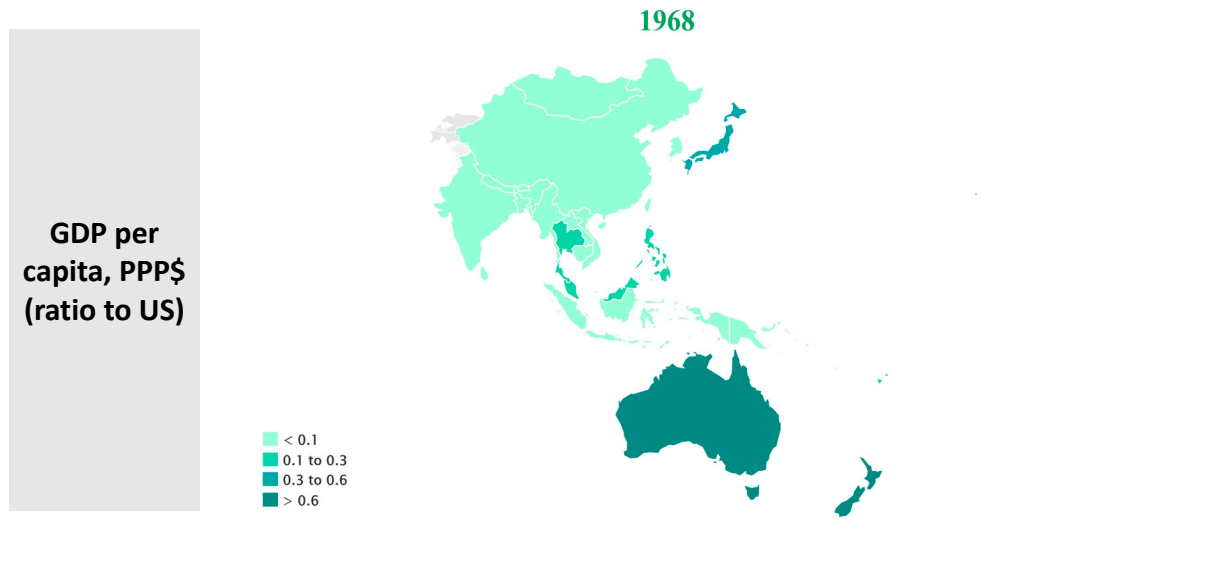
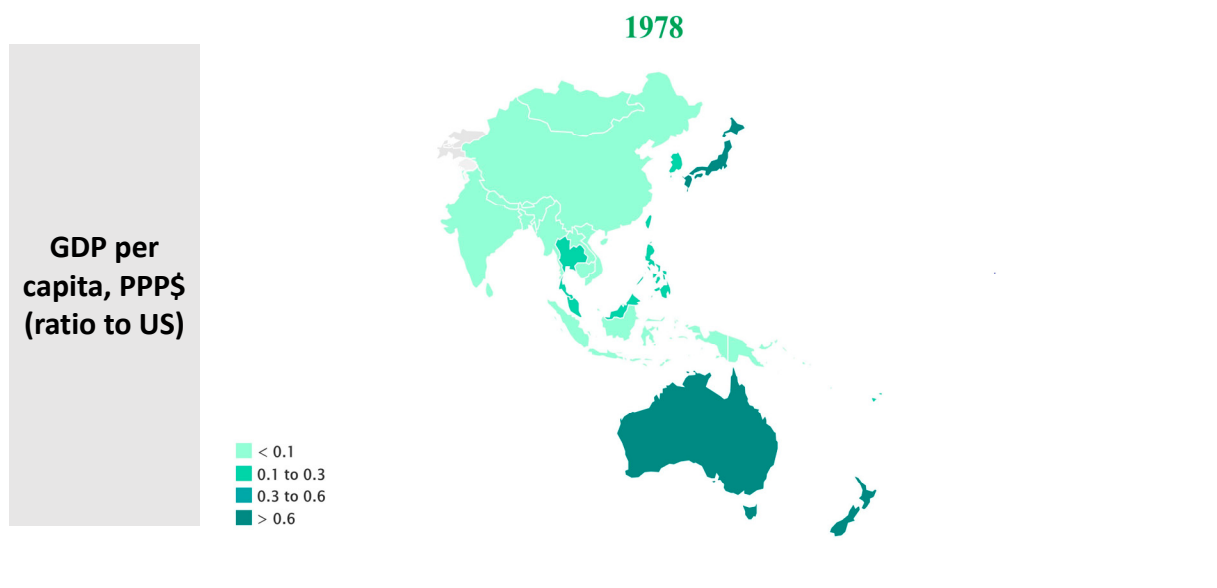


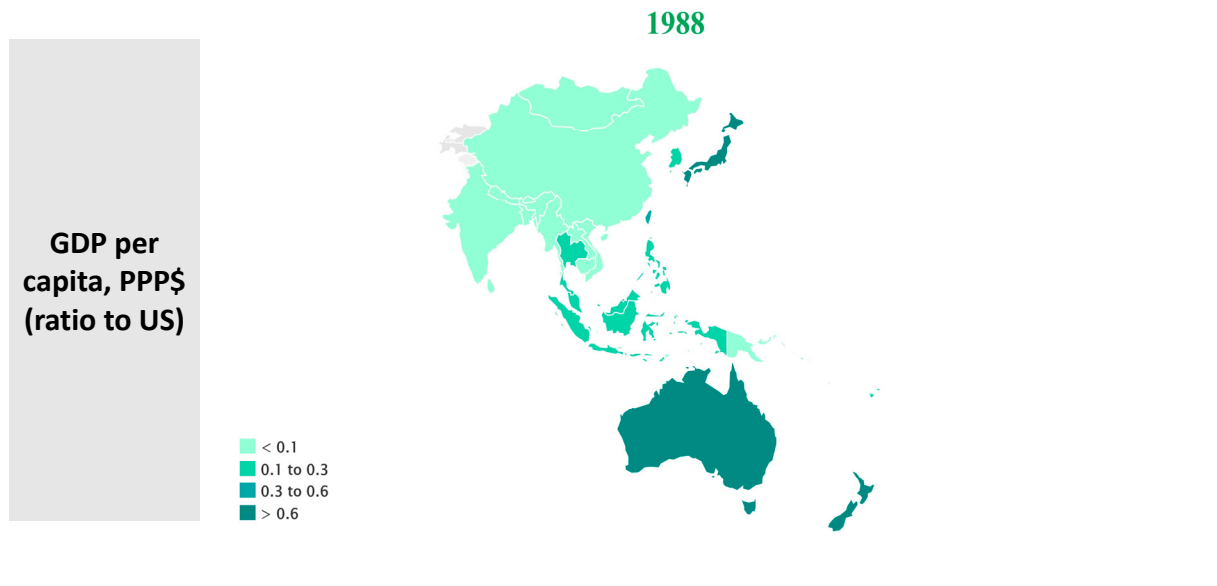
Asia has made tremendous progress over the past fifty years...



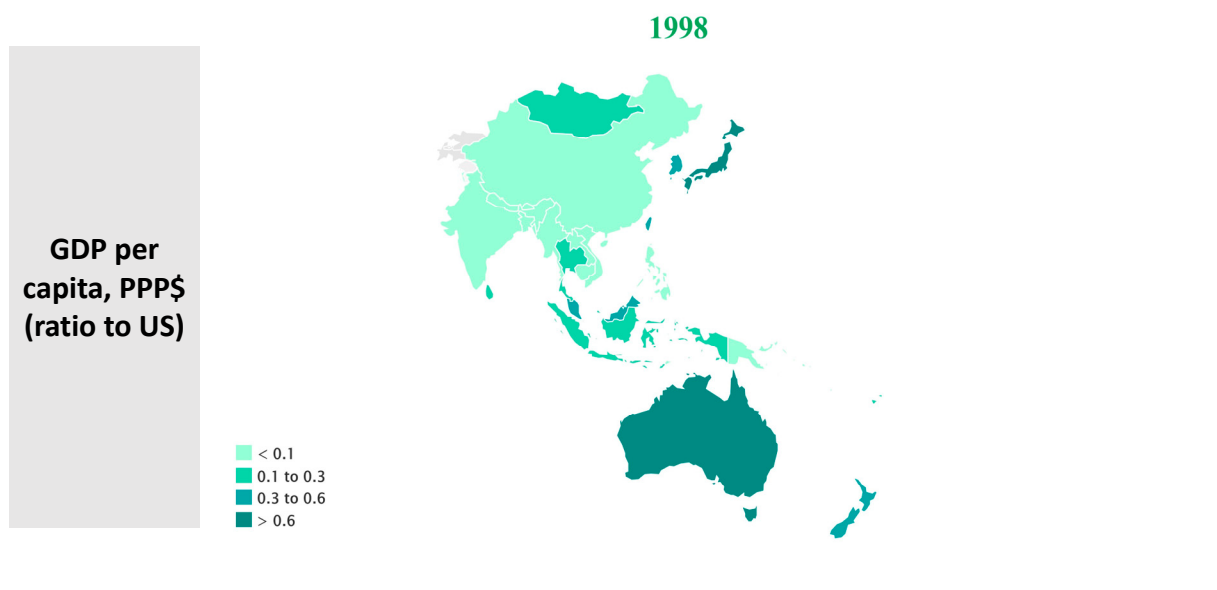
Asia has made tremendous progress over the past fifty years...



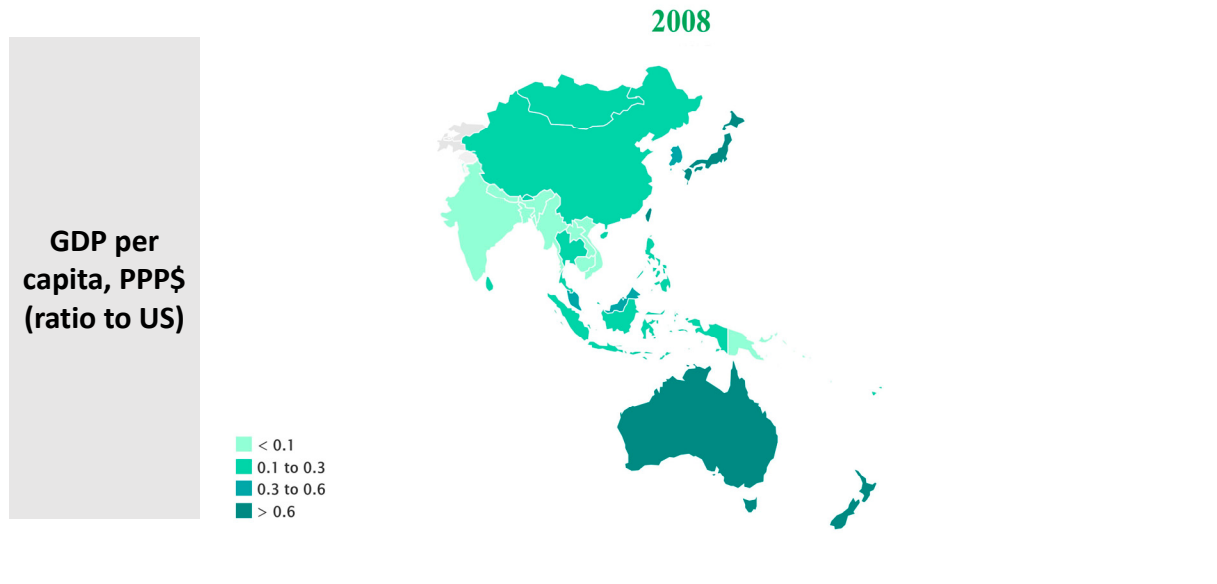
Asia has made tremendous progress over the past fifty years...



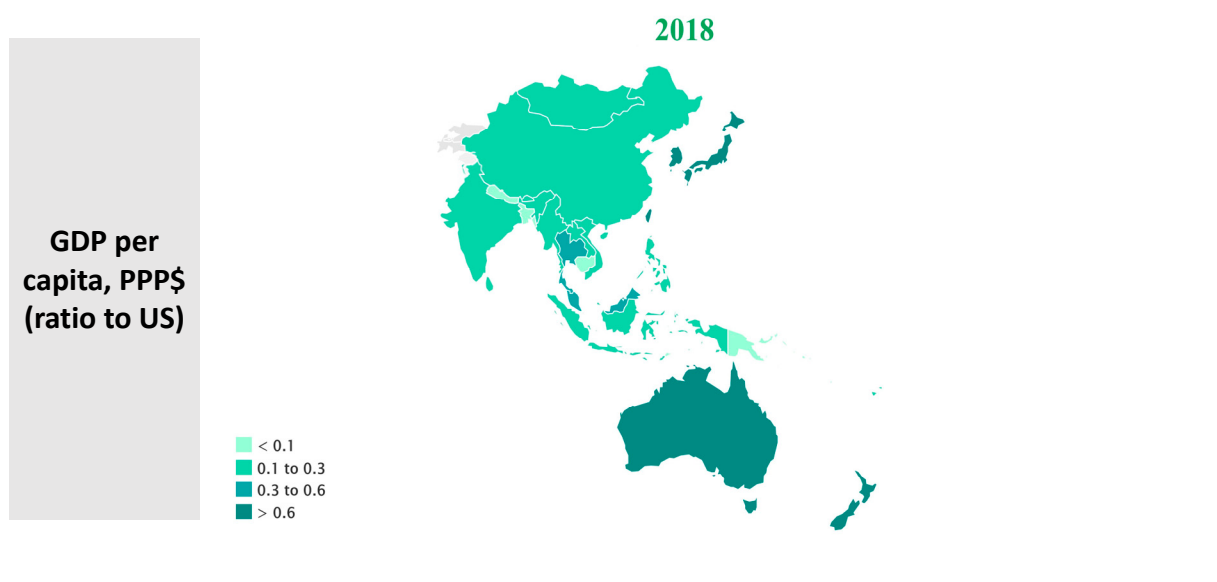
Asia has made tremendous progress over the past fifty years...



Asia has made tremendous progress over the past fifty years...

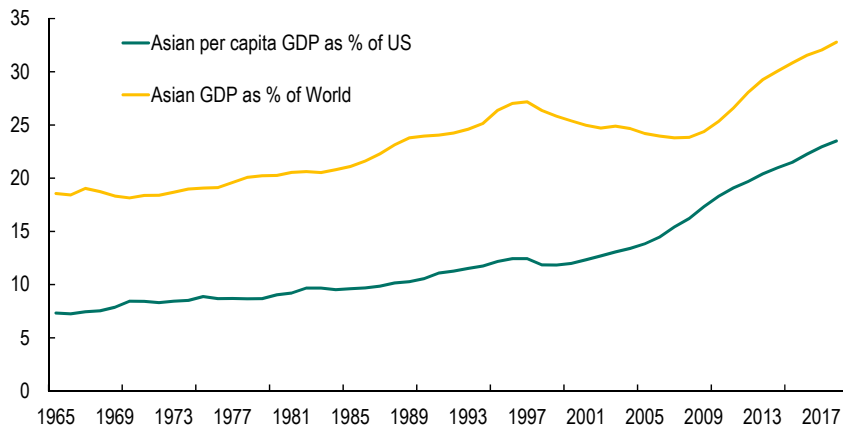


Asia has made tremendous progress over the past fifty years...



Income convergence still has a way to go, but Asia already accounts for 30 percent of global GDP...

Asian Income Convergence
(in percent)



Source: IMF, World Economic Outlook.
Note: Asian GDP as % of World measured by nominal GDP (5 year moving average); Asian per capita GDP as % of US measured in PPP terms.

...and more than 60 percent of global growth.

Contribution to Global Growth by Region
(Percentage points, 2018 estimates)



Source: IMF, World Economic Outlook and IMF staff estimates.
Note: Regional categories based on IMF classification, ASEAN: Association of Southeast Asian Nations.

Asia remains the world's fastest growing region.

Growth projections: Selected Asia

(Percent change from a year earlier)

	World	Asia	China	Japan	India	Korea	Australia and New Zealand	ASEAN	APD Small States
2017	3.7	5.7	6.9	1.7	6.7	3.1	2.3	5.3	2.6
2018	3.7	5.6	6.6	1.1	7.3	2.8	3.2	5.2	1.4
Revision from Apr. 2018	-0.2	0.0	0.0	-0.1	-0.1	-0.2	0.2	-0.1	-2.3
2019	3.7	5.4	6.2	0.9	7.4	2.6	2.8	5.1	4.1
Revision from Apr. 2018	-0.2	-0.2	-0.2	0.0	-0.4	-0.3	-0.3	-0.2	0.2

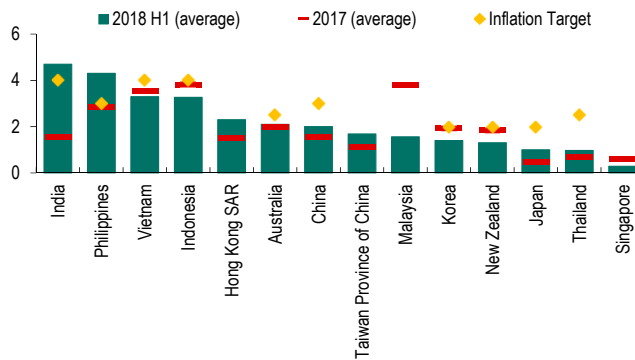
Source: IMF staff.
Note: Figures for India are on a fiscal year basis.

11

Inflation has increased somewhat but remains around or below targets for most economies.

Selected Asia: Headline Inflation

(Year-on-year percent change)



Note: Inflation targets unavailable for Hong Kong SAR, Malaysia, Taiwan Province of China, and Singapore.
Sources: CEIC; and IMF staff calculations.

Tighter financial conditions pose a short-term risk.

Monetary policy normalization has led to capital outflows...

Asia: Cumulative Portfolio Flows
(Billions of US dollars)

Cumulative Portfolio Flows since January 2018
(Billions of US dollars)

Source: IIF
Note: Equities coverage: Indonesia, India, Korea, Malaysia, Philippines, Taiwan Province of China, Thailand, and Vietnam; bonds coverage: Indonesia, India, Korea, Malaysia, Philippines and Thailand.

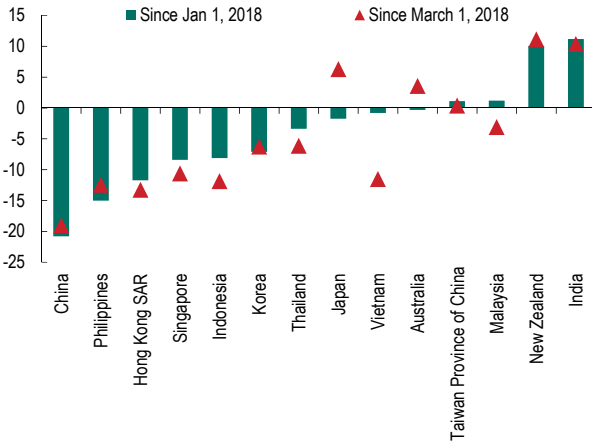
Sources: IIF, and IMF Staff Calculations.
Note: As of August 2018

14

...equity declines and rising bond yields...

Selected Asia: Equity Price Movements

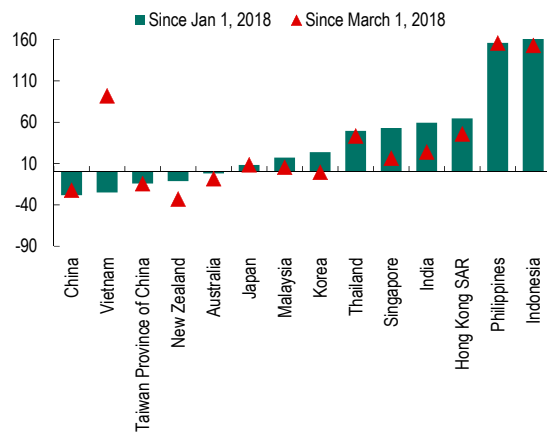
(Percent change)



Sources: Bloomberg L.P.; and IMF staff calculations.

Selected Asia: Ten-Year Sovereign Bond Yields

(Change in Basis Points)



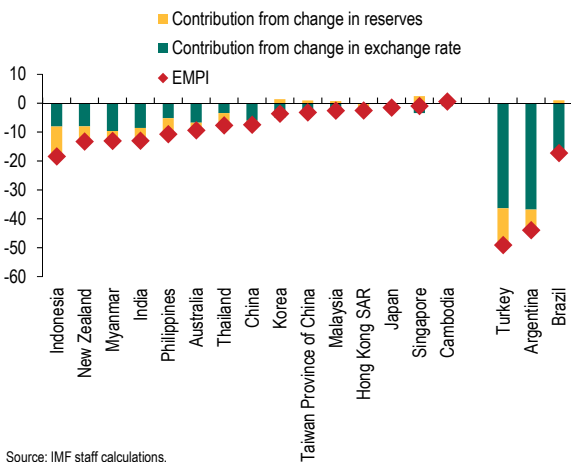
Source: Bloomberg L.P.
Note: Latest data as of October 2, 2018.

15

...and pressure on exchange rates.

Exchange Market Pressure Index (EMPI)

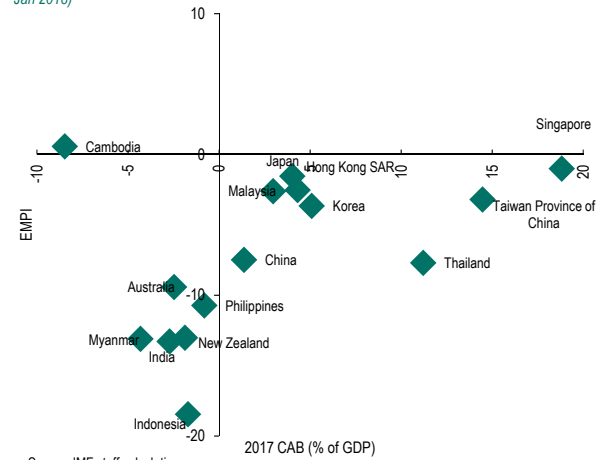
(Percent change in U.S. dollar/local currency exchange rate plus percent change in reserves; since Jan 2018)



Source: IMF staff calculations.
Note: As of August 2018

Current Account Balance and Exchange Market Pressure Index (EMPI)

(Percent change in U.S. dollar/local currency exchange rate plus percent change in reserves; since Jan 2018)

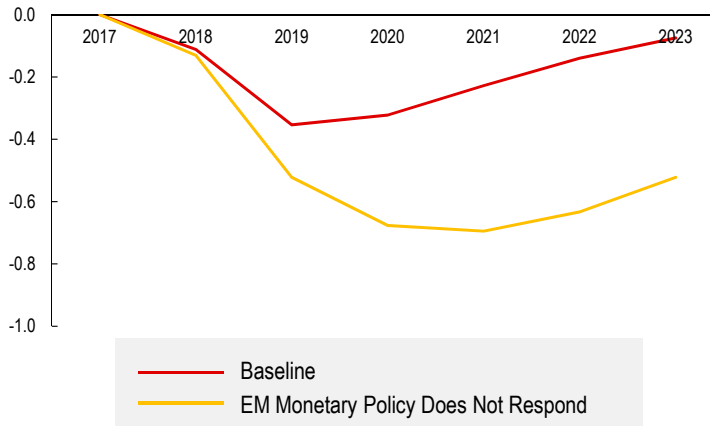


Source: IMF staff calculations.
Note: As of August 2018

16

Model simulations suggest that a further tightening of financial conditions could weigh heavily on growth.

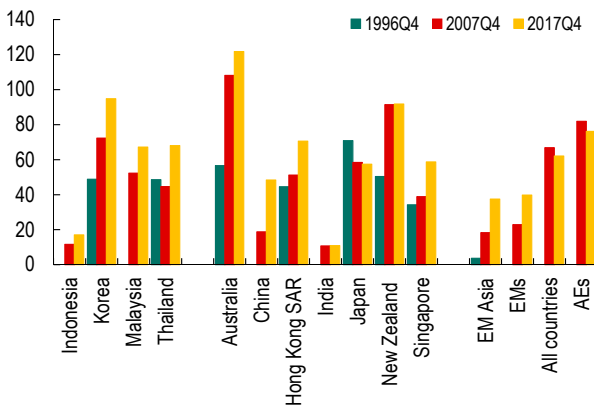
Real GDP, Asian Emerging Economies
(Percent difference, level)



17

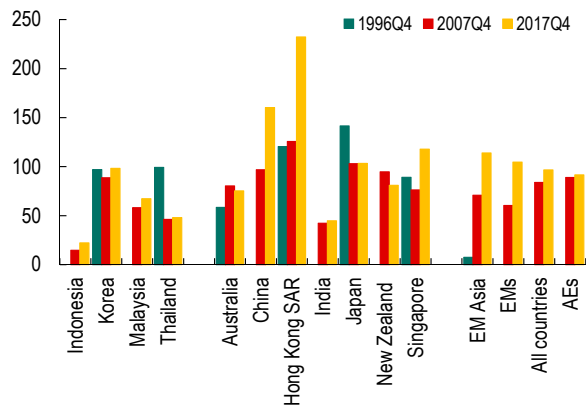
Asia's high private-sector leverage is still a vulnerability...

Households Credit
(Percent of GDP)



Note: EMs and All Countries data as of 2008Q1
Source: BIS

Non-Financial Corporations Credit
(Percent of GDP)

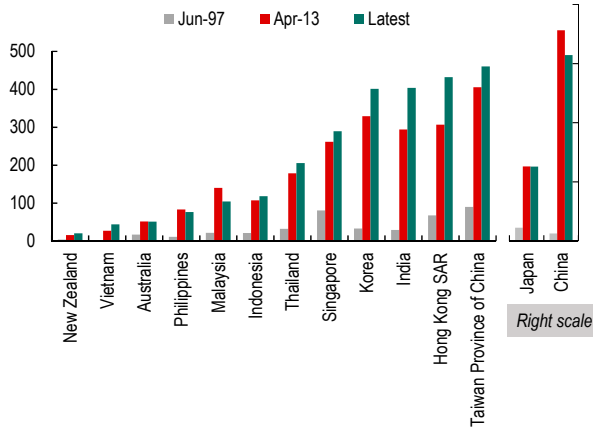


Note: EMs and All Countries data as of 2008Q1
Source: BIS

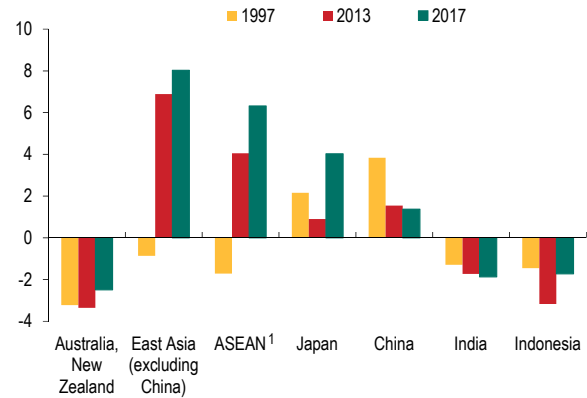
18

...but Asia has better external buffers now...

Selected Asia: Foreign Exchange Reserve Accumulation
(Billions of US dollars)



Asia: Current Account Balances
(Percent of GDP)



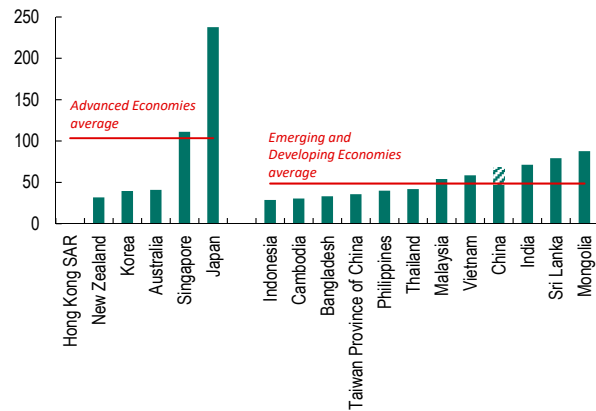
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
¹ ASEAN includes Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.

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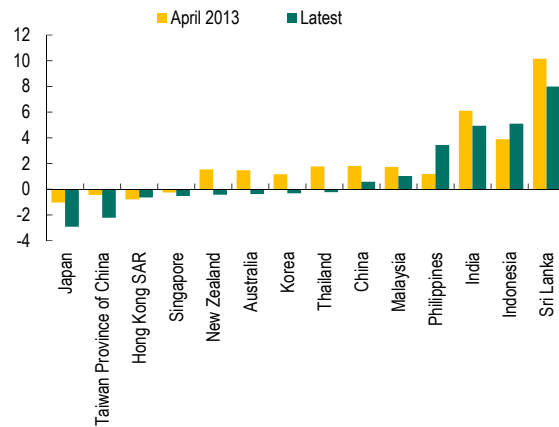
...and many economies have fiscal space.

Government Debt, 2017
(Percent of FY GDP)



Note: The shaded portion in China's debt refers to "augmented debt", including local government financing vehicles and other off-budget activity. Mongolia's debt as percent of calendar year GDP. Sources: WEO, China Staff Report, Mongolia Staff Report.

Selected Asia: Ten-Year Sovereign Bond Spreads
(Percentage points)



Source: Bloomberg L.P.
Note: Latest data as of October 2, 2018.

20

Escalating trade tensions could slow growth.



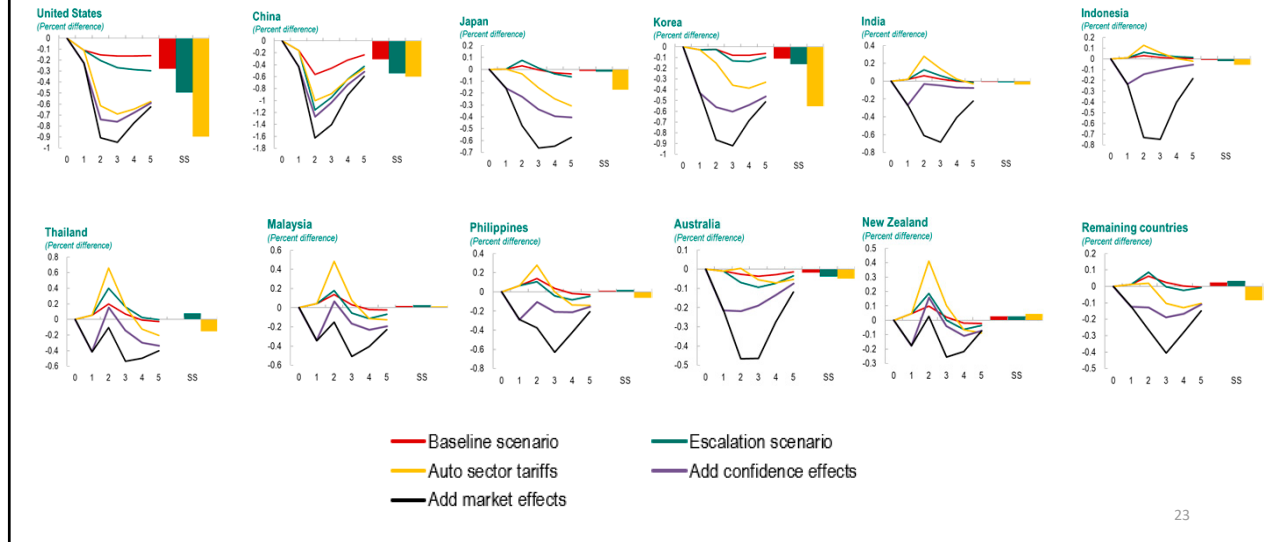
Modeling trade tensions: two models

- **Global Integrated Monetary and Fiscal model (GIMF)** – a dynamic stochastic general equilibrium model that sheds light on short- and medium term macroeconomic consequences.

	Channel	Calibration
Trade	Lower relative demand for imports, also investment and consumption effects	Current and proposed tariff actions
Confidence	Lower private business investment	Economies' trade openness relative to that of the U.S.
Financial	Higher corporate spreads lead to lower private business investment	Historic episodes and current credit ratings

- **Ricardian Trade Model** – additional detail on how individual 44 economies and 35 sectors would be affected in the long term while also accounting for global value chains.

Tariffs would have a significant impact on Asia.

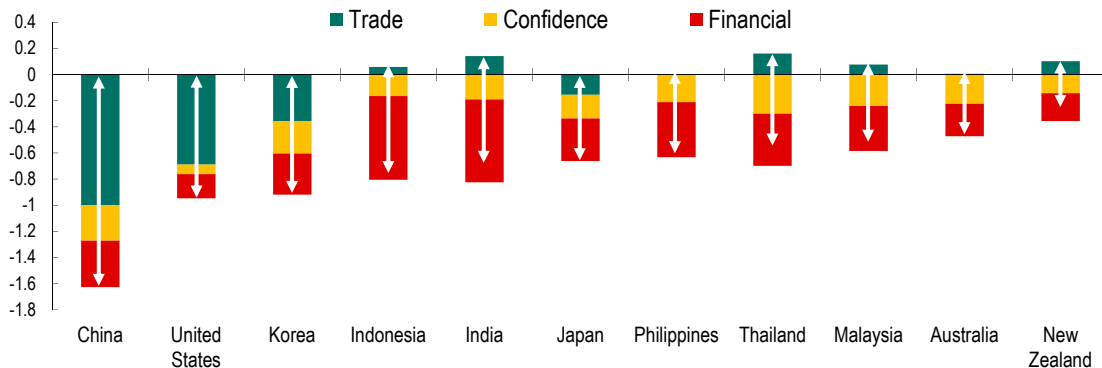


23

Tariffs would have a significant impact on Asia (cont'd).

Trade Tension Scenario: Peak Impacts on Real GDP

(Percent deviation relative to before trade tensions)



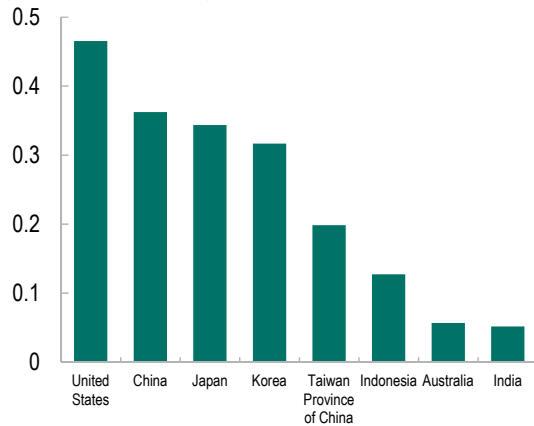
Source: IMF staff calculations. Peak responses are generally from 2020.

Note: Scenario includes baseline (steel & aluminum; the first \$50B of Chinese imports to the US; and the additional \$200B just announced), escalation (\$267B of Chinese imports to the US); and automobile sector tariffs—with retaliation as well as confidence and financial market effects.

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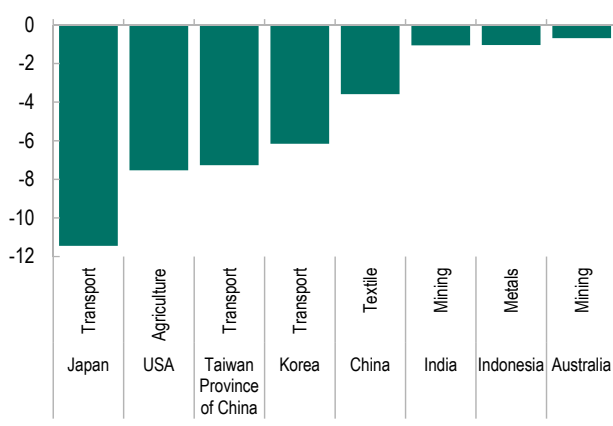
Aggregate labor displacement is limited, but some sectors could be hit hard.

Total Labor Reallocation in Rising Trade Tensions Scenario
(Percent of initial employment)



Source: IMF staff estimates.

Major Sectors with Large Labor Shedding in the Trade Tensions Scenario
(Percent of sector's initial employment)

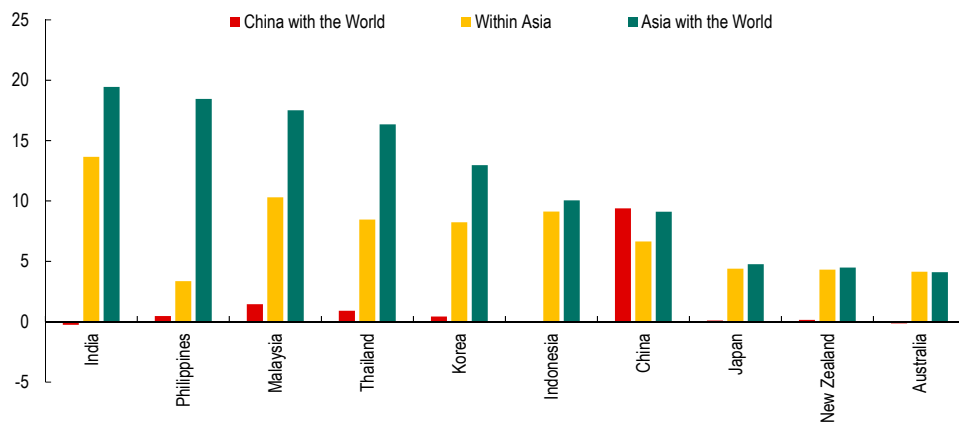


Source: IMF staff estimates.

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Asia would benefit from liberalizing intraregional trade and investment, especially in services.

Trade Liberalization for Tariffs, NTBs, including FDI Regimes
(Impact on GDP, percent)



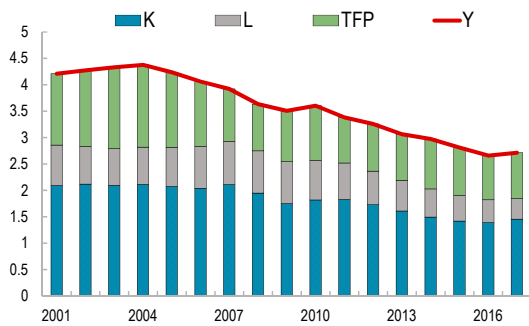
26

Asia faces slowing potential growth.

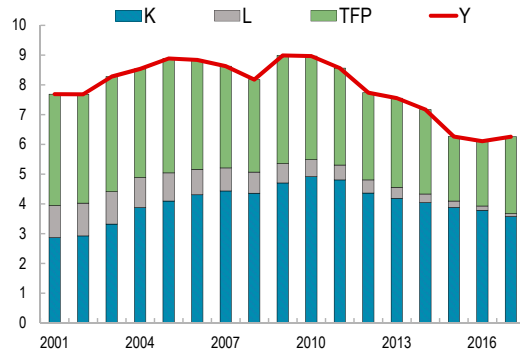


Potential growth in many Asian economies has declined in recent years.

Asian Advanced Economies (excl. Japan) Potential Growth
(Percent)



Asian Emerging Markets Potential Growth
(Percent)

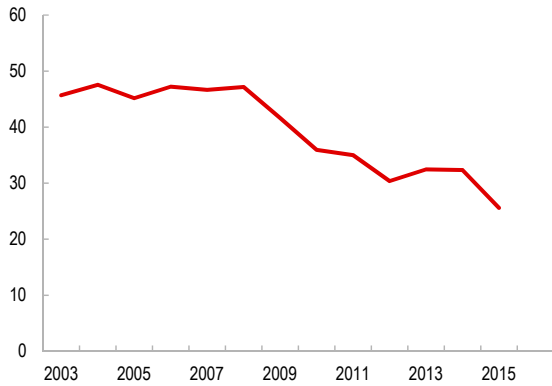


Sources: Penn World Tables, United Nations, International Labor Organization, and IMF Staff Calculations.

Firm dynamism is key: the share of young (productive) firms is falling...

Share of Young Firms

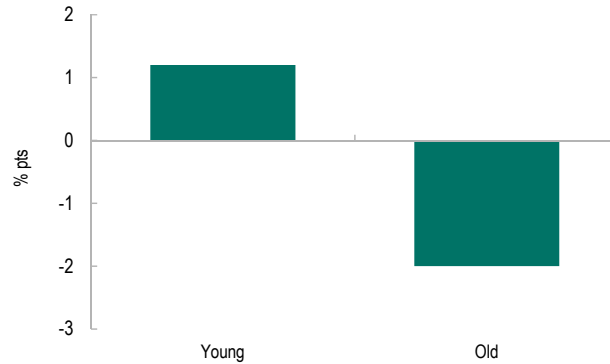
(Percent of all firms; a young firm is a firm with less than 10 years since incorporation; average across China, Japan, Korea, Malaysia, Philippines, Thailand)



Sources: Orbis; and IMF staff calculations.

TFP Growth

(Averages, 2014)



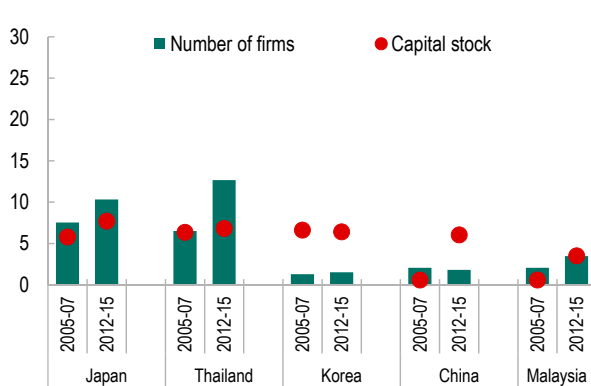
Source: Orbis; and IMF staff calculations. Young defined as <10 years; old is defined as >10 years.

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...and the share of zombies is rising.

Asia: Number and Share in Capital of Zombies

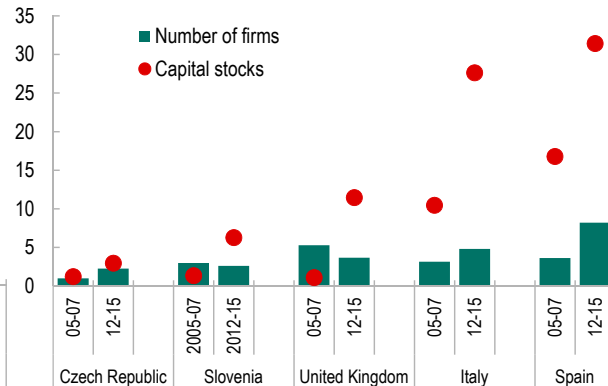
(Percent)



Sources: Orbis; and IMF staff calculations.

Europe: Number and Share in Capital of Zombies

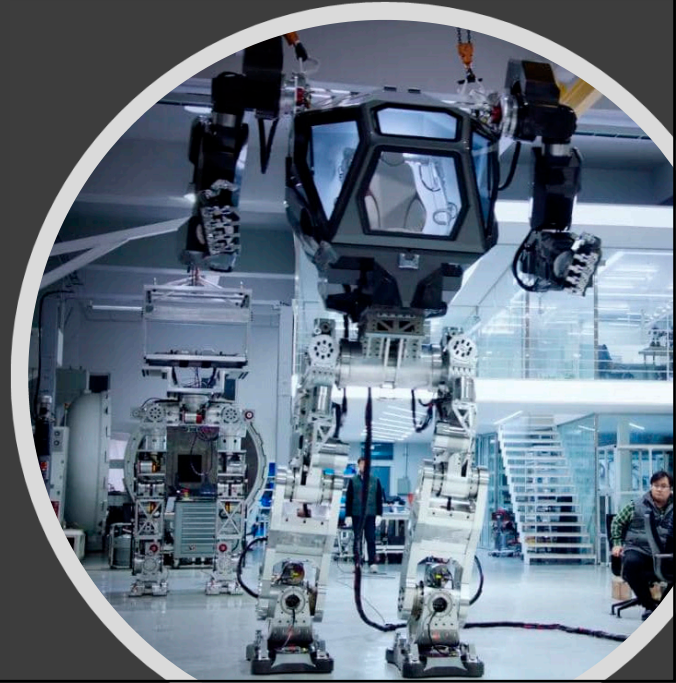
(Percent)



Sources: Orbis; and IMF staff calculations.

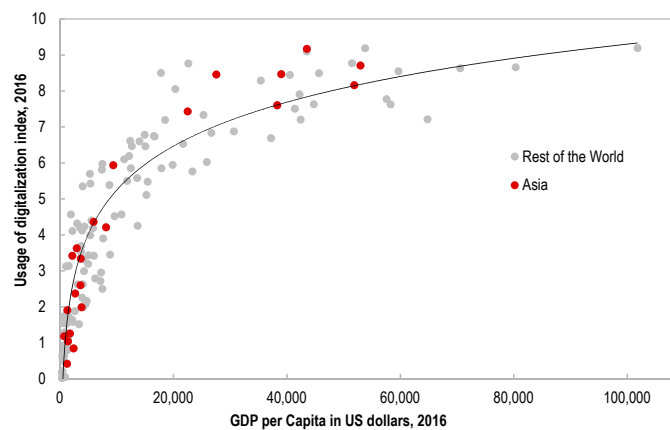
30

Is the Digital Revolution a new engine of growth?



Asia is at the forefront of the digital revolution...

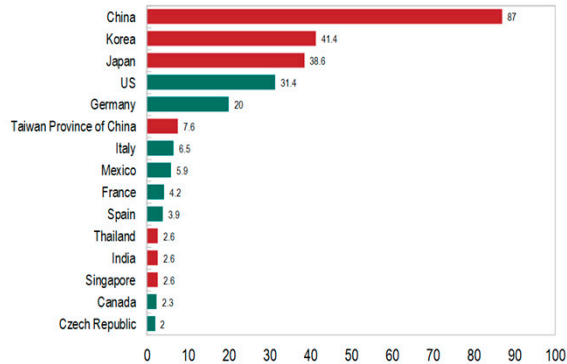
GDP per Capita & Usage of Digitalization
(Index 0-10)



Sources: IMF WEO; International Telecommunication Union (ITU); and IMF staff calculations.

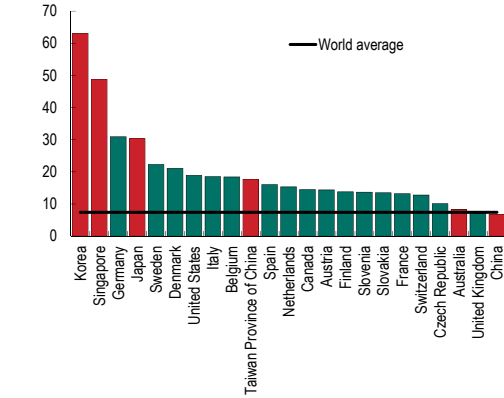
...especially in robotics...

Estimated Worldwide Annual Shipment of Industrial Robots, 2016
(Thousands of robots)



Sources: IFR World Robotics 2017; and staff calculation.

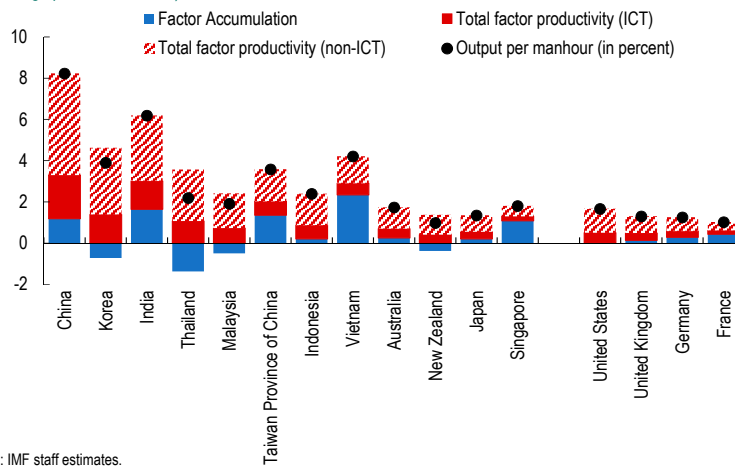
Robot Density in Manufacturing, 2016
(Number of industrial robot stock, per 1,000 employees)



Source: International Federation of Robotics (2017).

...and digital innovation has been a key driver of growth.

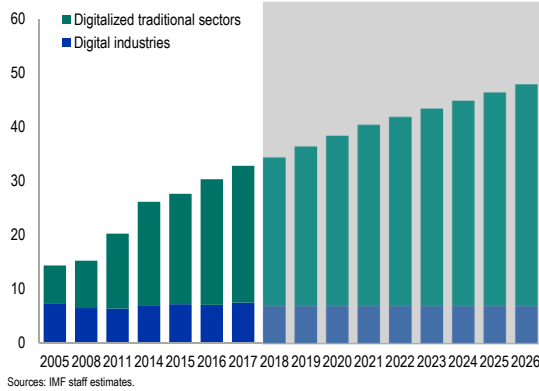
Sources of Economic Growth
(In percentage points; 1995-2016)



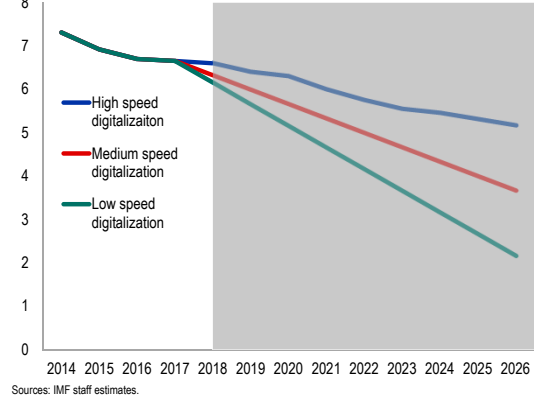
Source: IMF staff estimates.

In China, fast-paced digitalization could help buoy growth going forward.

Digitalization to Continue
(Percent of GDP)



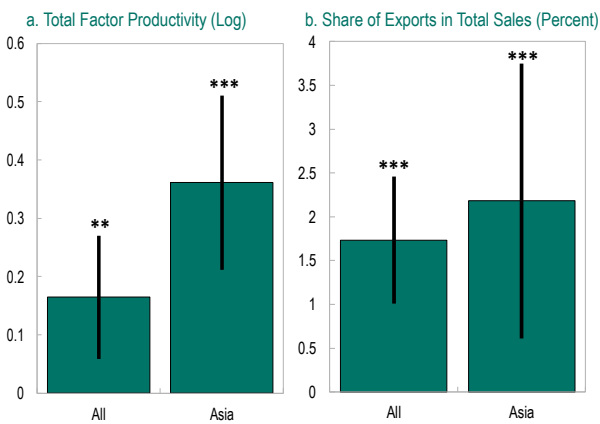
Digitalization to Buck the Downward Trend
(GDP growth under alternative scenarios of digitalization, in percent)



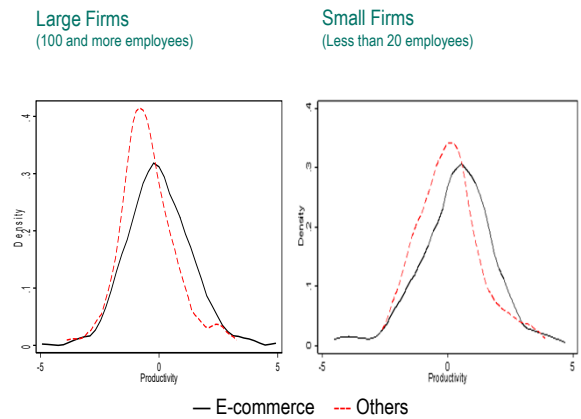
35

Early signs of positive effects? Firms with online activities have higher labor productivity...

Estimated Impacts of E-commerce Participation on Productivity and Export



Distribution of TFP among Asian Firms

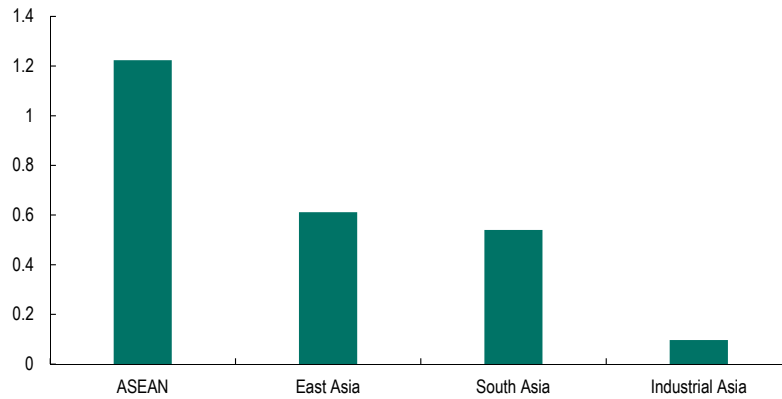


Source: World Bank Enterprises Surveys and IMF staff calculations. The error bars refer to the 95 percent confidence interval around the estimated coefficient. ** p < 0.05, *** p < .01.

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...and digitalization has the potential to enhance revenue mobilization.

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

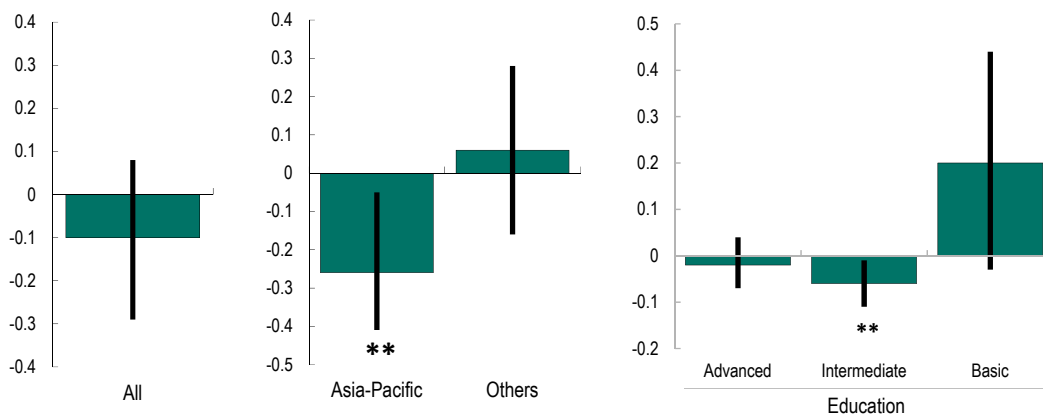


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What is the future of work?

Estimated Employment Changes

(In percentage points, associated with one more robot per thousand workers)



Source: International Federation of Robotics; World Input-Output Database; and IMF staff calculations. Note: This figure is based on estimations and the follow-up computation of total effects for each group specified in the horizontal axis. The error bars refer to the 95 percent confidence interval around the estimated coefficient. ** p<0.05.

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Policies



Policymakers should aim for prudent macro policies in the short run...

Challenging current global environment:

- Monetary policy normalization in AEs.
- USD appreciation and renminbi depreciation.
- EM volatility.
- Higher oil prices.
- Trade tensions.

IMF's general policy advice:

- Exchange rate flexibility should be the first line of defense, serving as a shock absorber and allowing greater monetary policy independence.
- Monetary policy should be set in line with domestic inflationary pressures, and tightened if depreciation poses risks to inflation.
- MPMs and microprudential policies should be used to manage the financial cycle, particularly where the real and financial cycles diverge.
- CFMs on outflows should be used only in case of crisis or imminent crisis, and should be removed when the situation normalizes.
- FX intervention should be used to address disorderly market conditions and where there are balance sheet concerns, provided that reserves levels are adequate.
- Fiscal policy should focus on building buffers, supporting inclusive long-term growth, and reducing excessive external imbalances.

...complemented by structural reforms to address long-run challenges and sustain inclusive growth.

Challenges in the longer-term:

- Intra-regional trade integration be strengthened to buffer the region from externally-generated trade tensions and promote Asia as both the source and destination of trade.
- Declining potential growth and drop in aggregate productivity.
- Digitalization may lead to financial disruptions and higher inequality, even as it eventually boosts productivity.

IMF's policy advice:

- Liberalize regional trade and investment, especially in services.
- Promote firm dynamism, lower zombie congestion, and foster innovation and openness.
- Implement policies to soften the labor market impact of new technologies and enhance financial stability.
- Improve education, infrastructure, and regulatory environments to benefit fully from digitalization.

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