Asia's Middle-Income Transition

Challenges and Opportunities

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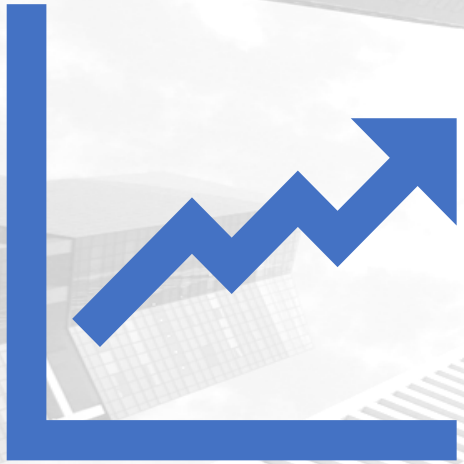
OUTLINE

1. The Re-Emergence of Asia & Impacts of COVID-19

2. Asia's Middle-Income Transition

3. Some Key Challenges

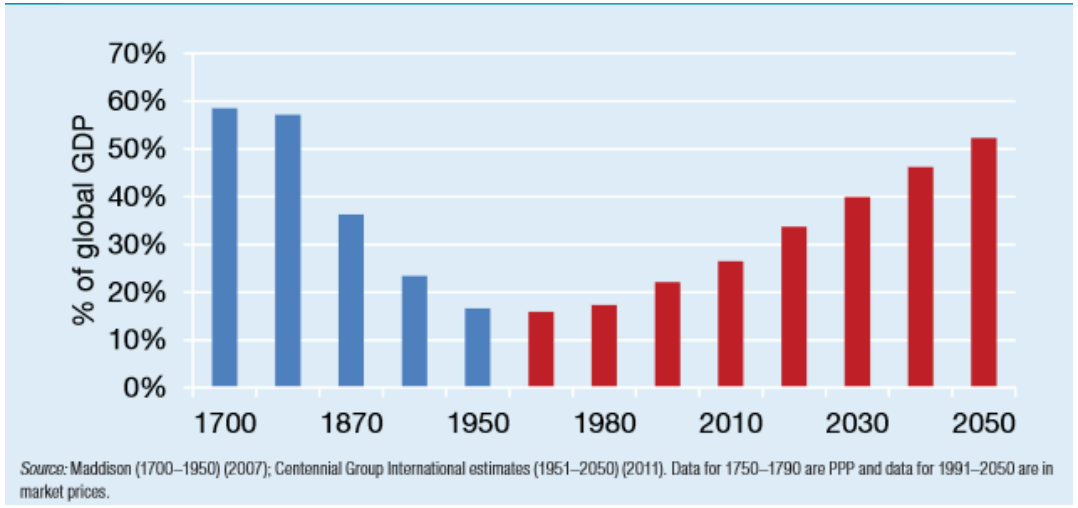
4. Opportunities & Priorities



1. The Re-Emergence of Asia and Impacts of COVID-19

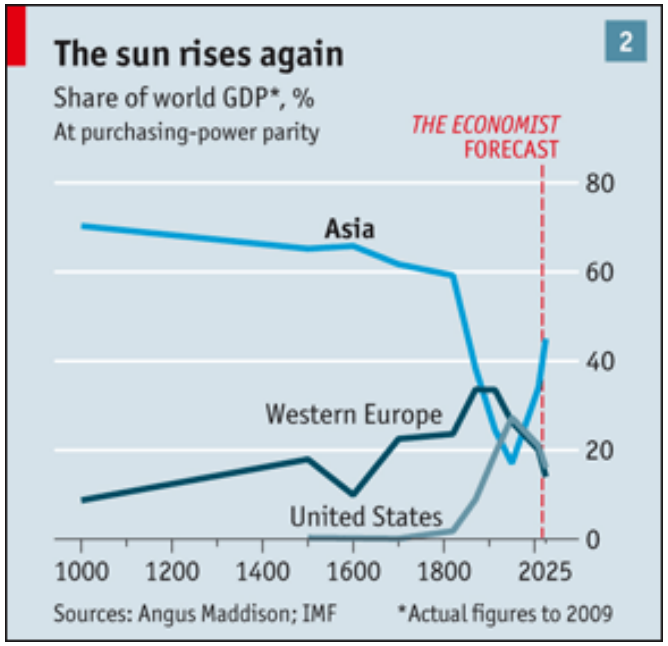
Re-emergence of Asia

Asia's Share of Global GDP, 1700-2050



Source: Maddison (1700–1950) (2007); Centennial Group International estimates (1951–2050) (2011). Data for 1750–1790 are PPP and data for 1991–2050 are in market prices.

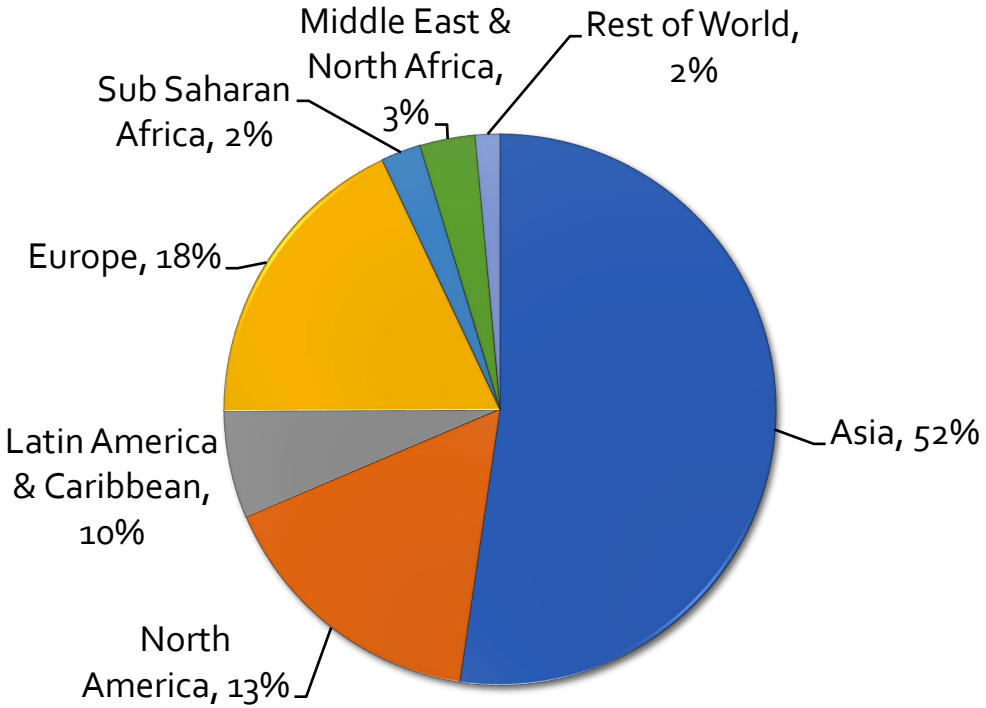
- Asia accounted for about 60% of world economy before the Industrial Revolution
- In the following two centuries:
  - Declined to 15% by mid-1900s
  - Projected to reach 50% by 2050



- Asia began to re-emerge after 1950, spurred first by Japan, then NICs
- Starting in 1980s, first PRC then India, Indonesia and Viet Nam, gave further boost

The Asian Century

Asian Century Scenario: 2050

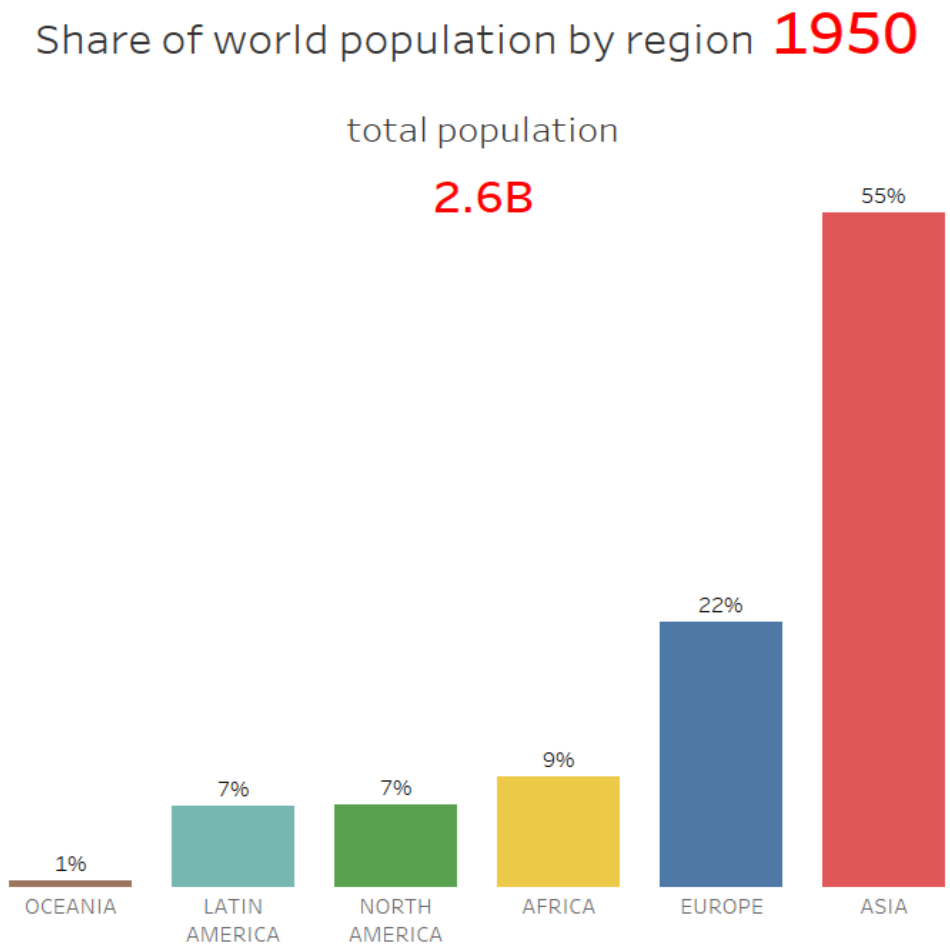


GDP at market exchange rate (Trillion)	
World	333
Asia	174
United States	38

GDP per capita at constant PPP	
World	37,300
Asia	40,800
United States	94,900

Asian century driven by Asia 7: India, Indonesia, Japan, Malaysia, PRC, Republic of Korea, and Thailand projected to account for 90% of Asia's growth between 2010 and 2050.

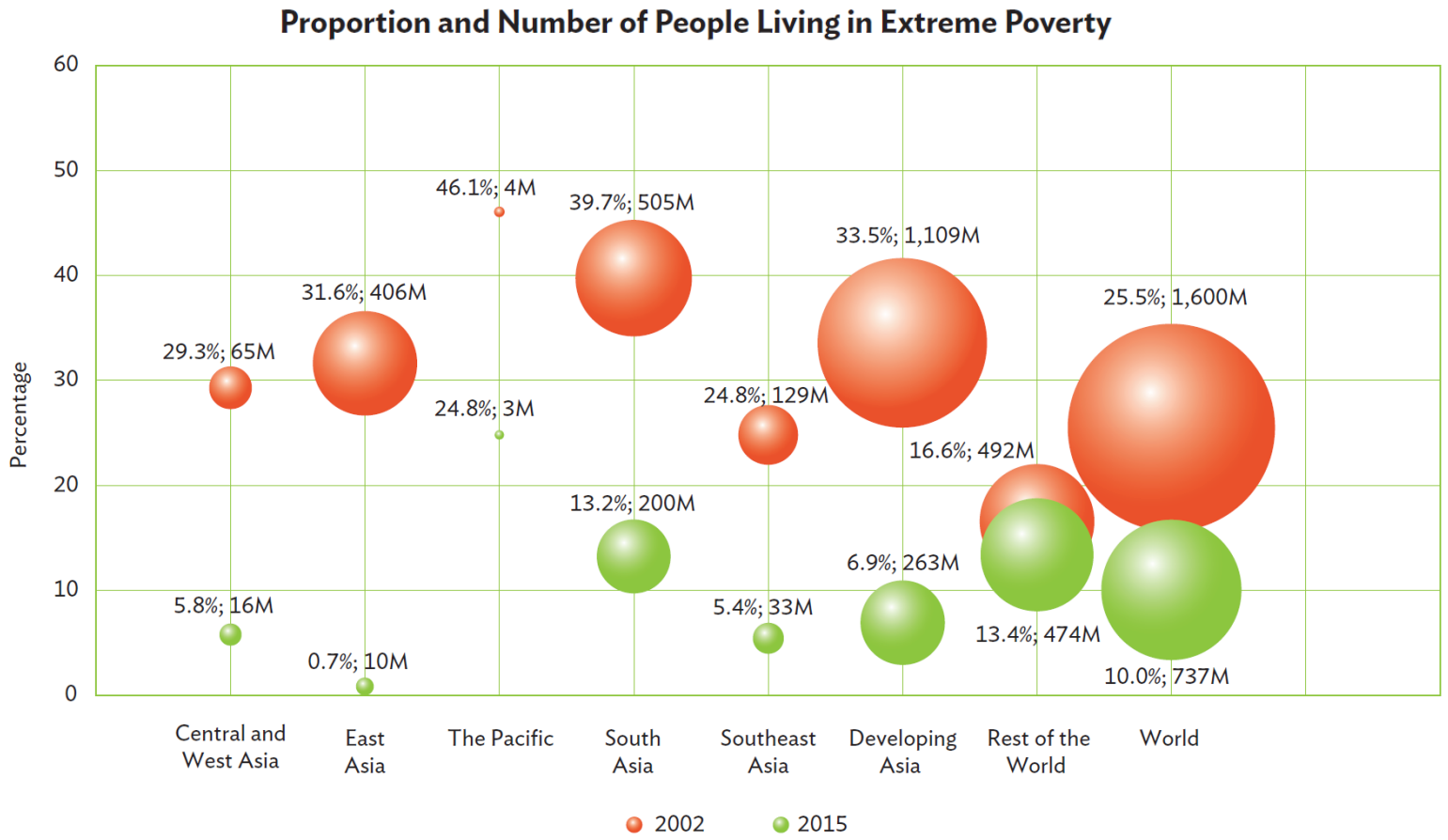
Population Matters



- Asia accounts for **45%** of global GDP and **60%** of global population
- Its share of global population will decline to below **50%** by 2050
- The region is home to a large share of the world's extreme poor, but it has made steady progress on reducing this (next slide)

Source: https://www.visualcapitalist.com/animation-world-population-2100-region/

Progress on Poverty



M = million.

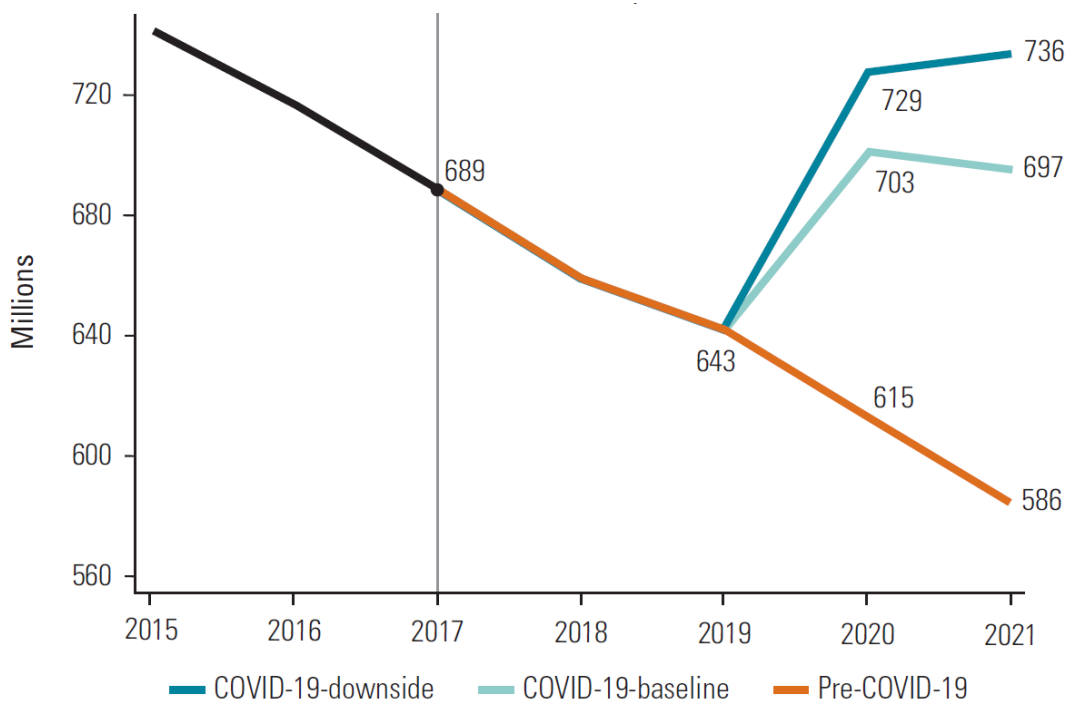
Note: The size of the bubbles refers to the number of people living in extreme poverty, and the numbers next to the bubbles indicate the proportion of population in extreme poverty and the number of extreme poor in millions.

Source: Asian Development Bank estimates using World Bank. PovcalNet Database: http://iresearch.worldbank.org/PovcalNet/home.aspx (accessed 27 March 2020).

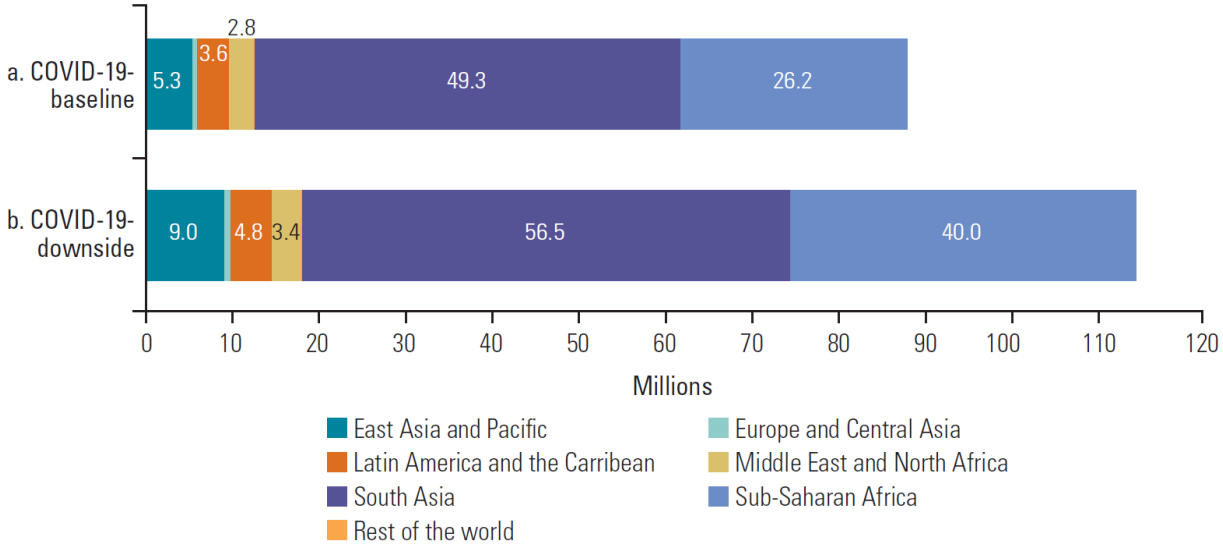
- People in extreme poverty declined from **1.1 billion** to **263 million** from 2002 to 2015 in developing Asia
- But estimated **1.1 billion** still living at less than $3.20 per day (2019)
- COVID-19 will have halted and reversed progress made in recent years (next slide)

COVID-19 and Poverty

Nowcast of the Global Number of Poor at the US$1.90-a-Day Poverty Line, 2015–21



Additional Poor at the US$1.90-a-Day Poverty Line in 2020, per the COVID-19 Baseline, and COVID-19 Downside Scenarios



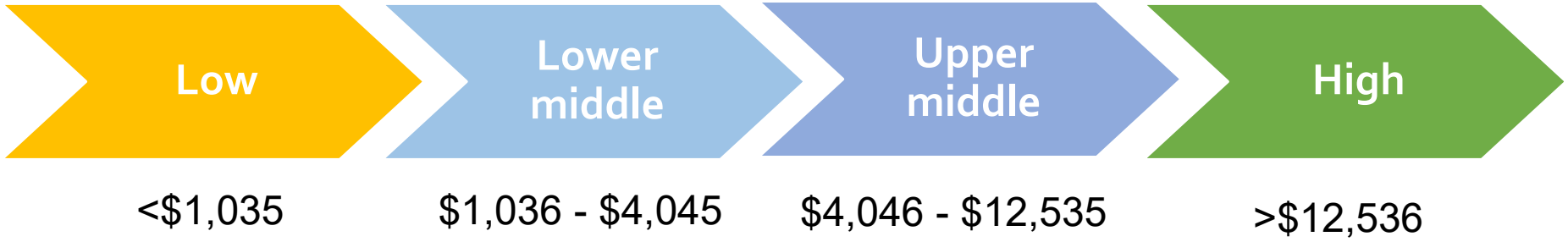
Sources: Updated estimates of Mahler et al. 2020, based on Lakner et al. 2020; PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/; World Bank 2020a, 2020b. *Note:* Three growth scenarios are considered: First, pre-COVID-19 uses the January 2020 *Global Economic Prospects* (GEP) growth forecasts for 2020 and 2021, predating the COVID-19 crisis, and the June 2020 forecasts for 2019. Second and third, COVID-19-downside and COVID-19-baseline use the June 2020 GEP growth forecasts projecting a contraction in global growth in 2020 of 8 percent and 5 percent, respectively. Mahler et al. (2020) use the January 2020 GEP growth forecasts (World Bank 2020a) for the pre- COVID-19 scenario in 2019. They thus find a difference in projected poverty rates under the pre-COVID-19 and COVID-19 scenarios in 2019. To calculate the number of additional poor attributable to COVID-19 in 2020, they use a difference-in-differences methodology. Here, it is sufficient to use the raw difference between the pre-COVID-19 and COVID-19 scenarios for 2020.

Sources: Updated estimates of Mahler et al. 2020, based on Lakner et al. 2020; PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/; World Bank 2020a, 2020b.

2. Asia's Middle-Income Transition

Defining MICs

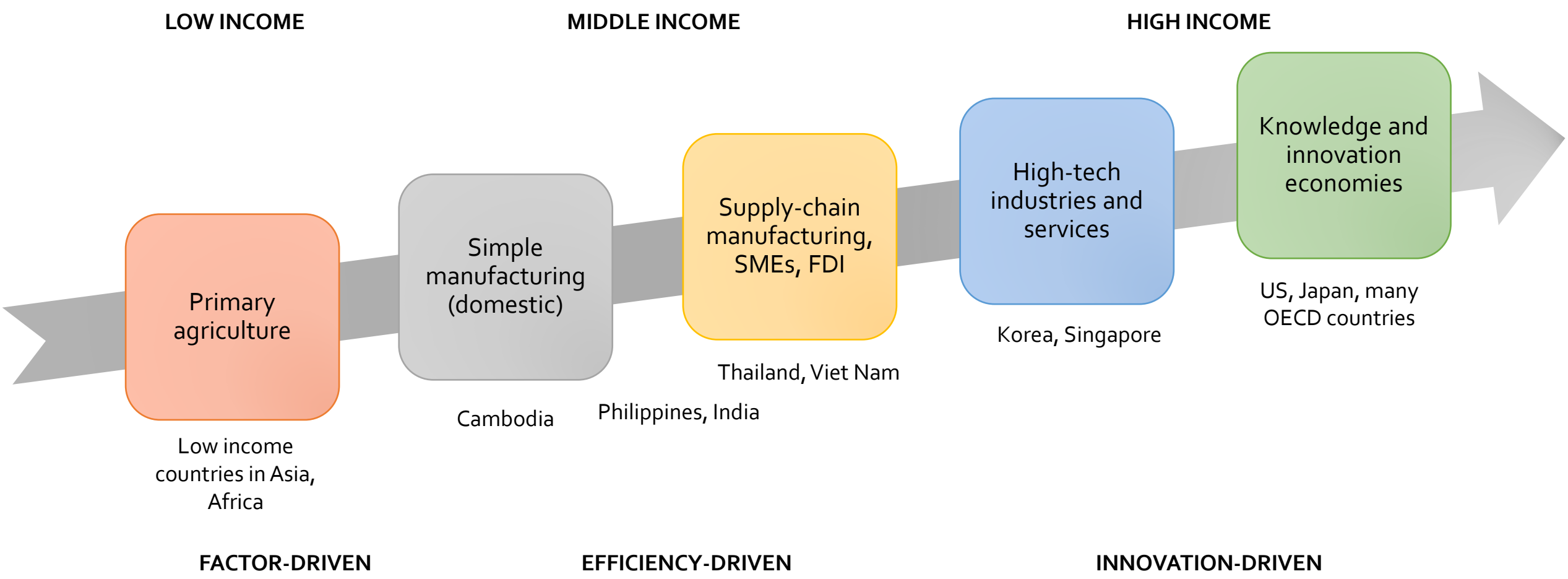
Income classification standards, GNI per capita (US$, Atlas method)



Income does not completely represent levels of development, but closely related to nonmonetary measures of quality of life

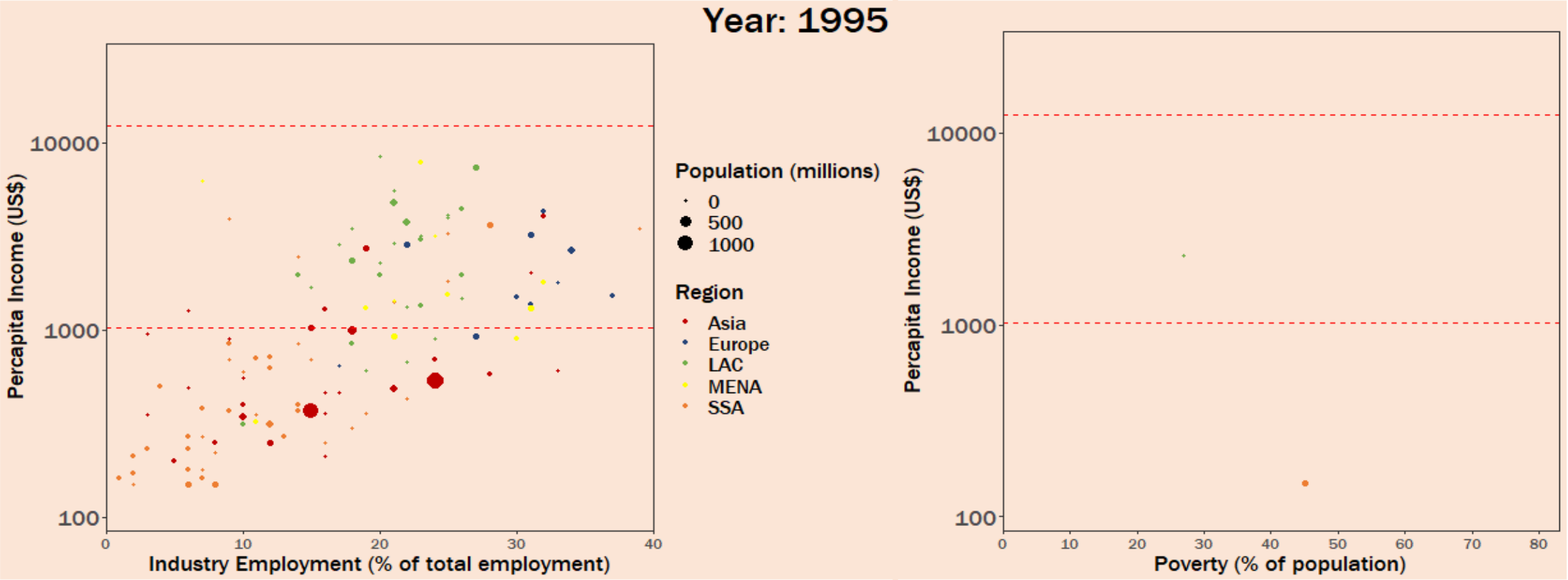
Source: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Income and Development Transition



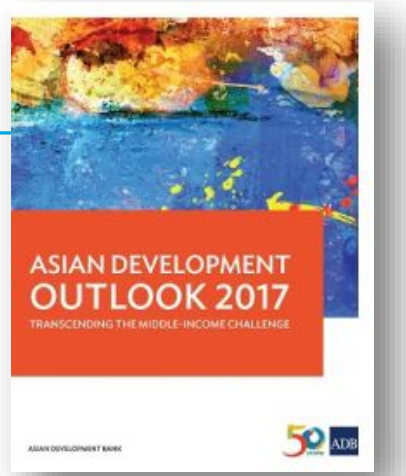
Employment, Income, and Poverty Patterns

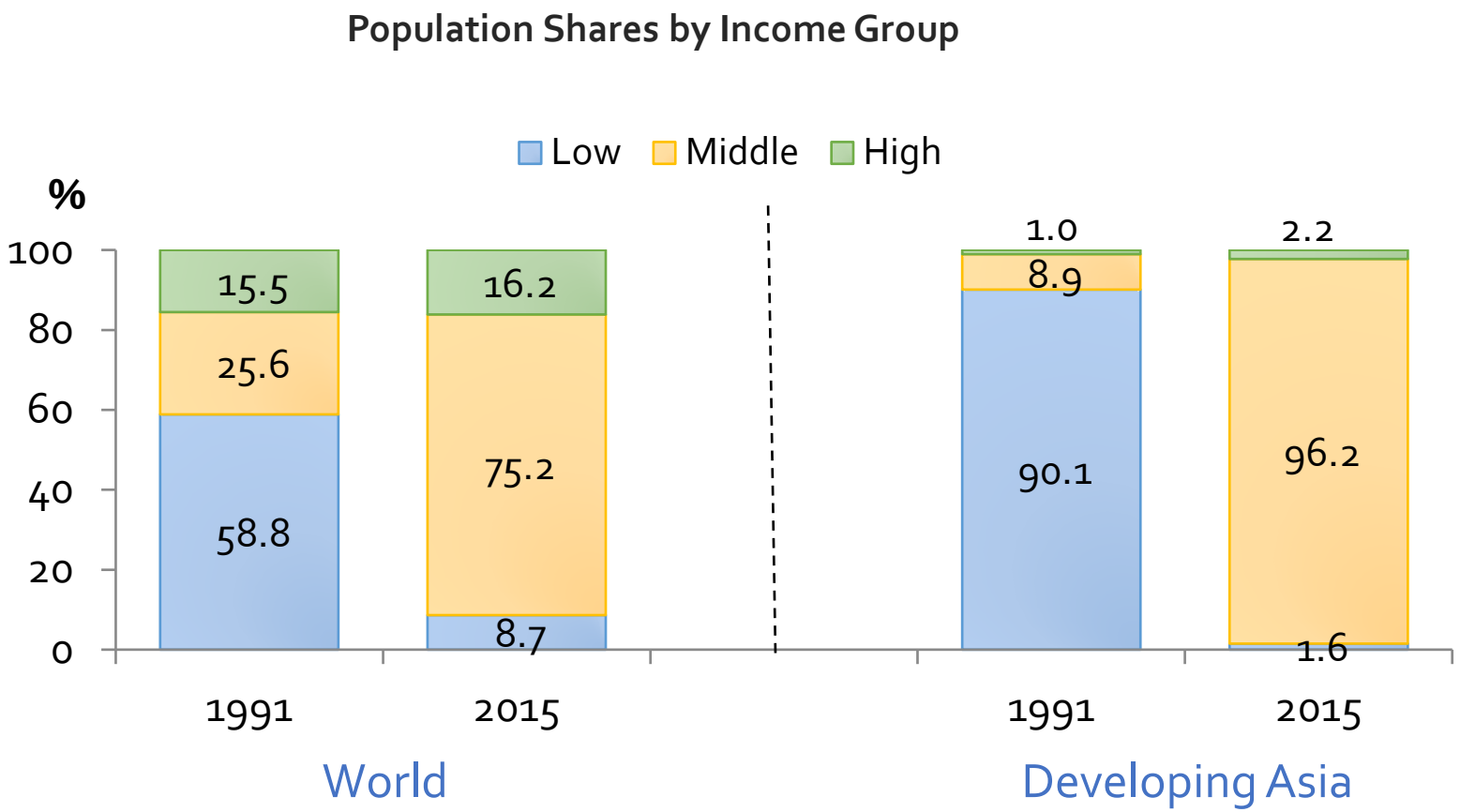
Asia's transition: increased industrial employment, income growth, and poverty reduction



Source: IED animation (J. Principe) using WB-WDI Database

Moving to the Middle: Population Shares





Moving to the Middle: Country Classifications

2020 Update:

- High income = 3
- UMIC = 15
- LMIC = 21
- LIC = 2

(see next slide)

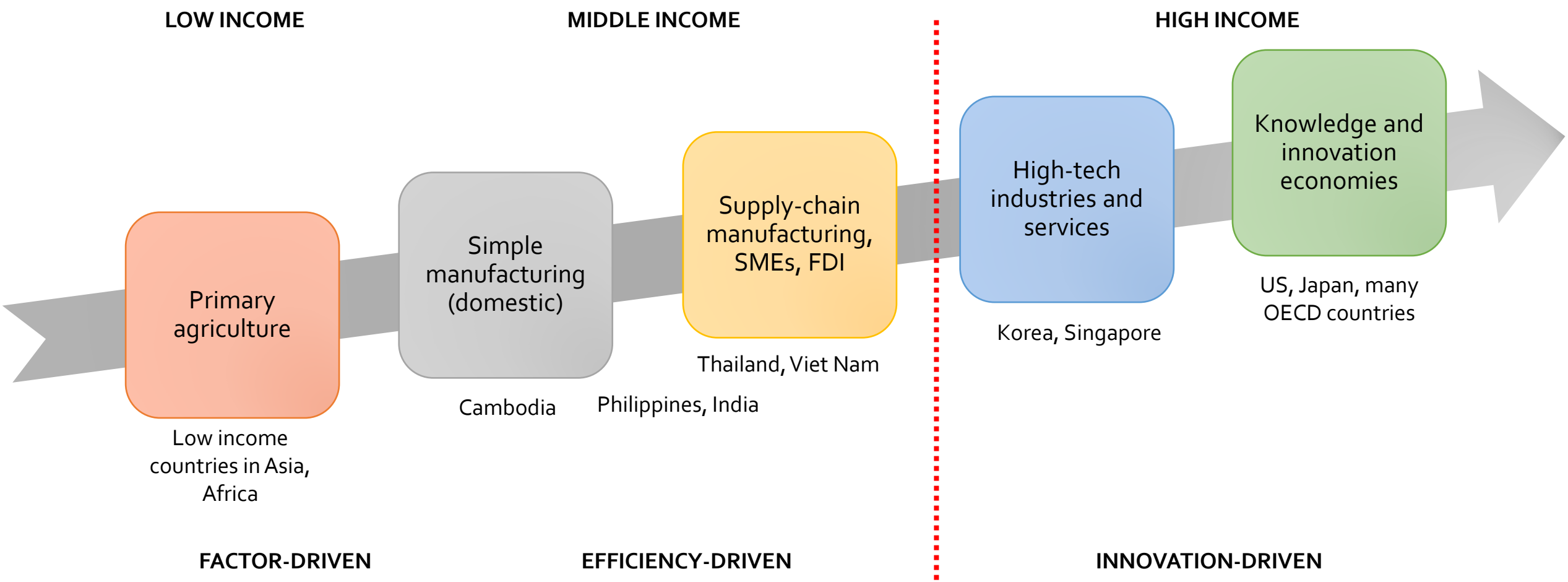
Developing Asia by Income Classification (2020)

Income Classification	Country
High Income	Cook Islands, Palau, Nauru+
Upper-Middle Income	Armenia, Azerbaijan, People's Republic of China, Fiji, Georgia, Indonesia, Kazakhstan, Malaysia, Maldives, Marshall Islands+, Samoa, Thailand, Tonga, Turkmenistan, Tuvalu
Lower-Middle Income	Bangladesh, Bhutan, Cambodia, India, Kiribati+, Kyrgyz Republic, Lao PDR, Federated States of Micronesia+, Mongolia, Myanmar+, Nepal, Pakistan, Papua New Guinea+, Philippines, Solomon Islands+, Sri Lanka, Timor-Leste+, Uzbekistan, Vanuatu, Viet Nam
Low Income	Afghanistan+, Tajikistan

BLUE indicates Small Island Developing States (SIDS); + = Fragile and conflict-affected situations (FCAS)
Source: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

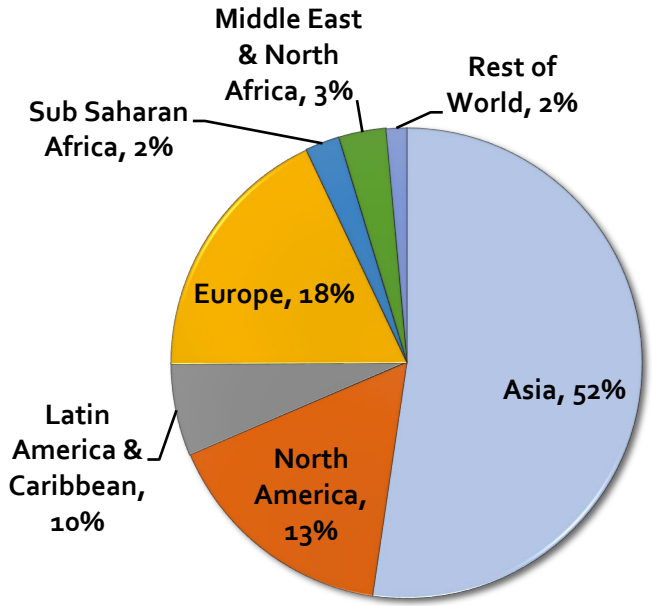
3. Challenges

Hurdling the Middle-Income Transition



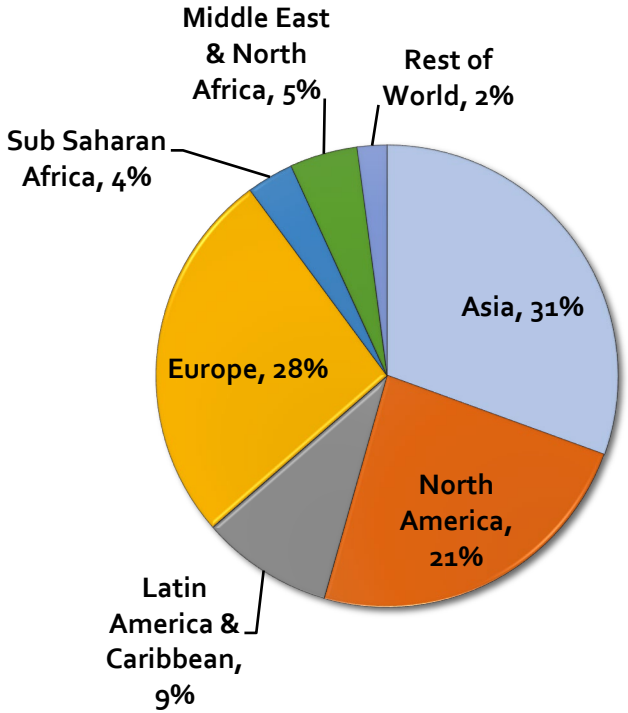
Opportunity Cost of Failure

Asian Century Scenario



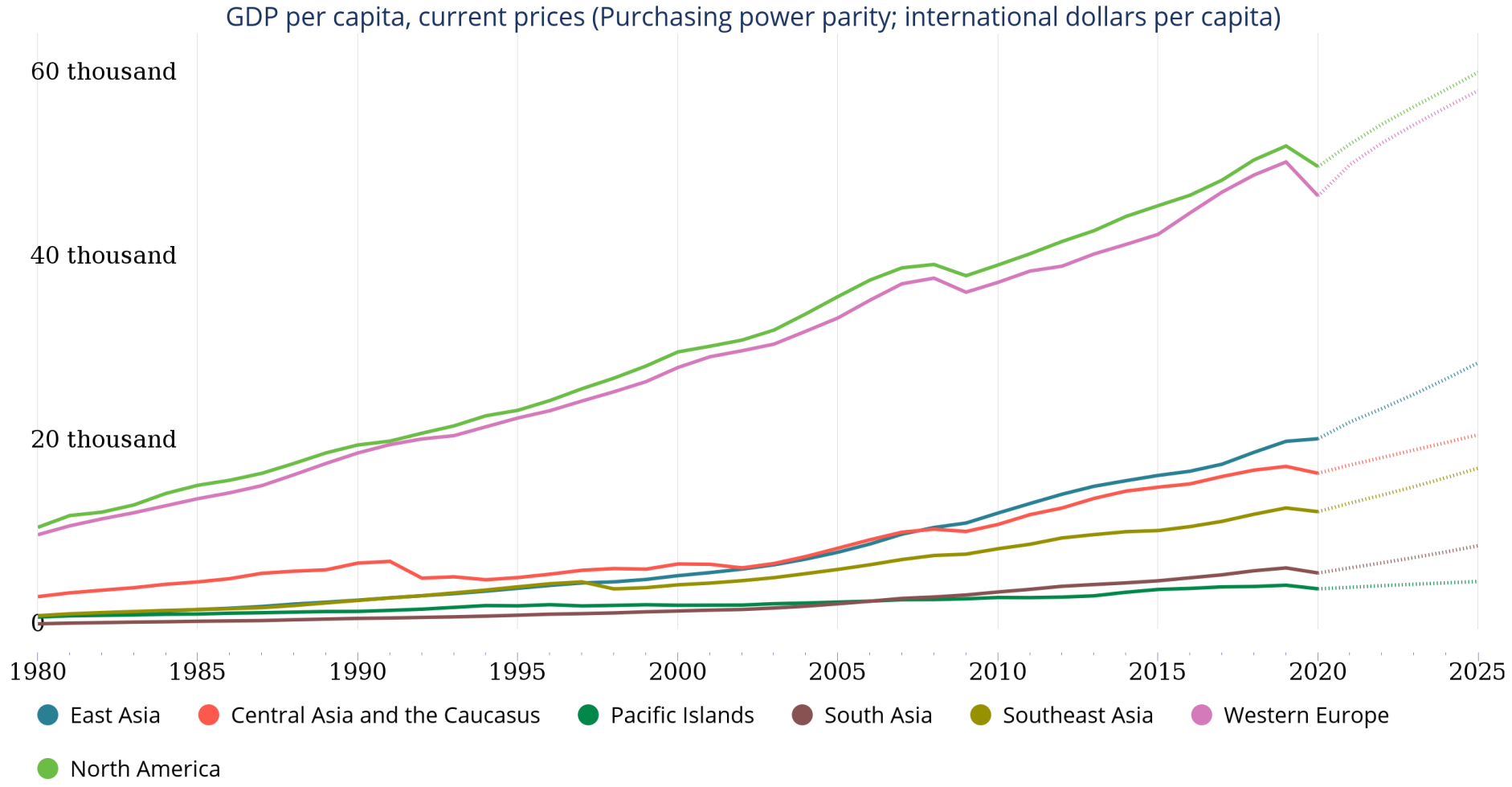
Asian GDP: $174 trillion
Asian GDP per capita: $40,800

Middle Income Trap Scenario



Asian GDP: $65 trillion
Asian GDP per capita: $20,600

Income Per Capita



Some Key Challenges

Inclusion

1. Reducing inequality
2. Addressing urban poverty

Economic growth

3. Tapping private sector for development

Environmental sustainability

4. Arresting environmental degradation and climate change
5. Managing rapid urbanization

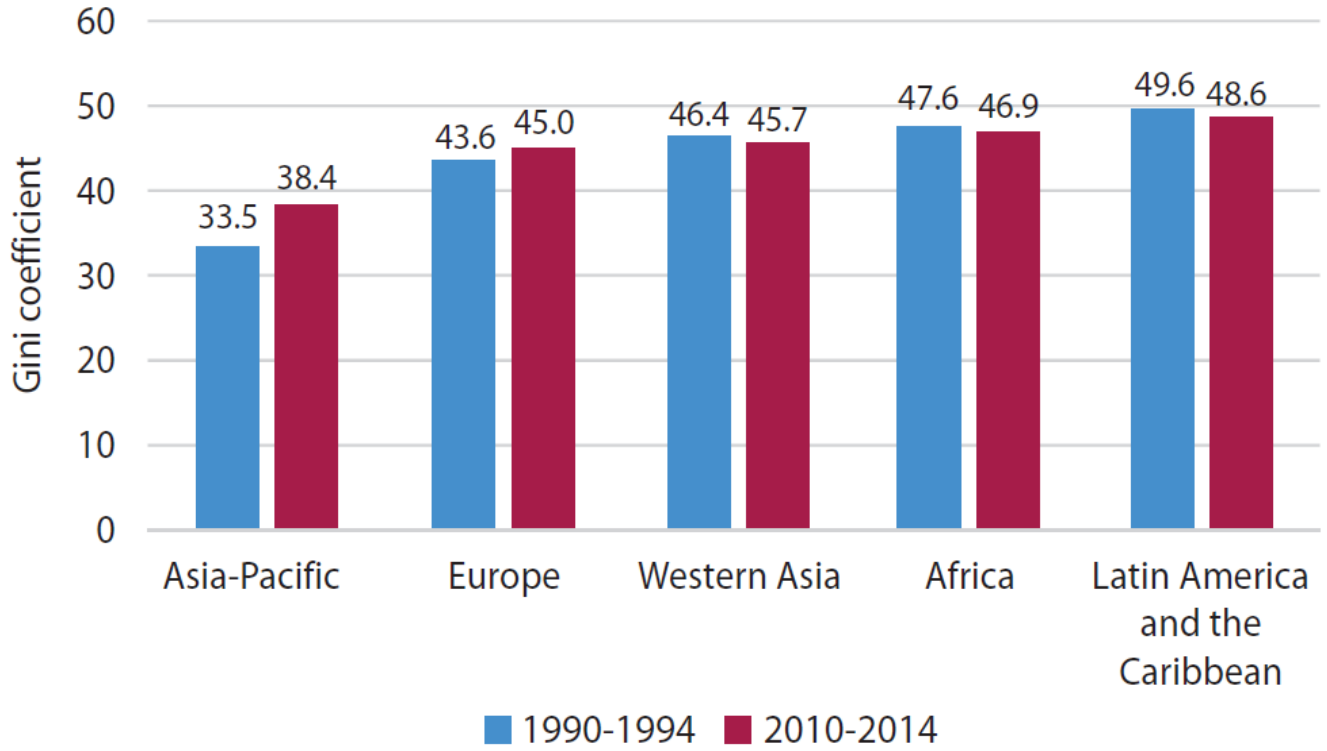
6) Strengthening governance and institutions

How can countries achieve the Triple-Bottom-Line?

Strong and sustained economic growth with social inclusion and environmental sustainability and resilience?

(1) Income Inequality

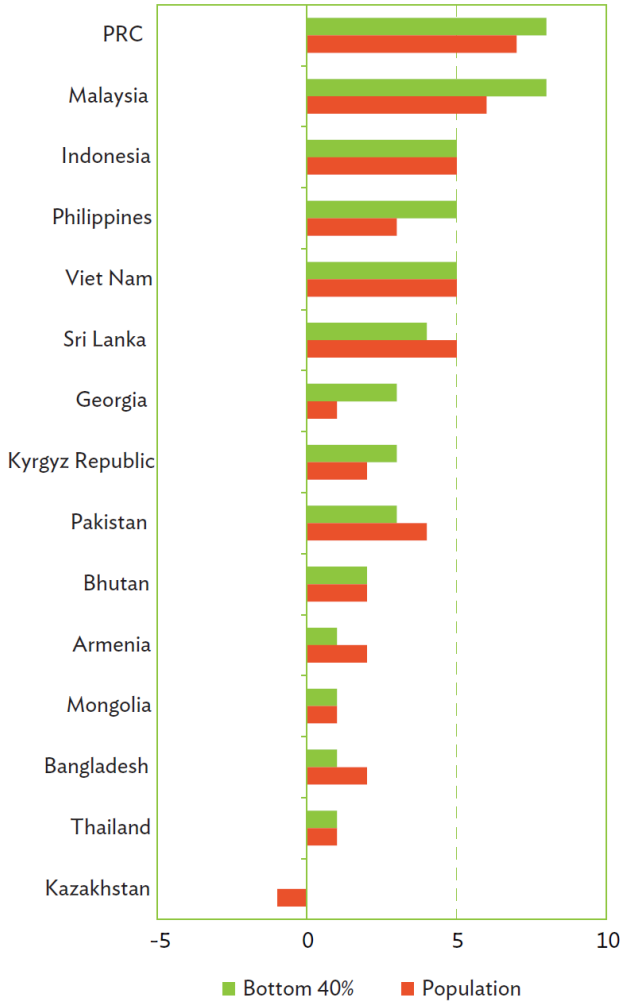
Income inequality by region, changes between early 1990s and early 2010s



Notes: The regional classification is based on the United Nations regional commissions. The Gini coefficient of each country was calculated as the simple average of the available Gini coefficients within each 5-year period (1990-1994 and 2010-2014). Each region's Gini coefficient is calculated as the weighted average of the Gini coefficients of the countries in the region using population weights.

Source: UN ESCAP. 2018. *Inequality in Asia and the Pacific in the Era of the 2030 Agenda for Sustainable Development.* United Nations.

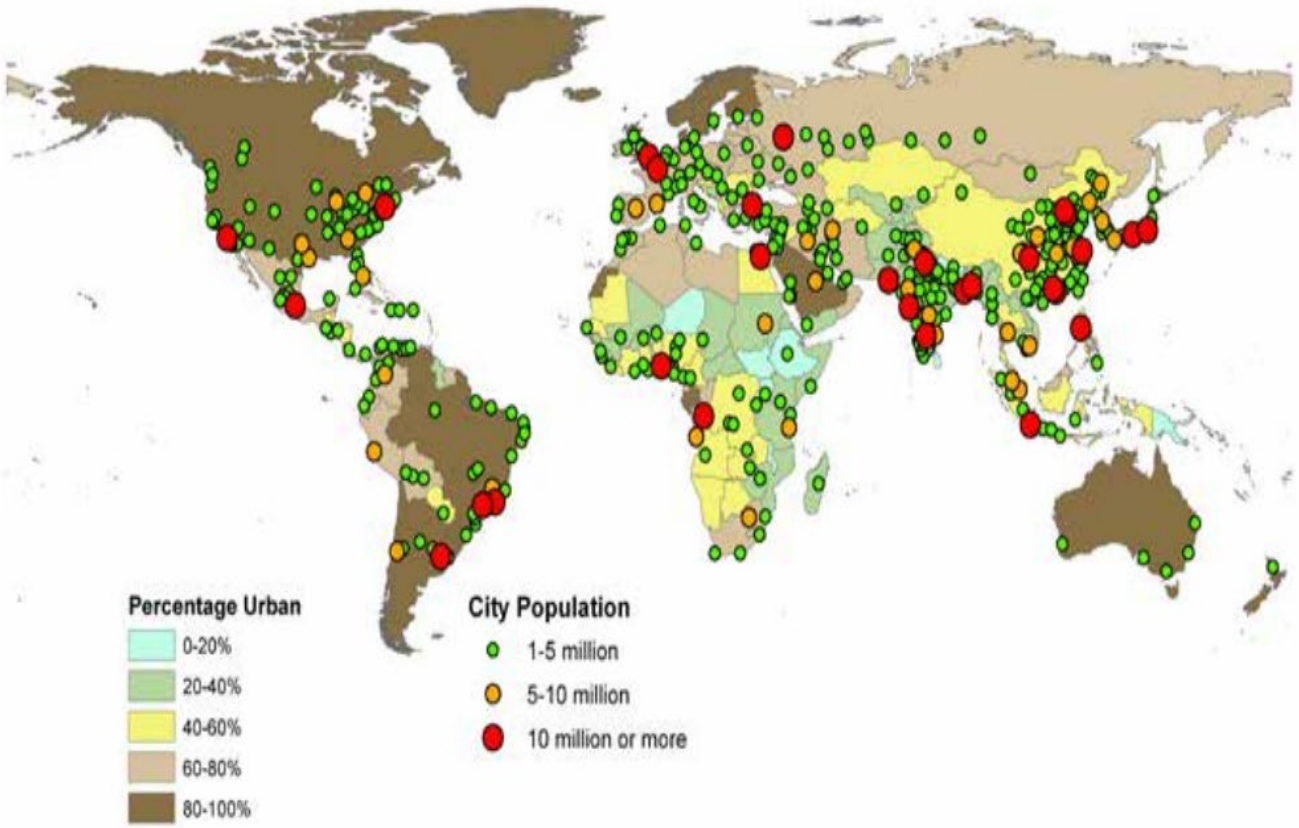
Growth Rates of Household Expenditure or Income per Capita, 2010–2018 (%)



PRC = People's Republic of China.
Note: Bottom 40% refers to individuals within the lowest 40 percentile band in terms of income. Growth in household expenditure or income per capita is assessed over varying periods for each economy, usually periods of 5 or 6 years falling within 2010 and 2018. Growth rates refer to latest available data for over about a five-year period. Only economies with data for both the bottom 40% and the total population are included.
Source: Table 1.10.1, Key Indicators for Asia and the Pacific 2020.

(2) Asia's Urban Poverty Challenge

Global Patterns of Urbanization, 2015

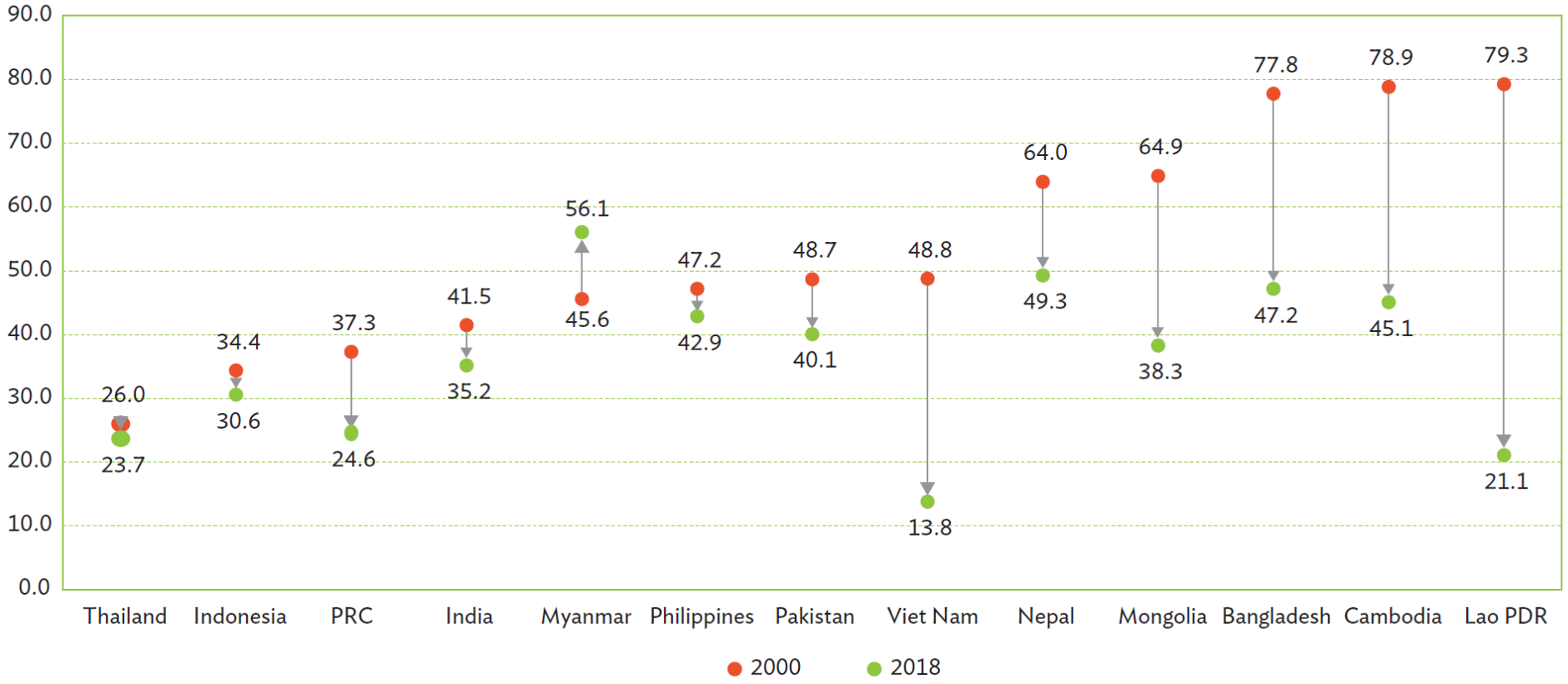


Source: UN World Cities Report 2016

- Two faces of Asian urbanization: **economic prosperity** of cities and increasing **urban poverty**
- Out of 2.1 billion urban people in Asia, more than 500 million are urban poor
- Urbanization closely associated with development, the urban poor will be left behind if their needs are not addressed
- More recent data suggests some progress in reducing number of people living in urban slums (next slide)

(2) Asia's Urban Poverty Challenge

Proportion of Urban Population Living in Slums, 2000 and 2018 (%)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Note: Only economies with available data for both 2000 and 2018 are included. For reference year 2000, data for Cambodia, the Lao PDR, Myanmar, and Thailand refer to 2005.
Source: Table 1.11.1, Key Indicators for Asia and the Pacific 2020.

(3) Private Sector Financing Needed

Estimates of Infrastructure Investment Needs by Region, 45 DMCs, 2016–2030 ($ billion in 2015 prices)

	Meeting Asia's Infrastructure Needs Baseline Estimates 45 DMCs		
Region	Investment Needs	Annual Average	As % of GDP
Central Asia	492	33	6.8
South Asia	5,477	365	7.6
East Asia	13,781	919	4.5
Southeast Asia	2,759	184	5.0
Pacific	42	3	8.2
Asia and the Pacific	22,551	1,503	5.1

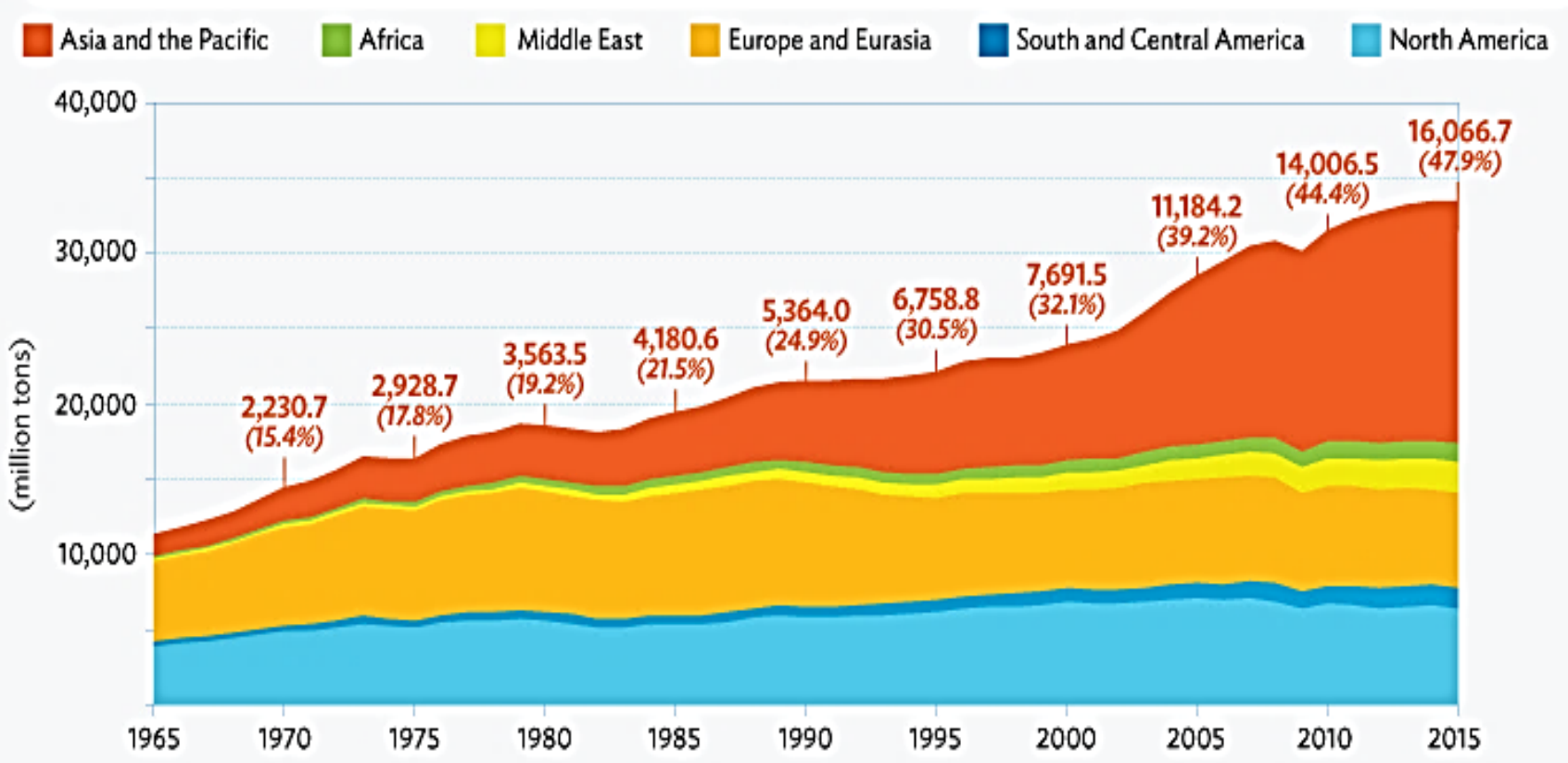
DMC = developing member country, GDP = gross domestic product.
Sources: ADB. 2017. *Meeting Asia's Infrastructure Needs.* Manila; Global Infrastructure Hub and Oxford Economics. 2017. *Global Infrastructure Outlook*. Sydney and London; World Bank. 2019. *Beyond the Gap.* Washington.

IED PPP Evaluation (2020):

- With urbanization and economic change has come a growing infrastructure deficit
- Annual infrastructure investment needs range from $1.5 to $2.0 trillion
- Private sector financing will be critical to addressing this gap

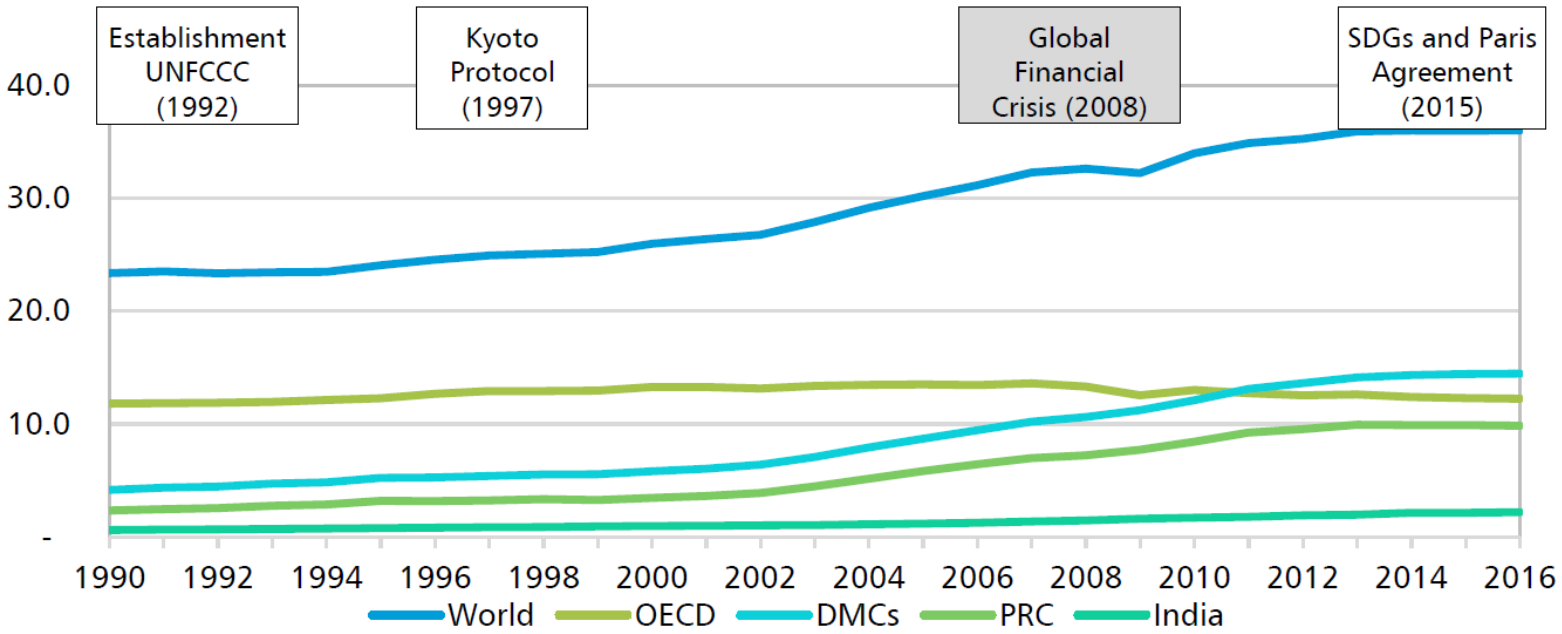
(4) Economy and Environment

CO_2 Emissions by Region (in million tons)



(4) Economy and Environment

Energy Sector Greenhouse Gas Emissions, Selected Regions, and Key Milestones, 1990–2016 ($GtCO_2e$)



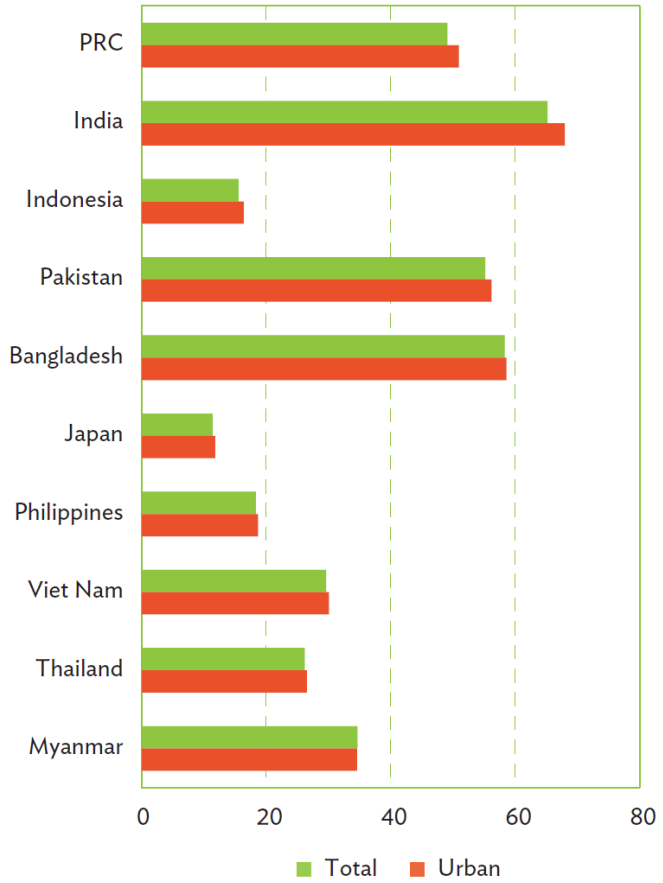
DMC = developing member country, GHG = greenhouse gas, $GtCO_2e$ = gigaton of carbon dioxide equivalent, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China, SDG = Sustainable Development Goal, UNFCCC = United Nations Framework Convention on Climate Change. Source: Climate Watch. Data Explorer.

IED Energy Evaluation (2020):

- Energy responsible for more emissions than any other sector, at 30% of total emissions
- Countries setting targets (NDCs) under Paris Agreement, but efforts so far fall short of limiting warming to 2 degrees Celsius
- Just over half of total global emissions are from Asia

(4) Economy and Environment

Annual Mean Levels of Fine Particulate Matter in Cities of Asia and the Pacific's Most Populous Economies, 2016 (µg/m3)



µg = microgram, m³ = cubic meter, PRC = People's Republic of China.
Note: Fine particulate matter is classified as matter with a diameter equal to or less than 2.5 microns in diameter (PM 2.5). The graph covers cities in the 10 most populous economies of Asia and the Pacific.
Sources: Table 1.11.1 and Table 2.1.1, Key Indicators for Asia and the Pacific 2020.

- Air pollution in urban areas exceeds WHO-recommended maximum levels in more than 90% of the region's economies
- The region is experiencing environmental degradation in other dimensions, e.g. deforestation and unsustainable use of marine resources

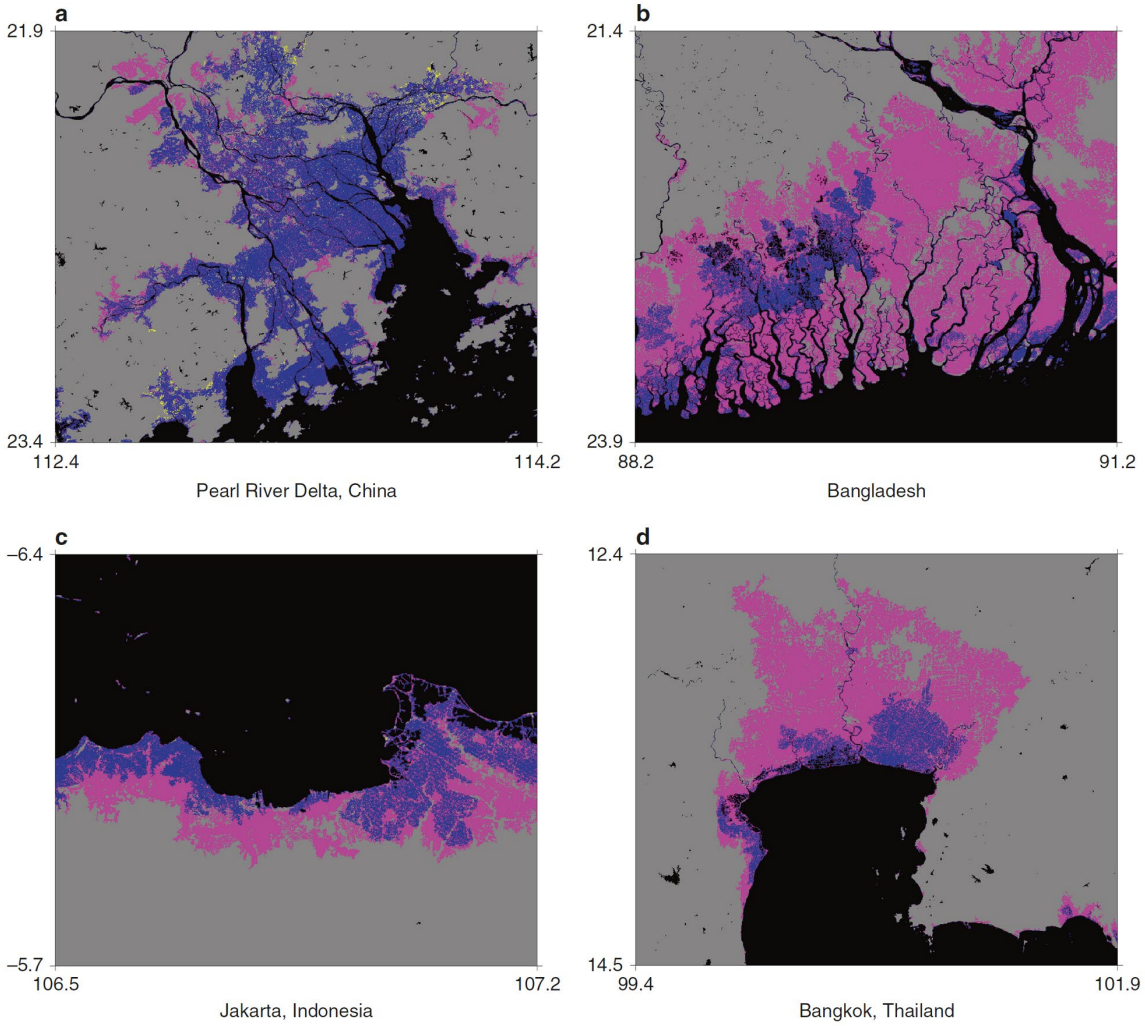
(4) Climate Vulnerability

Majuro Atoll in the Marshall Islands

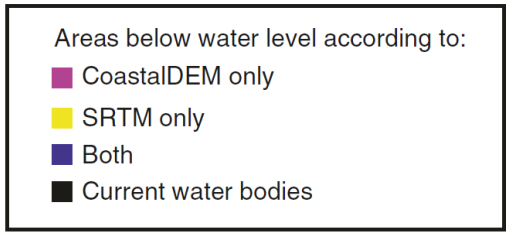
IED Evaluation on Climate Change (ongoing):

- Countries in the region are highly vulnerable to impacts of climate change
- Frequency and severity of extreme weather events will continue to escalate with continued emissions
- Sea level rise to bring potentially catastrophic consequences for coastal communities and those in low-lying regions and islands, including atoll nations
- Half of the region's urban population lives in low-lying coastal zones and flood plains
- Recent modeling suggests significant populations vulnerable to flooding (next slide)

(4) Climate Vulnerability



Permanent inundation surfaces predicted by CoastalDEM and SRTM given the median K17/RCP 8.5/2100 sea-level projection. Locations include (a) the Pearl River Delta, China; (b) Bangladesh; (c) Jakarta, Indonesia; and (d) Bangkok, Thailand. Low-lying areas isolated from the ocean are removed from the inundation surface using connected components analysis. Current water bodies are derived from the SRTM Water Body Dataset. Gray areas represent dry land. Axis labels denote latitude and longitude.



Kulp, S. and Strauss, B. *New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding.* In Nature Communications, (2019) 10:4844. https://doi.org/10.1038/s41467-019-12808-z | www.nature.com/naturecommunications

(5) Rapid Urbanization

- Rapid and unplanned urbanization now a major problem across many countries
- Even in small Pacific islands, rapid urbanization creating challenges
- This presents a complexity of issues to be addressed
- Not just first-tier cities: 577 second-tier cities to account for 50% of global GDP by 2025

Source: McKinsey Global Institute. 2011. *Urban world: Mapping of the Economic Power of Cities*.

Economy

Cities produce 80 % of GDP
Drivers of economic growth
But vulnerable to impacts of climate change

Energy

Cities use about 85% of energy
Major sources of CO_2 emissions
Air pollution severe in many cities

Asian URBAN Challenge

Climate Change

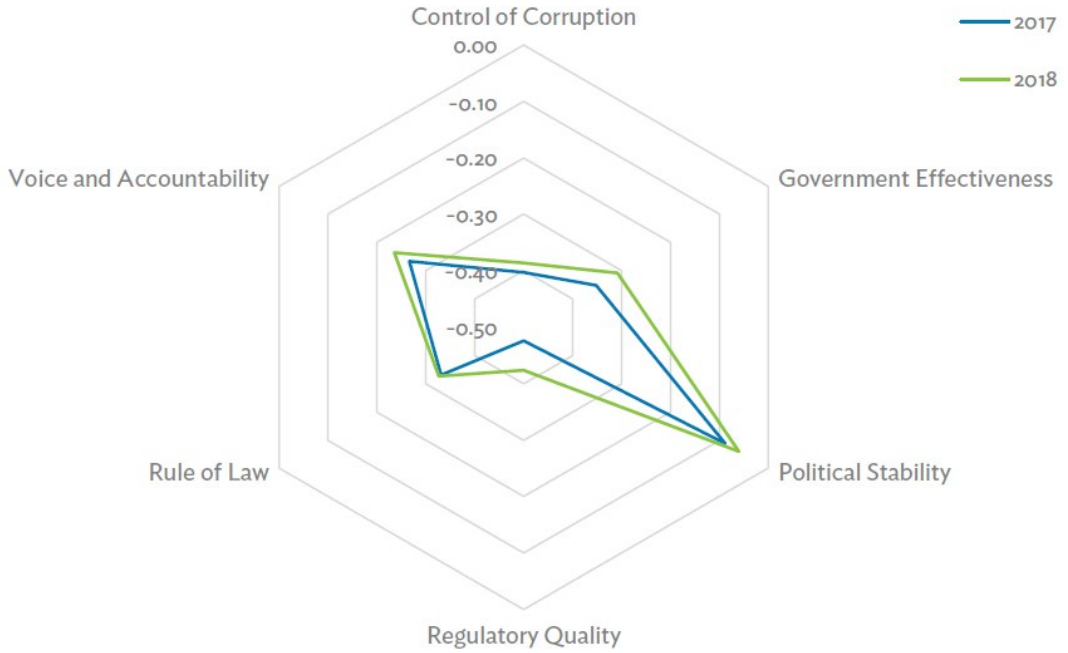
Environment

(6) Governance and Institutions

IED Governance Evaluation (2014):

- Stronger governance and better-performing institutions are fundamental to the overall quality of growth and development
- Better governance is essential to addressing the region's many challenges and achieving the triple-bottom-line: **growth** with **inclusion** and **sustainability**
- Strengthening governance and institutions is a long-term, arduous endeavor
- Complex relationships between different dimensions of governance and development
- DMCs' scores on World Governance Index have improved but remain low

ADB Developing Member Country Scores on World Governance Indicators

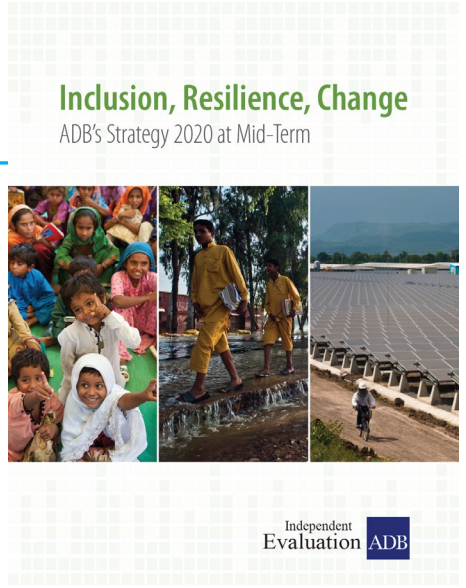


Source: 2019 ADB Development Effectiveness Review; based on World Governance Indicators data for 2017 and 2018

4. Opportunities and Priorities

Recent Perspectives from IED & Asian Development Outlook

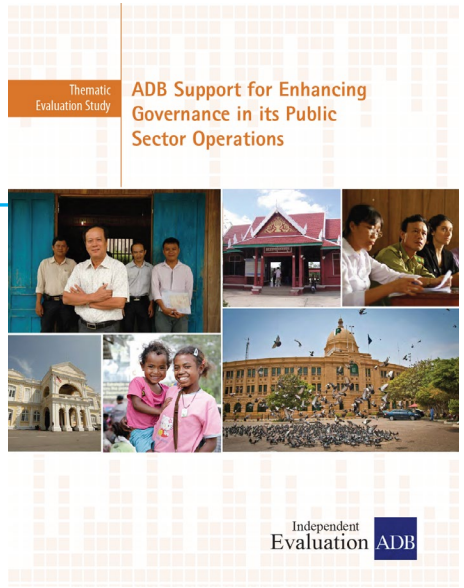
Opportunities and Priorities: IED



IED evaluation *Inclusion*, *Resilience*, *Change* (2014):

- Despite remarkable progress, income and non-income disparities and environmental degradation persist, while climate and disaster risks grow
- Supporting the triple-bottom line of economic growth with social inclusion and environmental sustainability remains highly relevant for the region and for major partners like ADB
- Infrastructure and non-infrastructure projects can support inclusive growth, but such an outcome is not automatic, as often assumed
- Much stronger focus on environmentally sustainable growth pathways and to building climate and disaster resilience is urgently needed
- Support for governance, gender, regional cooperation and integration, private sector development, and knowledge are essential

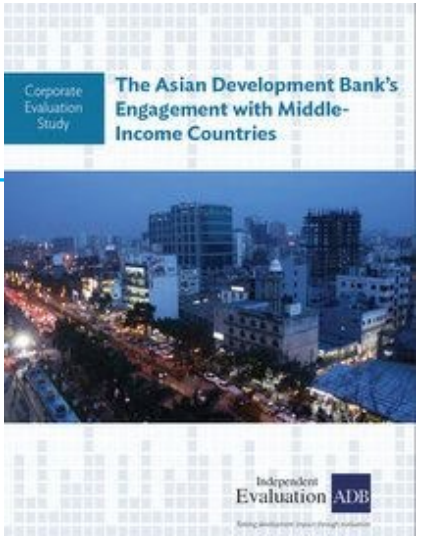
Opportunities and Priorities: IED



IED evaluation on Governance (2014):

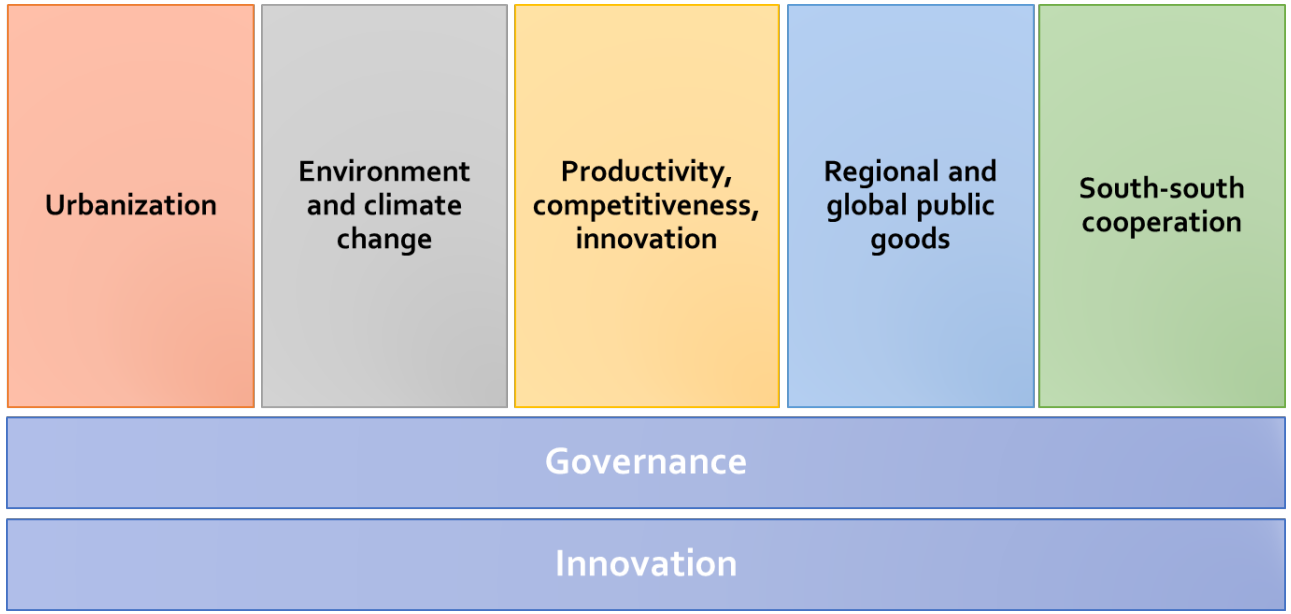
- Strengthening governance is essential to achieving the triple bottom line
- The region's governance performance is not in line with its economic growth performance: global indicators suggest continued weakness in key dimensions, regional surveys highlight concerns over poor governance and corruption in many countries
- Achieving higher development dividends from growth will require improved quality of governance—for most countries this will be an arduous undertaking
- Supporting better governance has been challenging for partners like ADB, reflecting the high-risk/high-return nature of this work
- Continued governance and capacity development support is needed to raise development effectiveness in the region and to tackle complex challenges

Opportunities and Priorities: IED



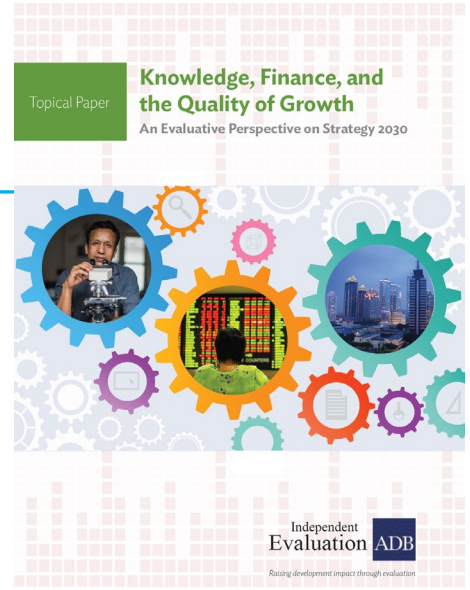
IED evaluation on Middle-Income Countries (2016):

- Anchor finance on knowledge
- Scale-up operations and target specific MIC needs, including:



- Decisively support private sector and public-private partnerships

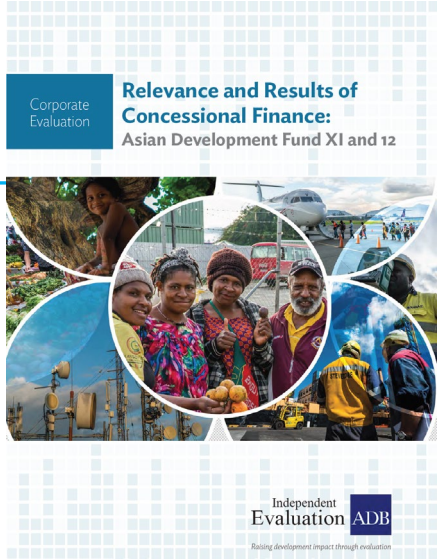
Opportunities and Priorities: IED



IED paper *Knowledge, Finance, and the Quality of Growth* (2017):

- The rapidly changing socioeconomic, financial, and institutional landscape of the region requires a focus on better quality growth
- Quality economic growth: social and geographic inclusion, environmental sustainability, and resilience
- Increasing complexity and multidimensional nature of challenges require development approaches that are more integrated, cross-sectoral, and thematic
- The sharp rise in the number of MICs in the region reflects its dynamism, yet progress differs widely across and within countries
- All of this demands agility, expertise, and differentiated approaches on the part of major development partners like ADB

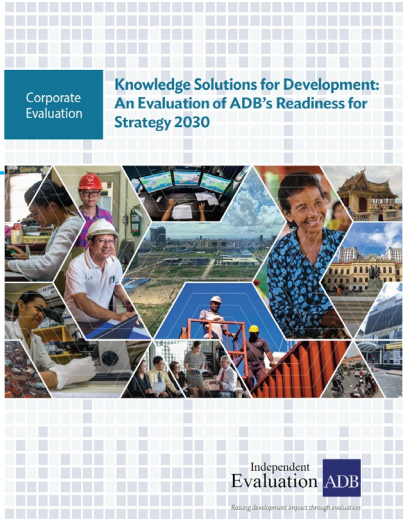
Opportunities and Priorities: IED



IED evaluation on Asian Development Fund (2019):

- Continued need for concessional loans and grants for poorest and most vulnerable countries
- FCAS and SIDS extremely challenging development contexts; results in these countries are much harder to achieve, cannot apply same approaches used in larger and more advanced economies
- Encourage private investment in these countries using blended-finance
- SIDS face sustainability challenges, in particular from climate change, which need stronger focus and resources
- Fragility and conflict need sharper focus by major partners like ADB

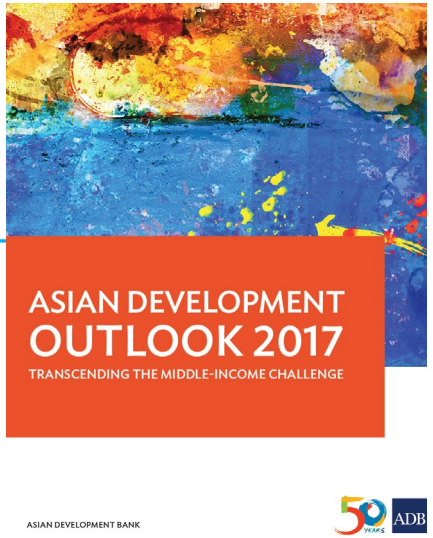
Opportunities and Priorities: IED



IED Knowledge Evaluation (2020):

- Knowledge central to development; explains a large percentage of economic growth and increased productivity
- Since 1950s, knowledge has played a central role in virtually all economic models of growth and development
- Knowledge is important at all stages of development, but countries at different stages have different knowledge needs
- More advanced knowledge economies are driven increasingly by more sophisticated business processes and innovation

Final Perspectives from ADO2017



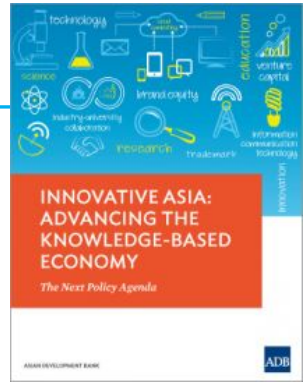
Special Chapter: *Transcending the Middle-Income Challenge*

- Rapid growth has moved the majority of countries to middle-income status, but question now is how to build on this success?
- Global experience suggests the jump from middle to high income can be difficult
- As economies evolve, so do their growth drivers, with increasing importance of productivity and innovation, entrepreneurship and a diverse and sophisticated product mix
- While human and physical capital accumulation continue to matter, more rapid productivity growth is essential to reaching high income status
- Innovation supported by human capital and infrastructure offers a promising pathway to productivity and economic growth

Thank you!

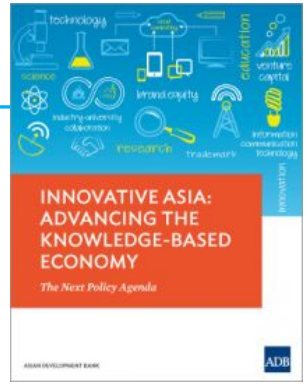
ADDITIONAL SLIDES

Success stories: Korea



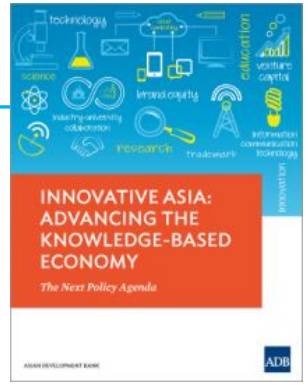
- R&D as % of GDP: from 0.5% in 1965 to 2.5% in 1997 to 3.7% in 2010.
  - Korea intends to increase this to 5.0% of GDP
- Super ministry combining science and technology and IT: Ministry of Science, ICT and Future Planning
- Government for R&D
  - Republic of Korea Advanced Institute of Science and Technology and Korean Institute of Science and Technology
  - Government incentives for private sector
  - Fiscal and trade policies tax credits, accelerated depreciation, lowered import tariffs
- Education: 35% of all Korean tertiary graduates earned degrees in engineering, manufacturing or construction disciplines (1999)

Success stories: Singapore

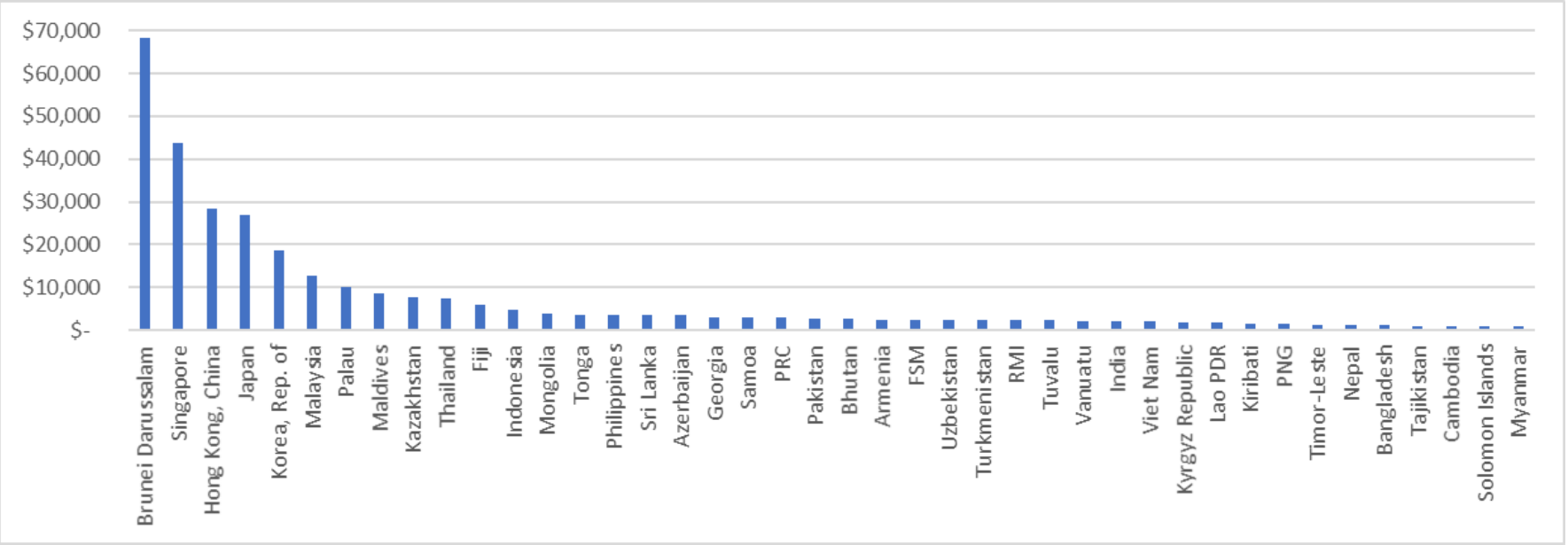


- From labor-intensive growth to skill-intensive growth to technology-intensive growth to knowledge and innovation economy-based growth
- R&D expenditure was 0.5% of GDP in the initial years and has steadily grown to 2.3% of GDP.
  - The country intends to increase it to 3.5% of GDP by 2015
- Role of Government: Economic Development Board (EDB) and Agency for Science, Technology and Research (A*Star)
- Singapore emerged as a hub of services and further developed new high-growth services capabilities

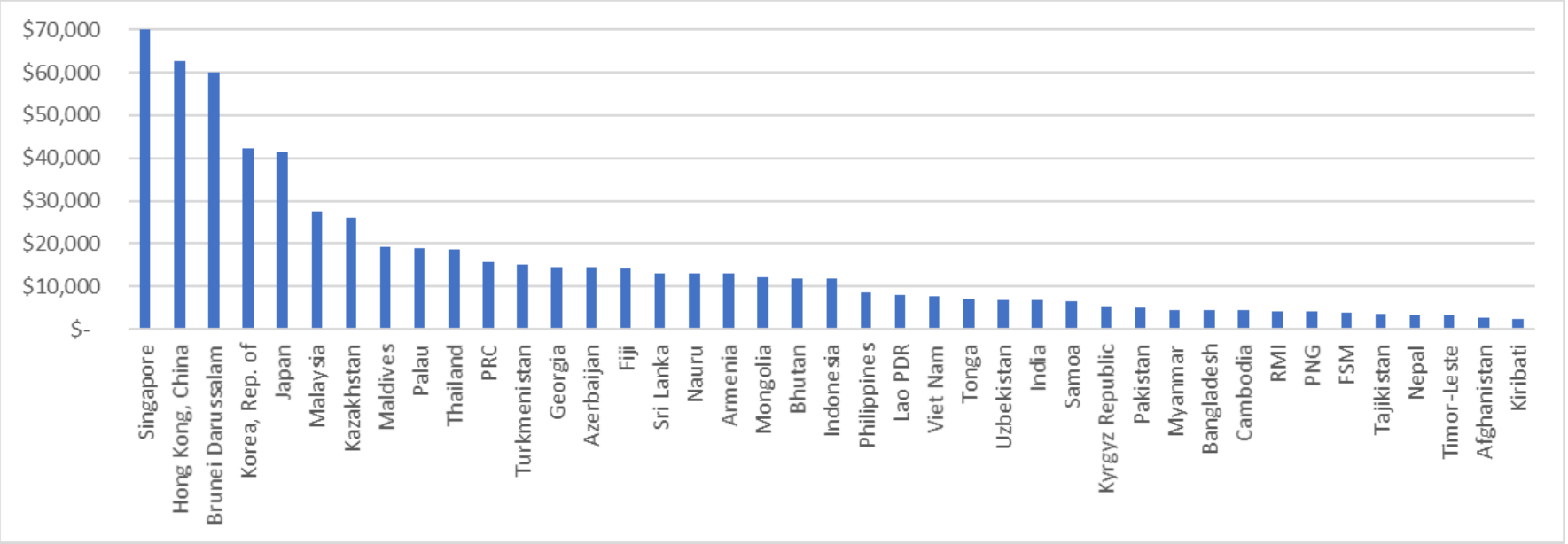
Success stories: Finland



- 1950s: Finland was still an agriculture-based economy
- 1990s onward: firmly established as an innovation-based knowledge economy
- Broad-based and engaging approach to formulating the education, research, and innovation policy agenda
- R&D to reach 4% of GDP by 2015
- Support to the ICT sector used a multipronged approach linked funding for R&D
  - enhanced education and human capital development specifically for IT
  - support to state technology agencies and other institutions
  - central focus on ICT as a competitive sector for the economy

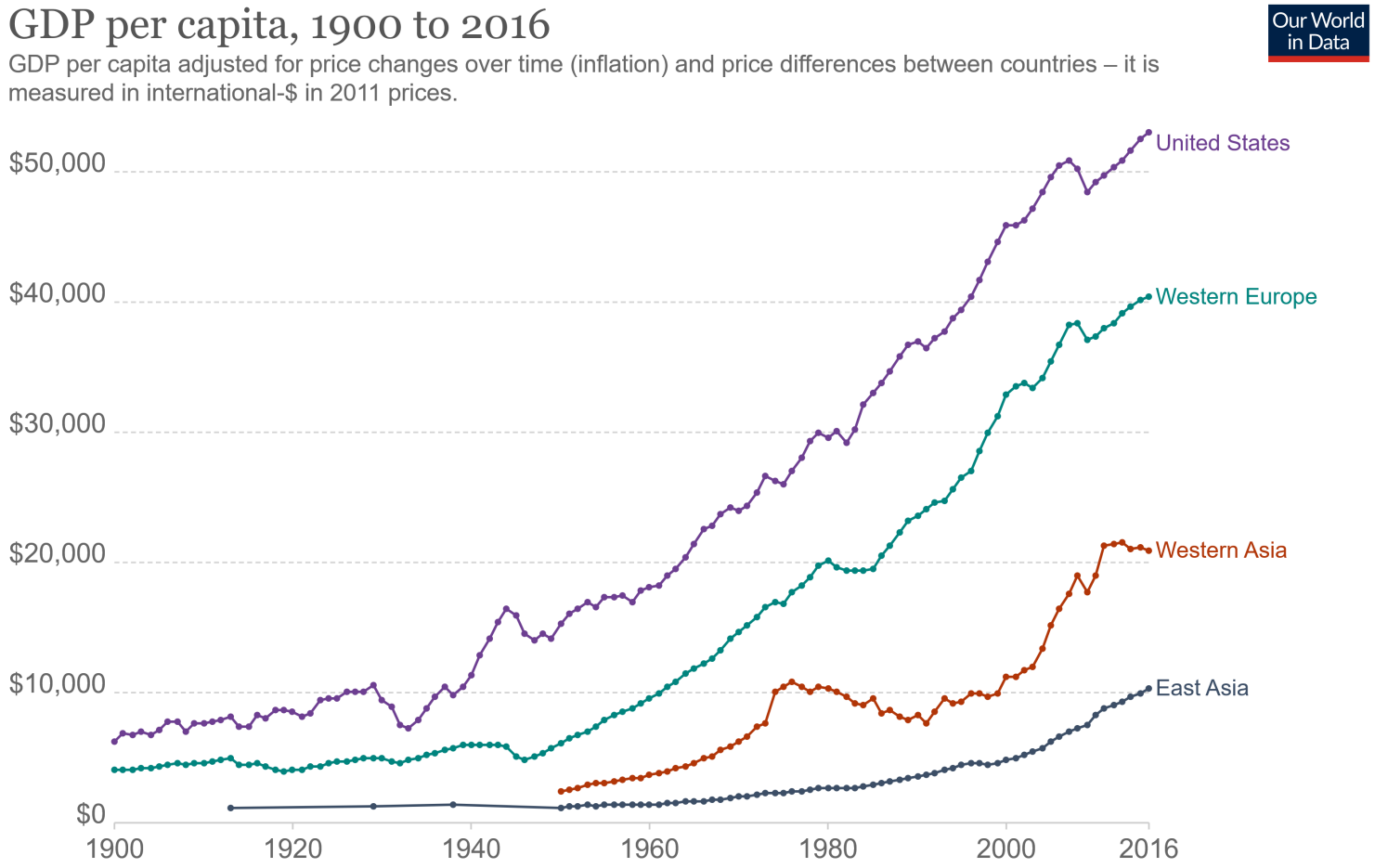


2000 GDP per capita, PPP (current international $)

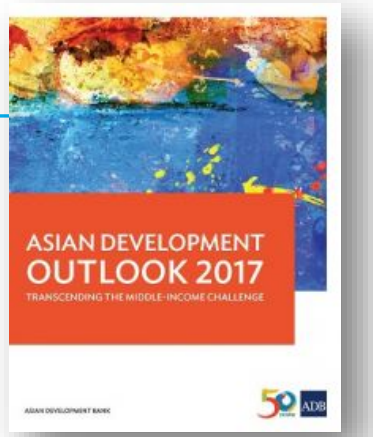


2018 GDP per capita, PPP (current international $)

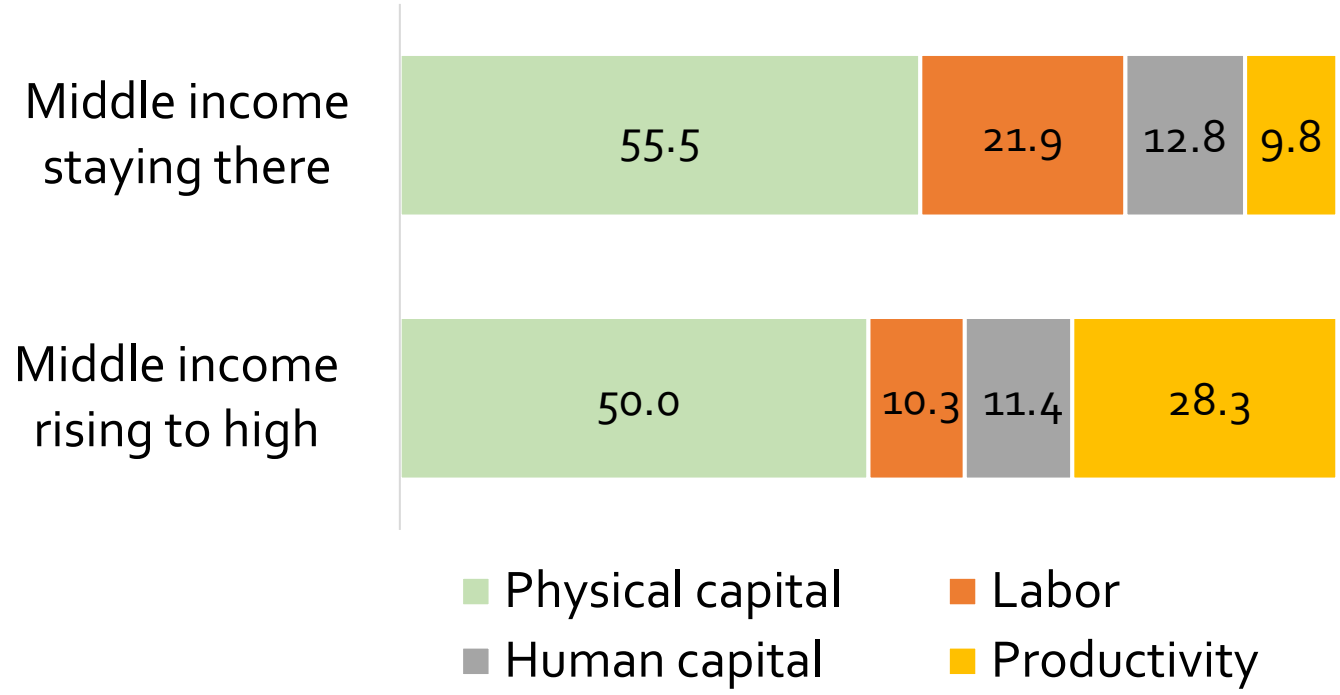
Per Capita Income



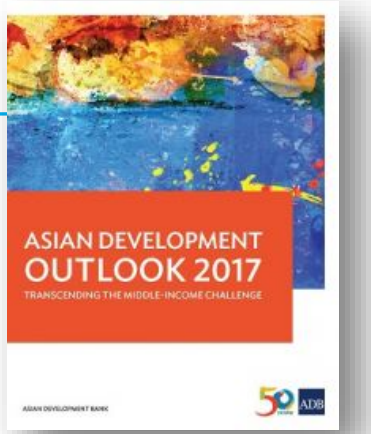
Productivity-centered growth is needed…



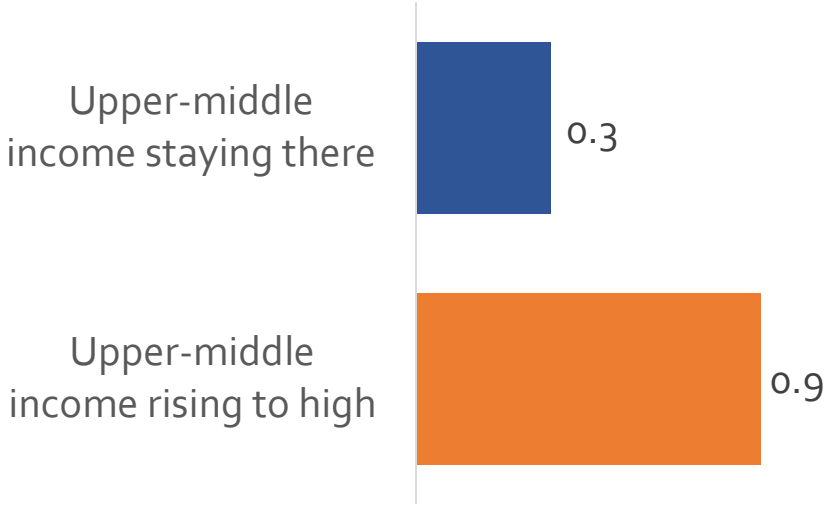
Contributions to Growth, 1960–2014 (%)



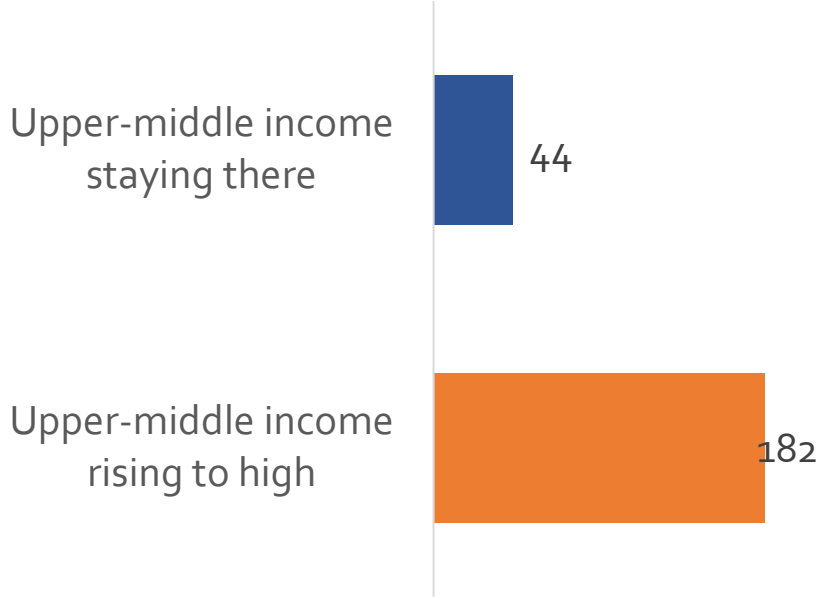
…driven by innovation…



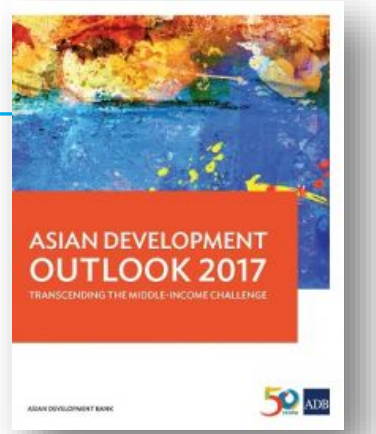
Research & development stock per labor hour

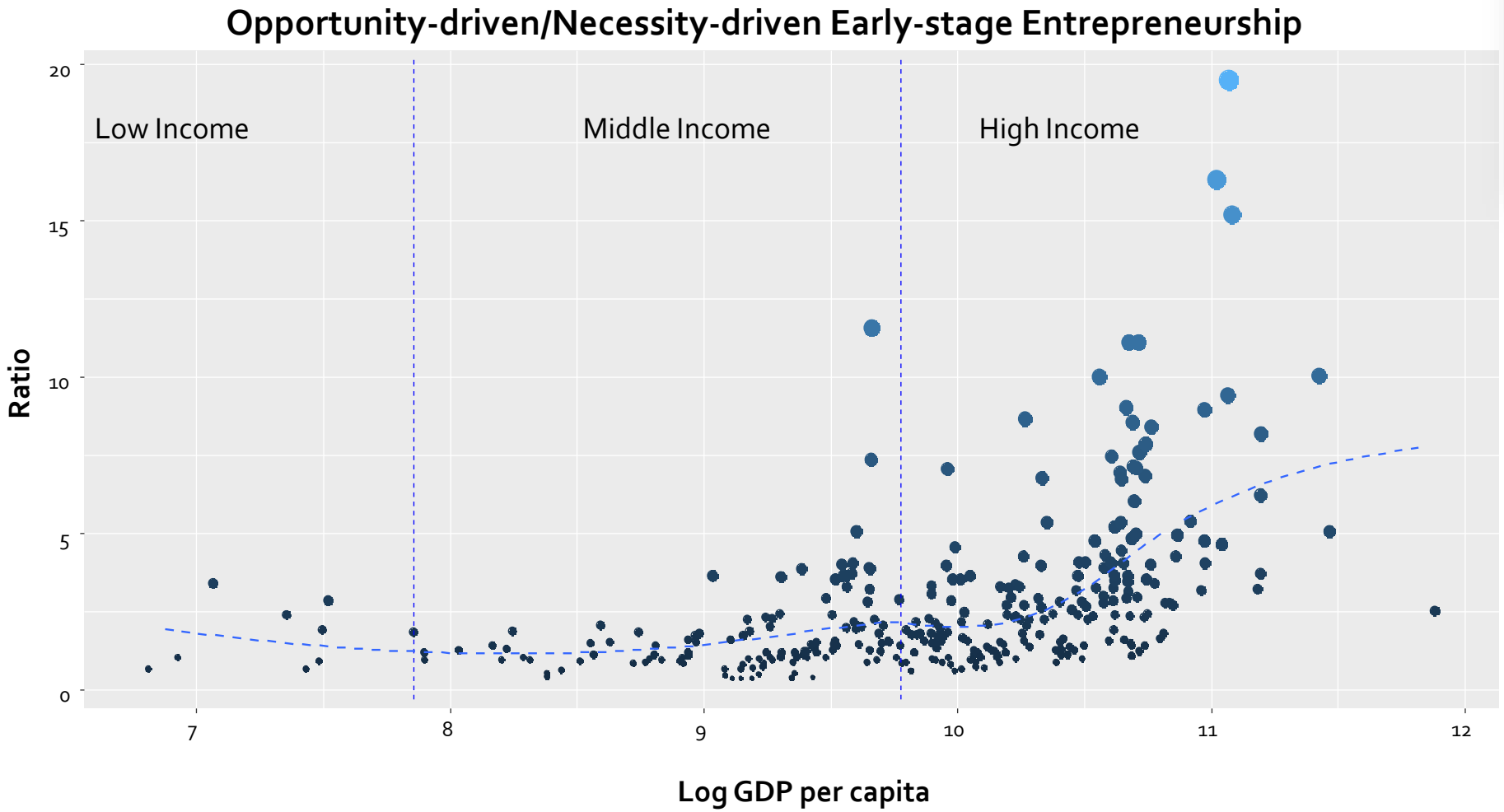


Patent applications (resident) per million persons

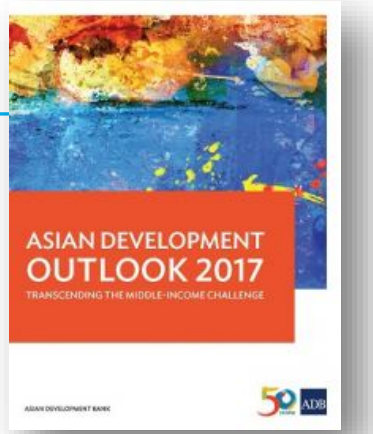


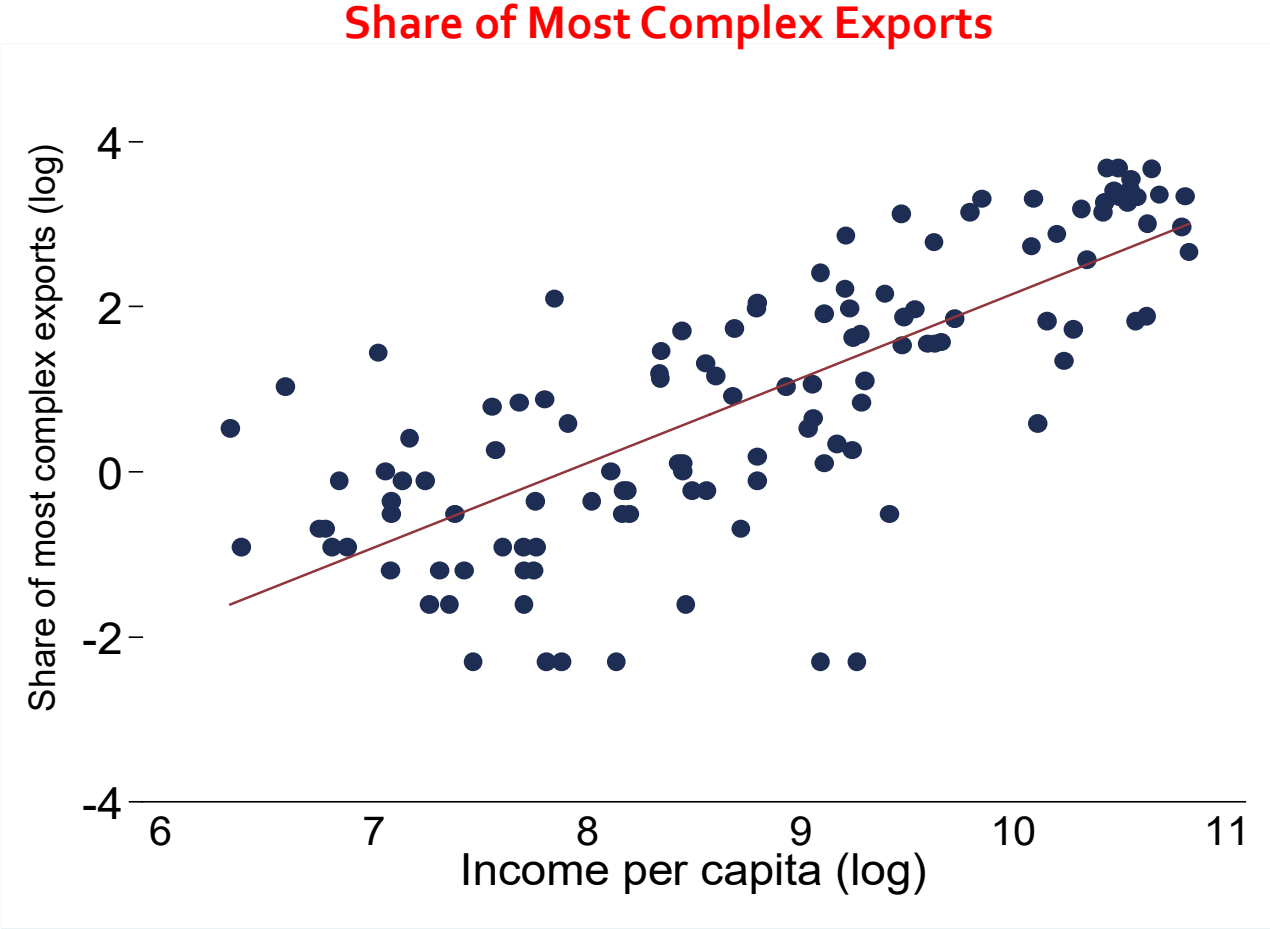
…led by entrepreneurs…



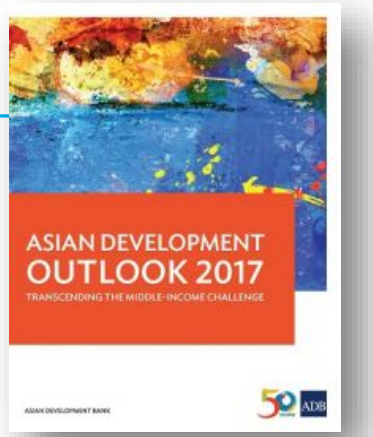


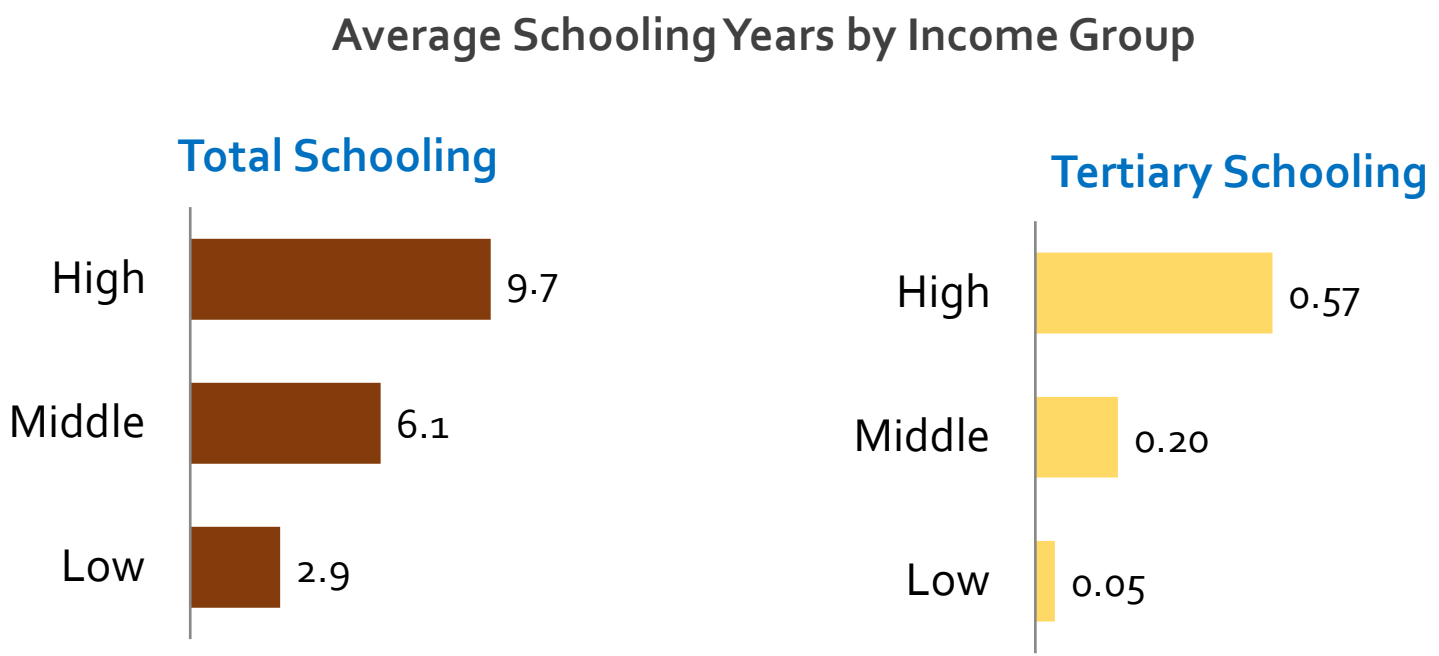
… who create more sophisticated products.



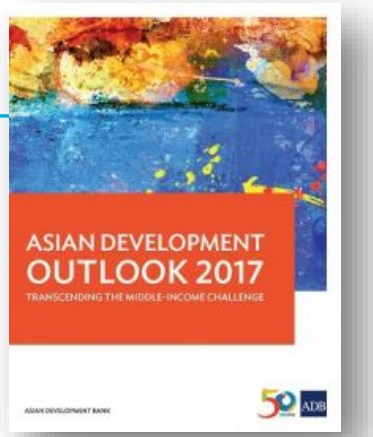


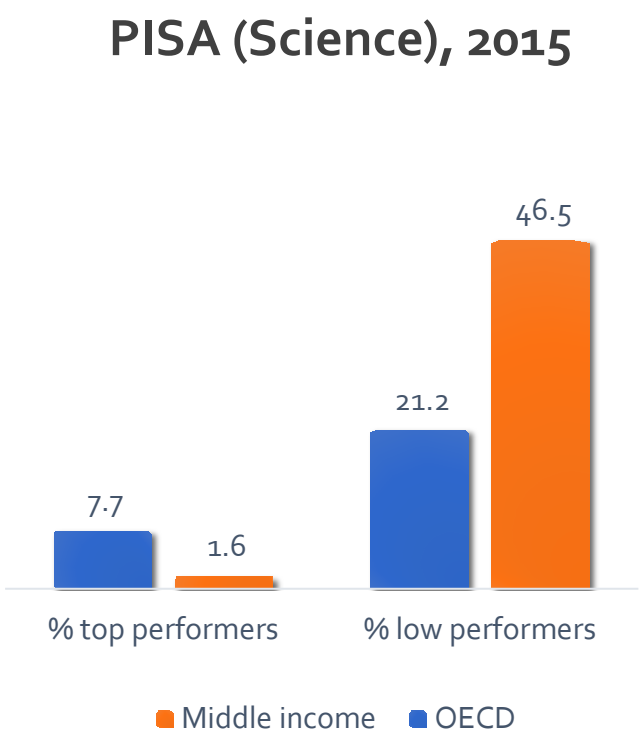
Human capital investment fuels innovation…

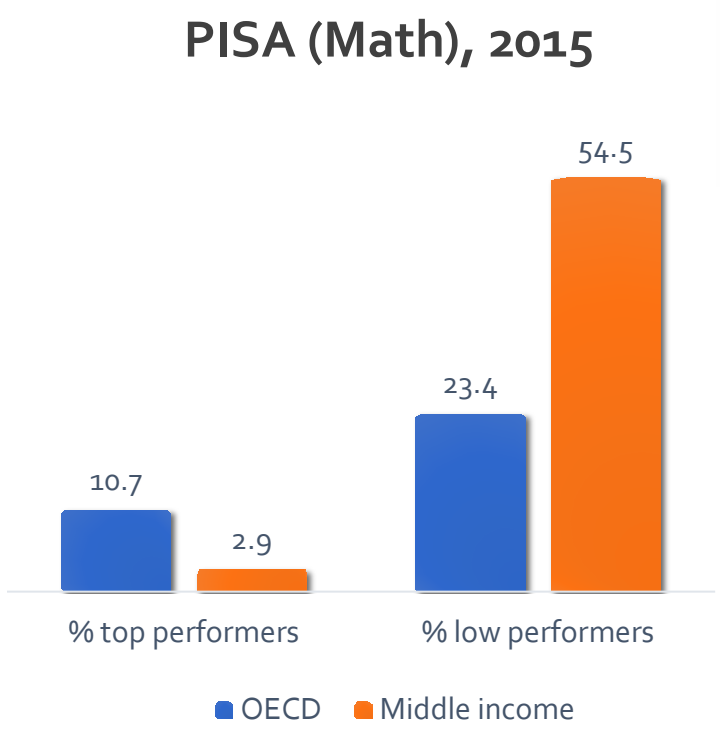




…and closes the skills gap.

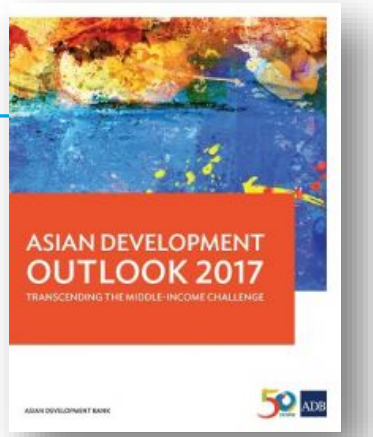


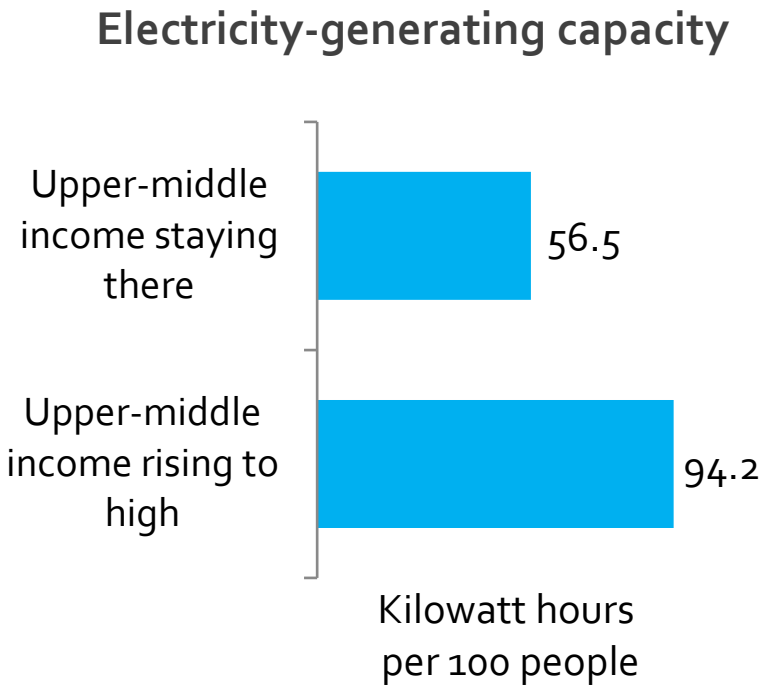


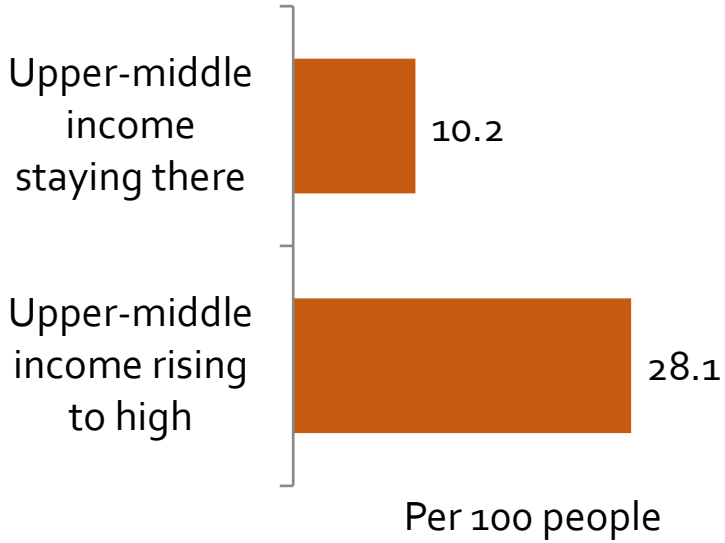


OECD = Organisation for Economic Co-operation and Development; PISA= Programme for International Student Assessment

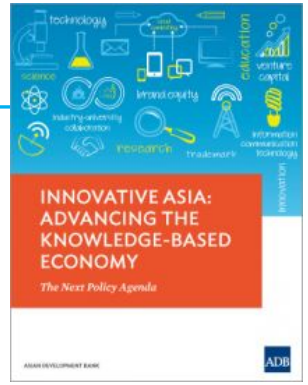
Investing in infrastructure is essential



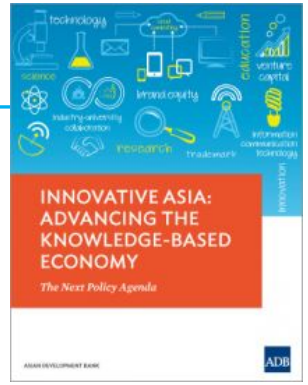




Some key lessons

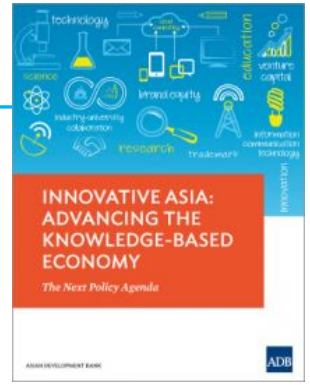


- Enabling systematic and sustained investments in knowledge-based economies
- Moving up the value-added scale in merchandise goods and services
- Important role of government in steering development of knowledge-based economies
- The private sector follows the government to invests in knowledge-based economies
- Removing constraints to innovation and enable knowledge asset creation



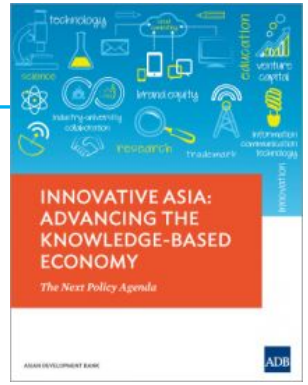
What can be done?

Education and skills



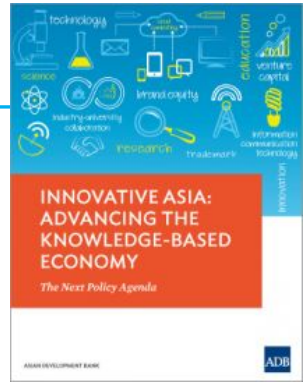
- Increasing education for employment and employability
  - Increase attainment levels and raise the quality of education
- Developing flexible systems of education, training and lifelong learning
  - Qualifications and competencies required in the marketplace
- Cater to tech or gray-collar workers
  - New knowledge workers as manufacturing and IT converge
- Expand PPP in education

Education and skills



- Leveraging ICT to extend access and improve education quality
  - Web-based e-learning platforms
  - Massive open online courses (MOOCs)
- Expand centers of excellence in R&D
  - Incentivize industry giants to set up leading research labs
- Create a critical mass of world-standard tertiary education institutions

Innovation

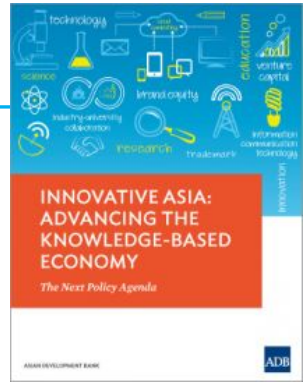


- Increase R&D expenditure to at least 1.5% of GDP
  - Except of PRC, none of emerging economies have R&D investment of 1.5%
  - Needed to advance beyond middle-income levels

- Promote high-impact R&D investments
  - PRC set to overtake the US as the world's largest R&D investor by 2020
  - but efficiency also needs to be raised

- Steer policies to encourage frugal innovation and innovation for "middle pyramid" consumers
  - Invest in innovation that better fits the specifics needs of the mass markets

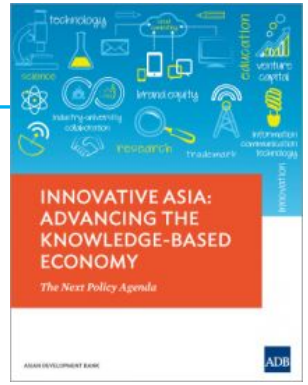
Innovation



- Develop innovation intermediaries
  - Proof of concept labs, early stage financing, mentoring, business development support, market scoping, and testing

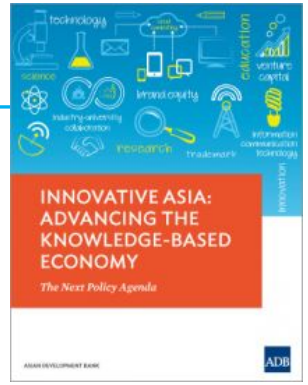
- Realize the potential of innovation in the services sector
  - Capitalize on offshoring opportunities
  - Invest in innovation capacity

Innovation



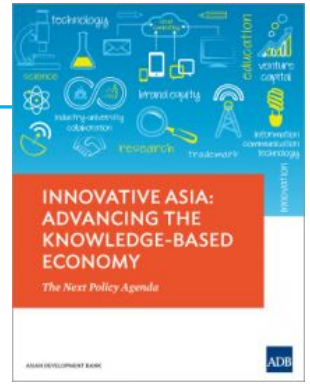
- Public sector funding to support commercialization of new technologies by local start ups
  - Examples: Small Business Innovation Research (SBIR) program in US and TEKES in Finland
- Strengthen and update intellectual property protection policies
- Create multiple innovation bases and hubs
  - Innovation districts that link technology, talent and finance
  - Co-located innovation clusters with industrial clusters and economic zones

Information and communication technology



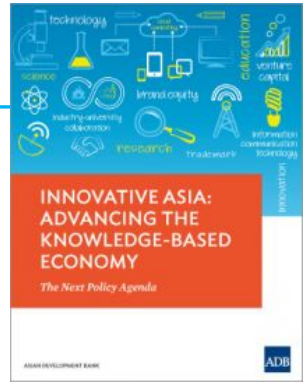
- Increase the penetration of ICT
  - a 10 percentage point increase in mobile phone penetration contributes to 4.2 percentage point increase in total factor productivity
- Tap the power of mobile phones for development
  - 3.5 billion mobile subscriptions in Asia; there are nearly 9 mobile phones for every 10 persons
  - More people have access to mobile networks that with access to electricity at home
  - 2015: Asia and the Pacific will account nearly 30% of global mobile data traffic

Information and communication technology



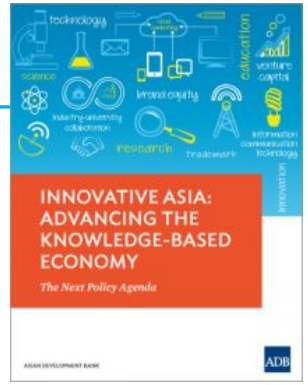
- Ensure universal, affordable and high-speed broadband
  - Need for comprehensive national broadband policies
- Expand digital literacy and talent for IT
- Adopt cloud based technology devices
  - Cloud computing will generate 10 million jobs in Asia by 2016 (14 million globally)
- Promoting e-government services

Economic incentive and institutional regime



- Improving governance and the role of government
  - Korea and Singapore are good examples
  - Coordinate knowledge economy promotion
  - Accelerate the commercialization of innovation
  - Support creative industries
- Tapping global knowledge
  - Taking part in global value chains

Economic incentive and institutional regime



- Improving intellectual property rights regime
  - Malaysia, Sri Lanka and PRC rank above world average

- Improving efficiency of capital and labor markets
  - Financial underdevelopment limits the availability of credit