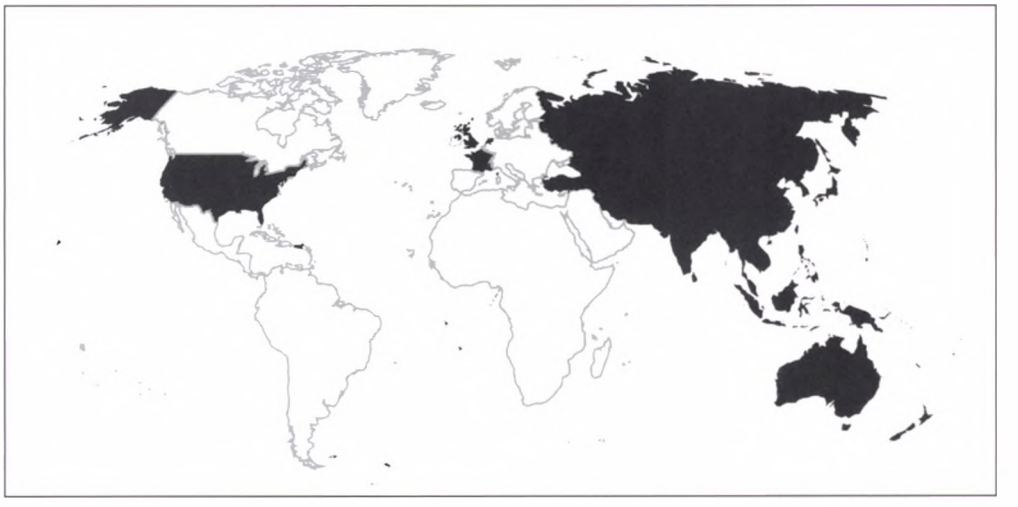
ECONOMIC AND SOCIAL SURVEY OF ASIA AND THE PACIFIC 2018

Mobilizing finance for sustained, inclusive and sustainable economic growth

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

74th COMMISSION SESSION



*The shaded areas of the map indicate ESCAP members and associate members.**

The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest regional intergovernmental platform with 53 Member States and 9 Associate Members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aims to support countries' sustainable and inclusive development ambitions.

*The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ECONOMIC AND SOCIAL SURVEY OF ASIA AND THE PACIFIC 2018

Mobilizing finance for sustained, inclusive and sustainable economic growth

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

ECONOMIC AND SOCIAL SURVEY OF ASIA AND THE PACIFIC 2018

Mobilizing finance for sustained, inclusive and sustainable economic growth

Shamshad Akhtar
Executive Secretary

Hongjoo Hahm
Deputy Executive Secretary

Hamza Ali Malik
Director, Macroeconomic Policy and Financing for Development Division

United Nations publication
Sales No. E.18.II.F.16

Printed in Bangkok
ISBN: 978-92-1-120780-4
e-ISBN: 978-92-1-363324-3
ISSN: 0252-5704
ST/ESCAP/2829

FOREWORD

The Asia-Pacific region continues to show strong economic performance. Improved global economic conditions provided further impetus to the dynamism of the region as it delivered stronger-than-expected growth in 2017. The steady progress provides room for policymakers to look beyond the expansion of output, and to improve social inclusiveness and environmental sustainability. Clearly, the Asia-Pacific region has great potential to help the world implement the 2030 Agenda for Sustainable Development and build a fair globalization and an inclusive future.

At the same time, the region faces elevated levels of global policy uncertainty, growing trade protectionism and a likely tightening of financial conditions. This situation may delay a more broad-based rebound in trade and investment. Efforts to lift productivity and create decent jobs also remain challenging against a backdrop of demographic transitions and technological advancement. Policymakers will need to maintain a focus on reducing poverty, mitigating inequalities and minimizing the environmental costs of rapid economic growth.

Financing will be critical, yet the Asia and Pacific region faces sizeable investment gaps. This edition of the *Economic and Social Survey of Asia and the Pacific* analyses policy options for strengthening tax revenues, enhancing prudent sovereign borrowing and leveraging private capital. The *Survey* underscores the importance of effective institutional arrangements, strong administrative and governance capabilities, and market-friendly rules and regulations. It also explores ways to finance small and medium-sized enterprises and to harness the potential of financial technology.

The countries in the Asia-Pacific region are diverse and home to some of the most vibrant economies of the world. Their policies and experiences hold valuable lessons for regional peers and beyond. I commend this timely analysis and policy advice to a wide audience.

António Guterres
Secretary-General of the United Nations

PREFACE

Recent economic trends in Asia and the Pacific lend optimism to perceptions that the region will maintain its preponderant influence as the engine of the global economy. Economic growth in 2017 was shared by a broad base of countries, with growth accelerating in two thirds of the regional economies, accounting for more than 80 per cent of the region's GDP. The region's long trend of robust economic growth, estimated at 5.8 per cent in 2017 compared with 5.4 per cent in 2016, is anticipated to remain steady, reflecting growing dynamism amid relatively favourable global economic conditions that are underpinned by a revival of demand and steady inflation. Robust domestic demand, recovering investment and trade volumes all contributed to the 2017 growth trajectory and underpin a stable outlook for 2018. The current situation has emerged due to a combination of factors.

First, the global recovery has been broad based and is expected to be sustained as advanced economies, namely Japan, the United States of America and those in the European Union, bounced back supported by upturns in manufacturing, investment and trade. Global economic prospects look stable and will benefit from new measures, such as a reduction in the statutory corporate tax rate of the United States, but the global scenario is burdened by old and new uncertainties.

Second, in addition to the revival in external demand, domestic demand has picked up in regional economies as consumption grew in major economies in line with growing purchasing power and recovery of remittances flows and revival of oil-producing countries as oil prices went up. Beyond cyclical recovery, investment demand revived as the business climate improved and countries expedited infrastructure development. Investment prospects seem positive, as new investments take place in technology, climate-friendly and energy-efficient projects, such as renewables. Countries are also addressing long-standing challenges of the business and policy environment and macroeconomic and financial stability – an emerging concern, as borrowing costs and debt sustainability considerations will magnify as interest rate pressures grow.

Prospects for least developed countries remain a concern, despite their average growth being in the range of 7 per cent, because they have inherent vulnerabilities to terms-of-trade shocks and exposure to natural disasters.

Macroeconomic dynamics demand continued vigilance and management. Weaknesses in public finance remain, as developing countries' resource mobilization remains low despite structural reforms designed to enhance the tax net and achieve better compliance. Monetary management will remain complicated, as advanced countries reverse their unprecedented monetary easing and low interest rates. Inflation is picking up, as aggregate demand is gaining momentum

and international oil prices have risen. If these complications are contained, inflation should remain moderate, although possibly they will be a concern for oil-importing countries and those vulnerable to movement in exchange rates.

There are risks on the horizon: growing financial vulnerability and rising private and corporate debt, particularly in China and countries in South-East Asia, falling or low reserves in a few South Asian economies and uncertainty concerning trends in commodity prices. Our policy simulation for 18 countries suggests that a $10 rise in the price of oil per barrel would dampen GDP growth by 0.14 - 0.4 percentage points, widen external current account deficits by 0.5-1.0 percentage points and build inflationary pressures in oil-importing economies. Oil exporters, however, would see a positive impact.

Furthermore, while trade rebounded in 2017, trade protectionism has seen a revival in recent years and continues to be a threat to global economic stabilization. Uncertainty and more trade protectionism may negatively affect some of the region's traditional strengths, such as open export-oriented markets.

In the medium term, taking advantage of the steady pace of economic expansion, policymakers must work to implement the 2030 Agenda for Sustainable Development to ensure that the quality of economic growth is inclusive and sustainable. Specific challenges include maintaining steady long-term economic growth to tap the region's potential through enhancements in productivity, the slow pace of skills advancements for the creation of decent jobs, and rising inequality and environmental degradation. These challenges are compounded by the uncertain impact of the "Fourth Industrial Revolution", which involves deep structural transformation of economies as it is likely to be accompanied by disruptions and dislocation to both industry and jobs even as it provides new opportunities.

This context calls for taking the necessary policy measures, a step which requires improved policy management and execution, strong political will and broad-based leveraging of financing for development. There is significant scope for improved public expenditure efficiency and mobilizing additional public and private resources. Many countries in the region have some of the lowest rates of domestic resource mobilization, and large private sector resources are not being invested in support of sustainable development.

Financing for development is not "just about the money". For example, it also involves State institution building, answering fundamental questions, such as distilling the core functions of the State in an economy and developing financial markets to service the people and the planet. To shed light on these issues, the *Survey* for 2018 contains an exploration of specific

questions. How could Governments in the Asia-Pacific region expand and make effective use of fiscal space? How could Governments enhance resource mobilization? How could financial inclusion be scaled up? How could countries fix excess resource use? How could private capital be more effectively leveraged to strengthen long-term prospects of economic development?

Fundamental reforms of tax policy and compliance would be game changers. They call for the modernization of tax administration: a 1 point increase in the tax administration index in the region would lead to a tax revenue increase of 0.15 per cent of GDP. The prospects for expanding the tax base are substantial and can be achieved through streamlining and rationalizing tax incentives for foreign direct investment, carbon taxes and creating an enabling environment where public-private partnerships can thrive. There is evidence that an effective legal and regulatory framework is associated with more infrastructure investments through public-private partnerships. Similarly, the role that government effectiveness and macroeconomic fundamentals can play in increasing the fiscal space through public bonds is notable.

The Asia-Pacific region is vast and diverse, and its economies exhibit varying challenges and capabilities to implement the necessary policy options. To reflect on such diversity and showcase lessons learned from specific subregions, the *Survey* contains analyses of specific issues covering the perspectives of both the public and private sectors while underlining the importance of regional integration and cooperation.

To conclude, let me emphasize that this is a timely analysis of how we can link a thorough assessment of the macroeconomic situation with the "bigger picture": highlighting what the long-term economic and development challenges are, how we want to address them and what we need to do, and how doing so could ensure that economic growth in Asia and the Pacific is sustained, inclusive and sustainable.

Shamshad Akhtar
Under-Secretary-General of the United Nations and
Executive Secretary, United Nations Economic and
Social Commission for Asia and the Pacific

EXECUTIVE SUMMARY

The long-term economic prospect of an economy does not just depend on near-term outlook of expansion of economic output. It also depends on how the benefits of such an expansion are shared in the society, and what kind of impact it is having on the environment. Therefore, Sustainable Development Goal 8 calls for promoting sustained, inclusive and sustainable economic growth. Indeed, the well-being of people and societies increases if progress is made on all three fronts: economic resilience, social inclusiveness and environmental sustainability. There is no doubt that the Asia-Pacific region has made tremendous progress on the economic front. However, economic inequality within and among the region's economies has increased, and rapid expansion of economic output has contributed to untenable levels of environmental degradation. The *Economic and Social Survey of Asia and the Pacific* for 2018 contains analyses of economic prospect of economies keeping in view such considerations and discussions of policy options that could help countries to effectively pursue these objectives. The 2018 *Survey* delves deeper into the importance of financing for supporting various policy initiatives and contains an examination of how Governments of countries in the Asia-Pacific region could increase domestic public financial resources and leverage private capital to strengthen long-term prospect of economies.

The economic performance of the Asia-Pacific region, as measured by GDP growth rate, continues to improve steadily, while inflation remains stable. The key tasks at hand are to ensure that such economic performance is sustained over time, that it benefits everyone and that adverse environmental implications are minimized. In the *Survey* for 2018, it is noted that financial risks and protectionist trade measures weigh on the near-term macroeconomic outlook, while the medium-term challenges of lifting the region's potential economic growth and reducing poverty on a sustained basis continue. Furthermore, while rapid technological advancements promise immense opportunities, they also pose considerable challenges in terms of job polarization and income and wealth inequalities. China's pursuit of innovative, inclusive and sustainable economic growth could also have important regional impacts through trade, investment and other channels.

In the *Survey* for 2018, Governments of countries in the Asia-Pacific region are advised to take advantage of the currently favourable economic conditions in order to address vulnerabilities and enhance the resilience, inclusiveness and sustainability of their economies. Those Governments will have to take the lead in such pursuits, but have an array of policy options at their disposal. The implementation of several policy initiatives will require not only the channelling of existing financial resources, both in the public and the private sectors, towards sustainable development, but also creating additional financial means. While it is recognized that specific priorities and circumstances may vary across countries, the *Survey* for 2018 contains an exploration of several financing for development issues and an examination of how Governments could effectively mobilize development finance.

The report is structured as follows: the first chapter provides an updated and detailed assessment of economic performance in and outlook for the Asia-Pacific region, both at the aggregate and the subregional levels. It contains discussions of macroeconomic risks and analyses of medium-term challenges that may have adverse impacts on the prospects for sustained, inclusive and sustainable economic growth. The chapter concludes with an analysis of various policy options to deal with these risks and challenges. In the second chapter, the research delves into the importance of development finance as an essential means to effectively implement some of the policies highlighted in the first chapter.

The chapter is focused primarily on increasing domestic public financial resources and leveraging private capital to support long-term prospects of economies. In the light of the region's diversity, and zeroing-in on selected development finance issues, chapter three provides subregional analyses on such issues as dealing with volatile fiscal positions (Pacific); tax reforms to enhance government revenues (South and South-West Asia); development of local currency bond markets (South-East Asia); enhancing access to finance for small and medium-sized enterprises to strengthen diversification (North and Central Asia); and harnessing the potential of financial technology ("FinTech") (East and North-East Asia).

Economic performance and outlook

The developing Asia-Pacific economies are estimated to have sustained a relatively high economic growth rate of 5.8 per cent in 2017 compared with 5.4 per cent in 2016. About two thirds of the regional economies, accounting for more than 80 per cent of the region's GDP, achieved faster economic growth in 2017 than in the previous year. In the case of China, strong global demand for its products, resilient private consumption and service activities continued to drive the country's economic growth. However, investment moderated amid efforts to curb pollution and overcapacity in certain industries. In India, the recently introduced goods and services tax, together with weak corporate and bank balance sheets, resulted in moderate economic growth, but signs of recovery have emerged. The Russian Federation resumed growth after a two-year recession on the back of higher oil prices and more stable inflation and credit conditions. Least developed countries in the region grew by 6.8 per cent, the fastest in a decade, supported by stronger trade and investment flows.

The recent recovery in global manufacturing, investment and trade is providing a tailwind to the already steady expansion of economic output in the Asia-Pacific region. However, this upturn – the fastest global output expansion in five years – comes after an extended period of weak investment and low productivity growth. Thus, there is an element of uncertainty in terms of continuation of these trends. Moreover, the delayed but stronger-than-anticipated recovery brings its own challenges. These include: expectation of a faster rise in interest rates, which could trigger volatility in financial markets; strengthening of the United States dollar, although it weakened in 2017 and policy uncertainty continues; and relatively higher oil prices compared with recent trends. Nevertheless, global output is projected to grow by 3 and 3.1 per cent in 2018 and 2019 respectively, on par with an estimated 3 per cent in 2017.

Investment expenditures and trade volumes, which have shown lukewarm growth in recent years, also showed signs of recovery in 2017. Firmer global demand and increased public infrastructure outlays supported a pickup in investments. A stronger demand in China and global rebound in electrical and electronics trade, which makes extensive use of regional production networks, provided an impetus to higher trade volumes. Sustained investment recovery could be undermined, however, by protectionist trade measures, tighter financial conditions and uncertainty over the domestic legal and regulatory environment. Similarly, growth in trade volumes may moderate in 2018, as the uptick in 2017 was measured against the previous year's weak performance; thus, a high "base effect" will kick in. Also, growth moderation in China could be reflected in its import demand, especially for metals and other investment-related goods.

Supported by robust domestic demand and improved global economic prospects, developing Asia-Pacific economies are projected to grow by 5.5 per cent in both 2018 and 2019, with a slight moderation in China offset by a recovery in India and steady performance in the rest of the region. In line with the region's growing purchasing power, domestic private consumption is likely to remain the major source of economic growth. However, in nearly half the countries in the region, consumption of the bottom 40 per cent of the population, already substantially low, grew at a slower pace than that of the average household. Moreover, without consistent increases in real wages backed by rising productivity, consumption-led growth could lead to debt accumulation and

financial vulnerabilities. Thus, mitigating inequalities and investing in productivity growth will facilitate sustained and resilient economic growth.

Consumer price inflation in the developing countries of the Asia-Pacific region is projected to rise to 3.5 per cent in 2018 and 2019 compared with 3.2 per cent in 2017. This increase is in line with higher global oil prices and stronger aggregate demand. Despite this pick up, inflation is likely to remain steady at low levels. Aside from country-specific factors, such as good harvests and stable food prices, there are a few global reasons relating to the energy sector, currencies, capacity utilization and technology that explain a stable path for inflation. First, despite the OPEC-plus[1] agreement to cut oil production, oil prices are not expected to rise further in view of the reduced cost of extracting shale oil in the United States of America and the dramatic decline in renewable energy prices. Second, currency appreciation in several economies has eased price pressures. Third, economies may still be operating below their potential, with slack capacity as mirrored in subdued growth in real wages and formal employment. Fourth, global value chains and e-commerce may be meeting demand at lower costs, while increased use of robots in production processes place downward pressure on wages and prices.

Macroeconomic risks and medium-term challenges to the economic outlook

Despite moderation in new trade-restrictive measures in 2017, there is a slowdown in new trade-liberalizing measures both globally and within the region. Furthermore, there has been an increase in non-tariff measures, which are less transparent and could be more harmful. A rise in trade barriers may disrupt cross-border production networks, affecting not only trade but also long-term investments and productivity growth. While trade liberalization measures, pursued in a multilateral manner, are needed to bolster the contribution of trade to economic growth, efforts are also needed to address the social and environmental concerns related to trade and foreign direct investment, including complementary domestic measures to help adversely affected workers and firms. There remains substantial scope for South Asia and least developed countries to benefit more from trade.

Dampening of capital flows to the Asia-Pacific region and associated financial vulnerabilities cannot be ruled out. So far, trade balances have remained mostly manageable in the region, along with strong capital inflows due to the region's economic buoyancy. This trend has contributed to relatively stronger currencies in the region and improvement in foreign exchange reserves. However, trends could reverse rather easily given the recent economic recovery in the United States and the eurozone that could prompt faster-than-expected interest rate increases, resulting in asset price corrections and exchange rate volatility. High and rising private debt in some economies, both at the corporate level as in China and at the household level as in Malaysia, the Republic of Korea and Thailand, is already a source of financial vulnerability. Rapid increases in private debt along with changing external conditions can easily affect whole financial systems, as had been experienced in the region during the 1997/98 Asian financial crisis.

The combination of a weaker United States dollar and higher oil prices over the past year are also a source of uncertainty and potential risks. While the weak United States dollar in 2017 has provided some space for other countries to adjust gradually to financial tightening, the baseline projection is that the dollar will strengthen on the back of a strong United States economy. However, there is considerable uncertainty over its trajectory and net impact. Dollar strength has implications for trade competitiveness but also for dollar loans and dollar-denominated debt. Currencies pegged directly to the dollar are more prone to a potential negative impact. Similarly, global oil prices reached $70 per barrel at the beginning of the year, a dramatic rise from $30 per barrel two years previously. While some easing is expected, large-scale oil importers could face higher inflation and wider current account deficits. Oil exporters would experience roughly opposite effects.

With regard to the medium-term outlook, potential economic growth is on a downward trend in several countries owing to population ageing, slower capital accumulation and modest productivity growth. This situation may adversely affect sustained poverty reduction and improvement in living standards. By 2050, it is estimated that one of every four people in the region will be aged 60 years or older. Among other implications, such a demographic transition could have a major effect on long-term economic growth. As population ageing progresses in the face of relatively low incomes in the region's economies, lifting potential growth will require higher productivity growth. Productivity growth in the developing countries of the Asia-Pacific region, has been modest and declined by more than half between the periods 2000-2007 and 2008-2014. Contributing factors include skills and infrastructure deficits, inefficient allocation of resources and weak technological innovation and diffusion.

Rapid technological advancements, while offering enormous opportunities, pose challenges as well. New technologies, such as three-dimensional printing, big data, robotization of production processes and artificial intelligence, are making rapid inroads and could induce a productivity-led economic growth spurt in the future. Similarly, FinTech and e-government applications are examples of technologies that could support sustainable development. However, technology and innovation favour skilled over unskilled labour and bias capital over labour, thus contributing to inequality of income and wealth. While there are differing views on whether new technologies will displace labour and result in downward pressure on wages, job polarization is likely to increase regardless. Moreover, increased automation in developed countries and in China could reduce the scope for industrialization in other developing countries and thus the ability to expand decent jobs.

China's pursuit of innovative, inclusive and sustainable economic growth could have important regional impacts through trade, investment and other channels. If ongoing structural reforms in China are successful, total factor productivity would overtake capital formation to become the major driver of growth, and the service sector would account for 70 per cent of GDP by 2030, close to current levels in developed economies. Such changes will affect China's trade structure. As China moves up the value chain, such countries as Bangladesh and Viet Nam could enjoy greater opportunities to engage in low-skilled, labour-intensive manufacturing. Existing technology exporters could face increased competition, however. Commodity exporters could also be adversely affected in the near term. Nevertheless, China's growing domestic market augurs well for regional trading partners in the medium term. At the same time, China's outbound investment in the region has steadily increased over the past decade. In going forward, the quality as well as the quantity of Chinese investments will be important for recipient countries' economic development and mutually beneficial trade relationships.

The relatively high incidence of poverty and rising inequalities are adversely affecting the region's dynamism and economic outlook. Despite a considerable reduction in extreme poverty in the region, led by China, the incidence of poverty remains relatively high in several economies, especially in South Asia and in least developed countries. Across the region, large segments of the non-poor population remain vulnerable to falling back into poverty; they could be defined as comprising a "transitional class" rather than a "middle class". Moreover, such factors as technological progress, globalization and market-oriented reforms that have supported rapid economic growth are contributing to wider inequality of income and wealth, which does not bode well for the inclusive development of the region. It is increasingly being recognized that high and rising economic inequality is detrimental to sustained economic growth.

Economic policies for sustained, inclusive and sustainable economic growth

Monetary and financial policies should be focused on supporting a smooth transition to the expected gradual pickup in inflation and financial tightening prompted by stronger global

economic growth, while tackling systemic risks in the financial system through appropriate macroprudential measures. In 2017, thanks to stable inflation, most countries in the region kept their policy rates unchanged or even reduced them further. Despite an overall stable inflation outlook, this trend may not continue given the recent uptick in oil prices, financial sector risks and faster-than-expected increases in interest rates in the United States and the eurozone. Therefore, consideration should be given to gradual increases in interest rates in the region's economies. Central banks should also step up deleveraging efforts to address systemic financial risks and assign high priority to strengthening macroprudential frameworks, regulation and supervision. Such measures are important in view of the high levels of private debt and distressed bank loans that are constraining robust investment.

Fiscal policy should be focused on lifting productivity growth and reducing inequalities, as the need for near-term stimulus diminishes. After widening to nearly 3 per cent of GDP in 2016, fiscal deficit has stabilized in 2017 and is expected to narrow in the forecast period on the back of stronger economic growth. Moreover, fiscal sustainability gap analysis by ESCAP suggests that government debt ratios will stabilize or decline in most countries in the baseline scenario. While these are encouraging, greater attention is needed to the composition and quality of government expenditures. Education and health outcomes are important for labour productivity, but combined education and health expenditures remain below 5 per cent of GDP in such countries as Bangladesh, Cambodia and Pakistan. There are positive examples in the region. Several countries have identified new sources of fiscal space to extend social protection coverage and benefits, including through reallocating part of its military expenditures or phasing out regressive energy subsidies.

In addition to budget reallocation, Governments could increase expenditure efficiency and ensure equal access to basic public services. Without such efforts, additional spending may not translate into better development outcomes. Estimation of public expenditure efficiency would suggest that many countries have ample room to improve. For instance, compared with regional peers at the frontier, Pakistan could decrease its public expenditures by some 33 per cent in education and 17 per cent in health to produce the same level of education and health outcomes. Similarly, it has been estimated that about 30 per cent of the potential benefits of pubic investments are lost due to inefficiencies. While there are sector-specific ways to improve expenditure efficiency, a cross-cutting factor is good governance. One of the ways in which Governments could improve fiscal governance is by leveraging technology; for instance, countries which proactively use e-government tools tend to perform better in terms of corruption perception.

Lifting productivity will require a "whole-of-Government approach" for fostering science, technology and innovation and investments in relevant skills and infrastructure. At the same time, Governments can consider a wide range of redistributive measures to mitigate the risks of technology-induced inequality and unemployment. Information and communications technologies (ICT) infrastructure is essential for supporting innovative growth and narrowing the existing digital divide. To develop core skills for people to be flexible and responsive to rapid changes brought about new technology, more students, especially female students, should be encouraged to take science, technology, engineering and mathematics (STEM)-related courses. At the same time, to mitigate the potential adverse impacts on income distribution, Governments can consider progressive income taxes and wealth-related taxes. A more radical proposal is the universal basic income (UBI), whereby every individual would receive an unconditional cash grant. A basic calculation would suggest that the fiscal cost of UBI (targeted at providing $1.90 per day for the working-age population) in the Asia-Pacific region could be about 14 per cent of GDP on average.

While the Asia-Pacific region has come a long way in reducing extreme poverty to emerge as the world's economic powerhouse, the strains from rapid structural transformation – from rising inequality to environmental degradation – have

become more acute and are threatening the region's economic dynamism. Without improving the quality of growth, economic resilience too will be compromised. Governments could strengthen social protection as a strategic way of enhancing economic resilience, not least in view of demographic transitions (risk of skills shortage among youth on the on hand, and risk of old-age poverty on the other) and labour market disruptions associated with reforms and technological innovations. At the same time, Governments could mainstream resources efficiency targets into national plans and budgets as well as to sectoral policies, and establish appropriate legal and regulatory measures to enforce standards and to promote awareness. Carbon tax and emission trading systems could play a critical role in transitioning to a low-carbon, climate-resilient economy.

Mobilizing financing for sustained, inclusive and sustainable economic growth

Implementation of several of the policy measures discussed above would require not only effectively utilizing existing financial resources of both the public and the private sectors, but also creating additional financial means as well. Several available estimates show that the investment requirements to make economies resilient, inclusive and sustainable are sizeable – as high as $2.5 trillion per year on average for all developing countries worldwide. The good news is that ample financial resources and savings, mostly in the private sector, are available in the Asia-Pacific region. For instance, the combined value of international reserves, market capitalization of listed companies and assets being held by financial institutions, insurance companies and various funds in developing Asia-Pacific economies is estimated at about $56.2 trillion. Part of these private sector resources could potentially be mobilized for sustainable development. For example, the *Survey* for 2018 shows that an appropriate policy environment could increase investments made by institutional investors in long-term infrastructure projects. Similarly, listed firms and commercial banks could directly support social inclusiveness and environmental sustainability through such initiatives as impact investment and corporate social responsibility.

Governments should lead the way to enhance needed investments and facilitate leveraging of private capital. A multipronged strategy should be considered: first, efficient use should be made of available fiscal resources through effective expenditure management so that greater development impacts could be attained for the same amount of fiscal resources. Improving governance is the key in this regard. Second, the fiscal space should be enhanced through greater efforts to boost revenues and borrowings from the financial markets in a responsible manner. Third, the Sustainable Development Goals should be used to provide guidance for future private investments and identify areas where public resources are likely to flow and demand is likely to increase. Fourth, public financing should be used as a catalyst to attract private resources rather than replace private financing; initial public outlays pave the way for additional private investments. Fifth, appropriate regulations and institutional frameworks should be developed that would shape the space for private investments. Sixth, better indicators of systemic risk (risks associated with poor governance, weak contract enforcement and vulnerability to instability) should be developed that would capture progress on economic as well as social and environmental fronts. Government policies and public investments, for instance those aimed at improving the judicial system, enhancing productivity of the population and setting up effective natural disaster prevention, are de-risking; they should be taken into account when considering investments in the development endeavours of developing countries.

Strengthening tax revenues should remain a high priority for several economies in the region, especially those in the South and South-West Asian subregion. Several recent issues of the *Survey* have consistently highlighted the role of strong fiscal positions in steering economic growth strategies. For instance, the *Survey* for 2014, while estimating the tax potential in Asia-Pacific economies based on each country's economic structure, emphasized the need to: (a) enhance tax administration by streamlining procedures and

increasing the use of information technology; and (b) expand the tax base by rationalizing existing tax exemptions and introducing new taxes. The *Survey* for 2018 expands the analysis by examining the extent to which recommended tax policies, if implemented, would help narrow the gap.

Better tax administration helps enhance revenue collection by reducing tax avoidance and evasion, including by influencing people's willingness to pay taxes. To gauge the quality of tax administration in developing Asia-Pacific economies, the *Survey* for 2018 contains proposals for developing a new composite tax administration index that would measure the extent to which the institutional arrangements, core business functions and legal and policy framework enable tax authorities to address tax avoidance and evasion, thus enhancing revenue collection efficiency. It would draw upon survey-based information from tax authorities available for 60 economies, of which 14 are in Asia and the Pacific. According to this new index, the quality of tax administration in developing economies in the Asia-Pacific region is lower than that in developed countries and developing countries in other regions of the world, especially in the institutional arrangement category.

The impact of better-quality tax administration on the level of the tax revenue-to-GDP ratio across countries is significant. In the *Survey* for 2018, it is estimated that a one-point increase in the tax administration index is associated with a tax revenue increase of 0.15 per cent of GDP. If the values of the index in individual Asia-Pacific economies are assumed to match the level observed in an average member country in the Organisation for Economic Co-operation and Development (OECD), the potential revenue impact could be as high as 8 per cent of GDP in such countries as Myanmar and Tajikistan, and about 3 to 4 per cent of GDP in larger countries, such as China, India and Indonesia.

Expanding the tax base by rationalizing foreign direct investment (FDI) tax incentives and introducing a carbon tax are examples of policy options that can be implemented to enhance revenues. Based on firm-level financial data of more than 28,500 registered foreign companies in 9 developing Asia-Pacific economies, it is estimated in the *Survey* for 2018 that the total tax expenditure related to FDI incentives would be close to $16 billion. In some cases, the extent of tax revenue foregone is up to 0.3 per cent of GDP. While there is a need to rationalize FDI tax incentives, a policy priority should be to improve the investment climate by offering, for example, a business-friendly regulatory framework and decent infrastructure. Greater regional cooperation could help to avoid a race among regional economies to see who can offer more generous and excessive FDI tax benefits. Similarly, in the *Survey* for 2018 it is also estimated that a carbon tax could generate about $43 billion in additional tax revenue per year in 38 developing Asia-Pacific economies taken together. On average, the estimated increase in the total tax revenue is equivalent to 0.16 per cent of GDP and increases to 0.21 per cent of GDP in a group of countries with higher carbon intensity. An issue worth highlighting is that a carbon tax is generally regressive, as poorer households spend disproportionally more on electricity services, the tariff of which may increase when a carbon tax is imposed. Thus, Governments should consider reducing taxes in other areas to compensate for higher energy prices, and/or make the introduction of a carbon tax revenue-neutral in the short term by spending carbon tax revenue on schemes to promote the development of green technologies.

While closely monitoring and maintaining public debt sustainability, an increase in prudent sovereign borrowings from financial markets should be considered. Public bond issuances are not very common in developing Asia-Pacific economies. Of 47 countries with available data, 20 of them have never issued any government bonds, 11 countries have issued only public domestic bonds, and 16 countries have issued both public domestic and foreign bonds. Even among the countries that have issued public bonds in the past, the quantity of bond issuances was generally modest. Using statistical analysis, the *Survey* for 2018 shows that countries with lower debt stocks, better regulatory framework and more favourable current account performance

tend to be relatively more successful in issuing government bonds in both domestic and international markets. For an average country, the likelihood that domestic government bonds would be issued increases by about 7 per cent when the current account balance-to-GDP ratio rises by 1 per cent. The impact of better regulatory quality is much larger.

The sustainability of public debt, however, could weaken if contingent liabilities are taken into consideration. Available data would suggest that many Asia-Pacific economies can afford a higher level of public debt to support sustained, inclusive and sustainable economic growth. In fact, public debt levels are expected to decrease in 11 of 24 developing Asia-Pacific economies during the next five years, from a moderate 42.5 per cent of GDP in 2017 to 42 per cent of GDP in 2022. Further debt sustainability analysis shows that 22 of 41 developing Asia-Pacific economies exhibit a low risk of public debt distress, while 8 countries exhibit high risk. Most of these eight countries are least developed countries, such as Afghanistan and the Lao People's Democratic Republic, and small island developing States, such as Maldives and Samoa. While public debt sustainability is not an immediate concern for most Asia-Pacific economies, Governments should closely monitor contingent liabilities that may arise due to a banking sector failure, default on subnational government debt, operation of State-owned enterprises and natural disasters.

Ensuring an enabling policy environment is crucial for effectively leveraging private capital, for instance through public-private partnerships. An enabling policy environment helps reduce investment risks, such as those arising from macroeconomic instability and political uncertainty. As an illustration, the *Survey* for 2018 contains a proposed composite index to assess the extent of a country's readiness to pursue public-private partnerships (PPPs) in infrastructure projects. Called the PPP Enabling Environment Index, it comprises five sub-indices: (a) institutional arrangement for PPP projects; (b) past experiences with PPP; (c) macroeconomic stability; (d) financial market development; and (e) a legal and regulatory framework. The analysis shows that, in countries with a more enabling environment, PPP infrastructure projects tend to receive higher risk-adjusted returns and are more commercially viable. It further shows that a single unit increase in the value of this new index is associated with a 5 per cent increase in the amount of infrastructure investment under PPP. Among the five sub-indices, the impact of the quality of the legal and regulatory framework is most pronounced. Nevertheless, despite significant potential benefits, PPP projects should be carefully implemented. A possible risk is increased contingent liability, as Governments may need to take over projects that the private partner fails to deliver.

To unleash the potential of PPP and support the issuance of sovereign bonds, financial markets need to be developed further in Asia and the Pacific. Developing financial markets is a long-term task that requires policy actions on various fronts, such as: (a) an effective legal framework for the issuance process; (b) a sizeable investor base; (c) a diverse set of financial instruments and services; (d) knowledgeable financial intermediaries; and (e) an enabling market infrastructure, such as credit rating agencies and bond pricing agencies. As an illustration, the *Survey* for 2018 contains analyses of two aspects: (a) widening the investor base by increasing the role of institutional investors; and (b) diversifying financial instruments by exploring the potential of Islamic finance. A case study of issues surrounding the development of local currency bond markets in the South-East Asian subregion is also presented.

Recent breakthroughs in FinTech also hold considerable potential in shaping the prospective role and impact of finance on economies and societies. FinTech has impacts on access to credit and equity (for instance, crowdfunding); financial inclusion (for instance, access to online banking in remote places); and money transfer (through incipient technological breakthroughs, such as blockchain or cashless payments). Such transformations affect the supply of credit and its demand, aggregate demand via easier payments and aggregate supply via innovation and investments. Some subregions of Asia and the Pacific are making considerable investments

in FinTech. In particular, East and North-East Asia is at the forefront of such a transformation, as policymakers are managing its development via regulatory changes and preferential tax schemes, among others.

In conclusion, the current strong economic performance in the Asia-Pacific region provides an opportune time for Governments to initiate policies that can make economies resilient, inclusive and sustainable. Examples of policy options range from ensuring financial and external sector stability, effective use and expansion of fiscal space, strengthening redistributive measures and social protection, and fostering science, technology and innovation and investments in relevant skills and infrastructure. The implementation of several of these policies will require not only the channelling of existing financial resources of both the public and the private sectors towards enhancing long-term prospects of economies, but also coming up with additional financial means. It contains an examination of several elements of such financing strategies that could increase domestic public financial resources and leverage private capital to support sustainable development. The bottom line is that the prospects for mobilizing financing for development purposes are promising.

ENDNOTE

1 Refers to cooperation with countries that are not members of the Organization of the Petroleum Exporting Countries (OPEC) to raise oil prices by cutting production.

ACKNOWLEDGEMENTS

The *Economic and Social Survey of Asia and the Pacific* is a flagship publication of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). Its purpose is to provide policymakers, civil society and academia with recommendations on the current economic situation and trends in the region.

The 2018 issue was prepared under the overall leadership and guidance of Shamshad Akhtar, Under-Secretary-General of the United Nations and Executive Secretary of ESCAP. Hongjoo Hahm, Deputy Executive Secretary, provided valuable advice and direction. The report was coordinated by a core team led by Hamza Ali Malik, Director, Macroeconomic Policy and Financing for Development Division. The core team included Zhenqian Huang, Achara Jantarasaengaram, Daniel Jeongdae Lee, Jose Antonio Pedrosa-Garcia, Kiatkanid Pongpanich and Vatcharin Sirimaneetham.

ESCAP staff who gave useful inputs and feedback include: Shuvojit Banerjee, Andrzej Bolesta, Alberto Isgut, Zheng Jian, Oliver Paddison and Tientip Subhanij (Macroeconomic Policy and Financing for Development Division); Fabian Kreuzer (Energy Division); Stefanos Fotiou, Arun Jacob and Solene Le Doze (Environment and Development Division); Syed Ahmed and Sung Eun Kim (Information and Communications Technology and Disaster Risk Reduction Division); Nagesh Kumar, Predrag Savic and Vanessa Steinmayer (Social Development Division); Nixie Abarquez, Eric Hermouet and Farzana Sharmin (Statistics Division); Witada Anukoonwattaka and Mia Mikic (Trade, Investment and Innovation Division); Sandeep Jain (Transport Division); Nobuko Kajiura and Dorothea Lazaro (ESCAP Subregional Office for East and North-East Asia); Hiroaki Ogawa (ESCAP Subregional Office for North and Central Asia); Sanjesh Naidu (ESCAP Subregional Office for the Pacific); and Matthew Hammill (ESCAP Subregional Office for South and South-West Asia).

Sara Elder and Daniel Kostzer (International Labour Organization) also provided valuable comments. The following consultants provided substantive inputs: Athiphat Muthitacharoen, Assistant Professor, Faculty of Economics, Chulalongkorn University (Thailand); Chandan Sharma, Associate Professor, Indian Institute of Management Lucknow (India); Douglas Brooks, Principal Research Fellow, Australian APEC Study Centre, RMIT University, Melbourne; He Jianwu, Research Fellow, Development Research Center of the State Council, China; and Yong Yoon, Assistant Professor, Faculty of Economics, Chulalongkorn University (Thailand).

The report benefited from extensive debates and suggestions from an eminent group of policymakers, scholars and development practitioners acting as external peer reviewers, namely: Mohamed Ariff, Professor, International Centre for Education in Islamic Finance (Malaysia); Wanrawee Fuangkajonsak, Manager of Fiscal Affairs, Philip Morris Thailand (Thailand); Neelesh Gounder, Senior Lecturer and Deputy Head of School, School of Economics, Faculty of Business and Economics, University of the South Pacific (Fiji); Syed Turab Hussain, Associate Professor and Chair, Department of Economics, University of Management Sciences (Pakistan); Vutha Hing, Research Fellow, Cambodia Development Resource Institute (Cambodia); Byung Mok Jeon, Director, Research Group for Taxation, Korea Institute of Public Finance (Republic of Korea); Shigeo Katsu, President, Nazarbayev University (Kazakhstan); Azizkhon Khankhodjaev, Senior Fellow, Regional Center for Development Studies (Uzbekistan); Thida Kyu, Professor and Head, Department of Economics, Yangon University of Economics (Myanmar); Shuanglin Lin, Director,

China Center for Public Finance, National School of Development, Peking University (China); Athiphat Muthitacharoen, Assistant Professor, Faculty of Economics, Chulalongkorn University (Thailand); JinhWan Oh, Associate Professor, Ewha Womans University (Republic of Korea); Posh Raj Pandey, Chairman, South Asia Watch on Trade, Economics and Environment (Nepal); Pisit Puapan, Director of Macroeconomic Analysis Division, Bureau of Macroeconomic Policy, Fiscal Policy Office, Ministry of Finance (Thailand); Selim Raihan, Professor, University of Dhaka, and Executive Director, South Asian Network on Economic Modelling (Bangladesh); M. Govinda Rao, Emeritus Professor, National Institute of Public Finance and Policy (Bangladesh); Yong Yoon, Assistant Professor, Chulalongkorn University (Thailand); and Ganeshan Wignaraja, Chair of the Global Economy Programme, Lakshman Kadirgamar Institute (Sri Lanka).

Pannipa Jangvithaya and Chawarin Klongdee of the Macroeconomic Policy and Financing for Development Division, ESCAP, provided excellent research assistance. Sutinee Yeamkitpibul, supported by Sukanitt Jarunveshsuti of the Macroeconomic Policy and Financing for Development Division, proofread the manuscript, and provided valuable administrative assistance including support for the publication's launch.

Yasmin Winther De Araujo Consolino Almeida, Chulathep Fungsa, Sara Holttinen and Noormah Rizwan provided inputs to specific parts of the report and excellent research assistance.

The manuscript was edited by John Loftus. The layout and printing were done by Clung Wicha Press.

Ricardo Dunn, Katie Elles and Kavita Sukanandan, from the ESCAP Strategic Communications and Advocacy Section, coordinated the media launch and dissemination of the report.

CONTENTS

CHAPTER 1 Economic outlook and policy challenges

CONTENTS *(continued)*

CHAPTER 2 Mobilizing finance for sustained, inclusive and sustainable economic growth

CHAPTER 3 Selected issues in financing for development: a subregional perspective

CONTENTS *(continued)*

BOXES

CONTENTS *(continued)*

Figures

CONTENTS *(continued)*

Tables

EXPLANATORY NOTES

Analyses in the *Economic and Social Survey of Asia and the Pacific 2018* are based on data and information available up to 1 March 2018.

Groupings of countries and territories/areas referred to in the present issue of the Survey are defined as follows:

- ESCAP region: Afghanistan; American Samoa; Armenia; Australia; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; China; Cook Islands; Democratic People's Republic of Korea; Fiji; French Polynesia; Georgia; Guam; Hong Kong, China; India; Indonesia; Iran (Islamic Republic of); Japan; Kazakhstan; Kiribati; Kyrgyzstan; Lao People's Democratic Republic; Macao, China; Malaysia; Maldives; Marshall Islands; Micronesia (Federated States of); Mongolia; Myanmar; Nauru; Nepal; New Caledonia; New Zealand; Niue; Northern Mariana Islands; Pakistan; Palau; Papua New Guinea; Philippines; Republic of Korea; Russian Federation; Samoa; Singapore; Solomon Islands; Sri Lanka; Tajikistan; Thailand; Timor-Leste; Tonga; Turkey; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; and Viet Nam.
- Developing ESCAP region: ESCAP region excluding Australia, Japan and New Zealand.
- Developed ESCAP region: Australia, Japan and New Zealand.
- Least developed countries: Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu. Samoa was part of the least developed countries prior to its graduation in 2014.
- Landlocked developing countries: Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, Turkmenistan and Uzbekistan.
- Small island developing States: Cook Islands, Fiji, Kiribati, Maldives, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu.
- East and North-East Asia: China; Democratic People's Republic of Korea; Hong Kong, China; Japan; Macao, China; Mongolia and Republic of Korea.
- North and Central Asia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Uzbekistan.
- Pacific: American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Northern Marina Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
- Pacific island developing economies: All those listed above under "Pacific" except for Australia and New Zealand.
- South and South-West Asia: Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka and Turkey.
- South-East Asia: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam.

Bibliographical and other references have not been verified. The United Nations bears no responsibility for the availability or functioning of URLs.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of firm names and commercial products does not imply the endorsement of the United Nations.

Many figures used in the Survey are on a fiscal year basis and are assigned to the calendar year which covers the major part or second half of the fiscal year.

Growth rates are on an annual basis, except where indicated otherwise.

Reference to "tons" indicates metric tons.

References to dollars ($) are to United States dollars, unless otherwise stated.

The term "billion" signifies a thousand million. The term "trillion" signifies a million million.

In the tables, two dots (..) indicate that data are not available or are not separately reported; a dash (–) indicates that the amount is nil or negligible; and a blank indicates that the item is not applicable.

In dates, a hyphen (-) is used to signify the full period involved, including the beginning and end years, and a stroke (/) indicates a crop year, fiscal year or plan year. The fiscal years and currencies of the economies in the ESCAP region are listed in the following table:

Country or area in the ESCAP region	ISO Alpha-3 code	Fiscal year	Currency and abbreviation
Afghanistan	AFG	21 March to 20 March	afghani (Af)
American Samoa	ASM	..	United States dollar ($)
Armenia	ARM	1 January to 31 December	dram
Australia	AUS	1 July to 30 June	Australian dollar ($A)
Azerbaijan	AZE	1 January to 31 December	Azerbaijan manat (AZM)
Bangladesh	BGD	1 July to 30 June	taka (Tk)
Bhutan	BTN	1 July to 30 June	ngultrum (Nu)
Brunei Darussalam	BRN	1 January to 31 December	Brunei dollar (B$)
Cambodia	KHM	1 January to 31 December	riel (CR)
China	CHN	1 January to 31 December	yuan (Y)
Cook Islands	COK	1 April to 31 March	New Zealand dollar ($NZ)
Democratic People's Republic of Korea	PRK	..	won (W)
Fiji	FJI	1 January to 31 December	Fiji dollar (F$)
French Polynesia	PYF	..	French Pacific Community franc (FCFP)
Georgia	GEO	1 January to 31 December	lari (L)
Guam	GUM	1 October to 30 September	United States dollar ($)
Hong Kong, China	HKG	1 April to 31 March	Hong Kong dollar (HK$)
India	IND	1 April to 31 March	Indian rupee (Rs)
Indonesia	IDN	1 April to 31 March	Indonesian rupiah (Rp)
Iran (Islamic Republic of)	IRN	21 March to 20 March	Iranian rial (Rls)
Japan	JPN	1 April to 31 March	yen (¥)

Country or area in the ESCAP region	ISO Alpha-3 code	Fiscal year	Currency and abbreviation
Kazakhstan	KAZ	1 January to 31 December	tenge (T)
Kiribati	KIR	1 January to 31 December	Australian dollar ($A)
Kyrgyzstan	KGZ	1 January to 31 December	som (som)
Lao People's Democratic Republic	LAO	1 October to 30 September	kip (KN)
Macao, China	MAC	1 July to 30 June	pataca (P)
Malaysia	MYS	1 January to 31 December	ringgit (M$)
Maldives	MDV	1 January to 31 December	rufiyaa (Rf)
Marshall Islands	MHL	1 October to 30 September	United States dollar ($)
Micronesia (Federated States of)	FSM	1 October to 30 September	United States dollar ($)
Mongolia	MNG	1 January to 31 December	tugrik (Tug)
Myanmar	MMR	1 April to 31 March	kyat (K)
Nauru	NRU	1 July to 30 June	Australian dollar ($A)
Nepal	NPL	16 July to 15 July	Nepalese rupee (NRs)
New Caledonia	NCL	..	French Pacific Community franc (FCFP)
New Zealand	NZL	1 April to 31 March	New Zealand dollar ($NZ)
Niue	NIU	1 April to 31 March	New Zealand dollar ($NZ)
Northern Mariana Islands	MNP	1 October to 30 September	United States dollar ($)
Pakistan	PAK	1 July to 30 June	Pakistan rupee (PRs)
Palau	PLW	1 October to 30 September	United States dollar ($)
Papua New Guinea	PNG	1 January to 31 December	kina (K)
Philippines	PHL	1 January to 31 December	Philippine peso (P)
Republic of Korea	KOR	1 January to 31 December	won (W)
Russian Federation	RUS	1 January to 31 December	ruble (R)
Samoa	WSM	1 July to 30 June	tala (WS$)
Singapore	SGP	1 April to 31 March	Singapore dollar (S$)
Solomon Islands	SLB	1 January to 31 December	Solomon Islands dollar (SI$)
Sri Lanka	LKA	1 January to 31 December	Sri Lanka rupee (SL Rs)
Tajikistan	TJK	1 January to 31 December	somoni
Thailand	THA	1 October to 30 September	baht (B)
Timor-Leste	TLS	1 July to 30 June	United States dollar ($)
Tonga	TON	1 July to 30 June	pa'anga (T$)
Turkey	TUR	1 January to 31 December	Turkish lira (LT)
Turkmenistan	TKM	1 January to 31 December	Turkmen manat (M)
Tuvalu	TUV	1 January to 31 December	Australian dollar ($A)
Uzbekistan	UZB	1 January to 31 December	Uzbek som (som)
Vanuatu	VUT	1 January to 31 December	vatu (VT)
Viet Nam	VNM	1 January to 31 December	dong (D)

ACRONYMS

ABF	Asian Bond Fund
ABMF	Asian Bond Market Forum
ABMI	Asian Bond Market Initiative
ADB	Asian Development Bank
AIFC	Astana International Financial Centre
AMBIF	ASEAN+3 Multi-currency Bond Issuance Framework
APCTT	Asia and Pacific Centre for Transfer of Technology
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BEPS	base erosion and profit-shifting
CGIF	Credit Guarantee and Investment Facility
CIF	Consolidated Investment Fund
CSR	corporate social responsibility
EIU	Economist Intelligence Unit
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FDI	foreign direct investment
FinTech	financial technology
FTT	financial transaction tax
GIIN	Global Impact Investing Network
GDP	gross domestic product
ICT	information and communications technologies
ILO	International Labour Organization
IMF	International Monetary Fund
IT	information technology
MSMEs	micro-, small and medium-sized enterprises
OECD	Organisation for Economic Co-operation and Development
PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative
PMI	purchasing managers index
PPP	public-private partnerships
RegTech	regulatory technology

RESAP	Regional Space Applications Programme for Sustainable Development
SAARC	South Asian Association for Regional Cooperation
STEM	science, technology, engineering and mathematics
STI	science, technology and innovation
tCO2e	ton of carbon dioxide equivalent
TFP	total factor productivity
TPP	Trans-Pacific Partnership
TTF	Tuvalu Trust Fund
TVET	technical and vocational education and training
UBI	universal basic income
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
VAT	value-added tax
WB	Word Bank
WDI	World Development Indicators
WGI	Worldwide Governance Indicators
WTO	World Trade Organization

CHAPTER 1

Economic outlook and policy challenges

1. Introduction

Average GDP growth in the developing economies of the Asia-Pacific region continues to steadily improve, while inflation remains stable. Sustaining the investment recovery and further enhancing the drivers of economic growth are key considerations in going forward. There is a risk, however, of a short-lived recovery from protectionist trade measures, financial market disruptions, natural disasters and geopolitical tensions.

Moreover, the region's medium-term prospects rest on the ability to lift potential economic growth and ensure shared prosperity. Lifting potential growth will require higher productivity growth. Technology, a key driver of productivity, poses both opportunities and challenges, particularly with respect to how new technologies, such as artificial intelligence and robotics, will reshape the future of work and global and regional production patterns. A risk which calls for attention is that of increased job polarization and premature deindustrialization, which could widen inequality within and across countries.

In the light of the above-mentioned near- and medium-term challenges, three policy considerations are highlighted.

Monetary and financial policy should be focused on supporting a smooth transition to the expected gradual pickup in inflation and financial tightening prompted by stronger global growth, while addressing systemic risks in the financial system through appropriate macroprudential measures. The latter are important in view of the region's high level of private debt and distressed bank loans, which are also constraining robust investment.

Fiscal policy should be focused on supporting medium-term objectives of lifting productivity growth and reducing inequalities as the need for near-term stimulus diminishes. Beyond allocating more resources to education, health, social protection and infrastructure, greater progress is needed to enhance expenditure efficiency and ensure equal access to public services. Progressive taxation could help increase fiscal space.

While there are sector-specific ways to improve expenditure efficiency, a cross-cutting factor is good governance. One of the ways in which Governments could improve fiscal governance is by leveraging technology; for instance, countries which proactively use e-government tools tend to perform better in terms of the perception of corruption.

Parallel efforts are needed to foster innovation and ensure that its benefits are widely shared. Leading innovative countries take a "whole-of-government approach" and invest in relevant skills and infrastructure, but efforts are needed to leave no country behind. Competition policy, labour market policy and fiscal policy should be calibrated to support inclusive innovation. Universal basic income could be considered as well.

Without improving the quality of economic growth, economic resilience too will be compromised. Governments should strengthen social protection as a strategic way of enhancing economic resilience and economic dynamism, not least in view of demographic transitions (risk of skills shortage among youth on one hand, and risk of old-age poverty on the other) and labour market disruptions associated with reforms and technological innovations.

At the same time, Governments should mainstream resources efficiency targets into national plans and budgets as well as into sectoral policies, and establish appropriate legal and regulatory measures to enforce standards and to promote awareness. Carbon tax and emission trading systems could play a critical role in transitioning to a low-carbon, climate-resilient economy.

Addressing these challenges and implementing many of these policies will require better use of existing resources but also mobilization of additional resources, including through tax reforms, prudent sovereign borrowing and leveraging of private finance – the focus of chapter II.

2. Economic performance and outlook

2.1. Global context – stronger economic growth and associated challenges

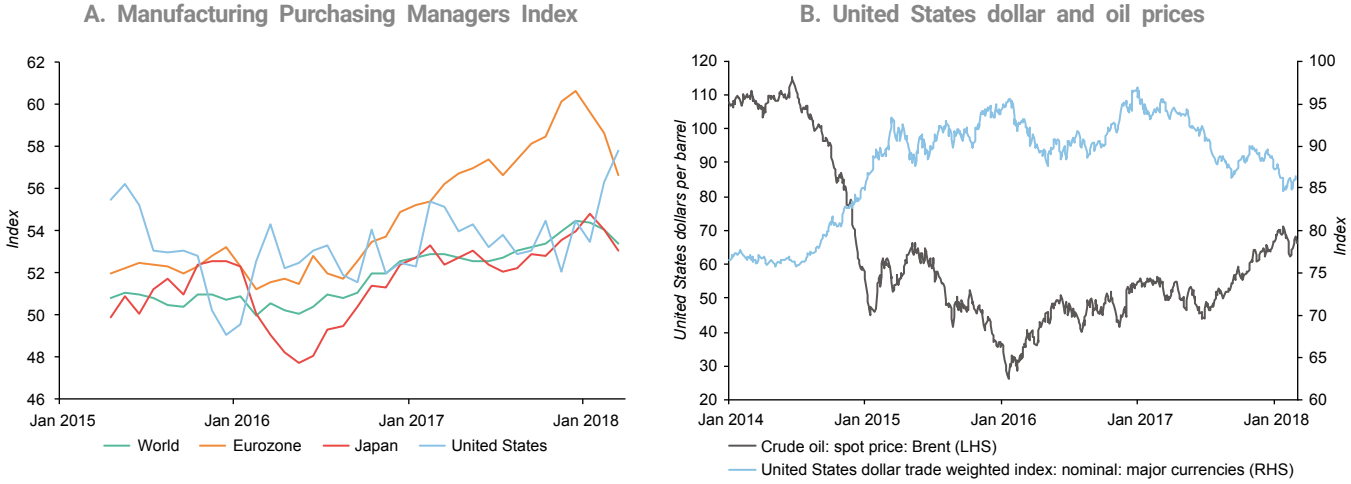
In 2017, there was a broad-based recovery in global manufacturing, investment and trade, resulting in the fastest global output expansion in five years. The upturn was evident in the United States, the eurozone and Japan (figure 1.1), along with continued strong performance by China and gradual recovery in major commodity exporters. This momentum is expected to be largely sustained, although there is an element of uncertainty. Global output is projected to grow by 3 and 3.1 per cent in 2018 and 2019 respectively, on par with an estimated 3 per cent growth in 2017; slight easing in growth in developed economies is expected to be offset by a rebound in developing economies, including commodity exporters in Africa and Latin America (figure 1.2). The eurozone is expected to further transition from recovery to expansion (European Commission, 2018). In the United States, reduced statutory corporate tax rates, from 35 to 21 per cent, are expected to boost investment in the forecast period (IMF, 2018). Global trade volumes, which rebounded and grew by 4.3 per cent in 2017, are expected to moderate only slightly to 4 and 3.9 per cent in 2018 and 2019 respectively (WTO, 2018; World Bank, 2018a).

While the recent upturn in the global economy is encouraging, it is worth noting that this follows an extended period of weak investment and low productivity growth (United Nations, 2017). Thus, there is an element of uncertainty in terms of continuation of these trends. Moreover, the belated but stronger-than-anticipated recovery brings its own challenges. The expectation of a faster rise in interest rates could trigger financial market volatility, as has already been seen recently in equity markets. While the weak United States dollar has provided some space for other countries to adjust gradually to financial tightening, the dollar could easily revert to its recent trend of strengthening on the back of a

strong United States economy (figure 1.1). For other countries, this could provide a boost in exports but also increase pressure on external financing and undermine further recovery in investment (Avdjiev and others, 2018). Similarly, corporate tax reform in the United States could result in a large-scale repatriation of some $2 trillion held abroad by United States multinationals (UNCTAD, 2018).

Inflation and wage growth, which have remained relatively subdued despite the closing of output gaps and low unemployment rates, are expected to rise gradually. In January 2018, average hourly earnings in the United States grew at the fastest pace since 2009 (United States Department of Labor, 2018). Global oil prices averaged $67 per barrel in the first two months of 2018 compared with $30 per barrel two years previously (figure 1.1).

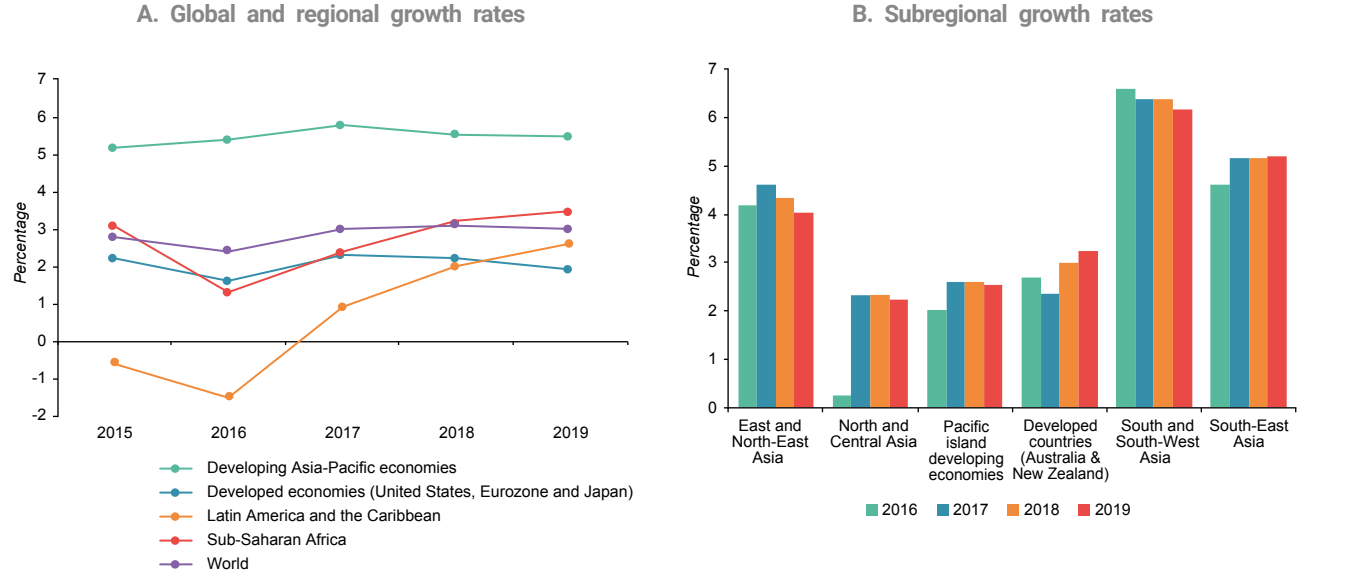
Figure 1.1. Global context



Source: ESCAP, based on CEIC Data. Available from www.ceicdata.com (accessed 1 March 2018).

Note: A PMI value higher than 50 indicates that the manufacturing economy is expanding, while a PMI value of less than 50 indicates that the manufacturing economy is contracting.

Figure 1.2. Economic growth



Source: United Nations, Department of Economic and Social Affairs, *World Economic Situation and Prospects 2018*, see table I.1, p. 1. (Sales No. E.18.II.C.2). Available from www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018_Full_Web-1.pdf; and World Bank, *Global Economic Prospects, January 2018: Broad-based Upturn, but for How Long?* (Washington, D.C., 2018). Available from https://openknowledge.worldbank.org/bitstream/handle/10986/28932/9781464811630.pdf.

While the price is expected to moderate to about $60 per barrel, higher oil prices pose downside risks for large oil importers, such as India which benefited greatly from the low oil prices for the last three years but now is experiencing higher inflation and wider current account deficit (India, Ministry of Finance, 2018). These and other broader risks to the economic outlook are discussed further in section 4.1.

2.2. Economic growth in Asia and the Pacific – a broad-based upturn and stable outlook

Developing Asia-Pacific economies benefited from the global tailwind, growing by an estimated 5.8 per cent in 2017 compared with 5.4 per cent in 2016 (figure 1.2). About two thirds of the regional economies, accounting for 80 per cent of the region's GDP, achieved faster economic growth in 2017 (table 1.1). In China, strong global demand, resilient private consumption and service activities continued to drive economic growth, but investment moderated amid efforts to curb pollution and overcapacity in certain industries. In India, the recently introduced goods and services tax as well as weak corporate and bank balance sheets resulted in modest economic growth, but signs of recovery emerged in the second half of the fiscal year. The Russian Federation resumed growth after a two-year recession on the back of higher oil prices and more stable inflation and credit conditions. Least developed countries in the region grew by 6.8 per cent, the fastest in a decade, supported by stronger trade and investment flows, although they remain vulnerable to terms-of-trade shocks and natural disasters and face skills and infrastructure bottlenecks (box 1.1).

The outlook for economic growth in the Asia-Pacific region in 2018 and 2019 is looking broadly stable. Improved global economic prospects, a broad-based pickup in exports and robust domestic consumption support this positive economic outlook. Developing Asia-Pacific economies are projected to grow by 5.5 per cent in both 2018 and 2019, with a slight moderation in China offset by a recovery in India and steady performance in the rest of the region. Recently firmed economic activities in China could provide the authorities with more room to continue deleveraging and rebalancing towards a services and consumption-driven economy, which suggests that the region's largest economy would have steadier but slower economic growth. A comparison across ESCAP subregions reveals that South and South-West Asia continues to lead the region's economic growth, followed by South-East Asia, in part reflecting their demographic dividend. Economic recovery is under way in North and Central Asia and in the Pacific island developing economies (table 1.1; for more details, see subregional updates in section 3).

2.3. Inflation – picking up but still low

In line with higher global oil prices and strong aggregate demand, consumer price inflation in the developing economies of the Asia-Pacific region is projected to rise to 3.5 per cent in both 2018 and 2019 respectively compared with 3.2 per cent in 2017, with inflation accelerating in about 60 per cent of the regional economies (table 1.1). In China, Japan and the Republic of Korea, a recovery in producer prices is also expected to contribute to higher consumer price inflation. However, inflation has subsided in North and Central Asia, from 7.8 per cent in 2016 to 4.5 per cent in 2017; it is expected to remain stable in the forecast period in view of more stable commodity prices and exchange rates.

Despite some increase, inflation is likely to remain steady at low levels. Aside from country-specific factors, such as good harvests and stable food prices, there are a few global reasons for this situation related to the energy sector, currencies, capacity utilization and technology. First, despite the OPEC-plus agreement to cut oil production, oil prices are unlikely to rise significantly higher given the reduced cost of extracting shale oil in the United States where oil output exceeded 10 million barrels per day, the highest level since 1970 (United States Energy Information Agency, 2018) as well as the dramatic decline in renewable energy prices such that the average cost of electricity from certain renewables now falls within the range of that produced with fossil fuels. Second, currency appreciation in several economies has eased price pressures

Table 1.1. Economic growth and inflation, 2016-2019

	Real GDP growth				Inflation[a]			
(Percentage)	2016	2017[b]	2018[c]	2019[c]	2016	2017[b]	2018[c]	2019[c]
East and North-East Asia[d]	**4.2**	**4.6**	**4.3**	**4.0**	**1.2**	**1.2**	**1.6**	**1.8**
East and North-East Asia (excluding Japan)[d]	**6.1**	**6.3**	**6.1**	**5.9**	**1.9**	**1.6**	**2.0**	**2.2**
China	6.7	6.9	6.6	6.4	2.0	1.6	2.1	2.2
Democratic People's Republic of Korea	..	..	..	..	..	..	..	..
Hong Kong, China	2.0	3.8	3.3	3.5	2.4	1.5	2.1	2.4
Japan	0.9	1.6	1.3	0.8	-0.1	0.5	0.9	1.1
Macao, China	-0.9	9.1	7.0	6.1	2.4	1.2	2.2	2.4
Mongolia	1.5	5.1	6.0	6.7	1.1	4.3	6.0	6.5
Republic of Korea	2.8	3.1	3.0	2.9	1.0	1.9	1.7	2.0
North and Central Asia[d]	**0.3**	**2.3**	**2.3**	**2.2**	**7.8**	**4.5**	**4.4**	**4.4**
North and Central Asia (excluding Russian Federation)[d]	**2.2**	**4.2**	**3.9**	**4.2**	**10.9**	**8.3**	**6.5**	**6.1**
Armenia	0.9	7.4	3.3	3.4	-1.4	1.0	3.4	4.0
Azerbaijan	-2.7	-1.1	0.9	1.5	12.4	12.9	5.9	7.0
Georgia	2.8	4.8	4.5	4.7	2.2	6.0	3.2	3.2
Kazakhstan	1.0	4.5	3.7	3.8	14.7	7.4	6.6	5.7
Kyrgyzstan	4.3	4.6	4.2	4.6	0.4	3.2	3.0	3.0
Russian Federation	-0.2	1.9	1.9	1.8	7.1	3.7	3.9	4.0
Tajikistan	6.9	6.6	7.2	7.2	6.0	7.4	6.3	6.0
Turkmenistan	6.2	6.4	6.3	6.3	3.6	6.0	6.2	6.2
Uzbekistan	7.8	6.2	5.6	6.3	8.0	10.5	9.0	8.0
Pacific[d]	**2.7**	**2.3**	**3.0**	**3.2**	**1.3**	**2.0**	**2.3**	**2.5**
Pacific island developing economies[d]	**2.0**	**2.6**	**2.6**	**2.5**	**5.5**	**6.1**	**6.2**	**4.5**
Cook Islands	8.8	5.0	5.0	5.0	-0.1	-0.1	0.5	0.5
Fiji	0.4	4.2	3.6	3.2	3.9	2.8	3.0	3.2
Kiribati	1.1	3.1	2.3	2.4	1.9	2.2	2.5	2.5
Marshall Islands	1.9	4.0	2.5	2.4	-1.5	0.5	1.0	1.5
Micronesia (Federated States of)	-0.1	2.0	2.0	0.9	-1.0	1.5	2.0	2.0
Nauru	10.4	4.0	-4.0	0.2	8.2	6.0	2.0	2.0
Palau	0.5	-0.5	3.5	3.0	-1.3	1.5	2.0	2.0
Papua New Guinea	2.0	2.2	2.4	2.4	6.7	7.5	7.5	5.1
Samoa	7.1	3.0	1.0	1.8	0.1	1.7	2.0	2.5
Solomon Islands	3.2	3.0	3.0	3.2	1.1	0.5	1.0	2.5
Tonga	3.1	2.8	3.5	2.9	2.5	2.5	2.5	2.5
Tuvalu	4.0	3.2	3.0	2.2	3.5	2.9	2.5	2.5
Vanuatu	4.8	4.0	3.4	3.0	0.9	3.1	4.8	4.8
Developed countries in the Pacific subregion[d]	**2.7**	**2.3**	**3.0**	**3.2**	**1.2**	**1.9**	**2.3**	**2.4**
Australia	2.5	2.3	3.0	3.2	1.3	2.0	2.3	2.5
New Zealand	4.1	2.7	3.0	3.5	0.6	1.9	2.0	2.0

Table 1.1. *(continued)*

	Real GDP growth				Inflation[a]			
(Percentage)	2016	2017[b]	2018[c]	2019[c]	2016	2017[b]	2018[c]	2019[c]
South and South-West Asia[d,e]	**6.6**	**6.4**	**6.0**	**6.2**	**5.8**	**6.4**	**6.7**	**6.5**
Afghanistan	2.4	2.5	3.0	3.1	2.2	6.0	6.0	6.5
Bangladesh	7.1	7.3	7.4	7.4	5.9	5.4	5.9	5.5
Bhutan	6.4	6.8	7.0	7.3	4.0	4.5	5.0	4.8
India	7.1	6.6	7.2	7.4	4.6	3.7	5.0	5.2
Iran (Islamic Republic of)	13.4	4.5	5.1	5.3	9.0	10.0	10.9	10.5
Maldives	6.2	6.9	6.0	6.1	0.5	2.8	3.3	3.5
Nepal	0.4	7.5	4.6	5.1	9.9	4.5	6.0	5.8
Pakistan	4.5	5.3	5.6	6.0	2.9	4.2	4.9	5.2
Sri Lanka	4.4	3.7	4.8	4.9	4.0	7.7	5.2	5.0
Turkey	3.2	7.0	4.0	4.0	7.8	11.1	9.1	8.0
South-East Asia[d]	**4.6**	**5.1**	**5.1**	**5.2**	**2.2**	**2.9**	**2.9**	**3.2**
Brunei Darussalam	-2.5	0.1	1.0	1.5	-0.7	-0.1	0.3	0.5
Cambodia	6.9	6.8	6.9	6.8	3.0	3.1	3.6	3.3
Indonesia	5.0	5.1	5.3	5.4	3.5	3.8	3.5	4.0
Lao People's Democratic Republic	7.0	6.7	6.6	6.9	1.6	0.8	1.0	1.3
Malaysia	4.2	5.9	5.3	5.3	2.1	3.8	2.7	2.9
Myanmar	5.9	6.9	7.2	7.4	7.2	4.6	6.0	6.5
Philippines	6.9	6.7	6.8	6.9	1.8	3.2	4.1	3.5
Singapore	2.4	3.6	3.0	3.0	-0.5	0.6	1.0	1.3
Thailand	3.3	3.9	4.1	4.0	0.2	0.7	1.1	1.9
Timor-Leste	5.0	3.0	5.0	6.0	-1.3	1.0	2.7	3.6
Viet Nam	6.2	6.8	6.7	6.5	2.7	3.5	4.2	4.0
Memorandum items:								
Developing Asia-Pacific[f]	**5.4**	**5.8**	**5.5**	**5.5**	**3.4**	**3.2**	**3.5**	**3.5**
Least developed countries	6.0	6.8	6.8	6.9	5.8	4.9	5.6	5.5
Landlocked developing countries	2.2	4.4	4.0	4.3	10.2	7.8	6.4	6.1
Small island developing States	2.6	3.3	3.3	3.2	4.7	5.5	5.7	4.4
Developed Asia-Pacific economies[g]	**1.3**	**1.7**	**1.6**	**1.3**	**0.2**	**0.8**	**1.2**	**1.4**
Total ESCAP region	**4.2**	**4.7**	**4.5**	**4.3**	**2.5**	**2.5**	**2.8**	**2.9**

Source: ESCAP.

a Changes in the consumer price index.
b Estimates.
c Forecasts (as of 1 March 2018).
d Aggregate growth rates were calculated using 2015 GDP at 2010 United States dollars as weights, which is a change from the previous calculation method using 2010 GDP at 2010 prices. The update better reflects the current structure of economies. Largely reflecting the increase in China's weight, the shift in the base year resulted in increased aggregate growth by approximately 0.2 percentage points compared with the previous base year.
e The estimates and forecasts for countries relate to fiscal years defined as follows: 2017 refers to the fiscal year spanning the period from 1 April 2017 to 31 March 2018 in India; from 21 March 2017 to 20 March 2018 in Afghanistan and the Islamic Republic of Iran; from 1 July 2016 to 30 June 2017 in Bangladesh, Bhutan and Pakistan; and from 16 July 2016 to 15 July 2017 in Nepal.
f Developing Asia-Pacific economies consists of all countries listed in the table excluding Australia, Japan and New Zealand.
g Developed Asia-Pacific economies consists of Australia, Japan and New Zealand.

through cheaper imports, although this trend could be reversed, as discussed in section 5.1. Third, economies may still be operating below their potential, with slack capacity as mirrored in subdued growth in real wages and formal employment. Fourth, global value chains and e-commerce may be meeting demand at lower costs, while the increased use of robots in production processes places downward pressure on wages and prices (ESCAP, 2017b).

Box 1.1. Prospects for least developed countries

The Asia-Pacific region is home to 12 least developed countries. Achieving 7 per cent annual GDP growth is a target under Sustainable Development Goal 8, but only some of these countries are meeting this target. In 2017, Bangladesh, Cambodia, the Lao People's Democratic Republic, Myanmar and Nepal benefited from the favourable global and regional economic conditions and grew at or close to 7 per cent. The trade share of the Asia-Pacific least developed countries in world exports has risen in the last few years, indicating the increased role of trade in the economic development of these countries (figure A below).

Economic growth among least developed countries in the region is expected to remain robust in 2018 and 2019, with most least developed countries growing by 6-7 per cent or higher, with the exception of Nepal and the small island least developed countries. Bangladesh, Cambodia and Myanmar continue to benefit from the migration of low-cost manufacturing from such higher-wage economies as China, with positive spillover effects on their consumption and investment. Robust growth in Bhutan and the Lao People's Democratic Republic is supported by hydropower exports and investments, and large-scale transport infrastructure in the case of the Lao People's Democratic Republic. Nepal on the other hand will see growth moderate with the unwinding of post-earthquake reconstruction and subdued remittance flows. Small island least developed countries will also see growth moderate, including from weaker timber earnings in Solomon Islands and the unwinding of cyclone reconstruction in Vanuatu.

Figure A. Percentage share of Asia-Pacific least developed countries in world exports 2005-2016

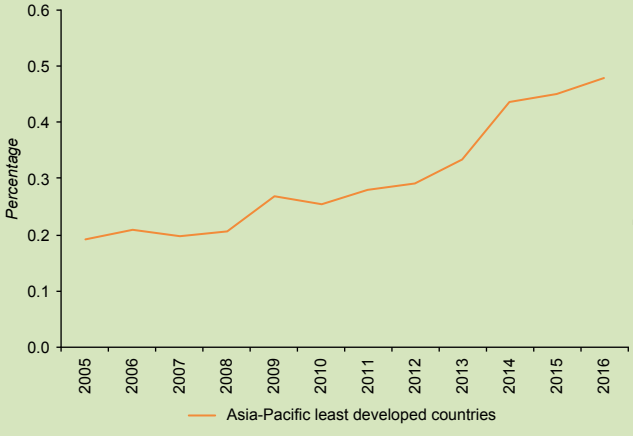
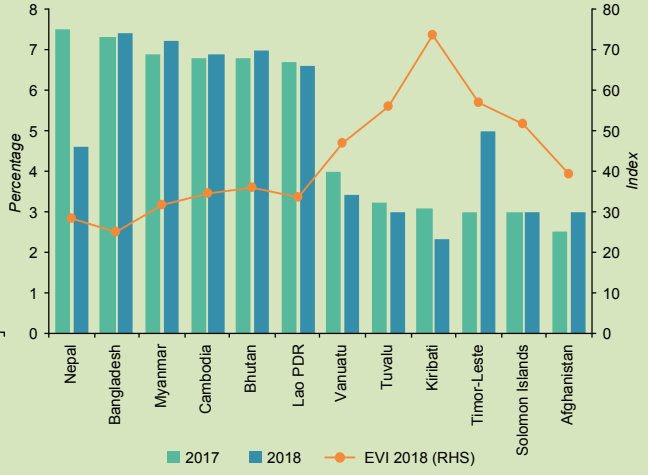


Figure B. Economic growth and vulnerability



Source: Table 1.1; United Nations Committee for Development Policy Secretariat, Triennial Review dataset 2000-2018. Available from www.un.org/development/desa/dpad/least-developed-country-category/idc-data-retrieval.html. (accessed 31 March 2018); and United Nations Comtrade Database. (accessed 31 March 2018).

Note: Economic Vulnerability Index (EVI), is a measure of structural vulnerability to economic and environmental shocks. A higher EVI represents a higher economic vulnerability. High vulnerability indicates major structural impediments to sustainable development.

Box 1.1. *(continued)*

Despite the generally positive near-term outlook, least developed countries remain highly vulnerable to terms-of-trade shocks and natural disasters, as reflected in high Economic Vulnerability Index (EVI) scores in figure B. Higher global oil prices, while providing a positive boost to oil exports from Timor-Leste, pose a downside risk for other least developed countries in the region through higher price pressures and adverse impacts on real incomes and consumption. Moreover, most least developed countries in the region are already faced with current account deficits due to large imports of capital goods for infrastructure projects; with higher oil prices, such deficits could further widen.

Least developed countries are also highly vulnerable to the impacts of environmental degradation and climate change through natural disasters and unusual weather patterns which have direct impacts on their agricultural output and productive capacity. Floods in Bangladesh and Nepal in the latter half of 2017 resulted in higher food prices. In 2015, the earthquake in Nepal and the cyclone that swept through Tuvalu and Vanuatu resulted in considerable loss of life, as well as damage to shelters and infrastructure, potentially pushing parts of the population into poverty. Furthermore, this year's Asia-Pacific Countries with Special Needs Development Report will examine how external shocks could trigger conflict and potentially result in a vicious cycle which undermines peace and development (ESCAP, 2018a).

The medium-term economic outlook for least developed countries depends critically on addressing infrastructure and skills deficits. While there has been positive progress, least developed countries face the challenge of raising sufficient resources to fund much needed infrastructure investments, as they have a small private sector and underdeveloped capital markets and thus rely on limited domestic public finance and on official development assistance (ESCAP, 2017c). At the same time, lack of high-skilled labour to capitalize on technological innovation is affecting their productivity growth as well as their prospects for expanding decent jobs. In Cambodia and Nepal, for instance, employment in high-skilled labour constitutes a mere 5 per cent of total employment. Thus, there is a need to develop human resources capacity to take on more skilled labour. Otherwise, there is risk of a slower catch-up and widening gap with more developed economies which are taking advantage of new technologies to further boost their productivity growth.

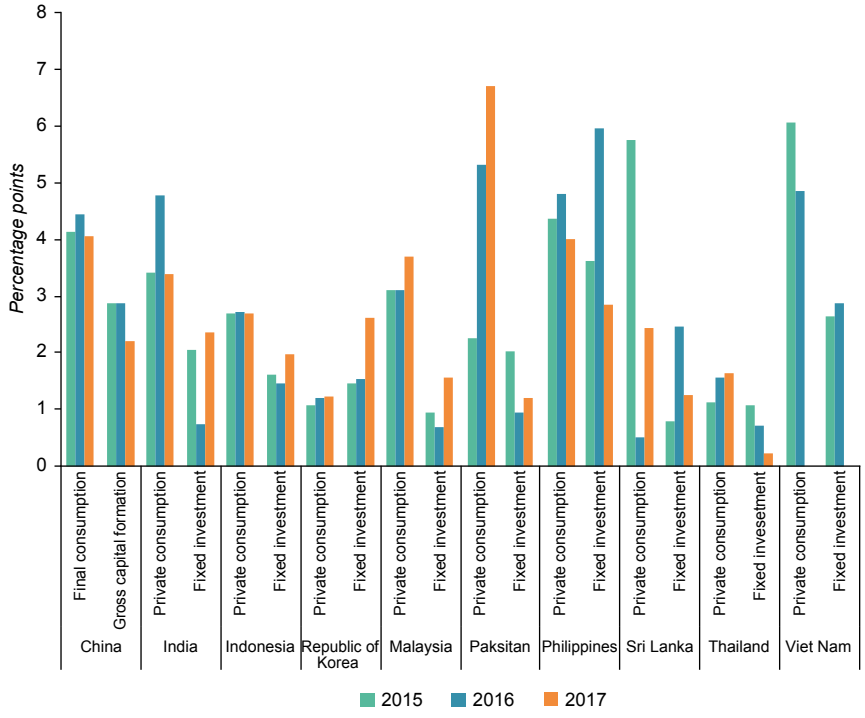
2.4. Consumption, investment and trade dynamics – strengthening the drivers of growth

Consumption

In line with the region's growing purchasing power, domestic private consumption has been the major economic growth driver in recent years (figure 1.3). Such consumption has been supported by low inflation and ease of borrowing at low interest rates as well as stable labour market conditions. Over the past year, in line with the broader economic recovery, consumer confidence indicators have also been rising in several countries. In China, rapidly expanding e-commerce and mobile payments are supporting consumption growth. Consumption also strengthened in India as the impacts of demonetization faded and in the Russian Federation, as inflation and unemployment rates declined. Another contributing factor has been the recovery in remittance flows, especially in North and Central Asia.

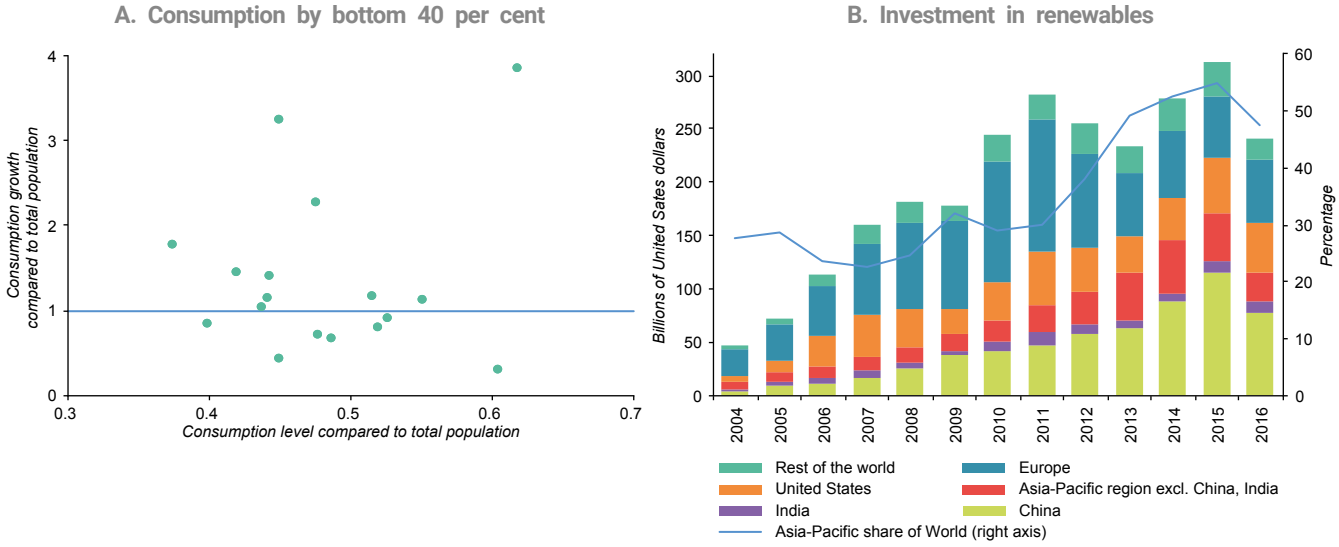
The relatively strong performance in consumption may come as a surprise given that exports and investments were relatively sluggish in recent years. A possible reason is that, compared with subdued wage growth, property and financial asset prices were buoyant, fuelling consumption by the rich, as reflected in strong sales of luxury goods. Indeed, the consumption share of the top quintile has been increasing while the other quintiles have seen their shares decrease since the 1990s. More recent data reveal that, in nearly half of the countries in the region, consumption of the bottom 40 per cent, already substantially low, grew at a slower pace than that of the average household (figure 1.4). Thus, beyond the

Figure 1.3. Contribution to GDP growth of private consumption and fixed investment



Source: ESCAP, based on CEIC Data. Available from www.ceicdata.com (accessed 1 March 2018).

Figure 1.4. How inclusive and sustainable is domestic demand?



Source: ESCAP, based on Global Database of Shared Prosperity and International Renewable Energy Agency.

Note: Panel A: blue dots below the blue line (1 on the y-axis) indicate countries where consumption of the bottom 40 per cent grew at a slower pace than the average household. The x-axis shows that consumption level of the bottom 40 per cent is less than half of that of the average household in many countries. Panel B: the bars and left axis show that the region's investment in renewable energy (combined light green, purple and red bars) has steadily increased to reach $171 billion in 2015. The dark blue line and right axis show that the region now accounts for half of the world's investment in renewable energy, such as solar and wind.

aggregate figures, assessment is needed on just how broad-based is consumption growth and whether or not particular groups are left behind.

Consumption-led economic growth may turn out to be rather fragile over time. This is because, without consistent increases in real wages backed by rising productivity, such growth can lead to debt accumulation and entail financial vulnerability. Robust investment is critical for sustained income growth, on which consumption ultimately depends. Thus, having a balanced aggregate demand mix is important, and some progress seems to be taking place. In South Asia, where the nominal share of investment is relatively low, investment growth is projected to outpace private consumption growth in the coming years, while in East Asia, particularly in China, where investment rates are relatively high, private consumption growth is projected to outpace investment growth (World Bank, 2018a).

Investment

Investment performance was relatively weak in recent years amid heightened global uncertainty. In India, weak corporate and bank balance sheets also contributed to a sharp slowdown in investment; thus, simply lowering policy interest rates was not enough to revive investment in that country. Over the past year, there has been a welcome recovery in investment. In line with firmer global demand and stronger trade, investment in export-oriented manufacturing sectors picked up. Increased public infrastructure outlays have also supported strong investment in such countries as Indonesia and Pakistan.

While leading indicators, such as the Purchasing Managers Index (PMI), would suggest further recovery in private investment in 2018, it could be short-lived due to protectionist trade measures and expected tighter financial conditions. Persistently low tax revenues and higher sovereign borrowing costs could also weigh on public investment. In China, investment growth is expected to ease further as financial stability gains higher policy priority and government efforts to curb pollution and overcapacity in certain industries continue. However, investment in high-technology manufacturing is expected to remain strong (ESCAP, 2017a). In India, the new bankruptcy code and the recapitalization package for public sector banks are expected to support a gradual recovery in private investment.

Beyond cyclical recovery, policy attention is needed concerning the long-term determinants of investment. Countries which successfully transformed their economies sustained high investment rates for an extended period. How did they do it? Based on the literature and the region's own experience, aggregate demand, cost of capital, financial development, trade openness, macroeconomic stability and regulatory quality turned out to be key determinants (box 1.2). Moreover, given that investment slowdowns tend to incur high economic loss and last for a long time if associated with balance sheet difficulties, appropriate support measures for swift recovery may be required (India, Ministry of Finance, 2018).

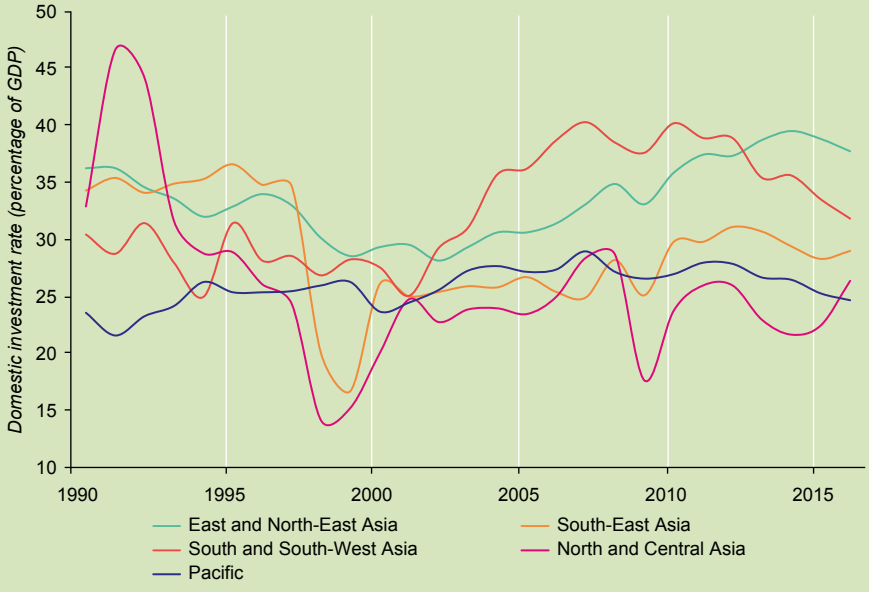
At the same time, there is a need to better assess the economic, social and environmental impacts of investment, including FDI. While the aggregate economic benefits of FDI are well known (including formal sector jobs, technology transfer and participation in global value chains), inequality and carbon emissions could increase if there are no complementary policy measures. As illustrated through a computable general equilibrium analysis, an integrated approach which includes implementation of income transfers and carbon-reducing technologies would deliver greater benefit (ESCAP, 2017d). Countries should scale up investments directly linked to sustainable development. For instance, the Asia-Pacific region's investment in renewable energy has grown rapidly in the past decade, reaching $171 billion in 2015; the region's share in global investment in renewable energy has risen from less than 30 per cent to about 50 per cent in the past decade (figure 1.4). Similarly, stimulating investment in innovative, higher value-added sectors could expand decent jobs.

Box 1.2. Investment trends and their determinants

The Asia-Pacific region's rapid economic growth in recent decades was supported by high savings and investment rates. After suffering a setback during the 1997/98 Asian financial crisis, investment rates, as a percentage of GDP, rose steadily in the 2000s before stabilizing at about 35 per cent, which is significantly higher than the global average of 23 per cent. This was, however, largely driven by China, which increased its investment rate by some 20 percentage points between the early 1990s and the early 2010s, and which now accounts for more than half of total investment in the region. Excluding China, the region had an investment rate of 26 per cent, only marginally higher than the global average and with a declining trend in recent years. An assessment of ESCAP subregions further reveals that South and South-West Asia experienced a significant slowdown since the early 2010s, largely owing to banking sector problems in India. This is worrying in view of the subregion's low productivity levels and wide infrastructure gaps.

What might explain these divergent trends? A panel regression analysis of 29 countries in the region over the period 1990-2016 shows that, in line with the literature, output level and growth positively affect investment, whereas the cost of capital (as proxied by the real interest rate) has a negative effect. Trade openness turns out to be significant, but financial openness (proxied by the Chinn-Ito index) is insignificant; this situation likely reflects the region's high trade integration and relatively low levels of capital account liberalization, including in major economies, such as China and India. Financial development is positive and significant when proxied by domestic credit extended to the private sector, but insignificant when proxied by stock market size, which likely reflects bank dominance and underdeveloped capital markets in the region. Macroeconomic stability (proxied by inflation) has a negative effect; high inflation could increase information costs and currency risks for foreign investors.

Figure A. Investment rate by ESCAP subregions



Source: ESCAP Statistical Database.

What are the policy implications? Given that investment is highly elastic to aggregate demand, countercyclical fiscal policy could support investment during economic downturns. While promoting financial development, including capital markets, adequate financial oversight is needed to avoid "boom-bust" cycles. Enhanced trade integration could help firms gain intermediate inputs for investment and provide economies of scale. Moreover, better governance, including in regulatory quality, would create an enabling environment for robust investment (ESCAP, 2017a).

Trade

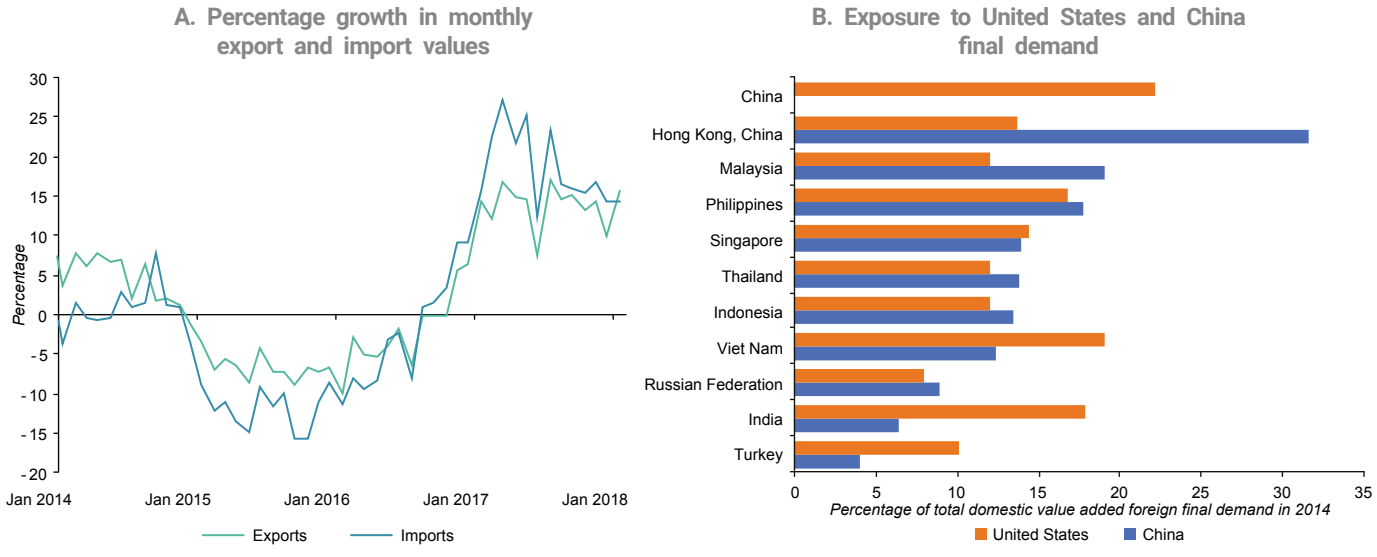
Following two years of unusually weak performance, global trade growth rebounded in 2017 from a low base. Developing countries in the Asia-Pacific region experienced a broad-based pickup in trade (figure 1.5), with export and import volumes expanding by an estimated 6.6 and 9 per cent respectively (table 1.2). Along with a firmer recovery in developed economies, stable growth in China supported regional trade. The strong rebound in electrical and electronic goods trade was a major booster, given its extensive use of regional production networks.

Despite the improved global trade outlook, some moderation is expected in 2018, with the region's export and import volumes projected to grow by 4 and 4.3 per cent respectively (table 1.2). This is because a high "base effect" will kick in, contrary to the uptick in 2017, which was measured against the previous year's weak performance. Also, given that intraregional trade takes up more than half of total trade, with China playing a central role as a production network hub and increasingly as source of final demand (figure 1.5), growth moderation in China could be reflected in its import demand, especially for metals and other investment-related goods.

The medium-term trade outlook is uncertain. On one hand, the explosive growth in global trade in the decade following China's accession to the World Trade Organization (WTO) will not be replicated. China's industrial upgrading has also reduced its import demand for intermediate goods, which are now being sourced domestically. On the other hand, substantial scope remains for greater trade integration of South Asian economies and least developed countries. It is encouraging that the share of least developed countries in global exports has steadily increased, albeit from very low levels (box 1.1). Technological progress and trade facilitation could also support small firms' integration into global value chains.

Trade has contributed to the region's rapid economic growth and poverty reduction in recent decades, but has come under increased scrutiny in recent years amid rising income inequality and wealth concentration. Trade liberalization measures, pursued in a multilateral manner, are needed. However, the debate over the benefits of trade is getting diluted in dealing with rising

Figure 1.5. Trade performance and final demand



Source: ESCAP based on CEIC Data. Available from www.ceicdata.com (accessed 1 March 2018); and OECD-WTO, Trade-in-Value Added Database.

Note: Panel A shows the average value for 10 major regional economies. Panel B shows that China is now on par with the United States in terms of final demand for regional exports, especially for South-East Asian economies.

Table 1.2. Export and import growth, 2017-2019

(Annual percentage change)

	Exports									Imports								
	2017			2018[a]			2019[a]			2017[a]			2018[a]			2019[a]		
	Value	Price	Volume	Value	Price	Volume	Value	Price	Volume	Value	Price	Volume	Value	Price	Volume	Value	Price	Volume
Australia	18.3	9.0	8.5	-4.0	-9.3	5.9	5.6	0.6	4.9	8.2	2.8	5.3	3.1	1.3	1.8	4.8	1.7	3.1
Azerbaijan	22.1	..	..	5.3	..	..	-3.4	..	..	-3.0	0.0	-3.0	4.0	2.0	2.0	4.9	2.0	2.8
Bangladesh	5.0	3.6	1.4	7.2	1.4	5.7	6.0	1.7	4.2	18.8	0.7	18.0	3.8	-1.5	5.4	3.9	-1.2	5.2
China	9.4	4.0	5.2	7.9	3.9	3.8	7.6	3.2	4.3	16.2	6.6	9.0	6.6	2.6	3.9	7.2	3.9	3.2
Hong Kong, China	8.1	1.5	6.5	7.0	2.2	4.7	6.8	2.3	4.4	8.2	1.6	6.5	6.8	2.9	3.8	6.9	2.5	4.3
India	11.9	-4.7	17.4	10.3	-5.5	16.7	3.3	-2.1	5.5	18.2	6.4	11.1	13.1	3.5	9.3	1.6	-0.3	1.9
Indonesia	16.4	5.7	10.1	16.1	6.2	9.4	10.9	3.5	7.2	15.5	6.6	8.4	19.4	6.7	11.9	16.2	7.3	8.3
Iran (Islamic Reppublic of)	18.0	9.3	8.0	10.3	7.1	3.0	6.0	-1.0	7.1	21.0	25.9	-3.9	9.2	12.9	-3.3	9.0	12.0	-2.7
Japan	7.7	5.6	2.0	8.4	5.6	2.6	9.8	12.0	-2.0	9.4	10.0	-0.6	10.1	11.7	-1.4	9.0	6.8	2.1
Kazakhstan	32.2	21.7	8.6	16.7	10.7	5.4	1.0	-2.1	3.2	13.1	8.3	4.5	8.8	5.0	3.6	5.6	2.2	3.3
Malaysia	14.3	4.4	9.5	11.5	3.3	8.0	9.5	3.1	6.2	16.9	5.2	11.1	13.0	2.5	10.3	11.8	4.2	7.3
New Zealand	13.7	13.2	0.4	0.6	-4.9	5.8	3.8	-0.8	4.6	11.0	5.3	5.4	0.7	-0.6	1.3	4.2	1.5	2.6
Pakistan	6.4	2.0	4.3	6.2	1.2	4.9	4.5	0.7	3.8	21.9	5.2	15.9	5.7	2.4	3.3	1.3	-6.9	8.8
Philippines	14.3	-5.8	21.3	16.8	4.2	12.1	13.7	2.5	10.9	13.3	-5.1	19.4	10.9	0.9	9.9	10.5	1.9	8.5
Republic of Korea	25.5	15.5	8.6	11.7	8.7	2.7	3.1	-0.7	3.8	24.2	3.9	19.5	5.8	4.1	1.6	5.2	1.2	3.9
Russian Federation	10.0	9.5	0.4	8.5	6.7	1.7	4.2	3.4	0.8	14.8	8.2	6.1	9.6	6.9	2.5	3.7	-1.0	4.7
Singapore	12.8	8.9	3.5	6.5	9.1	-2.4	7.2	5.3	1.8	16.4	9.3	6.4	5.0	3.9	1.1	4.6	1.3	3.3
Sri Lanka	10.6	5.6	4.8	8.6	3.4	5.0	7.6	2.1	5.4	9.6	6.6	2.9	10.2	4.0	5.9	6.5	1.4	5.0
Taiwan, Province of China	12.1	4.6	7.2	5.6	2.1	3.4	4.4	2.0	2.4	11.6	7.6	3.7	6.6	3.4	3.1	4.8	0.7	4.1
Thailand	13.4	6.2	6.8	4.8	2.7	2.0	2.7	1.0	1.6	15.8	5.4	9.8	5.9	3.3	2.6	4.9	0.6	4.3
Turkey	10.9	1.3	9.4	9.0	4.0	4.8	6.6	2.1	4.5	17.7	7.5	9.5	7.6	2.0	5.5	5.4	1.3	4.1
Viet Nam	20.2	5.5	13.9	10.1	3.2	6.7	8.7	2.4	6.1	26.8	9.3	16.1	10.3	3.6	6.5	9.4	2.9	6.3
Asia-Pacific[b]	11.8	5.6	6.1	8.0	4.0	3.9	6.8	3.4	3.4	14.9	7.3	7.6	8.0	4.5	3.5	6.6	2.8	3.8
Developed Asia-Pacific[b]	10.3	6.7	3.6	5.1	1.5	3.6	8.6	8.5	0.1	9.2	8.2	1.0	8.0	8.6	-0.6	7.9	5.5	2.3
Developing Asia-Pacific[b]	12.0	5.4	6.6	8.4	4.4	4.0	6.5	2.5	4.0	15.9	6.9	9.0	8.0	3.7	4.3	6.4	2.3	4.1

Source: United Nations, Economic and Social Commission for Asia and the Pacific, *Asia-Pacific Trade and Investment Report 2017* (March 2018 update).

Note: The estimated growth rates are calculated based on constant prices (in 2010 terms).

a Projections.

b Regional trade growth is the trade-weighted, time-varying average growth rate.

inequalities. Trade is key to implementing the 2030 Agenda, but just as is the case with economic growth, it cannot be a sufficient condition for achieving sustainable development. Efforts are needed to make trade more inclusive and eco-friendly, including through complementary policy measures to help adversely affected workers and firms through their transition.

3. Subregional economic updates – diversity of the region

3.1. East and North-East Asia

The East and North-East Asian subregion accounts for a large share of the region's total GDP and trade. With a rapidly ageing population and as a leader in technology and innovation, the subregion also has a relatively high income and large surplus savings. Most countries in the subregion are net energy importers.

In 2017, economic growth in this subregion accelerated to 4.6 per cent, from 4.2 per cent in 2016, on the back of strong domestic consumption and recovery in external demand. China achieved faster economic growth for the first time since 2010. Consumption grew faster than investment and services faster than industry in line with ongoing rebalancing efforts. In Japan, the unemployment rate declined to a record low. In the Republic of Korea, such export sectors as semiconductors experienced strong growth. Similarly, the economy of Hong Kong, China benefited from stronger global demand, and the gambling sector in Macau, China profited from stronger tourist arrivals. Mongolia's economy rebounded despite budget cuts, benefiting from non-mining construction, the price hike for coal and stronger external demand for this commodity (partly due to reductions in China's coal production). While the Democratic People's Republic of Korea does not release official economic statistics, international sanctions are likely to be having a significantly negative impact on its economy.

In 2018 and 2019, the subregion's economies are likely to continue benefiting from an improved external environment as well as strong domestic demand, but at a slower pace of 4.3 and 4 per cent respectively. Notably, growth in China is expected to ease steadily as financial stability gains higher policy priority. Japan is expecting continued moderate recovery on the back of supportive monetary and fiscal policy measures; however, a widening primary deficit and very high government debt raise concerns. In the Republic of Korea, the planned increase in employment and social spending are expected to boost household income and consumption. Higher minimum wages will support equity objectives but could weaken competitiveness if there are no commensurate productivity gains. Mongolia remains vulnerable to commodity price swings. A three-year programme of the International Monetary Fund (IMF) in that country is aimed at strengthening the banking sector and improving fiscal policymaking.

Inflation in most countries was subdued in 2017, except for Mongolia where the depreciation of the currency and a tax hike on fuel pushed up the inflation rate. Inflation in the subregion is projected to accelerate in 2018 and 2019, but to still manageable rates of 1.6 and 1.8 per cent respectively compared with 1.2 per cent in the previous two years.

While China and the Republic of Korea have relatively strong fiscal positions, spending on health care and pensions is expected to increase significantly in the future in line with rapid population ageing. There is scope for the subregion's surplus savings, including pension fund assets, to be better channelled to the rest of the region's investment needs, which could provide high returns and thus be mutually beneficial. Outbound investments from this subregion already account for a large share of intraregional FDI. On trade, China is promoting the vision of the proposed "Free Trade Area of the Asia-Pacific", which would build on the proposed "Regional Comprehensive Economic Partnership", an ASEAN+6 trade deal currently under negotiation. In the absence of the United States, Japan championed negotiations on the Trans-Pacific Partnership (TPP), another

mega trade deal which also includes, among other countries, Australia, Brunei Darussalam, Malaysia, New Zealand, Singapore and Viet Nam in the ESCAP region. The modified TPP was signed in March 2018 and is now called the Comprehensive and Progressive Agreement for Trans-Pacific Partnership.

3.2. South and South-West Asia

The South and South-West Asian subregion accounts for a large share of the region's total population and an even greater share of its youth population. The incidence of poverty and the share of vulnerable employment in the subregion are relatively high, and there are wide infrastructure gaps. There is significant scope for greater trade integration. Most countries in the subregion are net energy importers.

In 2017, economic growth decelerated to 6.4 per cent, from 6.6 per cent in 2016. Despite the slowdown, it remains the fastest-growing subregion in Asia and the Pacific. In fact, growth accelerated in all but two countries: India and Sri Lanka. The recently introduced goods and services tax (GST) as well as protracted issues of corporate and bank balance sheet problems pushed the growth rate of India downward. For Sri Lanka, growth moderated further due to severe weather disruptions. In Bangladesh, robust growth has been supported by domestic demand, especially large infrastructure projects and new initiatives in the energy sector. Remittance flows have also started to increase with the increase in global oil prices.

Economic growth is forecast to further moderate to 6 per cent in 2018 before picking up to 6.2 per cent in 2019. Further moderation this year is largely due to Turkey and to a lesser degree Nepal, where the effects of fiscal stimulus and reconstruction are fading; however, growth elsewhere will accelerate. In India, a gradual recovery is expected; private investment is expected to revive as the corporate sector adjusts to GST, infrastructure spending increases and corporate and bank balance sheets improve with government support. Further growth acceleration is projected for Pakistan on the back of increased infrastructure investment; however, wide fiscal and current account deficits raise concerns. Similarly, while Bangladesh is expecting faster growth, the banking sector has been plagued by financial scams, non-performing loans and weak monitoring problems, which might cause a macroeconomic risk in the near term. Sri Lanka's exports are likely to benefit from the reinstatement of the GSP+ component of the European Union's Generalized Scheme of Preferences for developing countries. Growth in the Islamic Republic of Iran is expected to pick up slightly, with higher investment growth offset by lower oil production and limited access to finance.

Inflation accelerated in 2017 mainly as a result of increased food and fuel prices following severe floods in several countries and rising global oil prices. In India, higher inflation was also due to the housing rent allowances for civil servants and military staff recommended by the Seventh Pay Commission. While inflation is expected to remain stable in the forecast period, risks are posed by global oil prices (box 1.4). If higher oil prices require tighter monetary policy to meet the inflation target, real interest rates could exert a drag on consumption.

At the same time, fiscal space is relatively limited in most countries, owing to persistently low tax revenues and high debt-servicing costs. In the wake of upcoming national elections in several countries (Afghanistan, Bangladesh, India, Maldives and Pakistan), effective fiscal management is even more important. Despite progress, the subregion suffers from wide development gaps, especially in social indicators of education and health but also in infrastructure and energy. While the subregion is home to some of the most successful social programmes in Asia and the Pacific, including cash transfers and employment guarantee schemes, further progress is needed to reduce leakage, including by leveraging technology. India has announced in its new budget a major plan to extend health insurance to some 500 million people in financially vulnerable households. Further progress is also needed to improve female labour participation and working conditions (ESCAP, 2016a).

3.3. North and Central Asia

The North and Central Asian subregion accounts for a large share of the region's energy supply. With limited economic diversification, however, most economies in the subregion remain vulnerable to commodity price swings, as has been witnessed in recent years. Most countries are landlocked, posing an additional constraint for integration into the global economy. The economy of the Russian Federation has experienced wide spillover effects through trade, investment and remittances.

In 2017, economic growth rebounded to 2.3 per cent, from 0.3 per cent in 2016, led by the Russian Federation, which emerged from a two-year contraction, and stronger growth in Kazakhstan. The upturn was clearly driven by higher oil prices and more stable inflation, credit and employment conditions as countries recovered from the 2014 terms-of-trade shock. In the Russian Federation, prudent fiscal management and bank recapitalization supported macroeconomic stability, while structural reforms, including the reorganization of agricultural business entities, have helped to increase productivity. However, Azerbaijan underwent another year of recession as banking sector problems constrained credit growth, and external stability concerns prompted monetary tightening.

The economic outlook is stable, with growth expected to be sustained at 2.3 and 2.2 per cent in 2018 and 2019 respectively. This positive situation is underpinned by stable growth in the Russian Federation. Growth will ease in Kazakhstan as one-off effects of increased oil production and fiscal stimulus start to wane. The market integration process driven by the Eurasian Economic Union is expected to support greater intrasubregional trade and facilitate stable remittance flows. The 2017 accession of India and Pakistan to the Shanghai Cooperation Organisation offers an opportunity for the subregion to connect with South Asia along with several regional energy projects, such as the Central Asia-South Asia electricity transmission system, commonly known as CASA-1000. Gas trade with South Asia could be expanded though the Turkmenistan-Afghanistan-Pakistan-India pipeline. The recently agreed Lapis-Lazuli Corridor would also strengthen transit and transport cooperation between Afghanistan, Azerbaijan, Georgia, Turkey and Turkmenistan.

Inflation decelerated to 4.5 per cent in 2017, from 7.8 per cent in 2016, and the outlook is stable. The deceleration was due to more stable exchange rates in Kazakhstan and the Russian Federation. Inflation remained high in Azerbaijan but is expected to ease in the forecast period. Overall, lower inflation has enabled more accommodative monetary stances, supporting the subregion's economic recovery.

While most countries have low government debt-to-GDP ratios, the terms-of-trade shock in 2014 had significant revenue implications and has turned the debt trajectory towards an upward trend. Thanks to prudent fiscal management during the commodity boom years, many countries had fiscal space for economic stabilization against the shock. However, diversification of revenue sources is a priority in going forward. Several countries, including Azerbaijan and Tajikistan, also need to address problems in the banking sector. Strengthening the subregion's financial sector will be important for supporting entrepreneurship, economic diversification and infrastructure development.

3.4. South-East Asia

In 2017, several economies in South-East Asia experienced higher-than-expected economic growth owing to the rebound in global trade and domestic stimulus measures. For example, in Thailand the Fiscal Policy Office upgraded its economic growth forecast for 2018 to 4.2 per cent, from 3.8 per cent (Chaitrong, 2018). Other economies, such as Malaysia and Singapore, expanded at a slightly slower pace in the fourth quarter of 2017, but their prospects for growth in 2018 remain solid.

Overall for the subregion, economic growth in 2018 and 2019 is expected to be strong at 5.1 and 5.2 per cent respectively. Some economies are particularly buoyant: Cambodia, Myanmar and Viet Nam will continue to record growth

rates exceeding 6 per cent owing mainly to relatively low wage costs and their advantageous geographical locations. Economic performance is clearly supported by exports, which are expected to remain steady and continue contributing to economic growth in 2018 (table 1.2). However, macroeconomic risks identified in section 4 could weigh on South-East Asia's outlook, including trade protectionist measures and financial risks related to capital flows and domestic private debt.

Currently, most countries in the subregion show relatively low and stable inflation, including some that in the past struggled due to natural disasters, which disrupted the supply chain and pushed prices upward. For instance, the Philippines central bank, which has an annual inflation target of 2-4 per cent, met its goal six times in the past eight years; in the two times that it did not, prices were low. In the context of ongoing monetary normalization in the United States, further policy rate cuts are unlikely, especially given that monetary policy stances are already very accommodative, with policy rates at a historic low in some countries. Only Indonesia has reduced its policy rate in recent months.

Several policy developments are worth noting. FinTech is picking up momentum. In 2017, Indonesia recorded foreign investment in the digital economy worth $4.8 billion (Jakarta Post, 2018). The country's central bank launched the National Payment Gateway (*Gerbang Pembayaran Nasional*), an integrated electronic payment system that reduces the cost that banks charge customers from 2-3 per cent to 1 per cent. Also in the realm of FinTech, other countries, such as Thailand, are currently studying how to regulate such segments as cryptocurrencies.

Infrastructure investment remains an important priority. In the Lao People's Democratic Republic, issuing bonds is one of the steps that have been taken to address the budget deficit and ease budgetary tensions: in 2018, the Government plans to issue domestic bonds worth 3.3 trillion kip and other bonds worth 3.2 trillion kip ($400 million). There have also been several trade enhancement measures. In December 2017, the central banks of Indonesia, Malaysia and Thailand announced the launching of a local currency settlement framework between them, which is aimed at boosting trade and operational efficiency. In January 2018, China and Thailand extended for two more years a currency swap agreement initially agreed in 2014.

Several countries in South-East Asia are part of major trade negotiations, including the proposed "Regional Comprehensive Economic Partnership". In March 2018, Brunei Darussalam, Malaysia, Singapore and Viet Nam joined other countries from Asia and the Pacific as well as other regions to become parties to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, which will come into force in 2019. Others such as Indonesia and the Philippines have expressed interest as well. In this new TPP agreement, also known as TPP11, remarkably few of the original provisions were frozen, making the agreement "one of the world's most exacting trade pacts, measured by openness to investment from other members, the protection of patents and environmental safeguards" (Economist, 2018). Only a few concessions have been made; for instance, Malaysia will not immediately have to liberalize its State-owned enterprises, and Viet Nam can put on hold new rules about resolving labour disputes and allowing independent trade unions.

3.5. Pacific

Pacific island developing economies are typically small in terms of population and land area and have limited resources. When combined with their narrow economic base, these conditions make them especially vulnerable to external shocks, including natural disasters, which have become more frequent. A sizeable proportion of Pacific islanders, particularly in rural and outer islands, lack access to basic public services, such as safe drinking water, sanitation, reliable sources of energy, education and health care. As a result, levels of hardship remain relatively high in most of these countries, exacerbated by youth unemployment and limited private sector development.

The subregion's ability to sustain economic growth has been hampered by a range of

factors. Limited access to, and the costs of, connectivity through transport, energy and information and communications technology infrastructure networks, and low human and institutional capacities remain key constraints. External factors include the impacts of natural disasters, variable and limited investment, trade and aid flows.

In 2017, Pacific island developing economies collectively grew by 2.6 per cent, up from 2 per cent in 2016, broadly supported by tourism activities, resource and agricultural production and infrastructure upgrades. Economic growth remained highly uneven across economies. Improved agricultural and mineral production boosted growth as did spending in preparation for hosting the 2018 Asia-Pacific Economic Cooperation (APEC) meetings in Papua New Guinea, a country which accounts for close to 60 per cent of the total GDP of the Pacific island developing economies. In Fiji, tourism, retail trade, manufacturing, construction activity and infrastructure upgrades supported growth. Similarly, Vanuatu's economy benefited from ongoing infrastructure upgrades, as well as from tourism activity. The economies of Marshall Islands and the Federated States of Micronesia rebounded, based on higher spending on infrastructure, while growth remained solid in Solomon Islands and Tonga based on retail trade and construction output. The smaller atoll economies of Kiribati and Tuvalu received windfall fishing licence revenue, which resulted in increased public spending and infrastructure projects in support of growth. The economies of Cook Islands, Nauru, Palau and Samoa slowed for several reasons, including lower tourism and retail trade activities and the tapering of public spending. In 2018 and 2019, the subregion's economies are expected to benefit from a supportive domestic and external environment, with growth remaining stable at 2.6 and 2.5 per cent respectively.

Inflation in most countries was subdued in 2017, except for Papua New Guinea where currency movements and drought affected the local food supply, and for Nauru where food and fuel prices raised the inflation rate. In 2018 and 2019, inflation in the subregion is forecast at 6.2 and 4.5 per cent respectively compared with 6.1 per cent in 2017, being still at manageable levels for most countries, except Papua New Guinea due to expected spillover effects of the drought.

Economies in the subregion have comparative advantages in certain niche and higher value-added industries, such as sustainable tourism, organic agriculture and fishery activities. At the same time, further reforms are needed to move away from producing and exporting primary commodities, while boosting entrepreneurship and innovation to increase countries' competitiveness. In addition, to raise household income levels, global employment opportunities in the security industry, sports, caregiving, seafaring and various seasonal work schemes can be further tapped.

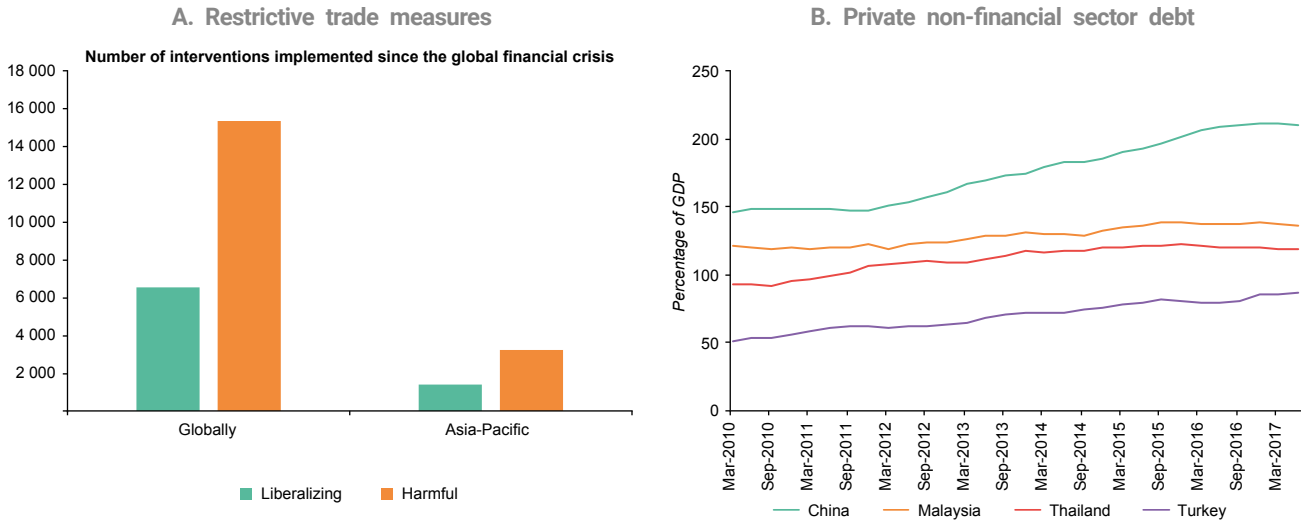
4. Macroeconomic risks and medium-term challenges to the economic outlook

4.1. Protectionism, financial risks and commodity prices – examples of key macroeconomic risks

While the region's economic outlook for 2018 and 2019 is broadly stable, uncertainties and risks loom on the horizon. Elevated levels of policy uncertainty continue to cloud prospects for global trade, migration and climate targets, and may delay a more broad-based rebound in global investment and productivity (United Nations, 2017).

Trade protectionism casts a shadow on the chances for a consistent revival in trade. In the aftermath of the global financial crisis that started almost a decade ago, the use of trade-restrictive measures rose considerably (figure 1.6), including non-tariff measures, which are less transparent and could be more harmful than other measures. According to WTO data (which are based on what member States report to WTO), there was a moderation in trade intervention in 2017 in terms of both restrictive and liberalization measures. Based on an alternative source, such as the Global Trade Alert, however, it is estimated that, for each

Figure 1.6. Trade barriers and financial vulnerabilities



Source: ESCAP, based on Global Trade Alert. Available from www.globaltradealert.org (accessed 1 March 2018); and Bank for International Settlements. Available from www.bis.org (accessed 1 March 2018).

Box 1.3. Steel tariffs by the United States: A prelude to a trade war

On 8 March 2018, the President of the United States, signed an executive order that would impose tariffs of 25 and 10 per cent on imports of steel and aluminum respectively. Imposition of steel tariffs is not new for the United States, nor is it the only measure having impacts on this sector. This time, however, the rationale behind the action refers to "national security", permitted under Article XXI (entitled "Security Exceptions") of the General Agreement on Tariffs and Trade 1994. As Article XXI has never been subjected to the dispute settlement mechanism and the "national security" rationale cannot be challenged in the World Trade Organization (WTO) – despite the fact that Unites States military requirements for steel and aluminum account for only 3 per cent of local production – the only option left is retaliatory action, potentially leading to a trade war.

There are rarely good economic arguments for imposing import tariffs, particularly when looking beyond a narrow sectoral/group protectionist interest. Indeed, tariffs imposed during the presidency of George W. Bush, which were applied for only 21 months, while linked to an increase of 3,500 jobs in steel industry employment, came at a staggering cost of $400,000 per job created or preserved. The current tariffs are also likely to result in job losses in sectors depending on competitively priced steel and aluminum, such as automobile manufacturing and the production of beverages. Judging by the impact of the 2002 tariffs, the latest round of tariffs could result in the loss of 200,000 jobs.

The tariffs on steel and aluminum, as well as other protectionist measures invoked or threatened, should be seen as continuation of the current United States Administration's unorthodox negotiating tactics that started with its withdrawal in January 2017 from the Trans Pacific Partnership, promising much "better" deals to be negotiated bilaterally. It appears that the United States Administration has decided to first raise the barriers to trade and then remove them in a selective manner, based on concessions captured by the negotiating parties. Indeed, 65 per cent of imported steel is excluded from paying these new tariffs (China accounts for just over 3 per cent of United States imports of steel) and 55 per cent of aluminum (China accounts for 16 per cent), because imports from Argentina, Australia, Brazil, Canada, Mexico, the Republic of Korea and the European Union are excluded under the current arrangements. The Republic of

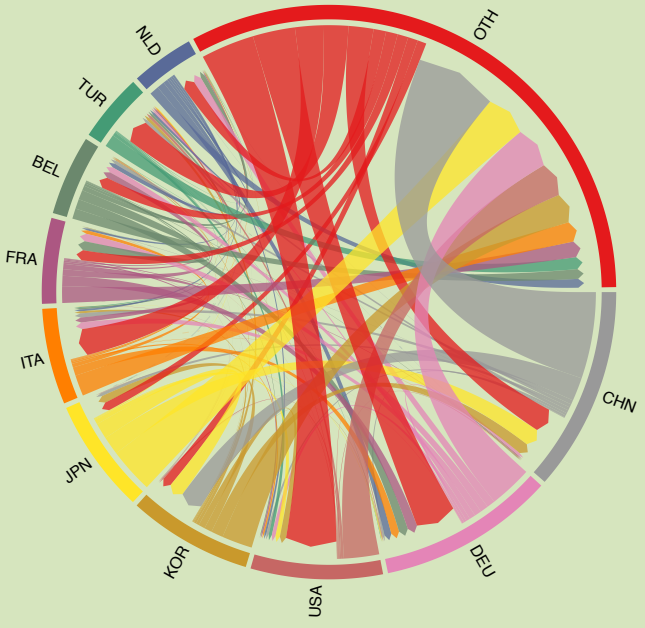
Box 1.3. *(continued)*

Korea agreed to renegotiate its free trade agreement with the United States to expand its import quota for cars and extend the phasing out of some tariffs while promising to restrain steel exports by 70 per cent of their recent levels. This move effectively re-introduced voluntary export restraint arrangements which were banned in 2002 by WTO. Similarly, Australia has reached a "security agreement" with the United States to qualify for an exemption.

In a broader context, it is the United States bilateral trade imbalance with China which has driven these measures. The current merchandise trade deficit of $375 billion is blamed on unfair trade, mainly associated with practices involving technology transfer, use of intellectual property and innovation. As the trade in steel with China (already subject to safeguard measures) is relatively small (see figure below), the United States announced on 22 March 2018 tariffs of up to $60 billion on imports from China, and on 3 April 2018 it announced an additional 25 per cent tariff on a list of 1,300 products worth $50 billion. In response, China announced a proposed list of 128 products imported from the United States, valued at about $3 billion as the target for the "tit for tat" tariffs, followed by a further list of 106 products with an import value of $50 billion which would face a 25 per cent tariff in retaliation for the second wave of tariffs.

Large and persistent current account deficits often lead to blaming trade partners about unfair trade practices. However, there are several points worth noting, including how current accounts are measured and what factors really drive current account deficits. First, the reported trade balances are based on the gross commercial value of cross-border flows of goods and services, which do not capture the complex nature of global trade today where countries often import intermediate goods and services for adding value locally before they are (re)exported. Adjusted by the value added, flows reveal a significant reduction in the bilateral trade deficit between developed and developing countries, including between China and the United States. Second, the current account deficit may not indicate competitiveness levels but rather a low level of national savings relative to investment. This means that current account deficits can occur in a country that is highly productive and rapidly growing or in a country where fiscal policy is mismanaged or where there is overconsumption. The savings-investment imbalance implies that the deficit is unlikely to respond to protectionist policies because there is no obvious connection between protectionism and savings or investment. In fact, a deficit can be desirable or undesirable for a country at a particular time depending on the factors underlying the trend.

Global steel trade pattern, 2016



Source: ESCAP calculations using data from UN Comtrade database (accessed March 2018): chapter 72 (iron and steel) imports and mirror imports, 2016.

Note: CHN = China, DEU = Germany, USA = United States of America, KOR = Republic of Korea, JPN = Japan, ITA = Italy, FRA = France, BEL = Belgium, TUR = Turkey, NLD = Netherlands, OTH = Others.

liberalizing trade measure that economies in the Asia-Pacific region implemented between 2014 and 2017, an average of 3.7 restrictive measures were adopted. Recent measures, such as tariffs imposed by the United States on imports of solar cells and washing machines, and on steel and aluminium imports from certain countries, also suggest that trade protectionism remains a risk (box 1.3). A rise in trade barriers may disrupt cross-border production networks, thus adversely affecting trade, and may provoke retaliatory measures. Even if many of the fears of a "trade war" are not realized, rising uncertainties could be a disincentive for long-term investment and trade (ESCAP, 2017c).

At the same time, a prolonged period of abundant global liquidity and low borrowing costs have contributed to a further rise in global debt levels and a build-up of financial vulnerabilities. Many developing countries, especially those with more open capital markets, remain vulnerable to spikes in risk aversion, a disorderly tightening of global liquidity conditions and sudden capital withdrawal (United Nations, 2017). In view of the ongoing economic recovery in the United States and the eurozone, faster-than-expected interest rate increases cannot be ruled out. This could dampen capital flows to the region and increase exchange rate volatility. Countries which rely heavily on external financing, such as Malaysia, Sri Lanka and Turkey, are particularly vulnerable. While the weak United States dollar has provided some space for gradual adjustment to financial tightening, the dollar could easily revert to its recent trend of strengthening on the back of a strong United States economy.

A related source of financial vulnerability is the high or rising private debt in some economies (figure 1.6). Rapid increases in private debt can easily affect whole financial systems, as experienced during the Asian financial crisis that started in 1997 (ESCAP, 2017b). In China, non-financial corporate debt, held largely by State-owned enterprises, is at a record high while shadow banking, including in wealth products, has emerged as a source of vulnerability. Effectively addressing these challenges will be important for securing financial stability and ensuring efficient allocation of resources. Failing to do so could also have adverse spillover effects on the Asia-Pacific region through trade and confidence channels, as had been observed in 2015 and early 2016 (ESCAP, 2016a).

In some countries, overall private debt levels remain relatively low, but there are considerable financial sector problems, which impose a heavy cost on the economy and have direct fiscal

Box 1.4. Potential impacts of higher oil prices

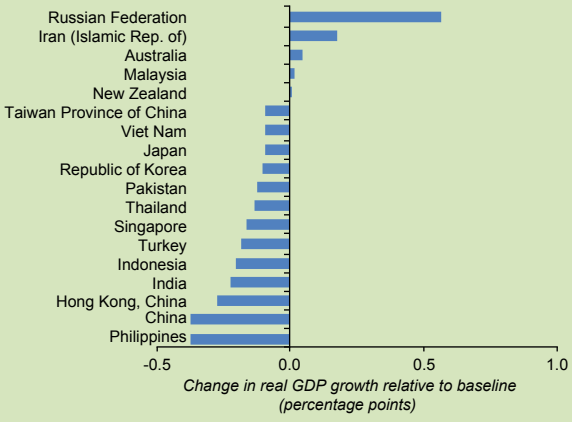
Global oil prices have broad macroeconomic implications, producing roughly the opposite effects on oil exporters and importers. The commodity boom of the 2000s provided a significant boost for commodity exporters, but the end of the "supercycle", particularly the oil price slump in 2014, had severe consequences. Sharp currency losses and high inflation on one hand and extensive revenue losses on the other prompted tighter monetary and fiscal conditions at a time when some economies were already struggling from a collapse in private investment. At the other end of the spectrum, net commodity importers enjoyed a positive terms-of-trade shock. Lower oil prices provided ample breathing space for importers suffering from current account and fiscal account deficits. Low and stable inflation also enabled an accommodative monetary stance, boosting domestic demand. In addition, lower oil prices encouraged both exporters and importers to phase out their domestic fossil fuel subsidies, which had a positive environmental impact and opened up more fiscal space.

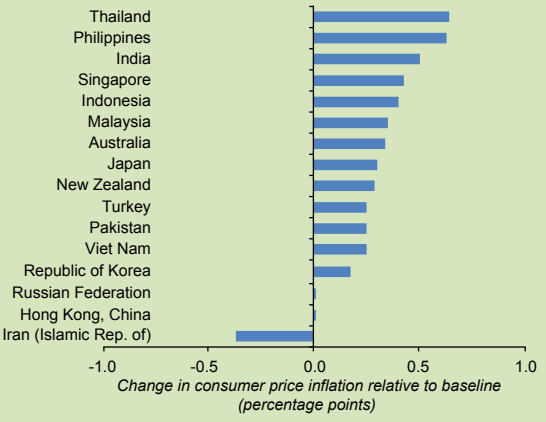
A faster-than-anticipated pickup in global oil prices in recent months has supported the economic recovery of oil exporters but raised worries among oil importers. For India, it is estimated that a $10 per barrel increase in oil prices reduces GDP growth by 0.2-0.3 percentage points, increases inflation by about 1.7 percentage points and worsens the current account balance by about $9-10 billion (India, Ministry of Finance, 2017).

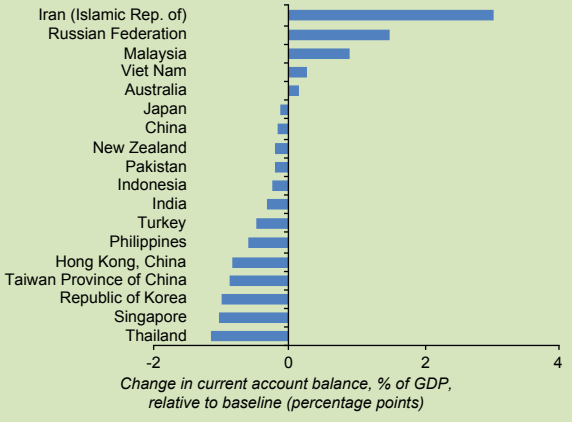
Box 1.4. *(continued)*

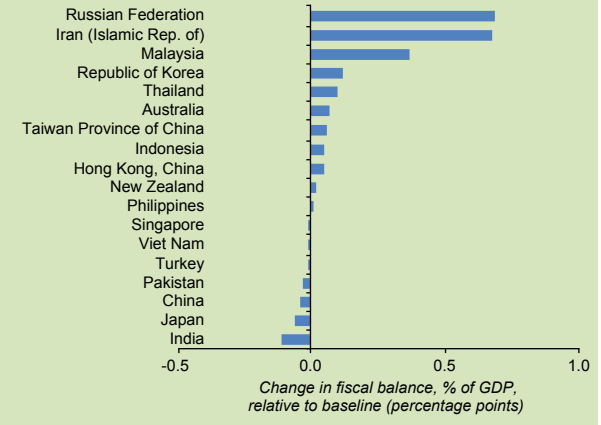
A similar simulation was considered for 18 economies in the region (see figures below). An increase in the oil price by $10 per barrel would dent GDP growth of oil importers in the region by 0.1-0.4 percentage points, but boost growth by 0.7 percentage points for the Russian Federation. Inflation would increase by 0.5-0.7 percentage points for oil importers, such as India, the Philippines and Thailand. Deterioration in the current account balance by an average of 0.5-1 percentage points is evident in large oil importers, such as the Republic of Korea and Thailand, but by only 0.2 percentage points in China, perhaps due to the rapidly increased share of renewables in its energy mix. Fiscal balance would improve by more than half a percentage point in large oil exporters, such as the Islamic Republic of Iran and the Russian Federation, while a decline by 0.1 percentage points or less would be experienced by oil importers in the region. The phasing out of fossil fuel subsidies in recent years seems to have mitigated the impact of higher oil prices on the national budgets of oil importers.

Average change in 2018/19 of a rise in the oil price by $10 per barrel, relative to baseline (percentage points)









Source: ESCAP, based on the Oxford Global Economic Model.

Note: The simulation assumes that global crude oil price (Brent) in 2018 and 2019 is $10 per barrel higher than the baseline. The baseline prices (as projected by the Oxford model) are $67.75 per barrel in 2018 and $65 in 2019.

implications if government support is required. In India, the share of non-performing loans has doubled, and defaults on corporate bonds and syndicated loans have surged in recent years. By mid-2017, distressed bank loans reached a record high of 9.5 trillion rupees ($148 billion), but more recent revelations suggest that the actual figure may be even higher. In Bangladesh, eight State banks had a capital shortfall of approximately $1.55 billion, or nearly 1 per cent of GDP. In Tajikistan, four banks were facing a liquidity crisis due to bad loans.

Another macroeconomic risk is related to commodity prices. As already noted, global oil prices reached $70 per barrel in January 2018 compared with $30 per barrel two years previously. While prices are expected to moderate to about $60 per barrel, there is considerable uncertainty over their trajectory and net impact. Higher oil prices pose downside risks for large oil importers, such as India, which benefited greatly from the low oil prices for the last three years but now is experiencing higher inflation and a wider current account deficit (box 1.4). Therefore, in the light of such macroeconomic risks to the near-term outlook, prudent policies will be needed, as discussed in section 5.

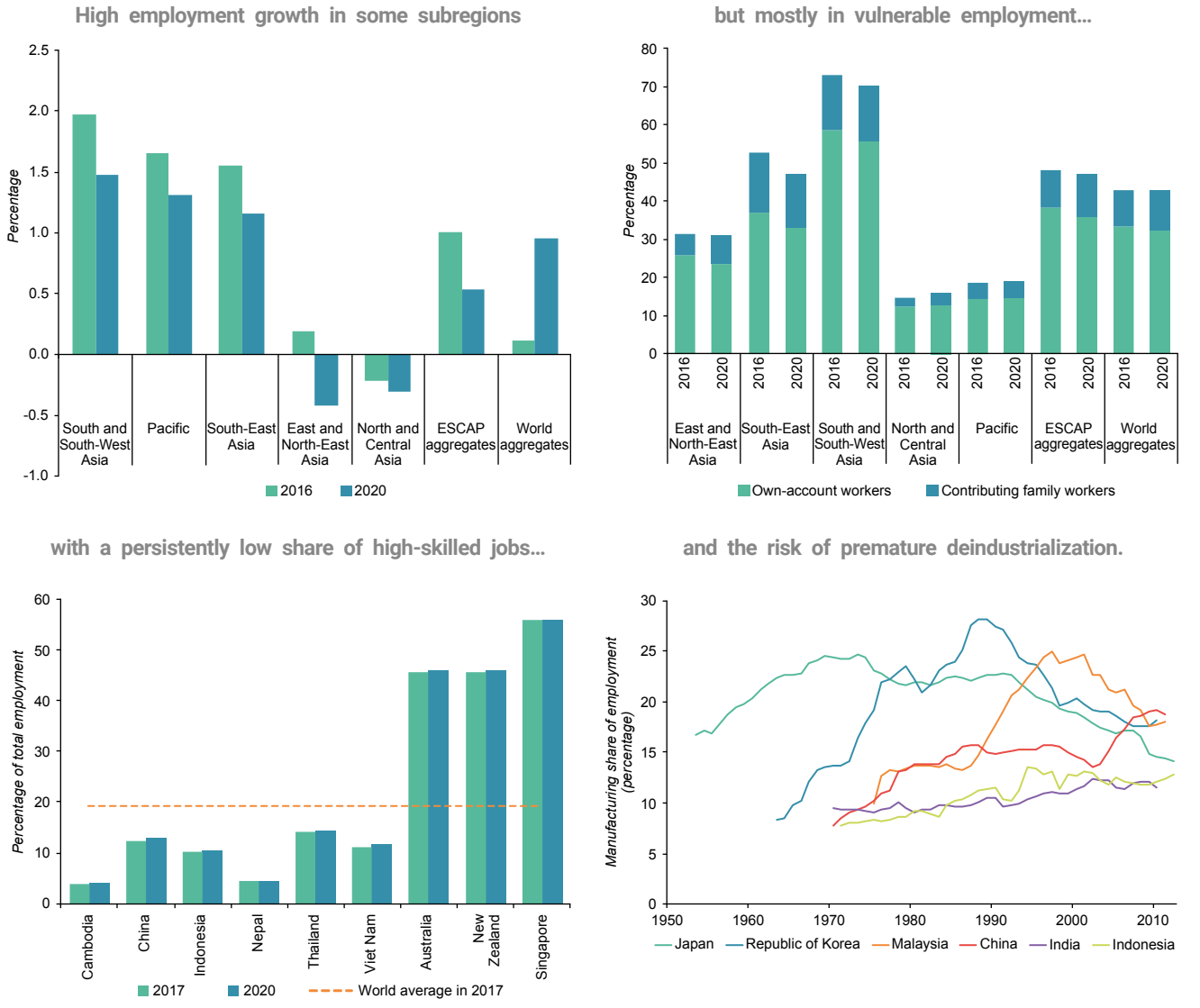
4.2. Potential growth, technology and future of work

A medium-term priority is to lift the region's potential for economic growth, which is on a downward trend in some countries owing to demographic changes, slower capital accumulation and modest productivity growth. Notably, China's potential growth rate fell sharply from about 10 per cent during the period 2003-2007 to about 7-8 per cent during the period 2013-2017 (World Bank, 2018a), and further declines are projected through 2030 (see section 4.3). Potential growth has also declined in India over the past decade owing to a sharp slowdown in capital accumulation; recent estimates of the country's potential growth range from 6 to 8 per cent (ADB, 2016a).

Potential growth is determined largely by demographic transitions and technological progress. Demographic trends could subtract 0.5 to 1 percentage points from annual GDP growth over the next three decades in such countries as China and Japan, while adding 1 percentage point to annual GDP growth in such countries as India and Indonesia (IMF, 2017). However, there is significant uncertainty concerning this forecast. Countries which have already realized their demographic dividend are proactively taking advantage of new technologies to offset shrinking working-age populations with increased labour productivity, but several "late convergers" are struggling to catch up, constrained by wide gaps in skills and infrastructure. In some sense, this latter group is doubly challenged; they have failed to provide even the basic education necessary for structural transformation, and that failure will prove to be increasingly costly because the human capital frontier for the new structural transformation induced by new technologies has probability shifted further away (India, Ministry of Finance, 2018).

The risk of not being able to realize the demographic dividend is most evident in labour markets. South and South-West Asia, followed by South-East Asia, have the highest employment growth rates, but also very high vulnerable employment shares, which are not expected to improve significantly in the forecast period (figure 1.7; table 1.3). Although the share of working poor has been largely improved (from 35.3 per cent in 2010 to 9.4 per cent in 2016 for developing countries in the Asia-Pacific region), a large number of the jobs created remain of poor quality and are highly concentrated in own-account employment or as contributing family workers who are usually employed in informal arrangements, lack income stability and job security and are not covered by legal and social protection systems (ILO, 2018). Young people face greater challenges to find decent jobs, as shown in the high youth unemployment rates in table I.3. Importantly, the share of highly skilled employment remains relatively low, at less than 5 per cent in Cambodia and Nepal (figure 1.7). In China, Indonesia, Thailand and Viet Nam, this share was less than 15 per cent, which is below the global average and significantly below that of Australia, New Zealand and Singapore, where one of every two persons is employed in highly

Figure 1.7. Inadequate decent jobs in countries with a youth bulge



Source: ESCAP, based on ILOSTAT. Available from www.ilo.org/ilostat (accessed 19 February 2018); and the GGDC 10-Sector Database.

Note: Vulnerable employment in 2020 is a model-based projection by the International Labour Organization.

skilled occupations (figure 1.7). A related concern is that, whereas the share of manufacturing in total employment used to peak at more than 20 per cent in countries which now enjoy a high income, this share has fallen to 13-15 per cent for a typical developing country today (figure I.7, bottom right panel).

Lifting potential growth will require higher productivity growth. However, the past decade was marked by only modest productivity growth. In the developing countries of the Asia-Pacific region, growth in total factor productivity (TFP) declined by more than half between the periods 2000-2007 and 2008-2014, while growth in labour productivity declined by a third over the same time frame (ESCAP, 2016a). Factors constraining higher productivity growth include skills and infrastructure deficits, inefficient allocation of resources and weak technological innovation and diffusion.

Technological progress is critical for productivity growth. New technologies, such as three-dimensional printing, big data, robotization of production processes and artificial intelligence, are making rapid inroads in production processes and could induce an economic growth spurt

Table 1.3. Labour market indicators

	Youth unemployment rate % 2017	Vulnerable employment % of total employment Latest	Minimum wage % of monthly average wage Latest	Labour productivity 2017
East and North-East Asia				
East and North-East Asia (excluding Japan)				
China	10.8	13.7 (2014)	27.2 (2013)	27 153
Democratic People's Republic of Korea	11.7	..	..	2 752
Hong Kong, China	9.2	5.9 (2016)	..	106 210
Japan	4.6	8.6 (2016)	0.3 (2016)	74 427
Macao, China	4.5	3.3 (2010)	..	93 007
Mongolia	18.9	46.9 (2016)	30.7 (2013)	28 925
Republic of Korea	10.7	25.5 (2016)	0.2 (2013)	67 956
North and Central Asia				
North and Central Asia (excluding Russian Federation)				
Armenia	39	41.9 (2015)	42.9 (2014)	19 863
Azerbaijan	13.7	55.0 (2016)	42.8 (2013)	31 780
Georgia	29.3	56.3 (2016)	2.8 (2014)	18 675
Kazakhstan	4.7	25.6 (2015)	..	47,317
Kyrgyzstan	15.7	34.7 (2016)	..	8 565
Russian Federation	16.3	6.2 (2016)	29.8 (2013)	49 552
Tajikistan	18.9	47.1 (2009)	31.5 (2013)	7 544
Turkmenistan	6.5	..	..	36 606
Uzbekistan	14.6	..	..	14 168
Pacific				
Pacific island developing economies				
Cook Islands	..	14.3 (2011)	..	..
Fiji	18.8	16.5 (2016)	61.6 (2012)	22 043
Kiribati	..	55.6 (2010)	..	..
Marshall Islands	..	..	..	..
Micronesia (Federated States)	..	..	..	..
Nauru	..	..	..	..
Palau	..	..	..	..
Papua New Guinea	5	..	..	7 044
Samoa	18	31.4 (2014)	..	27 806
Solomon Islands	4.4	..	..	3 984
Tonga	2.8	..	..	..
Tuvalu	..	..	..	..
Vanuatu	10.6	70.2 (2009)	..	5 508
Developed countries				
Australia	12.6	10.7 (2017)	..	91 149
New Zealand	12.8	12.2 (2016)	62.1 (2013)	66 064
South and South-West Asia				
Afghanistan	17.7	..	..	..
Bangladesh	11.4	57.7 (2016)	41.2 (2013)	9 572
Bhutan	10.2	73.3 (2015)	..	16 339
India	10.5	..	..	16 774
Iran (Islamic Republic of)	30.3	41.4 (2016)	..	61 310
Maldives	13.8	22.6 (2014)	38.1 (2010)	24 882
Nepal	4.3	79.0 (2008)	84.3 (2013)	4 134
Pakistan	7.7	60.0 (2016)	69.0 (2013)	14 066
Sri Lanka	20.7	31.9 (2014)	41.5 (2009)	30 409
Turkey	20.3	27.9 (2016)	54.0 (2016)	68 676
South-East Asia				
Brunei Darussalam	28.1	4.7 (2014)	..	167 876
Cambodia	0.4	53.6 (2012)	66.1 (2013)	6 177
Indonesia	15.6	48.2 (2016)	93.4 (2013)	23 788
Lao PDR	1.7	83.9 (2010)	73.4 (2013)	10 973
Malaysia	10.8	22.2 (2016)	48.1 (2013)	55 528
Myanmar	1.7	57.7 (2016)	..	11 758
Philippines	7.9	35.4 (2016)	120.1 (2014)	18 618
Singapore	4.6	8.3 (2016)	..	141 425
Thailand	5.9	48.1 (2016)	60.5 (2013)	28 303
Timor-Leste	11.6	54.7 (2013)	..	20 672
Viet Nam	7	55.9 (2016)	..	10 232

Source: ESCAP, based on ILOSTAT. Available from www.ilo.org/ilostat (accessed 1 March 2018).

Note: Youth unemployment refers to 15-24 years of age; Labour productivity is measured by GDP in 2011 international $PPP.

in the future (Brynjolfsson and McAfee, 2014). Furthermore, technology is a key enabler of sustainable development – for example, clean technology improves energy efficiency, curbs carbon emissions and reduces negative environmental impacts (Beder, 1994); FinTech businesses could largely improve financial inclusion; and using e-governance can also help reduce leakages in taxation and social transfer (ESCAP, 2017b). If well managed, such technologies could also contribute to expansion of decent jobs.

Nevertheless, there are concerns about how technology will shape the future of work. Technology has features that favour capital over labour and favour skilled over unskilled labour (Kanbur, Rhee and Zhuang, 2014). Therefore, technology advancement could potentially lead to job polarization and put downward pressure on wages, especially for unskilled labour, which could lead to a worsening of income distribution. Between 1995 and 2009, the global income share of low- and middle-skilled labour dropped by more than 7 percentage points (IMF, 2017; United Nations, 2017). In the Asia-Pacific region, it has been estimated that labour income share declined by more than 5 percentage points between the early 1990s and the late 2000s (ESCAP, 2016a).

The features of technology are also reshaping global production patterns. The pattern of global trade depends on the availability and price of production factors. Low transport costs, the transferability of technology and the availability of cheap labour and capital attracted a substantial share of industrial production moving to the region (Bluth, 2017). However, technology advancement and automation might call into question whether the region will maintain its comparative advantage. Some have forecast that industrial production is likely to return to the developed world, that is, "reshoring" (Shih, 2013). This practice could reduce the scope for some developing countries' industrialization through a traditional focus on labour-intensive manufactures and limit opportunities to create more jobs. This situation could have implications for such countries as India, which intends to increase manufacturing value added to 25 per cent by 2020, from 16 per cent in 2015.

Globally and primarily in China, Japan and the Republic of Korea, many firms are investing in artificial intelligence and automation as a strategy to remain competitive. With the rapid adoption of such technology, it is estimated that about 56 per cent of all employment in Cambodia, Indonesia, the Philippines, Thailand and Viet Nam are at high risk of automation in subsequent decades (Chang and Huynh, 2016). Arguably, this is not an imminent risk. Increasing labour productivity and the resulting rise in wages in China are creating opportunities for poorer developing countries in labour-intensive manufacturing where the use of robots is not economically viable, such as in major segments involved in the manufacture of garments. In these industries, automation has yet to create competitive pressure, and countries with a surplus of low-cost labour retain a cost advantage. Many other sectors within manufacturing, however, could provide ample scope for automation. It is notable that the same industries where robots are being introduced are the ones that were susceptible to the fragmentation of production in the global value chain (Frey and others, 2016).

Thus, to realize the opportunities and mitigate the risks presented by new technologies, countries will need to strengthen innovation and technology policies and pursue necessary structural reforms, as discussed in section 5.3. Equipping workers with the right skills and assisting them through disruptive changes will be critical, especially given the high share of vulnerable employment in the region.

4.3. China's economic transformation: impacts on Asia and the Pacific

An assessment of the medium-term outlook should recognize the regional dimensions of economic growth. While structural changes are happening all across the Asia-Pacific region, the case of China is outstanding in terms of pace and scale, as well as the potential impacts on the rest of the region through its growing domestic market, evolving trade structure and expanding outbound investment.

In the last four decades, China's economy has been transformed from a predominantly agricultural one to an industrial powerhouse; now it is increasingly becoming service oriented. Average incomes grew ninefold since 1990, and some 800 million people were lifted out of poverty during that period. China's economic performance accounted for a third of global economic growth over the past decade.

Strains from rapid structural changes, however, have become clearer. Prominent among these are the country's slowing population growth and labour force expansion, its slowing productivity growth as available technologies approach the technological frontier, distributional tensions resulting from rising inequality and strains on the carrying capacity of the natural environment.

While a trend decline in economic growth is inevitable in the coming decades, the quality of economic growth will differ significantly depending on the policy choices made. China's ongoing rebalancing from export- and investment-led growth to consumption-led growth is important. Without such rebalancing, the efficiency of investment is projected to decline further such that 20 per cent more capital inputs are needed by 2030 to generate the same amount of output as in 2015. This implies that debt levels will also remain high. At the same time, without forceful measures, urban-rural income gaps as well as inequality within urban and rural areas will remain wide, leaving pockets of poverty. China's energy consumption and carbon emissions will continue to rise. These aspects are shown as the baseline scenario in figure 1.8.

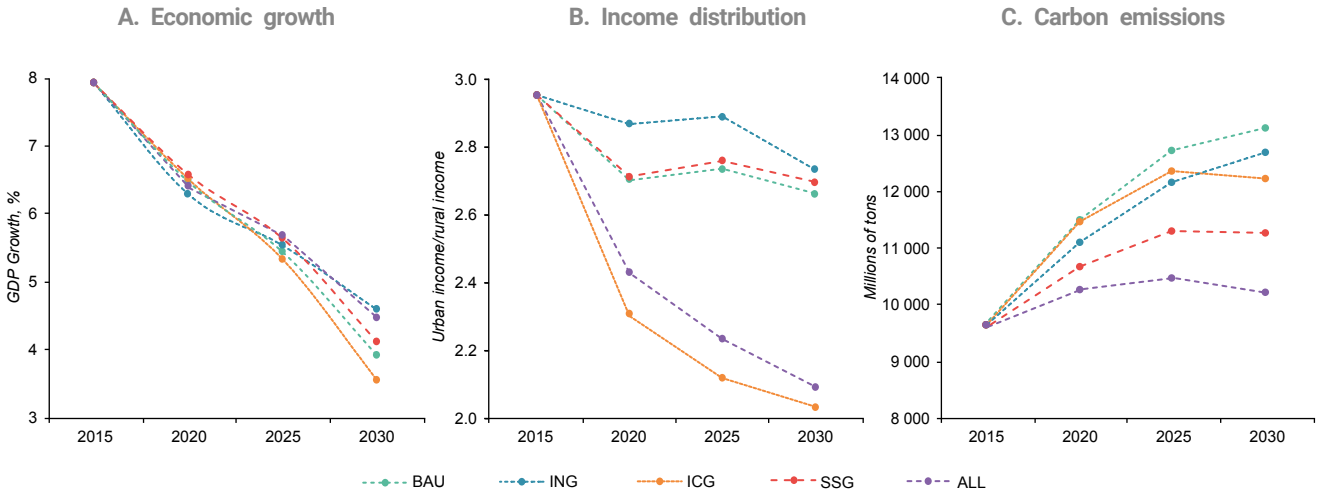
However, there is an alternative scenario, which better reflects the policy directions set out by the Government of China, including in its national action plan on the 2030 Agenda for Sustainable Development. Under this "innovative, inclusive and sustainable growth" scenario, China is pursuing holistic structural reform, which helps the country to sustain relatively high rates of economic growth even as the labour force shrinks and capital accumulation slows, while it realizes shared and green development.

First, the Government has established objectives for China to become an "innovative nation" by 2020, an "international innovation leader" by 2030 and a "world powerhouse of scientific and technological innovation" by 2050. China is moving aggressively on advanced manufacturing and the digital economy, with the support of government initiatives, such as "Made in China 2025" and "Internet Plus". The country is also pursuing supply-side reforms to enhance the efficiency of resource allocation, including tax reforms and interest rate liberalization. Under this "innovative growth" scenario, total factor productivity would overtake capital formation to become the major driver of economic growth, and the service sector would account for 70 per cent of GDP by 2030, close to current levels in developed economies.

Second, the Government has established objectives for eliminating absolute poverty by 2020 in order to deliver a "moderately prosperous society". At the end of 2016, there were still more than 40 million people living below the national poverty line (equivalent to about $2.40 per day). The Government has increased fiscal transfers to enhance social protection while deploying more funds for financing rural infrastructure, agricultural subsidies and discounted loans. This "inclusive growth" scenario is also tied to more rapid urbanization, which is expected to rise to 70 per cent by 2030. Ongoing hukou (household registration) reforms will also facilitate labour mobility to areas with better jobs and enable more equal access to public social services. Under this scenario, income inequality would moderate, and average households would use more of their incomes for expenditures.

Third, the Government has declared war on pollution while speeding up the transition to clean energy. Four decades of breakneck economic growth turned China into the world's largest carbon emitter. Air pollution is estimated to have contributed to 1.6 million deaths per year. Now the Government is trying to change that without damaging the economy – and perhaps even use its green policies to become a leader in technological innovation. China has been the

Figure 1.8. Alternative scenarios for China in 2030



Source: ESCAP, based on DRC-CGE model.

Note: BAU = baseline scenario; ING = innovative growth scenario; ICG = inclusive growth scenario; SSG = sustainable growth scenario; and ALL = innovative, inclusive and sustainable growth scenario. The baseline scenario (BAU) is based on the historic trend of China's economic development to simulate economic growth without structural reforms; the innovative growth scenario (ING) assumes that China will improve economic efficiency through technological progress and efficient resource allocation; the inclusive growth scenario (ICG) projects China's growth with assumptions of policies to focus on narrowing income inequalities and providing social protection; the sustainable growth scenario (SSG) assumes that China will increase the share of non-fossil fuel in its energy composition and introduce more market mechanisms to improve energy and carbon intensity, such as a carbon tax; the innovative, inclusive and sustainable growth scenario (ALL) combines the assumptions of ING, ICG and SSG scenarios. China's economic growth simulation is based on a computable general equilibrium model.

global leader in electric vehicle sales since 2015 and is aiming for 7 million annual sales by 2025. It intends to acquire 20 per cent of its energy from renewables by 2030; in 2016 alone, China installed 35 gigawatt hours of new solar generation capacity, equal to Germany's total capacity. Under this "sustainable growth" scenario, China would make proactive use of carbon pricing such that its total energy consumption and carbon emission levels would peak before 2030.

Such structural changes in China are expected to have important ramifications for the Asia-Pacific region. China's growing domestic market, evolving trade structure and expanding outbound investment are likely to present both opportunities and risks for other countries in the region.

China remains a hub for regional production networks, for assembly and re-exporting to North American and European markets. However, China's final demand has become increasingly important over the past decade as external demand collapsed in the wake of the global financial crisis. China's huge stimulus, focused on investment largely in real estate and infrastructure, was an important source of regional final demand. More recently, China's demand mix has been shifting towards consumption, a trend that is expected to continue through 2030. Moreover, as incomes rise, consumption patterns are likely to shift towards higher-end goods and more services. Such changes have several implications for regional trading partners.

While China accounts for a fifth of total exports by its regional trading partners, gross export figures could overestimate their exposure to Chinese markets. Analysis using the OECD-WTO Trade in Value Added database reveals that for every $10 the region exports to China, $8 is the domestic value-added component (the rest are foreign inputs), of which $6 caters to Chinese final demand (the rest are re-exported to third markets) (figure 1.9). Nevertheless, China is now on par with the United States as a source of final demand for several countries, especially in South-East Asia. Thus, continued expansion of

the Chinese economy could be beneficial for regional exporters.

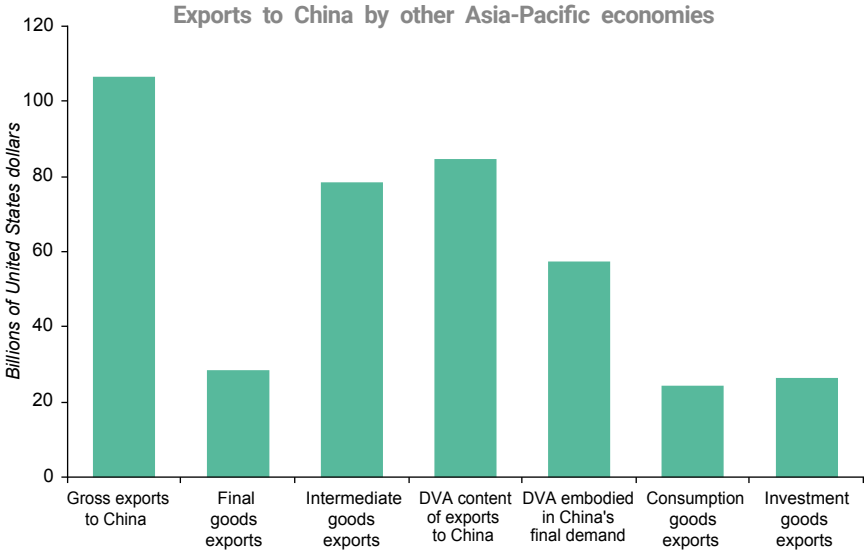
However, China's ongoing rebalancing from investment to consumption may have adverse effects at least in the near term, as further disaggregation of data reveals that regional exports cater more to Chinese investment demand rather than consumption demand. This includes energy and metal exporters in the region. Even those that export consumer goods to China may find few opportunities if they specialize in necessity goods or low-technology goods. Moreover, given that services trade is relatively underdeveloped in the region, countries may find it difficult to penetrate China's growing services market, such as in e-commerce. The degree to which trade potential is realized will depend on whether countries have market access and the capacity to trade in growing sectors.

This situation naturally draws attention to the supply side. As China moves up the value chain, such countries as Bangladesh and Viet Nam could enjoy greater opportunities to engage in low-skilled, labour-intensive manufacturing. If indeed a large-scale relocation of some 100 million Chinese manufacturing jobs takes place, this could significantly boost employment prospects and support economic diversification in those countries, including through services that complement the manufacturing chain. It is also possible, however, that assembly plants would relocate to China's inland provinces in view of their relatively low wage levels and proximity to the suppliers of parts and components and to the country's large domestic market.

For existing technology exporters in the region, China's industrial upgrading also increases competition. China is increasingly becoming an exporter of high-technology products and equipment and has distinguished itself as a major emerging capital exporter. The decreasing share of components and parts in China's total imports and increasing Chinese value addition in other countries' exports in particular mark the transition in China's position in the global value chain from a final product assembler to a supplier of high-value-addition intermediaries. This development could increase competition and result in opportunities for further specialization, or for increased innovation.

Meanwhile, commodity exporters in the region could be adversely affected, if significant efforts are not made to increase economic diversification and leverage on such initiatives as the One Belt One Road. China's resource-intense production and significant economic growth fuelled a boom in commodities in the 2000s. More recently, infrastructure spending to support growth helped

Figure 1.9. Trade linkages with China



Source: ESCAP, based on OECD-WTO Trade in Value Added database.

Note: Calculation is based on 2011 data, the latest available year; DVA refers to Domestic Value Added.

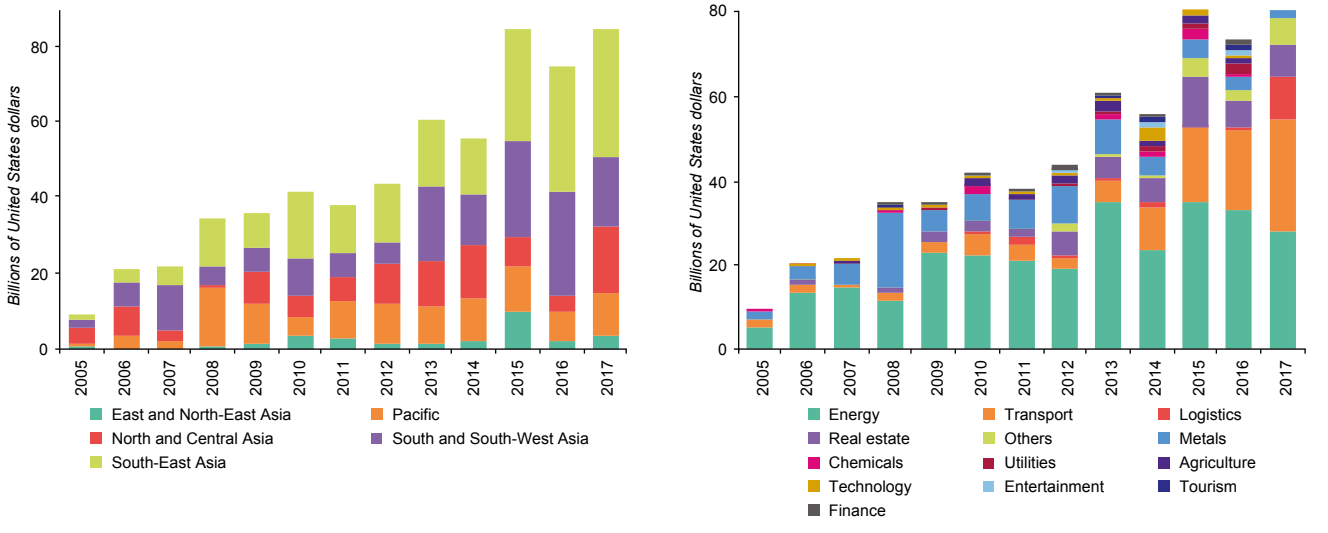
stabilize commodity prices. China's closing of inefficient and polluting producers of metals and energy products has also forced the country to buy more iron ore and coal from abroad. Nevertheless, China's ongoing economic rebalancing and its transition to clean energy imply that fossil fuel-based energy exporters face the prospect of lower long-term demand from China.

China's outbound investment to economies in the Asia-Pacific region has steadily increased over the past decade. It is worth noting that data reported by China and the recipient countries often differ significantly, as do those reported by international organizations and private sources. Significant amounts of investments are also channelled to their ultimate destinations through Hong Kong, China; and Singapore. Based on transaction-based data compiled by the American Enterprise Institute, Chinese investments in the Asia-Pacific region reached a value of $84.6 billion in 2017, with cumulative investment since 2005 reaching $605.6 billion (figure 1.10). The largest recipient by ESCAP subregion was South-East Asia, followed by South and South-West Asia. By sector, the top five were energy, transport, real estate, logistics and metals, in that order. The emphasis seems to have shifted in recent years from securing raw materials towards broader productivity cooperation and infrastructure development.

While there is no comprehensive assessment on the quality of Chinese investments, several concerns have been raised. It is often pointed out that linkages with the rest of the economy are often minimal in the case of construction deals, given that labour and capital inputs are procured mostly from China. It has been estimated that, unlike other foreign investments, Chinese investments do not seem to contribute positively to the recipient country's economic upgrading, perhaps due to limited technological transfers (Gui-Diby , Renard and Fouedjio, forthcoming). There are also concerns about Chinese financial investments (loans) undermining recipient country's debt sustainability.

In going forward, the quality as well as quantity of Chinese investments will be important. It could be the case that, as the quality of China's own economic growth improves, this will also be reflected in China's overseas investments. China's innovation drive could potentially increase technological transfers to other countries. China's shift to clean energy could expand opportunities in green infrastructure investments. Enabling other developing countries, especially its geographic neighbours and potential trading partners, in terms of their economic growth and industrial development would in turn create a broader market for China's upgraded industrial products, unlock new investment opportunities for outgoing Chinese

Figure 1.10. Investment linkages with China



Source: ESCAP, based on American Enterprise Institute and Heritage Foundation.

firms and provide more diversified consumption choices for Chinese consumers.

Domestic and regional policy initiatives will be important to maximize new opportunities and mitigate risks as all economies, including that of China, undergo further structural transformation. Countries in the region should harness the potential complementarities arising from different levels of economic development and factor endowments. Further deepening economic ties could serve as a new driver of growth. They could also contribute to shared prosperity in the region, but many poorer countries may be unable to take advantage of trade opportunities without strengthening their productivity capacities.

5. Economic policy considerations

5.1. Monetary and financial policy – securing macrofinancial stability

The fundamental role of monetary policy and central banks in sustaining economic growth over long periods is to contribute to macroeconomic and financial stability. Of the 15 major central banks in the Asia-Pacific region, 13 have explicit numerical targets for inflation and 5 have made exchange rate stability a policy objective. While financial stability is not an explicit objective for most central banks, it is clearly an issue of concern given its implications for the real economy.

Monetary policy environment

Monetary policy stances in the Asia-Pacific region remained accommodative in 2017. This was possible because, despite better-than-expected economic growth and the spurt in oil prices, inflation was benign and well within the target range of central banks in most countries. At the same time, exchange rates were stable, with major regional currencies gaining against the United States dollar as capital inflows to the region rebounded. This was despite the narrowing differential between interest rates in the region and the United States federal funds rate, as risk premiums were compressed on the back of financial market calm and the search for yield continued. With the rebound in capital inflows and exports, most countries were able to rebuild their foreign exchange reserves. For instance, reserves in India and Indonesia have risen to about 9.8 and 8.6 months of import cover respectively (table 1.4). In this context, most countries did not unwind the expansionary stances that they had adopted in recent years, keeping their policy rates unchanged or even reducing them further as in the case of India, Indonesia, the Russian Federation and Viet Nam (figure 1.11; table 1.4).

In going forward, consumer inflation in developing countries in the Asia-Pacific region is expected to accelerate, from 3.2 per cent in 2017 to 3.5 per cent in both 2018 and 2019. Despite the recent economic upturn, there is little risk of overheating; thus, the inflation outlook will depend largely on non-demand factors, such as global oil prices and exchange rates. Although oil prices are expected to stabilize at about $60 per barrel, there is more uncertainty over capital flows and exchange rates in the forecast period. Further normalization of monetary policy in the United States could increase financial market volatility. At the same time, China's ongoing deleveraging could slow economic growth and increase corporate defaults. A combination of such developments could trigger investor risk aversion, resulting in capital reversal and currency depreciation in the region. The likelihood of such a scenario seems to have increased in recent months with the corporate tax reform and infrastructure plan in the United States, which could boost that country's near-term economic growth and accelerate the pace of interest rate hikes. New tariffs on steel and aluminium and increased rhetoric of a trade war could also trigger investor risk aversion.

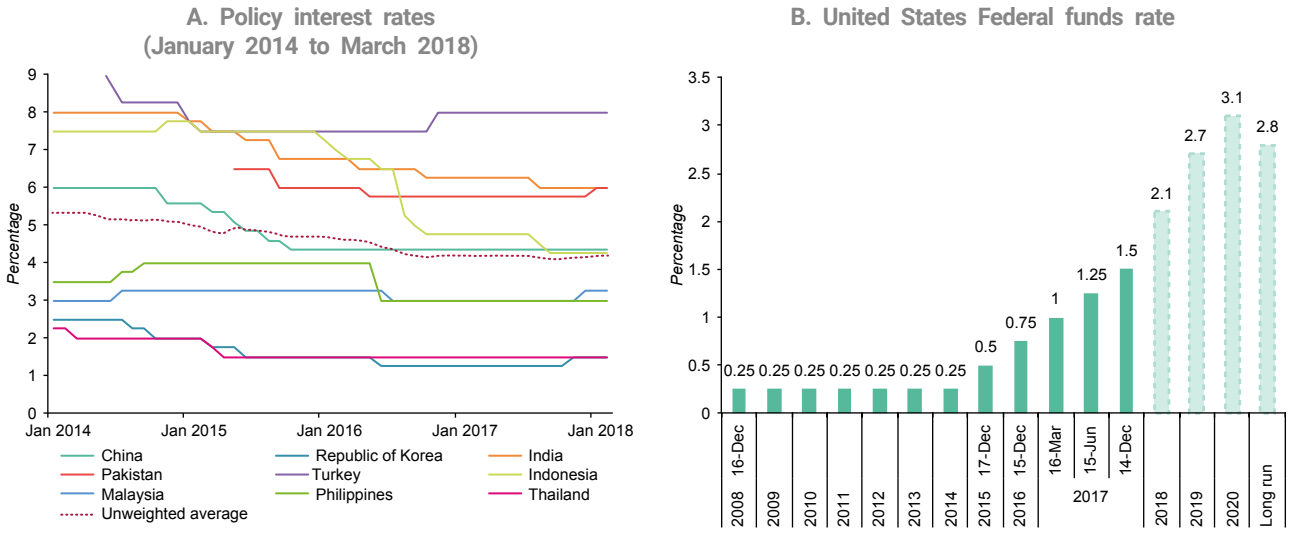
Therefore, gradual increases in interest rates, as introduced by Malaysia and Pakistan recently, should not be ruled out. These two countries are experiencing relatively strong economic growth; moreover, they face high external financing requirements owing to the sizeable short-term external debt in the former and widening fiscal and current account deficits in the latter. Other countries with high external debt or low levels

Table 1.4. Monetary and financial indicators

	Policy rates %		Domestic credit growth %		Real effective exchange rate %		Foreign exchange reserves, months of import	
East and North-East Asia								
East and North-East Asia (excluding Japan)								
China	16.5	*Feb-2018*	12.0	*Feb-2018*	127.6	*Feb-2018*	22.7	*Feb-2018*
Democratic People's Republic of Korea	..	..	..	..	..	..	..	..
Hong Kong, China	1.8	*Feb-2018*	20.4	*Nov-2017*	114.2	*Feb-2018*	9.0	*Jan-2018*
Japan	-0.1	*Feb-2018*	3.3	*Jan-2018*	74.3	*Feb-2018*	19.0	*Jan-2018*
Macao, China	1.8	*Feb-2018*	..	..	..	..	19.4	*Jan-2018*
Mongolia	11.0	*Feb-2018*	-1.0	*Jan-2018*	..	..	6.4	*Dec-2017*
Republic of Korea	1.5	*Feb-2018*	6.5	*Jan-2018*	112.3	*Feb-2018*	9.3	*Feb-2018*
North and Central Asia								
North and Central Asia (excluding Russian Federation)								
Armenia	6.0	*Feb-2018*	18.1	*Dec-2017*	..	..	7.0	*Jan-2018*
Azerbaijan	15.0	*Jan-2018*	-12.0	*Dec-2017*	..	..	6.5	*Dec-2017*
Georgia	7.3	*Feb-2018*	11.0	*Jan-2018*	..	..	4.4	*Feb-2018*
Kazakhstan	9.8	*Feb-2018*	-4.0	*Jan-2018*	..	..	7.1	*Jan-2018*
Kyrgyzstan	5.0	*Feb-2018*	17.2	*Jan-2018*	..	..	4.2	*Dec-2017*
Russian Federation	7.5	*Feb-2018*	6.9	*Jan-2018*	85.7	*Feb-2018*	24.0	*Jan-2018*
Tajikistan	14.8	*Feb-2018*	-30.6	*Dec-2017*	..	..	2.1	*Dec-2017*
Turkmenistan	..	..	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..	..
Pacific								
Pacific island developing economies								
Cook Islands	..	..	..	..	..	..	..	..
Fiji	..	..	..	..	..	..	..	..
Kiribati	..	..	..	..	..	..	..	..
Marshall Islands	..	..	..	..	..	..	..	..
Micronesia (Federated States)	..	..	..	..	..	..	..	..
Nauru	..	..	..	..	..	..	..	..
Palau	..	..	..	..	..	..	..	..
Papua New Guinea	..	..	..	..	..	..	..	..
Samoa	..	..	..	..	..	..	..	..
Solomon Islands	..	..	..	..	..	..	..	..
Tonga	..	..	..	..	..	..	..	..
Tuvalu	..	..	..	..	..	..	..	..
Vanuatu	..	..	..	..	..	..	..	..
Developed countries								
Australia	1.5	*Feb-2018*	2.5	*Dec-2017*	90.8	*Feb-2018*	2.2	*Jan-2018*
New Zealand	1.8	*Feb-2018*	4.5	*Jan-2018*	104.6	*Feb-2018*	5.6	*Jan-2018*
South and South-West Asia								
Afghanistan	..	..	..	..	..	..	..	..
Bangladesh	6.8	*Feb-2018*	14.3	*Jan-2018*	..	..	7.5	*Dec-2017*
Bhutan	..	..	..	..	..	..	..	..
India	6.0	*Feb-2018*	8.1	*Jan-2018*	100.0	*Feb-2018*	9.8	*Jan-2018*
Iran (Islamic Republic of)	..	..	25.8	*Feb-2017*	..	..	..	..
Maldives	..	..	..	..	..	..	..	..
Nepal	7.0	*Feb-2018*	21.7	*Jan-2018*	..	..	9.2	*Jan-2018*
Pakistan	6.0	*Feb-2018*	13.5	*Jan-2018*	..	..	2.8	*Feb-2018*
Sri Lanka	7.3	*Feb-2018*	12.5	*Dec-2017*	..	..	3.3	*Jan-2018*
Turkey	8.0	*Feb-2018*	16.4	*Jan-2018*	70.0	*Feb-2018*	4.1	*Jan-2018*
South-East Asia								
Brunei Darussalam	..	..	-3.8	*Sep-2017*	..	..	8.7	*Sep-2017*
Cambodia	..	..	15.6	*Dec-2017*	..	..	8.2	*Sep-2017*
Indonesia	4.3	*Feb-2018*	6.8	*Jan-2018*	88.9	*Feb-2018*	8.6	*Feb-2018*
Lao People's Democratic Republic	4.0	*Feb-2018*	14.4	*Sep-2017*	..	..	2.2	*Sep-2017*
Malaysia	3.3	*Feb-2018*	5.6	*Jan-2018*	91.8	*Feb-2018*	5.4	*Jan-2018*
Myanmar	..	..	22.1	*Nov-2017*	..	..	..	..
Philippines	3.0	*Feb-2018*	13.5	*Jan-2018*	99.5	*Feb-2018*	8.3	*Jan-2018*
Singapore	..	..	9.5	*Jan-2018*	106.6	*Feb-2018*	9.6	*Jan-2018*
Thailand	1.5	*Feb-2018*	4.6	*Jan-2018*	105.7	*Feb-2018*	10.2	*Jan-2018*
Timor-Leste	..	..	..	..	..	..	..	..
Viet Nam	4.3	*Feb-2018*	16.3	*Nov-2017*	..	..	2.2	*Nov-2017*

Source: CEIC Data. Available from www.ceicdata.com; and Bank for International Settlement (BIS).

Figure 1.11. Policy interest rates



Source: ESCAP, based on CEIC Data. Available from www.ceicdata.com (accessed 1 March 2018); and United States Federal Reserve. Available from: www.federalreserve.gov.

of reserves include the Lao People's Democratic Republic, Sri Lanka and Turkey. Economies with currencies pegged directly to the United States dollar, such as Hong Kong, China; and Singapore, could also be more prone to a negative impact. Of course, not all countries are in a similar situation, and some may still have room for further interest rate reduction. Nevertheless, interest rates are already at historically low levels in most countries, and further reduction could have implications for domestic financial stability. In such countries as the Republic of Korea and Thailand, low interest rates for an extended period have contributed to high household debt. On the other hand, in India and Indonesia, policy rate reductions did not translate into lower commercial lending rates due to banking sector problems. Further rate cuts would not do much good in either case.

Macroprudential frameworks, regulation and supervision

Given the current environment of relatively robust economic growth and benign inflation, central banks and other relevant authorities should focus especially on aspects of financial stability. Macroprudential measures could critically complement monetary policy in this regard. Rather than changing the cost of borrowing for an entire economy, macroprudential measures are targeted at specific areas of financial excess, for instance the housing sector. At the same time, macroprudential measures are aimed at reducing systemic risks and safeguarding the stability of the financial system as a whole. In view of the high degree of interconnectedness among financial institutions, a shock could spread rapidly across the entire system. Hence, there has been growing consensus that financial regulation should move from a "micro" approach based on individual institutions towards a "macro" framework (table 1.5).

Macroprudential measures could be classified as those that affect the demand for and the supply of credit, or those that are borrower-targeted and lender-targeted (table 1.6). Among the former, commonly used tools include loan-to-value ratios, which impose a minimum down payment and discourage speculators from taking multiple loans, and debt-to-income ratios, which restrict an unaffordable increase in debt. These tools are associated with a reduction in credit growth, most notable in the housing sector in developing countries. Among the latter, reserve requirements are the most popular, but there are also sectoral capital requirements which force lenders to hold extra capital against loans to a specific sector, thus discouraging heavy exposure to that sector. Such measures targeting liquidity

Table 1.5. Macroprudential vs. microprudential measures

	Macroprudential	Microprudential
Proximate objective	Limit financial system-wide distress	Limit distress of individual institutions
Ultimate objective	Avoid output (GDP) costs	Consumer (investor/depositor) protection
Model of risk	Endogenous (in part)	Exogenous
Correlations and common exposures across institutions	Important	Relevant
Calibration of prudential controls	In terms of system-wide distress, top-down	In terms of risks of individual institutions, bottom up

Source: Claudio Borio, "Towards a macro-prudential framework for financial supervision and regulation?" BIS Working Papers, No. 128 (Basel, Switzerland, Bank for International Settlements, 2003). Available from www.bis.org/publ/work128.pdf.

risks tend to restrain leverage and excessive growth in asset prices. Some lender-targeted measures, such as limits on foreign currency loans, are aimed at reducing the sensitivity of domestic credit cycles to cross-border capital flows. Overall, in the literature it is found that the effectiveness of macroprudential measures is contingent on such aspects as the development of financial markets, the potential for domestic and cross-border leakage and coordination with monetary policy. For instance, China has been raising money market rates in order to discourage riskier lending practices, but at the same time it keeps markets well supplied with funds.

Most countries in the Asia-Pacific region already had macroprudential measures in place prior to the financial crisis that started in 2008, but several countries have introduced additional measures in the wake of the crisis, many of which were targeted at the housing sector (Cerutti, Claessens and Laeven, 2015; ESCAP, 2016a). Moreover, many countries have been improving their macroprudential frameworks, that is, not just the quantity of those frameworks but their quality as well. Macroprudential measures need to be formulated to respond appropriately to evolving economic and financial developments. In addition to known sources of systemic risks, policymakers should keep an eye on new and emerging sources of risk, such as shadow credit. For instance, China recently introduced a range of prudential measures aimed at slowing growth in banks' supply of shadow credit, reducing dependence on interbank funding and containing regulatory arbitrage. Such measures help reverse the growth in off-balance sheet shadow credit in the form of wealth management products (IMF, 2017).

Although banks in the region are generally well capitalized, it is likely that mortgage delinquencies and corporate defaults will rise as financing costs rise. Non-performing loan ratios remain

Table 1.6. Macroprudential measures targeting demand for and supply of credit

Tools affecting the demand for credit	Tools affecting the supply of credit
• Loan-to-value ratios • Margin requirements • Loan maturities • Tax policy and incentives	• Lending rate ceilings • Interest rate ceilings • Reserve requirements • Capital requirements • Portfolio restrictions • Supervisory pressure

Source: Douglas Elliott, Greg Feldberg and Andreas Lehnert, "The history of cyclical macroprudential policy in the United States" Finance and Economics Discussion Series, No. 2013-29 (Washington, D.C., Divisions of Research and Statistics and of Monetary Affairs, Federal Reserve Board, 2013). Available from www.federalreserve.gov/pubs/feds/2013/201329/201329pap.pdf.

relatively low in most countries where private debt has increased most, but there are some signs of deterioration in asset quality. Thus, bank supervision should be strengthened with respect to the quality of loans as well as exposure to foreign exchange and interest rate shocks. Stress tests could be introduced to ensure that banks not only have sufficient capital levels to absorb losses but also governance structures and risk management processes that promote banking stability. At the same time, improving the credit history information of households and firms – for instance, through credit registers – could help lenders become better informed about the current debt of potential borrowers; in this regard, India's central bank recently proposed a new public credit registry. Efforts to enhance financial access for low-income households and small firms should be accompanied by financial education to inform borrowers of potential risks.

Addressing China's high debt and India's bad loans

While many countries in the region are addressing their domestic financial vulnerabilities, China and India stand out in terms of their scale. Given that their respective challenges have notable differences (for instance, China is curbing credit growth while India is reviving credit growth), a comparison of their experiences could also shed light on the appropriate policy mix for different types of problems, including some measures which go beyond monetary and macroprudential policies.

China has seen a significant increase in non-financial private debt over the past decade. Several China-specific factors – high savings, current account surplus, small external debt and various policy buffers – can help mitigate the near-term risks of disruptive adjustments and buy time to address risks. These factors would likely not eliminate the eventual adjustment, however, but make the boom larger and last longer (Chen and Kang, 2018). With the economy on a sufficiently high growth path, policymakers are focusing more on securing financial stability. In 2017, the growth of the money supply (M2) slowed amid measures to curb excessive credit growth, especially non-bank credit, and to reduce debt held by State-owned enterprises. China's improved macroprudential framework also is aimed at addressing the increased reliance of banks on short-term wholesale funding and the increased opacity of intermediation. Finally, to contain regulatory arbitrage, China established a new committee on financial stability and development, members of which include the central bank and regulators of the banking, securities and insurance sector. In China, improving credit allocation and restricting State-owned enterprises are also critical measures for achieving private sector debt sustainability.

In India, the share of non-performing loans has doubled, and defaults on corporate bonds and syndicated loans have surged in recent years. By mid-2017, distressed bank loans reached a record high of 9.5 trillion rupees ($148 billion), but more recent revelations suggest that the actual figure may be higher. The banking problem is closely related to high corporate leverage; thus, the two problems are known as the "twin balance sheet" challenge. If it does not effectively address that challenge, India will continue to face weak private investment and modest economic growth. The Government's policy initiatives have centred around the so-called 4Rs – recognition, resolution, recapitalization and reforms (India, Ministry of Finance, 2018). The central bank strengthened its asset quality review in 2015, which found significant quantities of non-performing assets. It introduced new schemes to facilitate debt-to-equity swaps and other forms of loan restructuring. Importantly, its new bankruptcy code has provided a resolution framework that will help corporates to clean up their balance sheets and reduce their debts. The Government also announced in late 2017 a large recapitalization package, equivalent to about 1.2 per cent of GDP, to strengthen the balance sheets of public sector banks.

In going forward, given the diminished need for demand management, central banks in the region should focus more on addressing domestic financial vulnerabilities and building resilience to cope with potential external shocks. They could assign high priority to enhance macroprudential frameworks, regulation and supervision.

5.2. Fiscal policy – making effective use of fiscal space

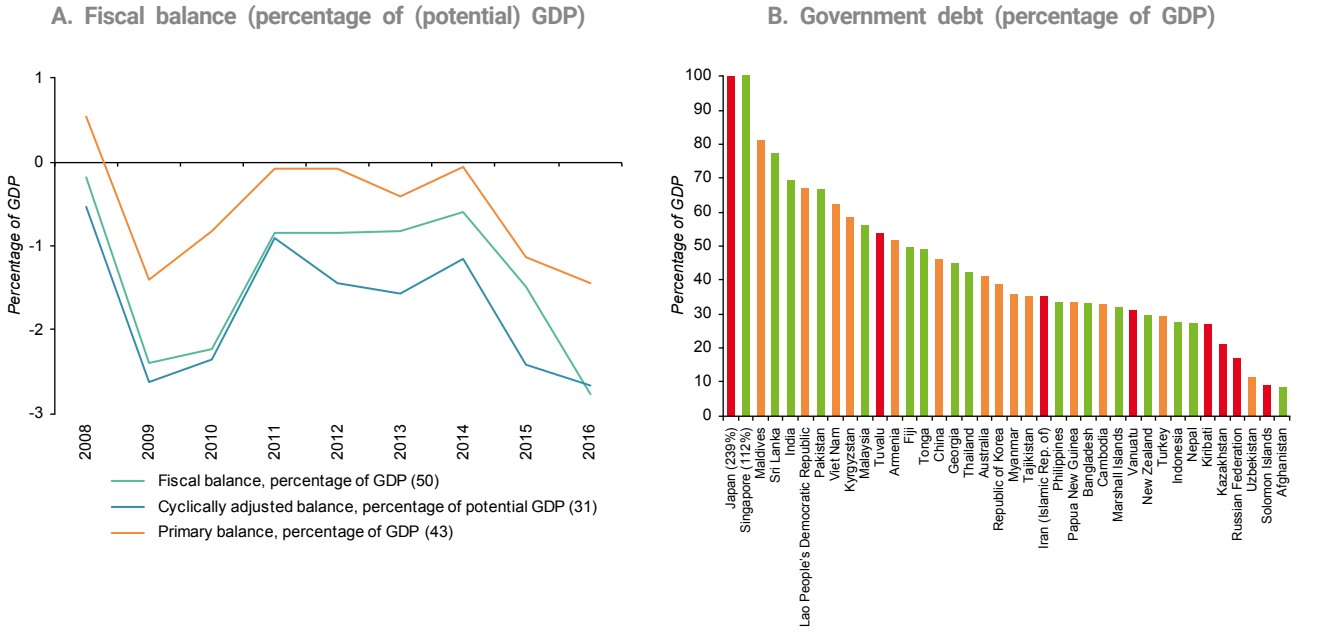
As the need for near-term stimulus diminishes with stronger economic growth, fiscal policy could be focused more on supporting the medium-term objectives of lifting productivity growth and reducing inequalities. In this section, stock is taken of recent fiscal developments in the context of fiscal space, before providing a discussion on how Governments could spend more and better in order to facilitate sustained, inclusive and sustainable economic growth.

Recent fiscal developments

A countercyclical fiscal stance, including tax relief for small and medium-sized enterprises and increased public infrastructure outlays, has contributed to the region's economic resilience in recent years. This position has led to a widening of budget deficits to an estimated 3 per cent of GDP on average, although stronger economic growth as a result of such measures limited the increase in government debt-to-GDP ratios (figure 1.12). Fiscal sustainability gap analysis by ESCAP would suggest that debt ratios will stabilize or decline in most countries under current economic growth and financing conditions (ESCAP, 2017b). Fiscal space would be more limited once contingent liabilities and off-budget operations are considered; this is illustrated in figure I.14 by the colour of the bars which indicate whether debt ratios would rise or fall under different scenarios. Moreover, as will be discussed in chapter II, in the light of the financing requirements for achieving sustainable development, enlarging the fiscal space should remain a priority for several countries. (For a detailed discussion on fiscal space, including alternative measures of it, see also ESCAP, 2017b).

Based on official targets and other information, fiscal deficits in the Asia-Pacific region are expected to narrow slightly in 2018, from an estimated 3 per cent of GDP in 2017. This outcome seems to reflect primarily stronger economic growth, as most countries are maintaining a proactive and expansionary fiscal stance.

Figure 1.12. Fiscal position



Source: ESCAP, based on World Bank, Fiscal Space Database, and its own calculations.

Note: Panel A: numbers in parentheses indicate the number of countries, based on which the median is presented. Panel B: if the primary balance, borrowing cost and GDP growth remain as in 2016, countries in RED will see their debt ratio increase, while for others it will fall. Under a less favourable scenario in which a 1 standard deviation shock is applied to the differential between borrowing costs and GDP growth, only the countries in GREEN would see their debt ratio decrease, while for others (RED plus ORANGE) it would increase.

China's fiscal stimulus measures in recent years, including large public infrastructure outlays and wide-ranging tax breaks, were important for boosting the country's economic growth, which in turn also supported regional trade and contributed to the region's resilience against weak external demand. Domestically, such demand support measures also helped mitigate some near-term drag on activity resulting from supply-side reforms. However, large fiscal stimulus also resulted in local government debt problems. To address this situation, the Chinese Government is taking an approach known as "opening the front door and blocking the back door". While offering no implicit guarantees on financing vehicles, local governments were allowed to issue special purpose bonds, debt which is repaid through returns on investment projects rather than fiscal revenues.

India has been on a gradual consolidation path, with the goal of lowering government debt to 60 per cent of GDP by fiscal year 2022/23. However, its deficit has overshot targets, as the recent monetary and tax reforms weighed on immediate economic activity despite the expected medium-term benefits (ESCAP, 2017b). Another reason for the wider deficit was the debt restructuring of State power distribution companies. The national budget deficit target for the 2018/19 fiscal year is 3.3 per cent of GDP, lower than the estimated 3.5 per cent deficit in 2017/18, but higher than previously set targets (India, Ministry of Finance, 2018). The latest budget contains provisions for corporate tax breaks for small and medium-sized enterprises, more spending for the rural economy and a new national health insurance scheme for the poor. The wider deficit, however, has increased sovereign yields. To raise revenues, the Government increased customs duties on mobile phones and other imported consumer items, and introduced a new long-term capital gains tax.

Indonesia has made notable progress in recent years in reallocating a larger share of the budget towards social and infrastructure programmes through tax and subsidy reforms. Improving connectivity, especially in regions outside Java and Sumatra, has been a priority. Key social programmes – including housing for the urban poor, credit for micro and small businesses, and education assistance and health care for low-income earners – will continue to feature prominently in 2018 (Negara, 2017). The Government also decided to remove the electricity subsidy gradually as part of ongoing reforms in the energy sector. Indonesia has relatively low government debt, and the fiscal deficit for 2018 is targeted at 2.19 per cent of GDP, lower than the actual 2.57 per cent in 2017. Thus, there is fiscal space. However, more progress is needed in improving administrative capacity and avoiding delays and back-loading in budget disbursement. The country's capacity to collect taxes also needs to be improved in view of persistent revenue shortfalls in recent years.

Spending better for long-term growth

Although aggregate budget deficits or public debt can serve as useful indicators of short-term macroeconomic stability, they offer little indication of the long-term effects of fiscal policy on economic growth and development (ESCAP, 2013; World Bank, 2006). For the purpose of development, what matters is where and how the deficit is being spent. Is it, for instance, being spent for enhancing human, physical or social capital that would improve productivity and hence economic growth? If that is the case, then public debt, even though it rises in the short term, would be sustainable.

Precise estimation of long-term fiscal multipliers is not straightforward, but several studies have found sizeable (indirect) positive impacts on economic growth. For instance, Li and Huang (2010) found that a 1 per cent increase in mean years of schooling can lead to an increase in GDP growth by 0.25 - 0.5 per cent, and a similar increase for health outcome as proxied by life expectancy. The importance of public investment in developing countries is also well known, as economic diversification and upgrading critically depend on having good-quality infrastructure.

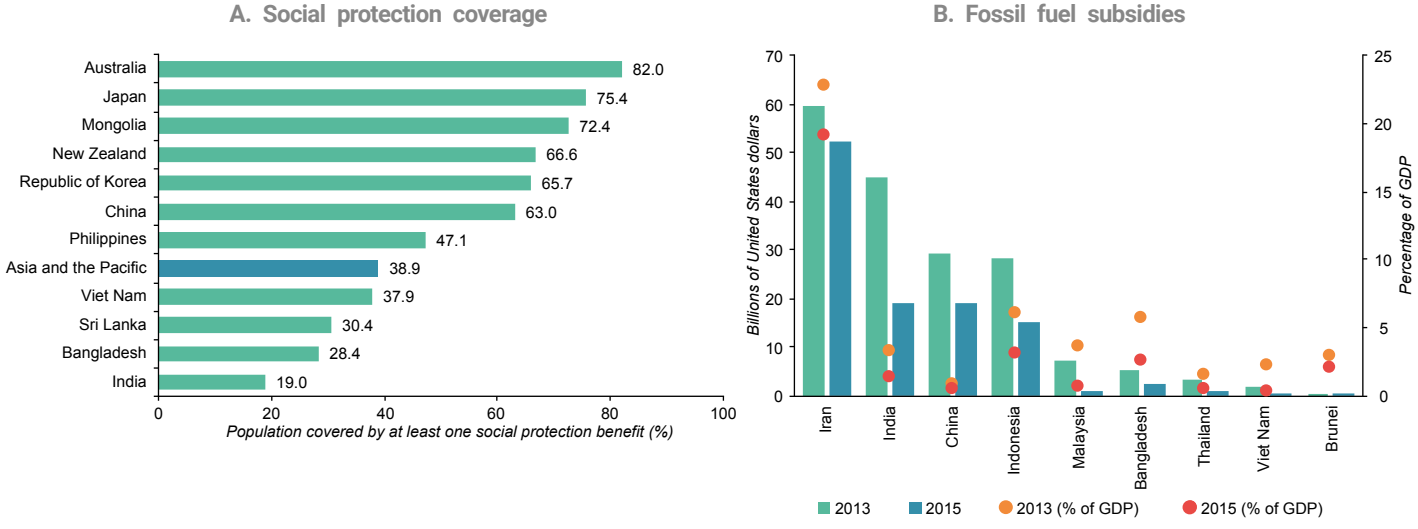
Governments of countries in the region have made efforts to enhance the composition and quality of public expenditures in support of their development priorities. For instance, many

countries have identified new sources of fiscal space to extend social protection coverage and benefits. For example, Thailand reallocated part of its military expenditures for universal health; Mongolia financed a universal child benefit from a tax on mineral exports; and Indonesia extended its social protection programme through a reform of energy subsidies (figure 1.13). Latest available data indicate that 38.9 percent of the population in the region are now covered by at least one social protection benefit. Available data for 10 countries indicate that, between 2013 and 2015, fossil fuel subsidies were reduced by as much as 89 per cent for Viet Nam and 12 per cent for oil-exporting Islamic Republic of Iran. Despite such progress, there seems to remain significant room for strengthening and reorienting the national budget towards these priority areas. For instance, combined education and health expenditures remain at below 5 per cent of GDP in such countries as Cambodia, Bangladesh and Pakistan (table 1.7).

In addition to budget reallocation, Governments could increase expenditure efficiency and ensure equal access to basic public services. Without such efforts, additional spending may not translate into better development outcomes. Estimation of public expenditure efficiency would suggest that many countries in the region have ample room to improve on this front. For instance, compared with regional peers at the frontier of expenditure efficiency, Pakistan could decrease its public expenditures by some 33 per cent in education and 17 per cent in health to produce the same level of education and health outcomes (figure 1.14; ESCAP, 2017a). Similarly, IMF (2015) found that on average about 30 per cent of the potential benefits of public investment are lost due to inefficiencies in the investment process.

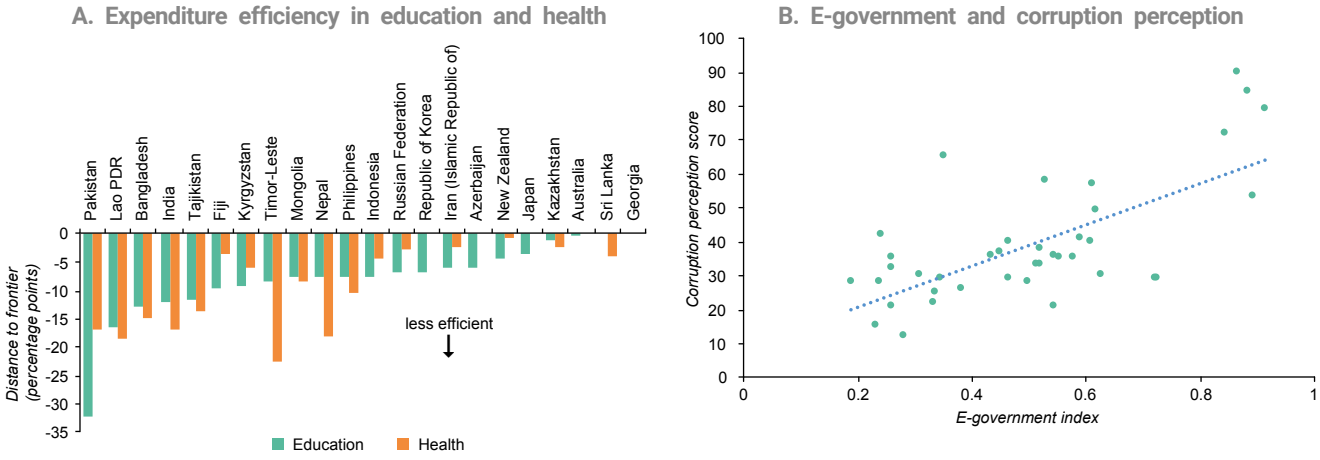
While there are sector-specific ways to improve expenditure efficiency, a cross-cutting factor is good governance. Between 2005 and 2014, the impact of better governance on public sector efficiency was as high as 57 per cent in Georgia in the health sector and as high as 32 per cent in Indonesia in the education sector (ESCAP, 2017a). Moreover, as will be discussed in chapter II, good governance could help better leverage private capital for infrastructure development. One of the ways in which Governments could improve fiscal governance is by leveraging technology (ESCAP, 2017b). Countries which proactively use e-government tools also tend to perform better in terms of corruption perception (figure 1.14).

Figure 1.13. Social protection coverage and fossil fuel subsidies – examples of budget reallocation



Source: International Labour Organization, *World Social Protection Report 2017-19: Universal Social Protection to Achieve the Sustainable Development Goals* (Geneva, 2017). Available from www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_604882.pdf.; and ESCAP Statistical Database.

Figure 1.14. Government expenditure efficiency



Source: ESCAP, *Economic and Social Survey of Asia and the Pacific 2017: Governance and Fiscal Management*. Sales No. E.17.II.F.8.

5.3. Structural reforms – fostering inclusive innovation

As previously discussed, technology is key to enhance productivity and thus accelerate economic growth and welfare. However, it could also bring disruptions to global and regional production patterns, countries' comparative advantage and the labour market. To harness the potential of frontier technologies and mitigate associated risks, policymakers can proactively take actions to provide an enabling environment. Many of the leading technology-savvy countries in the region have taken a "whole-of-Government approach", with an overarching governance structure for science, technology and innovation (STI) based on committed leadership that has oversight of the STI strategy. Japan, for example, set up the STI Council within the Cabinet Office to coordinate STI policies and resources. The Council is under the direct leadership of Japan's Prime Minister (ESCAP, 2016b). Strong political support for innovation can ensure access to and use of technologies.

Moreover, fundamental infrastructure for information and communications technologies (ICT) is essential to underpin innovation and technological progress. In the region, there is room for countries to improve their ICT infrastructure, such as availability, access and affordability of broadband, Wi-Fi and mobile data-intensive services. A major investment push can help countries to deploy such backbone infrastructure. With stronger ICT infrastructure, countries can not only conduct research and connect it to business sectors more quickly, but also narrow the existing digital divide and disparities through financial, transport and trade links.

Furthermore, the working population should be equipped with the correct skills. The innovative capacity of any country depends on the skills set of its population, which relies heavily on education and training systems. Not all countries in the region have sufficient talent to innovate and operate new technologies. In order to develop core skills for people to be flexible and responsive to rapid changes brought about by new technology, more students, especially female students, should be encouraged to take science, technology, engineering and mathematics (STEM)-related courses; Governments and businesses need to anticipate the skills needed and provide technical and vocational education and training (TVET) (Chang and Huynh, 2016). The availability of low-cost online courses has greatly expanded the opportunities for continuous learning (ESCAP, 2016b). Many countries in the region have launched open online courses, including China, Indonesia, Japan, Malaysia, the Republic of Korea and Thailand, and have attracted millions of users (Kubota, 2016).

In addition to creating an innovation-enabling environment, policymakers also need to ensure that the benefits of innovation-led economic growth are widely shared. From the perspective of industrial

Table 1.7. Government expenditures

	% of GDP							
	Health		Social Protection		Education		Research and development	
	2010	Latest	2010	Latest	2010	Latest	2010	Latest
East and North-East Asia							**2.46**	**2.52**
East and North-East Asia (excluding Japan)								
China	2.7	3.1	6.7	6.3	3.1	3.8	1.7	2.1
Democratic People's Republic of Korea	..	..	..	..	..	..	..	..
Hong Kong, China	..	..	2.3	2.7	3.5	3.3	0.7	0.8
Japan	7.9	8.6	22.1	23.1	3.6	3.6	3.1	3.3
Macao, China	..	..	..	..	2.6	2.0	0.1	0.1
Mongolia	2.7	2.6	15.7	14.4	4.6	..	0.2	0.2
Republic of Korea	3.9	4.0	8.3	10.1		5.1	3.5	4.2
North and Central Asia							**1.0**	**0.9**
North and Central Asia (excluding Russian Federation)								
Armenia	1.9	1.9	7.1	7.6	3.2	2.8	0.2	0.3
Azerbaijan	1.2	1.2	7.9	8.2	2.8	2.6	0.2	0.2
Georgia	2.3	1.6	9.0	10.6	..	..	0.2	0.3
Kazakhstan	2.5	2.4	7.0	5.4	..	2.8	0.2	0.2
Kyrgyzstan	3.7	3.6	8.2	9.0	5.8	5.5	0.2	0.1
Russian Federation	3.7	3.7	16.6	15.6	..	..	1.1	1.1
Tajikistan	1.6	2.0	..	..	4.0	5.2	0.1	0.1
Turkmenistan	1.2	1.3	..	..	..	3.1	..	..
Uzbekistan	2.8	3.1	11.2	11.6	..	..	0.2	0.2
Pacific								
Pacific island developing economies								
Cook Islands	..	..	..	..	..	..	..	..
Fiji	3.0	3.0	3.4	3.4		3.9	..	..
Kiribati	8.7	8.3	..	12.0	..	..	..	..
Marshall Islands	14.4	14.4	..	..	..	..	..	..
Micronesia (Federated States of)	12.6	12.4	..	..	..	12.5	..	..
Nauru	8.5	2.9	..	..	..	..	..	..
Palau	7.6	6.5	9.7	7.1	..	..	..	..
Papua New Guinea	3.2	3.5	..	3.6	..	..	..	..
Samoa	5.0	6.5	2.3	2.0	..	..	..	..
Solomon Islands	7.0	4.6	8.2	6.6	10.0	..	..	..
Tonga	3.7	4.3	..	..	..	..	..	..
Tuvalu	16.6	16.4	..	..	..	..	..	..
Vanuatu	4.2	4.5	..	..	..	5.5	..	..
Developed countries								
Australia	6.1	6.3	16.7	18.8	5.6	5.2	2.4	2.2
New Zealand	9.3	9.1	20.3	19.7	7.0	6.4	1.2	1.2
South and South-West Asia							**0.7**	**0.6**
Afghanistan	2.9	2.9	7.2	2.8	3.5	3.3	..	..
Bangladesh	1.1	0.8	..	1.7	..	2.0	..	..
Bhutan	4.5	2.6	3.0	2.7	4.0	7.4	..	..
India	1.2	1.4	..	2.7	3.4	3.8	0.8	0.6
Iran (Islamic Republic of)	2.7	2.8	12.5	..	3.9	2.9	0.3	0.3
Maldives	5.3	10.8	5.1	..	4.6	5.2	..	..
Nepal	2.9	2.3	3.1	3.0	3.6	3.7	0.3	0.3
Pakistan	1.0	0.9	0.2	0.2	2.3	2.6	0.4	0.2
Sri Lanka	1.6	2.0	3.2	6.5	1.7	2.2	0.1	0.1
Turkey	4.4	4.2	12.8	13.5	..	4.8	0.8	1.0
South-East Asia							**0.5**	**0.6**
Brunei Darussalam	2.5	2.5	..	..	2.0	3.4	0.0	0.0
Cambodia	1.4	1.3	0.6	1.2	1.5	1.9	0.1	0.1
Indonesia	1.0	1.1	0.9	1.1	2.8	3.6	0.1	0.1
Lao People's Democratic Republic	1.3	0.9	0.7	1.2	1.7	3.3	..	..
Malaysia	2.3	2.3	3.4	3.8	5.0	5.0	1.0	1.3
Myanmar	0.3	1.0	..	..	..	..	0.2	0.2
Philippines	1.6	1.6	1.6	2.2	..	..	0.1	0.1
Singapore	1.4	2.1	2.3	4.2	3.1	2.9	2.0	2.2
Thailand	2.8	3.2	2.7	3.7	3.5	4.1	0.3	0.6
Timor-Leste	0.8	1.3	3.3	3.3	10.4	7.8	..	..
Viet Nam	3.0	3.8	4.6	6.3	5.1	5.7	0.2	0.4

Source: International Labour Organization, *World Social Protection Report 2017: Universal Social Protection to Achieve the Sustainable Development Goals* (Geneva, 2017). Available from www.social-protection.org; World Bank, World Development Indicators database.

strategy, technology and innovation policies should move beyond the traditional focus on economic competitiveness. Governments should work with enterprises and support industries that have dynamic linkages to other economic sectors, enhance industry-services linkages and promote technological diffusion across a wider range of firms, including small enterprises, to stimulate broad-based productivity and employment gains.

From the perspective of public policies, Governments can consider a wide range of redistributive measures to mitigate the risks of technology-induced inequality and unemployment. Progressive income taxes and wealth-related taxes could help mitigate inequalities while creating needed revenues for better public education, training and social protection. Reducing taxes on labour generally encourages employment, reducing the need for redistribution, whereas taxing new technologies risks reducing economic growth and technology adoption, and reducing sources for redistribution. Instead, taxing rents and high profits arising from concentrated market structures may be more conducive to balance social and economic objectives (United Nations, 2017).

Other more radical proposals are available but are considered somewhat controversial. The proposal most closely associated with the impact of technology on unemployment is the notion of a universal basic income, whereby every individual would receive an unconditional cash grant (box 1.5). This proposal would serve to guarantee a minimum level of income regardless of employment status and simplify the administration of various public programmes. Other proposals, associated for example with Varoufakis (2016), attempt to directly distribute profits more equitably with a "universal basic dividend". Under this strategy, a fixed share of new equity issuance by firms is placed in a public trust, generating an income stream which is then distributed evenly among segments of society. Taxes on robotics are also under discussion but have yet to be tested; however, they are more problematic to implement.

For all countries, but in particular those with low technological capacities, regional and international cooperation are effective instruments to harness technological dividends and reduce capacity inequalities. In line with the 2030 Agenda, Governments have committed to fostering technology development, dissemination and transfer, and to the strengthening of scientific and technological capabilities of all countries. Regional and international collaboration can help countries, especially those with special needs, to gain access to much-needed investment and to facilitate cross-border technological learning through trade, FDI, mobility of human resources and access to technology and knowledge.

Various regional and international mechanisms and platforms are in place to facilitate technology development and dissemination, and to ensure that new technologies can be employed in a way that moves the world closer to sustainable development. Examples include: Asia and Pacific Centre for Transfer of Technology (APCTT); Regional Space Applications Programme for Sustainable Development (RESAP); the decision to launch a technology facilitation mechanism as called for by the Addis Ababa Action Agenda to support achievement of the Sustainable Development Goals; and the United Nations technology bank established to help least developed countries in particular to lift themselves out of poverty (ESCAP, 2016b).

5.4. Quality of growth – enhancing economic resilience

It is increasingly being recognized that persistently high levels of poverty, rising economic inequality and environmental degradation are detrimental to sustained economic growth and undermine economic resilience to shocks. Thus, tackling these broader development goals is also important for economic growth.

Despite the considerable reduction in extreme poverty that has occurred in the region – led by China – the incidence of poverty remains relatively high in several economies, especially in South and South-West Asia and in the least developed countries (figure 1.15a). In developing countries of the Asia-Pacific region, the incidence of poverty has declined from 49.5 per cent in 1990 to 10.2 per cent in 2012 based on the

Box 1.5. Universal basic income

Universal basic income (UBI) is a form of social security that offers periodic cash payments to all individuals in a country, universally and unconditionally. This is not a new idea. Many OECD countries provide non-contributory, non-means-tested benefits, although only for certain groups (mainly children or pensioners) (OECD, 2017b). No country has made UBI the central pillar of its social security system. UBI has received increasing attention recently due to concerns on rising inequality, atypical forms of education and fears of potential massive job losses due to automation.

Different from traditional programmes, UBI is universal and unconditional. Advocates believe that UBI could provide a broader and more substantial safety net for all citizens, eradicate extreme poverty quickly and effectively, improve wealth redistribution and reduce inequalities. According to IMF (2017), UBI could reduce the Gini coefficient by five points in all countries on average (before financing). Moreover, UBI does not face a potential poverty trap – benefits cannot be withdrawn if income increases; therefore, individuals would still have incentives to work. In addition, workers would have stronger bargaining power to refuse jobs with unhealthy and unsafe working conditions, as they would have a regular income to raise them out of poverty (Malul, Gal and Greenstein, 2009). Women could benefit from UBI in particular because they are more likely to be in extreme poverty.

Furthermore, UBI could offer a policy option in response to increasing digitalization and automation. Technology has changed the structure and nature of work throughout history; although its impacts are notably positive for society, technology can create challenges for certain industries and jobs categories. Lower-paid lower-skilled jobs are more susceptible to being replaced by automation, leading to mass unemployment and increasing the inequality gap between groups. Moreover, such changes in the underpinning of work will call for re-evaluation of welfare policies, which are designed in line with traditional employment contracts as well changes in labour institutions. Consequently, in a society with rising unemployment and inequality, UBI presents itself as a tool to improve the society's overall well-being; it can be argued that the benefit would function as an income replacement for those people who were replaced by technology. Last but not least, UBI does not impose social stigma on anyone.

However, UBI involves considerable fiscal costs, which depend on the level at which UBI is set. IMF (2017) estimated that, if it were set at 25 per cent of median per capita income, the fiscal cost would be about 6-7 per cent of GDP in advanced economies and 3-4 per cent in emerging markets and developing economies. Research in OECD countries would suggest that, without additional taxes, a budget-neutral UBI would be lower than the poverty line of a single individual, that is, not sufficient to eradicate poverty (OECD, 2017c). A simple back-of-the-envelope calculation would suggest that the fiscal cost of UBI (targeted at providing $1.90 per day for the working-age population) in the Asia-Pacific region could be about 14 per cent of GDP on average. In most developing economies, especially countries with special needs, the current public expenditure on social protection is not sufficient to cover such a provision of UBI (see figure below).

This leads to the issue of how to finance UBI, which is critical because the manner in which UBI is financed has a direct link with economic activities and the redistributive impacts. Stilwell (2016) argued that, if UBI comes at the expense of investment in infrastructure, housing, education or other public services, a cost-benefit analysis may not be favourable to UBI. In view of their limited fiscal resources, many countries may choose a budget-neutral method, such as allocating current spending on social protection, in order to finance UBI. In such a case, the distributive effect would depend on the coverage and progressivity of the existing transfer system. Since the existing expenditure on social protection is not financially sufficient to cover UBI, to spread the expenditure out equally may not be distributionally neutral. Lower-income households could be worse off if they receive transfers under the current system. Additionally, IMF (2017) suggested financing UBI though indirect taxes. The net distributive impact could be progressive if income inequality is high. OECD (2017b; 2017c) argued that UBI should be taxable along with other incomes. Therefore, its net value would fall for those in a higher tax bracket; it could then better target lower-income groups that

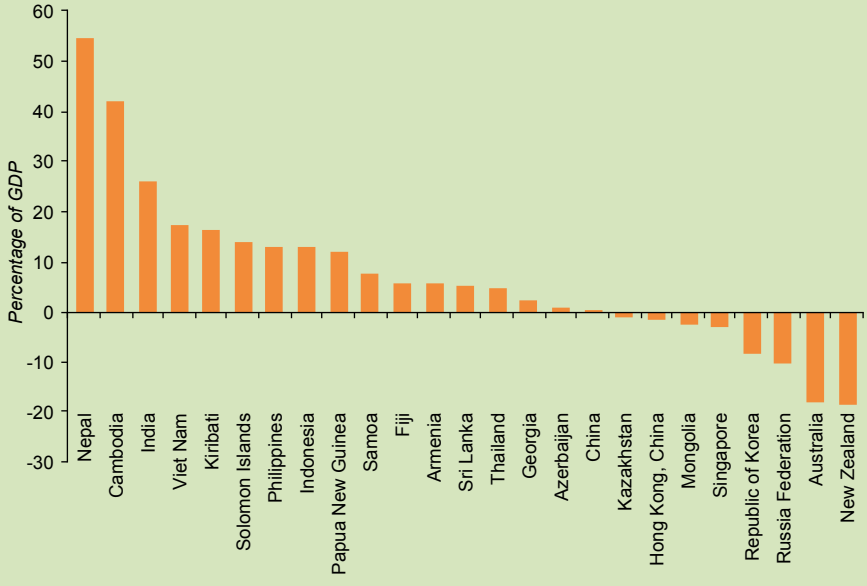
Box 1.5. *(continued)*

pay their tax at lower rates. This approach could help relieve the criticism of leakage. In any case, raising fiscal resources, including through taxes, would likely be inevitable to finance UBI. OECD (2017b) also suggested retaining some targeted cash transfer alongside UBI to support lower-income groups that lose out from UBI systems.

Many economies in the region are not ready for introducing UBI. Given the volatility of economies, an expenditure commitment, such as a regular universal income, could lead to problems with financial sustainability, especially if the country concerned suffers from cyclical budget deficits. The affordability and efficiency of UBI is also contingent upon inflation, which could reduce its potential benefits. Administrative challenges would also be considerable, given that a well-functioning taxation system would be a prerequisite to implement such a policy. Another risk comes from the possible influx of migrants. If people migrate to countries with UBI without contributing first, the sustainability of the programme could be compromised.

In the Asia-Pacific region, India has piloted some UBI projects in its rural areas. The outcome is positive for increasing economic activities and reducing inequalities. The Government of India is considering scaling up the programme to the national level. In the country's annual Economic Survey 2016-2017, a feasibility study of UBI was published. The amount proposed to be given is 7,620 rupees ($113) a year. This estimation is based on the assumption that in practice any programme cannot strive for strict universality, so a target quasi-universality rate of 75 per cent was set. This yields a figure of 4.9 per cent of GDP. Although the amount is less than the minimum monthly wage in a city, it is expected to cut absolute poverty from 22 per cent to 0.5 per cent. Such a policy would be financed by reorganizing the budget from the existing 950 welfare schemes in India, including subsides for water, food and fertilizers, which add up to roughly 5 per cent of GDP. However, since the proposed UBI project is quasi-universal, how the selection would be made, either by means-tested or a voluntary opt-out, has yet to be defined (India, Ministry of Finance, 2017).

Fiscal gap to finance universal basic income with existing expenditure on social protection, as a percentage of GDP, based on data from the latest available year



Source: ESCAP, based on data from International Labour Organization, *World Social Protection Report 2017-19*. Available from: www.social-protection.org/ (accessed 19 February 2018); United Nations, Department of Economic and Social Affairs, *World Population Prospects 2017*. Available from https://esa.un.org/unpd/wpp/ (accessed 19 February 2018); World Bank, World Development Indicators database. Available from https://data.worldbank.org/ (accessed 19 February 2018).

Note: The universal basic income (UBI) programme is aimed at providing only the working-age population with $1.90 per day. The fiscal gap reflects the difference between fiscal needs of this UBI project and the total public expenditure on social protection as a share of GDP.

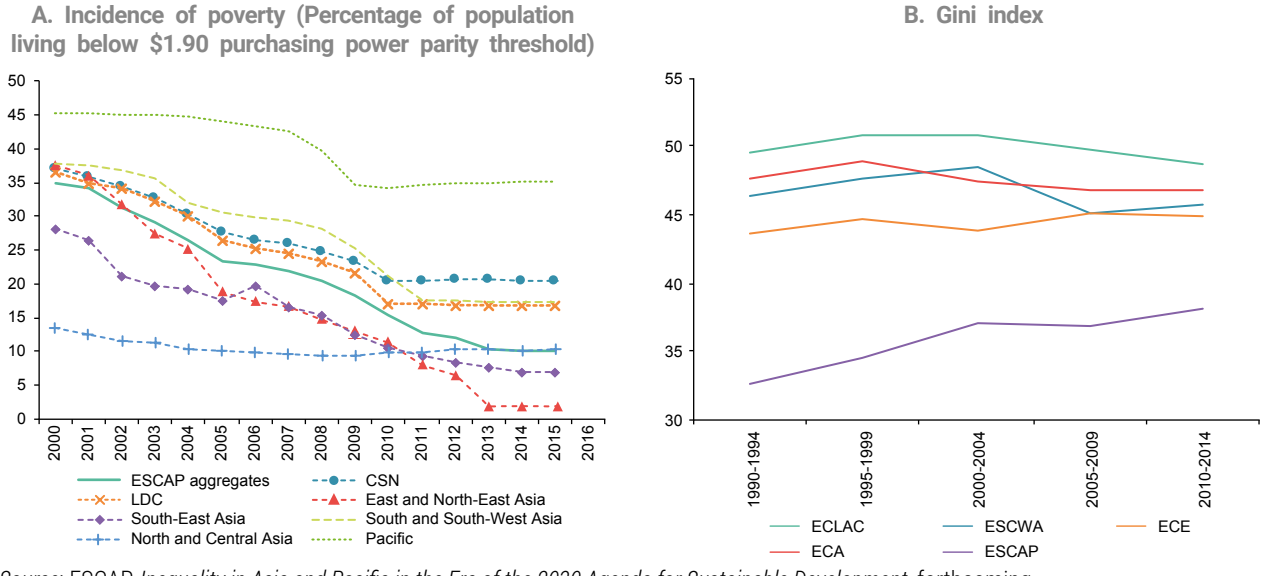
$1.90 purchasing power parity threshold, but with wide variations across countries. Moreover, such factors as technological progress, globalization and market-oriented reforms that have supported rapid economic growth are contributing to wider inequality of income and wealth, which does not bode well for inclusive development in the region. The Gini coefficient in the region increased from 32.7 for the period 1990-1994 to 38.1 for the period 2010-2014 (figure 1.15b).

The adverse implications of environmental degradation and intensive and unsustainable use of countries' natural resource wealth for economies and societies should not be underestimated. In 2015, the Asia-Pacific region accounted for more than 50 per cent of global domestic material consumption and 55 per cent of the global material footprint. Productivity losses due to excessive levels of air pollution are much higher in the region (close to 0.2 per cent of GDP) compared with the rest of the world (Lancet Commission on Pollution and Health, 2017). Climate change-induced agricultural loss is substantial; in India, it was found that such losses can reduce annual agricultural incomes by 15-18 per cent (India, Ministry of Finance, 2018). Moreover, inefficient and unplanned urban expansion has resulted in the conversion and loss of forests, wetlands and other ecosystems and has increased the already high exposure to disasters. Between 1970 and 2016, the Asia-Pacific region lost assets worth $1.3 trillion as a result of floods, storms, droughts, earthquakes and tsunamis (ESCAP, 2017e).

To enhance economic resilience, Governments could strengthen social protection. This is important keeping in view the persistent challenges of poverty and inequality, the further risks arising from demographic transitions (risk of skills shortage among youth on one hand, and risk of old-age poverty on the other) and labour market disruptions associated with reforms and technological innovations. Understandably, trade-offs are involved among the three aspects of social protection systems – universal coverage, sufficient benefit levels and financial sustainability. Countries should expand coverage earlier than later. Universal coverage may be based on low benefit levels, but it still helps empower those in financial need. Nevertheless, financial gaps are likely to remain in efforts to effectively support social protection programmes; hence the need for strengthening and expanding the fiscal space.

At the same time, a comprehensive policy response is needed to counter the prevailing environmental challenges and climate risks, and make a transition to sustainable economic growth. To this end, countries should mainstream resource efficiency targets into national plans and budgets as well as into sectoral policies, and establish

Figure 1.15. Poverty and inequality



Source: ESCAP, *Inequality in Asia and Pacific in the Era of the 2030 Agenda for Sustainable Development*, forthcoming.

Note: Gini index is shown by five year averages, using country classification of the five UN regional economic commissions. ECLAC covers Latin America and the Caribbean; ECA covers Africa. ECE covers Europe; ESCAP covers Asia and the Pacific; ESCWA covers Western Asia.

appropriate legal and regulatory measures to enforce standards and to promote awareness. Promoting an enabling financing framework, re-evaluating trade portfolios and their implications for resource efficiency, and leap-frogging to efficient technologies and improving innovation capacity could also prove to be quite helpful. In addition, countries could further prioritize life-cycle approaches and effective waste management. Carbon tax and emission trading systems could also play a critical role. Several countries have also phased out fossil fuel subsidies, including Bangladesh, India, Indonesia and Malaysia, which is a step in the right direction.

6. Concluding remarks

As discussed in the present chapter, domestic demand has been the primary driver of economic growth in recent years of weak external demand. While this resilience reflected the region's increased purchasing power, this was also a time when productivity gains and expansion of decent jobs were relatively weak, such that households and corporates came to rely increasingly on credit. Such a pattern cannot be sustained; aside from financial stability concerns, it weighs on future domestic demand. Moreover, the region's economic growth continues to come at significant environmental costs, with intensive use of natural resources and heavy pollution eventually also undermining long-term growth prospects.

Thus, while sustaining its growth momentum, the Asia-Pacific region should maintain a long view and enhance the fundamental drivers of economic growth by lifting productivity and translating it into gains in real wages and broad-based consumption such that this in turn will stimulate productive investments. In this regard, the chapter contained an examination of recent consumption patterns, investment dynamics and labour market developments to gauge the strength and quality of domestic demand.

There are important regional dimensions to sustaining the growth momentum and improving the quality of growth. Strong domestic demand could have positive spillover effects and provide new impetus to intraregional trade. Productivity and employment prospects also depend on shifts in regional production patterns. While China is rebalancing towards services, many countries, including India, are trying to expand their manufacturing base, to realize the demographic dividend and further diversify their economies. The chapter contained a preliminary assessment on such issues, with a focus on China's economic transformation and its implications for the region.

Given the low and stable rate of inflation, monetary policy is expected to maintain its accommodative stance and provide support for economic growth. However, as the impact of low policy rates has been limited by high corporate leverage and non-performing loans, broader financial sector reforms and enhanced oversight would be required. Countries should also be prepared for a tightening in global financial conditions in view of the ongoing monetary policy normalization in the United States.

On the fiscal front, most countries are expected to maintain an expansionary and countercyclical policy stance. Fiscal sustainability is not an immediate concern given the low or declining government debt-to-GDP ratios; nevertheless, fiscal space needs to be enlarged to support sustainable development, as will be argued in chapter II. Moreover, it is imperative that existing fiscal space be used effectively through enhanced composition and quality of expenditures and better governance, as emphasized in the Survey for 2017. More and better spending on education, health, social protection, research and development and infrastructure could support long-term growth and redistribution objectives.

While the Asia-Pacific region has come a long way in reducing extreme poverty to emerge as the world's economic powerhouse, the strains from rapid structural transformation – from rising inequality to environmental degradation – have become more acute and are threatening the region's economic dynamism. Addressing these challenges and implementing these policies will require better use of existing resources but also mobilization of additional resources, including through tax reforms, prudent sovereign borrowing and leveraging of private finance – the focus of chapter 2.

CHAPTER 2

Mobilizing finance for sustained, inclusive and sustainable economic growth

1. Introduction

There are numerous policy actions that developing Asia-Pacific countries can undertake to achieve sustained, inclusive and sustainable economic growth. Examples of some suggested policy actions range from increasing fiscal spending to lift productivity growth and reduce inequalities to introducing measures aimed at addressing environmental degradation, natural disasters and climate change. A key consideration is how to mobilize financing, whether from the public and private sectors or domestic and external sources, to effectively pursue sustainable development. The challenge seems daunting. Past spending and allocation of available resources has not been adequate, while future requirements are likely to be even greater. In this chapter it is argued that, to meet the financing challenges, countries will need to not only channel existing financial resources towards sustainable development but also come up with additional financial means.

Specifically, the chapter contains an examination of how Governments of countries in the Asia-Pacific region could increase domestic public financial resources and leverage private capital to support sustainable development. The reasons to focus on these two policy areas are straightforward. Governments, which in most cases are incurring fiscal deficits, will need to lead investments in areas that have high social returns but relatively low commercial returns that make them less attractive to private investors. However, public finance alone will not be adequate for achieving the numerous policy suggestions highlighted above. As the size of assets being managed by business corporations, funds and financial institutions is enormous, the adequacy of financing seems not to be the main issue. Rather, countries will need to rethink how to efficiently channel these large available resources towards sustainable development. This is not an easy task. In many cases, this means a shift from making short-term, low-risk investments in developed countries to making longer-term, higher-risk investments in developing economies.

In complementing the analyses contained in previous issues of the ESCAP *Economic and Social Survey of Asia and the Pacific*, this chapter presents some estimates on the magnitude of the funds that countries could potentially mobilize as a consequence of various policy changes. On strengthening public finance, the analysis contains estimates of the revenue impact of better tax administration (as measured by the newly proposed composite index) and policies aimed at broadening the tax base, particularly rationalization of FDI tax incentives and the introduction of carbon taxes. In countries where development gaps remain wide but future public debt levels seem sustainable, which is indeed the case for most countries in the region, an assessment is made of the potential role of prudent sovereign borrowing in expanding the fiscal space. In particular, there is an examination of the extent to which government effectiveness and macroeconomic fundamentals can help increase the Government's ability to issue public bonds, both in domestic and foreign financial markets.

On leveraging private finance, the issue of how an enabling policy environment could help catalyse investment in infrastructure projects is studied in this chapter, especially under public-private partnerships. To facilitate the private sector's contribution to sustainable development, also discussed are the policies needed to deepen financial intermediation. The focus is on widening the investor base through increasing the role of institutional investors and diversifying financial instruments through the greater use of Islamic finance.

Some of the key findings of this chapter would suggest that the prospect for mobilizing financing for sustained, inclusive and sustainable economic growth is promising. For example, if developing Asia-Pacific economies could improve the quality of their tax administration to match the level that exists in OECD countries, this could generate additional tax revenues of 3-4 per cent of GDP in key emerging economies, such as China and India, and even larger revenues of up to 8 per cent of GDP in smaller economies. Similarly, conservative estimates on the revenue potential of a policy effort to expand the tax base are sizeable. For the region as a whole, government revenues could rise by about $60 billion per year by rationalizing FDI tax incentives and introducing carbon taxes. These illustrative changes in tax policies would help narrow the currently wide gap between the tax potential and the actual tax revenue collection in the region.

The results on the role of government effectiveness and macroeconomic fundamentals in supporting the fiscal space through public bond financing are also encouraging. The likelihood that domestic government bonds would be issued increases by about 2.1 times if the quality of government regulations improves from, for instance, the level in the Philippines to that in the Republic of Korea. Similarly, when a country's total indebtedness increases, say from 40 per cent of GDP to 50 per cent, the amount of public domestic bonds that could be issued tends to decrease by 1 per cent of GDP, which is sizeable relative to past issuance amounts in the region.

Finally, there is a strong association between the quality of the policy environment for public-private partnerships (PPP), as measured by a newly proposed composite index, and the size of PPP infrastructure investment. For example, if the quality of the policy environment in Bangladesh increases to the level found in Malaysia, the amount of PPP infrastructure investment could rise by almost 40 per cent. The results also point to the significant role played by an economy-wide legal and regulatory framework and PPP institutional arrangements, such as project preparation and procurement practices.

Importantly, the selected policy areas discussed in this chapter should be viewed as illustrative case studies on the magnitude of development finance that could be generated. Whether these policy actions are considered as relevant and important would depend on country-specific circumstances. Indeed, the task of identifying policy options to increase the fiscal space and leverage private capital should be guided by specific country conditions.

2. Sizeable investment gaps to achieve sustainable development

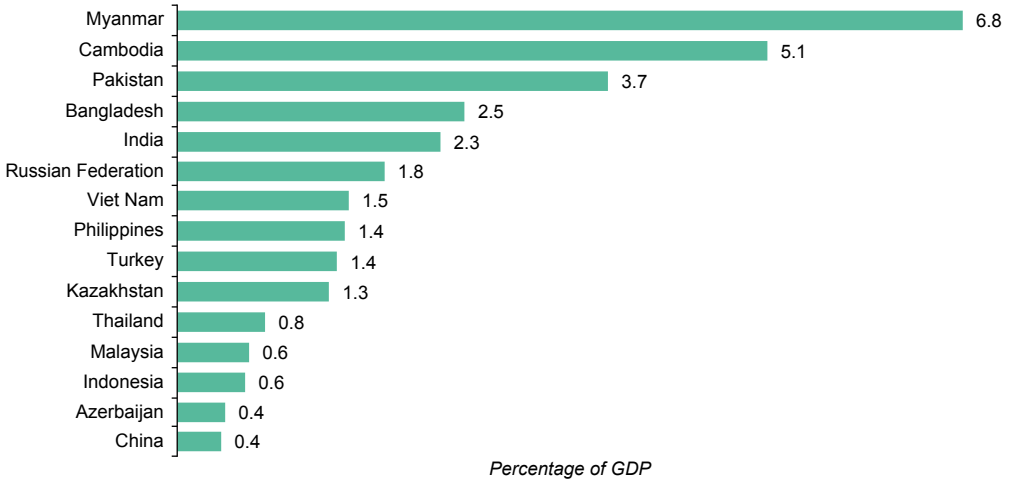
There are numerous policy actions that developing Asia-Pacific countries can undertake to achieve Sustainable Development Goal 8, namely sustained, inclusive and sustainable economic growth. Among other actions, an increase in fiscal spending is necessary to lift productivity growth and reduce inequalities. A wide range of policy measures also needs to be introduced to address environmental degradation, natural disasters and climate change. This section contains a review of some estimates on financing requirements and gaps to achieve sustainable development. Several studies have presented such estimates for all 17 Sustainable Development Goals, while others were focused on the investment needs and gaps for infrastructure only.

Achieving the Sustainable Development Goals will require a substantial increase in financial investments. Globally, Schmidt-Traub (2015) estimated that low- and lower-middle-income countries need on average an additional $1.4 trillion per year, or about 11.5 per cent of their combined GDP, during the period 2015-2030 in order to achieve Sustainable Development Goals in such areas as health, education, food security, infrastructure, ecosystem services and humanitarian work. For all developing countries worldwide, UNCTAD (2014) estimated that such additional investment requirements would increase by $2.5 trillion per year during the same period, based on the annual investment needs of about $3.9 trillion and current spending at $1.4 trillion. Both studies suggested that investment needs for economic infrastructure, such as transport, energy, telecommunications and water and sanitation, are much higher than other investment areas also needed to achieve the Goals. In Schmidt-Traub (2015), infrastructure was found to account for about 70 per cent of the total investment needed. In UNCTAD (2014), transport, such as roads, rail and ports, alone was estimated to cost more than the health and education-related Sustainable Development Goals combined.

Studies that are focused only on infrastructure would also suggest that the amount of required financial investments far exceeds the prevailing trends. McKinsey Global Institute (2016) estimated that global infrastructure investment needs would stand at $3.3 trillion per year over the period 2016-2030. China and India together would account for about 35 per cent of this amount. For developing Asia-Pacific economies, ADB (2017a) suggested that the infrastructure investment gap, after taking into account additional costs to make infrastructure more climate-resilient, will be about $460 billion or 2.4 per cent of GDP per year during the period 2016-2020. If China, which has a relatively small investment gap, is excluded, the average gap for the remaining countries would rise to about 5 per cent of GDP. For individual Asia-Pacific economies, Global Infrastructure Hub (2017a) showed that infrastructure investment shortfalls are as large as 4-7 per cent of GDP in Cambodia, Myanmar and Pakistan (Figure 2.1). Finally, ESCAP (2017a) revealed that the infrastructure investment needs in a group of 26 countries with special needs (least developed countries, landlocked developing countries and small island developing States) in the Asia-Pacific region will be up to 10.5 per cent of GDP on average per year during the period 2016-2030. Such an estimate far exceeds the current infrastructure spending trend of 4-7.5 per cent of GDP in this group of economies.

While these estimates are all indicative, varying and not generally comparable,[1] they all point to the need for a considerable boost to future investment in order to promote sustainable development and to make economies resilient, inclusive and sustainable. Past spending and allocation of available resources has not been sufficient, as demonstrated by the large number of people who are still malnourished and lack access to electricity and clean water. Ongoing structural shifts are likely to place even greater pressure on future investment needs, especially in infrastructure. For example, rapid urbanization would require better urban transport and telecommunications systems, while climate change increases the demand for climate-resilient infrastructure. Similarly, the need to strengthen social protection is increasing in order to enhance economic resilience and social

Figure 2.1. Estimated infrastructure investment gaps in selected Asia-Pacific economies



Source: Global Infrastructure Hub, Global infrastructure outlook. (Sydney: GIH, 2015). Available from https://outlook.gihub.org.

inclusiveness, especially in view of the challenges of poverty and inequality and the further risks arising from demographic transitions and labour market disruptions associated with reforms and rapid technological advancements.

3. Mobilizing development finance: flow of funds and selected focus areas

As developing countries need to markedly increase their investments to achieve the Sustainable Development Goals, two key policy considerations are how to better channel the available financial resources and how to secure more financing for such investment. This section contains an illustration of the flow of funds in a given country; it is noted that there are numerous ways that countries can explore in order to mobilize development finance.[2] As such, this section highlights selected areas on which this chapter is focused.

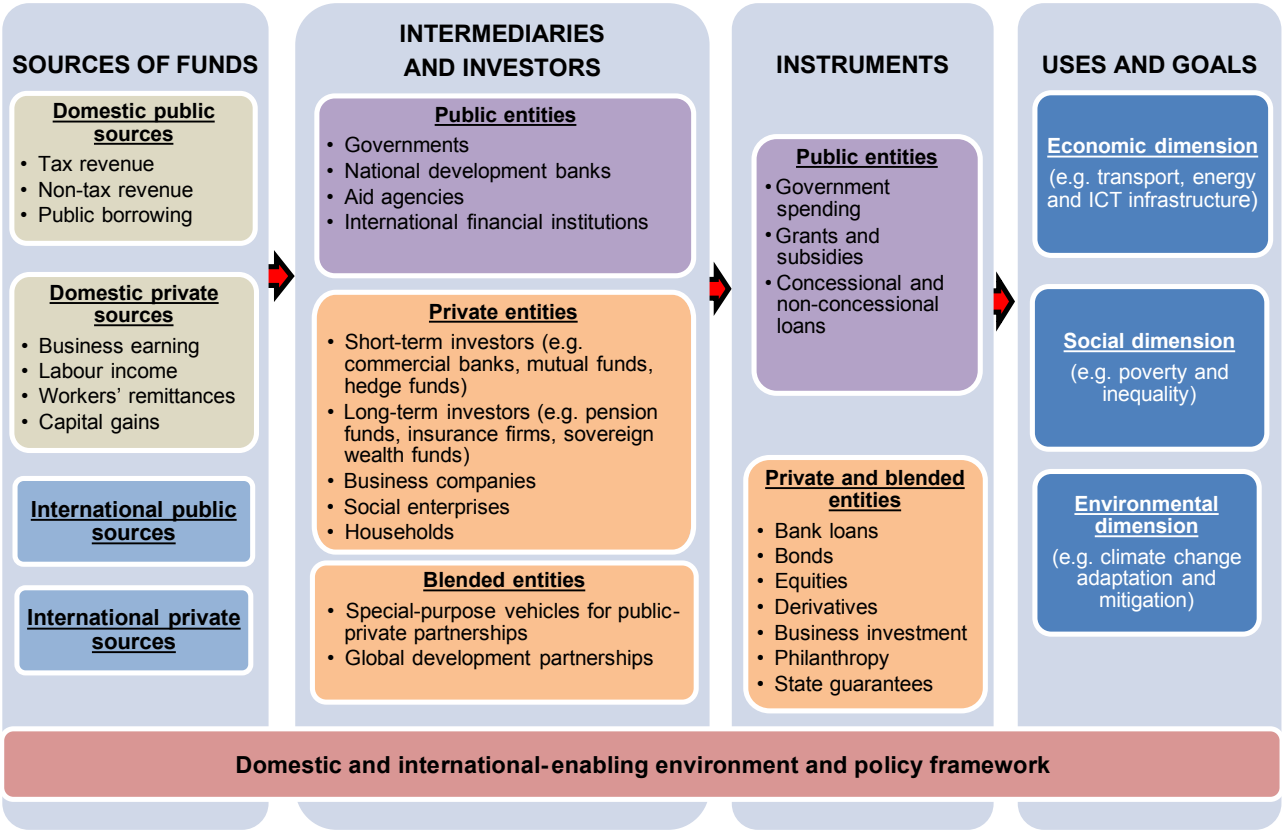
3.1. Flow of funds

The flow of funds involves various sources of funds (public/private and domestic/international) and intermediaries that channel available funds to promote sustainable development through a wide range of instruments.

Figure 2.2 depicts an illustrative flow of funds. In the context of public finance, an obvious example is the mix of government spending, concessional loans by national development banks and grants provided by foreign donors to promote social development, such as through poverty reduction programmes. In the context of private finance, business firms, financial companies and institutional investors can contribute to, among others, tax revenues and business investments. For blended finance, the Government may provide State guarantees, while private construction companies work with commercial banks to deliver large-scale infrastructure projects under public-private partnerships.

The magnitude of assets and funds held by private companies, banks and monetary authorities in the Asia-Pacific region is very large. The two panels of Figure 2.3 depict selected indicators on available financing on a stock and flow basis. As shown in panel A, the combined value of international reserves, excluding gold; market capitalization of listed companies; and assets held by financial institutions, insurance companies and mutual, pension and sovereign wealth funds in developing Asia-Pacific economies is estimated at about $56.2 trillion. This is about 2.6 times the combined GDP values of developing countries in the region in 2016. Similarly, panel B shows that the region exhibits sizeable domestic savings. The combined GDP value after deducting total

Figure 2.2. Illustrative flow of funds for development finance in a given country



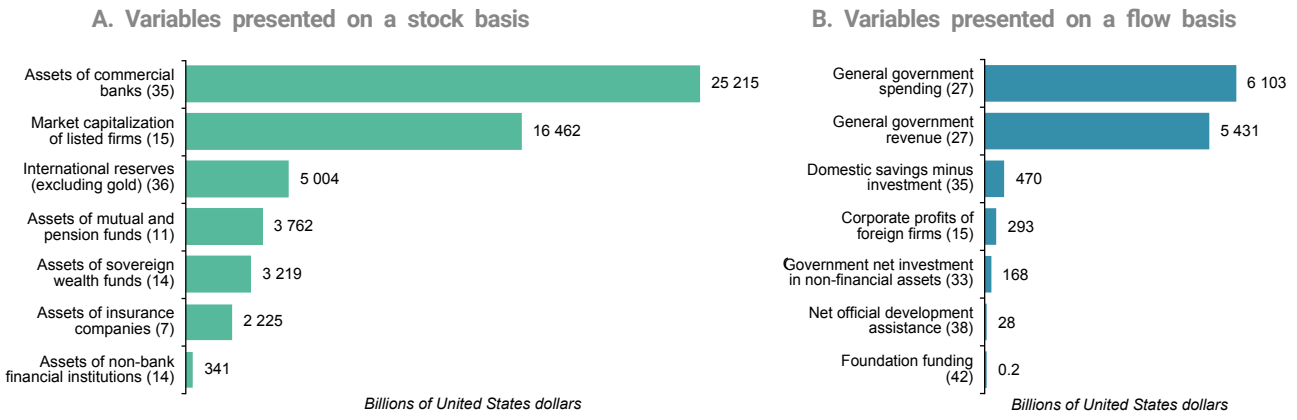
Source: ESCAP, based on United Nations System Task Team (UNTT), Report of the Intergovernmental Committee of Experts on Sustainable Development Financing" (New York, 2014).

consumption and gross capital formation stood at about $470 billion in 2016. Such a huge amount alone is enough to finance investments needed to close infrastructure gaps in the region, which are estimated at $460 billion a year (ADB, 2017a).

Part of assets and funds under management by the private sector could potentially be mobilized for development purposes. For example, as will be discussed in more detail below, an appropriate policy environment could increase the investments made by institutional investors, such as pension funds and insurance companies, into long-term infrastructure projects. Similarly, listed firms and commercial banks could directly support social inclusiveness and environmental sustainability through initiatives, such as impact investment and corporate social responsibility.

Given the Government's prominent role, an important avenue is effective use of available fiscal resources and enhancing the fiscal space. For most countries, a desirable increase in government spending may need to be accompanied by greater efforts to boost revenues. Total spending by general Governments, which has played a key role in supporting sustainable development, amounted to $6.1 trillion in 27 developing Asia-Pacific economies in 2016 (panel B of Figure 2.3). This amount far exceeded government revenues, resulting in a fiscal deficit of $672 billion in the same year. While overall public debt positions currently seem to be sustainable, the situation may change as Governments step up their efforts to implement the 2030 Agenda. Apart from revenue enhancement, additional public financial resources may be achieved through more effective expenditure management so that greater development impacts could be attained for the same, or an even smaller, amount of fiscal resources. One example is to ensure that public investment in non-financial assets, which

Figure 2.3. Selected indicators on size of available financing in selected economies



Source: ESCAP, based on World Development Indicators Database, Global Financial Development Database, Orbis database, SDGfunders.org and Sovereign Wealth Fund Institute.

Notes: Figures in parentheses indicate the number of developing Asia-Pacific economies on which calculations are based. The data period for most indicators is either 2015 or 2016.

stood at almost $170 billion in 2016, or about six times the official development assistance that the entire region received in the same year, is adequately allocated to development objectives.

3.2. Focus areas of this chapter

One message that may be drawn from Figure 2.3 is that a country's efforts to mobilize development finance could be focused on two broad areas, namely enhancing domestic public finances and leveraging private capital. The need to strengthen public finances is obvious. Most Governments in the region are incurring fiscal deficits at the same time that their greater development needs require larger levels of public spending. Governments are expected to lead an effort to achieve components of the Sustainable Development Goals that have high social returns but relatively low commercial returns, a situation which makes them less appealing to private investors. For example, Schmidt-Traub (2015) noted that financing of the Goals relating to public health, education and emergency response and humanitarian work is likely to be borne fully by the public sector. Moreover, government spending is de-risking. Public investments, such as those aimed at improving the judicial system and setting up an effective natural disaster prevention system, help to reduce a country's systemic risk (Roy, 2017). Meanwhile, the adoption of the comprehensive 2030 Agenda means that public finance alone will not be adequate in achieving the Sustainable Development Goals. As noted above, the volume of private capital is enormous, and there is clearly more room to increase the private sector's contribution to sustainable development.

Within the broad areas of strengthening public finance and leveraging private capital, this chapter is focused on the following three dimensions:

(a) Strengthening tax revenues, including through improving tax administration and expanding the tax base;
(b) Prudent sovereign borrowing from domestic and international financial markets;
(c) Leveraging private capital, including through enhancing a policy environment for public-private partnerships and deepening financial intermediation.

The focus on tax revenues and government borrowing is a continuation of the work of ESCAP on fiscal policy in recent years. For example, on government borrowing, ESCAP (2013) argued that Governments in the Asia-Pacific region could consider additional borrowing if a country's development gaps remain wide, public debt is deemed sustainable and fiscal resources are spent on areas that help lift a country's potential economic growth. On tax revenue, ESCAP (2014)

showed that actual tax collections are currently below their potential; that study highlighted the need to improve tax administration and expand the tax base in order to narrow the tax gap. This chapter expands and deepens these analyses.

4. Strengthening tax revenues

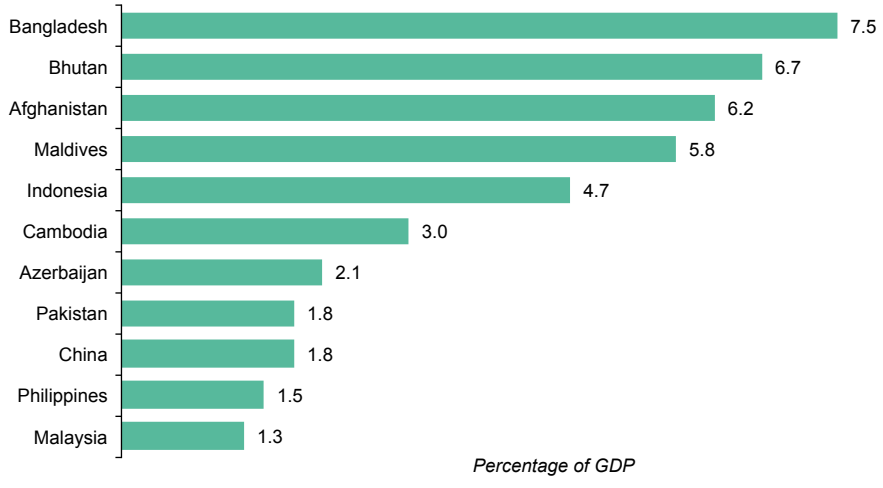
Actual tax collections have fallen short of their potential levels in the Asia-Pacific region. ESCAP (2014) estimated the tax potential in Asia-Pacific economies, based on each country's economic structure, including such factors as agricultural value added, GDP per capita level and the degree of trade openness.[3] The analysis showed that actual tax collection levels were below their potential levels in 17 Asia-Pacific economies with available data. Such tax gaps are estimated to be more than 6 per cent of GDP in such countries as Afghanistan, Bangladesh, Bhutan and Maldives (Figure 2.4). While already large, these estimates of tax gaps may be viewed as conservative. In Langford and Ohlenburg (2015), the tax gap in 13 developing Asia-Pacific economies was estimated at 13.6 per cent of GDP on average. To narrow the tax gap, ESCAP (2014) emphasized the need to: (a) enhance tax administration by, among other things, streamlining procedures and making greater use of information and communications technology; and (b) expand the tax base by rationalizing existing tax exemptions, introducing new taxes and tackling tax evasion and fraud.

This section expands and deepens the analysis carried out in ESCAP (2014). In particular, it contains an examination of the extent to which recommended tax policies, if implemented, would help to narrow the tax gap in Asia-Pacific economies. Through a newly proposed index that measures the quality of tax administration across Asia-Pacific economies, the potential revenue impact of better tax administration is provided below, and this is followed by an exploration of the revenue impact of a wider tax base, particularly through the introduction of a carbon tax and the rationalization of tax incentives to attract foreign direct investment.

4.1. Improving tax administration

Better tax administration contributes to higher tax revenue collection and other economic benefits by reducing tax avoidance and evasion, including by influencing people's willingness to pay taxes. For instance, in India a recent study showed that tax revenue in the state with the least effective tax administration could increase by at least 57 per cent if its tax administration efficiency were to improve to the level being observed in the country's best-performing state (Das-Gupta, Estrada and Park, 2016). The benefits

Figure 2.4. Estimated tax gaps in selected Asia-Pacific economies



Source: ESCAP, *Economic and Social Survey of Asia and the Pacific 2014: Regional Connectivity for Shared Prosperity*. Sales No. E.14.II.F.4. Available from www.unescap.org/sites/default/files/Economic%20and%20Social%20Survey%20of%20Asia%20and%20the%20Pacific%202014.pdf.

of effective tax administration also go beyond tax revenues. In a sample of developing economies worldwide, Dabla-Norris and others (2017) noted that better tax administration helps narrow the productivity gaps between small and large firms, as smaller companies typically face higher tax compliance costs.

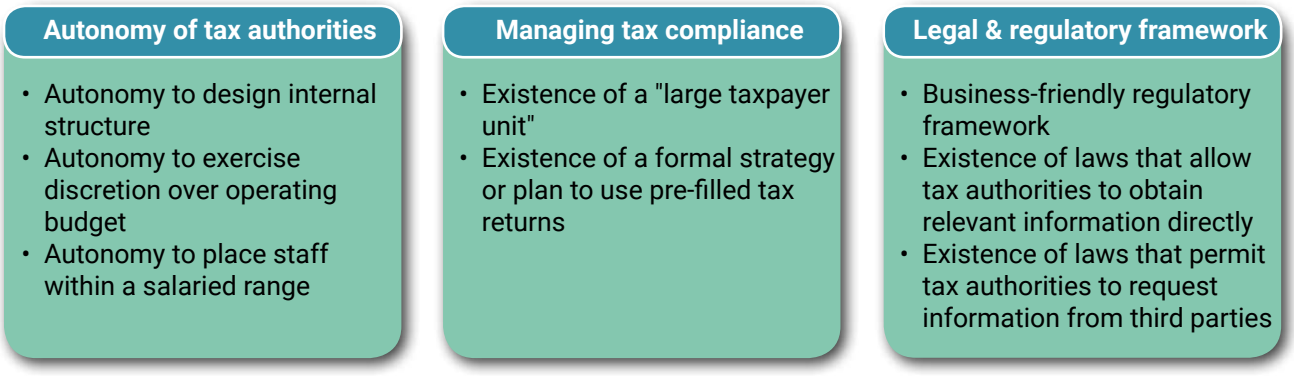
The quality of tax administration depends primarily on the institutional set-up of tax authorities and an economy-wide legal and regulatory framework in which tax authorities operate. As such, enhancing tax administration is possible through various means. Examples include introducing effective tax legislation and ensuring its enforcement, increasing the use of ICT in tax operations, adopting risk-based compliance control, training of tax officials and close consultation with relevant stakeholders (World Bank, 2011). In Dabla-Norris and others (2017), the quality of tax administration was assessed through four performance areas, namely taxpayer information, filing and payment, post-filing processes and the accountability and transparency of tax authorities. Crandall (2010) noted that some indicators of good tax administration include a low cost-to-collection ratio, a high actual-to-target tax revenue ratio and high filing and payment compliance rates, as well as the timeliness and quality of tax services.

A new composite index is proposed in this section; it measures the extent to which the institutional setting and policy environment enable tax authorities to address tax avoidance and evasion, thus enhancing the efficiency of revenue collection. Consistent with World Bank (2011), the newly proposed "Tax Administration Index" can be used to examine three dimensions of tax administration: (a) institutional arrangements that grant autonomy to tax authorities; (b) core business functions that facilitate compliance risk management and use advances in technology to enhance tax collection; and (c) a legal and regulatory framework that enables tax authorities to gain access to information in order to validate taxpayers' liability. These dimensions of tax administration represent three equally weighted sub-indices of the composite index. Figure 2.5 shows the components of the three sub-indices.

The Tax Administration Index is based largely on information obtained from surveys of tax authorities in the Asia-Pacific region and beyond.[4] ADB (2016c) and OECD (2017a) conducted surveys of tax authorities on various aspects of tax administration, such as institutional design, budgeting, compliance risk, human resources management and use of ICT in tax operations. The newly proposed index is available for 60 economies, of which 14 are developing Asia-Pacific economies. The data period is 2015. Technical details of the index are presented in annex I.

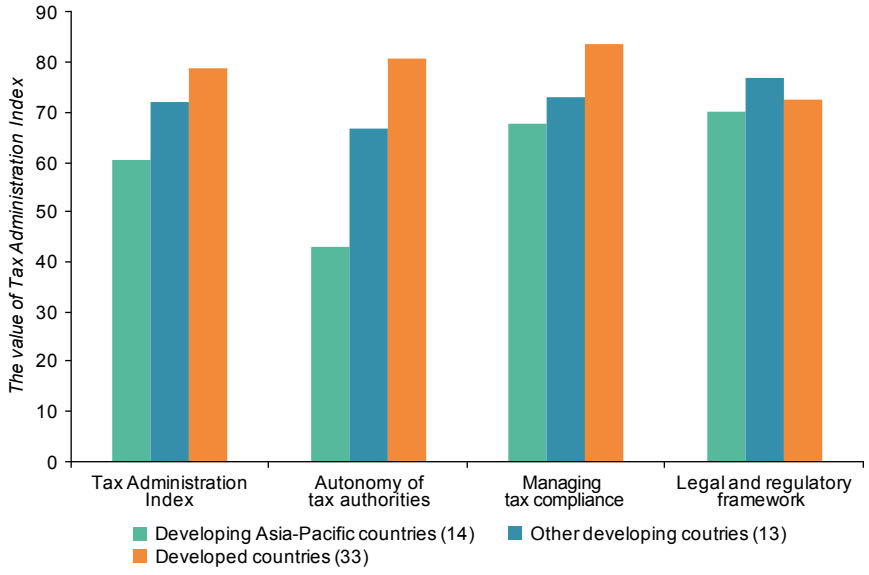
The quality of tax administration in developing Asia-Pacific economies appears weaker than that in developed countries and developing countries in other regions of the world. Figure 2.6 shows that the region lags in all three sub-indices of the Tax Administration Index.

Figure 2.5. Components of the Tax Administration Index



Source: ESCAP analysis.

Figure 2.6. The Tax Administration Index in developing Asia-Pacific economies and beyond

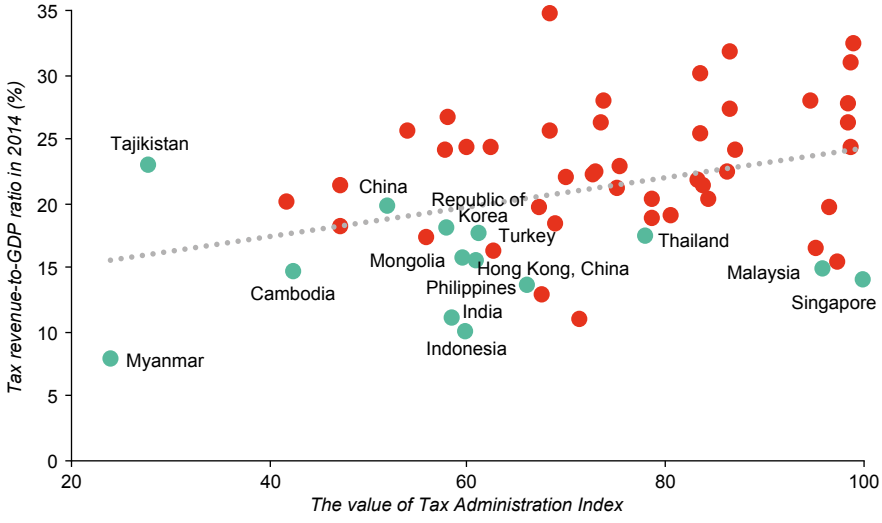


Source: ESCAP, based on Organisation for Economic Co-operation and Development (OECD), *Tax Administration 2017: Comparative Information on OECD and Other Advanced and Emerging Economies*. Paris: OECD Publishing; Asian Development Bank (ADB), A Comprehensive Analysis of Tax Administration in Asia And The Pacific: 2016 edition. Manila, Philippines; and Worldwide Governance Indicators.

Note: The figures in parentheses indicate the number of countries with available data. Other developing countries are Argentina, Brazil, Bulgaria, Colombia, Costa Rica, Croatia, Cyprus, Lithuania, Malta, Morocco, Peru, Romania and South Africa.

Globally, countries with better-quality tax administration tend to exhibit stronger tax collection capacity. Figure 2.7 depicts a positive relationship between the value of the Tax Administration Index and the tax-to-GDP ratio in 59 developed and developing economies worldwide in 2014. Interestingly, the chart would also suggest that the tax-to-GDP ratios in developing Asia-Pacific economies are often lower than those in other regions of the world with a similar quality of tax administration. Among others, two possible explanations are the existence of large informal sectors in several economies in the region and the policy choice Governments make to maintain

Figure 2.7. Scatter plot between Tax Administration Index and tax revenue-to-GDP ratio



Source: ESCAP analysis.

Note: The dots highlighted in green represent 14 developing Asia-Pacific economies.

a low-tax environment in order to support the competitiveness of business sectors in such countries as Malaysia and Singapore.

The potential revenue impact of improved tax administration is estimated to be significant. In a regression analysis that was carried out to explain the level of the tax-to-GDP ratio across countries, it was found that a one-point increase in the value of the Tax Administration Index is associated with a tax revenue increase of 0.15 per cent of GDP (see annex I for technical details). To illustrate the magnitude of such a relationship, if a statutory change is made to allow tax authorities in Cambodia to design their own internal structure, this step alone could increase the value of the Tax Administration Index in Cambodia by about 11 points, so that country's tax revenue could rise by almost 1.7 per cent of its GDP. If the quality of tax administration in individual Asia-Pacific economies is assumed to match the level observed in an average OECD country, the potential increase in tax revenue could be as high as 8 per cent of GDP in Myanmar and Tajikistan, and about 3-4 per cent of GDP in larger countries, such as China, India and Indonesia (Figure 2.8).

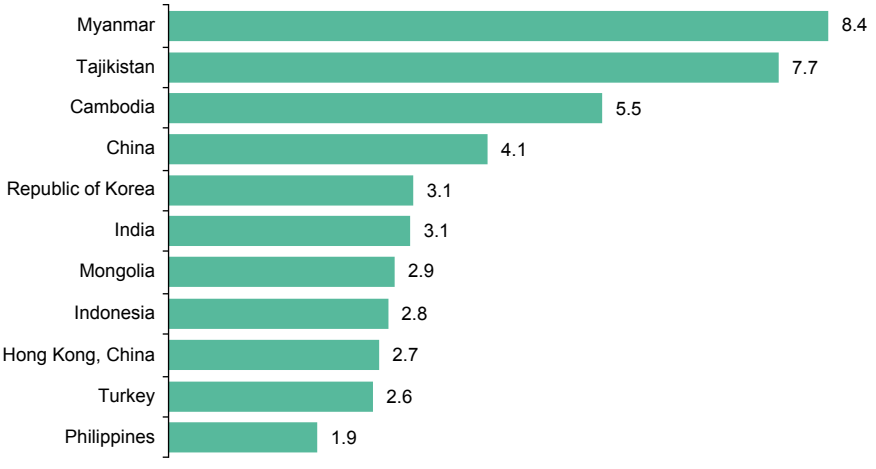
4.2. Expanding the tax base

Conceptually, expanding the tax base may be achieved by rationalizing existing tax exemptions and introducing new tax instruments. This section contains two illustrative cases that reflect these policy options: (a) rationalizing tax incentives that are offered to attract foreign direct investment (FDI); and (b) introducing a carbon tax. In ESCAP (2014), the rationalization of FDI tax incentives, especially through means of greater regional cooperation, was put forward as a key policy recommendation. The discussion in this section may be considered as a follow-up analysis. Meanwhile, a carbon tax has been selected as the case for introducing a new tax instrument in view of the significant positive impact it could have on environmental sustainability.

Rationalizing tax incentives for foreign direct investment

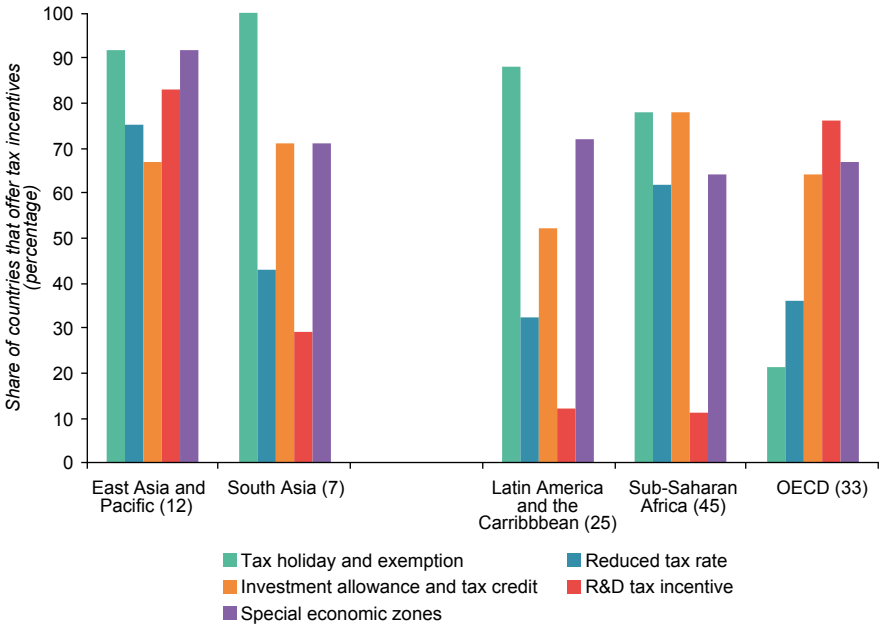
The Asia-Pacific region offers more tax incentives to attract foreign direct investment than other regions of the world. In East and South Asia, virtually all economies offer tax exemptions (Figure 2.9). Moreover, at least two thirds of these economies offer investment tax credits and other tax benefits when firms operate in special economic zones. In general, tax incentives are offered as a way to compensate for deficiencies in infrastructure, burdensome regulatory framework, political instability or lack of natural resources. In other cases, tax incentives are provided in response to a race among regional peers to offer more generous benefits to foreign investors. In many cases, these tax incentives for FDI have led to profit shifting and erosion of the tax base.

Figure 2.8. Potential revenue impact of better tax administration



Source: ESCAP analysis.

Figure 2.9. Use of foreign direct investment tax incentives in selected regions of the world in 2014



Source: ESCAP, based on Sebastian James, *Effectiveness of investment incentives in developing countries: evidence and policy implications* (Washington, D.C., World Bank, 2014). Available from www.tepav.org.tr/upload/files/haber/1285937438-5.Effectiveness_of_Tax_Incentives_in_developing_countries___Policy_and_Evidence___TEPAV_Sept_2010_B_W.pdf.

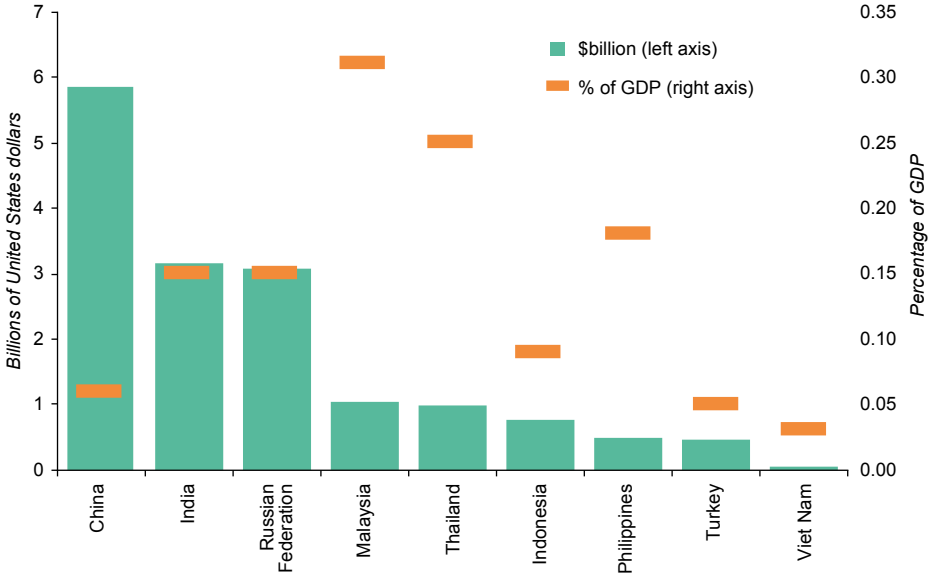
Note: Figures in parentheses indicate the number of countries covered in each group of countries.

This section contains an estimation of the size of tax expenditure relating to FDI tax incentives in developing Asia-Pacific economies. Based on a methodology highlighted in IMF, OECD, United Nations and World Bank (2015), the revenue foregone was calculated as the difference between the tax actually paid and the tax liability under a hypothetical case in which there were no FDI tax incentives; thus, the statutory corporate income tax rate was applied to profit before taxes. To consider various deductions to which firms are entitled, such as depreciation allowance, the analysis subtracted 13 per cent of profits before applying the statutory tax rate. That figure is the median value of the ratio of depreciation to profit before taxes ratio during the period 2013-2015.

While not substantial, the revenue forgone due to FDI tax incentives is estimated to be sizeable nonetheless. Based on firm-level financial data of more than 28,500 registered foreign companies in 9 developing Asia-Pacific economies, the total tax expenditure has been estimated at close to $16 billion in 2014 (Figure 2.10). In major FDI destinations, such as Malaysia and Thailand, the size of the tax revenue forgone is up to 0.3 per cent of GDP. Annex II shows the estimated tax revenue forgone under scenarios that assume larger and smaller depreciation allowances than the baseline calculations.

The true economic cost of FDI tax incentives may be underestimated here. Conceptually, quantifying the size of tax revenue forgone is challenging. Among other reasons, the estimated tax expenditure could be underestimated due to international tax avoidance techniques, such as transfer pricing. Similarly, business losses that are carried over from previous years and tax deductions for charitable donations make firms' observed tax liability smaller than the hypothetical-case tax liability. More importantly, the race among regional peers to offer a more enabling business environment has incentivized Governments to cut corporate tax rates. Applying the existing statutory tax rates, which is what the analysis in this section did, would underestimate the full cost of tax expenditures. On the other hand, the tax revenue forgone could be overestimated also because some investors may have chosen not

Figure 2.10. Potential tax expenditure on foreign direct investment incentives



Source: ESCAP, based on firm-level data in the Orbis database. Available from https://orbis.bvdinfo.com.

to invest without tax incentives. In noting these methodological limitations, the estimates provided could still inform the order of magnitude of tax revenues available if Governments wish to rationalize their FDI tax incentives.

A broad policy message here is that countries need to consider carefully the objectives and effectiveness of existing tax incentives. The policy aim should be to strike the right balance between an attractive tax regime for business investment and securing public revenues. In countries where the administrative complexity of FDI tax incentives has increased the opportunities for corruption or where the knowledge spillovers of foreign investment are limited, generous tax incentives may be reconsidered. Nonetheless, country experiences show that tax incentives have also been used to meet economic objectives other than promoting foreign investment (Jun, 2017). For example, countries may explicitly give preferential tax treatments to domestic firms over foreign companies because domestic companies tend to contribute more to tax revenue in view of their limited capital mobility. In another example, tax incentives can be used to incentivize firms, especially small and medium-sized enterprises, to remain in the formal sector in order to maintain the size of the tax base.

While Governments may consider rationalizing FDI tax incentives where needed, a policy priority should be to improve the investment climate by offering a business-friendly regulatory framework and decent infrastructure. In a survey of investors in Thailand and Viet Nam, more than 80 per cent of respondents stated that an FDI project would still have been made in these countries even without tax incentives (James, 2014). Moreover, studies have shown that these factors have a larger impact on attracting FDI than tax incentives (Van Parys and James, 2010; Muthitacharoen, 2017). At the regional level, policymakers could strengthen cooperation that would help to avoid a race among regional economies to offer more generous FDI tax benefits.

Introducing a carbon tax

While tax instruments, such as corporate and personal income taxes, import tariffs and sales taxes, are in place in most countries, there are many other taxes which are less commonly adopted. Examples of such taxes are wealth-based taxes, such as taxes on financial transactions (see box 2.1), inheritances and gifts, and taxes that are designed to discourage "public bads", such as taxes on carbon emissions, use of natural resources, airline tickets and use of vehicles in

Box 2.1. Financial transaction tax

A financial transaction tax (FTT) is a tax that is levied on the transfer of ownership of financial assets, such as stocks, bonds, foreign currencies and derivatives. The potential revenue of FTT has been estimated to be significant, at up to $125 billion annually worldwide (United Nations, 2012). In the United States alone, FTT could generate cumulative revenues of $200 billion over the period 2017-2021 (Congressional Budget Office, 2016). In addition to generating government revenue, FTT can to some extent potentially discourage speculative financial trading given the higher transaction costs involved. Often perceived as a progressive tax, FTT could also reduce income inequality as its burden is disproportionally borne by institutional investors and wealthier individuals.[a]

A well-designed FTT scheme should levy low tax rates on a wide range of financial assets (Bivens and Blair, 2016). A broader base would reduce the opportunity for investors to transition from taxed instruments to untaxed ones. A broader base also allows for lower tax rates for each financial asset, which should lead to less tax evasion and avoidance. The tax rates can be set according to the characteristics of financial assets. For example, transactions involving derivatives could be taxed at a much lower rate than those concerning equities because derivatives have expiration dates; thus, they require more frequent trading than equities (Barclay, 2010). Alternatively, the FTT rates can be set as a proportion of existing transaction costs, such as brokerage fees.

Several Asia-Pacific economies have already adopted some form of FTTs, although coverage could be broadened. The most common instrument is a tax or stamp duty on transfers of shares of listed companies, which range between 0.1 per cent in such countries as China, Indonesia and Thailand, to 0.5 per cent in the Philippines.[b] However, among the countries that have adopted a tax on equity transactions, trading of other financial assets, such as bonds, derivatives and foreign currencies, is often not subject to FTT. In this regard, additional tax revenues could be generated from introducing FTT where it is currently not in place and from expanding its scope in countries that already have certain forms of FTT.

While considering the introduction of FTTs, countries should be mindful of some implementation issues. First, studies on how investors have reacted to FTT show that they have yielded mixed results. In China, Yongyang and Zheng (2010) showed that a 22-basis-point increase in the securities transaction tax rate was associated with a 28 per cent decrease in trading volume. Nonetheless, in India the value of shares traded continued to rise steadily in the three years after the introduction of a securities transaction tax in 2004 (Malik, 2014). Second, FTT could reduce tax revenues from other tax instruments, such as revenues collected from personal income and capital gains taxes. Third, FTT could push up public borrowing costs, given the higher transaction costs of bond trading. Finally, enforcing FTTs is increasingly difficult amid the widespread use of multi-country electronic trading platforms.

Despite its potential to generate tax revenues and address income inequality, FTT may not be a viable policy option in countries with small or underdeveloped financial markets. In such countries as Bangladesh, Pakistan and Papua New Guinea, the value of stocks traded is still below 1 per cent of GDP, so the revenue that could be generated tends to be small relative to the administrative and enforcement costs. More importantly, there is still a need to further promote the role of financial markets in channelling productive investments in these countries.

[a] For a literature review of FTT, see Matheson (2011).

[b] See Burman and others (2016), Deloitte (2016) and various issues of HSBC Treasury Management Profile. Available from https://globalconnections.hsbc.com/global/en/tools-data/treasury-management-profiles.

designated urban zones. These less conventional taxes have the potential to generate tax revenue and address social and environmental issues, such as income inequality and air pollution. For example, Lockley and Chambwera (2011) estimated that introducing air ticket levies in 23 developed countries could generate about $10.3 billion a year, while a similar estimate in the context of the European Union could create revenues of up to €5.4 billion a year (Krenek and Schratzenstaller, 2016).

A carbon tax is a tax that is levied on fossil fuels that emit carbon dioxide when they are burned, such as coal, oil and natural gas. As such, larger-scale carbon emitters are often power generation plants and oil refineries. The main aim of a carbon tax is to reduce greenhouse gas emissions. Pricing carbon, which can be done through a carbon tax and an emissions trading system, incentivizes producers and consumers to rethink how much energy they should produce and consume in the face of higher prices for key energy items.

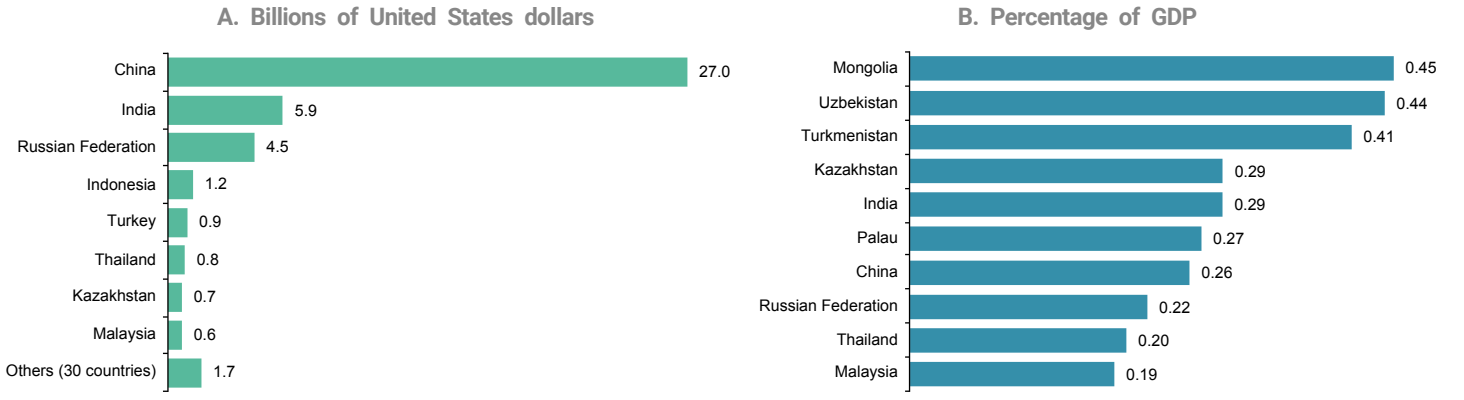
A carbon tax is relatively uncommon in the Asia-Pacific region (World Bank, 2016a). Except in parts of Japan where a carbon tax has been in place since 2012, other countries are still considering its introduction. Among others, Singapore plans to introduce a carbon tax in 2019 (Singapore, 2017). Such a tax is under study in the Republic of Korea, Thailand and Turkey. Overall, a carbon tax is less commonly used relative to the emissions trading system, which is another type of carbon pricing scheme that is in place or scheduled to be implemented in Australia, China, Japan, Kazakhstan, New Zealand and the Republic of Korea.[5]

The magnitude of public revenues that a carbon tax could generate depends on several factors. Primarily, such factors include the volume of carbon emissions in a country, the threshold on the level of emissions that would be subject to the carbon tax and the tax rate that would be introduced. Moreover, the potential revenue depends on how the relevant parties respond to the introduction of a carbon tax, such as the adoption of green technologies by energy companies that would lead to lower emission levels. Finally, a carbon tax may reduce tax revenues from other sources. For example, a carbon tax would push up energy production costs, thus reducing the profits and taxes paid by energy companies. In contrast, if much of the higher energy production cost is passed on to consumers in the form of higher retail prices for energy, this could weaken household spending and sales tax revenues.

This section contains an estimation of the size of tax revenue that a carbon tax could generate. In the first step, the potential carbon tax revenue is calculated by multiplying each country's carbon emission level by a hypothetical tax rate of $3.50 per metric ton of carbon dioxide equivalent (tCO_2e), which is the median tax rate of the carbon pricing initiatives in developing countries worldwide.[6] This assumed carbon tax rate could be viewed as moderate. Liu, Suk and Yamamoto (2014) estimated that energy-intensive businesses in such countries as China and Japan could afford a higher carbon price of $5-$12 per tCO_2e. In the second step, the impact of introducing a carbon tax on the total tax revenue is estimated at 75 per cent of the carbon tax revenue. As noted above, such a reduction (25 per cent) is assumed to capture a possible decrease in corporate profit and sales tax revenues after a carbon tax is introduced, an assumption that is also made in other studies (see Horowitz and others, 2017).

The potential revenue of a carbon tax in the Asia-Pacific region is estimated to be significant. As a whole, a carbon tax could generate about $43.3 billion in additional tax revenues per year in 38 developing Asia-Pacific economies. At $27 billion, China alone already accounts for more than 60 per cent of the total amount (panel A of Figure 2.11). On average, the estimated increase in the total tax revenue is equivalent to 0.16 per cent of GDP. This increases to 0.21 per cent of GDP in a group of countries with higher carbon intensity, such as Mongolia, Turkmenistan and Uzbekistan (panel B). These estimates under the baseline case may be considered conservative. If a hypothetical tax rate is assumed to be $15 per tCO_2e, which is the median tax rate

Figure 2.11. Potential tax revenue from introducing a carbon tax in selected economies



Source: ESCAP analysis.

of the carbon pricing initiatives in developed countries, the overall tax revenue could rise by $185.5 billion (see annex III for country-level estimates).

There are various policy considerations when evaluating the wisdom of introducing a carbon tax. One key issue is its possible impact on poverty and income distribution. Nurdianto and Resosudarmo (2016) showed that a carbon tax may push up the incidence of poverty in South-East Asian countries if its introduction is not accompanied by compensation to affected households. Moreover, a carbon tax is generally regressive (Metcalf and Weisbach, 2009), as poorer households spend disproportionally more on energy items, the prices for which may increase with a carbon tax. For example, in Singapore an official estimate would suggest that the price of electricity could rise by about 2-4 per cent when the carbon tax is introduced in 2019 (Singapore, 2017). To ease public concern, Governments could cut taxes in other areas to compensate for higher energy prices. The Government could also make the introduction of a carbon tax revenue-neutral in the short term by spending carbon tax revenue on schemes to promote the development of green technologies (Marron and Toder, 2014; Marron and Morris, 2016).

Another consideration is to examine the impact that introduction of a carbon tax may have on a country's tax structure and tax burden. In countries where other environmental taxes and regulations are already in place, a carbon tax may further complicate the tax system. Moreover, while setting a carbon tax at a high rate would send a stronger signal and potentially produce greater behavioural effects, it may place a large financial burden on private businesses and households, especially if the adjustment period is short. Finally, energy-intensive industries in countries with an environmental tax would become less competitive unless there are multilateral agreements that encourage the levy of environmental taxes in a regional or global manner (Cottrell and others, 2017).

5. Prudent sovereign borrowing from financial markets

ESCAP (2013) argued that the goal of macroeconomic policies, in particular fiscal policies, should not be focused solely on ensuring macroeconomic stability, but also on promoting sustainable development through job creation, social development and environmental protection. Hence, there is a need to rethink what is the right balance between the stabilization and the developmental roles of fiscal policies. Balancing the developmental role of fiscal policy and ensuring fiscal sustainability, however, is a contentious issue. While public debt sustainability should be

closely monitored and maintained, Governments also should ensure that meeting targeted fiscal outcomes and predetermined fiscal rules does not come at the cost of reducing spending on development objectives.

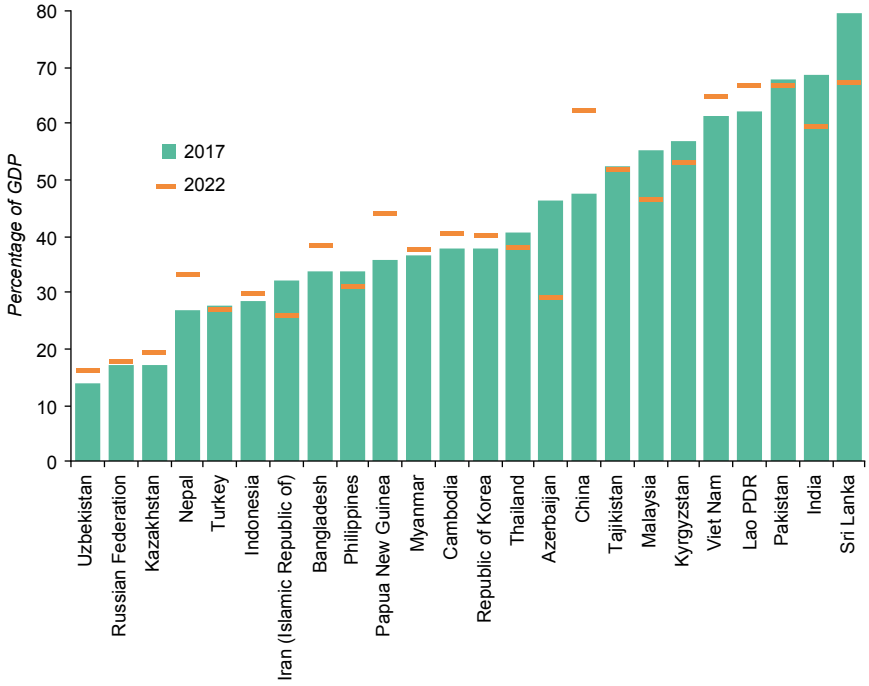
In this section, a question is studied: how could developing Asia-Pacific economies make greater use of government borrowing from financial markets in a prudent manner? There is an examination on whether the region can afford a higher public debt level to increase development expenditure. Through a regression analysis, the role that the quality of public policies has on the Government's ability to issue sovereign bonds, both in domestic and international markets, is explored.

5.1. Room for a higher level of public debt

Available data would suggest that many Asia-Pacific economies can afford a higher public debt level to increase development spending. According to IMF estimates, public debt levels in 2022 are expected to decrease from the 2017 levels in 11 of 24 developing Asia-Pacific economies (Figure 2.12). For this group of economies, the average debt level is considered moderate at 42.5 per cent of GDP in 2017 and is projected to decrease slightly to 42 per cent of GDP in 2022. Meanwhile, recent public debt sustainability analysis carried out by IMF and the World Bank also indicate that the risk of public debt distress is generally low, with 22 of 41 economies in the region being viewed as having a low level of risk. In those economies, public debt levels are projected to remain sustainable under a standard set of adverse macroeconomic shocks, such as slower output growth, higher interest rates and weaker exchange rates.

While public debt sustainability is not an immediate concern for most Asia-Pacific economies, there are other factors that warrant close surveillance. In principle, changes in the public debt-to-GDP ratio over time is driven mainly by changes in a primary fiscal balance (government revenue and grants after deducting non-interest expenditures) and the differences between real GDP growth and real interest rates. Examples of other factors that could influence the public debt level are contingent liabilities and receipts from the privatization of

Figure 2.12. Public debt levels in 2017 and 2022

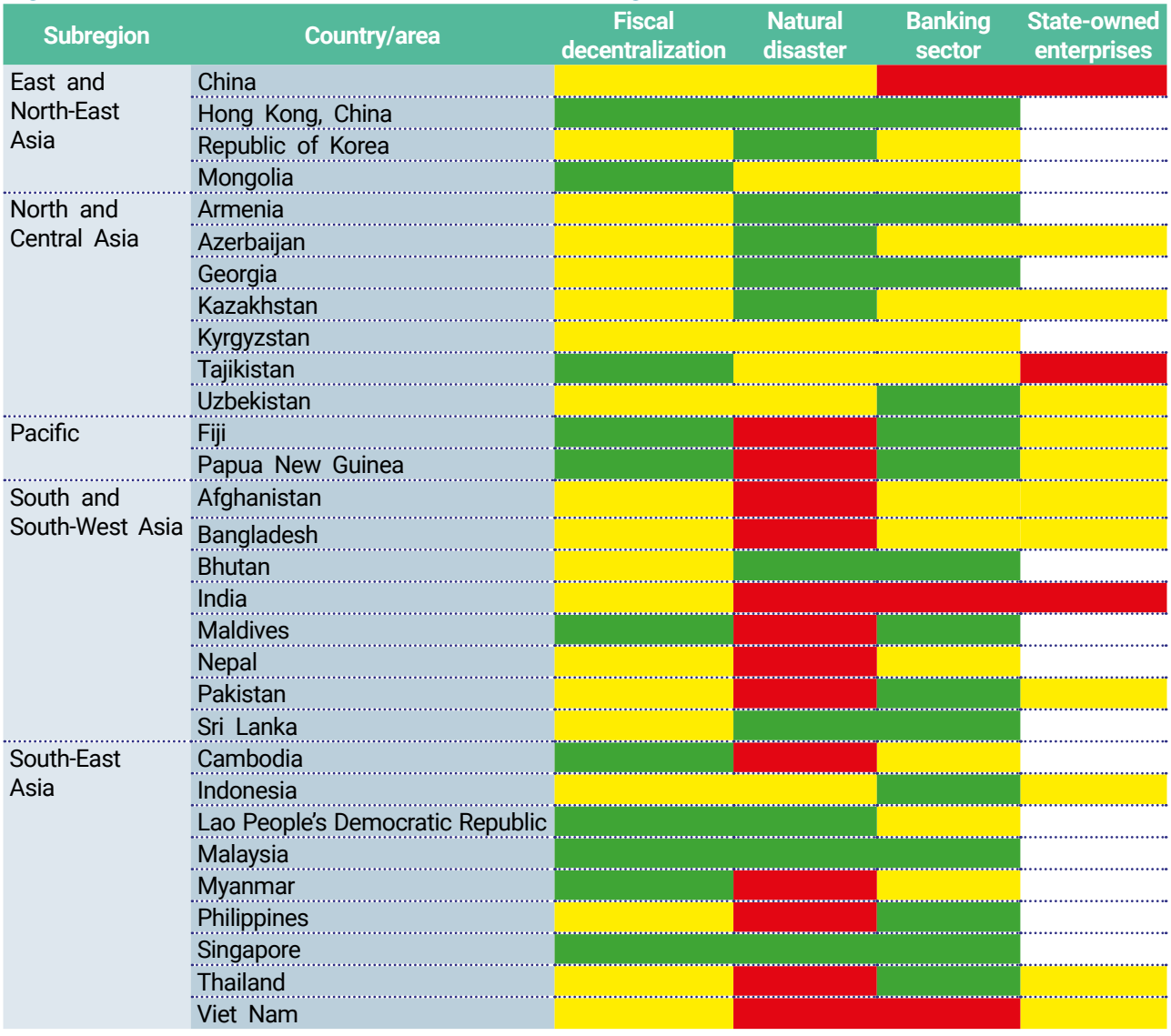


Source: ESCAP, based on IMF Fiscal Monitor database (October 2017 edition).

State-owned enterprises. Contingent liabilities can be explicit, such as bank deposit insurance and State guarantees on private investment, or implicit, such as the default of subnational public entities and failure of the banking sector.

Developing Asia-Pacific countries are subject to various types of fiscal contingent liabilities. Kopits, Ferrarini and Ramayandi (2016) assessed the level of risk that individual Asia-Pacific countries face as a result of contingent liabilities in four areas: a banking sector crisis; subnational government debt; operation of State-owned enterprises; and natural disasters. Their study showed that Pacific small island developing States and several economies in South and South-West Asia and South-East Asia are highly prone to natural disasters (Figure 2.13). Such catastrophes have led to significant output losses and triggered the need for large post-disaster fiscal support. Meanwhile, the fiscal cost of capital injection to bail out troubled State-owned enterprises, if materialized, could be high in China, India and Tajikistan. Moody's (2017) estimated that liabilities of State-owned enterprises

Figure 2.13. Fiscal risks due to selected contingent liabilities in selected economies



Source: ESCAP, based on George Kopits, Benno Ferrarini and Arief Ramayandi, Exploring risk-adjusted fiscal sustainability: Analysis for Asian economies. ADB Economics Working Paper Series No. 483 (Manila, 2016).

Note: Cells highlighted in green indicate a low risk; those in yellow, a medium risk; and red, a high risk. Cells highlighted in white indicate that no information is available.

in China stood at 114 per cent of GDP at the end of 2015, and that such enterprises' liabilities, worth about 20-25 per cent of GDP, may require restructuring over time. In another study, Ferrarini and Hinojales (2018) noted that the Government of China may have to spend up to 5.5 per cent of GDP by 2021 for bailouts in case there are defaults on the debts of some State-owned enterprises. Finally, contingent liabilities relating to banking sector turmoil are also estimated to be significant in China, India and Viet Nam.[7] Arslanalp and Liao (2013) showed that bank-related contingent liabilities in China and India could be worth about 3.9 per cent and 1.9 per cent of GDP respectively.

In addition to the issue of contingent liabilities, another caveat is that public debt sustainability could be a concern for several less developed economies in the region. IMF/World Bank public debt sustainability analysis suggested that 8 of 41 Asia-Pacific economies are considered as having a high risk of public debt distress (Table 2.1). Most are least developed countries, such as Afghanistan and the Lao People's Democratic Republic, and small island developing States, such as Maldives and Samoa. Moreover, in an analysis that assumes adverse shocks to the economic growth-interest rate differential, ESCAP (2017b) showed that many of the economies listed in Table 2.1 would experience an increase in the public debt-to-GDP ratio as opposed to lower debt projected in the baseline scenario. These economies are Armenia, Kyrgyzstan, the Lao People's Democratic Republic, Maldives and Viet Nam.

5.2. Increasing the role of public bond financing

There are various methods that a Government could use to finance fiscal deficits. One option is through official development assistance. The second approach involves "printing money"; under that approach the central bank would hold part of newly issued government debt through creation of additional currency. The third approach, which is the focus of this section, involves open-market borrowing, in which government debt instruments, such as sovereign bonds, are voluntarily held by financial institutions and the public in exchange for the interest that the debt instruments pay. These methods have different advantages and disadvantages, which also depend on a country's specific conditions. For instance, in a small economy, large-scale open-market borrowing may push up the economy's interest rates and crowd out part of private investments. On the other hand, while such a crowding-out effect would be less strong in the case of the method involving the printing of money, creation of additional currency to finance the fiscal deficit could have serious inflationary and exchange rate implications. Disincentives to undertaking fiscal reforms when money can just

Table 2.1. Countries with moderate and high risks of public debt distress

Moderate risk	High risk
Armenia	Afghanistan
Azerbaijan	Kiribati
Bhutan	Maldives
Kyrgyzstan	Marshall Islands
Mongolia	Lao People's Democratic Republic
Pakistan	Samoa
Solomon Islands	Sri Lanka
Timor-Leste	Tuvalu
Tonga	
Vanuatu	
Viet Nam	

Source: ESCAP, compiled from 41 issues of IMF Article IV reports on developing Asia-Pacific economies that have been released since 2016.

be printed can be substantial and should not be underestimated.

Issuance of public bonds is not very common in developing Asia-Pacific economies. Of 47 countries with available data during the period 1995-2016, 20 countries have never issued any government bonds, 11 countries have issued public domestic bonds only and 16 countries have issued both public domestic and foreign bonds. Most countries that have never issued a public bond are either a least developed country or a small island developing State (Table 2.2).

Even among the countries that have previously issued public bonds, the quantity of bond issuances was generally modest. The average annual amount of domestic public bond issuance across 24 developing Asia-Pacific economies stood at about 2.6 per cent of GDP during the period 1995-2016. For foreign bonds, the figure was even lower at 0.6 per cent of GDP. China and India are the top issuers of public domestic bonds in term of number, which stood at close to 60 bonds a year (Figure 2.14). In terms of value, top issuers are Sri Lanka and Turkey where public domestic bond issuances were equivalent on average to 9-10 per cent of their respective GDP per year. Both the number and value of public foreign bond issuances are typically lower.

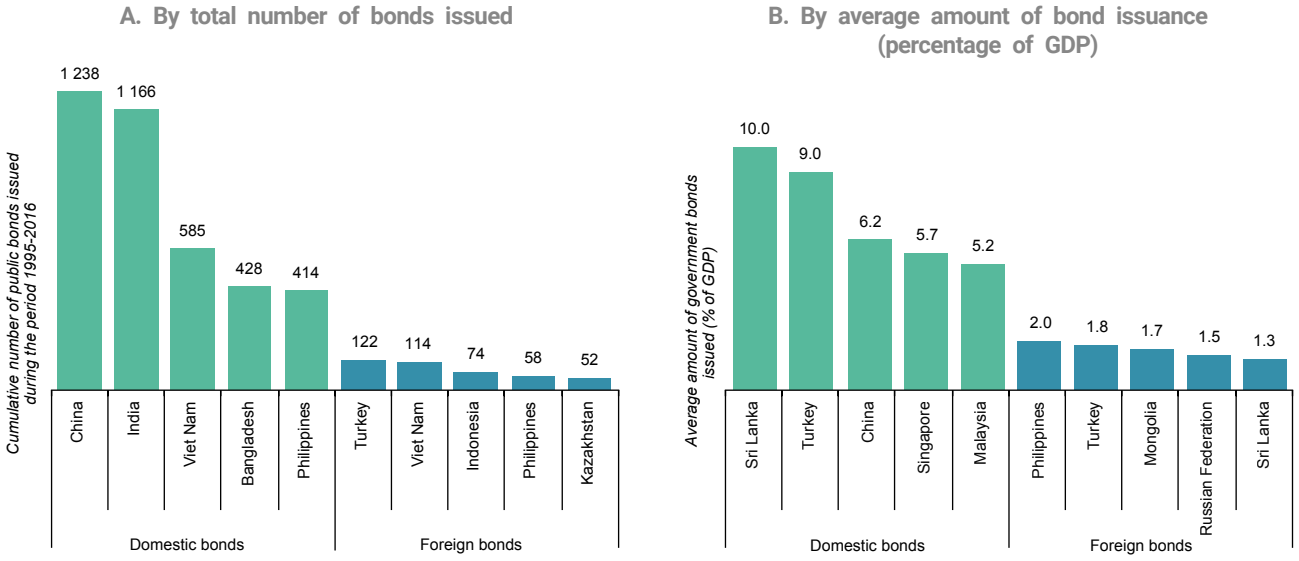
A wide range of factors could determine a Government's ability to issue bonds. One such factor is the Government's sovereign credit risk rating, which is influenced by, among other things, the Government's revenue collection capacity, past economic growth record, macroeconomic stability, external account vulnerability and the quality of the Government's institutional framework. Figure 2.15 shows that about half of the developing economies in the region exhibit a sovereign credit rating that is rated as non-investment grade or worse. In addition to the sovereign credit risk rating, another factor is the development level of domestic capital markets. Large and liquid capital markets help channel domestic savings into purchases of government bonds.

Table 2.2. Record of public bond issuance in Asia-Pacific economies, 1995-2016

No bond issuance	Domestic bonds only	Both domestic and foreign bonds
Afghanistan	Bangladesh	Armenia
Bhutan	Fiji	Azerbaijan
Brunei Darussalam	Hong Kong, China	China
Cambodia	India	Georgia
Democratic People's Republic of Korea	Kyrgyzstan	Indonesia
Iran (Islamic Republic of)	Lao People's Democratic Republic	Kazakhstan
Kiribati	Myanmar	Malaysia
Macau, China	Nepal	Mongolia
Maldives	Singapore	Pakistan
Marshall Islands	Uzbekistan	Philippines
Micronesia (Federated States of)	Vanuatu	Republic of Korea
Palau		Russian Federation
Papua New Guinea		Sri Lanka
Samoa		Thailand
Solomon Islands		Turkey
Tajikistan		Viet Nam
Timor-Leste		
Tonga		
Turkmenistan		
Tuvalu		

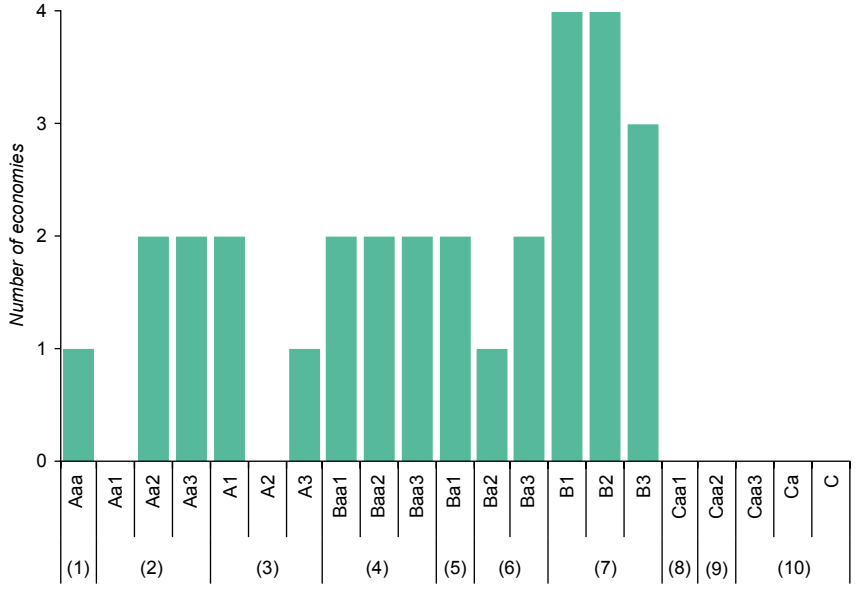
Source: ESCAP, based on Bloomberg database. Available from https://www.bloomberg.com/professional.

Figure 2.14. Top issuers of government bonds in terms of number and amount, 1995-2016



Source: ESCAP, based on Bloomberg database.

Figure 2.15. Sovereign credit risk ratings across developing Asia-Pacific economies



Source: ESCAP, based on https://tradingeconomics.com/country-list/rating.

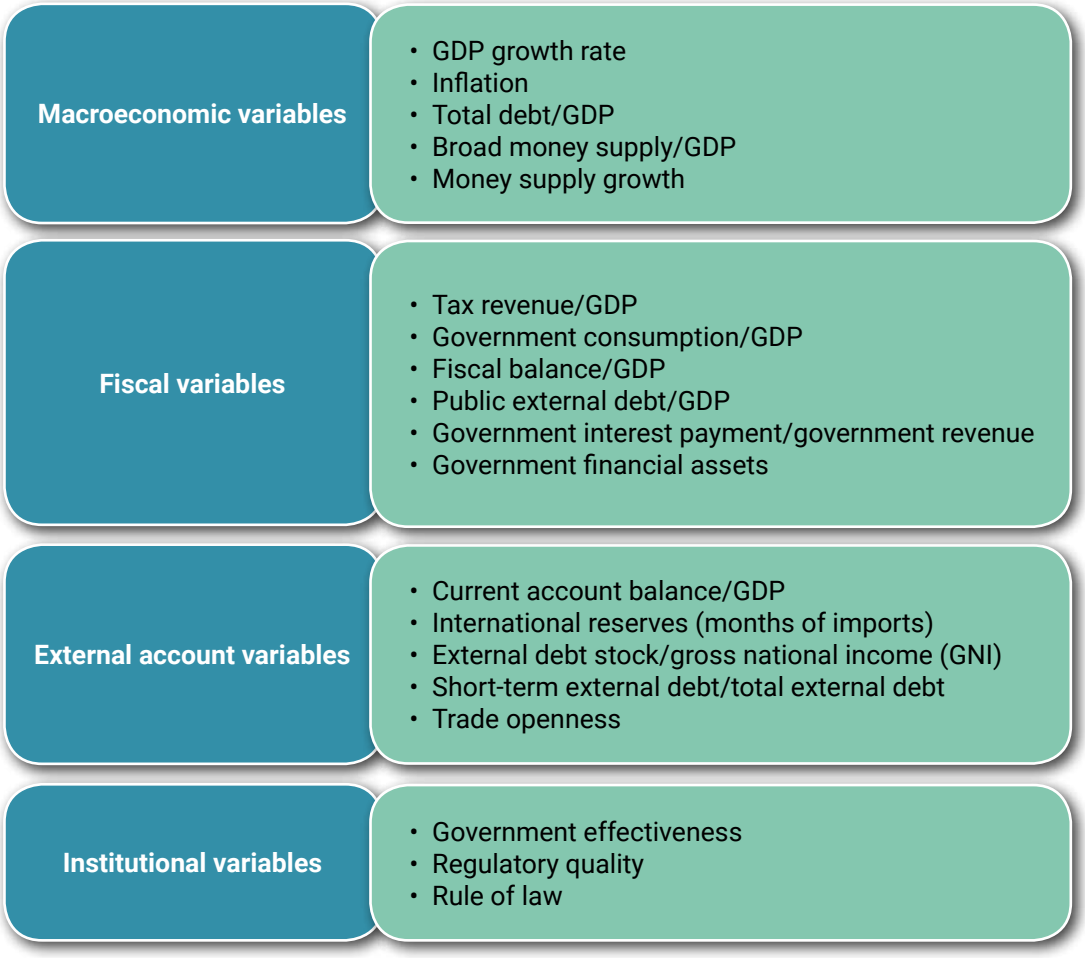
Note: The ratings are based on Moody's indicators: (1) is prime; (2) is high grade; (3) is upper-medium grade; (4) is lower-medium grade; (5) is non-investment grade; (6) is speculative; (7) is highly speculative; (8) is substantial risks; (9) is extremely speculative; and (10) is in default, with little prospect for recovery.

This section presents a regression analysis that seeks to explain why some developing Asia-Pacific economies have been able to issue government bonds both in domestic and international markets. For countries that have issued public bonds in the past, the analysis also examines the factors that determine the amount of past bond issuances. The analysis takes into account a wide range of possible explanatory factors (Figure 2.16). Technical details are provided in annex IV.

Overall, the regression results would suggest that countries that have a larger total debt stock, face a wide current account deficit and exhibit a weak regulatory framework, less open trade regime and less developed financial system[8] find it more difficult to issue public domestic bonds. Moreover, countries with wider fiscal shortfalls tend to issue more public bonds. These results are as expected and consistent with those of other studies, such as Csonto and Ivaschenko (2013); Mu, Phelps and Stotsky (2013); and Presbitero and others (2016).

The size of some of these statistical relationships is notable. For an average country, the likelihood that domestic government bonds would be issued increases by about 7 per cent when the current account balance-to-GDP ratio rises by 1 per cent. The impact of better regulatory quality is much larger. A similar likelihood could rise by about 2.1 times if the quality of government regulations improves by one standard deviation, such as from the level observed in the Philippines to that in the Republic of Korea. On the amount of issuance, a 1 per cent increase in the total

Figure 2.16. Possible determinants of a public bond issuance



Source: ESCAP analysis.

debt-to-GDP ratio corresponds to a 0.04 per cent decrease in the value of public domestic bonds as a share of GDP. Thus, if a country's total debt increases from 40 per cent of GDP to 50 per cent, the amount of public domestic bonds that could be issued would tend to decrease by 1 per cent of GDP. This is not small, considering that the amount of public domestic bond issuance in Asia-Pacific economies is about 2.6 per cent of GDP on average.

Similarly, the results on the issuance and value of public foreign bonds also highlight the importance of a country's indebtedness and financial market development. For an average country, if the total debt-to-GDP ratio increases by 1 per cent, the likelihood that foreign government bonds would be issued decreases by about 7 per cent. In the case of short-term debt as a share of total external debt, the impact on such a likelihood is larger at about 9 per cent.

While the results that the Government's ability to issue bonds is influenced by the public debt level are as expected, this situation highlights a wide range of policy actions that Governments may need to take. Public debt level is an outcome of fiscal management, which involves a Government's ability to collect taxes, generate non-tax revenues, manage foreign aid, deliver efficient and effective public spending programmes and make use of prudent domestic and international borrowing.

6. Leveraging private finance

Public financial resources are unlikely to be sufficient in delivering investment for sustainable development so there is a need to leverage private capital. As noted at the beginning of this chapter, the size of assets that is being managed by private firms, financial institutions and funds in the region is very large. An important policy issue is how to effectively leverage private capital rather than how to enlarge the pool of available funding.

Leveraging private finance for sustainable development is a broad concept. To start with, the private sector refers to a wide range of entities, such as business corporations, financial intermediaries, institutional investors, philanthropic organizations and households. Conceptually, in a large part of the literature discussions are on how to increase the risk-adjusted financial returns of investment projects in sustainable development so that those projects become more attractive to private investors.[9] Clearly, this is possible through reducing the level of investment risk (e.g. lower policy uncertainty and technical support for sound project design), increasing the rate of return (e.g. partial State guarantees and tax credits), or both.

Another concept that is examined in the literature is how to internalize social and environmental costs into market prices of goods and services, which would likely make profit-oriented business decisions more consistent with sustainable development.[10] An example is how to encourage corporates, through a set of incentives and regulations, to adopt more energy-efficient production technologies, the cost of which may be far higher than traditional, high-carbon technologies. Finally, an emerging concept is to use the Sustainable Development Goals to provide guidance for future private investments. Governments could identify areas where public resources are likely to flow, which may be used as a catalyst to attract private resources.

In this section, two broad areas of policy actions are discussed that could be pursued to leverage private finance for development purposes. The first policy area is to ensure an enabling policy environment that helps reduce investment risks, such as those arising from macroeconomic instability and political uncertainty. As an illustrative example, the focus here is on enhancing a policy environment that facilitates infrastructure investments under public-private partnerships (section 6.1 below). The second policy area is to enhance financial intermediation, especially through expanding the investor base and diversifying financial instruments (section 6.2 below). Box 2.2 provides a snapshot of other important policy areas that are not covered at length in this section, including blended finance, responsible business conduct, and impact investment.

Box 2.2. Examples of policy areas concerning the leveraging of private finance

In addition to ensuring an enabling policy framework for public-private partnership (PPP) infrastructure investments and developing domestic capital markets, there are several other areas of policy actions that policymakers could adopt in order to catalyse private capital. The information contained in this box provides a snapshot of three policy areas, namely blended finance, responsible business conduct and impact investment.

Blended finance typically refers to a mix between funds contributed by private investors and funds and risk management tools contributed by Governments or multilateral development banks. The aim is to de-risk investment projects, thus enhancing the feasibility of projects with a large impact in terms of social or environmental benefits, but which by themselves may be not considered commercially viable. Some of the common instruments of blended finance include guarantees, credit lines, syndicated loans and shares in collective investment vehicles. According to a survey of more than 70 bilateral and multilateral development organizations worldwide, the amount of private finance mobilized by these and other instruments during the period 2012-2015 was about $20 billion annually (Benn, Sangaré and Hos, 2017). Despite some success, Griffiths and others (2014) noted that challenges remain on how to attract more investment into small and medium-sized enterprises, which are the backbone of most developing economies, and how to ensure transparency and accountability of blended finance.

The second policy area is responsible business conduct, which seeks to better align profit-oriented business operations with sustainable development. To encourage firms to incorporate social and environmental considerations into commercial decisions, a wide range of incentives and regulations have been adopted in the Asia-Pacific region. Two examples are corporate social responsibility (CSR) in India and green labelling and certification schemes in Singapore (ESCAP, 2017c). In India, the updated Companies Act, 2013 mandates that firms with certain net worth, annual turnover or net profit to spend at least 2 per cent of their net profits on CSR activities. Among other things, such activities should be aimed at promoting poverty reduction, education, health, gender equality and environmental sustainability. As a result of this new policy, CSR funding increased by about $100 million during the period 2015-2016. Meanwhile, Singapore has adopted environmental standards and certification marks, such as the Singapore Green Labelling Scheme and Mandatory Energy Performance Standards, to increase the energy efficiency of electrical products, such as air-conditioners and refrigerators. The Government has also used these labels and standards as criteria in making public procurement of electrical products.

The third policy area is promoting impact investment. Impact investment is an investment made in private companies, non-profit organizations and funds for the purpose of promoting social or environmental development while making reasonable financial returns. While impact investments can be made in various forms and asset classes, a key distinction between impact investors and traditional investors is whether they also consider social and environmental values when making their investment decisions. In a recent survey of more than 200 impact investors worldwide (mainly fund managers and foundations), the value of impact investments stood at $22.1 billion in 2016 (GIIN, 2017). The same report showed that the total capital in India's impact investing market is about $418 million. An example of impact investment is the $20 million Women's Livelihood Bond, which is aimed at empowering women in selected South-East Asian countries (IIX, 2016). Another example is investment in social enterprises, which could take the form of for-profit ventures with a strong mission to promote social and environmental development.

Despite the great potential of impact investment, its role is still constrained by various factors. First, impact investments usually face higher transaction costs than traditional investments due to the complexity of deals and the lack of financial intermediation. Second, information on the availability and accessibility of impact investment funds is often limited. Third, if the number of experienced impact investors remains small, there is inadequate understanding of the financial and operational risks of the market.

To address these challenges, there have been several policy recommendations. Based on a survey of investors, ADB (2011) noted that some of the key enabling factors are a diverse set of impact investment tools, measurement tools on social and environmental benefits and the development of a social stock exchange. Meanwhile, to create a strategic road map for impact investment, ESCAP (2017c) emphasized the need to outline impact investment needs in alignment with national socioeconomic and environmental agenda and assess the capabilities, approaches and interactions of actors in the impact investment universe.

6.1. Enhancing the policy environment for public-private partnerships

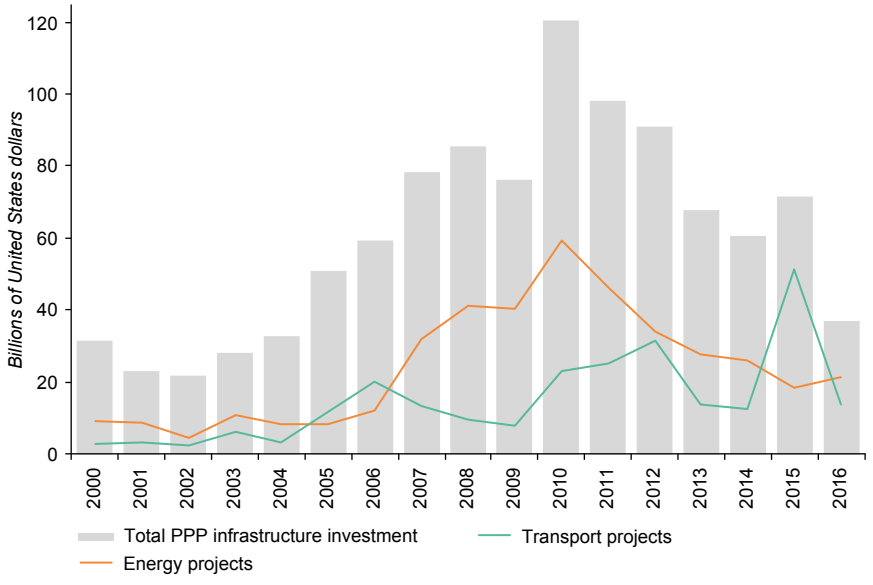
Public-private partnerships are generally defined as a contractual agreement between a public agency and a private entity on a long-term project aimed at providing a public service and infrastructure.[11] Examples of public services delivered through PPP are prison services and public parks, while infrastructure can refer to both economic infrastructure, such as electricity and mobile phone networks, and social infrastructure, such as public schools and hospitals. In general, the private entity assumes a large part of the financial and operational risks in a project, while the income could be in the form of user fees of the public service or infrastructure provided. An example is a consortium of private companies that build, operate and maintain a toll road in exchange for toll charges.

Given the situation of relatively scare fiscal resources, PPP provides an alternative approach in providing much-needed public infrastructure. PPP is particularly useful when fiscal space is small or when State capacity to deliver large-scale infrastructure projects is limited. Even when fiscal resources are available and State capacity is adequate, PPP helps shift certain risks relating to infrastructure projects to private investors. Such risks include: macroeconomic risks, such as inflation and exchange rate fluctuations; operating risks, such as higher-than-expected construction costs; and revenue risks, such as a lower-than-expected number of users and thus reduced user fees.

The discussion here is focused on PPP in infrastructure projects. Infrastructure is an investment area with the largest financing gap, and the one which often exhibits greater potential for private investor participation given its expected steady revenue stream. For example, Schmidt-Traub (2015) estimated that private financing could contribute at least half of the global required investment in energy, transport and telecommunications.

After its peak in 2010, total infrastructure investment under PPP projects in developing Asia-Pacific economies has trended downward in recent years. In 2016, the value of such PPP investment stood at $36.9 billion (Figure 2.17). The amount decreased from the annual average of $67 billion during the period 2013-2015 and the peak of $120 billion in 2010. The infrastructure sectors that have recorded larger PPP investments are transport and energy, which

Figure 2.17. Total infrastructure investment under public-private partnership projects in the Asia-Pacific region



Source: ESCAP, based on World Development Indicators database.

typically account for about three quarters of the total investment.

The value of PPP infrastructure investment varies notably across Asia-Pacific economies. In India, the total PPP investment in infrastructure projects during the period 2010-2016 was worth about $183 billion, followed by $113 billion in Turkey, $69 billion in the Russian Federation and $45 billion in China. Meanwhile, when compared with the size of an economy, PPP infrastructure investment is relatively large in such countries as Cambodia, the Lao People's Democratic Republic and Maldives.

This section contains a proposal for a new composite index that would be used to assess the extent of a country's readiness to implement PPP in infrastructure projects in selected Asia-Pacific economies. The PPP Enabling Environment Index comprises five equally weighted sub-indices: (a) institutional arrangements for PPP projects; (b) past experience with PPP; (c) macroeconomic stability; (d) financial market development; and (e) an economy-wide legal and regulatory framework. In countries with a more enabling environment, PPP infrastructure projects tend to offer higher risk-adjusted returns and are more commercially viable. The new index is available for 24 Asia-Pacific economies. Figure 2.18 depicts the components of each of the five sub-indices.

According to the PPP Enabling Environment Index, such countries as China, India, the Philippines, the Republic of Korea and Thailand exhibit a better policy environment for PPP projects than others (Figure 2.19). The results are consistent with those found in EIU (2015), which assessed the PPP policy environment in 17 economies in the region, based on actual data and expert opinions.[12]

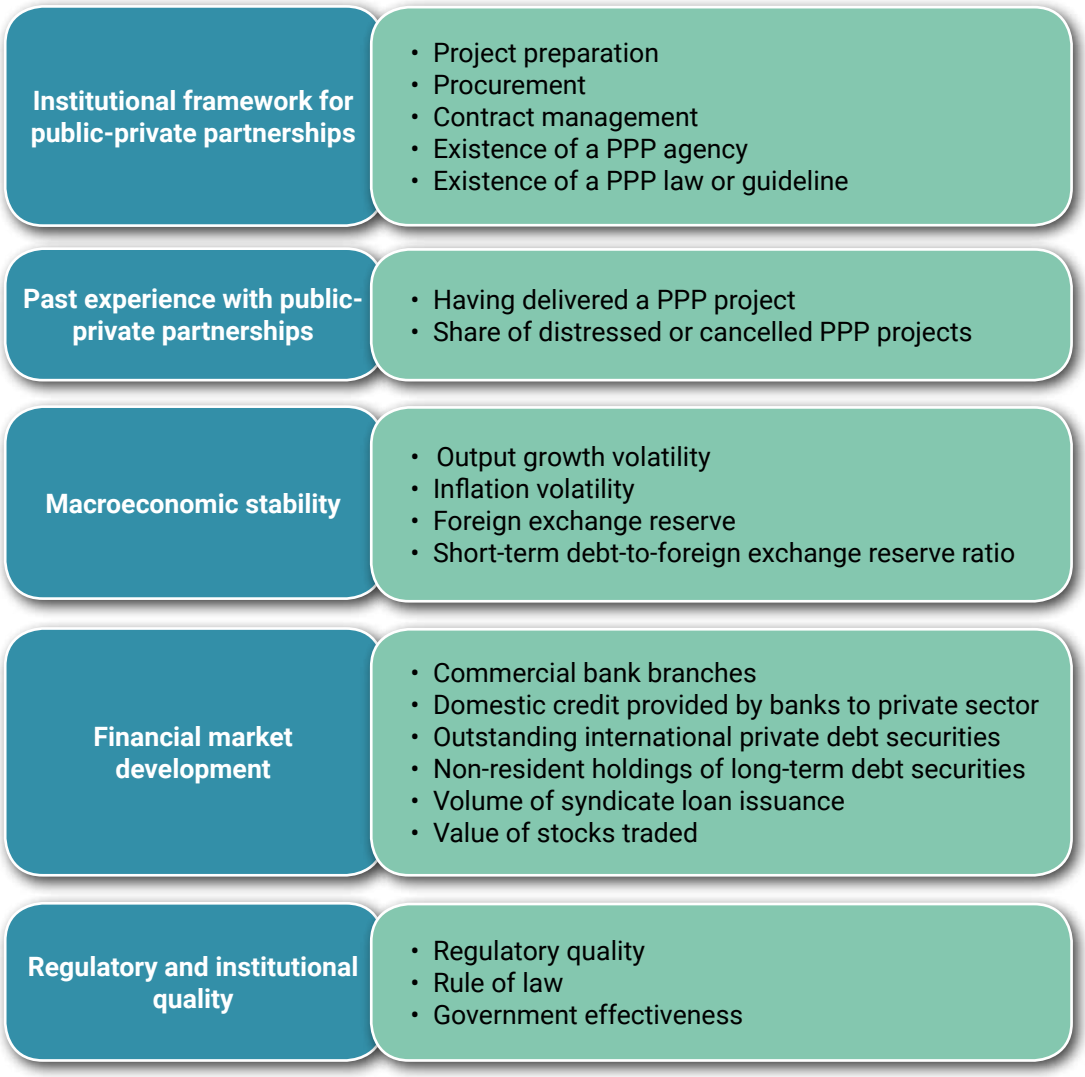
The impact of an enabling policy environment on the amount of infrastructure investment under PPP is notable. Figure 2.20 depicts the positive relationship between the value of the PPP Enabling Environment Index and the cumulative amount of PPP infrastructure investment in developing Asia-Pacific economies over the period 2010-2016. In a regression analysis that was undertaken to explain the size of PPP infrastructure investment across the region, a one-unit increase in the value of the PPP Enabling Environment Index corresponds to a 5.1 per cent increase in the amount of PPP infrastructure investment (see annex V for details). For example, if the quality of the policy environment in Bangladesh were assumed to match the level observed in Malaysia, the amount of PPP infrastructure investment in Bangladesh could rise by about 37 per cent.

The analysis that is used to examine the sub-indices of the PPP Enabling Environment Index yielded additional insights. First, among the five sub-indices, the impact of the quality of the legal and regulatory framework is the most notable. A one-unit increase in the value of the legal and regulatory sub-index is associated with an 8.6 per cent increase in the amount of PPP infrastructure investment. This is larger than the impact of 5.4 per cent for the macroeconomic stability sub-index and 4.8 per cent for the PPP institutional arrangements sub-index. Overall, the results that institutional quality and macroeconomic stability matter more to PPP infrastructure investment are expected and consistent with that of other studies.[13] Both are important factors that determine a country's sovereign risk rating, which is the variable that is strongly correlated with PPP investment (Araya, Schwartz and Andres, 2013).

Second, financial market development helps boost PPP investments, but only if it is accompanied by stable macroeconomic conditions (as captured by the interaction term of the two variables). As infrastructure projects are long-term in nature with high upfront costs, macroeconomic volatility complicates the forecast of future demand for infrastructure services and reduces project viability. Under such a situation, PPP infrastructure investment may not materialize even if financial market development is adequate.

Third, among the components of the PPP institutional arrangements sub-index, the quality of project preparation and procurement practices is particularly important. Economy-wide infrastructure planning that integrates sectoral plans and consultative project planning and selection are the key elements of good project preparation

Figure 2.18. Five components of the PPP Enabling Environment Index

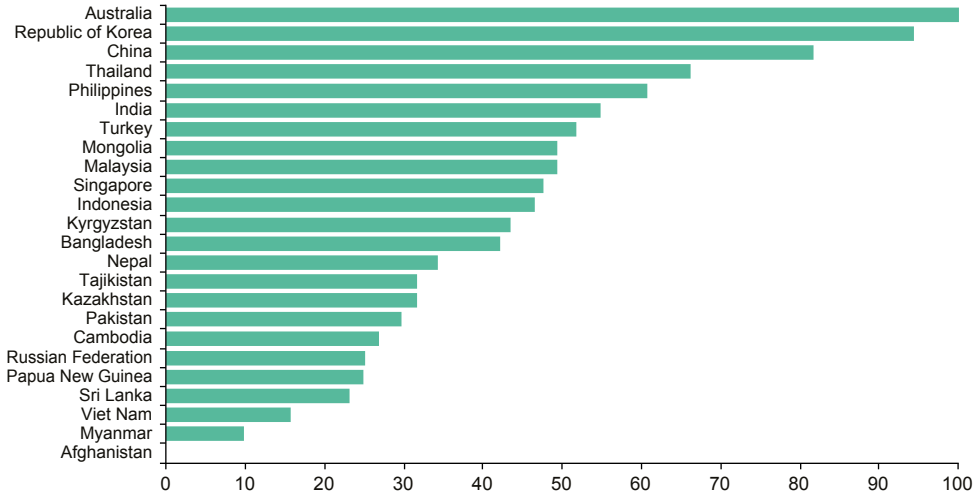


Source: ESCAP analysis.

(Global Infrastructure Hub, 2017b). Moreover, countries should prioritize infrastructure projects based on their ability to contribute to strategic goals, economic viability and project readiness. Meanwhile, with regard to public procurement, a procurement practice that is transparent and fair, encourages competition and incentivizes innovation is more likely to select a project that offers better value for money.

Despite significant potential benefits, infrastructure investments through PPP exhibit some risks; thus, careful project implementation is required. The first risk is increased fiscal contingent liabilities, as Governments may need to take over PPP projects that fail to be delivered by bid winners. To reduce such risk, World Bank (2010) pointed out several good practices based on past country experiences. Some examples are conducting a cost-benefit analysis for project selection, quantifying the size of fiscal contingent liabilities, publishing details of PPP contracts and having in place a budgetary system and financial reporting standards that accurately reflect fiscal obligations. The second risk is that PPP projects may reduce medium-term fiscal flexibility given public financial commitments in the years after infrastructure projects are completed. Finally, PPP may potentially lead to high user charges for infrastructure services.

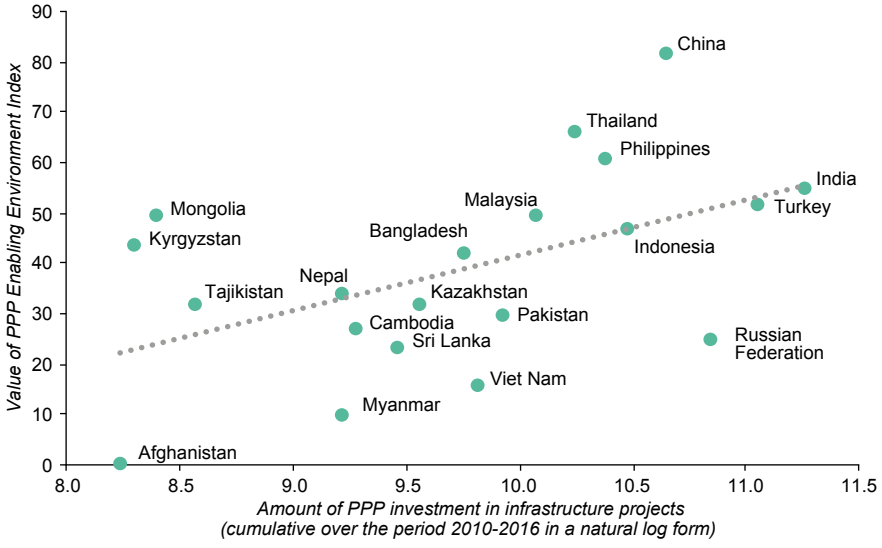
Figure 2.19. The PPP Enabling Environment Index across Asia-Pacific economies



Source: ESCAP analysis.

Note: A higher score value means more enabling environment.

Figure 2.20. Scatter plot: PPP Enabling Environment Index and public-private partnership infrastructure investment



Source: ESCAP analysis and World Development Indicators database.

6.2. Deepening financial intermediation

Discussions in different sections of this chapter have highlighted the importance of financial sector development in channelling available savings into investments in sustainable development. In particular, well-functioning domestic capital markets help support the role of sovereign bond financing and the policy environment for PPP infrastructure investment. Capital market development also helps support sustainable development through other less conventional instruments, such as green bonds and diaspora bonds.[14] More broadly, relatively well-developed local-currency capital markets reduce a country's reliance on foreign borrowing, thus reducing its current account imbalances and mitigating the risks arising from volatile capital flows and currency mismatches (IMF and World Bank, 2016). The need to have large precautionary reserve holdings is also less strong.

Except in a few economies, such as Hong Kong, China; and Singapore, which serve as some of the world's leading financial centres, capital markets in Asia and the Pacific remain relatively small, with low levels of market liquidity. Overreliance on bank lending in the region has constrained financing for long-term investment, such as infrastructure projects, because bank loans are typically short term and collateral-based in nature. A bank-dominant financial sector is constrained by more stringent banking regulations, which have led banks to become more selective in their allocation of capital to infrastructure lending. More broadly, reliance on bank financing also makes economy-wide macroeconomic stability more vulnerable to the health of the banking sector.

Developing domestic capital markets is a long-term task that requires policy actions on various fronts. For example, a policy effort on developing corporate bond markets involves having in place: (a) an effective legal framework for the issuance process, such as frameworks for different types of issuers and investor protection; (b) a sizeable investor base; (c) a diverse set of products; (d) knowledgeable financial intermediaries, such as business analysis capacity of investment banks and securities firms; and (e) an enabling market infrastructure, such as credit rating agencies and bond pricing agencies. In addition, broader issues include the effectiveness of corporate governance, harmonization and enforcement of international standards and relatively well-developed sovereign bond markets that provide yield curve benchmarks for corporate bond markets.

Given the broad nature of the topic, this section is focused on two areas, namely widening the investor base by increasing the role of institutional investors and diversifying financial instruments by exploring the potential of Islamic finance.

Widening the investor base: the role of institutional investors

Large assets under management by institutional investors are not being channelled into development finance. Institutional investors typically refer to a group of pension funds, mutual funds, sovereign wealth funds and insurance companies. As shown previously in this chapter, assets under management by institutional investors in developing Asia-Pacific economies are large, at a value of $14.2 trillion in 2016. The combination of the large amount of assets and the fact that liabilities of many institutional investors are long term in nature, which is consistent with investment in sustainable development, would suggest that institutional investors have immense potential to contribute to development finance. Yet, globally the contribution of institutional investors to sustainable development appears to be limited. Institutional investors accounted for only 1 per cent of investment in 163 PPP infrastructure projects in low- and middle-income countries in 2015 (World Bank, 2016b). A large part of such financing still came from traditional bank loans. Meanwhile, in addition to their potential contribution to sustainable development, data show that domestic capital markets are more developed in Asia-Pacific countries with a larger institutional investor base than a smaller base (OECD, 2014b).

Studies have suggested several reasons why engagement by institutional investors in development finance, especially in infrastructure projects, remains limited. First, while liabilities of institutional investors are long term, the incentive system still incentivizes fund managers to take a short-term view of investments. About two thirds of pension funds review the performance of fund managers on a quarterly basis, although 60 per cent of them agree that the key investment period is longer than a year (Aviva, 2014). Second, some regulations that govern the fund management industry remain restrictive. For example, Biswas (2016) noted that institutional investors in many Asia-Pacific economies are not permitted by law to invest directly in real estate or infrastructure. Third, many domestic institutional investors lack the required expertise to assess and manage infrastructure project risks. Fourth, political risks are usually high, as returns on infrastructure investment are greatly influenced by sudden changes in government policies and regulations (Genberg, 2016). Finally, Della Croce and Yermo (2013) highlighted the limited availability of financing vehicles and debt instruments, such as infrastructure funds and bonds, as well as the lack of high-quality infrastructure data and

clear benchmarks, a situation which makes it more difficult to assess the levels of risk.

Governments could pursue a wide range of policy options to increase the contribution of institutional investors to sustainable development. ESCAP (2017d), among others, emphasized the importance of: (a) facilitating foreign investment, through relaxing certain capital controls and increasing the availability of hedging instruments; (b) promoting financial integration through harmonizing standards and regulations, which helps to reduce cross-border transaction costs; (c) strengthening the role of local credit rating agencies, which could potentially provide more in-depth information relative to international rating agencies; (d) incorporating the concept of shared social and environmental values into the design of infrastructure projects, which would make them more appealing to impact-oriented institutional investors; and (e) reviewing tax policies, including offering favourable tax treatment for infrastructure-linked investment.

To realize the benefits that these options entail, Governments need to carefully implement policy options aimed at unlocking the potential of institutional investors. For example, while relaxing regulations that restrict institutional investors from investing directly in infrastructure would enable portfolio diversification and create stable long-term yields, their impact on portfolio risk should be reviewed. Similarly, more liberalized capital controls could lead to greater financial instability (Genberg, 2015), while closer financial integration may push up currency risks.

Diversifying financial instruments: the role of Islamic finance

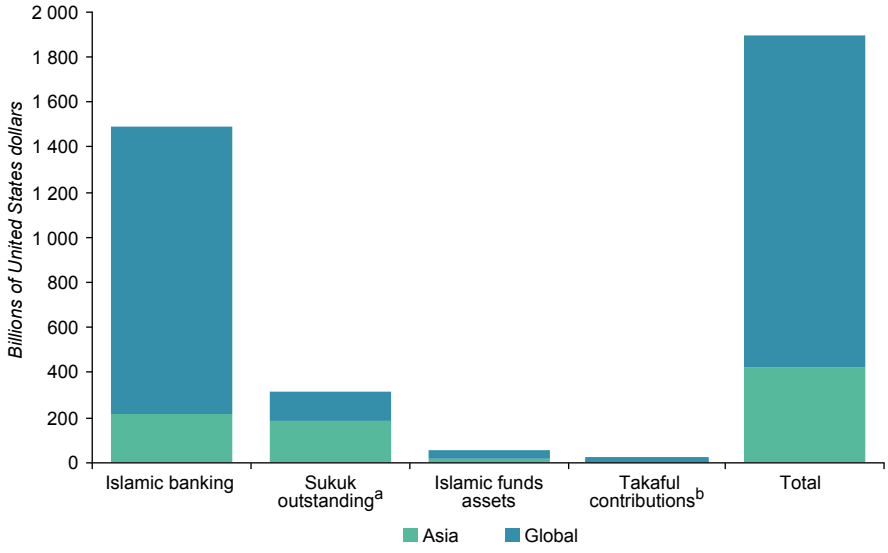
The principles of Islamic finance are consistent with sustainable development concepts. Islamic finance refers to financial services that are compliant with Sharia Islamic law and principles. Some of the key features that distinguish Islamic finance from conventional finance are its emphasis on an asset-based (as opposed to debt-based) approach, prohibition of financial transactions in speculative activities and linkages to the real economy, such as production and trade sectors. Moreover, Islamic finance promotes risk-sharing by forbidding the sale of debt, thus requiring lenders to share the risk of default. These principles make Islamic finance suitable for long-term investment in real sectors, such as infrastructure. More broadly, some of the key aims of Islamic finance, including promoting financial inclusion and shared prosperity, are also in line with the concept of sustainable development.

The Islamic finance industry is sizeable. The total worth of global Islamic financial services stood at about $1.9 trillion in 2016 (Figure 2.21). Almost 80 per cent of this amount is in the form of Islamic banking assets. Although the share of the total worth held by financial institutions based in the Asia-Pacific region is not very high at 22 per cent, the size remains substantial at $425 billion. The region has an important role in sukuk (Islamic equivalent of bonds), as it accounts for close to 60 per cent of the world's outstanding value of this instrument, mainly attributable to the active market in Malaysia. In addition to Malaysia, there are also some established Islamic finance markets in Bangladesh, Brunei Darussalam, Indonesia and Pakistan, and a growing interest from non-Muslim economies, such as Japan; Hong Kong, China; and the Republic of Korea.

Governments in the region are making efforts to boost infrastructure investments through greater use of Islamic finance. In Malaysia where funds raised from sukuk have been used to finance infrastructure projects involving airports, seaports and roads, favourable tax treatment is given to Islamic financial products. In Pakistan, the Government accorded tax neutrality for sukuk issuance, while Islamic banking institutions are allowed to opt out from benchmarking certain products against interest-based benchmarks. In Australia, tax laws are reviewed to ensure parity between Islamic and conventional financial products, while tax guidance on Islamic financing is published in Hong Kong, China. At the multilateral level, a plan to set up an Islamic infrastructure bank has been put forward by Indonesia, Turkey and the Islamic Development Bank.

There are a number of policy actions that could be taken to further increase the role of Islamic

Figure 2.21. Total worth of Islamic financial service industry in 2016



Source: ESCAP, based on Islamic Financial Services Board, *Islamic Financial Services Industry Stability Report*. Available from https://www.ifsb.org/docs/IFSB%20IFSI%20Stability%20Report%202017.pdf.

[a] The equivalent of an Islamic bond.
[b] The Islamic alternative to conventional insurance.

finance. First, a tax and regulatory framework could be made more conducive to Islamic finance. In many cases, while interest payments from conventional financial instruments are tax deductible, returns from profit-sharing sukuk are taxable. Second, a further standardization of guidelines for structuring Islamic financial products would help these products become more appealing to a larger pool of investors. Third, deeper domestic capital markets would facilitate secondary trading and the liquidity of Islamic financial products and provide a benchmark for their pricing in the long term. Available data show that only a fifth of all sukuk issued globally in 2014 have a maturity period of at least 10 years compared with a term of up to 20 years for many conventional infrastructure bonds in the region. Fourth, more capable Islamic financial institutions and an enabling legislative framework are needed to carry out the complex structuring of infrastructure projects. For example, the transfer of assets into special purpose vehicles is required in some cases, which may create a risk that the Government will lose control of the asset in case of a default. Finally, shortages of Islamic financial experts have led to notable discrepancies in practices involving Islamic financial transactions, thus undermining investor confidence in the industry.

7. Concluding remarks

This chapter contains an exploration of how Governments in developing Asia-Pacific countries could mobilize financing to support sustained, inclusive and sustainable economic growth. The two focus areas are increasing domestic public financial resources and leveraging private capital to support sustainable development. Through a number of quantitative analyses and policy discussions, several useful insights have been offered for the benefit of policymakers, some of which are presented here.

First, as various quantitative exercises carried out in this chapter demonstrated, the prospects for mobilizing financing for development purposes are promising. The potential revenue impact of better tax administration and a policy effort to expand the tax base, particularly through rationalizing FDI tax incentives and introducing carbon taxes, is estimated to be significant. Similarly, the role that government effectiveness

and macroeconomic fundamentals could play in increasing the fiscal space through public bond financing is also notable. Finally, there is strong evidence that a better policy environment for PPP projects is associated with larger PPP infrastructure investment in a country.

Second, as countries are implementing national plans to achieve sustainable development, there is also a need for national strategies on mobilizing development finance. As highlighted in this chapter, one of the critical components of such financing strategies is to ensure an effective legal and regulatory framework. Such a framework would bring about efficiency gains in tax administration, facilitate the role of sovereign bond financing and attract infrastructure investments under PPP. Moreover, Governments should be mindful that these elements of development finance are linked. Better tax revenue collection and greater use of sovereign bond financing would help support public debt sustainability, which is essential for building the confidence of the private sector in co-financing infrastructure projects.

Third, despite promising prospects on mobilizing development finance, realizing such opportunities requires bold yet careful policy efforts. Several caveats and implementation issues have been emphasized in this chapter for some of the policy actions discussed. For example, there is a need to: (a) carefully restructure government agencies in order to strengthen tax administration; (b) be aware of the impacts that a carbon tax, if introduced, could have on the incidence of poverty, income distribution and tax burden borne by private businesses and households; and (c) deal with heightened fiscal contingent liability relating to PPP projects. Meanwhile, regional cooperation is required to achieve some of the policy actions discussed in this chapter, such as a coordinated multilateral effort to rationalize FDI tax incentives and introduce carbon taxes.

Fourth and finally, while noting that selected policy areas discussed in this chapter are presented as illustrative case studies rather than as policy prescriptions, it should also be noted that not all Asia-Pacific countries would be able to implement these policy options, even if they are willing to so. While improving tax administration seems feasible for most countries, increasing the role of sovereign bond financing and attracting more PPP infrastructure investment require well-functioning capital markets and strong technical skills of government agencies. For less developed countries, the role of external sources of finance, such as official development assistance, South-South cooperation, and global development partnerships, which are not the focus areas of this chapter, remains critical.

ENDNOTES

1 Among other factors, estimates on infrastructure investment gaps are not comparable due to different definitions of infrastructure, country coverage, time period, methodologies used to calculate the baseline investment and targets, and whether climate mitigation and adaptation costs are taken into account.

2 See OECD (2014a) for a broad discussion of various channels that developing countries may adopt to mobilize development finance.

3 In addition to these factors, the actual tax levels are also closely linked to variables, such as governance, inequality and tax morale. To a large extent, the tax revenue level reflects a country's economic structure and public perception on the quality of Governments (Bird, 2012).

4 Since the Tax Administration Index is based on survey-based information, the index reflects the institutional setting that is in place rather than actual performance indicators of tax authorities. For example, while the presence of a large taxpayer unit is considered desirable, the Tax Administration Index does not capture the quality of such a unit in sample countries.

5 Under the emission trading system, the Government sets a limit on a company's carbon dioxide emission level. If a company's emission is below its cap, it may sell its unused carbon dioxide emission allocations on the market. On the other hand, companies that emit more than the limits can buy emission allocations.

6 The carbon tax rate assumed is the median value of the rates introduced in China, Colombia, Estonia, Latvia, Mexico, Poland, Slovenia and Ukraine.

7 In the context of emerging economies, IMF (2013) noted that an analysis on contingent liabilities relating to the banking crisis may be warranted when cumulative change in the private sector credit-to-GDP ratio over the latest three years is above 15 per cent, and the loan-to-deposit ratio exceeds 1.5. This is the case for China and Viet Nam. In India, a high level of non-performing loans also makes the banking sector more vulnerable to adverse shocks.

8 Here, the broad money-to-GDP ratio is used as a rough proxy for financial development given its wide availability. While the ratio tends to reflect the breadth of financial markets, it may not be an ideal proxy for domestic capital market level, which could be better measured by liquidity and the volume of bond trading. However, the availability of such bond trading data, especially in a panel data setting, is limited.

9 See, for example, UNTT (2013) and Yoshino, Nakahigashi and Pontines (2017).

10 See, for example, Schmidt-Traub and Sachs (2015).

11 See World Bank (2017c) for a comprehensive report on PPP, including its definitions, sources of financing, enabling policy environment and project cycle. Dintilhac, Ruiz-Nuñez and Wei (2015) provided a literature review on the economic impacts of PPP.

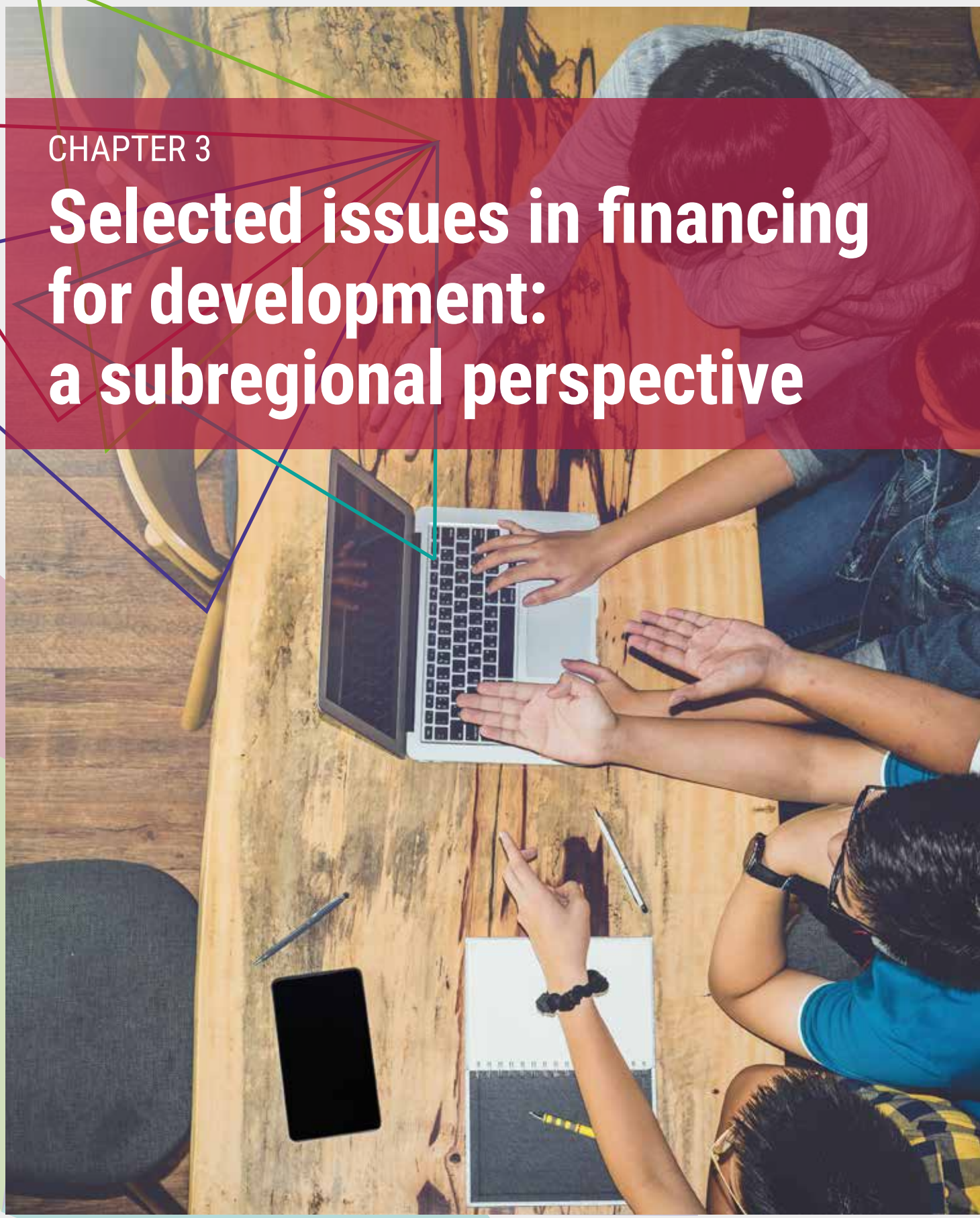
12 For 15 Asia-Pacific economies that are covered in this chapter's analysis and EIU (2015), the simple correlation coefficient is high at 0.86.

13 See, for example, Hammami, Ruhashyankiko and Yehouel (2006), Sharma (2012), Mengistu (2013), Kasri and Wibowo (2015) and Moszoro and others (2015).

14 See ESCAP (2017d) for a discussion on possible policy actions to increase the role of environmental-related bonds in the Asia-Pacific region.

CHAPTER 3

Selected issues in financing for development: a subregional perspective



1. Introduction

The previous chapter highlighted various estimates of the considerable investment gaps that developing countries face while pursuing implementation of the 2030 Agenda, and subsequently explored ways to help mobilize development finance for closing such gaps. Under the same conceptual framework, this chapter contains an examination of medium-term aspects relating to financing for development from the perspective of Asia-Pacific subregions. The focus of the chapter is motivated by the fact that the Asia-Pacific region is vast and diverse, and different subregions and countries have varying capabilities in terms of implementing the policy options discussed in chapter II. The region is home to some of the world's largest economies, such as China and India, where changing economic conditions or policies have notable implications at the regional as well as global levels. More importantly, the policy priorities of larger economies and the capacity to undertake a range of policy initiatives are considerably different from that of other relatively smaller countries in the region.

Therefore, the goal of this chapter is to delve deeper into certain aspects of financing for development issues from a subregional perspective, and to share knowledge and lessons learned regarding dealing with challenges that are specific to certain subregions. The underlying premise is that, for countries to be able to undertake the investments required towards implementing the 2030 Agenda, a critical condition is their ability to mobilize sufficient financial resources in a stable and predictable manner. Enhancing their access to finance and financial services, including through the use of technology, is another important consideration, especially from the point of view of the private sector. The issues discussed in this chapter are informed by such considerations.

First, given the importance of public resources in closing the investment gaps, efficiency in mobilizing and administering tax revenues is the key. Corrective measures need to be undertaken if this is not the case or if there is room for improvement. Such measures are explored in

this chapter in the context of the South and South-West Asian subregion, which stands out in Asia and the Pacific for having very low tax revenues as a percentage of GDP. It shows that this subregion needs reforms to simplify tax structures, reduce untargeted exemptions and make tax administration more effective. One motivating concern is the fact that the subregion has a regressive tax system (more reliance on indirect taxes than direct taxes) compared with other subregions.

Second, to strike a correct balance between meeting short-run contingencies, for instance due to natural disasters, and addressing long-run investment requirements, for instance to develop sustainable infrastructure, it is important to have a stable and predictable flow of fiscal resources. Unstable and volatile fiscal resources can prove to be very challenging for Governments when planning budgets and devising policies that can support sustained, inclusive and sustainable economic growth. Thus, in the context of the Pacific, the issue of fiscal volatility is analysed, where several policy initiatives, such as sovereign wealth funds (on the revenue side) and natural disaster risk insurance (on the expenditure side) have been implemented. As has become evident, the effectiveness of such initiatives can be greatly enhanced through regional cooperation and integration.

Third, developed capital markets are critical for mobilizing both public resources (through prudent sovereign borrowings, as analysed in chapter II) as well as private resources. In this context, issues surrounding the development of local currency bond markets are analysed for the South-East Asian subregion. Their development is vital to facilitate sustainable investments that are consistent with the 2030 Agenda, especially by large corporates. While this subregion has experienced growth in this area, there is considerable room for improvement, especially in terms of the development of the corporate bond market. The development of markets for government bonds needs to take precedence, as it can catalyse the emergence of corporate bond markets. The analysis shows that efforts are needed to improve market efficiency, deepen secondary markets and broaden the investor base. The role of regional cooperation and integration is particularly important in this context and for this subregion. In particular, the Association of Southeast Asian Nations (ASEAN) has a key catalytical role to play, as smaller markets can "grow" in size and benefit from the already-established relatively advanced markets in the subregion.

Fourth, given that East and North-East Asia is at the global forefront of development and use of financial technology (FinTech), the chapter contains an analysis of the evolution, opportunities and challenges that FinTech presents. After laying out the vital transmission mechanisms at play, it is argued that effective regulation of FinTech is necessary to maximize its benefits and minimize its disadvantages. Regulating FinTech presents several challenges, not least in such areas as the evolution of cryptocurrencies. Policymakers may wish to monitor closely and coordinate regulation internationally as much as possible in order to avoid regulatory arbitrage across countries.

Finally, issues surrounding access to financing by micro-, small and medium-sized enterprises (MSMEs) are analysed in the context of the North and Central Asian subregion. The continued limitations in accessing both equity and credit in this subregion are constraining its ability to overcome the myriad impediments to diversify and transform the structure of their economies. After discussing the barriers that MSMEs face, policy measures are proposed. The issue is complex, and a multi-layered approach is advocated. Reforms need be targeted at diversifying the supply of finance in order to increase the importance of sources other than banks, favour competition in the financial sector and promote venture capital, among others; capacity building of the demand for finance, especially through entrepreneurship funds or business incubators; and streamlining the regulatory framework to make it more effective. Currently, high collateral requirements imply excessive costs for financial institutions to recover their loans or collateral in cases of default.

2. Potential of financial technology in East and North-East Asia

2.1. FinTech affects the entire economy and is growing phenomenally

FinTech can be broadly defined as the application of information technology (IT) to the financial sector. Its importance is crucial due to the role of the financial sector in channelling savings towards sustainable investments, as it can make them more efficient by circumventing inefficient credit allocation systems that tend to favour State-owned enterprises over innovative MSMEs. Indeed, the rise of FinTech has permeated several aspects of economic dimensions, promoting what is known as the alternative economy: an economic structure that is separate from, and operates largely independently of, the traditional economy. Among many examples of the alternative economy, two well-known global ones are Uber (transport services) and Airbnb (accommodation services).

There are several mechanisms through which FinTech affects the economy. First, FinTech enhances the supply of credit. For instance, crowdfunding can channel savings from large numbers of savers on to borrowers, therefore affecting commercial banks' "monopoly" on supplying credit. Second, FinTech also expands the demand for credit. For example, as potential entrepreneurs and microenterprises see as being more feasible the possibility of accessing credit, they may demand more of it. In turn, as the supply of and demand for credit expands, aggregate supply increases via stronger investments and innovation. Finally, FinTech also stimulates aggregate demand, especially through the creation of easier payment methods, such as payment using cell phones.

These transmission mechanisms illustrate how FinTech stimulates private sector development and specifically key segments, such as innovative small businesses, start-ups and entrepreneurs. Besides driving innovations, these small businesses spur investment, generate employment, increase consumption and facilitate domestic resource mobilization via taxes, all of which actions support

Box 3.1. Categorization of FinTech

FinTech enables pooling and tapping assets of many small investors to provide alternative financing for consumers or small businesses, raise venture capital for start-ups and support the creative industry, among other enterprises. Generally considered as a disruptive innovation, FinTech comprises innovative financial instruments and technology-based platforms, such as crowdfunding, peer-to-peer (P2P) or marketplace lending, impact and social investing, cryptocurrencies, big data, online payments or digital finance, to name a few.

Depending on the ways in which savings are channelled to borrowers, the alternative economy can take many formats, which in turn can lead to several classifications:

- Marketplace/P2P consumer lending: individuals or institutional investors loan funds to consumer borrowers;
- Marketplace/P2P business lending: individuals or institutional investors loan funds to business borrowers;
- Equity-based crowdfunding: individuals or institutional investors purchase equity issued by a company;
- Reward-based crowdfunding: individuals or institutional investor funders provide individuals, projects or companies with finance in exchange for non-monetary rewards or products;
- Others: consumer lending, balance sheet business lending, marketplace/P2P real-estate lending, invoice trading, equity-based real estate crowdfunding, donation-based crowdfunding and revenue/profit-sharing crowdfunding.

economic development (World Economic Forum, 2015). Not surprisingly therefore major East and North-East Asian economies have traditionally been supporting and enabling small businesses to thrive. For instance, China established a national small and medium-sized enterprise development fund through a public-private partnership. Japan provides small and medium-sized enterprises with funds at low interest rates and a credit enhancement system to guarantee loans from commercial banks for such enterprises.

The global financial crisis that started in 2007 is generally considered as having been a turning point (Arner, Barberis and Buckley, 2015). In 2016, FinTech grew by 10 per cent globally, attracting $23.2 billion in investments, a tenfold increase relative to that of 2010 (Accenture, 2017). FinTech investments in the Asia-Pacific region, at $11.2 billion, more than doubled in 2016 relatively to a year previously, exceeding that of North America for the first time (North America attracted $9.2 billion in such investments) (Accenture, 2017). Furthermore, the sources of FinTech investment are from within the region, especially from East and North-East Asia. China's alternative online finance market dominates the global market, as it concentrates 99 per cent of the total (table 3.1). Alibaba and JD.com are the two major FinTech investors that are focused on providing end-to-end services, including payments and lending. In 2015, Japan and the Republic of Korea accrued investments worth $360.2 million and $41.2 million respectively (Zhang and others, 2016).

Not all the areas of FinTech are growing equally. In China's online alternative finance market, marketplace consumer lending and business lending constitute 52 and 39 per cent respectively of the total. Meanwhile, Japan's business lending share is almost 90 per cent, as FinTech becomes an investment option vis-à-vis low-interest yields offered by commercial banks. Crowdfunding in Japan has also been on the rise, averaging 60 per cent in the last four years (Yano Research Institute, 2017).[1] The Republic of Korea's FinTech market is heavily concentrated in consumer lending (figure 3.1).

With such fast transformation, the FinTech architecture is also rapidly transforming the digital payments systems in East and North-East Asia. China is at the forefront of using mobile messaging applications, or "apps",[2] and has introduced biometric payment services.[3] Similarly, cashless payments are widely used through mobile wallets and the acceptance of various types of e-money in Japan and T-money[4] payments in the Republic of Korea. In Mongolia, the infrastructure for electronic payments is growing rapidly, particularly Internet and mobile banking, although it remains underdeveloped outside of Ulaanbaatar (IFC, 2014).

Thus, FinTech offers very large potential benefits for various aspects of the economy. For example, digital financial services, together with effective oversight and supervision, can expand the scale, scope and reach of financial services

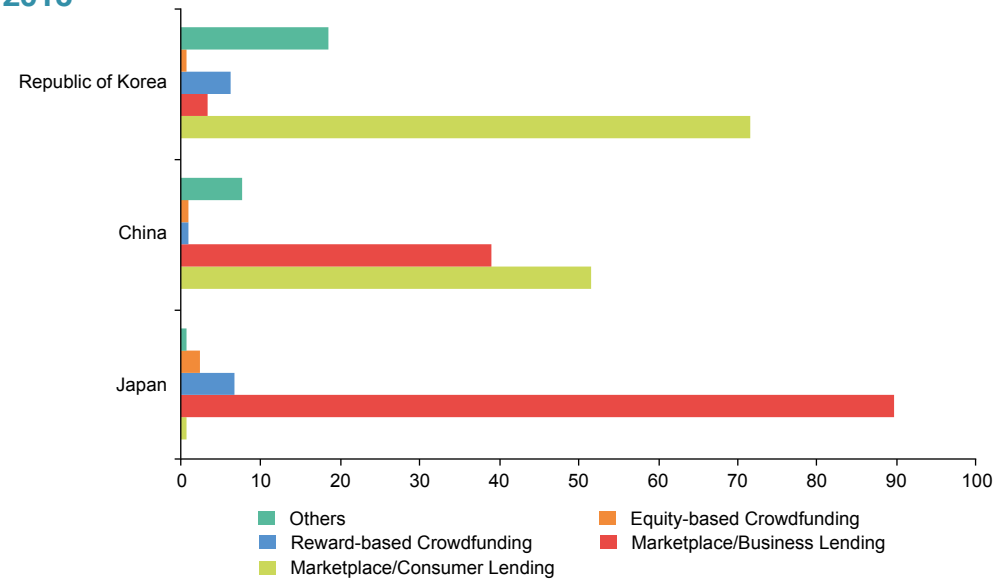
Table 3.1. Online alternative finance market in East and North-East Asia, 2013-2015

(Millions of United States dollars)

	2013	2014	2015
China	5 560.0	24 300.0	101 690.0
Japan	92.7	125.2	360.2
Republic of Korea	2.2	2.9	41.2
Asia-Pacific region (excluding China)	137.2	271.9	1 120.0

Source: Bryan Zhang and others, *Harnessing Potential: The Asia-Pacific Alternative Finance Benchmarking Report* (Sydney, 2016). Available from http://sydney.edu.au/business/__data/assets/pdf_file/0005/262166/Harnessing-Potential-Report.pdf.

Figure 3.1. Percentage share of the alternative finance market in East and North-East Asia, 2015



Source: Bryan Zhang and others, *Harnessing Potential: The Asia-Pacific Alternative Finance Benchmarking Report* (Sydney, 2016). Available from http://sydney.edu.au/business/__data/assets/pdf_file/0005/262166/Harnessing-Potential-Report.pdf.

in order to close gaps in financial inclusion. Similarly, blockchain (the underlying technology cryptocurrencies potential for efficiently managing various stakeholders and parties in complex, cross-border projects, especially those involving public-private partnerships. Indeed, such projects will be vital from the perspective of furthering regional integration with sustainable infrastructure. The policy aim should be to promote digital solutions in accelerating financial inclusion and to balance the risks and opportunities of digital financial inclusion, through an enabling and proportionate legal and regulatory framework (ADB, 2016b).

In this vein, China has undertaken efforts to improve financial infrastructure through an integrated city and rural approach. In 2010, a pilot test to provide financial services to farmers through bank cards and point-of-sale devices was aimed at expanding access to digital finance (G20 Global Partnership for Financial Inclusion, 2017). Similarly, China's Financial Inclusion Plan (2016-2020) encourages the use of technology by financial institutions and leveraging on the Internet for digital inclusion. In the Republic of Korea, the Seoul Metropolitan Government catalysed a market for impact investing through procurement ordinance for goods and services from social enterprises, and supported incubation and social entrepreneurship education; it also launched a fund for public crowdfunding.

2.2. Major drivers of the FinTech revolution

Several factors have made the rise of FinTech possible. At a more fundamental level and across countries, high levels of mobile phone adoption, massive use of the Internet in all aspects of everyday life and an increasing urban population with higher financial literacy have clearly favoured its spectacular rise.

Country-specific factors that have facilitated the expansion of FinTech are a developed financial infrastructure and paradoxically inefficient credit allocations. In some countries where State-owned enterprises were given a clear preference for credit allocation, FinTech has made possible the development of alternative financing schemes. In China, a well-developed e-commerce business, high demand for inclusive finance, a trial-and-error capability (McKinsey & Company, 2016) and wide use of so-called smartphones are at the root of the unprecedented growth of digital finance.

Several financing mechanisms, tax and incentive schemes have also supported the development

of the FinTech ecosystem directly or indirectly in East and North-East Asia. For instance, Japan's amendment of its Banking Act in June 2016 enabled bank financing for finance-related IT companies and those engaged in settlement services. Japan and the Republic of Korea allowed equity-based crowdfunding to encourage investments among non-listed small- to mid-sized companies, subject to a threshold value and/or years of business operations.

Credit schemes have also improved the access to finance of small and medium-sized enterprises and start-ups. For example, the Republic of Korea has a guarantee system to support small and medium-sized enterprise innovation (Korea Technology Finance Cooperation, 2018) using technology appraisal and a credit infrastructure to which financial institutions may refer in evaluating start-ups' viability, including management, intellectual property, marketability and business feasibility, in order to provide them with credit financing.[5]

Preferential tax schemes, such as the so-called angel scheme in Japan, assist in financing newly founded venture enterprises by individual investors known as "angels" (National Association of Trade Promotion, 2016), through a reduction in income and capital gains taxes for investing in such enterprises. The Republic of Korea also offers a wide range of tax incentives to small and medium-sized enterprises for FinTech, tax relief for venture businesses and tax deductions for technology research and development.

Hong Kong, China intends to become a FinTech innovation hub and has established a steering/advisory group and a FinTech facilitation office. This kind of support is similar to the FinTech support centres or support desks in Japan and the Republic of Korea; both of these countries cater to FinTech start-ups and the development of a FinTech ecosystem.

Box 3.2. Bitcoin, cryptocurrencies and blockchain technology

Bitcoin is a digital currency that was created by Satoshi Nakamoto in 2009. It was designed as a peer-to-peer payment system to be used in online transactions; it is considered to be the world's first completely decentralized digital currency. The unique and revolutionary aspect of Bitcoin is that, unlike prior payment systems, financial transactions can be accomplished without an intermediary, that is, Bitcoin does not have a central authority; it is the network itself. Relying on the "cryptocurrency" concept, Bitcoin uses encryption to control the generation of units of currency and secure the transfer of funds. The transfers are recorded in a publicly distributed ledger called a "blockchain", in which "blocks" of new information can be continuously added (Schueffel, 2017).

Blockchain is a shared database that exists across different locations or between various participants, with entries that must be confirmed and encrypted (Meola, 2017) by a previously authorized group or even a single user (in a "permissioned" ledger), or the changes in the database can be made and verified by any user in the network (in a "unpermissioned" ledger). The entries have a logical relationship with their predecessor and all the users in the network have a copy of the database. In this ledger, all the changes made by the nodes are reflected in all copies within minutes (United Kingdom, Government Office for Science, 2016), thus maintaining its accuracy and integrity.

As a publicly distributed ledger, one of the advantages of the blockchain is that it enables trust. The transactions, once they are verified, cannot be undone or falsified and are transparent to everyone in the network. The transactions in the Bitcoin network are made using public-key cryptography, assigning each user one public key, which could be roughly compared with a bank account number, and a private key, which can be compared with a password. To transfer bitcoins from one user to another, one message is created, and this message is added to the blockchain. To verify the authenticity of this message, that is, to verify if the "signature" (private key) of the sender is the same as the "bank account number" (public key), users called

Box 3.2. *(continued)*

"miners" perform computer hardware mathematical calculations to confirm these transactions (bitcoin.org, 2017). This process, although costly, rewards the users with newly created bitcoins. Consequently, those users compete among themselves to provide faster proof of work and record these transactions in a new block. By making it costly, the process of validation is secured in the sense that it would be contingent upon massive computational power and not solely on the number of identities someone controls to falsify a transaction (Nielsen, 2014).

Despite having existed since 2009, the value of bitcoins peaked against the United States dollar only recently before dropping considerably. By end-2017, the value of bitcoins reached astonishing values, from an average of $958.96 per bitcoin in January 2017 to $17,550 in December of that year. More recently, however, its value collapsed dramatically to $8,175 as of 15 March 2018. Conceptually, although Bitcoin offers some potential benefits, the sudden increase in the value of bitcoins followed by that considerable decline clearly indicates that there is a speculative bubble surrounding Bitcoin. Therefore, caution is needed when buying bitcoins as an individual or adopting the system at the institutional level.

Nevertheless, some potential benefits of Bitcoin can be mentioned. Transactions with bitcoins are quicker and involve lower transactions fees than those performed in usual payment networks (Brito and Castillo, 2013). The lower transaction fees hold promise for a low-cost remittance system and for enabling a cost-effective micropayments system. Bitcoin also has the potential to promote financial inclusion by providing cheap and global financial services and to increase trade by making transaction costs cheaper (bitcoin.org, 2017). Finally, the Bitcoin Protocol can also serve as a stimulus to innovation. As the blockchain technology is a register of ownership, its transparency can be used in many other sectors, such as financial transactions, intellectual property or public records (McKinsey&Company, 2017).

Notwithstanding their benefits, there are significant challenges attached to the broader usage and acceptance of cryptocurrencies as a payment system. Bitcoin's lack of consumer protection or supervision by public authorities contributes to its perception as a risky innovation (Sveriges Riksbank, 2014). Furthermore, the risk of unknown technical flaws in the protocol and security breaches in cryptocurrency exchanges, such as the hacking of the Mt. Gox Bitcoin exchange in 2014 and the Coincheck wallet and exchange service in 2018, increases the uncertainty surrounding cryptocurrencies. Moreover, payments in the Bitcoin network are not performed in real time, and Bitcoin is still not widely accepted (Sveriges Riksbank, 2014). The common perception that digital currencies are used to finance illegal activities online also discourages broad public use.

Policymakers should regulate cryptocurrencies in order to maximize their benefits and minimize possible negative consequences. In the short term, Governments should decide whether to create new regulation especially for cryptocurrencies, or whether old regulations should be adapted to better accommodate them. In the longer term, however, new regulations should be created to foster innovations, such as blockchain, keeping in mind that bitcoins and cryptocurrencies can be highly risky assets, and investing in them should be very carefully considered.

2.3. Regulatory framework as a driver of FinTech: policy considerations

Innovation-driven growth strategies, supportive regulatory framework and financial assistance have had, and are having, strong influence in the growth of FinTech in East and North-East Asia. The regulatory environment is arguably the most crucial factor explaining the rise of FinTech in that subregion. Initially, countries adopted a "wait-and-see" approach that led to considerable growth in FinTech. For instance, China allowed the nascent e-payment system and P2P platforms to operate without setting a legal and regulatory framework, thereby allowing developers space to innovate, expand and contribute to the growth of the digital ecosystem (G20 Global Partnership for Financial Inclusion, 2017).

Several concerns have arisen more recently, however, notably about consumer protection and cryptocurrencies. This is because, by its very nature, FinTech facilitates the development of shadow banking, understood broadly as financial intermediaries that are not subject to regulatory oversight by central banks.[6] Using Internet finance, debt-based lending platforms have greatly expanded with relatively loose regulatory policies in such countries as China (Zhang and others, 2016), which has introduced an array of risks and challenges due to inexperience among new investors and the limited information available on best practices. Similarly, from the beginning of Bitcoin (the first cryptocurrency), there were worries that it could be used for illegal activities. Generally, unregulated or poorly regulated FinTech can translate into poor consumer protection, which can exacerbate vulnerabilities and inequality in a society. There have been cases involving cryptocurrency exchanges where people lost their savings due to theft, such as the Mt. Gox "hack" in 2014 and that involving Coincheck in 2018. In January 2018, after detecting an unauthorized access Japan's cryptocurrency exchange Coincheck found that $400 million in NEM coins had been stolen.

In response, countries have started examining closely and regulating FinTech, especially cryptocurrencies. Two broad approaches have been adopted. On one hand, such countries as China have become increasingly restrictive. After the collapse of the peer-to-peer lender Ezubau,[7] China implemented "know your client" measures for the administration of online payments performed through non-bank payment institutions.[8] Amid worries about financial scams and money-laundering activities, the Government also began to tighten its grip on Bitcoin by banning companies from making initial cryptocurrency offerings, and in September 2017 closed some Bitcoin exchanges.

Recent guidelines[9] issued by Chinese financial regulators have been aimed at developing Internet (digital) finance while reducing emerging risks, such as fraud, money laundering, illegal fundraising and the unauthorized disclosure of users' personal information. New regulations cover non-bank payment services, licensing procedures and investor requirements and a centralized clearing platform. As with China, the Republic of Korea (one of the countries with the world's largest volume of exchange in cryptocurrencies) has turned increasingly restrictive towards cryptocurrencies. This does not mean, however, that all FinTech activities are being hindered. China continues to promote innovation and venture capital under its 13th Five-year Development Plan and has since then considered policies towards crowdfunding, online lending and Internet-based financing, among others. The rapid growth of FinTech, advancement of digital infrastructure and risks prompted not only the shift towards regulation, but also towards self-regulation in the FinTech sector (NIFA, 2016).

On the other hand, Japan has taken a more permissive approach and regulates FinTech to promote it. Registration and verification requirements are some examples of compliance measures to protect consumers and users and maintain strong healthy development of FinTech in East and North-East Asia. In the wake of the collapse of the Mt. Gox exchange[10] in 2014, Japan provided for the registration and capital requirements for virtual currency exchanges as well as cybersecurity and self-regulation to enhance customer protection and prevent money laundering (Okano, 2016). In April 2017, Japan, through its

Virtual Currency Act, began to recognize Bitcoin and other virtual currencies as legal tender and a method of payment, and it exempts the purchase and sale of such currencies from consumption tax. Cryptocurrency exchange operators are now required to register with the Financial Services Agency under an amendment to the Payment Services Act and undergo regular controls. Japan's active revitalization strategy towards the fourth industrial revolution includes promotion of artificial intelligence, FinTech and cashless payments. As entrepreneurs are aware of the new clearly set rules, this is expected to stimulate innovation and future development of the sector.

As there are no internationally agreed financial regulatory standards and the pace of change is exponential, regulators should keep a close eye on the evolution of FinTech in their countries. There are some key aspects that policymakers should consider when they adapt their regulations. First and foremost, there is a need for regulators to strike a balance between facilitating innovative financing services and performing varying mandates, such as consumer protection, market stability, market competition and prudential regulation (ADB, 2016a). For instance, recent regulatory requirements can be an obstacle to new market entrants and an added burden to promote access to finance. In China, marketplace and P2P lending platforms must now hold borrower and lender funds in an escrow custodian account with registered financial institutions separate from their own alternative platform. In the Republic of Korea, limitations on financial firms, that is, the scope of their permissible business or mismatch between supply and demand, as well as hefty capital barriers for FinTech start-ups and business regulations, are stumbling blocks to market-driven FinTech innovation (Lee, 2017).

Second, the benefits of FinTech should be inclusive, and policymakers have a central responsibility in this regard. In 2017, the Republic of Korea introduced Internet-only banking to cater to the marginalized or "unbanked" members of society. Another example of policy adjustment to enhance inclusiveness and competition in the financial sector is the deregulation of money transfer services, which traditionally had been provided only by banks and licensed depository institutions. In 2010, companies in Japan other than banks have been authorized to perform such services subject to a threshold value.

Third, regulation can become very complex, especially in such a fast-evolving environment as FinTech. In the Republic of Korea, FinTech firms argued that the country's complex legislation was unable to keep pace with the technological and market developments (Korea Chamber of Commerce, 2017). In 2017, the Government revised the regulations on electronic financial transactions and announced an innovative FinTech regulation plan to support convergence of finance and technology, maintain technology neutrality and lower entry barriers in such areas as remittances of foreign exchange, P2P finance and robo-advisors.[11] Japan's Financial Services Agency is also reviewing currently fragmented financial regulatory frameworks and envisages restructuring the framework with the enactment of a new law associated with FinTech in 2018.

Fourth, in the era of "big data", ownership and control of data is a key issue for all stakeholders as financial institutions seek to increase the amount and variety of data that they collect. For instance, in the Republic of Korea, there is a proposal for an open data policy to allow third parties to access financial firms' customer information (Lee, 2017). Currently, FinTech data are subject to relevant protection on personal information, such as Japan's Act on the Protection of Personal Information and China's Cyber Security Law, which provides for civil, criminal and administrative liability (effective June 2017). The Republic of Korea's law on personal information protection applies to processing entities regardless of whether they are located overseas. Meanwhile, the protection of data privacy has been expanded to reputational risk in Hong Kong, China, where the commissioner would be allowed to publish the name of an organization that is the subject of an investigation for violation of privacy.

Fifth, regulatory technology (RegTech) is emerging in response to FinTech. RegTech is an evolving area to promote risk-based and technology-neutral approaches by facilitating more efficient

regulatory monitoring, reporting and compliance and helping to avoid regulatory arbitrage through so-called regulatory sandboxes or test-and-learn approaches (ADB, 2016b).[12] In Hong Kong, China, the FinTech supervisory sandbox allows banks to conduct testing and the trial of innovative technologies without full compliance with the monetary authority's supervisory requirements. However, applicant firms need to provide ex ante customer protection and effective complaint-handling measures. In the Republic of Korea, its regulatory test bed is defined as a temporary, limited mitigation of regulations during a pilot period to test innovative financial business models. RegTech also provides an opportunity to help create transformative big data to support a paradigm shift from the know-your-customer to know-your-data approach (Arner, Barberis and Buckley, 2016). Such data could, for example help create a system of credit scoring for small and medium-sized enterprises and risk data for regulators to inform due diligence.

Finally, East and North-East Asia is characterized by differing regulatory priorities, technological capabilities and customer conditions that could challenge the narrative of FinTech to finance development. Fragmented regulations across countries can create competing interests and negative externalities. Hence, regulatory convergence is a vital concept to monitor; international coordination will be critical to maximize the benefits of FinTech and minimize its potential negative effects.

3. Developing local currency bond markets in South-East Asia

3.1. The role of local currency bond markets in mobilizing financial resources

Countries in South-East Asia, in common with those in other subregions, face the challenge of efficiently deploying financial resources to effectively pursue implementation of the 2030 Agenda. The private sector, particularly non-bank private institutions and individuals, can play a vital role in providing financing for sustainable development. This would bolster the resources that Governments obtain from taxation and that which the corporate sector obtains from bank loans, thereby facilitating investments. Thus, fostering government and corporate bond markets can be an important avenue by which Governments and the corporate sector can diversify and increase their financing sources. Along with enhancing local capital markets' infrastructure, bond markets help to reduce excessive reliance on short-term funding from the banking sector. South-East Asia remains highly dependent on banks for private financing. It is estimated that commercial banks account for more than 80 per cent of the total financial institution assets in ASEAN (Lee and Takagi, 2014). Moreover, development of local currency bond markets in the subregion can help mitigate currency and maturity mismatches,[13] which some Asian economies experienced during the 1997/98 Asian financial crisis.

Continued excessive reliance on bank loans, from both local and foreign banks, by the corporate and household sectors remains an issue and a source of currency and maturity mismatches. Similarly, Governments' external financing requirements as a percentage of GDP have increased considerably since 2010 in several South-East Asian economies, with the largest rise being seen in Malaysia, followed by Indonesia and Thailand. The ratio stands at nearly 40 per cent of GDP for Malaysia, with Thailand and Indonesia each standing at nearly 10 per cent of GDP, with the emerging markets' average being about 20 per cent of GDP (IMF, 2017). On the corporate side, the foreign currency share of non-financial corporate debt is particularly high in Indonesia, standing at more than 50 per cent of total non-financial corporate debt, with the global emerging markets' average being about 45 per cent (IMF, 2017). As shown in chapter I, even more of a concern is the increasing total external short-term debt (public and private) to GDP ratios, with the largest rise being for Malaysia. This situation has led to rising macroeconomic and financial stability risks.

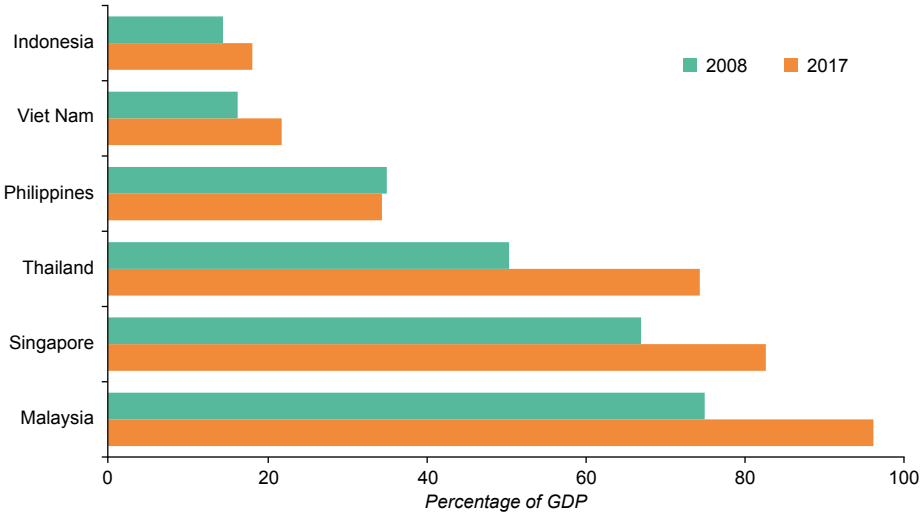
The robust growth in local currency bond markets in South-East Asia in recent years is a positive development. The size of the market in ASEAN economies stood at $1.19 trillion by mid-2017 (Zakariah, 2017). However, this growth remains unbalanced across countries due to the continuing prevalence of a range of obstacles. The size of corporate bond markets remains small in most economies as local currency bond markets are concentrated by far in government bonds. Thus, the challenge is how to stimulate growth in the local currency corporate bond market to strengthen the financing options of the corporate sector. The potential demand pool for such bonds exists, given the high rate of savings in the region, which are invested mostly in low-yielding foreign assets, such as United States Treasury bills, due to the perceived lack of reliable investment opportunities within the region. Governments therefore should undertake policies on the supply side to overcome obstacles to the greater issuance of local currency bonds, particularly by the corporate sector.

3.2. Segments of the market: government and corporate bond markets

A few countries in South-East Asia have a developed local currency bond market in terms of relative size to GDP. The development is led by Malaysia and Singapore, followed by Thailand and to a lesser extent the Philippines (figure 3.2). Indonesia has the smallest bond market in the region, followed by Viet Nam, while Cambodia, the Lao People's Democratic Republic and Myanmar currently do not have an active bond market. The reasons for the lack of a bond market in the smaller economies include lack of sufficient macroeconomic stability and the strength of legal protection of borrowers (Burger, Warnock and Warnock, 2015).

Government bonds dominate local currency bond markets, accounting for an estimated 65 per cent of total local currency outstanding bonds (figure 3.3). Government local currency bond issuance in South-East Asia in 2017 stood at $902.3 billion (Asian Bonds Online, 2017).[14] While this amount was nearly double the size of the corporate local currency bond issuance of $435 billion, it is important to note that both classes of bonds have seen strong growth in the last 10 years. In general, corporate bonds have grown more rapidly than government bonds in countries where the local currency bond markets are smaller (figure 3.4). Between 2008 and 2017, total local currency bond issuance in South-East Asia grew by 241 per cent, which can be decomposed as follows: government local currency bond issuance increased by 233 per cent, while corporate local

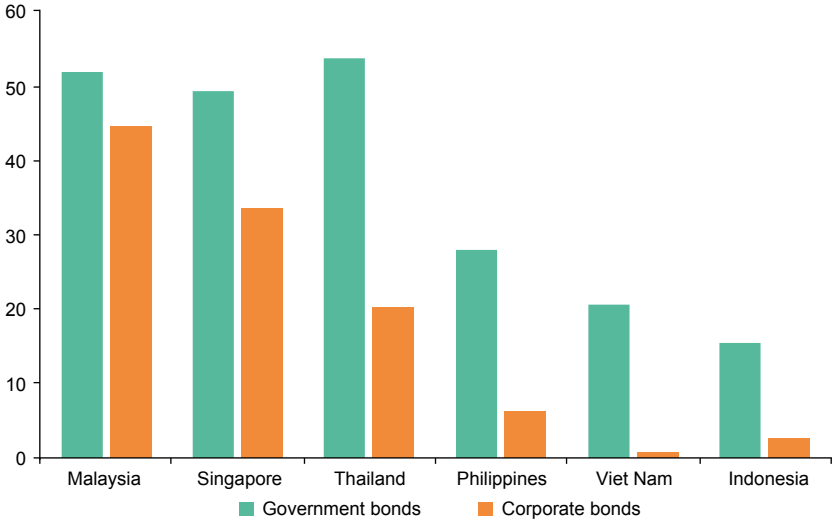
Figure 3.2. Local currency bond market size, 2008 and 2017



Source: ESCAP, based on Asian Bonds Online, Asian Development Bank. Available from https://asianbondsonline.adb.org/. (accessed 1 March 2018).

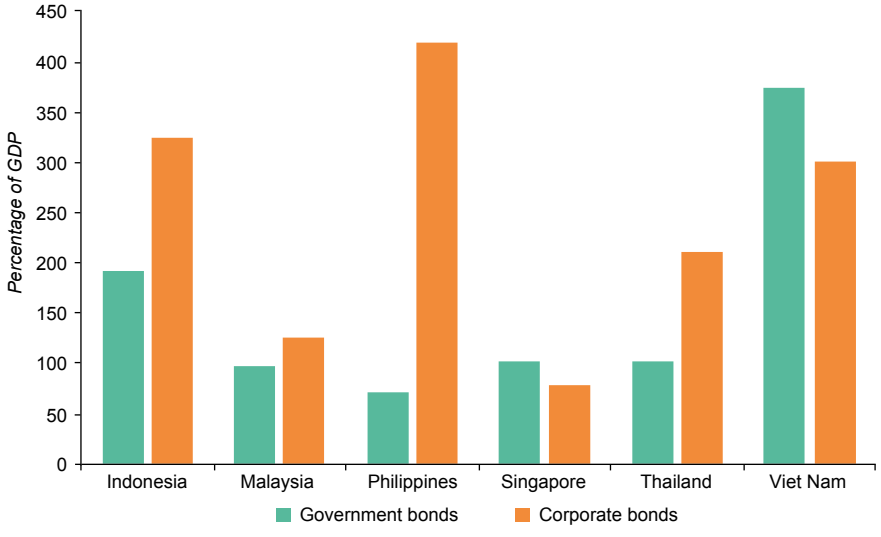
Note: Data for 2008 are as of December 2008; 2017 data are as of December 2017. The total local currency bond market comprises both government and corporate bond markets.

Figure 3.3. Local currency government and corporate bond markets in 2017



Source: ESCAP, based on Asian Bonds Online, Asian Development Bank. Available from https://asianbondsonline.adb.org/.
Note: Data for 2017 as of December 2017.

Figure 3.4. Percentage growth of local currency bond market, 2008-2017, by segment



Source: ESCAP, based on Asian Bonds Online, Asian Development Bank. Available from https://asianbondsonline.adb.org/
Note: Data for 2017 as of January 2018.

currency bond issuance increased by 321 per cent (Asian Bonds Online, 2017).[15] At the same time, foreign currency denominated bond issuance in ASEAN also expanded, but not at as fast a pace as local currency bonds. In 2016, foreign currency debt issuance increased from $37 billion to $37.8 billion (ADB, 2017b).

The 1997/98 Asian financial crisis played a catalytic role in propagating local currency bond issuance in the region, as issuers sought to avoid currency and maturity mismatches in the future. Subsequently, the 2008 global crisis further fuelled the growth of local currency bond issuance as a new source of funds for both government and corporate issuers. Governments turned to local currency bond markets to finance their fiscal stimulus packages in the post-crisis period. Corporate borrowers also turned to issuing more local currency bonds, as banks became

reluctant to lend to them when global banking liquidity dried up.

In 2017, the purchasers of local currency government bonds were primarily domestic, with the highest foreign participation being nearly 40 per cent of total buyers in Indonesia, while Malaysia saw about 25 per cent and Thailand about 15 per cent (ADB, 2017c). Among domestic purchasers, banks are the major group as compared with institutional investors, such as insurance or pension funds.

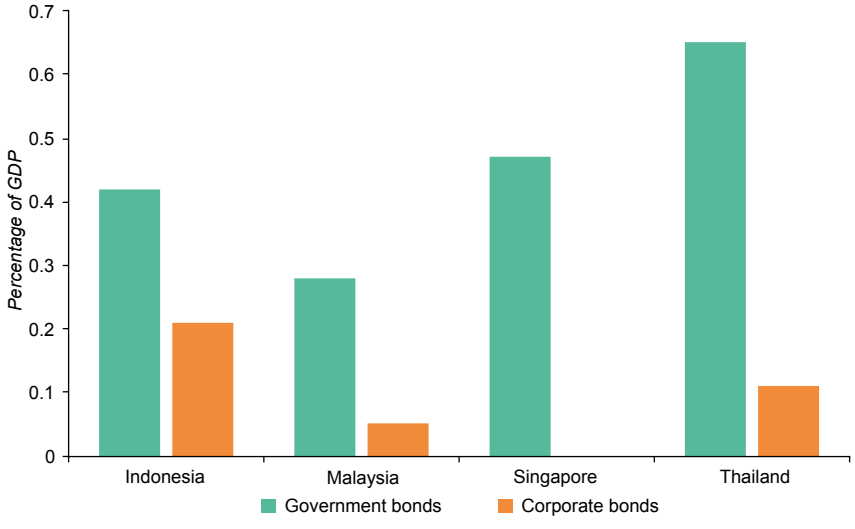
3.3. Challenges: liquidity, number and types of issuers and credit quality

Several challenges remain for local currency bond markets' development in South-East Asia. First, despite considerable growth in the primary issuance of bonds, there is the challenge of secondary market liquidity, that is, there is a "buy-and-hold mentality" in the market. This aspect is particularly pronounced for the corporate bond markets. Examination of turnover ratios, measured as the ratio of total turnover to the average outstanding amount of debt securities, is one way to gauge the extent of the liquidity problem in the secondary market; a higher turnover ratio implies a more active and liquid secondary market. As shown in figure 3.5, turnover ratios for corporate bonds in South-East Asian countries range between 0.1 and 0.2, as compared with between 0.4 and 0.7 for government bonds.

One reason for low liquidity is the lack of depth in the corporate bond markets in terms of the length of maturity of the instrument issued. Most bonds issued are of short-term maturity, which discourages liquidity because investors tend to hold the bonds to maturity. Apart from Malaysia, the Philippines and Singapore, more than 60 per cent of corporate bonds in other South-East Asian economies have maturities of less than five years. Notably, 87 per cent of Indonesia's corporate local currency bonds have maturities of less than five years, and 58 per cent have maturities of less than three years. Longer maturities favour a wider choice of investments, allowing for more participation of the private sector in projects that require sustainable capital investments.

A second challenge for the development of local currency corporate bond markets is the concentration of issuers, with the top 10 issuers accounting for 60-90 per cent of individual South-East Asian countries' total corporate bond issuance. This implies a clear profile of the corporations

Figure 3.5. Bond turnover ratio, 2017



Source: ESCAP, based on Asian Bonds Online, Asian Development Bank. Available from https://asianbondsonline.adb.org/ (accessed 1 March 2018).

Note: Bond turnover ratio is defined as the ratio of total turnover to the average outstanding amount of debt securities. Data are not available for the corporate bond turnover ratio of Singapore. Data for 2017 are as of December 2017.

that have access to bond market funding: it is primarily available to large and well-established corporations. Hence, this is a form of "pseudo-public borrowing": most corporate bond issuance originates from government-owned corporations, banks and other non-bank financial institutions. In terms of sectors, the main ones are energy, transport and other utility companies.

The third area requiring development is the range of credit quality of the corporate bonds issued. Currently, corporate bonds are clustered in higher credit ratings and do not cover the entire range of the credit curve. This situation limits market depth and reflects investors' conservative behaviour due to perception of high risk, leaving lower-rated companies without bonds as a financing option. Only the best-rated sovereign-risk countries issue bonds, and even those are not top rated by international standards, such as Thailand being rated Baa1 in July 2017 by Moody's; corporations usually have lower credit ratings than countries, which limits investors' appetite for such bonds.[16]

3.4. Initiatives to boost the development of corporate local currency bond markets

All these elements show that corporate bond markets in many South-East Asian countries are relatively underdeveloped in terms of size, liquidity and maturity, which impedes the channelling of existing savings into long-term investments, such as sustainable infrastructure projects. To address these challenges, first it should be recognized that local currency bond markets are not developed overnight, but through an incremental and slow process. Furthermore, a developed government bond market is a prerequisite for corporate bond markets. Such an incremental process has been observed in South-East Asia; such countries as Indonesia, the Philippines and Viet Nam first established a government bond market before the corporate one – other countries, such as Malaysia, Singapore and Thailand, have more advanced bond markets because they are wealthier economies and have more advanced financial sectors. Although a government bond market does not automatically lead to the development of a corporate bond market, a reliable benchmark yield curve provided by the government bond market is a necessary condition to allow for efficient and transparent pricing of corporate bonds. Specific elements required to develop a government bond market are regular issuance, a well-functioning primary dealer system, a vibrant hedging market and active liquidity enhancement facilities (BIS, 2006). In a similar vein, developing corporate bond markets require well-operated infrastructure, including such elements as standardized credit rating systems, risk management products and a functioning legal and regulatory framework.

Regional cooperation and integration have a significant role to play in the development of local currency bond markets, and ASEAN has undertaken several important initiatives in this regard (table 3.2). Notably, in 2003 the ASEAN+3 countries (ASEAN countries plus China, Japan and the Republic of Korea) launched the Asian Bond Market Initiative (ABMI), which is aimed at strengthening regulatory frameworks and necessary market infrastructure and promoting the issuance of local currency bonds. AsianBondsOnline was launched in 2004, which has greatly facilitated access to data in South-East Asia. In 2010, the Credit Guarantee and Investment Facility (CGIF) was established by ABMI in collaboration with the Asian Development Bank to foster standardization of market practices and the harmonization of regulations relating to cross-border bond transactions in the region (table 3.2) and to provide credit guarantees for investment-grade local-currency bonds (Sahay and others, 2015). A bond-pricing portal among five banks across ASEAN economies was launched in 2013 to serve as a precursor for an electronic trading platform in line with a similar project to integrate equity trading. Five banks in Indonesia, Malaysia, the Philippines, Singapore and Thailand are participating. Hong Kong, China; and Malaysia also launched a pilot platform for cross-border clearing and settlement of debt securities in 2013; the platform is aimed at promoting standardization and dissemination of corporate announcements across Asian markets. In May 2016, the latest elements of the ABMI were green bonds, infrastructure finance, small and medium-sized enterprise finance and housing finance. As of March 2017, CGIF had issued 17 credit guarantees valued at $1.06 billion for bonds issued by 13 companies in 8 ASEAN member countries.

Table 3.2. Bond market development timeline

Year	Initiative
2003	Asian Bond Market Initiative (ABMI) is launched under ASEAN+3 to develop a liquid and well-functioning bond market.
2003	Asian Bond Fund 1 (ABF1) is launched by central banks of the Executives' Meeting of East Asia and the Pacific countries to invest pooled savings in the region's (sovereign and quasi-sovereign) bond markets.
2004	ABMI launched AsianBondsOnline as a one-stop data and information portal for institutional investors, policymakers and researchers participating in local currency debt markets.
2005	Asian Bond Fund 2 (ABF2) started channelling investments into local currency bonds as a follow-up to ABF1. The primary goal is to reduce market barriers for investors and to improve liquidity in sovereign bond markets.
2008	ASEAN+3 ministers sign the New ABMI Road map to set up task forces to address specific issues in local bond market development.
2010	ASEAN+3 establishes the Asian Bond Market Forum (ABMF) as a platform to foster standardization of market practices and the harmonization of regulations relating to cross-border bond transactions in the region.
2010	The Credit Guarantee and Investment Facility is started as a trust fund within the Asian Development Bank to provide guarantees for local currency corporate bonds issued in the region.
2013	ASEAN+3 established the Cross-Border Settlement Infrastructure Forum to discuss the preparation of a road map and an implementation plan for the improvement of regional cross-border settlement infrastructure.
2015	ABMF released implementation guidelines for the ASEAN+3 Multi-currency Bond Issuance Framework (AMBIF), which helps facilitate intraregional transactions through standardized bond and note issuance and investment processes.

Source: Cyn-Young Park, "Developing local currency bond markets in Asia", ADB Economics Working Paper Series, No. 495 (Mandaluyong City, Philippines, 2016). Available from www.adb.org/sites/default/files/publication/190289/ewp-495.pdf.

3.5. Policy considerations

Despite progress, there is considerable room for development of local currency bond markets in South-East Asia as the outstanding amounts of corporate bond volume relative to GDP remain small. To this end, several areas of policy focus can be considered that are closely interrelated: improving market efficiency, deepening secondary markets and broadening the investor base.

Improving market efficiency will involve increasing the size and liquidity of secondary markets. As discussed above, despite fast growth in primary issuance in some countries, secondary market trading volumes and liquidity remain limited. A deep and liquid secondary market can reduce liquidity risks and enable investors to exit from long-term bonds before maturity, leading to greater demand for such issues. Key reforms could include improving prudential norms and risk management practices of market participants; promoting institutional investors, who tend to have longer investment horizons, and foreign participation in domestic markets to increase the investor base and diversify risks; enhancing primary and secondary market architecture to provide the appropriate level of market transparency; promoting market-making activities to increase liquidity; increasing the size of benchmark bonds and extending the yield curve. These improvements in market infrastructure will require such aspects as standardized credit rating systems, risk management products and more efficiency in the trading and settlement system.

In terms of broadening the investor base, there is a clear need to move beyond banks to attract other profiles of investors. Currently, banks are often the largest investors in corporate bond markets in South-East Asia, but global, progressive tightening of capital requirements could contribute

to lack of liquidity in secondary markets. Lack of investor diversity creates the risk of high volatility and exposure to sector-specific risks. Encouraging institutional investors, such as pension funds and insurance companies, can help contribute to the development of long-term bond markets. Encouraging foreign institutional investors would be particularly useful as their investment horizons and preferences may differ from that of domestic investors, which can result in improved demand structure and secondary market liquidity. However, allowing foreign investors to enter local bond markets should be done cautiously: illiquid markets could undermine financial stability in case there is a sudden capital outflow, which would create volatility in interest rates and exchange rates.

In line with the three areas of policy focus, domestic bond market policies should be supplemented by subregional cooperation and integration to improve subregional market infrastructure. While regional integration in South-East Asia is arguably the most advanced in the Asia-Pacific region, financial integration has traditionally been weaker than that in trade, and South-East Asian economies often developed closer linkages with advanced financial markets rather than among themselves (Monetary Authority of Singapore, 2007). Furthermore, integration of domestic bond markets has lagged the interconnectedness seen in other markets, such as for equities, although the degree of integration varies across countries (Levinger and Li, 2014). Some markets, such as Malaysia and Thailand, are relatively better integrated than others, such as Indonesia and the Philippines. A road map for capital market integration has been agreed as part of the ASEAN Economic Community, which should facilitate development of corporate bond market development. In this regard, it is critical to enable regional regulatory authorities to develop and implement appropriate regulatory frameworks to facilitate market development and integration, while safeguarding financial stability through the monitoring of increased competition and financial innovation, which could otherwise lead to increased risk-taking.

Subregional cooperation will also be important to create economies of scale for smaller economies in South-East Asia. Indeed, in the short term it may not be feasible to establish corporate bond markets for some small countries in South-East Asia due to their very low volume of transactions. However, subregional cooperation can support the access of these economies to other subregional bond markets. For example, under ABMI, the ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) can facilitate intraregional transactions by promoting common market practices and standardized conditions for bond issuance, such as disclosure standards and common documents.

The Lao People's Democratic Republic in recent years has been a leader among smaller South-East Asian economies in intraregional bond issuance, through the issuance of government bonds in the Thai market for infrastructure investment. A trading company recently became the first corporate entity from that country to issue baht-denominated bonds. The Governments of Cambodia and Myanmar and corporate entities could also consider Thailand's market for financing their large infrastructure and corporate needs. In this fashion, not only can economic actors raise the financial resources they need, they can do so in a currency other than the United States dollar, which would help them diversify their portfolio of currency-denominated debt and therefore reduce the risk of exchange rate misalignments.

In the long run, however, it will still be important to encourage development of local currency bond markets to avoid excessive foreign-denominated debt and offer investment diversification opportunities to the domestic corporate and banking sectors. Cambodia has led the way in South-East Asia, announcing plans to establish a local currency bond market in the near term. In general, small South-East Asian countries looking to establish local currency bond markets will have to engage in a step-by-step process. The pace of financial development is of consequence: evidence shows that too fast a pace leads to instability – the main reason being poor regulatory supervision (Sahay and others, 2015). Hence, the critical first step is to establish strong macroeconomic fundamentals to ensure that capital market development does not risk financial stability.

4. Managing fiscal volatility in the Pacific

4.1. Fiscal volatility is an impediment to stable and predictable fiscal resources

As noted in the introduction, to undertake investments with a long-term horizon, countries need not only to have sufficient fiscal resources but also to ensure that such resources are stable and predictable. In some contexts, such as in the Pacific subregion, this is not always the case, which complicates the planning and execution of public investments. For instance, such shocks as natural disasters constrain the capacity of Governments to allocate sufficient and predictable flows of funds to implement development priorities over the medium term. Other impediments include the structural features of these economies: Pacific island developing countries are generally characterized by small population size and limited land area, remote geographic location and exposure to natural hazards, such as tropical cyclones, floods and droughts. The economies of the subregion are mostly open and highly dependent on the global economy, especially through remittances and aid flows, tourism, imports of basic foods and fuel, fishing license fees, employment and investment returns on trust funds and sovereign wealth funds. These characteristics of Pacific island developing countries make fiscal management particularly challenging, as national budgets are subject to several sources of volatility due to large fluctuations in GDP, terms of trade, tax and non-tax revenues, procyclical remittances or the negative impact of disasters. Indeed, over the past decade, most Pacific island developing countries have experienced considerable volatility in their fiscal balances. The volatility is most noticeable in Kiribati, the Federated States of Micronesia and Tuvalu, which are small States highly dependent on fishing license revenues (figure 3.6).

Keeping in view the structural features of the Pacific, a context-specific design of fiscal policies, along with effective risk management, can help to improve resilience to shocks, improve economic growth potential and facilitate the implementation of sustainable development priorities. Strengthening fiscal frameworks and building buffers, with

Figure 3.6. Fiscal balance in Pacific economies, 2014-2016

Source: ESCAP, based on data from Asian Development Bank, Key Indicators for Asia and the Pacific 2017 (Mandaluyong City, Philippines, 2017). Available from www.adb.org/sites/default/files/publication/357006/ki2017.pdf.

revenue volatility smoothed as a precondition, can help manage risks to fiscal sustainability in Pacific island developing economies.

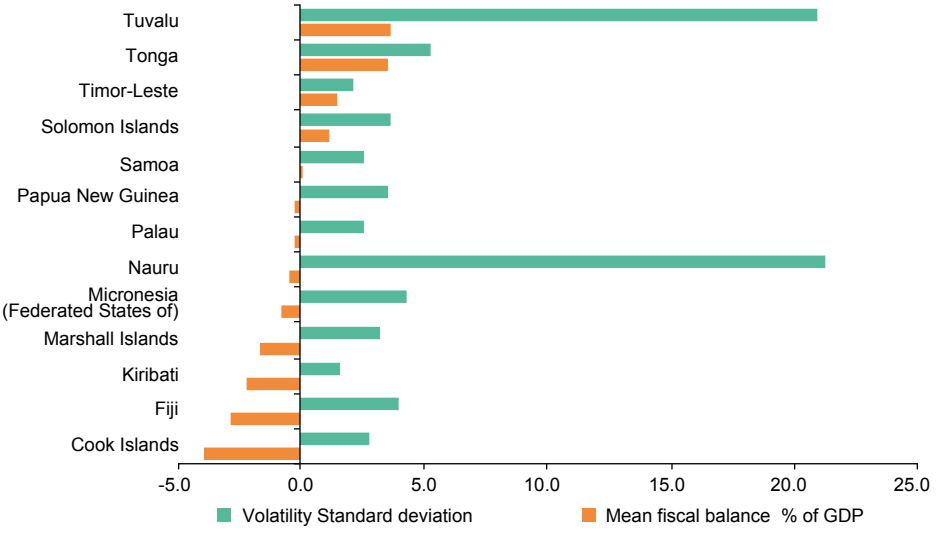
A country may experience considerable fiscal volatility despite having a reasonably stable and small fiscal deficit of, say, 3 per cent for several years in a row.[17] Figure 3.7 illustrates the extent of the volatility in the fiscal balances between 2014 and 2016. The highest levels of volatility can be seen in Kiribati and Tuvalu where the standard deviations in the level of their fiscal balances were 21.3 (mean fiscal balance of −0.4 per cent of GDP) and 20.9 (mean fiscal balance of 3.6 per cent of GDP) respectively. Micronesia, Papua New Guinea and Vanuatu had the next highest levels of fiscal volatility, with standard deviations of 5.3 (mean fiscal balance of 3.6 per cent of GDP), 4.0 (mean fiscal balance of −2.8 per cent of GDP) and 4.3 (mean fiscal balance of −0.8 per cent of GDP) respectively.

4.2. Root causes of fiscal volatility

A few reasons, specific to the Pacific, explain the high fiscal volatility in Pacific island developing economies. On the expenditure side, geographic isolation and dispersed populations mean that government expenditure per capita, especially recurrent costs and spending to supply essential services, is quite high relative to GDP. For example, in Kiribati and Tuvalu the level of government expenditure averaged about 100 per cent of total GDP between 2007 and 2016. Although the amount was less in Marshall Islands, the Federated States of Micronesia, Nauru, Palau and Solomon Islands, government expenditure averaged between 40 and 80 per cent of GDP during the same period.[18] Such high current spending levels occur because the public sector is typically the main employer[19] and the main provider of goods and services. This implies very limited budget allocations for public investments, which are often pursued through foreign grants and loans.

The long-run impact of natural disasters on fiscal position and economic development is also substantial. It has been estimated that damage and losses due to natural disasters reduced the average GDP growth rate in Pacific island developing countries by 0.7 percentage points per year during the period 1980-2014 (Cabezon and others, 2015). From a related estimate in the same study, it was suggested that, for damage and losses equivalent to 1 per cent of GDP, the fiscal balance would deteriorate by 0.5 per cent of GDP in the year after a

Figure 3.7. Fiscal balance and volatility of Pacific island economies, 2014-2016



Source: ESCAP, based on data from Asian Development Bank, Key Indicators for Asia and the Pacific 2017 (Mandaluyong City, Philippines, 2017). Available from www.adb.org/sites/default/files/publication/357006/ki2017.pdf.

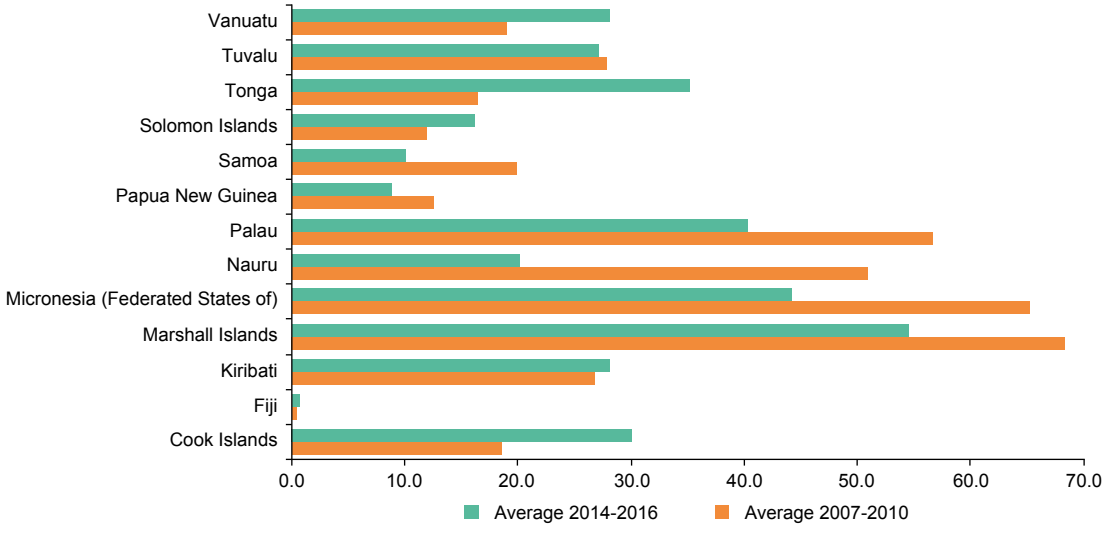
disaster, as spending on reconstruction rises while tax revenue falls. Another study found that among Pacific island developing countries, a natural disaster that affects 1 per cent of the population causes a contraction in tax revenue of 0.2 percentage points of GDP in the year of the disaster, followed by a revenue rebound in the following year (Cabezon and others, 2015). The rebound generally stems from development assistance flows aimed at supporting recovery and reconstruction activities. Owing to a narrower economic base and vulnerability to exogenous shocks, including from natural disasters and terms-of-trade shocks, revenue volatility in small States is larger than in developing non-small States (Cabezon and others, 2015).

An emerging source of revenue is the windfall fishing revenues in recent years for six of the eight Parties to the Nauru Agreement.[20] For Kiribati, Marshall Islands, the Federated States of Micronesia, Nauru, Palau and Tuvalu, estimates show a twofold increase in average fishing license revenues across these economies between 2012 and 2015. Collections climbed from the equivalent of 7.1 per cent of GDP in the period 2008-2011 to 17.7 per cent in the period 2012-2015 (ADB, 2016c). In the case of smaller States in the Pacific subregion, fishing license fees provide lumpy non-tax revenues (about 38 per cent of current government revenues on average – for Kiribati 90 per cent of current government revenue), a situation which further increases revenue volatility. Fishing license fees are intrinsically volatile (IMF, 2014) because ultimately, they are determined by the amount of fish caught, which is uncertain in itself.[21]

Fiscal positions in Pacific island developing countries are also vulnerable to large inflows of foreign aid and grants that typically follow natural disasters. High dependence on foreign aid is a source of fiscal volatility, given the unpredictability of the flows and direction of spending. Over the 10 years from 2007 through 2016, aid accounted for an average 29.4 per cent of total revenues,[22] including grants. There were wide variations both between countries and between the average grants in the first three years (2007-2010) and the final three years (2014-2016) of the 10-year period (figure 3.8). Cook Islands, Tonga and Vanuatu reported higher proportions of grants in their total revenues during the final three years of that 10-year period.

Volatile revenue flows, including from aid and natural resource rents, combined with rigid recurrent expenditure commitments and the impossibility to benefit from economies of scale in the provision of public services contribute to

Figure 3.8. Grants as percentage of total revenue in Pacific economies



Source: ESCAP, based on data from Asian Development Bank, Key Indicators for Asia and the Pacific 2017 (Mandaluyong City, Philippines, 2017). Available from www.adb.org/sites/default/files/publication/357006/ki2017.pdf.

underpin fiscal volatility. As a result, predictability of funding and the capacity to fund national development plans, including basic services and infrastructure, are compromised. This makes it difficult for Pacific island developing countries to engage in sustainable development projects in the medium-to-long run.

4.3. Policies to manage implications of fiscal volatility

In view of the specific characteristics of Pacific island developing economies and the varied country-specific implications of fiscal volatility, tailored policy measures are required. These measures should be supported by a multipronged approach towards enhancing fiscal resilience. Ongoing efforts in applying fiscal policy tools, together with risk management approaches on both the revenue and expenditure side, and broader structural reforms are all important for managing fiscal volatility. Pacific island developing countries have adopted several measures to smooth out revenues over time, including transferring windfall revenue to public trust and sovereign wealth funds, and participating in a subregional risk-pooling insurance scheme. These initiatives and a selected few policy principles and options, noting the stage of implementation of reforms in Pacific island developing countries, are highlighted below.

Strengthen public financial management and build buffers and fiscal frameworks. Further strengthening national fiscal frameworks is necessary to minimize fiscal risks from both volatile revenue and high and recurrent expenditure rigidities, create fiscal space for strategic investments in support of the 2030 Agenda, build buffers to support macroeconomic stability and allow for timely countercyclical spending. While several Pacific island developing countries have made some progress in building fiscal buffers since the 2008 financial and economic crisis, most of them still have higher debt and lower fiscal balances than they did before the crisis (Cabezon and others, 2015). A fiscal framework built around simple fiscal anchors, such as debt-to-GDP ratios and underlying fiscal balances, could help to minimize volatility by creating consensus on medium-term budget allocations to specific sectors, such as education. As a specific policy tool in this regard, the use and maintenance of a complementary medium-term expenditure framework may also help build political consensus on budgeting plans and spending priorities. In the subregion, Fiji has had such a framework in place for several years.

Improve domestic revenue flows. Higher flows of domestic revenues can support the build-up of fiscal buffers and mitigate the impact of unpredictable external inflows, such as revenue windfalls, development aid or multilateral finance. To build the domestic tax base, introducing tax measures on natural resources, such as fisheries and minerals, and tourism-related activities could yield a higher revenue base for Pacific island developing countries. The imposition of various levies and taxes on tourism activity in Fiji and Palau, and application of duties on prescribed volumes of mineral water extracted in Fiji provide some other examples.

Continue to broaden the economic base. Broadening the economic base can create more sources of domestic revenues. More effort is required to implement reforms to create an enabling environment for private sector development and strengthen areas of comparative advantage in the Pacific, such as agriculture and tourism. Tapping further into global employment opportunities in the security industry, sports, caregiving, seafaring and various seasonal work schemes can contribute to higher remittances and improved tax returns.[23]

Sovereign wealth fund or national trust fund. Most Pacific island developing countries[24] with budget surpluses arising from resource rents and royalties have sovereign wealth and national trust funds. These provide a means to build fiscal buffers that may be used to smooth windfall revenue flows into the annual budgets and to ensure sustainability over the longer term. Sovereign funds can be drawn down when required, subject to the established fund rules. Recent sharp increases in fisheries license revenues have enabled recipient countries to increase savings in public trust funds, including the Tuvalu Trust Fund (ADB, 2016d) (see Box 3.2).

Box 3.3. Tuvalu Trust Fund

In terms of fiscal policy, Tuvalu has devised a structure with a primary trust fund operating alongside a secondary "buffer" fund. The purpose of the Tuvalu Trust Fund (TTF), established in 1987, is to contribute to the long-term financial viability of Tuvalu by providing an additional source of revenue for recurrent expenditure.

Over the years, the original contribution of A$27 million has been supplemented by additional contributions from Tuvalu, including from the lease of the ".tv" Internet domain name and fishing license fees, and some of its development partners, including Australia and New Zealand, two of the original contributors. By September 2017, the market value of the fund had grown to A$172.3 million (equivalent to about 360 per cent of its GDP).

A "distribution" from TTF is made when the market value exceeds the so-called "real maintained value". This adjusts the underlying market value of the funds against the Australian consumer price index. If the market value exceeds the real maintained value, the excess is transferred to the Consolidated Investment Fund (CIF), which can be freely drawn on by the Tuvalu Government to finance budget spending, or be reinvested in the core TTF.

The objective of CIF is, however, to build a targeted minimum balance or "buffer" reserve, which is the equivalent of 16 per cent of the TTF value. This is designed to enable the Government to smooth the volatility of distributions and to enable the Government to continue making drawdowns from CIF for up to four years when the core trust fund distribution is zero. Such a situation arose in the periods 2001-2004 and 2008-2012, when the CIF balances were drawn down as TTF did not distribute. In 2016, a budget deficit was funded by a drawdown of CIF, while the target balance of 16 per cent of the maintained value of TTF was broadly maintained.

Good governance practices are well established and remain a key success factor. For example, TTF is managed and audited by reputable firms. TTF has very strict rules relating to distributions and withdrawals. These are specified in the Agreement Concerning an International Trust Fund for Tuvalu. Only in very exceptional circumstances would the core capital of the Fund be drawn down by the Government. It should be mentioned that, in 30 years of the Fund's operation, this has never occurred.

Consider specific measures to tackle the risk of natural disasters. Several ex ante and ex post options are available and have been implemented by Pacific island developing countries (ESCAP, 2016c). A structured risk management approach should be tailored to every country's specific circumstances, as it should balance the long-term value of disaster risk reduction measures, such as building more resilient infrastructure or investing in community-level preparedness, versus financial preparedness measures, such as purchasing insurance.[25] Specific measures adopted recently are discussed next.

Emergency funds and contingency budgets set aside by Governments annually can provide a resource that can be called on immediately to support disaster response. For example, Tonga has established a statutory emergency fund that can be accumulated from year to year. While such funds can support early recovery, further replenishment is likely required to respond to the occurrence of major damage and loss. In terms of cost effectiveness and quick access to funds for frequent disaster events causing relatively low levels of damage and loss, the use of both national emergency and contingency funds is applicable. In comparison, trust and sovereign wealth fund arrangements are more efficient for less frequent but higher-cost events.

Empirical available evidence shows that the effectiveness of funds in the Pacific to protect budgets from high revenue volatility and strengthen

fiscal prospects was hampered by lack of integration with budgets, institutional weaknesses and inadequate controls (Le Borgne and Medas, 2007). However, it is also recognized that if funds are well designed, they could be used as a tool to support a sound fiscal framework, but should not be seen as a substitute for fiscal reforms (Le Borgne and Medas, 2007).

Insurance against natural disaster risk has been implemented for several years, and the results seem quite positive. Notably, a risk-sharing mechanism called the Pacific Catastrophe Risk Insurance Company, provides limited insurance cover for five Pacific island economies, namely Cook Islands, Marshall Islands, Samoa, Tonga and Vanuatu (see box 3.3).[26] This insurance programme provides an immediate payout on the occurrence of an insured disaster event that meets specified parametric triggers. This provides participating economies with access to liquidity immediately after a natural disaster in a cost-efficient way as the risk is pooled across several countries.

Donor participation should supplement annual contingency budgets and emergency funds. For example, an innovative contingent financing product worth $25 million recently provided to Cook Islands, Samoa, Tonga and Tuvalu by the Asian Development Bank will provide a source of near-immediate financing for early recovery activities from disaster events.[27] However, a valuable use of aid would be to contribute to the funding of countries' insurance premiums against natural disasters. This would help reduce fiscal volatility and enhance preparedness against natural disasters.

Box 3.4. Pacific Catastrophe Risk Assessment and Financing Initiative

A project involving five Pacific island developing economies (Cook Islands, Marshall Islands, Samoa, Tonga and Vanuatu), the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), is a regional response to the perennial losses associated with natural disasters. Launched in 2007 as a pilot project, PCRAFI is aimed at providing disaster risk management and finance solutions to help build the resilience of Pacific island developing countries.

PCRAFI enhances financial preparedness against climate and disaster risk by: (a) pooling risks into a single, more diversified, less risky portfolio; (b) retaining some risks through joint reserves/capital; and (c) transferring the excess risks to the reinsurance and capital markets when it is most cost-effective to do so. The economies are insured for amounts based on independent and economy-specific parametric criteria, such as the strength and proximity of a cyclone. The amount of any payout is determined based on the level of insured risk and the estimated losses calculated by economy-specific models rather than actual losses, which allows for prompt payouts. A pilot was implemented over four cyclone seasons, with participating economies choosing to cover both the type and severity of natural hazard risk and the payout amount.

In 2014, Tonga received a payout of $1.27 million following Cyclone Ian, and Vanuatu received $1.9 million after Cyclone Pam in 2016. No payouts have been triggered since. The total value of insurance coverage for the 2016/17 season for cyclones and earthquakes, including tsunamis, amounted to $38.2 million for the five participating economies.

On 2 November 2016, the start of the fifth season of the Pacific Catastrophe Risk Assessment and Financing Initiative was announced, along with the recent establishment of a new Cook Islands-based insurance company, called the PCRAFI Facility, for the delivery of this insurance. The Facility has issued its first insurance policies to Cook Islands, Marshall Islands, Tonga, Samoa and Vanuatu, which will be complemented by reinsurance provided by Sompo Japan Nipponkoa Insurance, Mitsui Sumitomo Insurance, Tokio Marine and Nichido Fire Insurance, Swiss Re and Munich Re via its subsidiary NewRe, thus securing these Pacific island economies with total coverage of $38.2 million against the destructive effects of tropical cyclones, earthquakes and tsunamis.

Based on positive experiences with programmes such as PCRAFI, other countries are exploring innovative insurance approaches to manage their risk to natural disasters. For example, in August 2017 a new catastrophe risk insurance programme was launched by the Government of the Philippines.[28] The programme provides the Philippine peso equivalent of $206 million in coverage against losses from major typhoons and earthquakes affecting national government assets; protection is provided to 25 participating provinces against losses from major typhoons. Insurance payouts are made when predefined parametric triggers are met.

5. Reforming tax systems in South and South-West Asia

5.1. Government challenges in financing sustainable development through tax systems

As previously highlighted, countries should have significant resources to invest in sustainable and inclusive development. To do so, the most common yardstick is the tax-to-GDP ratio, which is a measure of the economic importance of the public sector in a country's economy. On average, South and South-West Asia's tax-to-GDP ratio is 12.6 per cent, one of the lowest in the world, below that of other developing countries in the Asia-Pacific region, at 15.2 per cent, and much lower than that of OECD countries, at 25.1 per cent.[29] Several countries in the subregion have tax-to-GDP ratios under 10 per cent: Afghanistan, Bangladesh, the Islamic Republic of Iran and Pakistan, with Afghanistan's being the lowest in the Asia-Pacific region at just 7.6 per cent.[30]

Given the considerable financing requirements of the 2030 Agenda, the current tax-to-GDP ratios will not suffice. Consequently, the 10 countries comprising the South and South-West Asian subregion are unlikely to achieve the Sustainable Development Goals without first implementing comprehensive and difficult reforms to improve this situation. Hence, investing in domestic resources through smarter tax policies and more inclusive public expenditure is the largest untapped finance opportunity for those countries to effectively pursue implementation of the 2030 Agenda (Long and Miller, 2017). Domestic resource financing must be infrastructure- and public service-intensive to support the various generational transformations under way in South and South-West Asia, such as urbanization, women's empowerment, youth bulge and population ageing; such financing is also needed for the economic transformation from labour-intensive agriculture to capital-intensive industry and services (ESCAP, 2017j).

It is possible and advisable to increase the tax-to-GDP ratio in this subregion because the ratio is considerably below its potential. Various international standards have suggested that tax-to-GDP ratios should be between 15 and 20 per cent; this range remains a realistic goal for South and South-West Asian countries to achieve before reaching in 2022 the halfway point for achieving the Sustainable Development Goals.[31] Recent studies would suggest that developing countries in the Asia-Pacific region are realizing only one half to two thirds of their tax potential (ESCAP, 2014). For the South and South-West Asian subregion, these estimates of tax potential would suggest tax-to-GDP ratios of 12-13 per cent for the Islamic Republic of Iran and Pakistan.[32] Countries in the subregion are working to improve their tax-to-GDP ratio. For example, in Bangladesh a flat 15 per cent value-added tax has been introduced – although, owing to pressure from the business sector, its implementation (initially planned for 1 July 2017) has been pushed forward to 2019 (EIU, 2018a).[33]

5.2. Problems facing tax systems

It should be noted first that South and South-West Asian countries have different tax structures and therefore face different challenges. Such diversity is reflected in the average tax rates – and especially in the tax types that are zero (table 3.3). While some countries such as Bangladesh have gaps in social security, others such as Afghanistan could reinforce their revenue from indirect taxes.

Table 3.3. Average tax rates, by type, in selected countries in South and South-West Asia

	Indirect	Corporate	Individual	Social security (Employee)	Social security (Employer)
Afghanistan	0	20	20	20	50
Bangladesh	15	25	30	0	0
India	15	34.61	35.43	12	12.5
Pakistan	17	31	20	0	0
Sri Lanka	11	28	16	8	12

Source: KPMG Tax Rates Online Tool. Available from https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online.html.

Tax rates by themselves do not explain the fundamental sources of the diversity of tax systems; specific country circumstances should also be considered. For instance, the fragile security situation and weak government control over parts of Afghanistan pose great challenges for the collection of taxes. It is estimated that about 48 per cent of the country's total revenue comes from domestic resources, with the remainder being derived from external grants (EIU, 2018a). In India, while it has been acknowledged that its goods and services tax has reduced the complexity of its taxation system, its tax laws still are perceived to be second most complex in the Asia-Pacific region – after those of China. Well over half of private sector companies in India believe that complexity in the tax regime has increased in the last three years – "complexity" referring to the perceived level of difficulty in interpreting the tax law and rules in the relevant jurisdictions (Deloitte, 2016). In Sri Lanka, the 2018 budget is aimed at streamlining the corporate income tax system and reducing exemptions in order to improve compliance and increase revenues (EIU, 2018b). In Pakistan, most tax revenue is derived from indirect taxes, making the tax system relatively regressive, which does not favour inclusion.

To the extent that generalizations can be made about the tax systems in South and South-West Asia, it may be said that they are complex, inefficient and not very conducive to the collection of large tax volumes. For example, based on the calculations in chapter II, India has a tax administration index of 58.4 per cent, which is below the average index for the entire Asia-Pacific region at 60.3 per cent.

Inefficiency in the tax system does not favour inclusion, which in turn lowers tax morale. Financial contributions by people and businesses to their Government depend on the perception of the public goods and services received, such as education, health care, basic utilities or responsive government administration. In most countries and sectors in the subregion, this social contract is broken. The result can be a vicious cycle of tax avoidance which hampers financing decent public goods and government services, and subsequent low-quality, exclusionary service delivery.

5.3. Factors limiting tax system effectiveness

The complexity of the structure and composition of tax systems in South and South-West Asia can be gauged by considering the multiplicity of taxes, cumbersome assessment procedures, inefficiency of tax administrations, delays in resolving disputes, unequal exemptions granted to certain groups and corruption. Because of such complexity, the subregion's tax systems tend to be dependent on indirect taxes for most tax revenue. Value-added taxes (VAT) are increasingly popular and expanding in coverage as a strategy to capture tax revenue without the complex assessment of household incomes and wealth, and they lower the disincentives to business compared with direct corporate taxation.

An element that can aggravate complexity in the tax system is the highly decentralized structures of countries in the subregion. Subnational public expenditures are one third greater than subnational public revenues in Bangladesh. They are twice as large in India and more than six times as large in Pakistan (ESCAP, 2017a). Central tax collection

results in greater uniformity and simplicity across provinces, states and districts, but requires a transparent and equitable process for distribution of revenues. In addition, various provincial/state and local-level taxes typically remain in place, which increases coordination costs. For example, Indian states apply a separate state goods and services tax along with the federal equivalent on relevant transactions. In Pakistan, property taxes are collected at the state and provincial levels, but are more difficult to administer and apply due to valuation requirements and their greater complexity. Some cases in other regions show local taxation as more effective than central grants in delivering good-quality social infrastructure when coordination is poor.[34]

Goods and services taxes and VAT have often been introduced without differentiation and adopt various rates and exemptions during passage of legislation in order to appease key interest groups, or attempt targeting to lighten the burden on those left behind.[35] Each modification imposes additional complexities, making tax administration more difficult. India's recent introduction of national and state goods and services taxes occurred after some delay; its final form currently affords goods and services exemptions for food and agricultural products. Sri Lanka increased VAT rates from 11 to 15 per cent in 2015 and expanded VAT to include telecommunications and private health care (IMF, 2016), but left food and medicine VAT exempt. In Bangladesh, a new VAT law increasing the rate from 11 to 15 per cent was supposed to be implemented in 2017; however, implementation has been delayed until 2019 after resistance from various special interest groups (EIU, 2018a).[36]

Indirect taxes instead of direct taxes tend to be applied in the subregion. In effect, this means that those who are wealthier pay relatively less tax, because indirect taxes have regressive scale effects. Consequently, well-designed and well-administered tax systems are necessary to offset regressive indirect taxation. Fragmented indirect taxes and regressive tax revenue streams can be addressed and offset by direct taxation policies, pro-poor public spending and more effective tax administration. However, South and South-West Asian countries face additional challenges in all three areas, leaving regressiveness as a key characteristic of subregional tax systems.

Across South and South-West Asia, the collection of personal income tax and property tax tends to be below potential as a result of high thresholds and various exemptions, thus making tax administration burdensome and inefficient. In 2013, the subregion's share of personal income tax in total tax revenue was only 14 per cent on average, the lowest in Asia and the Pacific.[37] Tax reforms in various countries in the subregion have increased personal income tax thresholds over time, decreasing the scope of their tax net (Bhutan, Ministry of Finance, 2017). By taking such measures, countries "untax" or remove the tax burden for the vast majority of the poorer population, in particular those who work informally,[38] but they also leave much of the population permanently outside the tax administration system (ESCAP, 2017a). Property taxes also contain numerous exemptions in the subregion's tax systems, often being undervalued and poorly implemented. In Pakistan, property tax intake is low due to generous exemptions and undervaluation, such as in Pakistan's Punjab Province; the level of undervaluation has been estimated at 45-80 per cent (Bahl and others, 2015).

Corporate tax rates in many South and South-West Asian countries are not considerably lower than those in other regions of the world, mirroring the relatively high rates for many businesses in developing countries (World Bank, 2017e). However, corporate taxes across countries also contain numerous exemptions in an attempt to increase investment and encourage productivity. These exemptions can be arbitrary and create vested interests in maintaining special conditions when economies and structures have substantially changed. In Bangladesh, corporate income tax rates are not especially lower, but revenue is diminished by numerous exemptions, tax holidays and depreciation allowances, as well as challenges in enforcing compliance (Mansur and others, 2011). In Pakistan, broad discretion in exemptions to the payment of corporate taxes meant for industries involved in the China-Pakistan Economic

Corridor and in special economic zones, has led to exemptions being applied to unrelated projects (Abbasi, 2017).

Poor capacity and ineffective tax administration is also hampering resource mobilization in South and South-West Asia. The problem of adding complexity to each tax is that it burdens the tax administration and its capacity for accurate, timely and transparent tax collection. Across the subregion there are large gaps in capacity to administer the complex tax web. As a result, on one hand the frequent thresholds and exemptions leave large shares of the population outside the tax system. On the other, the complexity of the tax system delays tax administration and gives extensive discretion to working-level officials to make tax assessment decisions, thus making those decisions less transparent and reducing overall accountability. A simpler progressive tax system with fewer loopholes and greater manageability would outperform designs that are only better on paper (ESCAP and Oxfam, 2017).

Small tax bases are a key constraint in the subregion's tax systems, driven by informal economies, loopholes, exemptions and poor administration for obtaining compliance. Afghanistan's small tax base includes a miniscule group of large taxpayers contrasted with the wider potential taxpayer population that is largely non-compliant and unidentified (Grut, 2017). In Bangladesh, the top 10 large taxpayers paid more than 78 per cent of VAT collected by the large taxpayers unit, and 50 per cent of all tax revenue collected by the unit came from just one company (World Bank, 2017e). For business and corporate taxation in Nepal, about 1,000 companies contribute half the tax revenue (GIZ, 2008). Pakistan had only 750,000 payers of income tax registered in 2014 in a country of 190 million people; moreover, almost half (46 per cent) of the 1,167 members of the 6 houses of parliament (national assembly, senate and four provincial assemblies) paid no tax at all, thus demonstrating the weak tax morale even among legislators (ESCAP, 2017a).

Tax competition and base erosion is also hampering domestic resource mobilization. The capacity to capture tax revenues on a sustained basis from corporations and enterprises is also challenged by the increasing globalization of production and value chains. Countries in the subregion have responded with tax competition, among other investment incentives, for attracting corporate presence into the country with benefits of tax flows, productivity and employment, although the evidence for these gains is weak (ESCAP and Oxfam, 2017). At the same time, multinational enterprises are more strategic in their use of profit shifting and transfer pricing to erode traditional tax bases and take advantage of arbitrage gains in tax loopholes between countries. Increasing the corporate tax based and avoiding its erosion for countries in the subregion requires unanimous cooperation for reversing eroding tax incentives and for coordinating treatment of multinational enterprises to close tax loopholes between countries (KPMG, 2017).

5.4. Policy recommendations

The countries in the subregion need to design tax systems and taxes that incentivize and accelerate transitions to sustainable economies and environmentally friendlier technologies. In South and South-West Asia, inclusive tax design requires addressing disincentives and perverse effects in two areas: gender equality and environmental sustainability. Tax design is gender blind in the subregion. Personal income tax structures are often based on traditional household models of a single male head of household and breadwinner, with women being dependents. Rates reflect this model and penalize secondary income earners, mostly women, with higher marginal tax rates and fewer options for tax deductions (ESCAP and Oxfam, 2017). Greater gender mainstreaming in tax design should be matched by improved pro-poor gender-responsive budgeting to link tax revenues to spending priorities that better empower women and promote equal voice and control in society and the economy (ESCAP and Oxfam, 2017).

In leveraging technology, both filing tax returns and making payments are vital as they address the complexity of taxation systems. Both operations should be done electronically, and countries in the subregion have been active in opening up their tax systems so that taxpayers can file their tax returns electronically and make payments electronically as well. Afghanistan has introduced electronic filing for large taxpayers and plans to roll out a system for medium-sized taxpayers in the coming year (Byrd and Payenda, 2017). The country also has an electronic revenue collection system for making payments (Afghanistan, Ministry of Finance, 2017). Bangladesh and Nepal have also recently introduced electronic filing and a payments system which simplifies individual and VAT processes. In Nepal, 98 per cent of income and VAT returns were filed electronically in 2016 (GIZ, 2008).

Tax and spending coordination and negotiation between different levels of government is critical for revenues collected centrally to be spent effectively at the provincial/state and municipal levels. This is very country-specific, but countries should consider reforming the bottlenecks that they experience in overall fiscal management. Specific tools that they can use to identify those bottlenecks may be, for example public expenditure benefit-incidence analysis, which can capture the distributional impacts of public spending across categories of gender, geography and social groups. That tool showed that access to and utilization of public spending is regressive in India, with gender-differentiated patterns.

Increasing the tax base requires a carrot-and-stick approach, which also can be highly country-specific. In Bangladesh, the stick approach in 2017 increased the number of individual tax filers from 1 million to 1.55 million by requiring tax submission from all government officials with monthly salaries exceeding 16,000 taka (about $190) and by requiring private sector managers and executives to file returns so that their employers would not be fined (World Bank, 2017e). In contrast, Bhutan increased its number of personal income tax filers by more than 10 per cent in the 2016 financial year, despite reduced exemptions, because individuals were encouraged to file their returns in order to claim refunds owed to them as a result of tax changes (Bhutan, Ministry of Finance, 2017).

Environmental and green taxes that internalize negative externalities are necessary in the subregion, but their design needs to accommodate two challenges. One of the challenges is to create adequate national and subregional markets for environmental taxation and emissions-type trading systems to allow enterprises to internalize costs for the first time. The other is to maintain good principles of tax design towards universal, simple and transparent rules with a few rates that allow for less discretion but greater accountability. Most countries in the subregion have yet to develop national carbon accounts or systems of environmental national accounts. Rigor and transparency would be important to avoid rent-seeking behaviours in establishing methods and designing new environmental taxes.

Transparency is vital to stimulate accountability and strengthen the social contract. Despite the complex systems in South and South-West Asia, greater transparency in decisions and processes would encourage greater tax morale when people are confident that there is equity and a level playing field when it comes to paying taxes. Across the subregion, publishing tax information increases transparency and accountability. Pakistan has set an important good example by becoming the fourth country in the world to introduce a regular complete directory of registered taxpayers and the total amount of tax they paid (Pakistan, Federal Board of Revenue, 2017).

Tax reforms, tax policies and changes often differ from their initial proposals before the negotiation and passage of legislation, and this can be confusing if complying with the new rules is not clear and simple for people and businesses to understand. Public information campaigns and education of individuals and businesses will improve transparency, identify any confusion and enable people to anticipate and plan for costs and compliance. In Afghanistan, a new VAT law came into effect eight months after its official publication and included no reactive penalties, which gave time for businesses to check on how

to comply with the law and plan for doing so (Grut, 2017). However, the same country's 2015 Tax Administration Law came into effect from the date of publication, giving taxpayers no time to prepare how to comply. The publication of the law was delayed and not announced, with many taxpayers subsequently finding out about the bill only after they had received penalties for not complying with it. Information sessions about the tax took an additional year to organize (Grut, 2017).

Tax reforms can have unintended consequences and negative results, which policymakers should carefully try to anticipate. For example, to drive up tax filing and non-cash transactions, Pakistan in 2015 imposed a withholding tax on bank transactions targeting both large bank cash transactions (exceeding 50,000 rupees, or approximately $435) and all non-cash transactions at the rate of 0.4 per cent, with tax filers being able to claim refunds for this tax. Instead of encouraging tax filing, the withholding tax has had a negligible effect on revenue but has led to declines in private deposits and a large increase in the amount of currency in circulation, double the annual rate of the last decade (State Bank of Pakistan, 2017).

Finally, countries should try to make further progress in adopting measures that address base erosion and profit-shifting (BEPS) strategies; in this regard, the OECD BEPS Initiative may provide a useful benchmark. An example of ongoing progress is India, which has been active in promoting the OECD BEPS Initiative (KPMG, 2017).[39] In following BEPS recommendations, the country passed amendments in its domestic law to be in line with BEPS regulations (EY, 2018). Several proposals in the Finance Act of 2016 were influenced by OECD recommendations on BEPS, such as implementation of master file and country-by-country reporting (relating to action 13), introduction of an equalization levy which requires withholding on a gross basis for all payments in relation to certain specified digital services (action 1) and a "patent box" tax regime for royalty income (action 5) (EY, 2018).

It should also be noted that, while BEPS may not be an equally important issue for all countries, regional coordination and integration can be a useful dimension for learning from each other. The subregion already has structures for regional cooperation and integration, that is, the South Asian Association for Regional Cooperation (SAARC), which could be more actively used to debate the implementation of measures to tackle BEPS.

6. Boosting the access of micro-, small and medium-sized enterprises to finance in North and Central Asia

6.1. Role of small and medium-sized enterprises in private sector development and structural transformation

Access to financing is one of the fundamental conditions for individuals and small businesses to be able to invest and become entrepreneurs. Several economies in the Asia-Pacific region, including those in the North and Central Asian subregion, however, lag in facilitating such opportunities for potential entrepreneurs. This situation hampers the private sector's potential contribution to the development of the country and impedes the process of inclusive income and wealth creation. MSMEs are a critical potential vector of positive change that can help in the development of the private sector and stimulate structural transformation in the subregion.

The 2030 Agenda and the Addis Ababa Action Agenda recognize the significance of MSMEs in promoting sustained, inclusive and sustainable economic growth, facilitating full and productive employment and fostering innovation. These Agendas also recognize lack of access to finance as one of the challenges for MSMEs to grow, and they call for development-oriented policies that foster MSMEs' growth and formalization. They also call for MSMEs' integration into financial services and global value chains, especially in developing countries.

Several countries in North and Central Asia have achieved higher levels of economic development over the past decade,[40] but structural transformation in several of them remains an ongoing process. For instance, in such countries as Armenia, Kyrgyzstan, Tajikistan and Uzbekistan, agriculture still plays a central role in the economy. At the other extreme, such countries as Kazakhstan have similar shares of the industrial sector in their economies, a development which has been greatly facilitated by having natural resources, such as gas or oil. In countries with poor diversification of their economic structures, the relevance of access to finance of MSMEs is even more crucial: if MSMEs are able to grow and have access to export markets, they would spur innovation and competitiveness in their local economies.

Analysing national definitions and official statistics in North and Central Asia shows that small and medium-sized businesses (often farms and agro-businesses) play a major role in economic activities of lower-middle-income countries. For instance, they account for 58.1 per cent of GDP in Georgia and 56.9 per cent in Uzbekistan (table 3.4).[41] However, the contribution of small and medium-sized enterprises to GDP in oil-exporting countries is relatively modest, but even then, they account for more than 20 per cent of the economy. MSMEs are also a key source of employment in most of countries in this subregion. They account for more than one fifth of total employment, ranging from 21.9 per cent in Georgia to 56.8 per cent in Uzbekistan.[42]

It is important to note that table 3.4 comprises only official statistics. The estimated size of the informal sector is large, which makes it difficult to include the contribution of small and medium-sized enterprises in national statistics and cover them through government support schemes. The estimated size of the shadow economy in North and Central Asia ranges from 26.3 to 35 per cent of GDP, and the lack of available and recent data makes the task of understanding the challenges faced by the enterprises even more difficult (Abdih and Medina, 2013).

6.2. Constraints in access to finance by the micro-, small and medium-sized enterprises

Despite being recognized as major sources of employment and economic growth, MSMEs in North and Central Asia operate in a challenging environment in terms of ease of doing business. The median ease of doing business rank of the countries in this subregion with available data is 52 (figure 3.9). There are several reasons for this, which vary across countries, but overall, figure 3.10 shows that the main obstacles relate to

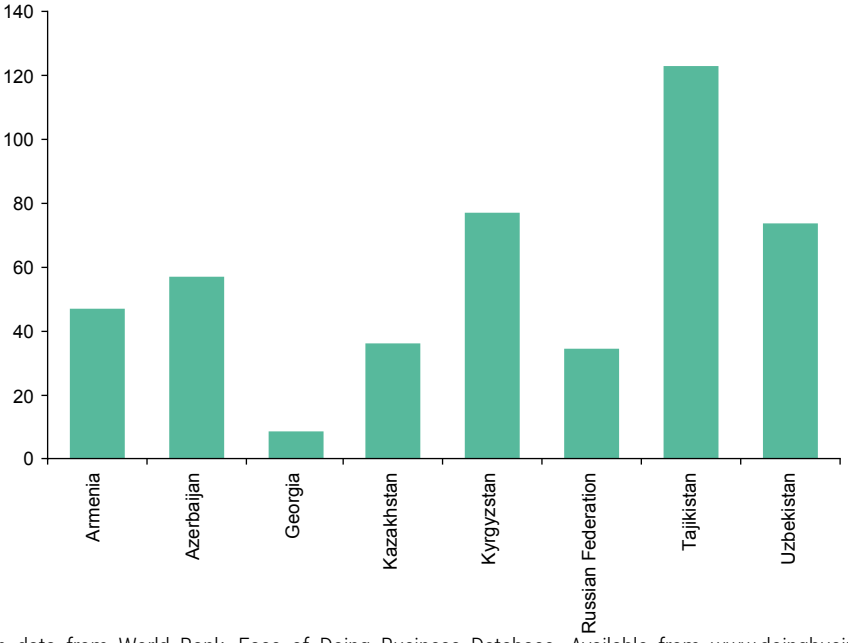
Table 3.4. Percentage contribution of small and medium-sized enterprises to employment shares, by size of the enterprises

Country	Year	SME100	SME150	SME200	SME250	SME300	SME500	SME250 Manufacturing
Armenia	2008	37.4	51.9	56.4	61.2	66.9	74.9	73.5
Azerbaijan	2008	30.3	37.4	40.1	43.0	48.5	53.8	54.7
Georgia	2007	22.1	23.6	26.0	27.7	28.0	35.6	27.8
Kazakhstan	2008	36.4	45.6	53.3	58.2	60.7	72.2	51.2
Kyrgyzstan	2008	42.9	52.9	55.9	58.6	82.7	88.3	47.9
Russian Federation	2008	9.5	12.2	14.5	16.6	19.3	27.2	26.3
Tajikistan	2007	31.0	36.8	40.5	47.5	49.8	59.2	39.5
Uzbekistan	2007	58.1	68.3	70.9	73.9	76.2	82.5	66.0

Source: Meghana Ayyagari and others, "Small vs young across the world", World Banl Policy Research, Working Paper No.5631 (2011). Data are available from http://siteresources.worldbank.org/INTRES/Resources/469232-1107449512766/WPS5631_DataTables.xlsx.

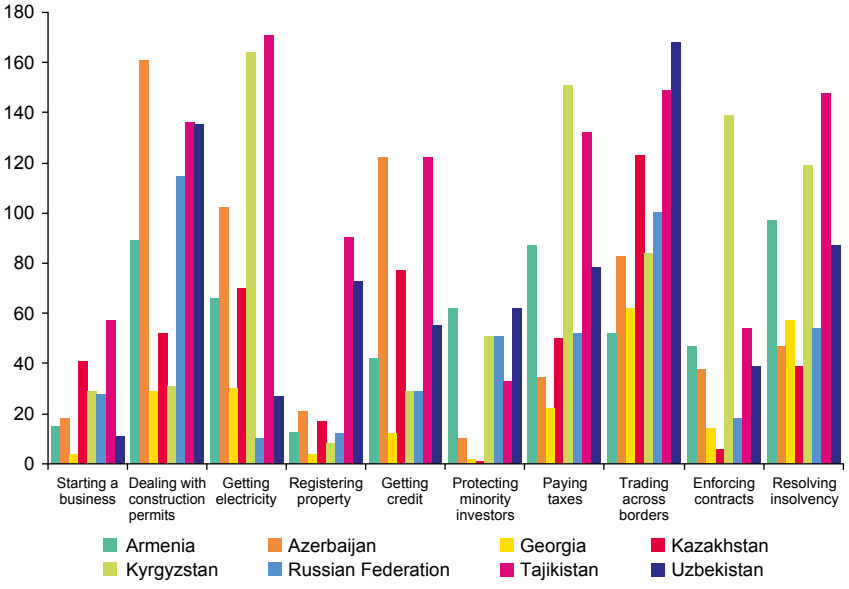
Note: The figures next to the acronym SME in the top row of labels refer to the number of employees in each small and medium-sized enterprise.

Figure 3.9. Ease of doing business ranks in North and Central Asia



Source: ESCAP, based on data from World Bank, Ease of Doing Business Database. Available from www.doingbusiness.org/rankings.
Note: The lower the number is, the more business-friendly is the country.

Figure 3.10. Components in the ease of doing business rankings for North and Central Asia



Source: ESCAP, based on data from World Bank, Ease of Doing Business Database. Available from www.doingbusiness.org/rankings.
Note: The lower the number is, the more business-friendly is the country.

permits (for trading, building and getting electricity connection) and finance (paying taxes, obtaining credit and resolving insolvency). Approximately 20 per cent of firms in the subregion identify accessing finance as a major constraint.

Assessment of financial inclusion indicators shows that, although in some countries having an account at a financial institution is widespread among MSMEs in North and Central Asia, having access to a loan or credit line is much more complicated (figure 3.11). Consequently, MSMEs in the subregion tend to rely more heavily on their internal cash flows to finance their investments (relative to the global average), even in countries where MSMEs often have an account

Figure 3.11. Basic indicators of financial inclusion by micro-, small and medium-sized enterprises in selected North and Central Asian countries

Source: Global Findex Database. Available from http://datatopics.worldbank.org/financialinclusion.

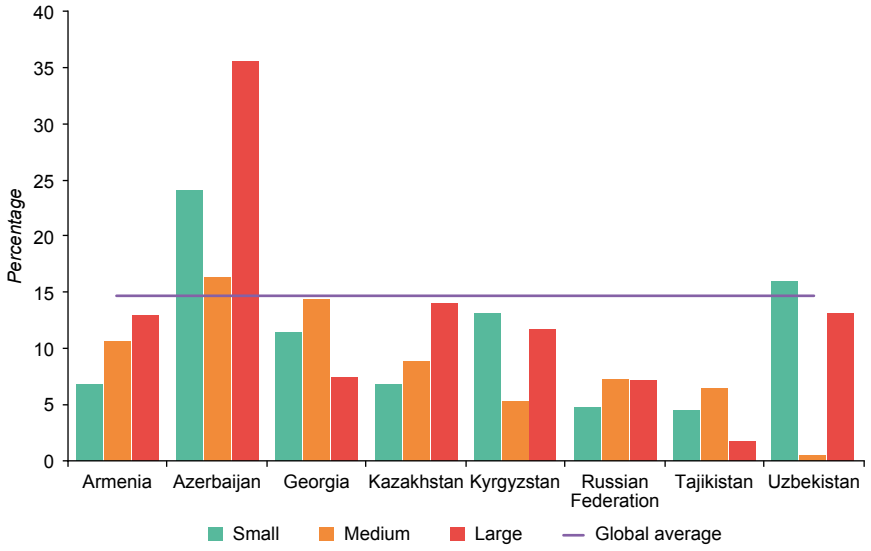
at a financial institution (figure 3.11). Personal savings of families and friends is another source of funds for financing entrepreneurs' ventures; more than 23 per cent of adults older than age 15 borrowed money from friends and family, while only 12 per cent of the same age group borrowed from a financial institution. In some surveys, respondents have identified distrust of financial institutions as a reason for not having an account in a financial institution. This may not be surprising considering the history of bank failures and currency devaluation in North and Central Asia.[43]

Other factors constraining access to finance by MSMEs in the subregion include the high levels of required collateral needed as a percentage of the loan value (approximately 200 per cent in 2013), and high interest rate spreads that on average were 10.87 per cent in 2015 and 9.24 per cent in 2016 (World Bank, 2017h). These two indicators are particularly insightful: high collateral requirements usually imply excessive costs for financial institutions to recover their loan or collateral in the case of default (which is linked to ineffective legal and regulatory frameworks), while high interest rate spreads tend to indicate poor competition in the banking sector.[44] Indeed, it has been noted that crucial issues hindering growth of access to credit and financing for MSMEs in North and Central Asia include weak regulatory frameworks and low diversification of financial products. This finding supports the idea that financial institutions may not have a pressing need to adapt in order to facilitate the supply of financial products (OECD, 2011).

On the supply side, although bank lending is the main source of financing in the subregion, only about 16 per cent of investments by small firms and 17 per cent by medium-sized firms are financed by banks. Moreover, the percentage of firms in the subregion whose recent loan application was denied is above the global average.[45] As a result, the proportion of investments of MSMEs that are financed by banks in North and Central Asia is generally below the global average (figure 3.12).

Commercial banks view MSMEs as inherently riskier and as a less developed market than larger enterprises. Many of those small and medium-sized enterprises are agricultural households operating in a cash-based economy, which makes it difficult for potential borrowers to fulfil the collateral and credit requirements. The information asymmetry from low transparency and poor financial reporting standards of MSMEs, intrinsic risks for banks in

Figure 3.12. Proportion of investments financed by banks, by size of the small and medium-sized enterprise



Source: Enterprise Surveys Database. Available from http://microdata.worldbank.org/index.php/catalog/enterprise_surveys/about.

lending to small firms and credit rationing due to insufficient collateral mean that lending to MSMEs is focused mostly on working capital loans, often for trade and agricultural businesses and those with short-term horizons (World Bank, 2018b).[46]

Besides bank lending, the options for MSMEs to access financing from a financial institution are very limited. The stock market is dominated mainly by large firms and is inaccessible to MSMEs; other venture capital options are virtually non-existent in most countries in the subregion. Credit unions and microfinance institutions are possible alternatives, and several countries in North and Central Asia have implemented initiatives to expand microfinance towards the MSMEs segment. Microfinance volumes are slowly becoming more important in the subregion, as the interest rate differential between microfinance institutions and traditional banks has shrunk over time. However, penetration is still very shallow. For instance, of a population of 80.9 million, only 2.5 million are active borrowers from financial service providers focusing on microfinance, which yields a rate of 3.1 per cent of borrower participation (table 3.5).

Table 3.5. Depth and coverage of microfinance services in selected countries of North and Central Asia

Country	Financial service providers (number)	Gross loan portfolio (Billions of United States dollars)	Active borrowers (Number) Million	Population (Millions)	Deposits (Billions of United States dollars)	Depositors (Millions)
Azerbaijan	30	3.2	0.9	9.8	2.7	1.2
Armenia	9	0.7	0.4	2.9	0.3	0.3
Kyrgyzstan	14	0.3	0.4	6.1	0.1	0.2
Georgia	9	0.3	0.3	3.7	0.0	0.1
Tajikistan	20	0.4	0.3	8.7	0.2	0.2
Kazakhstan	7	0.2	0.2	17.8	0.0	0.0
Uzbekistan	6	1.5	0.0	31.9	1.6	0.4
Total	95	6.6	2.5	80.9	4.9	2.4

Source: The Mix 2018. Avaolable from https://www.themix.org (accessed 3 March 2018).

In fact, several countries have a virtually non-existent number of borrowers (e.g. Uzbekistan), as well as of depositors (e.g. Kazakhstan). In some other countries, professionalism in the microfinance sector can be a concern, and this aspect can undermine sustainability. For example, although leverage ratios (gross loans/deposits) are relatively conservative, in most countries, they have more active borrowers than depositors.

With regard to enhancing the sources of financing through FinTech, it should be noted that unlike other subregions in Asia and the Pacific, such as East and North-East Asia, the North and Central Asian subregion still has to develop an appropriate infrastructure and climate. The basic requirements for the FinTech sector to take off are far from guaranteed. Fixed broadband subscriptions are extremely weak in the subregion, ranking from 0.1 per 100 people in Tajikistan and Turkmenistan to 19.5 per 100 people in the Russian Federation (ESCAP, 2018c). While mobile cellular subscriptions have increased dramatically in the last 15 years and surpass 100 per 100 people, Internet users as a percentage of the population lag considerably behind, ranging from 18 per cent in Turkmenistan in 2016 to 78.2 per cent in Azerbaijan. This poor Internet penetration is partly due to frail infrastructures and partly due to widespread mistrust of the Internet. Of the seven subregional member countries of ESCAP with available data on the Freedom on the Net 2017 index,[47] three are rated "not free", three are rated "partly free" but only one is rated "free" (Georgia) (Freedom House, 2017).

In addition to the structural features described so far, it should be acknowledged that business cycles can aggravate the poor access to financing by MSMEs. For instance, when interest rates are high, MSMEs are more likely to be left out of the credit market, that is, as the cost of finance becomes higher, MSMEs (less likely to have a credit history and thus considered as inherently riskier) face more difficulties in gaining access to bank financing.

6.3. Policy recommendations

On the supply side, credit-granting institutions should consider different methodologies to assess creditworthiness. Credit scoring and risk measurement have traditionally been very difficult for the unbanked in general, because no data exist about their financial history, which in turn prevents them from getting credit. FinTech solutions for credit scoring can ameliorate the lack of credit data as they include decentralization and less intermediation, and promote efficiency, transparency and competition. All these elements lower the cost of supplying credit to MSMEs, which then enables them to develop a credit history.

An alternative for lending institutions is to accompany their MSME debtors and advise them on entrepreneurship ideas and training on basic financial reporting practices etc. This effectively would make the borrowers and the lenders partners and has been shown to succeed in some cases. For example, Damu Entrepreneurship Development Fund, established by the Government of Kazakhstan in 1997, has supported entrepreneurs in 18 rural areas by establishing service centres to provide such training and business support, together with financial assistance, such as interest rate subsidies and loan guarantees.

It is also vital to diversify the supply of financing options available to MSMEs. Financial support by Governments and international financial institutions, such as subsidized interest rates, tax exceptions and direct loans, are increasing in North and Central Asia. For instance, the Russian-Kyrgyzstan Development Fund is an example of intergovernmental cooperation for MSME development in this subregion. Since its establishment in 2015 as a form of Russian financial assistance to modernize the Kyrgyzstan economy, the fund has approved 624 projects and financed more than $82 million in finances through partner banks to foster MSMEs in priority sectors of Kyrgyzstan, such as agricultural processing and textile industries.[48] Its interest

rates are set 2.5-3 times lower than the market average among commercial banks: the fund imposes an interest rate of 12 per cent for loans denominated in Kyrgyz soms and 5 per cent for loans denominated in United States dollars. The fund also developed several financial instruments, such as providing working capital financing to help borrowers in their day-to-day business.

Governments should try to stimulate equity financing as much as possible. An institutional format that has worked well in many countries, especially when accompanied by venture capital and advice on entrepreneurship, is business incubators. To foster more market-based financing, attract foreign and private investors and create a new financial hub in North and Central Asia, Kazakhstan recently established the Astana International Financial Centre (AIFC) within Expo 2017 Astana; it embeds best practices and standards from globally successful financial centres: an independent judiciary based on British law in the AIFC territory; providing an expat-friendly and English-speaking working environment; and provision of preferential tax treatment for corporate investors, among others.

An active role of Government would also be recommended for promoting competition in the financial sector, for example by privatizing State-owned banks or promoting the entry of foreign banks. As most banking sectors in North and Central Asia are still relatively closed, more competition would promote efficiency gains, innovation and the shrinking of interest rate spreads.

Perhaps most importantly, policymakers should work towards achieving a legal and regulatory framework where recovery of assets by lenders is much easier than it is currently. This should push down the value of collateral requirements and facilitate matching the supply of and demand for credit.

On the demand side, financial literacy could be strengthened through mass media and training programmes. It is important that people change their perception and gain trust in financial institutions. Of course, strong transparency measures that tackle corruption would be useful too, because people would then realize that the institutions are solid. In the last 10 years, Georgia has provided a remarkable example; it was one of the first countries in the subregion to establish legislation that holds companies criminally liable for bribery. Public administration reforms, ensuring active and autonomous investigation and prosecution of corruption at all levels, and involving civil society in the implementation and monitoring of national anti-corruption policies were key factors in the successful reduction of corruption.

It might be tempting to advise countries in North and Central Asia to take advantage of FinTech, and hopefully they should aspire to do so: new advances such as crowdfunding or blockchain technology offer great opportunities to mobilize private resources to finance new ideas and businesses – leapfrogging is possible. However, currently most countries in the subregion lack basic infrastructure and essential conditions, such as reliable networks and free Internet, to make such a revolution possible on a massive scale. Hence, Governments should ensure the provision of such infrastructure and promote simpler, better-established technologies, such as mobile payments (e.g. M-Pesa, a mobile phone-based money transfer, financing and microfinancing service, has been around for years and has enjoyed tremendous success overall). Opening the mobile market to experienced foreign companies to provide mobile banking services would be another option with considerable potential.

Finally, policymakers should also consider enhancing the Internet so that people really consider it as a trustworthy option to seek investment/financing opportunities. The introduction of frameworks to regulate FinTech, so that investors do not face regulatory uncertainty and feel more empowered to invest, would be welcome. In this regard, as with other fast-evolving technologies, it would be advisable that they take stock of lessons learned from the experiences of other countries which are ahead of the curve.

7. Concluding remarks

The underlying premise in this chapter was that, for countries to be able to make the investments required towards implementing the 2030 Agenda, a necessary condition is that sufficient financial resources be made available. Depending on the actor that is taken as a reference (public or private sector), this basic premise has different implications. For the public sector, it means that public authorities should be able to mobilize a significant, stable flow of financial resources. For the private sector, this means that firms should have access to credit or equity to undertake investments. In focusing on several cases, it has been possible to study the different angles involved in different subregions, and the lessons learned are as follows.

In East and North-East Asia, FinTech has transformed and will continue to transform considerably the financial sector and its contributions to financing development. Its potential benefits are great and many, but there are also risks, arising especially from the difficulties in regulating this technology – both within and across countries. Policymakers should closely monitor the evolution of FinTech, learn key lessons from other countries and, as much as possible, coordinate internationally in order to avoid regulation arbitrage that could undermine the great promise FinTech has to offer for sustainable development.

In South-East Asia although the growth of corporate bond markets has progressed, there is still room for further development. Policy efforts should be focused on market efficiency, deepening secondary markets and broadening the base of investors. A strategic approach that has been bearing fruit in the subregion is doing so through subregional cooperation and integration and such ASEAN-led initiatives as AMBIF.

In the Pacific, fiscal volatility poses substantial challenges for planning strategic public investments in support of the 2030 Agenda. Countries should consider policies that can help reduce fiscal volatility both from the revenue and the expenditure sides. Sovereign Wealth Funds (on the revenue side) and more recently natural disaster risk insurance (on the expenditure side) have proven to be useful and may provide lessons learned for countries elsewhere; some countries, such as the Philippines, have started to replicate experiences from the Pacific in this regard. In the specific domain of natural disaster risk insurance, regional integration has proven to be particularly useful, because small island developing States are then able to benefit from the economies of scale that they individually do not have.

In South and South-West Asia, tax systems face several challenges which are reflected in poor efficiency in trying to mobilize and manage public financial resources. The complexity of tax structures and the granting of exceptions undermine effectiveness, introduce regressiveness in tax systems and hinder the social contract, all of which factors take a toll on tax morale and promote informality. Tax reforms are necessary to avoid this vicious circle, while streamlining the tax systems to make them simpler, faster and more effective. Special attention should be paid to coordination of tax administration at different administrative levels, increasing the tax base and strengthening transparency to deter corruption – which may thrive due to the many possibilities for interpreting tax systems. Reforms may not be easy to undertake because the costs of implementing them are borne in the short term, but their benefits are realized in the medium to long run. However, reforms will be the only way to go if South and South-West Asia is to implement the 2030 Agenda. The importance of better and more effective governance will be critical to implement them successfully.

In North and Central Asia, MSMEs hold a promising seed to stimulate structural transformation in the subregion. This section contained an exploration of their access to financing as a way in which they could thrive. Short-term business cycle considerations may have some influence in the current context of monetary policy normalization in the face of relatively high inflation in the subregion. However, improving the business environment will require ambitious long-term institutional reforms. Such reforms should be

holistic and enhance the way in which MSMEs operate, from the way in which they are granted permits to how they deal with financial issues, such as accessing credit and paying taxes. Reforms should be targeted at diversifying the supply of finance (among other things, to reduce the importance of banks, favour competition in the financial sector and promote venture capital); building capacity to meet the demand for finance (especially through entrepreneurship funds and business incubators); and especially streamlining the regulatory framework to make it more effective – currently, high collateral requirements imply excessive costs for financial institutions to recover their loans or collateral in the case of a default.

From a more strategic perspective, the policy recommendations across subregions may be summarized in three common elements. First, countries in Asia and the Pacific should boost financing for sustainable development if they want to implement the 2030 Agenda and achieve the Sustainable Development Goals. Second, to do so reforms should be implemented which may require bold action, thus introducing the governance dimension. Third, to undertake the required reforms the regional dimensions provide important opportunities in several areas, especially as they relate to cooperation and integration.

ENDNOTES

1 Crowdfunding market size in Japan increased from to ¥6.9 billion to ¥47.7 billion (estimated) from 2012 to 2016.

2 For example, WeChat or Alipay enables payments by a simple scan of a QR code from a retailer's point-of-service terminal or a smartphone.

3 Payments can be made by scanning their fingers on a small fingerprint sensor machine.

4 A unified electronic system to pay for public transport services and convenience store purchases, or those for vending machines and parking fees.

5 See National Information and Credit Evaluation Inc. (initially designated as authorized credit rating agency) http://eng.nice.co.kr/main.nice.

6 This would also include the shadow-banking operations of banks subject to regulatory oversight.

7 An apparent Ponzi scheme that has reportedly cost 900,000 lenders over $7 billion.

8 Online payments via non-bank payment institutions are now widely seen all over China. They are not just being used for retail purchases, but also in innovative ways to support payments, investments, loans and money transfers (Zou and Parsons, 2016). The measures adopted apply to all "non-bank payment institutions" (payment institutions), i.e. institutions that are not banks but which – with a payment business permit – are authorized to provide online payment services, including through the Internet and mobile devices, landlines and interactive digital television (Zou and Parsons, 2016). The measures require payment institutions to establish a real-name management system, achieved through following "know your client" rules, registering clients and verifying their identity documentation, creating a client identification number and applying continuing client identification measures over the course of the client relationship (Zou and Parsons, 2016). For more details, see "China regulates online payment business of non-bank players". Available from www.hlmediacomms.com/files/2016/02/China-regulates-online-payment-business-of-non-bank-players-.pdf.

9 Guidelines further clarified the regulatory mandates of different financial regulators with respect to Internet finance, including online payment (People's Bank of China), online lending, trust and consumer finance (China Banking Regulatory Commission), equity crowdfunding and online funds sales (China Securities Regulatory Commission) and Internet insurance (China Insurance Regulatory Commission).

10 Formerly, the world's largest Bitcoin exchange, which experienced massive disappearance of a substantial amount of bitcoins.

11 Robo-advisors are a digital platform that offers customized financial planning services driven by machine-learning technology and asset allocation algorithms. For more information, see www.investopedia.com/terms/r/roboadvisor-roboadviser.asp, www.economist.com/news/finance-and-economics/21730693-automated-wealth-managers-are-getting-bigger-they-still-manage-very-small).

[12] A regulatory sandbox is established by financial regulatory authorities in some countries to create a "safe space" in which financial service players can test innovative new products, services, delivery mechanisms and business models without immediately incurring all the normal regulatory costs and lengthy approval procedures (ADB , 2016b).

[13] Maturity mismatch is when a bank has substantial long-term assets (such as a fixed-rate mortgages) funded by short-term liabilities (such as deposits). Currency mismatch is having assets that are denominated in a different currency than liabilities, so that a change in exchange rate between those currencies can have a large positive or negative effect on the bank's balance sheet.

[14] For countries with available data. Available from https://asianbondsonline.adb.org/.

[15] Calculated based on data from https://asianbondsonline.adb.org/.

[16] For full details, see The Nation (18 July 2017). "Thailand retains Baa1 rating from Moody's". Available from www.nationmultimedia.com/detail/Economy/30321123.

[17] Volatility is measured by the standard deviation of each country's fiscal balance from its mean over the period 2007-2016. The higher is the standard deviation, the greater is the level of volatility and the flatter the distribution of the series values.

[18] For details, see ADB Key Indicators 2017.

[19] Private sector size in most Pacific island developing countries is generally small due to a combination of factors, including supply side and infrastructure constraints, limited scale of domestic demand and high costs for transportation and doing business.

[20] The Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest is a subregional agreement between the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu. The Parties to the Agreement collectively control 25-30 per cent of the world's tuna supply.

[21] In 2013, the fee earnings ranged from 15 per cent of total revenues in the Marshall Islands to 65 per cent in Kiribati (IMF, 2014). Despite the wealth derived from fisheries, Pacific island countries have enormous untapped marine resources and further efforts are ongoing in that regard: first, the ratio of the income that those countries receive from foreign companies for selling their fishing rights to the value of the fish catch is very low; and second, there is a risk that a poorly managed scheme of access rights could lead to the overexploitation of marine resources, which might induce a depletion of fish stocks and undermine fiscal sustainability (IMF, 2014).

[22] Traditional development partners in the Pacific include multilateral development banks and agencies, and bilateral partners, such as Australia, China, Japan, New Zealand and the European Union.

[23] Several Pacific islands developing countries (particularly Fiji, Kiribati, Samoa, Tonga and Vanuatu) have benefited from overseas employment opportunities in recent years.

[24] The list of sovereign wealth funds from the Pacific include the following: Kiribati Revenue Equalization Reserve Fund; Marshall Islands Compact Trust Fund; Micronesia Compact Trust Fund; Nauru Phosphate Royalties Trust Fund; Palau Compact Trust Fund; Papua New Guinea Mineral Resources Stabilization Fund; Tonga Trust Fund; and Tuvalu Trust Fund. For further details, see (Le Borgne and Medas, 2007).

[25] For example, see ESCAP report on "Natural Disaster Risk" (ESCAP, 2017e).

[26] For more information, see Pacific Islands Forum Secretariat (2017). Disaster Risk Financing Instruments. A discussion paper for the 2017 Forum Economic Ministers' Meeting prepared jointly by the Asian Development Bank and the World Bank Group. Available from www.forumsec.org/resources/uploads/attachments/documents/PCRAFI_&_Contingent_Credit.pdf. Also see www.worldbank.org/en/news/press-release/2016/11/02/new-insurance-facility-to-boost-natural-disaster-resilience-in-pacific-island-countries and http://pcrafi.spc.int/about/, www.radionz.co.nz/international/pacific-news/344787/us45-million-for-pacific-catastrophe-insurance.

[27] www.adb.org/news/adb-help-strengthen-samoa-tonga-and-tuvalus-resilience-disasters and www.adb.org/news/adb-loan-improve-cook-islands-disaster.

[28] For more detail, see World Bank Press Release, 15 August 2017, "Philippines launches innovative insurance program to boost natural disaster risk management".

[29] OECD Statistics. Available from http://stats.oecd.org/. Figures differ; country reports and measures are different by time, aggregate and definition.

[30] IMF Government Finance Statistics Database. Available from www.imf.org/en/Data; it has been noted, though, that South and South-West Asian developing countries have ratios that are not too different from ratios of high-income countries when they were at a similar development stage (Long and Miller, 2017).

[31] The Addis Ababa Action Agenda sets a target tax-to-GDP ratio at 20 per cent. The IMF standard recommendation for low income countries, which for South and South-West Asia includes only Afghanistan, is an arbitrary 15 per cent to fuel development growth sprints. Recent reports by the World Bank and GIZ reinforce recommended ratios in this range (Long and Miller, 2017).

[32] The ratio could increase potential/gap: Afghanistan 15.0/6.2; Bangladesh 18.0/7.5; Bhutan 16.0/6.7; Islamic Republic of Iran 13.1/7.2; Maldives 16.5/5.8; Nepal 16.1/0.9; and Pakistan 12.1/1.8. Estimates do not include India.

[33] For further information, see EIU Economist Intelligence Unit (February 2018), Bangladesh Country Report.

[34] In Brazil, increases in municipal taxation were used to improve both the quality and quantity of education infrastructure, while increases in federal grants had no impact on infrastructure spending at all (Gadenne, 2016).

[35] For example, in India the first goods and services tax proposal contained one universal rate and no exemptions. The final legislation contains five rates (Economic Times, 2018) and various exempted categories that must be defined, categorized and reported in tax returns.

[36] For details, see www.mof.gov.bd/en/budget1/17_18/afs/en/St1_En.pdf.

[37] As an unweighted average. Latest data available are from the IMF Government Finance Statistics Database. Available from www.imf.org/en/Data.

[38] Rising income levels translate into higher tax intake when there is deliberate government action to modernize the tax system and incentivize formalization of the economy (Besley and Persson, 2014)

[39] The master file and CbyC reporting requirements predominantly enforce the principles of BEPS Actions 8 to 10 and Action 13 on transfer pricing.

[40] Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Uzbekistan.

[41] The definition of MSME varies across countries and industries and has been changing from time to time in this subregion. Most countries employ size of staff as a criterion to identify micro-, small and medium-sized enterprises. Companies with fewer than 50 employees are often considered as small enterprises. Some countries employ annual turnover and different thresholds for selected industries to provide subsidies or tax incentives for MSME development.

[42] Ayyagari and others (2011) provided a comprehensive data for the share of employment in small and medium-sized enterprises with a standardized definition of such enterprises.

[43] For further details, see The Global Findex Database – Financial Inclusion in Europe and Central Asia, 2015.

[44] As benchmarks, interest rate differentials of some countries adjacent to North and Central Asia: China (2.45 per cent) and Iraq (7.44 per cent).

[45] Small and medium-size enterprises in the Doing Business Indicators by the World Bank are defined as follows: small enterprises are firms with 5-19 employees, medium-size enterprises are firms with 20-99 employees and large enterprises are firms with 100+ employees.

[46] For details, see World Enterprise Surveys Database. Available from www.enterprisesurveys.org (accessed 15 March 2018).

[47] Freedom on the Net Index measures three aspects of the Internet:
- "Obstacles to Access details infrastructural and economic barriers to access, legal and ownership control over internet service providers, and independence of regulatory bodies;
- Limits on Content analyses legal regulations on content, technical filtering and blocking of websites, self-censorship, the vibrancy/diversity of online news media, and the use of digital tools for civic mobilization;
- Violations of User Rights tackles surveillance, privacy, and repercussions for online speech and activities, such as imprisonment, extra-legal harassment, or cyberattacks." For further information, see https://freedomhouse.org/report-types/freedom-net.

[48] For additional details, see Russian-Kyrgyz Development Fund, Annual Report 2016. Available from rkdf.org/sys/media/download/6617.

ANNEXES

Annex I. The Tax Administration Index: methodologies and regression analysis

Constructing the Tax Administration Index

The value of the Tax Administration Index ranges between 0 and 100. A higher value indicates the setting and characteristics of tax authorities that potentially enable them to address tax avoidance and evasion more effectively. For existence of a certain characteristic (such as having a Large Tax Unit in a country), a value of 1 was assigned to that country, and 0 otherwise. For the regulatory quality score from the Worldwide Governance Indicators, the estimates in standard normal units ranging from -2.5 (weak governance) to 2.5 (strong governance) were used.

Each component is standardized to range between 0 and 100 by using the following formula:

$$x^* = \frac{(x-min)}{(max-min)}$$

where x^* = standardized value, x = original value, min = minimum value of the component, and max = maximum value of the component.

In constructing each of the three sub-indices (autonomy of tax authorities, managing tax compliance, and legal and regulatory framework), the same weight was applied to all of its components. The Tax Administration Index is the equal-weighted average of the three sub-indices.

Regression Analysis

The regression analysis is based on a cross-section regression analysis (ordinary least squares regression with robust standard error). Panel regression analysis is not possible, given that surveys of tax authorities carried out by ADB (2016) and OECD (2017) have very limited variation across time.

The baseline model specification is as follows:

$$Y_i = \beta_0 + \beta_1 TAI_i + \beta_2 X_{1i} + \varepsilon_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

where Y = tax revenue-to-GDP ratio, TAI = Tax Administration Index, X_1 = vector of economic, institutional and regional characteristics, and ε_i = error term. The control variables include real GDP per capita, share of agricultural value added, trade openness (sum of exports and imports), and regional dummies. The results are also robust to the inclusion of additional control variables that measure the extent of old-age dependency and the degree of voice and accountability in the sample countries.

Table A.1.1. Base model estimation on tax administration

	(1) Coefficient	(2) Beta
Tax Administration Index	0.154*** (0.058)	0.430
Real GDP per capita (log)	3.374 (2.601)	0.383
Agriculture value-added	0.515* (0.277)	0.516
Trade openness	0.009 (0.011)	0.110
Asia & Pacific	-5.392*** (1.827)	-0.357
Other regions	0.351 (2.308)	0.021
Constant term	-29.630 (28.674)	.
Observations	59	59
Adjusted R^2	0.192	0.192

Notes: Column (1) presents the regression results of the base model specifications. Column (2) presents the beta coefficients associated with the base model. Numbers in parentheses indicate robust standard error. ***, ** and * indicate the level of significance at 1%, 5%, and 10%, respectively.

Computing additional tax revenue potential

The analysis computes the revenue potential associated with enhancing the capacity of tax authorities ($\hat{C}_i$) to the level being observed in an average OECD country. The additional revenue potential can be written as:

$$\hat{C}_i = \hat{\beta}_1 (TAI^* - TAI_i) \quad (2)$$

where $\hat{\beta}_1$ is the coefficient on TAI_i from equation (1), and TAI^* is average level of tax administration capacity for OECD countries.

Annex II. Foreign direct investment tax incentives

The estimation approach is based on the methodology suggested by IMF, OECD, UN and World Bank (2015). It uses firm-level data on financial accounts and ownership structure of registered companies, obtained from the Orbis database. The sample firms are foreign subsidiaries, i.e. firms with foreign ownership of more than 50 per cent of total stocks. The main analysis includes 9 Asia-Pacific countries that reported with at least 100 foreign subsidiaries. The table below reports six additional countries in which the number of reported firms is fewer than 100. The data period is 2014.

In addition to the baseline estimation, the analysis also examines alternative scenarios where the deduction of profits taken by firms, such as that on depreciation allowance, is assumed to be varying. Under the low case scenario, the deducted portion of profit is assumed at 0.19 per cent, which is the median value of the ratio of total depreciation to profit before taxes during the period 2013-2015 plus 0.25 times the standard deviation of that ratio. In the high case scenario, the deducted portion of profit equals 0.07 per cent, which is the median value of the ratio of total depreciation to profit before taxes minus 0.25 times the standard deviation of that ratio. The results are presented in the table below.

Table A.2.1. Estimated tax expenditures on FDI incentives (% of GDP)

	Number of firms	Low case	Baseline case	High case
Armenia	5	0.05	0.05	0.05
China	4 331	0.04	0.06	0.08
Fiji	4	0.03	0.03	0.04
Georgia	8	0.22	0.23	0.25
Indonesia	117	0.07	0.09	0.11
India	2 204	0.12	0.15	0.19
Cambodia	12	0.13	0.14	0.15
Macao, China	11	0.10	0.11	0.12
Malaysia	1 655	0.24	0.31	0.38
Philippines	643	0.14	0.18	0.21
Pakistan	42	0.12	0.14	0.15
Russian Federation	15 042	0.12	0.15	0.18
Thailand	3 611	0.18	0.25	0.32
Turkey	486	0.04	0.05	0.06
Viet Nam	472	0.00	0.03	0.07

Source: ESCAP, based on Orbis database and World Development Indicators database.

Annex III. Carbon tax

Table A.3.1. Estimated potential carbon tax revenue by country

Country	Baseline case		High case	
	$ million	% of GDP	$ million	% of GDP
Afghanistan	25.8	0.13	110.4	0.20
Armenia	14.5	0.13	62.2	0.20
Azerbaijan	98.4	0.13	421.7	0.21
Bangladesh	192.1	0.11	823.4	0.17
Bhutan	2.6	0.13	11.3	0.21
Brunei Darussalam	23.9	0.14	102.5	0.22
Cambodia	17.6	0.10	75.2	0.16
China	27 016.3	0.26	115 784.2	0.41
Fiji	3.1	0.07	13.2	0.11
Georgia	23.6	0.14	101.1	0.22
India	5 875.7	0.29	25 181.7	0.45
Indonesia	1 218.5	0.14	5 222.0	0.21
Kazakhstan	651.8	0.29	2 793.5	0.46
Kiribati	0.2	0.09	0.7	0.14
Malaysia	637.4	0.19	2 731.7	0.30
Maldives	3.5	0.11	15.0	0.18
Marshall Islands	0.3	0.15	1.2	0.23
Mongolia	54.7	0.45	234.5	0.70
Myanmar	56.8	0.09	243.4	0.14
Nauru	0.1	0.11	0.5	0.17
Nepal	21.1	0.11	90.4	0.17
Pakistan	436.5	0.18	1 870.9	0.28
Palau	0.7	0.27	2.9	0.43
Papua New Guinea	16.6	0.10	71.1	0.15
Russian Federation	4 476.5	0.22	19 185.1	0.34
Samoa	0.5	0.06	2.2	0.10
Singapore	148.0	0.05	634.2	0.08
Solomon Islands	0.5	0.05	2.3	0.07
Sri Lanka	48.3	0.06	206.9	0.10
Tajikistan	13.6	0.15	58.4	0.23
Thailand	830.1	0.20	3 557.4	0.32
Timor-Leste	1.2	0.09	5.3	0.14
Tonga	0.3	0.07	1.4	0.11
Turkey	908.2	0.10	3 892.3	0.15
Turkmenistan	179.6	0.41	769.8	0.65
Tuvalu	0.0	0.08	0.1	0.12
Uzbekistan	276.2	0.44	1 183.7	0.69
Vanuatu	0.4	0.05	1.7	0.08

Source: ESCAP.

Note: The carbon tax rate used for the baseline is $3.5 per tCO2e, and $15 per tCO2e for the high case scenario.

Annex IV. Sovereign bond financing

There are four dependent variables considered in this analysis: (i) a dummy variable indicating whether a country has issued a public domestic bond; (ii) a dummy variable indicating whether a country has issued a public foreign bond; (iii) the amount of public domestic bond issuance as a share of GDP; and (iv) the amount of public foreign bond issuance as a share of GDP. For the first two dependent variables (dummies), the estimation methods are the conditional fixed-effects logistic regression and the probit regression with country dummies. The coefficients reported are derived from the probit models. For the latter two dependent variables (amount), the estimation method is the fixed-effects regression. The analysis relies on a panel-data setting, with data period of 1995-2016. The data source of public bond issuance is the Bloomberg database.

For binary models, the regression models take this form:

$$Prob\ (SBI = 1)_{i,t} = \phi\ (\sum_{K} FACTORS^{k}_{i,(t-1,;t-3)}\ ;\ CONTROLS_{j})$$

Where *SBI* is the likelihood of a sovereign bond issuance by a country, *FACTORS* is a set of k time-varying domestic factors, and CONTROLS are control variables. *FACTORS* are the five groups of explanatory variables that are outlined in the main text. These explanatory variables are measured as three-year moving averages prior to the year of bond issuance, in order to mitigate possible endogeneity concerns and minimizes the incidence of outliers. The control variables are the United States 10-year treasury bond yield and the CBOE Volatility index.

The analysis employs a general-to-specific empirical strategy. In the first step, all variables under each group of independent variables are included at once. For example, for the group of macroeconomic indicators, all five variables are simultaneously included: GDP growth rate, inflation rate, total debt-to-GDP ratio, broad money supply-to-GDP ratio, and money supply growth. Only the ones that are statistically significant are kept. This is done for all four groups of explanatory variables. In the second step, the regressions only consider the variables that are statistically significant in each group of explanatory variables.

Table A.4.1. Regression results on public bond financing

Dependent variable	A dummy variable on whether a country has issued a public bond		Amount of public bond issuance/GDP	
	Domestic bond	Foreign bond	Domestic bond	Foreign bond
Regulatory quality	2.142*** (0.579)			
Current account balance/GDP	0.073*** (0.026)			
Trade openness	0.037*** (0.012)			
Foreign aid/GNI	-0.465*** (0.140)			-0.002*** (.000)
Total debt/GDP		-0.073*** (0.016)	-0.000** (.000)	
Short-term debt/total external debt		-0.090*** (0.019)		
Broad money supply/GDP		0.042*** (0.010)	0.001*** (0.000)	
Fiscal balance/GDP			-0.002** (0.001)	
Number of observations	303	248	436	401
Number of countries	17	13	24	25

Source: ESCAP.

Notes: Numbers in parentheses indicate standard error. ***, ** and * indicate the level of significance at 1%, 5%, and 10%, respectively.

Annex V. Determinants of public-private partnerships infrastructure investment

A regression model to test the effect of the PPP Enabling Environment Index and its sub-indices on PPP infrastructure investment in developing Asia-Pacific economies is specified as follows:

$$LnPPPI_i = \beta_1 + \beta_2 X_i + \beta_3 Z_i + e_i$$

where *PPPI* is PPP investment in infrastructure projects, *X* is the PPP Enabling Environment Index or its sub-index of country *i*, *Z* is a vector of control variables, and *e* is the disturbance term. PPP infrastructure investment are the log of total investment in transport, energy, ICT, and water and sanitation during the period 1995-2016. Control variables are population size and urbanization ratio. Considering the sample size, the Ordinary Least Square (OLS) estimator is used. The regression results are presented in tables below.

Table A.5.1. Determinants of PPP infrastructure investments: the PPP Enabling Environment Index

	(1)	(2)	(3)	(4)	(5)	(6)
Institutional framework for PPP	0.0477**					
	(2.59)					
Macroeconomic stability		0.0544**				
		(2.51)				
Financial market development			0.0229			
			(1.06)			
[Macroeconomic stability] * [Financial market development]				0.0387**		
				(2.64)		
Regulatory and institutional quality					0.0862**	
					(3.19)	
PPP Enabling Environment Index						0.0513**
						(2.37)
Constant term	17.62**	17.35**	19.62**	17.42**	17.95**	18.15**
	(16.76)	(14.69)	(27.42)	(14.72)	(22.91)	(19.43)
Number of countries	21	21	21	21	21	21
Adjusted R^2	0.221	0.210	0.006	0.231	0.314	0.187

Source: ESCAP.

Notes: *t* statistics in parentheses, * p<0.10, ** p<0.05

Table A.5.2. Determinants of PPP infrastructure investment: Institutional arrangement for PPP

	(1)	(2)	(3)
PPP preparation	0.0526**		
	(2.79)		
PPP procurement		0.0448**	
		(2.23)	
PPP contract management			0.0241
			(1.04)
Constant term	17.64**	17.40**	18.93**
	(18.11)	(13.46)	(15.40)
Number of countries	21	21	21
Adjusted R^2	0.254	0.165	0.004

Source: ESCAP.

Notes: *t* statistics in parentheses, * p<0.10, ** p<0.05

REFERENCES

Abbasi, Asad Ali (2017). A conversation about CPEC. Online magazine of the Institute of Asia and Pacific Studies, University of Nottingham. United Kingdom. Available from https://iapsdialogue.org/2017/06/06/a-conversation-about-cpec/.

Abdih, Yasser, and Leandro Medina (2013). Measuring the informal economy in the Caucasus and Central Asia. IMF Working Paper, No. WP/13/137. Washington, D.C., International Monetary Fund. Available from www.imf.org/external/pubs/ft/wp/2013/wp13137.pdf.

Accenture (2017). Blockbuster deals in China make Asia-Pacific the leader in global fintech investments, Accenture analysis finds. News release, 27 February. Available from https://newsroom.accenture.com/news/blockbuster-deals-in-china-make-asia-pacific-the-leader-in-global-fintech-investments-accenture-analysis-finds.htm.

Afghanistan, Ministry of Finance (2017). Afghanistan on the road to self-reliance: a year in progress. Progress report. Kabul, Afghanistan.

Araya, Gonzalo, Jordan Schwartz, and Luis Andres (2013). The effects of country risk and conflict on infrastructure PPPs. Policy Research Working Paper, No. 6569.Washington, D.C: World Bank.

Arner, Douglas, Janos Barberis, and Ross Buckley (2015). The evolution of Fintech: a new post-crisis paradigm? University of Hong Kong Faculty of Law Research Paper, No. 2015/047; UNSW Law Research Paper No. 2016-62. Available from http://dx.doi.org/10.2139/ssrn.2676553.

_____ (2016). The emergence of RegTech 2.0: from know your customer to know your data. *Journal of Financial Transformation*, vol. 44. pp. 79-86.

Arslanalp, Serkan and Yin Liao (2013). Contingent liabilities and sovereign risk: evidence from banking sectors. CAMA Working Paper 43/2013. Australian National University, Crawford School of Public Policy.

Asian Bonds Online (2017). Available from https://asianbondsonline.adb.org.

Asian Development Bank (ADB) (2011). *Impact Investors in Asia: Characteristics and Preferences for Investing in Social enterprises in Asia and the Pacific*. Mandaluyong City, Philippines.

_____ (2016a). *Asian Development Outlook 2016 Update: Meeting the Low-carbon Growth Challenge*. Mandaluyong City, Philippines. Available from www.adb.org/sites/default/files/publication/197141/ado2016-update.pdf.

_____ (2016b). *Financial Inclusion in the Digital Economy*. Proceedings of the Conference on Financial Inclusion in the Digital Economy, 24-25 May 2016. Mandaluyong City, Philippines. Available from www.adb.org/publications/financial-inclusion-digital-economy.

_____ (2016c). *A Comprehensive Analysis of Tax Administration in Asia and the Pacific: 2016 edition*. Manila.

_____ (2016d). Managing rising fisheries license revenues in the Pacific: a review of five countries receiving large inflows. *Pacific Economic Monitor*. July, pp. 22-27. Available from www.adb.org/sites/default/files/publication/188684/pem-july-2016.pdf.

_____ (2017a). *Meeting Asia's Infrastructure Needs*. Mandaluyong City, Philippines. Available from www.adb.org/sites/default/files/publication/227496/special-report-infrastructure.pdf.

_____ (2017b). *Asia Bond Monitor – March 2017*. Mandaluyong City, Philippines. Available from www.adb.org/sites/default/files/publication/234846/abm-mar-2017.pdf.

_____ (2017c). *Asia Bond Monitor –– November 2017*. Mandaluyong City, Philippines. Available from www.adb.org/sites/default/files/publication/382321/abm-nov-2017.pdf.

_____ (2017d). *Key Indicators for Asia and the Pacific 2017*. Mandaluyong City, Philippines. Available from www.adb.org/sites/default/files/publication/357006/ki2017.pdf.

Avdjiev, Stefan, and others (2018). The dollar exchange rate as a global risk factor: evidence from investment. BIS Working Papers, No. 695. Basel, Switzerland, Bank for International Settlements. Available from www.bis.org/publ/work695.pdf.

Aviva (2014). A roadmap for sustainable capital markets: how can the UN Sustainable Development Goals harness the global capital markets? – an Aviva white paper. Available from https://sustainabledevelopment.un.org/content/documents/10574avivabooklet.pdf.

Ayyagari and others (2011). Small vs. young firms across the world. World Bank Policy Research Working Paper No. 5631.

Bank for International Settlements (BIS) (2006). Developing corporate bond markets in Asia: proceedings of a BIS/PBC seminar held in Kunming, China on 17-18 November 2005. BIS Paper, No. 26. Basel, Switzerland: Bank for International Settlements. Available from www.bis.org/publ/bppdf/bispap26.pdf.

Bahl, Roy, Musharraf Cyan, and Sally Wallace (2015). The potential of provincial taxation. In *The Role of Taxation in Pakistan's Economic Revival*. Jorge Martinez-Vazquez and Musharraf Cyan, eds. Karachi: Oxford University Press, pp. 488-548.

Barclay, Bill (2010). A financial transaction tax: revenue potential and economic impact. CPEG Working Paper, No. 2010-2, Chicago Political Economy Group.

Beder, Sharon (1994). The role of technology in sustainable development. *Technology and Society*, vol. 13, No. 4, pp. 14-19. Available from https://www.uow.edu.au/~sharonb/RoleTech.html.

Benn, Julia, Cécile Sangaré, and Tomáš Hos (2017). Amounts mobilised from the private sector by official development finance interventions: guarantees, syndicated loans, shares in collective investment vehicles, direct investment in companies and credit lines. OECD Development Co-Operation Working Paper, No. 36.

Besley, Timothy, and Torsten Persson (2014). Why do developing countries tax so little? *Journal of Economic Perspectives*, vol. 28, No. 4, pp. 99-120.

Bhutan, Ministry of Finance (2017). *National Revenue Report 2016-2017*. Department of Revenue and Customs. Available from www.mof.gov.bt/wp-content/uploads/2014/07/NRR2016-17.pdf.

Bird, Richard (2012). Taxation and development: what have we learned from fifty years of research?, Working Paper Series GSU paper 1202, Georgia State University, International Center for Public Policy.

Biswas, Rajiv (2016). Mobilising private capital flows for infrastructure development in Asia and the Pacific. Discussion paper prepared for the first high-level follow-up dialogue on financing for development in Asia and the Pacific, Incheon, Republic of Korea, 30-31 March.

Bitcoin.org (2017). Bitcoin. Available from https://bitcoin.org/en (accessed 2 March 2018).

Bivens, Josh, and Hunter Blair (2016). *A Financial Transaction Tax Would Help Ensure Wall Street Works for Main Street*. Washington, D.C.: Economic Policy Institute. Available from www.epi.org/files/pdf/110651.pdf.

Bluth, Christian (2017). The effects of digitisation and automation on global trade: how future global production patterns are going to change. Gütersloh, Germany: New Perspectives on Global Economic Dynamics. Available from https://ged-project.de/allgemein-en/the-effects-of-digitisation-and-automation-on-global-trade/#_ftn5.

Borio, Claudio (2003). Towards a macro-prudential framework for financial supervision and regulation? BIS Working Papers, No. 128. Bank for International Settlements. Available from www.bis.org/publ/work128.pdf.

Brito, Jerry, and Andrea Castillo (2013). *Bitcoin: A Primer for Policymakers*. Arlington, Virginia: Mercatus Center at George Mason University. Available from https://coincenter.org/wp-content/uploads/2013/08/Bitcoin-Primer-2ndEd.pdf.

Brynjolfsson, Erik, and Andrew McAfee (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York and London: W.W. Norton and Company.

Burger, John D., Francis E. Warnock, and Veronica C. Warnock (2015). Bond market development in developing Asia. ADB Economics Working Paper Series, No. 448. Mandaluyong City, Philippines, Asian Development Bank. Available from www.adb.org/sites/default/files/publication/173190/ewp-448.pdf.

Burman, Leonard, and others (2016). Financial transaction taxes in theory and practice. National Tax Journal, vol. 69, No. 1, pp. 171–216.

Byrd, William, and M. Khalid Payenda (2017). Revenue growth in Afghanistan continues strong but future uncertain. Peace Brief, No. 219. February. Washington, D.C.: United States Institute of Peace. Available from www.usip.org/publications/2017/02/revenue-growth-afghanistan-continues-strong-future-uncertain.

Cabezon, Ezequiel, Patrizia Tumbarello, and Yiqun Wu (2015). Strengthening fiscal frameworks and improving the spending mix in small States. IMF Working Paper, No. WP/15/124. Washington, D.C.: International Monetary Fund..Available from www.imf.org/external/pubs/ft/wp/2015/wp15124.pdf.

Cerutti, Eugenio, Stijn Claessens, and Luc Laeven (2015). The use and effectiveness of macroprudential policies: new evidence. IMF Working Paper, No. WP/15/61. Washington, D.C.: International Monetary Fund. Available from www.imf.org/external/pubs/ft/wp/2015/wp1561.pdf.

Chaitrong, Wichit (2018). Economic growth to continue this year, *The Nations*, 30 January 2018. Available from http://www.nationmultimedia.com/detail/Economy/30337459

Chang, Jae-Hee, and Phu Huynh (2016). ASEAN in transformation: the future of jobs at risk of automation. Bureau for Employers' Activities, Working Paper, No. 9. Geneva: International Labour Office, and ILO Regional Office for Asia and the Pacific. Available from www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---act_emp/documents/publication/wcms_579554.pdf.

Chen, Sally, and Joong Shik Kang (2018). Credit booms—is China different? IMF Working Paper, No. 18/2. Washington, D.C.: International Monetary Fund. Available from www.imf.org/~/media/Files/Publications/WP/2018/wp1802.ashx.

Congressional Budget Office (2008). Policy options for reducing CO2 emissions, No. 2930 (February). Washington, D.C.

_____ (2016). Options from reducing the deficit: 2017 to 2026. Washington, D.C.

Cottrell, Jacqueline, and others (2017). Environmental tax reforms in Asia and the Pacific. Working Paper, No. WP/17/05. Macroeconomic Policy and Financing for Development Division, ESCAP.

Crandall, William (2010). Revenue administration: performance measurement in tax administration. Technical Notes and Manuals 10/11.Washington, D.C.: International Monetary Fund.

Csonto, Balazs, and Iryna Ivaschenko (2013). Determinants of sovereign bond spreads in emerging markets: local fundamentals and global factors vs. ever-changing misalignments. IMF Working Paper WP/13/164.Washington, D.C: International Monetary Fund.

Dabla-Norris, Era, and others (2017). Tax administration and firm performance: new data and evidence for emerging market and developing economies, IMF Working Paper, No. WP/17/95. Washington, D.C.: International Monetary Fund.

Das-Gupta, Arindam, Gemma Estrada, and Donghyun Park (2016). Measuring tax administration effectiveness and its impact on tax revenue. ERIA Discussion Paper Series, No. ERIA-DP-2016-17.

Della Croce, Raffaele, and Juan Yermo (2013). Institutional investors and infrastructure financing. OECD Working Papers on Finance, Insurance and Private Pensions, No. 36, Geneva: OECD Publishing.

Deloitte (2016). Taxation and investment in Singapore 2016: reach, relevance and reliabilty. Available from www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-singaporeguide-2016.pdf.

_____ (2017). Shifting sands: risk and reform in uncertain times – 2017 Asia Pacific tax complexity survey. Available from www2.deloitte.com/content/dam/Deloitte/cn/Documents/tax/deloitte-cn-tax-2017-ap-tax-complexity-survey-en-170424.pdf .

Dintilhac, Clio, Fernanda Ruiz-Nuñez, and Zichao Wei (2015). The economic impact of infrastructure and public-private partnerships: literature review. Washington, D.C.: World Bank.

Economic Times (2018). Confused about revised GST rates? Here's a quick guide, 19 January 2018. Available from https://economictimes.indiatimes.com/news/economy/policy/a-quick-guide-to-india-gst-rates-in-2017/articleshow/58743715.cms.

Economist (2018). Asia is taking the lead in promoting free trade. 24 January. Available from www.economist.com/news/asia/21735566-asian-voters-know-open-markets-have-lifted-billions-them-out-poverty-asia-taking-lead.

Economist Intelligence Unit (EIU) (2015). Evaluating the environment for public-private partnerships in Asia-Pacific: The 2014 Infrascope. London. Available from www.adb.org/sites/default/files/publication/158409/2014-infrascope.pdf.

_____ (2018a). *Bangladesh Country Report, February 2018*. New York: EIU.

_____ (2018b). *Sri Lanka Country Report, February 2018*. New York: EIU.

Ernst and Young (EY) (2018). India focus on BEPS – base erosion and profit shifting. Available from www.ey.com/in/en/services/tax/ey-india-beps-focus.

European Commission (EC) (2018). Winter 2018 interim economic forecast: a solid and lasting expansion. Available from https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/winter-2018-economic-forecast_en.

Ferrarini, Benno and Marthe Hinojales (2018). State-owned enterprises leverage as a contingency in public debt sustainability analysis: the case of the People's Republic of China. ADB Economics Working Paper Series, No.534. Manila: Asian Development Bank.

Frey, Carl Benedikt, and others (2016). *Technology at Work V2.0: The Future Is Not What It Used to Be*. Oxford: Oxford Martin Programme on Technology and Employment. Available from www.oxfordmartin.ox.ac.uk/downloads/reports/Citi_GPS_Technology_Work_2.pdf.

Freedom House (2017). Freedom on the Net 2017. Available from https://freedomhouse.org/report/table-country-scores-fotn-2017.

G20 Global Partnership for Financial Inclusion (GPF) (2017). *Digital Financial Inclusion: Emerging Policy Approaches*. Available from www.gpfi.org/sites/default/files/documents/Digital%20Financial%20Inclusion-CompleteReport-Final-A4.pdf.

Gadenne, Lucie (2016). Tax me, but spend wisely? Source of public finance and government accountability, Warwick Economics Research Papers, No. 1131, October. Available from https://pdfs.semanticscholar.org/91b3/6ed0428f33a816d5d0a369293f0d98505f1b.pdf.

Genberg, Hans (2015). Capital market development and emergence of institutional investors in the Asia-Pacific region. *Asia-Pacific Development Journal*, vol. 22, No. 2, pp. 1-26.

_____ (2016). The role of institutional investors in financing development in Asia and the Pacific. Discussion Paper, No. DP/11. Paper prepared for the first high-level follow-up dialogue on financing for development in Asia and the Pacific, Incheon, Republic of Korea, 30-31 March.

GIZ (2018). Support the tax authorities in Nepal. Available from www.giz.de/en.

Global Impact Investing Network (GIIN) (2017). *Annual Impact Investor Survey 2017*. Global Impact Investing Network.

Global Infrastructure Hub (2017a). *Global Infrastructure Outlook: Infrastructure Investment Needs 50 Countries, 7 Sectors to 2040*. Sydney, Australia: Global Infrastructure Hub.

_____ (2017b). *Set Your Infrastructure Policies in the Right Direction*. Sydney, Australia: Global Infrastructure Hub and KPMG.

Griffiths, Jesse, and others (2014). *Financing for Development Post-2015: Improving the Contribution of Private Finance*. Brussels: European Parliament. Available from www.eurodad.org/files/pdf/1546190-financing-for-development-post-2015-improving-the-contribution-of-private-finance.pdf.

Grut, Chantal (2017). How much do I need to pay? Changes to Afghanistan's tax law cause chaos and confusion. Afghanistan Analysts Network. 23 March. Available from www.afghanistan-analysts.org/how-much-do-i-need-to-pay-changes-to-afghanistans-tax-law-cause-chaos-and-confusion/.

Gui-Diby, Steve Loris, Mary-Françoise Renard, and Francky Fouedjio (forthcoming). *How Does China Contribute to the Economic Sophistication of Asian Economies?*

Hallegatte, Stephane, and others (2015). *Shock Waves: Managing the Impacts of Climate Change on Poverty*. Climate Change and Development Series. Washington, D.C.: World Bank. Available from https://openknowledge.worldbank.org/bitstream/handle/10986/22787/9781464806735.pdf?sequence=13&isAllowed=y.

Hammami, Mona, Jean-Francois Ruhashyankiko, and Etienne B. Yehouel (2006). Determinants of public-private partnerships in infrastructure. IMF Working Paper, No. WP/06/99. Washington, D.C: International Monetary Fund.

Horowitz, J., and others (2017). Methodology for analyzing a carbon tax. Washington, DC: United States Department of the Treasury, Office of Tax Analysis, Working Paper, No. 115.

Impact Investment Exchange Asia (IIX) (2016). *Bridging the Gap between Development and Finance*. Singapore.

India, Ministry of Finance (2017). *Economic Survey 2016-2017*. Available from www.indiabudget.gov.in/es2016-17/echap09.pdf.

_____ (2018). *Economic Survey 2017-18, Vol. 1*. Available from http://mofapp.nic.in:8080/economicsurvey/pdf/000_Preface_Ten_Facts_2017-18_Vol_1-18_pages.pdf.

International Carbon Action Partnership (ICAP) (2017). Emissions trading worldwide: status report 2017. Berlin. Available from https://icapcarbonaction.com/en/?option=com_attach&task=download&id=447.

International Finance Corporation (IFC) (2014). *SMEs and Women-owned SMEs in Mongolia*. Washington, D.C. Available from www.ifc.org/wps/wcm/connect/d85f65804697b853a598bd9916182e35/Women+SME-Mongolia-Final.pdf?MOD=AJPERES.

International Labour Organization (ILO) (2018). Employment in Asia-Pacific continues to grow but often remains of poor quality. World Employment and Social Outlook: Trends 2018. Available from http://www.ilo.org/asia/media-centre/news/WCMS_615872/lang--en/index.htm.

International Monetary Fund (IMF) (2013). Staff guidance note for public debt sustainability analysis in market-access countries. Washington, D.C. 9 May. Available from www.imf.org/external/np/pp/eng/2013/050913.pdf.

_____ (2014). *Asia and Pacific Small States Monitor, Quarterly Bulletin*, Issue No. 01/2014. Available from www.imf.org/~/media/external/np/apd/ssm/2014/0414.ashx.

_____ (2015). Making public investment more efficient. IMF Policy Paper, June. Available from www.imf.org/external/np/pp/eng/2015/061115.pdf.

_____ (2016) Sri Lanka staff report for the 2016 Article IV Consultation and request for a three-year extended arrangement under the extended fund facility; staff statement, and statement by the Executive Director for Sri Lanka, IMF Country Report, No. 16/150. Available from www.imf.org/external/pubs/ft/scr/2016/cr16150.pdf.

_____ (2017). *Regional Economic Outlook: Asia and Pacific – preparing for choppy seas*. Washington, D.C. Available from www.imf.org/~/media/Files/Publications/REO/APD/areo0517.ashx.

_____ (2018). *World Economic Outlook Update, January 2018: Brighter Prospects, Optimistic Markets, Challenges Ahead*. Washington, D.C. Available from www.imf.org/en/Publications/WEO/Issues/2018/01/11/world-economic-outlook-update-january-2018.

_____ and World Bank (2016). Development of local currency bond markets: overview of recent developments and key themes. Staff note for the G20 IFAWG, Seoul, Korea, 20 June.

International Monetary Fund (IMF), OECD, United Nations and World Bank (2015). A background paper to the report: options for low income countries' effective and efficient use of tax incentives for investment – a report to the G-20 Development Working Group. Available from www.imf.org/external/np/g20/pdf/101515.pdf.

Iqbal, Zamir (2015). Can Islamic finance help fund large infrastructure projects in emerging markets? 15 December. Available from http://blogs.worldbank.org/psd.

Islamic Financial Services Board (2017). Islamic financial services industry stability report. May. Available through a link from www.ifsb.org/docs/IFSB%20IFSI%20Stability%20Report%202017.pdf.

Jakarta Post (2018). Indonesia records $4.8 billion investment in digital economy. 31 January. Available from www.thejakartapost.com/news/2018/01/31/indonesia-records-4-8-billion-investment-in-digital-economy.html.

James, Sebastian (2014). Effectiveness of investment incentives in developing countries: evidence and policy implications. Washington, D.C.: World Bank. Available from www.tepav.org.tr/upload/files/haber/1285937438-5.Effectiveness_of_Tax_Incentives_in_developing_countries___Policy_and_Evidence___TEPAV_Sept_2010_B_W.pdf.

Jun, Joosung (2017). Tax incentives and tax base protection in developing countries, Working Paper, No. WP/17/07, Macroeconomic Policy and Financing for Development Division, ESCAP.

Kanbur, Ravi, Changyong Rhee, and Juzhong Zhuang (2014). *Inequality in Asia and the Pacific: Trends, Drivers, and Policy Implications*. Mandaluyong City, Philippines: Asian Development Bank. Available from www.adb.org/sites/default/files/publication/41630/inequality-asia-and-pacific.pdf.

Kasri, Rahmatina Awaliah and Farid Arif Wibowo (2015). Determinants of public-private partnerships in infrastructure provision: evidence from muslim developing countries, *Journal of Economic Cooperation and Development*, vol. 36, No. 2, pp. 1-34.

Klynveld Peat Marwick Goerdeler (KPMG) (2017). India – response to BEPS. Available from https://home.kpmg.com/xx/en/home/insights/2016/06/beps-action-plan-india.html.

Kopits, George, Benno Ferrarini, and Arief Ramayandi (2016). Exploring risk-adjusted fiscal sustainability: analysis for Asian economies. ADB Economics Working Paper Series, No. 483. Manila.

Korea Chamber of Commerce (KCC) (2017). Regulatory difficulty in Korea.

Korea Technology Finance Corporation (KTFC) (2018). KTFC website. Available from www.kibo.or.kr/src/english.

Krenek, Alexander, and Margit Schratzenstaller (2016). Sustainability-oriented EU taxes: the example of a European carbon-based flight ticket tax. FairTax Working Paper Series, No. 01.

Kubota, Keisuke (2016). Asia thinks outside the classroom to attract more students. Nikkei Asian Review. 2 June. Available from https://asia.nikkei.com/magazine/20160602-THE-BUSINESS-of-HALAL/Tech-Science/Asia-thinks-outside-the-classroom-to-attract-more-students?page=2.

Lancet Commission on Pollution and Health (2017). Pollution and health infographic. Ichan School of Medicine at Mount Sinai, The Lancet and Global Alliance on Health and Pollution. Available from www.thelancet.com/pb-assets/Lancet/stories/commissions/pollution-2017/Pollution_and_Health_Infographic.pdf.

Langford, Ben, and Tim Ohlenburg (2015). Tax revenue potential and effort: an empirical investigation. Working Paper, No. S-43202-UGA-1. International Growth Centre. Available from www.theigc.org/wp-content/uploads/2016/01/Langford-Ohlenburg-2016-Working-paper.pdf.

Le Borgne, Eric, and Paulo Medas (2007). Sovereign wealth funds in the Pacific island countries: macro-fiscal linkages. IMF Working Paper, No. WP/07/297. Washington, D.C.: International Monetary Fund. Available from www.imf.org/external/pubs/ft/wp/2007/wp07297.pdf.

Lee, Choong Lyol, and Shinji Takagi (2014). Assessing the financial landscape for the Association of Southeast Asian Nations Economic Community, 2015. *Asia and the Pacific Policy Studies*, vol. 2, No. 1, pp. 116-129.

Lee, J. (2017). Tasks to facilitate application of fintech in Korea. *KIF Financial Brief*, vol. 17, No. 13. Available from www.kcft.or.kr/2017/07/2566.

Levinger, Hannah, and Chen Li (2014). What's behind recent trends in Asian corporate bond markets? Deutsche Bank Research. 31 January. Available from www.dbresearch.com/PROD/RPS_EN-PROD/PRODOOOOOOOOOOO451971/What%E2%80%99s_behind_recent_trends_in_Asian_corporate_bon.PDF.

Li, Hongyi, and Liang Huang (2010). Health, education, and economic growth in East Asia. *Journal of Chinese Economic and Foreign Trade Studies*, vol. 3, Issue 2, pp.110-131.

Liu, Xianbing, Sunhee Suk, and Ryuichi Yamamoto (2014). The feasibility of pricing of carbon emissions in three Northeast Asian countries: Japan, China and the Republic of Korea. Policy Brief, No. 29, Institute for Global Environmental Strategies.

Lockley, Peter, and Muyeye Chambwera (2011). Solidarity levies on air travel: the case for a ready-made innovative stream of finance in support of the current international climate negotiations. *Oxford Energy and Environment Brief*, April. Available from www.oxfordclimatepolicy.org/publications/documents/Comment-March-2011_2.pdf.

Long, Cathal, and Mark Miller (2017). Taxation and the Sustainable Development Goals: do good things come to those who tax more? ODI Briefing Note, April. Available from www.odi.org/sites/odi.org.uk/files/resource-documents/11695.pdf.

Malik, Neha (2014). Securities transaction tax – case study of India. Working Paper, No. 273. Indian Council for Research on International Economic Relations.

Malul, Miki, John Gal, and Miriam Greenstein (2009). A Universal Basic Income: theory and practice in the Israeli case. Basic Income Studies, vol. 4, Issue 1. Available from http://taubcenter.org.il/wp-content/files_mf/basicincome.pdf.

Mansur, Ahsan H., Mohammad Yunus, and Biplob Kumar Nandi (2011). An evaluation of the tax system in Bangladesh. Paper presented at the Conference on Linking Research to Policy: Growth and Development Issues in Bangladesh, Dhaka. 20 December.

Marron, Donald, and Eric Toder (2014). Tax policy issues in designing a carbon tax. *American Economic Review: Papers and Proceedings*, vol, 104, No. 5, pp. 563-568.

Marron, Donald, and Adele Morris (2016). How to use carbon tax revenues. Tax Policy Center.

Matheson, Thornton (2011). Taxing financial transactions: issues and evidence. IMF Working Paper, No. WP/11/54. Washington, D.C.: International Monetary Fund.

McKinsey and Company (2016). *Disruption and Connection: Cracking the Myths of China Internet Finance Innovation*. Available from www.mckinsey.com/~/media/mckinsey/industries/financial%20services/our%20insights/whats%20next%20for%20chinas%20booming%20fintech%20sector/disruption-and-connection-cracking-the-myths-of-china-internet-finance-innovation.ashx.

McKinsey Global Institute (2016). Bridging global infrastructure gaps. Available from www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/bridging-global-infrastructure-gaps.

Mengistu, Tewodaj (2013). Determinants of private participation in infrastructure in low and middle-income countries (LMICs), Mimeo, Pardee RAND Graduate School.

Meola, Andrew (2017). How distributed ledger technology will change the way the world works. Business Insider, 5 October. Available from www.businessinsider.com/blockchain-distributed-ledgers-2017-10.

Metcalf, Gilbert, and David Weisbach (2009). The design of a carbon tax. Working Paper, No. 254. Chicago, Illinois: University of Chicago Public Law and Legal Theory.

Monetary Authority of Singapore (MAS) (2007). *Asian Financial and Monetary Integration: Challenges and Prospects*.

Moody's (2017). Sovereign contingent liabilities: public enterprises represent a material source of fiscal risk to some sovereigns. Sovereign Defaut Research, Moody's Investor Services.

Moszoro, Marian, and others (2015). What drives private participation in infrastructure developing countries? In *Public Private Partnerships for Infrastructure and Business Development*, S. Caselli, G. Corbetta and V. Vecchi, eds. New York: Palgrave Macmillan.

Mu, Yibin, Peter Phelps, and Janet G. Stotsky (2013). Bond markets in Africa. IMF Working Paper, No. 13/12 . Available from www.imf.org/en/Publications/WP/Issues/2016/12/31/Bond-Markets-in-Africa-40239.

Muthitacharoen, Athiphat (2017). Assessing the importance of taxation on FDI: evidence from South-East Asian developing countries. PIER Discussion Paper, No. 65. Bangkok: Puey Ungphakorn Institute for Economic Research. Available from www.pier.or.th/wp-content/uploads/2017/07/pier_dp_065.pdf.

Nation (2017). Thailand retains Baa1 rating from Moody's. 18 July. Available from www.nationmultimedia.com/detail/Economy/30321123.

National Association of Trade Promotion (2016). White paper on small and medium enterprises in Japan. Available from www.chusho.meti.go.jp/pamflet/hakusyo/H28/PDF/2016hakusho_eng.pdf.

National Internet Finance Association of China (NIFA) (2016). *China Internet Finance Industry Report 2016*. Available from www.nifa.org.cn/nifaen/2955875/2955895/2964342/index.html.

Negara, Siwage Dharma (2017). Promoting growth with equity: Indonesia's 2018 budget. ISEAS - Yusof Ishak Institute. Available from www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2017_68.pdf.

Nielsen, Michael (2014). How the Bitcoin protocol actually works: data-driven intelligence blog, 6 December. Available from www.michaelnielsen.org/ddi/how-the-bitcoin-protocol-actually-works/.

Nurdianto, Ditya, and Budy Resosudarmo (2016). The economy-wide impact of a uniform carbon tax in ASEAN. *Journal of Southeast Asian Economies*, vol. 33, No. 1, pp. 1-21.

Okano, Yasutake (2016). Virtual currencies: issues remain after Payment Services Act amended. *Iakyara*, vol. 243. Chiyoda City, Japan: Nomura Research Institute. Available from www.nri.com/~/media/PDF/global/opinion/lakyara/2016/lkr2016243.pdf.

Organisation for Economic Co-operation and Development (OECD) (2011). *Competitiveness and Private Sector Development: Central Asia 2011*. Paris: OECD Publishing. Available from www.oecd-ilibrary.org/finance-and-investment/competitiveness-and-private-sector-development-central-asia-2011_9789264097285-en.

_____ (2014a). *Development Co-operation Report 2014: Mobilising Resources for Sustainable Development*, Paris: OECD Publishing.

_____ (2014b). *Pension Markets in Focus*. Paris: OECD Publishing.

_____ (2017a). *Tax Administration 2017: Comparative Information on OECD and Other Advanced and Emerging Economies*. Paris: OECD Publishing.

_____ (2017b). Basic income as a policy option: technical background note illustrating costs and distributional implications for selected countries. Available from www.oecd.org/els/soc/Basic-Income-Policy-Option-2017-Brackground-Technical-Note.pdf.

_____ (2017c). Basic income as a policy option: can it add up? Policy Brief on the Future of Work. Paris: OECD Publishing. May. Available from www.oecd.org/employment/emp/Basic-Income-Policy-Option-2017.pdf.

Pacific Islands Forum Secretariat (2017). Disaster risk financing instruments: PCRAFI Foundation and contingent credit/savings facility for the Pacific. Paper prepared for the Forum Economic Ministers Meeting and Forum Economic Officials Meeting, Suva, 3-6 April 2017. Available from www.forumsec.org/resources/uploads/attachments/documents/PCRAFI_&_Contingent_Credit.pdf.

_____ (2017c). *Tax Administration 2017: Comparative Information on OECD and Other Advanced and Emerging Economies*. Paris: OECD Publishing.

Pakistan, Federal Board of Revenue (FBR) (2017). Tax directory: for the year ended 30 June 2016. Tax Directory. Islamabad: Federal Board of Revenue.

Park, Cyn-Young (2016), Developing local currency bond markets in Asia. ADB Economics Working Paper Series, No. 495 (Manila, 2016). Available from www.adb.org/sites/default/files/publication/190289/ewp-495.pdf.

Presbitero, Andrea F., and others (2016). Sovereign bonds in developing countries: drivers of issuance and spreads. *Review of Development Finance*, vol. 6, Issue 1, pp. 1-15.

Rathi, A., and Huang, E. (2017). The complete guide to the world's largest carbon market that just launched in China. Available from https://qz.com/1159667/china-is-launching-the-worlds-largest-carbon-market/.

Roy, Rathin (2017). Financing the SDGs. *Business Standard*, 5 October. Available from www.business-standard.com/article/opinion/financing-the-sdgs-117100501364_1.html.

Sahay, Ratna, and others (2015). *The Future of Asian Finance*. Washington, D.C.: International Monetary Fund. Excerpt available from www.elibrary.imf.org/fileasset/misc/excerpts/future_asian_excerpt.pdf.

Schmidt-Traub, Guido (2015). Investment needs to achieve the Sustainable Development Goals: understanding the billions and trillions. SDSN Working Paper, Version 2. Sustainable Development Solutions Network. Available from www.unsdsn.org/wp-content/uploads/2015/09/151112-SDG-Financing-Needs.pdf.

_____ and Jeffrey D. Sachs (2015). Financing sustainable development: implementing the SDGs through effective investment strategies and partnerships. SDSN Working Paper, Sustainable Development Solutions Network.

Schueffel, Patrick (2017). *The Concise Fintech Compendium*. Freiburg, Switzerland: School of Management. Available from http://schueffel.biz/wp-content/uploads/2017/09/Schueffel-2017-The-Concise-FINTECH-COMPENDIUM.pdf.

SDG Philanthropy Platform (2017). Available from http://sdgfunders.org/sdgs/.

Sharma, Chandan, (2012). Determinants of PPP in infrastructure in developing economies. *Transforming Government: People, Process and Policy*, vol. 6, No. 2, pp. 149-166.

Shih, Willy C. (2013). The re-industrialization of the United States? *Wirtschaftspolitische Blätter*, vol. 60, No. 2, pp. 297--312.

Singapore (2017). Budget 2017 speech. Available from www.singaporebudget.gov.sg/data/budget_2017/download/FY2017_Budget_Statement.pdf.

State Bank of Pakistan (2017). Annual Report 2017 (Special Section 1: impact analysis of withholding taxes on cash withdrawal and banking transactions). Islamabad. Available from www.sbp.org.pk/reports/annual/arFY17/Special-Section-1.pdf.

Stilwell, Frank (2016). Basic income: political economic considerations. *Australian Options*, Issue 86. Autumn.

Sveriges Riksbank (2014). *Sveriges Riksbank Economic Review*. Issues published in 2014 available from http://archive.riksbank.se/en/Web-archive/Published/Published-from-the-Riksbank/Economic-Review/Economic-Review/2014/.

Swartz, J. (2016). China's National Emissions Trading System. March. Global Economic Policy and Institutions.

United Kingdom, Government Office for Science (2016). *Distributed Ledger Technology: Beyond Block Chain*. Available from www.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf.

United Nations Conference on Trade and Development (UNCTAD) (2014). *World Investment Report 2014: Investing in the SDGs –an action plan*. Sales No. E.14.II.D.1. Available from http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf.

_____ (2018). Special Edition: Tax reforms in the United States: Implications for international investment. Global Investment Trend Monitor. UNCTAD/DIAE/IA/2018/2. Available from http://unctad.org/en/PublicationsLibrary/diaeia2018d2_en.pdf.

United Nations, Department of Economic and Social Affairs (United Nations) (2012). *World Economic and Social Survey: In Search of New Development Finance*. Sales No. E.12.II.C.1. Available from www.un.org/en/development/desa/policy/wess/wess_current/2012wess.pdf.

_____ (2014). Report of the Intergovernmental Committee of Experts on Sustainable Development Financing. Available from www.un.org/esa/ffd/wp-content/uploads/2014/12/ICESDF.pdf.

_____ (2017). *World Economic Situation and Prospects 2018*. Sales No. E.18.II.C.2. Available from www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018_Full_Web-1.pdf.

United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2013). *Economic and Social Survey of Asia and the Pacific 2013: Forward-looking Macroeconomic Policies for Inclusive and Sustainable Development*. Sales No. E.13.II.F.2. Available from http://www.unescap.org/sites/default/files/Economic-and-Social-Survey-of-Asia-and-the-Pacific-2013_1.pdf.

_____ (2014). *Economic and Social Survey of Asia and the Pacific 2014: Regional Connectivity for Shared Prosperity*. Sales No. E.14.II.F.4. Available from www.unescap.org/sites/default/files/Economic%20and%20Social%20Survey%20of%20Asia%20and%20the%20Pacific%202014.pdf.

_____ (2016a). *Economic and Social Survey of Asia and the Pacific 2016: Nurturing Productivity for Inclusive Growth and Sustainable Development*. Sales No. E.16.II.F.10. Available from www.unescap.org/publications/economic-and-social-survey-asia-and-pacific-2016-nurturing-productivity-inclusive.

_____ (2016b). *Harnessing Science, Technology and Innovation for Inclusive and Sustainable Development in Asia and the Pacific*. Sales No. E.16.II.F.12. Available from www.unescap.org/sites/default/files/STI_Theme_Study.pdf.

_____ (2016c). Coping with natural disasters in the Pacific. MPFD Policy Briefs, No. 35. April. Available from www.unescap.org/sites/default/files/MPFD%20Policy%20Brief-Pacific-Natural-disasters.pdf.

_____ (2017a). *Economic and Social Survey of Asia and the Pacific: Governance and Fiscal Management*. Sales No. E.17.II.F.8. Available from www.unescap.org/publications/economic-and-social-survey-asia-and-pacific-2017.

_____ (2017b). *Economic and Social Survey of Asia and the Pacific 2017: Year-end Update*. Bangkok. ST/ESCAP/2808. Available from www.unescap.org/sites/default/files/publications/Economic_and_Social_Survey_of_Asia_and_the_Pacific_2017_Year-end-Update.pdf.

_____ (2017c). *Asia-Pacific Countries with Special Needs Development Report 2017: Investing in Infrastructure for an Inclusive and Sustainable Future*. Sales No. E.17.II.F.9. Available from www.unescap.org/publications/asia-pacific-countries-special-needs-2017.

_____ (2017d). *Asia-Pacific Trade and Investment Report 2017: Channelling Trade and Investment into Sustainable Development*. Sales No. E.17.II.F.22. Available from www.unescap.org/publications/APTIR2017.

_____ (2017e). *Leave No One Behind: Disaster Resilience for Sustainable Development. Asia-Pacific Disaster Report 2017.* Sales No. E.17.II.F.16. Available from www.unescap.org/sites/default/files/publications/0_Disaster%20Report%202017%20High%20res.pdf.

_____ (2017f). *Addressing the Challenges of Population Ageing in Asia and Pacific: Implementation of the Madrid International Plan of Action on Ageing*. Sales No. E.17.II.F.17. Available from www.unescap.org/publications/addressing-challenges-population-ageing-asia-and-pacific-implementation-madrid.

_____ (2017g). *Responding to the Climate Change Challenge in Asia and the Pacific: Achieving the Nationally Determined Contributions (NDCs)*. Bangkok. ST/ESCAP/2802. Available from www.unescap.org/sites/default/files/Download.pdf.

_____ (2017h). *Analysing Resource Efficiency Transitions in Asia and the Pacific*. Bangkok. ST/ESCAP/2807. Available from www.unescap.org/publications/analysing-resource-efficiency-transitions-asia-and-pacific.

_____ (2017i). *Innovative Financing for Development in Asia and the Pacific: Government Policies on Impact Investment and Public Policies on Innovation*. Sales No. E.17.II.F.23. Available from www.unescap.org/sites/default/files/publications/Innovative%20Financing%20for%20Development%20in%20AP.pdf.

_____ (2017j). *Finance for Climate Action in Asia and the Pacific: A Regional Action Agenda to Access Debt Capital Markets*. ST/ESCAP/2803. Available from www.unescap.org/resources/finance-climate-action-asia-and-pacific-regional-action-agenda-access-debt-capital-markets.

_____ (2017k). PPP Policy, Legal and Institutional Frameworks in Asia and the Pacific. Report prepared as a background document prepared for the 4th High-level Dialogue on Financing for Development in Asia and the Pacific. Available from www.unescap.org/sites/default/files/PPP%20Policy%2C%20Legal%20and%20Institutional%20Frameworks%20in%20Asia%20and%20the%20Pacific.pdf.

_____ (2018a). *Asia-Pacific Countries with Special Needs Development Report 2018*. Sales No. E.18.II.F.15.

_____ (2018b). I*nequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development*. Sales No. E.18.II.F.13.

_____ (2018c). ESCAP Statistical Database (accessed 1 March 2018). Available from http://www.unescap.org/stat/data.

_____ and Oxfam (2017). Taxing for shared prosperity: policy options for the Asia-Pacific region. Briefing Paper. Oxford: Oxfam International and ESCVAP. Available from www.unescap.org/sites/default/files/Taxing%20for%20shared%20prosperity%20in%20Asia-Pacific.pdf.

United States Department of Labor (2018). Statement on January jobs report, 2 February. Available from www.dol.gov/newsroom/releases/osec/osec20180202.

United States Energy Information Agency (2018). U.S. monthly crude oil production exceeds 10 million barrels per day, highest since 1970. *Today in Energy,* 1 February. Available from www.eia.gov/todayinenergy/detail.php?id=34772.

United Nations System Task Team (UNTT) (2013). Public support to private investment for sustainable development: challenges and opportunities, with emphasis on the environmental pillar. Chapter 4, UNTT Working Group on Sustainable Development Financing. Available from https://sustainabledevelopment.un.org/content/documents/2111Chapter%204-public%20support%20to%20private%20investment.pdf.

Van Parys, Stephan, and Sebastian James (2010). The effectiveness of tax incentives in attracting investment: panel data evidence from CFA Franc zone. *International Tax and Public Finance,* vol. 17, Issue 4, pp.400-429.

Varoufakis, Yanis (2016). The universal right to capital income. Project Syndicate. 31 October. Available from www.project-syndicate.org/commentary/basic-income-funded-by-capital-income-by-yanis-varoufakis-2016-10?barrier=accessreg.

World Bank (2006). Fiscal policy for growth and development: an interim report. Washington, D.C. Available from http://siteresources.worldbank.org/DEVCOMMINT/Documentation/20890698/DC2006-0003(E)-FiscalPolicy.pdf.

_____ (2010). *Managing Contingent Liabilities in Public-Private Partnerships: Practice in Australia, Chile, and South Africa*. Washington, D.C. Available from http://documents.worldbank.org/curated/en/998191467987871769/pdf/101491-WP-PUBLIC-Box394815B-WB-ManagingContingentLiabilitiesAustraliaChileSoAfrica.pdf.

_____ (2011). An integrated assessment model for tax administration: the diagnostic tool, Washington, D.C. Available from http://siteresources.worldbank.org/PUBLICSECTORANDGOVERNANCE/Resources/285741-1326399585993/IamTaxSummary.pdf.

_____ (2016a). Maldives Pension and Social Protection Administration implementation completion report review. Available from http://documents.worldbank.org/curated/en/679691467993833844/pdf/ICRR-Disclosable-P104743-07-08-2016-1467993815811.pdf.

_____ (2016b). Sources of financing for public-private partnership investments in 2015. Public-Private Partnership Group. Available from https://ppi.worldbank.org/~/media/GIAWB/PPI/Documents/Data-Notes/2015-PPP-Investments-Sources.pdf.

_____ (2016c). *State and Trends of Carbon Pricing 2016*. Washington, D.C. Available from http://documents.worldbank.org/curated/en/598811476464765822/pdf/109157-REVISED-PUBLIC-wb-report-2016-complete-161214-cc2015-screen.pdf.

_____ (2017a). *Carbon Tax Guide: A Handbook for Policy Makers*, Washington D.C. Available from https://openknowledge.worldbank.org/bitstream/handle/10986/26300/Carbon%20Tax%20Guide%20-%20Main%20Report%20web%20FINAL.pdf?sequence=1&isAllowed=y.

_____ (2017b). *State and Trends of Carbon Pricing 2017*. Washington D.C. Available from http://documents.worldbank.org/curated/en/468881509601753549/pdf/120810-REVISED-PUB-PUBLIC.pdf.

_____ (2017c), *Public-Private Partnerships: Reference Guide* (version 3), Washington, D.C. Available from https://library.pppknowledgelab.org/documents/4699.

_____ (2017d). *Benchmarking Public-Private Partnerships Procurement 2017*. Washington D.C. Available from https://openknowledge.worldbank.org/bitstream/handle/10986/25089/PPPBenchmarking.pdf?sequence=1&isAllowed=y.

_____ (2017e). Bangladesh development update: more, better, and inclusive jobs can boost growth. Bangladesh Development Update. 27 September. Dhaka.

_____ (2017f). Private Participation in Infrastructure Database. Available from https://openknowledge.worldbank.org/handle/10986/9423.

_____ (2017g). Philippines launches innovative insurance program to boost natural disaster risk management. Press Release, 15 August. Available from www.worldbank.org/en/news/press-release/2017/08/15/philippines-launches-innovative-insurance-program-to-boost-natural-disaster-risk-management.

_____ (2017h). World Development Indicators Database. World Bank (accessed 1 March 2018). Available from https://data.worldbank.org/products/wdi.

_____ (2018a). *Global Economic Prospects, January 2018: Broad-based Upturn, but for How Long? Advance edition*. Washington, D.C. Available from http://documents.worldbank.org/curated/en/965861515772893243/pdf/GEP2018a-embargoed-01092018.pdf.

_____ (2018b). World Enterprise Surveys Database. Available from www.enterprisesurveys.org (accessed 15 March 2018).

World Economic Forum (WEF) (2015). *The Future of FinTech: A Paradigm Shift in Small Business Finance*. Geneva: WEF, Global Agenda Council on the Future of Financing and Capital. Available from www3.weforum.org/docs/IP/2015/FS/GAC15_The_Future_of_FinTech_Paradigm_Shift_Small_Business_Finance_report_2015.pdf.

World Trade Organization (WTO) (2018). Trade growth to sustain momentum in first quarter of 2018, latest trade indicator suggests. 12 February. Available from www.wto.org/english/news_e/news18_e/wtoi_12feb18_e.pdf.

Yano Research Institute (2017). Survey of Japan's crowd funding market. Available from www.yano.co.kr.

Yongyang, Su, and Lan Zheng (2010). The impact of the securities transaction tax on the Chinese stock market. MPRA Paper, No. 26748. Available from https://mpra.ub.uni-muenchen.de/26748/1/MPRA_paper_26748.pdf.

Yoshino, Naoyuki, Masaki Nakahigashi, and Victor Pontines (2017). Attract private financing to infrastructure investment by injecting spillover tax revenues. *Nomura Journal of Asian Capital Market*, vol. 1, No. 2.

Zakariah, Zarina (2017). ASEAN bond markets expand on government incentives and policies. New Straits Times, 24 November. Available from www.nst.com.my/business/2017/11/307001/asean-bond-markets-expand-government-incentives-and-policies.

Zhang, Bryan, and others (2016). *Harnessing Potential:The Asia-Pacific Alternative Finance Benchmarking Report*. Available from http://sydney.edu.au/business/__data/assets/pdf_file/0005/262166/Harnessing-Potential-Report.pdf.

Zou, Roy and Mark Parsons (2016). China regulates online payment business of non-bank players. Hogan Lovells TMT China Brief, Winter/Spring 2016. Available from www.hlmediacomms.com/files/2016/02/China-regulates-online-payment-business-of-non-bank-players-.pdf.

Since the 1957 issue, the *Economic and Social Survey of Asia and the Pacific* has, in addition to a review of the current situation of the region, contained a study or studies of some major aspect or problem of the economies of the Asian and Pacific region, as specified below:

1957: Postwar problems of economic development
1958: Review of postwar industrialization
1959: Foreign trade of ECAFE primary exporting countries
1960: Public finance in the postwar period
1961: Economic growth of ECAFE countries
1962: Asia's trade with western Europe
1963: Imports substitution and export diversification
1964: Economic development and the role of the agricultural sector
1965: Economic development and human resources
1966: Aspects of the finance of development
1967: Policies and planning for export
1968: Economic problems of export-dependent countries. Implications of economic controls and liberalization
1969: Strategies for agricultural development. Intraregional trade as a growth strategy
1970: The role of foreign private investment in economic development and cooperation in the ECAFE region. Problems and prospects of the ECAFE region in the Second Development Decade
1971: Economic growth and social justice. Economic growth and employment. Economic growth and income distribution
1972: First biennial review of social and economic developments in ECAFE developing countries during the Second United Nations Development Decade
1973: Education and employment
1974: Mid-term review and appraisal of the International Development Strategy for the Second United Nations Development Decade in the ESCAP region, 1974
1975: Rural development, the small farmer and institutional reform
1976: Biennial review and appraisal of the International Development Strategy at the regional level for the Second United Nations Development Decade in the ESCAP region, 1976
1977: The international economic crises and developing Asia and the Pacific
1978: Biennial review and appraisal at the regional level of the International Development Strategy for the Second United Nations Development Decade
1979: Regional development strategy for the 1980s
1980: Short-term economic policy aspects of the energy situation in the ESCAP region
1981: Recent economic developments in major subregions of the ESCAP region
1982: Fiscal policy for development in the ESCAP region
1983: Implementing the International Development Strategy: major issues facing the developing ESCAP region
1984: Financing development
1985: Trade, trade policies and development
1986: Human resources development in Asia and the Pacific: problems, policies and perspectives
1987: International trade in primary commodities
1988: Recent economic and social developments
1989: Patterns of economic growth and structural transformation in the least developed and Pacific island countries of the ESCAP region: implications for development policy and planning for the 1990s
1990: Infrastructure development in the developing ESCAP region: needs, issues and policy options
1991: Challenges of macroeconomic management in the developing ESCAP region
1992: Expansion of investment and intraregional trade as a vehicle for enhancing regional economic cooperation and development in Asia and the Pacific
1993: Fiscal reform. Economic transformation and social development. Population dynamics: implications for development
1995: Reform and liberalization of the financial sector. Social security

1996: Enhancing the role of the private sector in development. The role of public expenditure in the provision of social services
1997: External financial and investment flows. Transport and communications
1998: Managing the external sector. Growth and equity
1999: Social impact of the economic crisis. Information technology, globalization, economic security and development
2000: Social security and safety nets. Economic and financial monitoring and surveillance
2001: Socio-economic implications of demographic dynamics. Financing for development
2002: The feasibility of achieving the Millennium Development Goals in Asia and the Pacific. Regional development cooperation in Asia and the Pacific
2003: The role of public expenditure in the provision of education and health. Environment-poverty nexus revisited: linkages and policy options
2004: Poverty reduction strategies: tackling the multidimensional nature of poverty
2005: Dynamics of population ageing: how can Asia and the Pacific respond?
2006: Emerging unemployment issues in Asia and the Pacific: rising to the challenges
2007: Gender inequality continues – at great cost
2008: Unequal benefits of growth – agriculture left behind
2009: Triple threats to development: food, fuel and climate change policy challenges
2010: Multiple imbalances and development gaps as new engines of growth. A regional policy agenda for regaining the dynamism
2011: Regional connectivity and economic integration. Building the productive capacity of the least developed countries
2012: Living with high commodity prices
2013: Developmental macroeconomics: the critical role of public expenditure. Investing in inclusive and sustainable development
2014: Domestic resource mobilization: options for expanding fiscal space
2015: Realizing inclusive growth
2016: Increasing productivity for reviving economic growth and supporting sustainable development
2017: Governance and fiscal management

Photo credits:
Cover: Shutterstock (1039237918)
Chapter 1: Shutterstock (668607322)
Chapter 2: Shutterstock (82651165)
Chapter 3: Shutterstock (742824076)

United Nations publications may be obtained from bookstores and distributors throughout the world. Please consult your bookstore or write to any of the following:

Customers in: America, Asia and the Pacific

Email: order@un.org
Web: shop.un.org
Tel: +1 703 661 1571
Fax: +1 703 996 1010

Mail Orders to:
United Nations Publications
PO Box 960
Herndon, Virginia 20172
United States of America

Customers in: Europe, Africa and the Middle East

United Nations Publications
c/o Eurospan Group
Email: info@eurospangroup.com
Web: un.org/publications
Tel: +44 (0) 1767 604972
Fax: +44 (0) 1767 601640

Mail orders to:
United Nations Publications
Pegasus Drive, Stratton Business Park
Bigglewade, Bedfordshire SG18 8TQ
United Kingdom

For further information on this publication, please address your enquiries to:

Director
Macroeconomic Policy and Financing for Development Division
Economic and Social Commission for Asia and the Pacific (ESCAP)
United Nations Building, Rajadamnern Nok Avenue
Bangkok 10200, Thailand
Tel: 662 288-2011
Fax: 662 288-3007
Email: escap-mpdd@un.org

Economic growth performance in the Asia-Pacific region continues to improve on the back of firmer global demand and stable inflation. The tasks at hand are to ensure that such economic performance is sustained over time, that it benefits everyone and that any adverse environmental implications are minimal.

Financial risks and protectionist trade measures weigh on the near-term macroeconomic outlook, while medium-term challenges, such as lifting the region's potential for economic growth and reducing poverty on a sustained basis, persist. Furthermore, while rapid technological advancements present immense opportunities, they can also pose considerable challenges in terms of job polarization and income and wealth inequalities. China's pursuit of innovative, inclusive and sustainable economic growth could also have important regional impacts through trade, investment and other channels.

The implementation of the necessary policy initiatives will require not only the channelling of existing financial resources of both the public and private sectors towards sustainable development, but also the mobilization of additional financial resources. The *Economic and Social Survey of Asia and the Pacific 2018* contains an examination of how Governments of countries in the Asia-Pacific region could increase domestic public financial resources and leverage private capital to strengthen their long-term economic prospects. It contains estimates on how much additional finance countries may mobilize from such measures as reforms in tax administration or tax incentives, introduction of carbon taxes, prudent sovereign borrowing from financial markets and creation of an enabling environment for public-private partnerships.

"The countries in the Asia-Pacific region are diverse and home to some of the most vibrant economies of the world. Their policies and experiences hold valuable lessons for regional peers and beyond. I commend this timely analysis and policy advice to a wide audience".

António Guterres
Secretary-General of the United Nations

ISBN 978-92-1-120780-4

18-00396