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Regional Economic Outlook

Asia and Pacific

Asia at the Forefront: Growth Challenges for the Next Decade and Beyond

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Contents

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Definitions

In this *Regional Economic Outlook: Asia and Pacific*, the following groupings are employed:

- "ASEAN" refers to Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, unless otherwise specified.
- "ASEAN-5" refers to Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
- "Advanced Asia" refers to Australia, Hong Kong SAR, Japan, Korea, New Zealand, Singapore, and Taiwan Province of China.
- "Emerging Asia" refers to China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.
- "Frontier and Developing Asia" refers to Bangladesh, Cambodia, Lao P.D.R., Mongolia, Myanmar, Nepal, and Sri Lanka.
- "Asia" refers to ASEAN, East Asia, Advanced Asia, South Asia, and other Asian economies.
- "EU" refers to the European Union.
- "G7" refers to Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.
- "G20" refers to Argentina, Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, and the United States.

The following abbreviations are used:

AAM	automatic adjustment mechanism
ASEAN	Association of Southeast Asian Nations
BIS	Bank for International Settlements
CDIS	Coordinated Direct Investment Survey
CPI	consumer price index
CPIS	Coordinated Portfolio Investment Survey
DSGE	dynamic stochastic general equilibrium
DVA	domestic value added
EBA	external balance approach
ECI	economic complexity index
FCI	financial conditions index
FDI	foreign direct investment
FSI	financial soundness indicators
FX	foreign exchange
GDP	gross domestic product
GFCF	gross fixed capital formation

GMM	generalized method of moments
GVC	global value chain
IS	investment saving
LFPR	labor force participation rate
LIC	low-income country
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
PICs	Pacific island countries
QQE	quantitative and qualitative easing
R&D	research and development
REER	real effective exchange rate
RFI	rapid financing investment
TFP	total factor productivity
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
VAR	vector autoregression
VIX	Chicago Board Options Exchange Market Volatility Index
WEO	*World Economic Outlook*
WTO	World Trade Organization

The following conventions are used:

- In tables, a blank cell indicates "not applicable," ellipsis points (. . .) indicate "not available," and 0 or 0.0 indicates "zero" or "negligible." Minor discrepancies between sums of constituent figures and totals are due to rounding.
- In figures and tables, shaded areas show IMF projections.
- An en dash (–) between years or months (for example, 2007–08 or January–June) indicates the years or months covered, including the beginning and ending years or months; a slash or virgule (/) between years or months (for example, 2007/08) indicates a fiscal or financial year, as does the abbreviation FY (for example, FY2009).
- An em dash (—) indicates the figure is zero or less than half the final digit shown.
- "Billion" means a thousand million; "trillion" means a thousand billion.
- "Basis points" refer to hundredths of 1 percentage point (for example, 25 basis points are equivalent to ¼ of 1 percentage point).

As used in this report, the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

Asia at the Forefront: Growth Challenges for the Next Decade and Beyond

1. Overview

Asia has achieved remarkable economic success over the past five decades. Hundreds of millions of people have been lifted out of poverty, and successive waves of economies have made the transition to middle-income and even advanced-economy status. And whereas the region used to be almost entirely dependent on foreign know-how, several of its economies are now on the cutting edge of technological advance. Even more striking, all of this has happened within just a couple of generations, the product of a winning mix of integration with the global economy via trade and foreign direct investment (FDI), high savings rates, large investments in human and physical capital, and sound macroeconomic policies.

Overall per capita income in Asia still substantially lags that in the United States and Europe, but in growth terms, the region is very much at the forefront of the global economy, accounting for more than 60 percent of world growth and projected to grow at 5.6 percent in 2018 and 5.4 percent in 2019. There are signs, however, that the synchronized global recovery of the past few years is starting to fade, and risks to the Asian and global forecast are now tilted to the downside, reflecting increased financial market volatility, rising trade tensions, and slowing momentum in China.

In addition to these short- and medium-term risks, Asia faces important challenges to its long-term growth prospects. One of these relates to trade. While it is difficult to predict how the current situation will unfold, policymakers now confront the possibility of a pronounced and protracted slowdown in trade. If tariffs spiral upward and economies slip toward autarky, global growth would take a substantial hit, and Asia—which already needs to rebalance its trade-driven growth model given weaker medium-term prospects in advanced economies—would be vulnerable.

Population aging is another important long-term challenge. Some countries, such as India, Indonesia, and the Philippines, still enjoy a young population and a growing labor force, but Japan, Korea, Thailand, and several other economies are well past their demographic dividend. As the April 2017 *Regional Economic Outlook: Asia and Pacific* showed, many Asian economies face the risk of "growing old before they grow rich," in that they will not yet have converged to the income frontier by the time the demographic tide begins to turn against them.

Slowing productivity growth is another key challenge for Asia, as it is for other regions. The April 2017 *Regional Economic Outlook: Asia and Pacific* documented the slowdown in Asia since the global financial crisis and identified its main drivers, including declining research and development (R&D) investment, trade openness, and FDI. But firm-level dynamics—the misallocation of resources across firms of differing productivity—can also be an important factor.

Finally, Asia is at the forefront of digitalization, which promises a radical transformation of the global economy, and indeed of society itself, while at the same time threatening substantial disruptions and dislocation. For instance, workers worry that robots will make them obsolete, while financial supervisors are concerned about the risks to financial stability posed by the latest fintech innovations. Handling the possibly bumpy transition to an increasingly digital future will be yet another major challenge for policymakers during the coming decades. At the same time, digitalization may well be a key driver of productivity growth and improved welfare over the long run.

Thus, while Asia is at the forefront of the global economy today, it confronts some fundamental

challenges that may require a shift in the region's growth model. This report and its four background papers take up these issues, suggesting that, with the appropriate policy responses, Asia will be able to meet its challenges and secure its growth prospects. The next section offers a brief description of the current conjuncture, and the following sections analyze trade, productivity, and the digital economy, respectively, presenting highlights of the fuller analyses offered in the background papers. The main policy recommendations are as follows:

- First, **strengthen macro building blocks.** As described in the conjunctural background paper (IMF 2018a), macro policies in Asia have generally been prudent and will need to remain so. Against the backdrop of low inflation and increasing downside risks to a still-strong growth outlook, most economies can afford to keep monetary policy accommodative, while fiscal policy will increasingly need to focus on building buffers, and exchange rates should be kept flexible. Some economies, where inflation is on the rise or capital flows remain volatile, should maintain a tight monetary stance.
- Second, **liberalize trade and investment.** Model simulation exercises in the background paper on trade (IMF 2018b) suggest that recent tariff actions and proposals could weigh heavily on growth. The impact on China's output could be up to 1.6 percent over the first two years, and for the region as a whole, GDP could drop by up to 0.9 percent, although short-term policy stimulus is expected to offset much of the impact, and the effects would fade over time. But more fundamentally, policymakers could take the opportunity to offset the decline in external demand by liberalizing their own trade and investment regimes, particularly in the services sector, so as to boost global and intraregional trade and thus develop a new driver of regional growth. There will be winners and losers, and effecting such reforms will be difficult and will take time, but the aggregate welfare gains would be substantial.
- Third, **strengthen productivity prospects.** As shown in the background paper on productivity growth (IMF 2018c), a decline in firm dynamism, along with growing financial constraints such as excessive leverage, has been an important driver of the slowdown in Asia's productivity growth. Policymakers should ensure active entry and exit so that nonviable "zombie" firms do not absorb resources that could be better deployed in other enterprises, help firms address their debt overhang, and take steps to foster innovation and trade openness.
- Finally, **seize the opportunities of, while addressing the spillovers from, the digital economy.** As discussed in the background paper on the digital economy (IMF 2018d), Asia is already reaping major benefits from digitalization. Digital innovation has accounted for nearly one-third of Asia's per capita growth over the past two decades, e-commerce appears to be associated with higher firm productivity, and digitalization is helping to improve both revenue collection and expenditure targeting. At the same time, aggregate labor dislocations have been less pronounced than what some had feared. That said, policies to soften the labor market impact of new technologies will be of critical importance, as will policies to enhance financial stability. Furthermore, measures to improve education, infrastructure, and regulatory environments may permit digitalization to become an even more important engine of growth in the future than it already is.

In sum, Asia's growth faces some fundamental challenges, but with continued proactive and sound policymaking, the region should have good prospects for staying at the forefront over the coming decade and beyond.

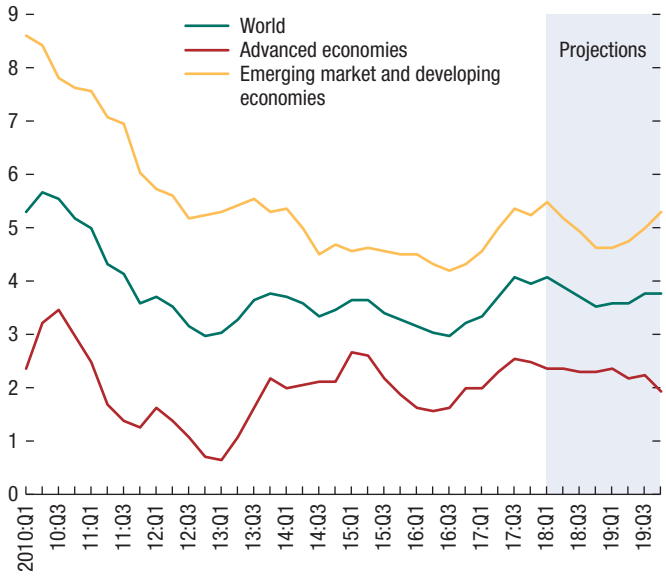
2. Asia as the Cycle Matures

Global Context

The global expansion that began two years ago appears to have peaked and become less synchronized across economies. While economic activity moderated in advanced economies during the first half of 2018 compared to 2017, it remained steady in most emerging economies (Figure 1). Growth was lower than expected in the euro area, Japan, and the United Kingdom. Meanwhile, in the United States, domestic demand continued to be buoyant, underpinned by low unemployment and a historically large, temporary fiscal expansion. Among emerging market economies, growth remained strong in emerging Asia but weakened in Argentina, Brazil, and Turkey. Several downside risks highlighted in the April 2018 *World Economic Outlook* (WEO) have increased or partially materialized, such as rising trade tensions and capital outflows from emerging economies with weaker fundamentals. With this more mixed global growth picture, there are already signs that trade is slowing.

Looking ahead, global growth for 2018–19 is projected at 3.7 percent, 0.2 of a percentage point lower than projected in the April 2018 WEO. The baseline forecast assumes gradually tightening financial conditions and relatively healthy trade growth (since only tariff actions that have already been approved are incorporated in the forecast). Advanced economies are projected to grow at 2.4 percent in 2018 before easing to 2.1 percent in 2019 as output gaps close and monetary policy becomes less accommodative. Emerging market and developing economies are projected to grow at 4.7 percent in both 2018 and 2019. In addition to the revisions to the baseline, risks have shifted to the downside—tied particularly to tightening financial conditions and rising trade tensions, as discussed below—and individual country prospects have changed on account of the differential impact of higher oil prices, tighter financial conditions, and idiosyncratic domestic factors.

Figure 1. Real GDP Growth
(Percent change, year over year)



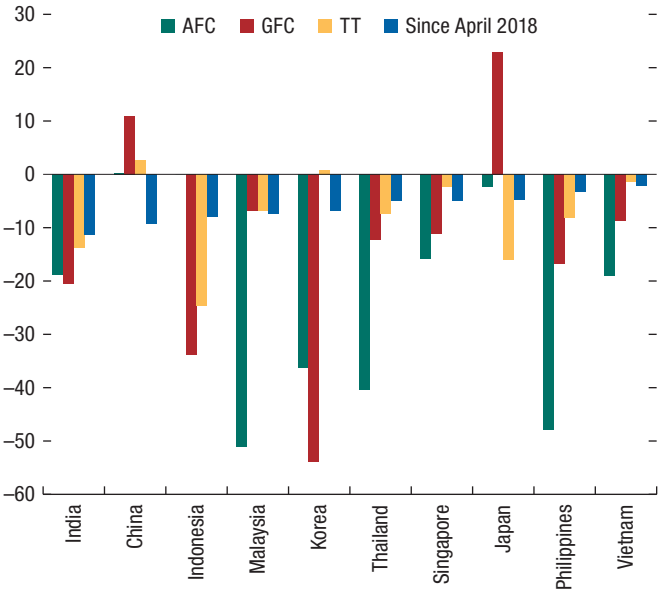
Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Recent Developments in the Region

Growth in the first half of 2018 was softer than in 2017, especially in advanced economies. In contrast, growth remained robust in emerging market economies and broadly in line with expectations. After rising to 6.9 percent in 2017, growth in China continued to be strong into the first half of 2018 but has likely slowed since, given the latest high-frequency indicators, including weakening investment growth. In Japan, after exceeding potential for two years, growth dropped into negative territory in the first quarter of 2018 before rebounding sharply in the second quarter. In India, growth continues to recover steadily after the disruptions related to demonetization and the rollout of the goods and services tax in the last fiscal year.[1] And in ASEAN-4 economies (Indonesia, Malaysia, the Philippines, Thailand), growth generally lost momentum in the first half of 2018, except in Thailand. Turning to price pressures, headline inflation inched up in several economies on account of higher oil prices and currency depreciation. Export growth generally

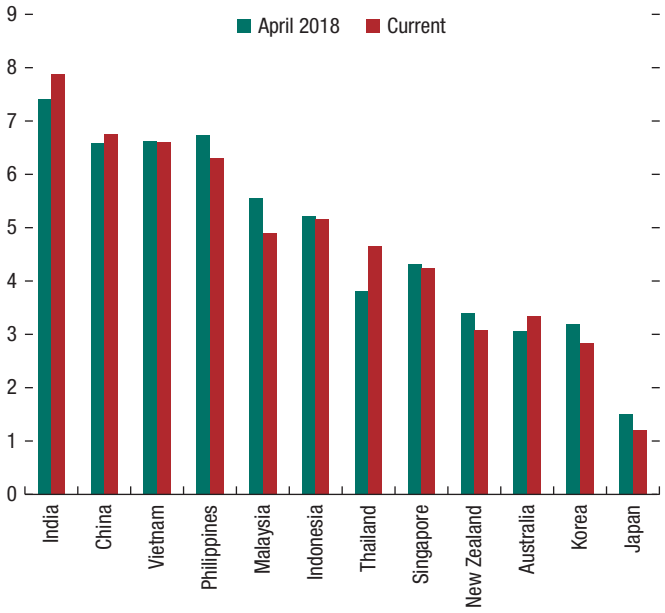
[1]Further country details are available in IMF (2018a).

Figure 2. Bilateral Exchange Rate Movements against US Dollars
(Percent change; positive = local currency appreciation)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: AFC = Asian financial crisis; GFC = global financial crisis; TT = taper tantrum.

Figure 3. Selected Asia: Real GDP Growth
(Percent change; year over year, 2018:H1)



Source: IMF, World Economic Outlook database.
Note: H1 = first half.

slowed in early 2018 but remains strong, while current account balances have narrowed on higher oil prices. Nonetheless, most economies, except China, Indonesia, and the Philippines, have increased their holdings of foreign reserves so far this year.

Financial conditions tightened, especially in Asian emerging market and developing economies, in response to US policy normalization, rising global trade tensions, and the recent volatility in some large emerging market economies. Cumulative portfolio flows in 2018 were far below those in 2016–17 on account of large outflows during the second quarter, with a pickup in nonresident sales of portfolio debt securities as the US dollar started to appreciate. Asian equity indices and exchange rates were negatively affected by trade tensions, while bond yields and spreads generally increased. Some central banks in the region raised policy rates, responding to inflation and exchange rate pressures, while some others directly intervened to support their domestic currencies. The recent volatility of Asian assets has been comparable in some respects to that seen during the taper tantrum, but Asia has been affected much less than other regions, and more tied to developments in China (Figure 2).

Asia's Near-Term Outlook

Notwithstanding the tightening of financial conditions and downside risks discussed below, the near-term outlook for Asia remains positive, supported by steady global momentum and broadly accommodative policies. Asia continues to be the main growth engine of the world and is projected to grow by 5.6 percent in 2018 (unchanged from what was projected in April) and 5.4 percent in 2019, down by 0.2 of a percent from April (Figure 3 and Table 1). Part of the downgrade is attributable to financial market stress and resultant policy tightening in some economies, but recent tariff actions have been another key driver. Indeed, as described below, these actions by themselves would have justified a much sharper growth markdown, but policy stimulus

Table 1. Asia: Real GDP Growth
(Percent change, year over year)

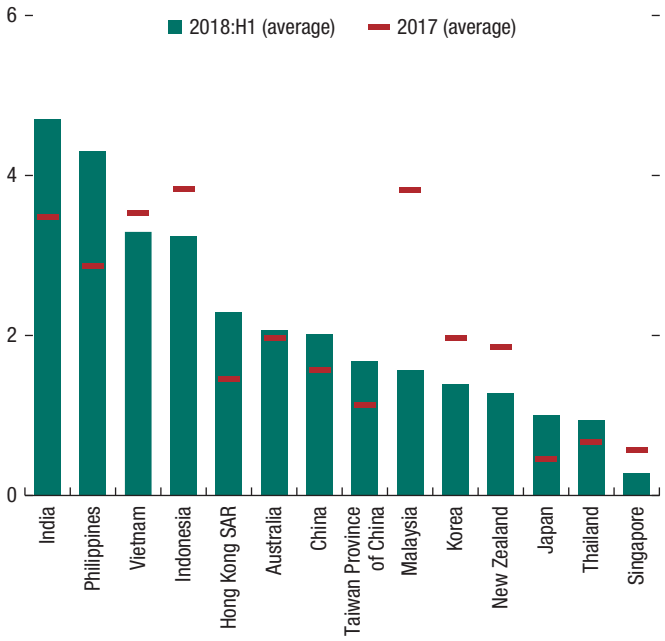
	Estimates and Latest Projections					Difference from April 2018 *World Economic Outlook*		
	2015	2016	2017	2018	2019	2017	2018	2019
Asia	**5.6**	**5.4**	**5.7**	**5.6**	**5.4**	**0.0**	**0.0**	**−0.2**
Advanced economies	**1.8**	**1.7**	**2.4**	**2.1**	**1.8**	**0.1**	**0.1**	**−0.1**
Australia	2.5	2.6	2.2	3.2	2.8	−0.1	0.2	−0.3
New Zealand	4.2	4.1	3.0	3.1	3.0	0.0	0.2	0.1
Japan	1.4	1.0	1.7	1.1	0.9	0.0	−0.1	0.0
Hong Kong SAR	2.4	2.2	3.8	3.8	2.9	0.0	0.2	−0.3
Korea	2.8	2.9	3.1	2.8	2.6	0.0	−0.2	−0.3
Taiwan Province of China	0.8	1.4	2.9	2.7	2.4	0.1	0.8	0.4
Singapore	2.2	2.4	3.6	2.9	2.5	0.0	0.0	−0.2
Emerging markets and developing economies[1]	**6.8**	**6.5**	**6.5**	**6.5**	**6.3**	**0.0**	**0.0**	**−0.3**
Bangladesh	6.8	7.2	7.4	7.3	7.1	0.3	0.3	0.1
Brunei Darussalam	−0.4	−2.5	1.3	2.3	5.1	0.8	1.3	−2.9
Cambodia	7.0	7.0	6.9	6.9	6.8	0.0	0.0	0.0
China	6.9	6.7	6.9	6.6	6.2	0.0	0.0	−0.2
India[2]	8.2	7.1	6.7	7.3	7.4	0.0	−0.1	−0.4
Indonesia	4.9	5.0	5.1	5.1	5.1	0.0	−0.2	−0.4
Lao P.D.R.	7.3	7.0	6.9	6.8	7.0	0.1	0.0	0.0
Malaysia	5.1	4.2	5.9	4.7	4.6	0.0	−0.6	−0.4
Myanmar	7.0	5.9	6.8	6.4	6.8	0.1	−0.5	−0.2
Mongolia	2.4	1.2	5.1	6.2	6.3	0.0	1.2	0.0
Nepal	3.3	0.6	7.9	6.3	5.0	0.4	1.3	1.0
Philippines	6.1	6.9	6.7	6.5	6.6	0.0	−0.2	−0.2
Sri Lanka	5.0	4.5	3.3	3.7	4.3	0.2	−0.3	−0.2
Thailand	3.0	3.3	3.9	4.6	3.9	0.0	0.7	0.1
Vietnam	6.7	6.2	6.8	6.6	6.5	0.0	0.0	0.0
Pacific island countries and other small states	**4.5**	**3.0**	**2.6**	**1.4**	**4.1**	**−0.4**	**−2.3**	**0.2**
Bhutan	6.2	7.3	7.4	5.8	4.8	1.4	−1.3	−2.8
Fiji	3.8	0.7	3.0	3.2	3.4	−0.8	−0.3	0.0
Kiribati	10.3	1.1	3.1	2.3	2.4	0.0	0.0	0.0
Maldives	2.2	4.5	4.8	4.7	5.0	0.0	−0.3	0.0
Marshall Islands	2.0	3.6	2.5	2.3	2.2	0.6	0.5	0.5
Micronesia	3.9	2.9	2.0	1.4	0.9	0.0	0.0	0.0
Nauru	2.8	10.4	4.0	−2.4	−1.0	0.0	0.6	−1.0
Palau	10.1	0.0	−3.7	0.8	2.2	−2.7	−0.2	−1.8
Papua New Guinea	5.3	1.6	2.5	−1.1	3.8	0.0	−4.0	1.2
Samoa	1.6	7.1	2.5	1.8	3.2	0.1	−0.7	0.4
Solomon Islands	2.5	3.5	3.5	3.4	2.9	0.3	0.4	0.0
Timor-Leste	4.0	5.3	−4.6	0.8	5.0	−4.1	−2.0	−0.7
Tonga	3.5	4.2	2.5	2.9	5.5	−0.6	−0.3	2.6
Tuvalu	9.1	3.0	3.2	4.3	4.1	0.0	0.8	1.0
Vanuatu	0.2	3.5	4.2	3.8	3.5	0.0	0.0	0.0
ASEAN[3]	**4.8**	**4.8**	**5.3**	**5.2**	**5.1**	**0.0**	**−0.1**	**−0.2**
ASEAN–5[4]	**4.5**	**4.6**	**5.1**	**5.0**	**4.8**	**0.0**	**0.0**	**−0.3**
EMDEs excluding China and India	**5.1**	**5.1**	**5.5**	**5.5**	**5.4**	**0.0**	**0.0**	**−0.2**

Sources: IMF, World Economic Outlook database; and IMF staff estimates and projections.
[1]EMDEs excluding Pacific island countries and other small states.
[2]India's data are reported on a fiscal year basis. Its fiscal year starts from April 1 and ends on March 31.
[3]ASEAN comprises Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.
[4]ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

from China (and possibly other economies as well) is likely to offset much of the impact. Projected growth in China remains at 6.6 percent for 2018 but has been marked down from 6.4 to 6.2 percent for 2019, with some increase in medium-term risks reflecting a possibly slower pace of deleveraging. In Japan, growth in 2018 has been marked down from 1.2 to 1.1 percent, reflecting the bumpy pattern of quarterly outturns, and over the medium-term growth is projected to converge toward potential. In India, the economy is projected to grow at 7.3 percent in FY2018/19 and 7.4 percent in FY2019/20, revised down by 0.1 and 0.4 percentage point, respectively, on account of higher oil prices and further monetary policy tightening. And in ASEAN-4 economies, growth projections have been revised down except in Thailand.[2]

Inflation across Asia is projected to increase to 2.7 percent in 2018 and 2.9 percent in 2019, reflecting higher commodity prices; however, inflation is expected to remain below target in several economies (Figure 4). Current account balances are expected to narrow with higher oil prices.

Figure 4. Selected Asia: Headline Inflation
(Percent change; year over year)



Sources: CEIC Data Company Ltd.; and IMF staff calculations.
Note: H1 = first half.

Risks to the Forecast

The balance of risks has shifted to the downside in the near term and remains, as in the April 2018 *Regional Economic Outlook: Asia and Pacific*, tilted to the downside over the medium term. While forecasters, including the IMF, systematically underestimated the strength of the recovery over the past couple of years, this trend now appears less likely given outturns in the first half of 2018 and weakening signals from forward-looking indicators. Sources of near-term downside risks include:

- *Escalating trade tensions.* Following tariff increases in early 2018 on washing machines, solar cells, steel, and aluminum, the United States on June 15 announced a list of products imported from China (worth $50 billion) that would be subject to a 25 percent tariff. China announced retaliation on a similar scale. On September 17, the United States announced a further $200 billion in imports from China that would be subject to a tariff starting at 10 percent and rising to 25 percent from January 2019. China, in turn, announced tariffs on an additional $60 billion of US imports. The United States has also suggested that a further $267 billion of goods—covering nearly all remaining Chinese imports—may be hit with tariffs, and it has separately proposed tariffs on the automotive sector that would affect many other countries. Sustained trade tensions could further undermine confidence, hurt financial markets, disrupt supply chains, and discourage investment and trade. Model simulations discussed below suggest that growth in Asia could drop by up to 0.9 of a percent over the next couple of years. Greater protectionism could also make

[2]IMF (2018a) provides a detailed description of the outlook for a range of other countries in the region.

tradable consumer goods less affordable and boost inflation.

- *Tighter global financial conditions*. Signs of higher-than-expected inflation in the United States could lead the US Federal Reserve and other advanced-economy central banks to tighten monetary policy at a faster pace than currently priced in by markets. A sudden deterioration of risk appetite, rising trade tensions, and political and policy uncertainty could also lead to tighter financial conditions. Turmoil already seen in some emerging market economies could worsen, with negative spillovers to Asia through reduced capital flows and higher funding costs. Simulations from the IMF's Flexible System of Global Models suggest that tighter financial conditions could lower Asia's GDP by as much as three-quarters of a percentage point (IMF 2018a).
- *Homegrown risks.* Macro policies in China have been focused on addressing the economy's significant and longstanding financial vulnerabilities, but the shift toward stabilizing growth may mean slower progress on deleveraging and thus heightened medium-term risks for China and the entire region. Economies also face their own domestic risks, including from high private-sector leverage in some countries such as Korea, inflated real estate markets in Australia and Hong Kong SAR, and slower-than-envisaged implementation of structural reforms in India.

Policies to Build Resilience

Policies and reforms should seek to maintain the current expansion, contain risks, and strengthen resilience to the growing downside risks. Policies should also raise medium-term growth and enhance its inclusiveness. Preserving international and regional collaboration remains an important overarching objective. Given the diversity of cyclical positions, structural constraints, and available policy space, specific policy priorities differ across economies:

- As discussed in IMF (2018a), exchange rates should generally be allowed to move flexibly and act as a shock absorber, with foreign exchange intervention used only to deal with disorderly market conditions.
- Monetary policy will then be able to independently address inflation and domestic objectives—currently, with low inflation and negative output gaps in most advanced economies in the region, monetary policy should generally remain accommodative, though a tighter stance would be warranted where inflation is on the rise, or where capital flows remain volatile and balance sheets show significant currency mismatches.
- Financial stability should be addressed by appropriate micro- and macro-prudential measures.
- Fiscal policy should focus on building buffers, supporting inclusive long-term growth, and reducing excessive external imbalances.
- Finally, structural reforms should be pursued to raise potential output and productivity, boost labor force participation—including that of females—and ensure opportunities for all segments of society. As discussed in the following sections, efforts at trade liberalization, measures to boost firm dynamism, and policies to harness the benefits of digitalization while addressing its financial and labor market disruptions will be particularly important structural reform priorities.

3. The Evolving Role of Trade in Asia: Opening a New Chapter[3]

Asia's heavy reliance on trade in general, and its integration in global value chains in particular, have been critical elements behind the region's

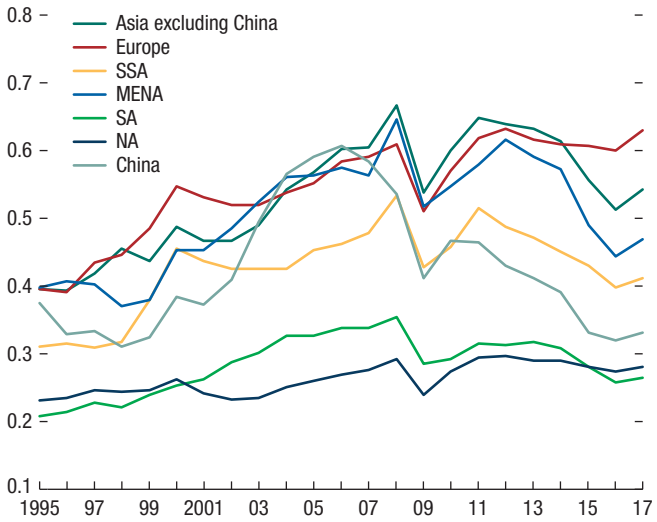
[3]This section is based on IMF (2018b).

stellar growth record. But rising income levels and wages in the region combined with a less buoyant medium-term outlook in advanced economies suggest the need for Asia to reconsider its growth model, currently oriented toward meeting final demand in other regions (IMF 2016, Mano 2016). In addition, China has not exited labor-intensive light manufacturing sectors as quickly as Korea and Japan did in earlier eras, possibly limiting opportunities for the next wave of Asian developing economies and again suggesting the need for a new model (Mathai and others 2016). Finally, the secular decline in manufacturing's share in employment combined with the fast rise in automation (for example, robotics), also points to a needed shift toward tradable services (IMF 2018e).

While Asia confronts this structural transformation, its export-oriented growth model faces an additional threat from increasingly inward-looking policies in advanced economies. Recently enacted tariff and investment-related actions are significant and would weigh on growth—particularly in China—although policy stimulus there is likely to offset some of the impact. Further escalation has been proposed, and this, along with impacts on confidence and financial markets, would have even more substantial economic effects across the region.

On the other hand, a reinvigorated commitment to an open, stable, and rules-based international trade system and negotiations to liberalize trade further at the global level would enhance productivity and raise incomes (IMF, World Bank, and WTO 2017). In Asia, trade restrictiveness and so-called "trade costs" remain high (Cerdeiro and Nam 2018), notwithstanding the progress made in cutting goods tariffs and nontariff barriers in the context of World Trade Organization and regional agreements (ADB 2017). Reinvigorating reforms in areas, such as agriculture, where less progress has been made is important. In addition, opening new areas in services and digital trade could contribute significantly to intraregional and global trade, with Asia being a driver of global demand and economic growth (IMF, World Bank, and WTO 2018).

Figure 5. Trade Openness
(Index)



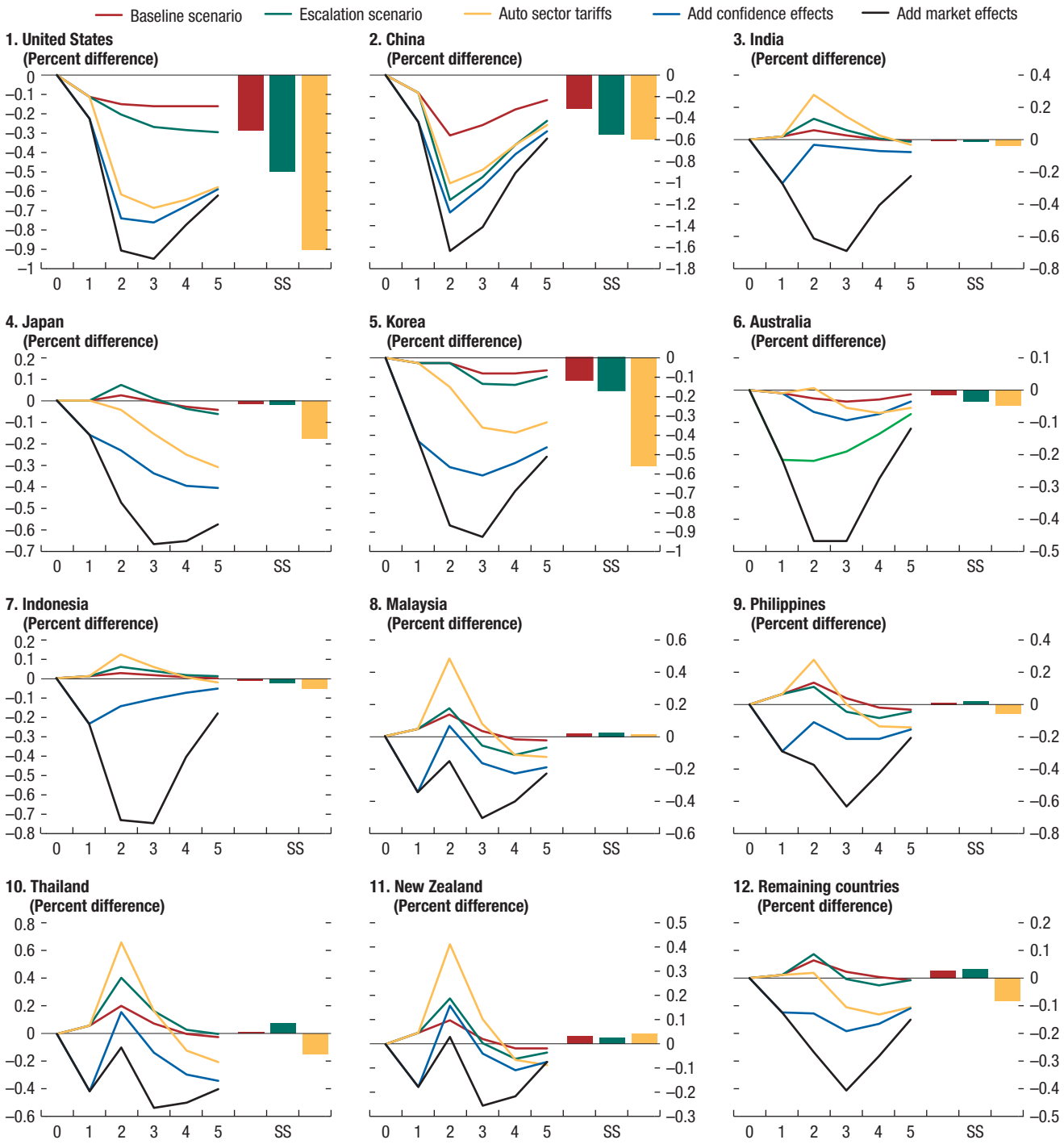
Sources: IMF, *World Economic Outlook*; IMF, Direction of Trade database; and IMF staff calculations.
Note: Europe = Europe and the Commonwealth of Independent States; MENA = Middle East and North Africa; NA = North America; SA = South America, Central America, and the Caribbean; SSA = sub-Saharan Africa.

Key Findings

The second background paper to this report (IMF 2018b) examines how trade has evolved as a driver of growth in Asia and explores the extent to which it can continue to play this role. The paper shows first that trade openness, which rose sharply starting in the late 1990s and early 2000s, has plateaued, and in some cases declined, since the global financial crisis, reflecting both the global trade slowdown and the maturing of global value chains, particularly in China (Figure 5).

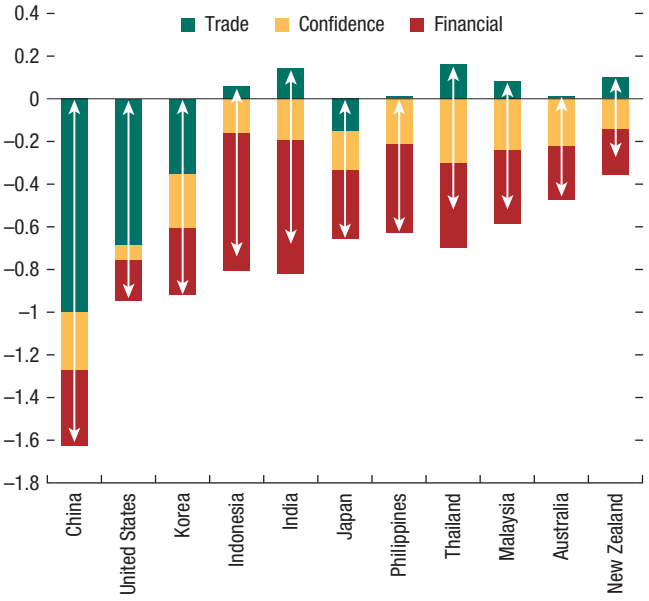
The paper then deploys two complementary models to examine the effects of trade policy changes, consistent with the analysis in the October 2018 *World Economic Outlook*. The effects of recently enacted tariffs and retaliation are small but material, especially for China (red lines in Figure 6). GDP losses would rise substantially should additional tariffs be implemented (green and yellow lines), and particularly so if business

Figure 6. Trade Tension Scenarios—Decomposed by Economy in Asia for Real GDP
(Percent deviation relative to before trade tensions)



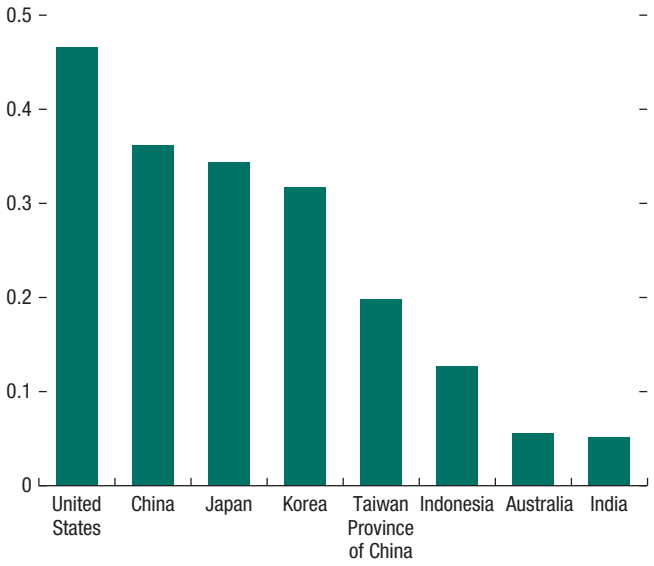
Source: IMF staff calculations.
Note: On the horizontal axes, "SS" is the steady-state outcome. The baseline scenario corresponds to measures that have already been implemented by the United States on steel and aluminum, products imported from China (worth $50 billion) subject to a 25 percent tariff and retaliation from China, and the further $200 billion in imports from China that is subject to a tariff starting at 10 percent and rising to 25 percent by year-end (China, in turn, announced tariffs on an additional $60 billion of US imports) that are included in the World Economic Outlook baseline projections. The escalation scenario estimates the impact of the United States imposing a 25 percent tariff on a further $267 billion of imports from China and China responding by raising both the base that tariffs apply to and the tariff rates such that all goods imports from the United States also face a 25 percent tariff (roughly $130 billion in imports from the United States). The auto sector tariff scenario estimates the impact of the United States following through on the proposal to impose a 25 percent tariff on all imported cars and car parts (worth about $350 billion) and retaliation. The fourth layer estimates the potential impact that rising trade tensions could have on confidence and thus firms' investment plans. The final layer adds the impact of a potential tightening in financial conditions for corporates.

Figure 7. Trade Tension Scenarios: Peak Impacts on Real GDP
(Percent deviation relative to before trade tensions)



Source: IMF staff calculations.
Note: Trade includes baseline, escalation, and auto sector tariffs with confidence and financial market effects as separate layers. Peak responses are generally from 2020.

Figure 8. Total Labor Reallocation in Trade Tension Scenarios
(Percent of initial employment)



Source: IMF staff estimates.

confidence and financial markets were to be affected (blue and black lines). For most countries, the output effects of tariffs would fade after a few years, but there could be substantial lasting effects in China, Korea, and the United States (bars in Figure 6). If all of the channels were in play, enacted and proposed tariffs and retaliation would cause peak GDP losses of 1.6 percent in China and close to 1 percent in the United States; other economies in Asia, many of which supply to China through global value chains and/or are heavily involved in the automotive trade, would also see their economies slowing substantially, and the peak GDP loss for Asia as a whole would be 0.9 percent (Figure 7).[4] Aggregate short-term job losses would likely be limited, but certain sectors—particularly those targeted by specific tariffs—could see sizable impacts (Figures 8 and 9).

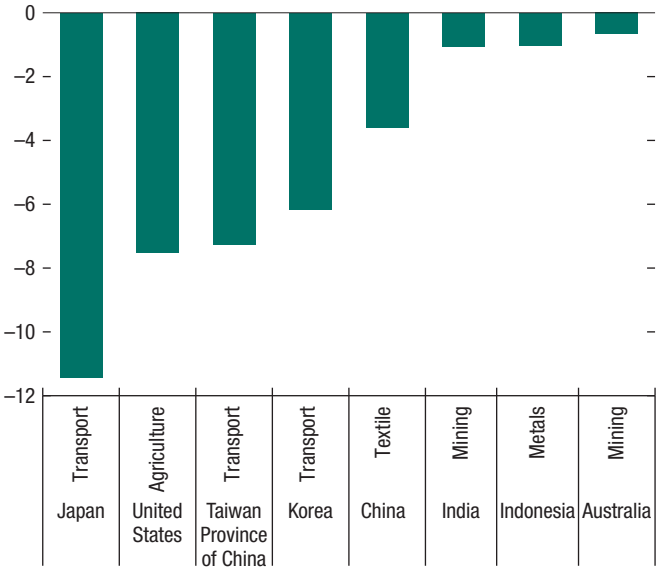
[4]The forecasts in Table 1 above have not been revised down as sharply as this since some of the tariff actions are still just proposals, and also because it is assumed that China implements substantial stimulus to bolster growth.

In the past, tariff reductions by Asian economies helped support growth, but in recent years liberalization efforts have slowed. Asia still suffers from significant trade costs, driven by nontariff barriers. Restrictions on services and foreign investment remain relatively high, and model simulations in IMF (2018b) suggest that there is scope for a new wave of liberalization that could, over time, lift productivity in the region.

IMF (2018b) illustrates three scenarios—one in which China eliminates goods tariffs and reduces nontariff barriers on services for all of its trading partners; another in which all Asian economies open up in this manner to each other; and a third in which all Asia opens up to the whole world (and possibly liberalizes FDI restrictions as well). In all of these scenarios, Asia's trade, productivity, and output increase, as do global trade and output. In the last, most ambitious, scenario, Asia's GDP would rise on average by nearly 12 percent, and some economies could see output increases approaching 20 percent (Figure 10).

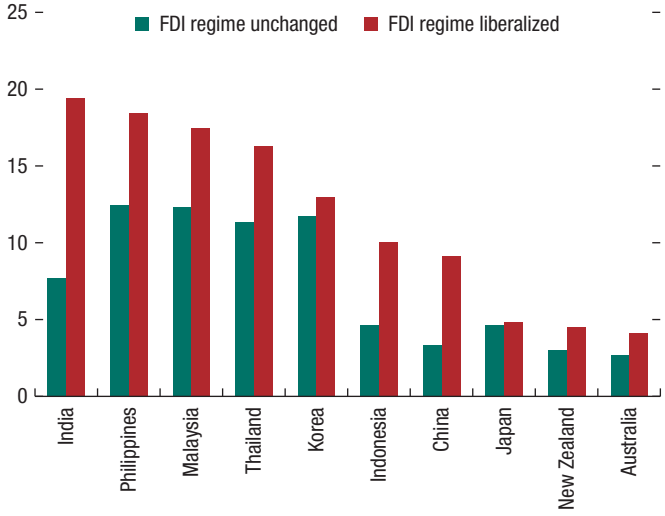
Thus, while today's trade tensions will clearly have a negative impact on the region and the world,

Figure 9. Major Sectors with Large Labor Shedding in Trade Tension Scenarios
(Percent of sector's initial employment)



Source: IMF staff estimates.

Figure 10. Effects of Trade Liberalization and Easing FDI Restrictions
(Percent deviation relative to baseline)



Source: IMF staff calculations.
Note: FDI = foreign direct investment.

Asian policymakers have it within their power to ensure that trade remains important, and in fact becomes more important, as a driver of growth. Multilateral liberalization would be ideal, but plurilateral liberalization within Asia can be a useful second-best solution. The priority should be to reduce nontariff barriers to services trade and liberalize investment regimes, thus promoting intraregional integration as well as global trade. Trade flows within Asia should increasingly cater to final demand within the region, consistent with the rebalancing agenda, with the region thus relying less on manufacturing exports to the rest of the world. And with eased investment restrictions, Asian economies will be better able to diversify their trade structures and move up value chains, playing a greater role in intermediate-goods trade.

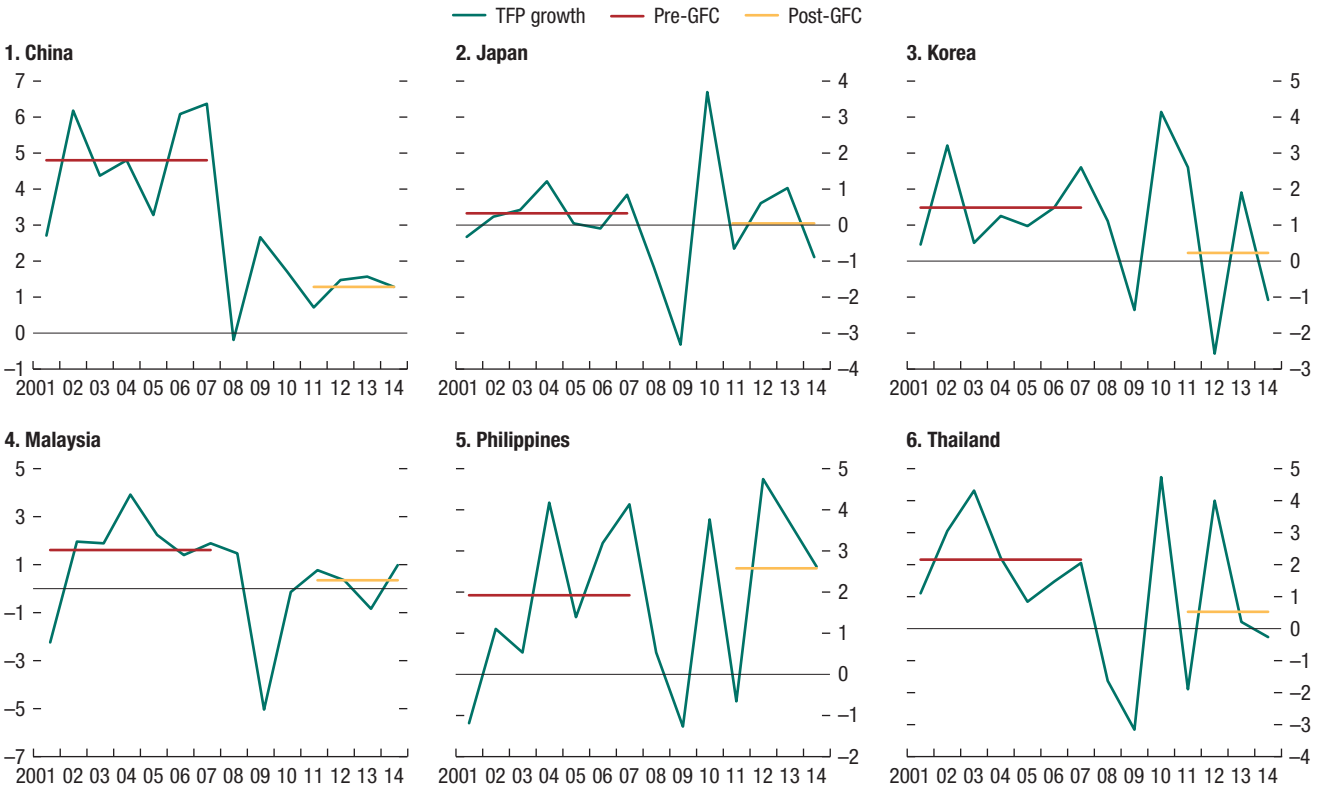
All of this may be easier said than done. Negotiating such reforms would in all likelihood take many years to accomplish, especially since liberalization could create both winners and losers (as also shown in IMF 2018d). And even after reforms were implemented, it would take additional time for their full benefits to be realized. In addition, some nontariff barriers may derive from domestic distortions, which may not be easy to correct. Domestic policies to address trade-related adjustments and ensure that all members of society share in the gains unleashed by liberalization will be critically important. Investment in infrastructure, active labor market policies (such as job search assistance and training programs), and social safety nets could aid structural transformation, augment worker skills, and facilitate re-employment. Efforts to boost productivity growth—including measures to promote greater dynamism at the firm level, as discussed in the next section—would also naturally help to cushion the impact of trade reforms.

4. Productivity Growth in Asia: Boosting Firm Dynamism and Weeding out the Zombies[5]

The April 2017 *Regional Economic Outlook: Asia and Pacific* documented that productivity growth

[5]This section is based on IMF (2018c).

Figure 11. Aggregate Total Factor Productivity Growth



Source: Penn World Tables.
Note: GFC = global financial crisis; TFP = total factor productivity.

in a number of economies in Asia—just as in the rest of the world—slowed after the global financial crisis, and that this slowdown was most severe in the region's advanced economies and in China (Figure 11). In addition, the slowdown was not a temporary phenomenon, but rather has persisted and even become the "new normal" in some economies. IMF (2018c), the third background paper to this *Regional Economic Outlook,* complements the earlier analysis, which was based on national accounts data, by examining firm-level data from the Orbis data set for six advanced and emerging market Asian economies for which sufficient data are available (China, Japan, Korea, Malaysia, the Philippines, and Thailand), during the period 2003–15.

The literature shows growing evidence that firm dynamism—the speed at which businesses are born, grow or decline, and exit—contributes to aggregate productivity growth through the continuous reallocation of resources toward more valued and productive activities (Decker and others 2016). And by the same token, the misallocation of resources across firms with differing productivity levels has been shown to be a major driver of the productivity growth slowdown in other regions. IMF (2018c) examines whether this is true in Asia as well, and whether a loss of firm dynamism has contributed significantly to lower productivity at the macro level.

Against this background, IMF (2018c) takes up three sets of questions:

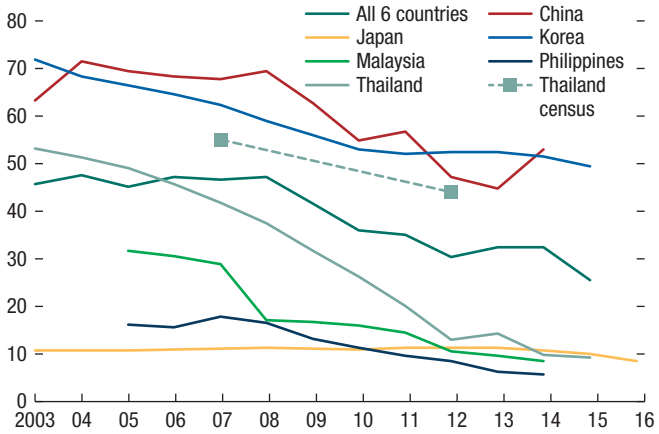
- Which firm characteristics are associated with higher firm productivity in Asia? How important are firm dynamism and related characteristics such as intangible capital deepening?

- To what extent is the presence of firms that are under persistent financial stress (so-called "zombie" firms) an obstacle to achieving higher productivity in Asia?
- To what extent is the region's productivity growth slowdown explained by macro developments such as sectoral shifts (from agriculture to manufacturing, and then to services) or the global financial crisis?

Key Findings

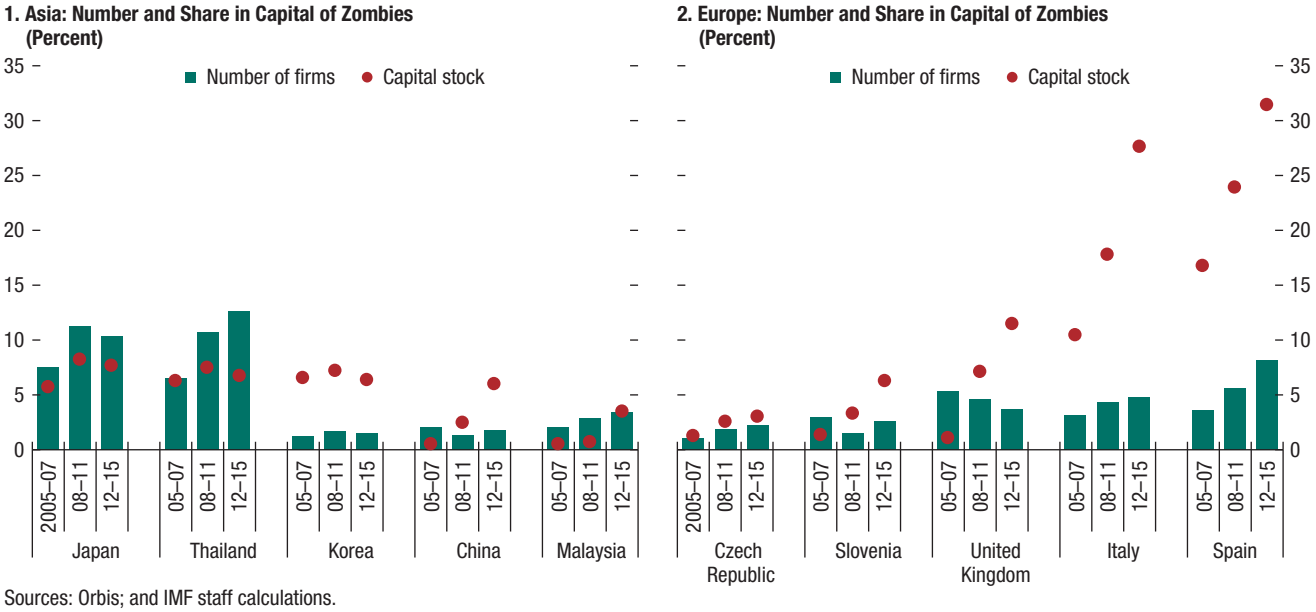
The background paper shows first that firm dynamism has decreased in Asia: the share of young firms has fallen (Figure 12), while that of so-called "zombie" firms—that is, those that are financially distressed, often on account of excessive leverage[6]—has risen (though not yet to levels seen in Italy and Spain) (Figure 13).[7] Moreover, young firms tend to have higher productivity growth

Figure 12. Share of Young Firms
(Percent of all firms; a young firm is a firm with less than 10 years since incorporation)



Sources: Orbis for all series except Thailand census, which is taken from Thailand's industrial census; and IMF staff calculations.

Figure 13. Zombie Shares

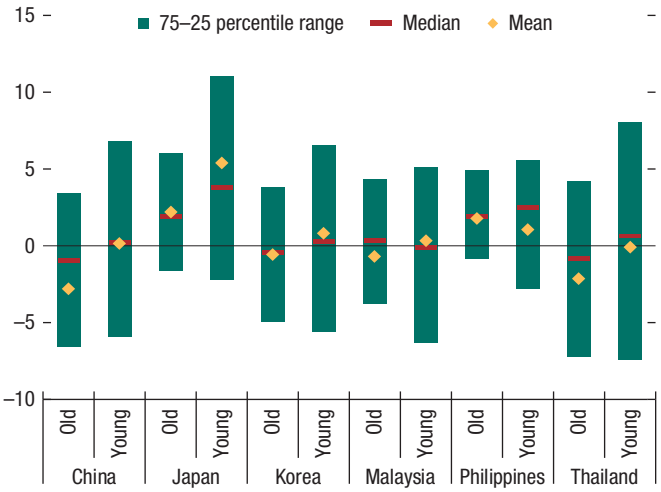


Sources: Orbis; and IMF staff calculations.

[6]We follow the Organisation for Economic Co-operation and Development approach of McGowan and others (2017), which defines a zombie firm as one that is aged 10 years or older and has an interest coverage ratio (ICR) less than one for three consecutive years. The ICR is defined as the ratio of earnings before interest and taxes (EBIT) to interest paid.

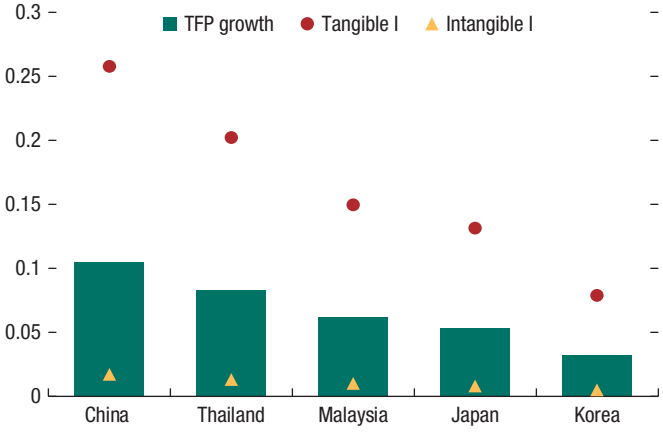
[7]Cross-country comparisons should be interpreted with care given idiosyncratic factors, including varying levels of corporate subsidies and other support.

Figure 14. Average Difference in TFP Growth: Young versus Old Firms, 2014
(Threshold is above/below 10 years since date of incorporation)



Sources: Orbis; and IMF staff estimates.
Note: TFP = total factor productivity.

Figure 15. Loss for a Typical Non-Zombie Firm due to Increase in Zombie Share from 2005–14
(Percentage points)

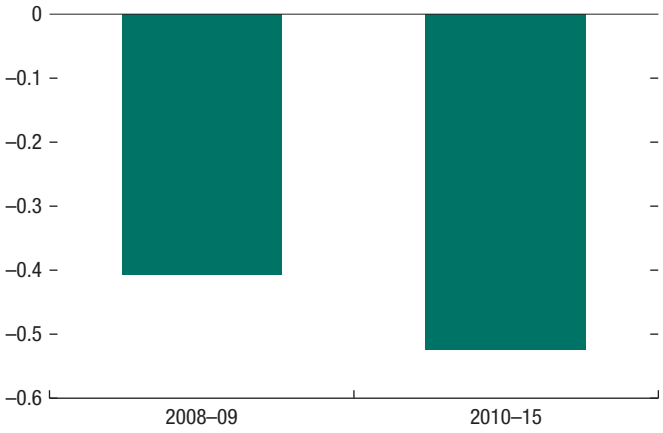


Sources: Orbis; and IMF staff calculations.
Note: I = investment; TFP = total factor productivity.

(Figure 14), while zombie firms not only have low productivity growth but also tend to reduce the productivity of other firms by absorbing financial, labor, and other resources that others could have used more effectively (Figure 15). Separately, IMF (2018c) establishes that higher productivity growth at the firm level is associated with investing more in intangible assets (for example, by conducting more R&D), belonging to exporting sectors, or being foreign-owned. In sum, these analyses suggest that forces at the firm level have been important determinants of Asia's productivity growth slowdown.

IMF (2018c) also examines the extent to which macroeconomic factors, such as the global financial crisis and sectoral shifts, have affected productivity. The econometric analysis shows that the global financial crisis led to a sharp drop in productivity at the firm level—one possible explanation is that firms were unable to shed labor and decommission capital as quickly as demand contracted, and thus their output fell more than their inputs did. If this explanation were the entire story, however, then the effect of the global financial crisis on productivity should have been temporary, as firms would

Figure 16. Impact of Precrisis Leverage on Post-GFC TFP Growth
(Percentage points)



Source: IMF staff calculations.
Note: GFC = global financial crisis; TFP = total factor productivity.

eventually have adjusted. The background paper shows, however, that the global financial crisis had a lasting impact on productivity, and this is through a financial channel—more highly leveraged firms had persistently lower tangible and intangible investment, which in turn led to lower productivity growth (Figure 16).

As for sectoral shifts, IMF (2018c), the third background paper to this *Regional Economic Outlook: Asia and Pacific*, shows that these were important in explaining some of the productivity slowdown for China but do not seem to have played a significant role as drivers of firm productivity in the other countries examined, possibly because the structural transformation was already more advanced in those economies.

Policy Implications

The above findings suggest that the productivity growth slowdown was not, in most economies, an inevitable product of macroeconomic trends, but rather was driven significantly by declining firm dynamism and by financial constraints, especially excess leverage. These are factors that can be influenced by policy, and the paper suggests that policymakers should focus on three areas in particular:

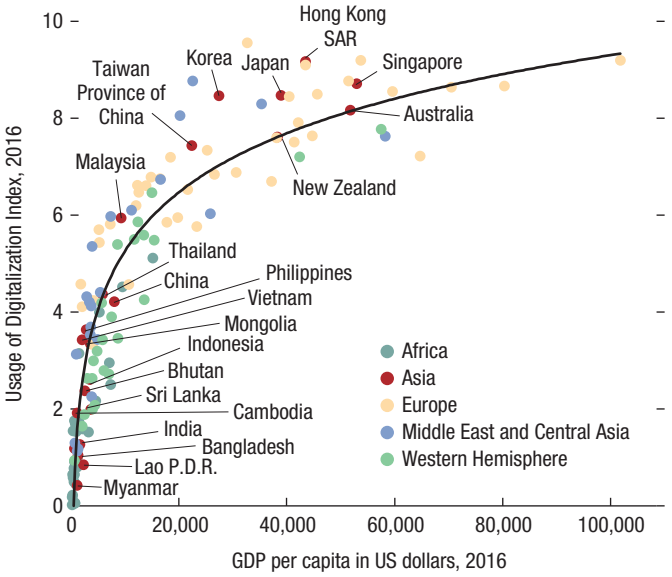
- *Fostering firm dynamism.* This would require supportive policies to foster an environment that is more conducive to innovation and to facilitate resource reallocation through the exit of nonviable firms. Entry and exit barriers should be eased, including by: (1) improving insolvency regimes and removing support schemes that keep distressed firms in operation; (2) lifting barriers to competition in goods markets; and (3) promoting increased labor market flexibility.
- *Addressing debt overhang and avoiding buildup of excessive leverage.* This could be achieved by: (1) facilitating judicious debt resolution and corporate restructuring plans to address weak balance sheets; (2) adopting the proper institutional frameworks and implementing supportive tax measures; and (3) introducing appropriate micro- and macro-prudential regulations to contain leverage. Tax and other policies that reduce firm leverage could stimulate firm dynamism and thus growth. By shifting the capital structure from debt to equity, an allowance for corporate equity would reduce leverage and boost firm investment in both tangible and intangible capital.
- *Fostering innovation and trade openness*. Fiscal incentives for R&D are already in place in some parts of Asia, and their scope could be broadened. Strengthening intellectual property rights regimes while avoiding undue limitations on competition could also incentivize R&D, as could competition for research grants. Separately, policymakers should continue to open their economies to international trade and foreign investment, as the stimulus from competition and knowledge transfer support higher TFP growth. In this respect, current trade tensions could dampen trends toward intangible capital deepening in Asia by increasing policy uncertainty for firms.

5. The Digital Revolution in Asia: Disruptor or New Growth Engine (or Both)?[8]

The final challenge for Asia addressed in this *Regional Economic Outlook: Asia and Pacific* is how to reap the potential benefits of the digital revolution while minimizing its costs. While digitalization and automation are not new, they have accelerated in recent years, and a new wave of innovation—triggered by advances in artificial intelligence, robotics, computing power, and cryptography, as well as the explosion of big data—is reshaping the global economy. More so than during past periods of innovation, including the spread of personal computers in the 1980s and the rise of the internet in the 1990s, today's technological advances are multiple and overlapping, creating synergies and accelerating outcomes. The digital revolution is affecting all sectors and activities of the economy, with a far-reaching social and economic impact. The new technologies are general-purpose in nature, with the potential—over time—to transform the global economy, substantially boost productivity, and fundamentally alter the way humans live and

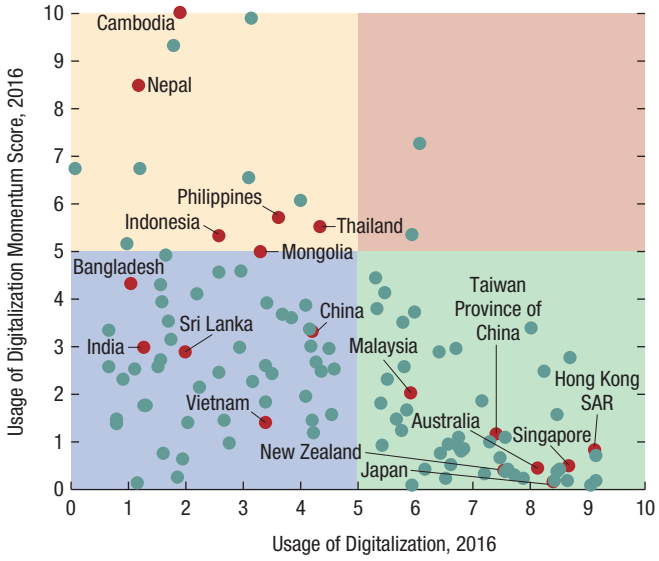
[8]This section is based on IMF 2018d.

Figure 17. GDP per Capita and Usage of Digitalization
(Index 0–10)



Sources: IMF, *World Economic Outlook*; International Telecommunication Union; and IMF staff calculations.

Figure 18. Digital Usage: Level and Momentum
(Index 0–10; Momentum change 2012–16)



Sources: IMF, *World Economic Outlook*; International Telecommunication Union; and IMF staff calculations.

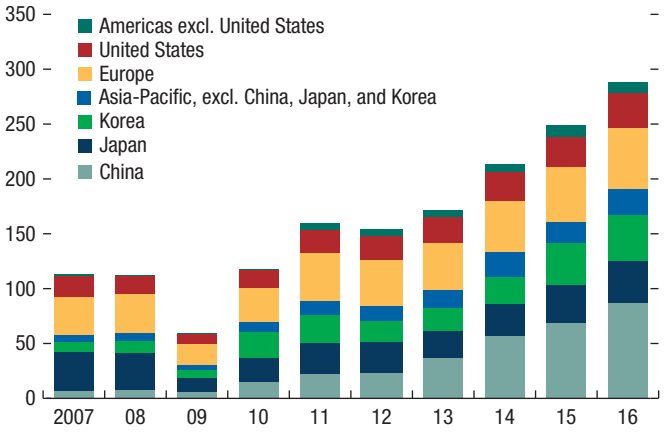
work, much as the steam engine and electricity did. That said, history suggests that such benefits may be observed only with a delay—after a sufficient stock of the new technology and complementary innovations, as well as the capital investments to implement them, are built up. And by the same token, the substantial disruptions and dislocations that may occur may also take place only over time. It is likely that neither the opportunities nor the challenges related to digitalization have yet become fully apparent.

The Digital Landscape in Asia

As discussed in the fourth background paper to this report (IMF 2018d), Asia has been at the forefront of the digital revolution, though with heterogeneity across the region. There are Asian players in the lead in nearly every aspect of digitalization, while some economies lag significantly behind. In fact, the region has the highest dispersion of economies in terms of the adoption of digital technologies—not surprising given that Asia covers the entire income spectrum. Nonetheless, at any given income level, Asian economies are at the frontier relative to their global peers (Figure 17), and moreover, even for relatively poor Asian economies, digitalization is accelerating—as shown in Figure 18, several Asian economies that currently have low levels of digital usage are increasing those levels rapidly.

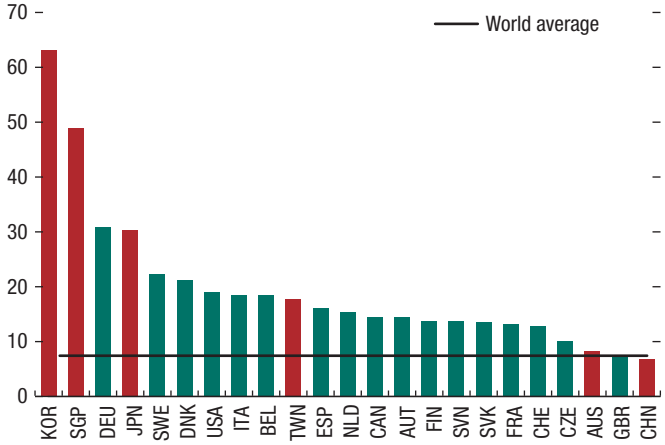
Turning to specific components of the digital economy, automation via industrial robots is one area in which some economies in Asia are clearly at the forefront. These robots are used almost exclusively in manufacturing, and with Asia being the "factory to the world," it is perhaps to be expected that a full two-thirds of the world's industrial robots are employed in the region. The use of these robots has accelerated since 2010: China is now the single biggest user (accounting for some 30 percent of the market), and in 2016 China, Japan, and Korea each employed more robots than the United States (Figure 19). But this is not merely because Asia does a lot of manufacturing. Robot density (the number of industrial robots per 1,000 workers) is high and rising fast in several Asian economies (Figure 20), attesting to their rapid and extensive adoption

Figure 19. Worldwide Destination of Industrial Robots, by Region
(Thousands of units)



Sources: International Federation of Robotics 2017; and IMF staff calculations.

Figure 20. Robot Density in Manufacturing, 2016
(Number of industrial robot stock, per 1,000 employees)



Source: International Federation of Robotics 2017.
Note: Data labels in the figure use International Organization for Standardization (ISO) country codes.

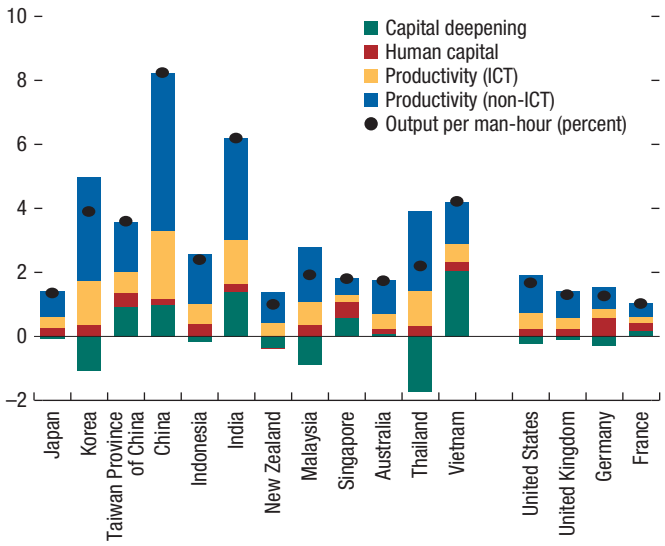
of these new technologies—indeed, Korea and Singapore are the global leaders in robot density, followed by Germany and Japan. Finally, Asia is a leader not only in the use of robots, but also in their production— Japan and Korea are the world's top two producers, with market shares of 52 and 12 percent, respectively.

E-commerce and fintech are other areas in which Asia leads. For instance, China accounted for less than 1 percent of global e-commerce retail transaction value about a decade ago, but that share has grown to more than 40 percent, and the penetration of e-commerce (as a share of total retail sales) now stands at 15 percent, compared to 10 percent in the United States. E-commerce penetration is lower in the rest of Asia, but it is growing fast—Lazada, for example, offers millions of products to online shoppers in Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. In terms of fintech, Asian economies have made significant progress, in many cases leapfrogging into new types of technology. For example, in 2016, mobile payments made by individuals for consumption purchases totaled $790 billion in China, 11 times the size of such payments in the United States. Finally, for better or worse, Asia has been a leader in cryptoassets, including initial coin offerings (ICOs). Before China tightened regulations, more than 90 percent of Bitcoin trading volumes were against the renminbi, and some small states in the region have even been approached by private investors to adopt cryptoassets as legal tender, causing serious legal and regulatory concerns.

Asia's Growth: From Perspiration to Digital Inspiration

All of these technological advances may eventually lead to a dramatic boost in productivity and GDP growth, just as happened—albeit with a lag—during earlier industrial revolutions. But the fact is that Asia has already benefited immensely from digitalization. As shown in IMF (2018d), the diffusion of global innovation was the key driver of growth in Asia over the past two decades, with digital innovation alone accounting for about 28 percent of per capita growth (Figure 21). The digital component of GDP, proxied most narrowly by the share of the information and communications technology (ICT) sector, is relatively large in many Asian economies. Asia is home to seven of the world's top 10 economies in terms of the ICT share of GDP. The sector has also been growing substantially faster than overall

Figure 21. Sources of Economic Growth
(Percentage points; 1995–2016)



Source: IMF staff estimates.
Note: ICT = information and communication technology.

GDP—twice as fast in India and Thailand, and nearly four times as fast in Japan. Digitalization can also boost the productivity of non-ICT sectors. IMF (2018d) finds, for instance, that a 1 percent increase in the overall digitalization of the Chinese economy is associated with a 0.3 of a percent increase in GDP growth. Innovation in Asia is tilted toward the digital sector, further highlighting the potential of digitalization to boost growth.

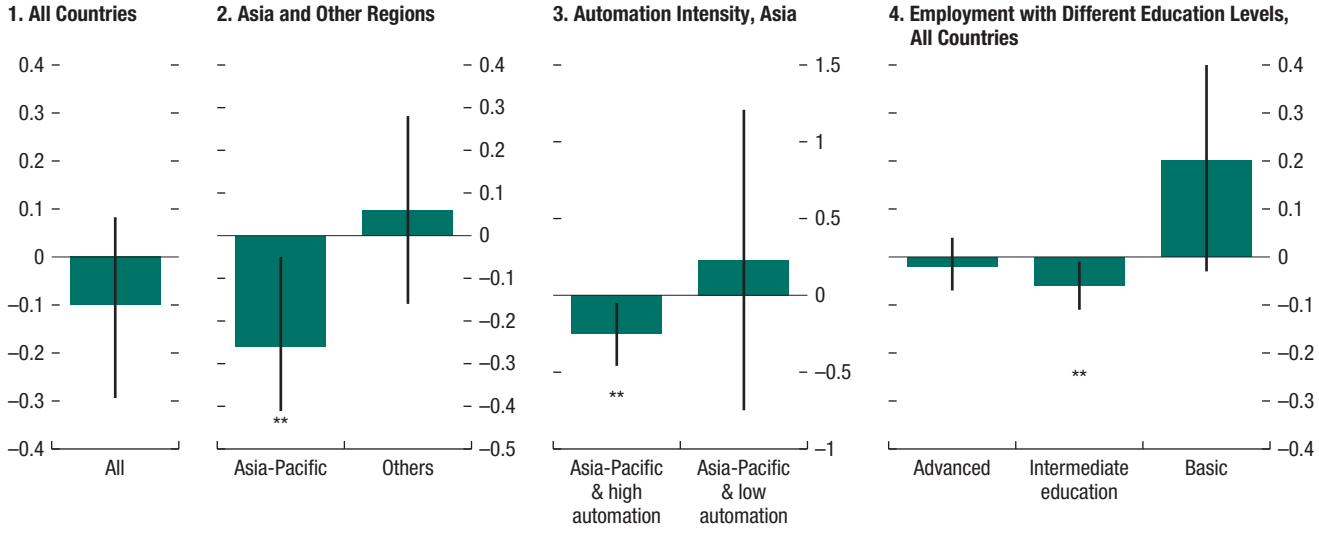
Automation and the Future of Work

As noted above, digitalization can bring disruption as well as higher growth, and one of the main areas of concern is the labor impact of automation. Using an approach pioneered by Acemoglu and Restrepo (2017), IMF (2018d) analyzes the impact of robot usage on manufacturing employment across a large sample of economies in Asia, Europe, and the Americas. Contrary to some observers' worst fears, the paper finds no evidence that robots destroy jobs on net—that is, the productivity-enhancing (and thus job-creating) effects of industrial robots have offset the displacement effect (in other words, the destruction of old jobs). Restricting attention to Asia, however, there is a slight negative impact on overall manufacturing employment, and particularly so in certain heavily automated sectors like electronics and automobiles (Figure 22, panel 1 to 3). Furthermore, like other research, IMF (2018d) finds that workers with medium-level education are more vulnerable to displacement than those with either low or high education levels (Figure 22, panel 4). Interestingly, however, in Japan, with its aging population and declining labor force, increased robot density in manufacturing is associated not only with greater productivity, but also with local gains in employment and wages (IMF 2018d). Japan's experience suggests that other Asian economies such as China, Korea, and Thailand, which will face similar demographic trends in the future, may also benefit from automation.

E-commerce as a Growth Driver

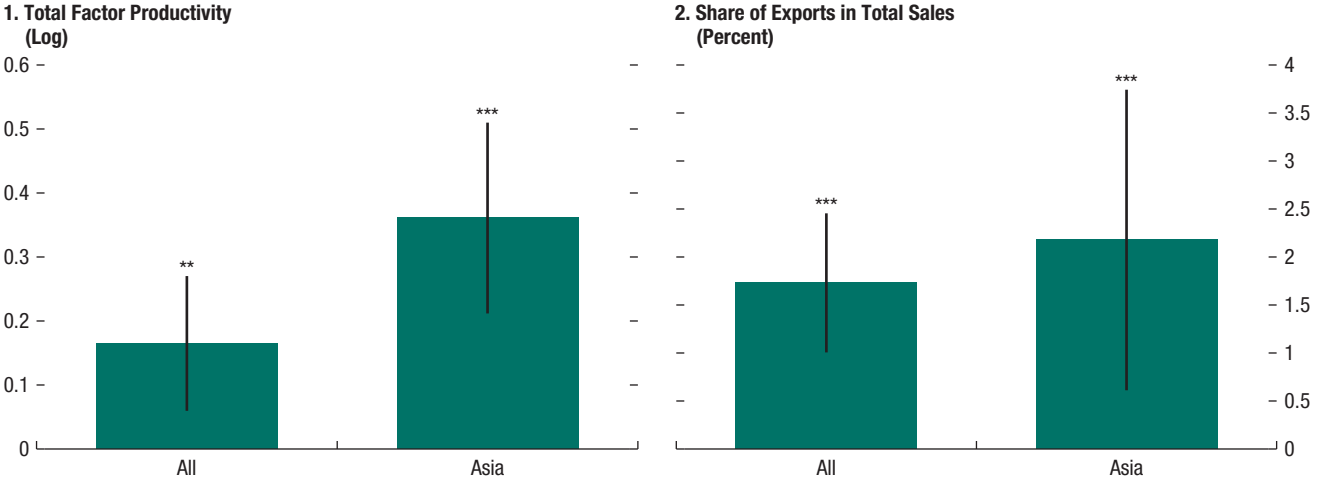
Another fast-growing and important digital area is e-commerce. E-commerce has the potential to support growth and rebalancing. For consumers, e-commerce may translate into better access to a wider range of products and services at lower prices, ultimately boosting consumption. A study by McKinsey (Dobbs and others 2013) shows that while 60 percent of internet spending in China represents purchases diverted from traditional retail to the online channel, close to 40 percent represents incremental (new) consumption—in other words, e-commerce can substantially bolster aggregate consumption. For firms, e-commerce could also provide new business opportunities and access to larger markets and may thus support investment. The econometric analysis in IMF (2018d) shows that participation in online commerce is associated with more than a 30 percent increase in total factor productivity at the firm level in Asia, and a 50 percent increase in exports (Figure 23). Interestingly, e-commerce seems to be especially beneficial for small firms in Asia.

Figure 22. Estimated Effect on Manufacturing Employment Growth
(Percentage points, associated with one more robot per 1,000 workers, 2010–14)



Sources: International Federation of Robotics 2017; World Input-Output database; International Labor Organization; and IMF staff calculations.
Note: Figure is based on regressions of the changes in manufacturing employment on the changes in robots per 1,000 employees during the period 2010–14. Panels 1 to 3 are based on 14 manufacturing subsectors in 40 countries, and panel 4 is based on countries for which education breakdown of employment data are available. Intermediate education refers workers with upper secondary and postsecondary non-tertiary education. Bars show the estimated total effects calculated based on the estimated coefficients for each specified group in the horizontal axis. Error bars refer to the 95 percent confidence interval.
$^{**}p < 0.05$.

Figure 23. Estimated Impacts of E-commerce Participation on Productivity and Export



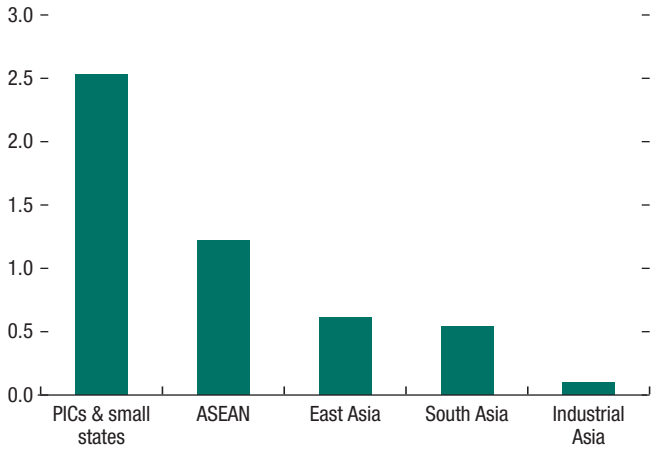
Sources: World Bank, Enterprises Surveys; and IMF staff calculations.
Note: Panels 1 and 2 illustrate coefficients and confidence intervals from two firm-level estimations: (1) the impact of e-commerce participation on total factor productivity controlling for firms' age, size, foreign ownership, and export status; and (2) the impact of e-commerce participation on the share of exports in total sales controlling for firms' size, age, and foreign ownership. The error bars refer to the 95 percent confidence intervals around the estimated coefficients. For Asia, the estimated coefficients imply that participation in e-commerce is associated with more than a 30 percent increase in total factor productivity and an increase in the share of exports to total sales by about 2 units, corresponding to a 50 percent rise.
$^{**}p < 0.05$; $^{***}p < 0.01$.

Digitalization of Finance

Turning to the financial sector, fintech can support potential growth and poverty reduction by strengthening financial development, inclusion, and efficiency. By leveraging the widespread increase in access to cell phones, fintech can help millions of individuals and small and medium enterprises, particularly in poor Asian economies, leapfrog access to financial services at an affordable cost, for example, through the development of fintech-enabled micro loans and accessible tools for bookkeeping and accounting. Fintech may also drive substantial efficiency gains by enabling the financial sector to provide more efficient cross-border payments and remittances, and in turn reducing counterparty risk and decreasing costs for market participants.

At the same time that fintech offers efficiency and inclusion benefits, however, it also poses risks to the financial sector if its applications undermine competition, monetary policy transmission, financial stability and integrity, and consumer and investor protection. These technologies may disrupt the business models of established financial institutions and lead to a migration of activities outside the regulated sector. IMF (2018d) finds that economies with a greater propensity for technological leapfrogging have also tended to see falling levels of traditional financial infrastructure, particularly bank branches. Unlike US tech companies, which face a different regulatory environment, Asian tech giants, such as Alibaba, Tencent, and Baidu in China and GO-JEK in Indonesia, have become important providers of financial services, putting competitive pressures on traditional financial institutions. Cryptoassets may pose risks related to money laundering, tax evasion, circumvention of capital controls, and other forms of illicit activity. As the financial system goes digital, cyber risks will increase further.

Figure 24. Potential Import-VAT Revenue Gains from Closing Half the Distance to the Digitalization Frontier, 2016
(Percent of GDP)



Sources: IMF, *Fiscal Monitor*; and IMF staff calculations.
Note: ASEAN = Association of Southeast Asian Nations; PICs = Pacific island countries; VAT = value-added tax.

Digitalization to Strengthen Public Finance

Finally, digitalization—which is correlated with good institutions and performance—presents opportunities for improving public finance in Asia. While there are risks of erosion of the tax base, these can be addressed with policies to enhance data sharing and withholding mechanisms. Indeed, by improving reporting of transactions, the adoption of digitalization by governments should facilitate increases in value-added tax (VAT), tariff, and other revenues. Moreover, if Asian economies were to move halfway to the global frontier, import VAT revenue could rise by 0.6 of a percent of GDP, and for Asian small states, which are typically further from that frontier, estimated revenue gains are on the order of 2½ percent of GDP (IMF 2018d) (Figure 24). Digitalization can also enhance public financial management and improve the efficiency of public spending, including via the targeting of social assistance, thus making fiscal policy more inclusive, fair, and ultimately sustainable.

Policies for the Digital Age

While the digital revolution is inevitable, the outcome—utopian or dystopian—will depend partly on policies. To realize the potential of the digital revolution, comprehensive policies, and fresh thinking are needed. For policymakers, the first hurdle is to accept that the digital revolution is inevitable. Policy responses will need to strike the right balance between enabling digital innovation and addressing digitalization-linked risks. Policies to harness digital dividends include revamping education to meet the demand for more flexible skill sets and lifelong learning, as well as new training, especially for the most adversely affected workers; reducing skill mismatches between workers and jobs; investing in physical and regulatory infrastructure that spurs competition and innovation; and addressing labor market and social challenges, including income redistribution and safety nets.

Policy priorities differ across Asia (and the world), as economies' initial conditions are different. But considering the inherent global reach of these technologies, regional and international cooperation will be key to developing effective policy responses, and the IMF can play an important role in this regard.

Policies to soften the labor market impact of new technologies can improve welfare. The more willing society is to support the necessary transition and provide support to those who are left behind, the faster will be the pace of innovation that society can accommodate while still ensuring that the outcomes improve welfare, with all members of the society better off. With the right policies, the digital revolution could be a new engine of growth and prosperity for Asia and the world.

6. Keeping Asia at the Forefront

Asia is the world's most dynamic economic region. But it faces a number of serious challenges over the medium to long term—that its trade-reliant growth strategy will no longer be viable (at least in its current form), that population aging will weigh on many dimensions of economic performance, that productivity growth may not accelerate again, and that the ongoing digitalization of its economies may lead to major disruptions even as it boosts productivity over time.

What these forces will mean for the region's future is squarely in the hands of Asian policymakers. Global trade tensions may well persist, and opportunities to export to advanced economies may be diminished. But Asia can offset this and create a new source of regional growth by liberalizing its relatively restrictive trade and investment regimes—particularly in services—and thus boosting intraregional trade. Productivity growth may be lagging, but policies to improve entry and exit and to help firms resolve their debt situation will help address some of the key micro-level drivers of the slowdown. And in terms of the digital economy, as discussed above, there is an important role for policymakers to play in developing education, infrastructure, and regulatory environments to allow their economies to reap the full benefits of digitalization and ensure that it can be a key growth engine, while taking steps to soften the accompanying labor market and other adjustments. While addressing these specific challenges, Asian policymakers will also need to do their part in ensuring continued regional and global policy collaboration, including via their engagement with, and governance of, global institutions.

To sum up, Asia's growth may face serious challenges, but with continued sound policymaking, the region should have good prospects for staying at the forefront over the coming decade and beyond.

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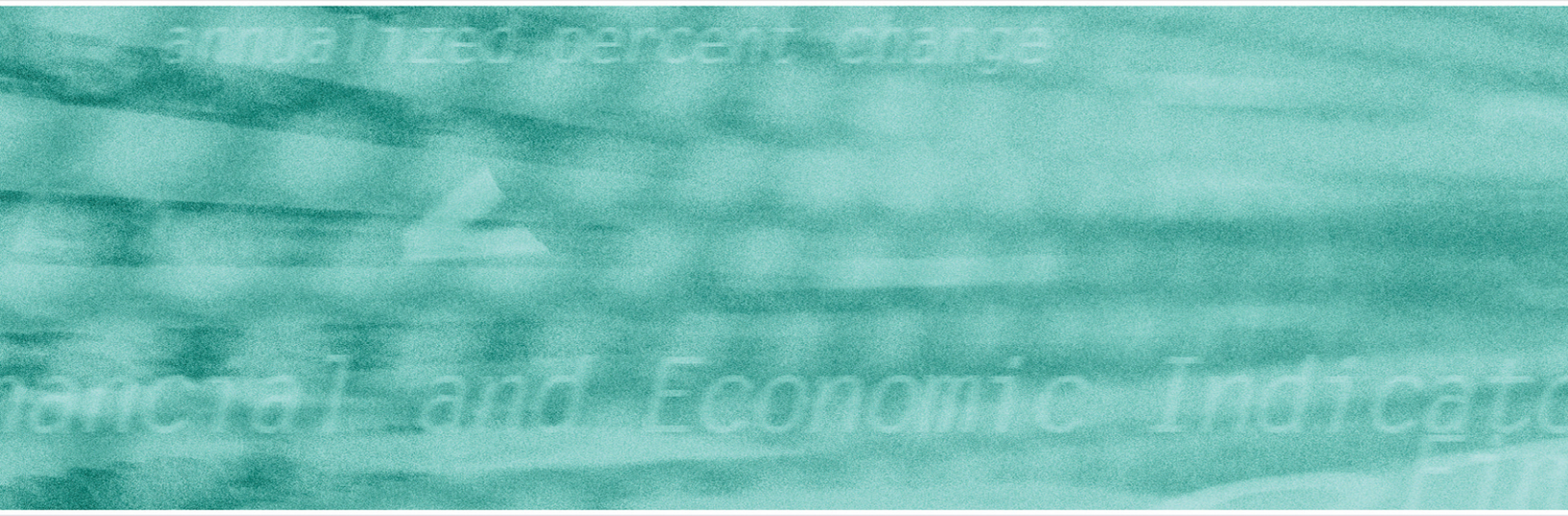

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