

# Middle-Income Countries in Asia and the Pacific

## Challenges and Opportunities

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# OUTLINE

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Economic Growth in Asia and the Pacific



Emergence and Evolution of MICs



Challenges Facing MICs



Opportunities



ADB Engagement with MICs: Evaluation's Views

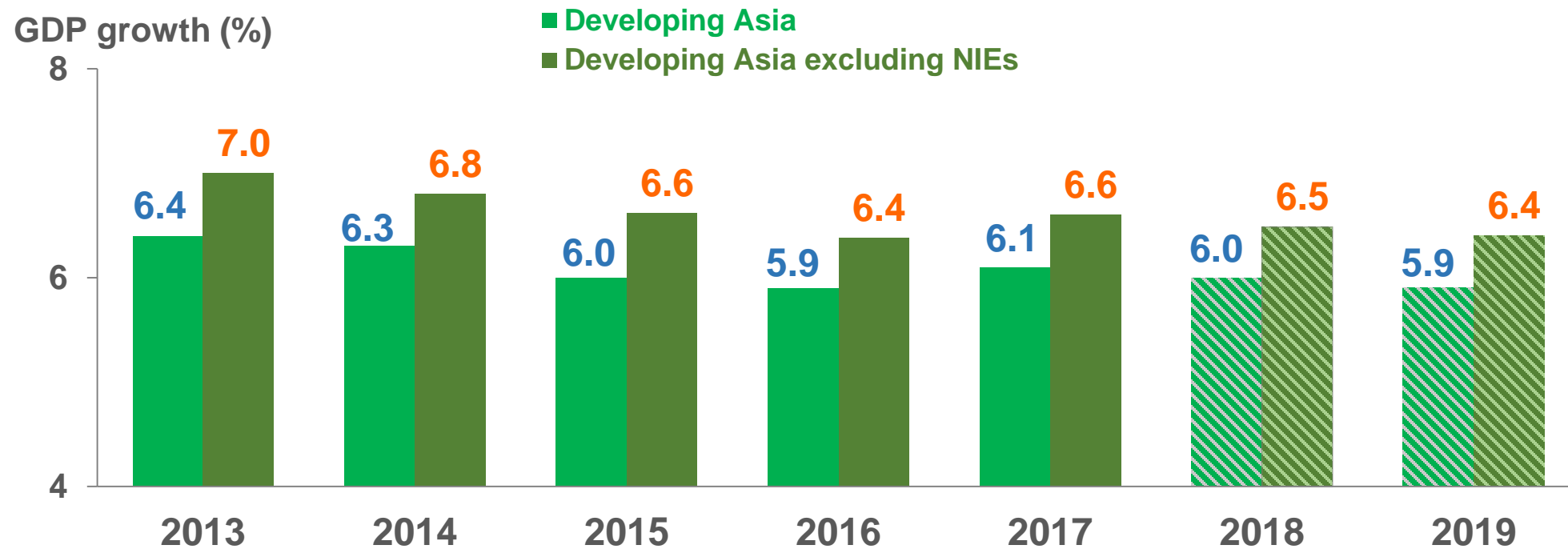




# Economic Growth in Asia and the Pacific



# Developing Asia's growth

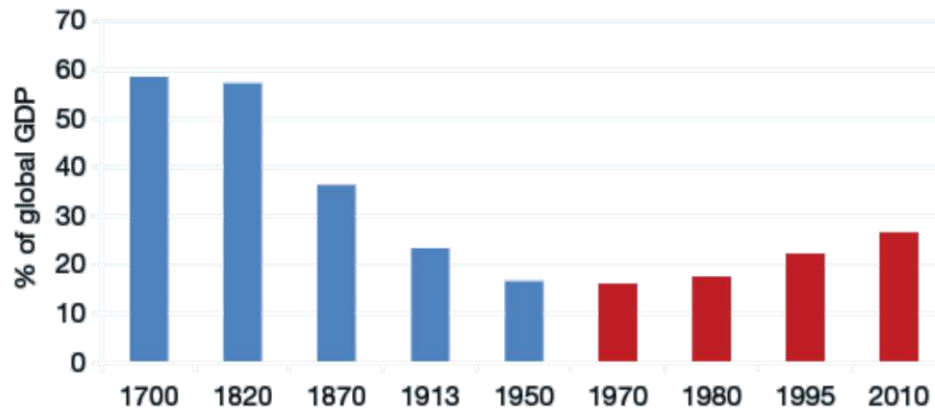


NIEs = newly industrialized economies of Hong Kong, China; Republic of Korea; Singapore; and Taipei, China

Source: Asian Development Outlook database.

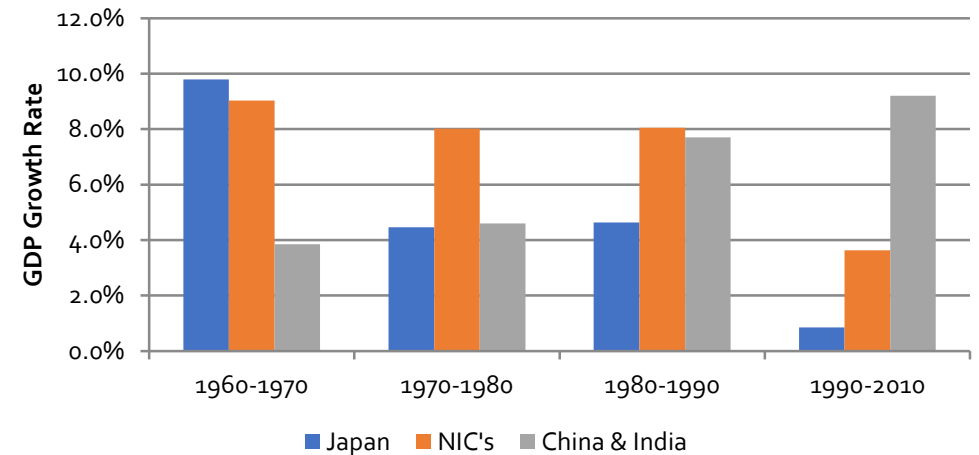
# Re-emergence of Asia

Asia's Share of Global GDP, 1700-2010



- Asia accounted for about 60% of world economy before Industrial Revolution
- In the following two centuries:
  - Asia's share declined to 15%
  - Asia's share in 2010 was 28%

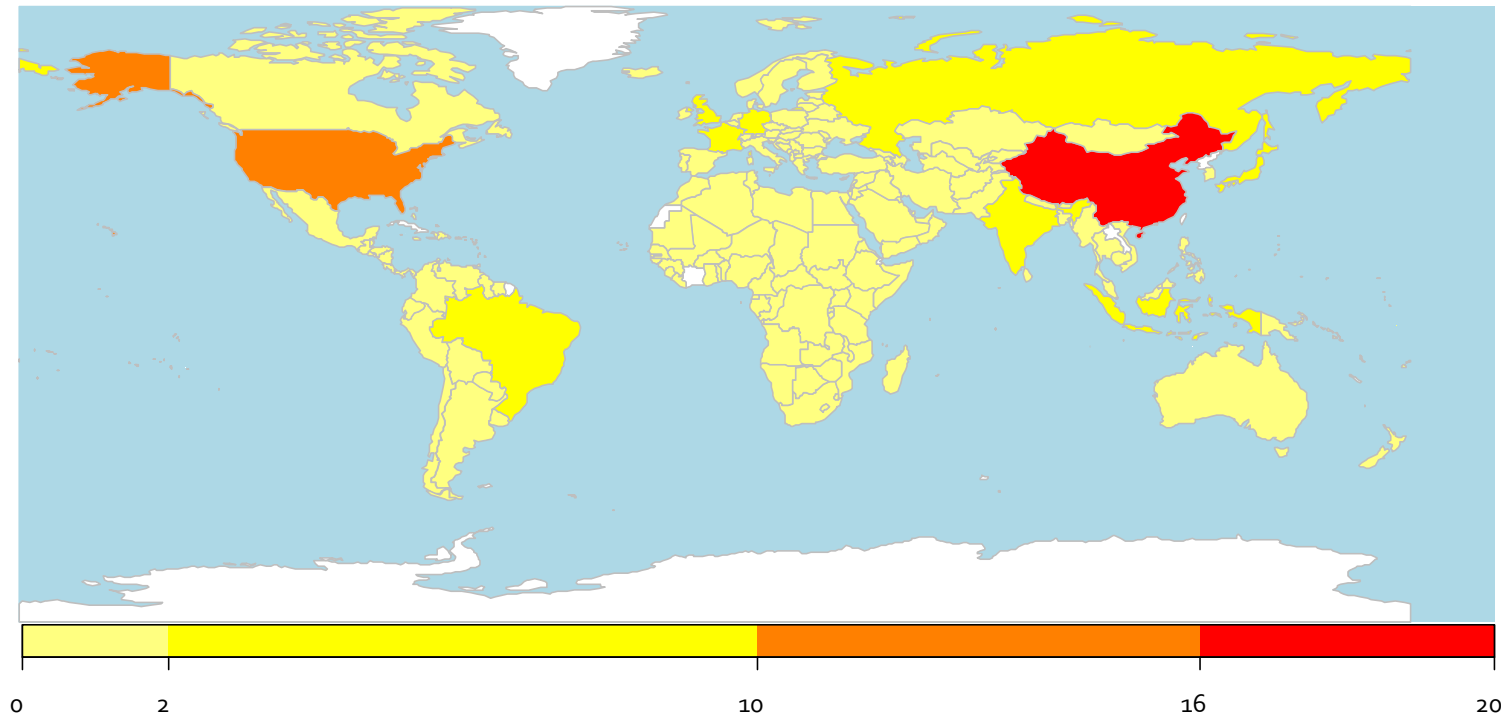
Asian Growth Rates



- 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

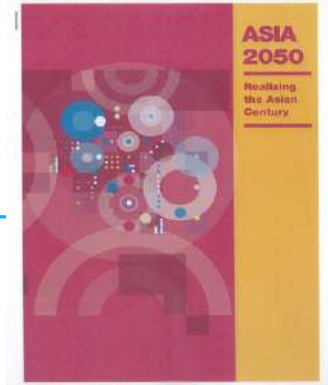
# Asia and the Pacific: a Global Driver of Growth

2017 World GDP, by Country Share (current PPP, %)

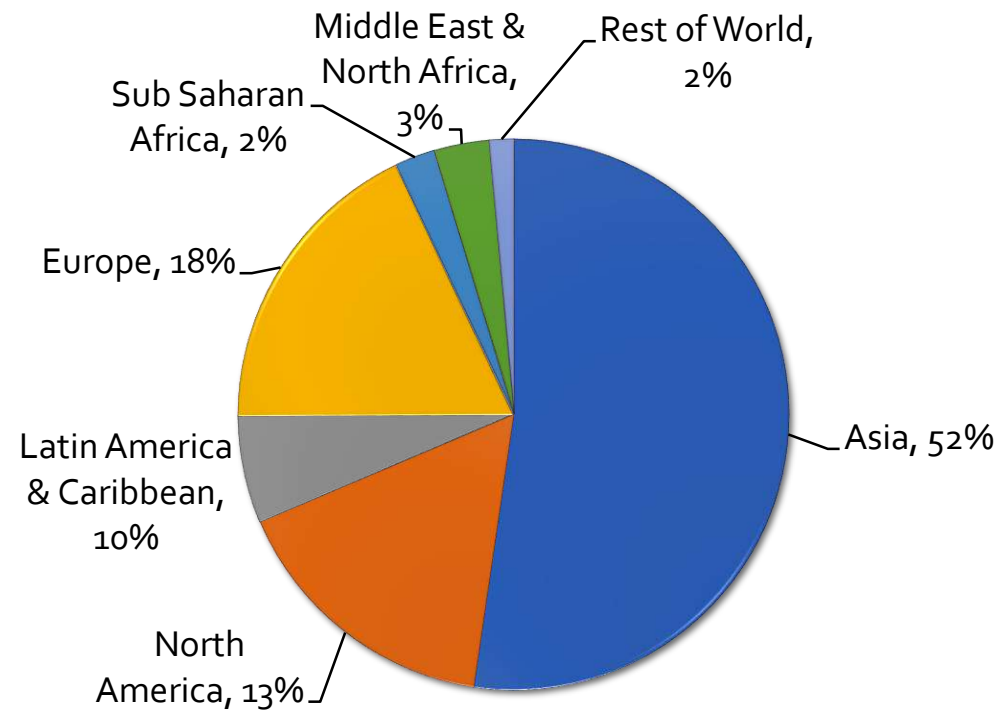


Asia and the Pacific accounts for **42%** of global GDP, drives **60%** of growth

# The Asian Century



## Asian Century Scenario: 2050



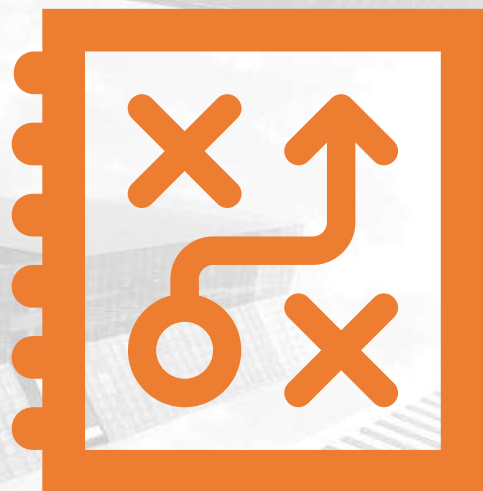
### GDP at market exchange rate (Trillion)

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.



# Emergence and Evolution of MICs

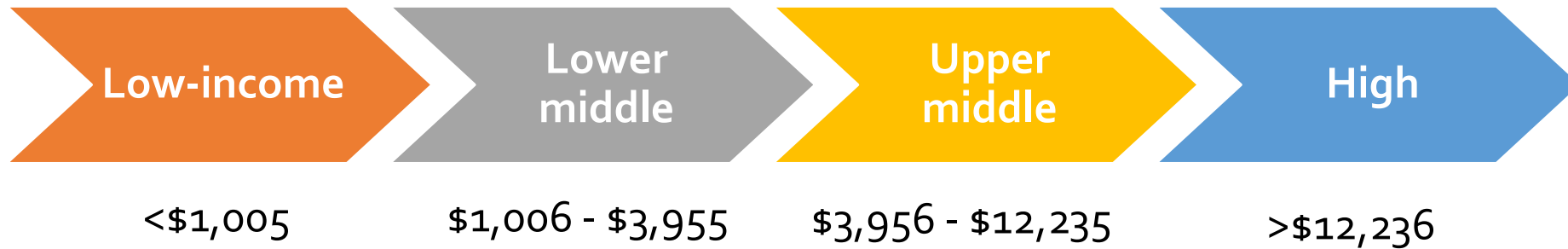




# Defining MICs

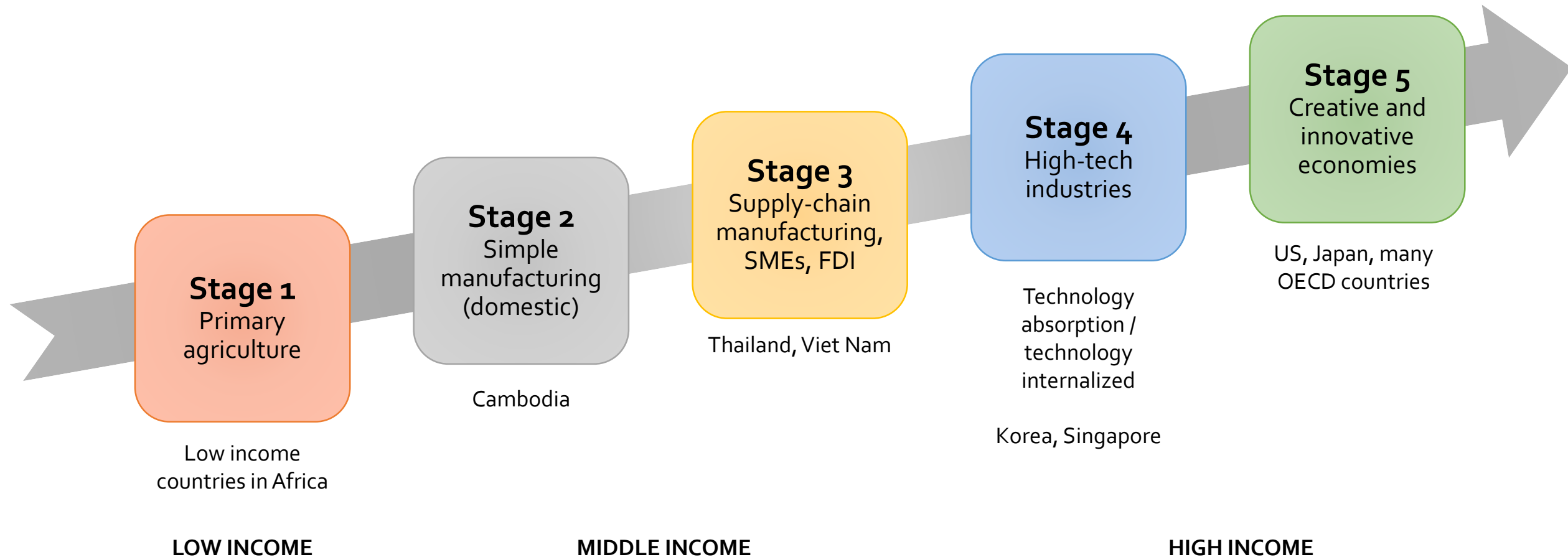
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Income classification standards, GNI per capita (US\$, Atlas method)

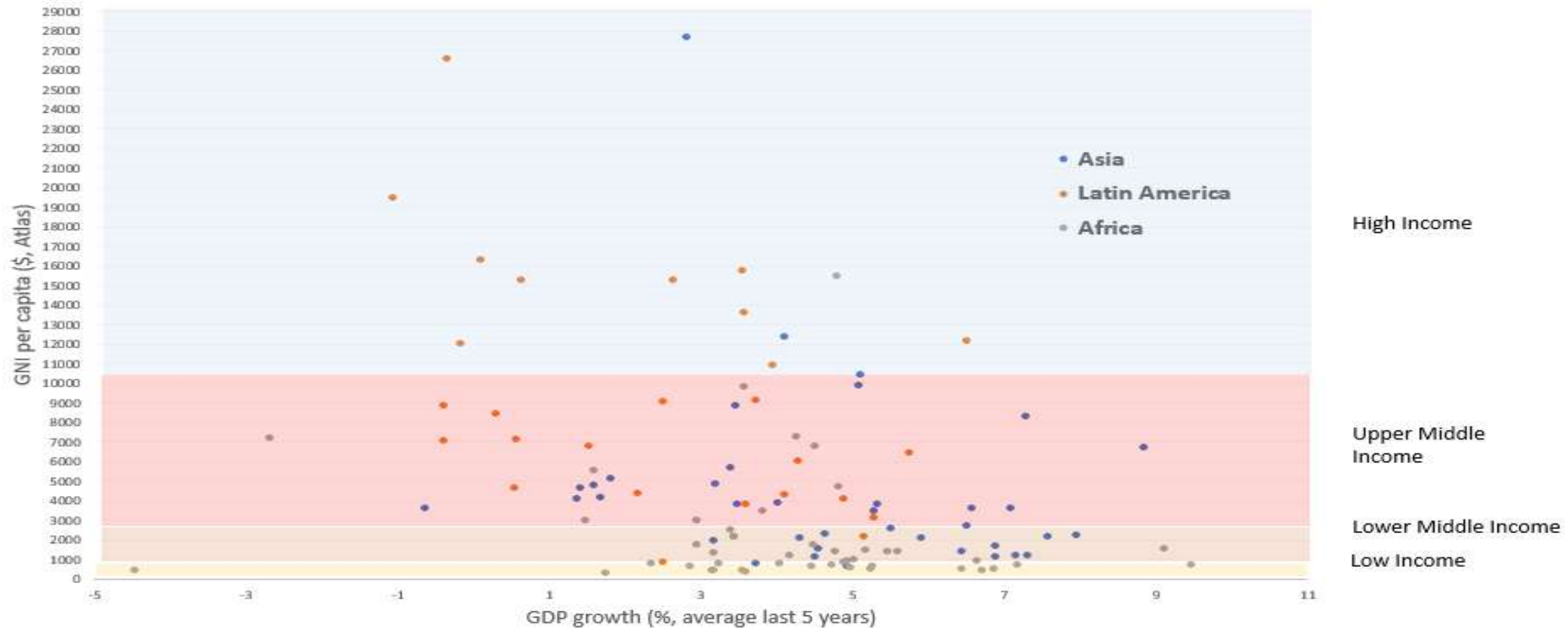


Do not completely summarize levels of development but closely related to nonmonetary measures of quality of life

# Stages of development

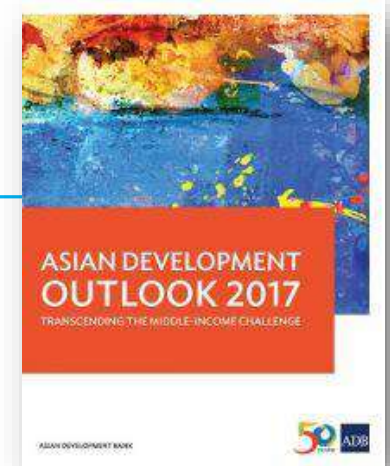
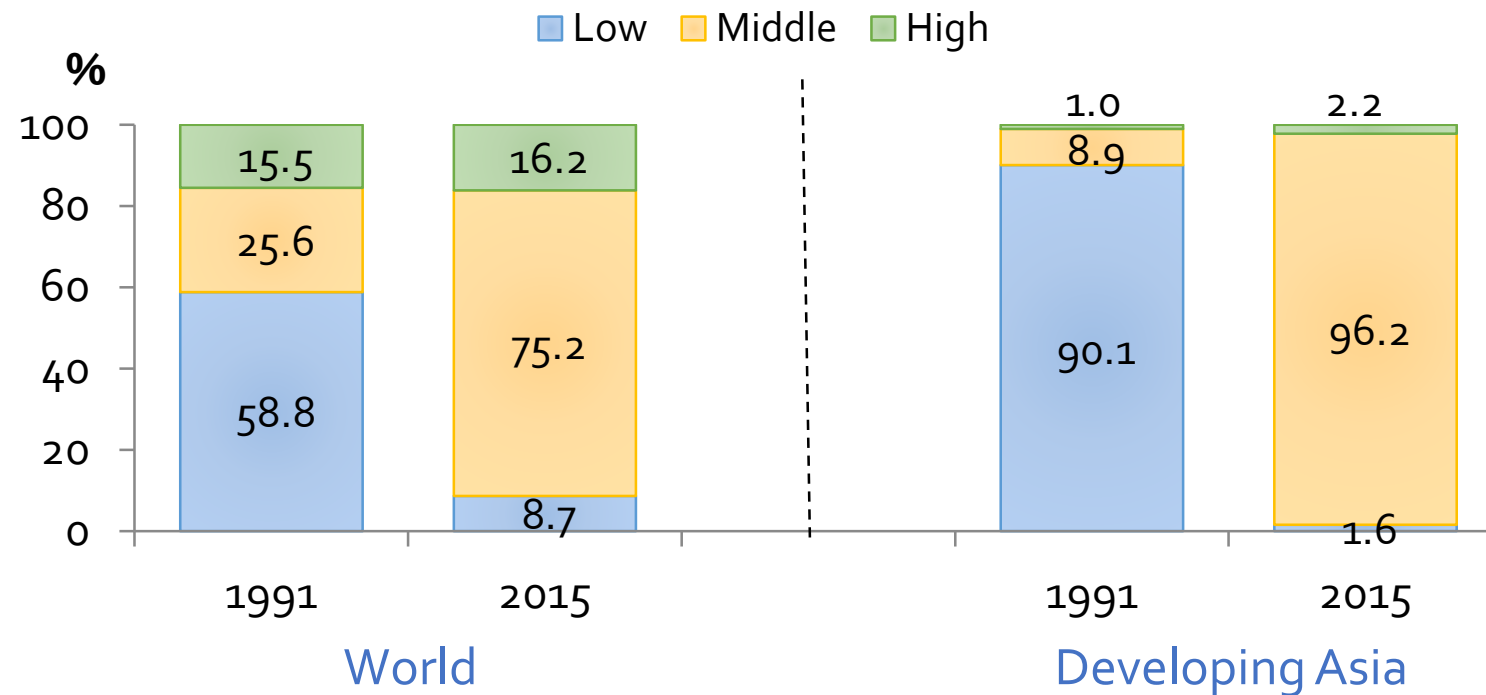


# Snapshot of MICs across regions



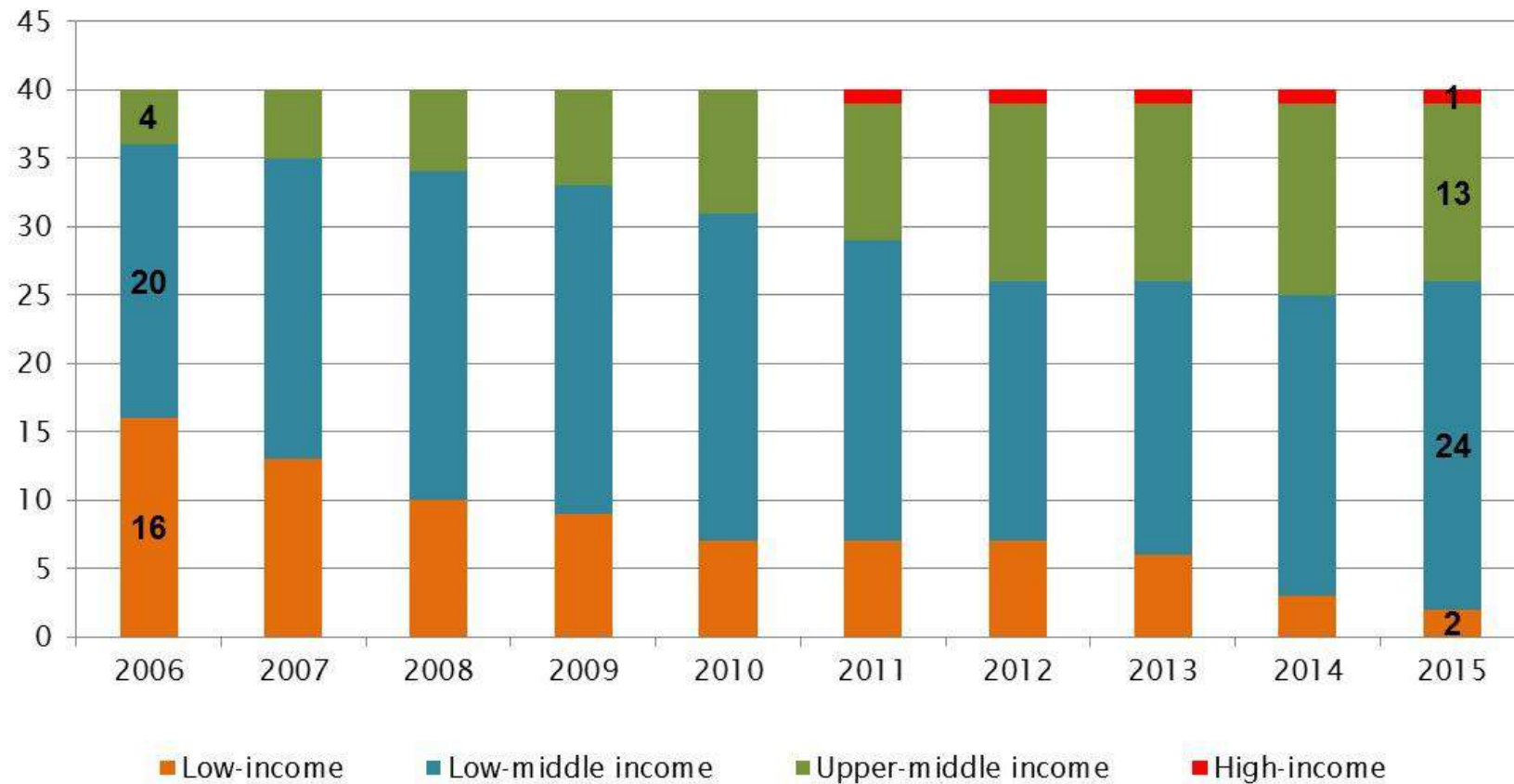
# Rapid growth transformed Asia from low to middle income

## Population Shares by Income Group





# Rising number of UMICs and LMICs in developing Asia



# Developing Asia by income classification

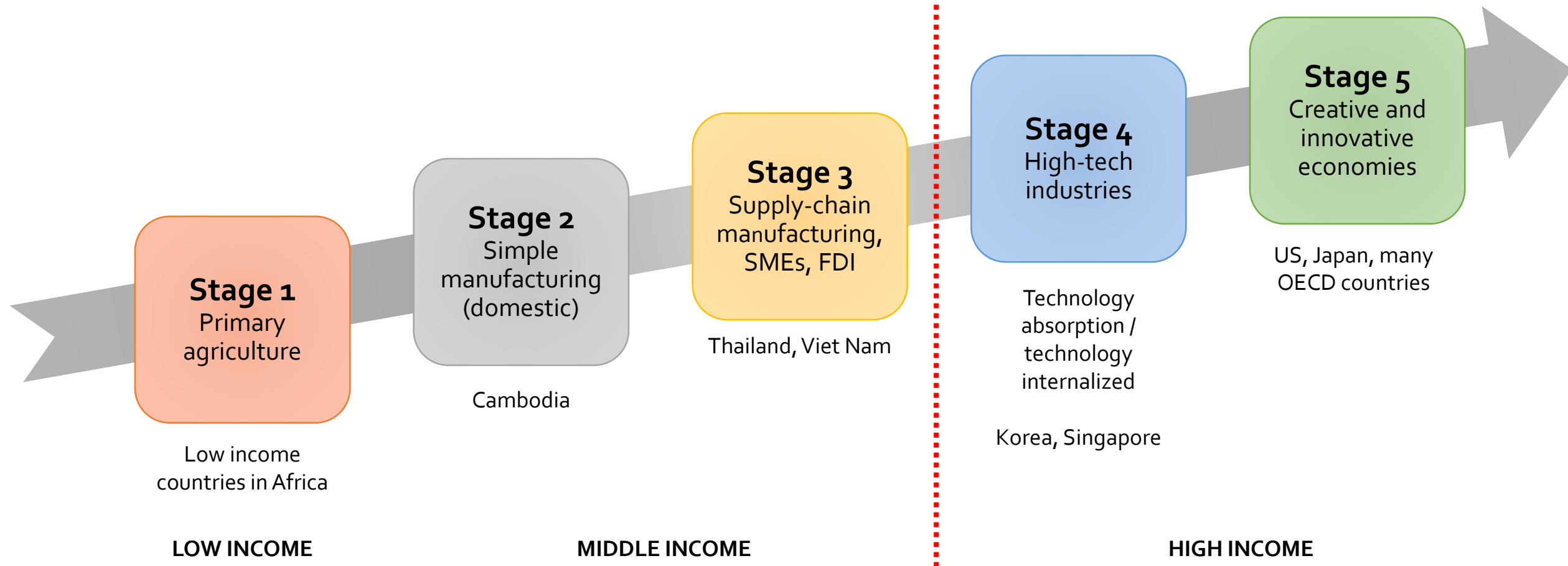
Income Classification	Country
High Income	Cook Islands
Upper-Middle Income	Azerbaijan, People's Republic of China, Fiji, Georgia, Kazakhstan, Malaysia, Maldives, Marshall Islands, Nauru, Palau, Thailand, Turkmenistan, and Tuvalu
Lower-Middle Income	Armenia, Bangladesh, Bhutan, Cambodia, India, Indonesia,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



# Challenges Facing MICs

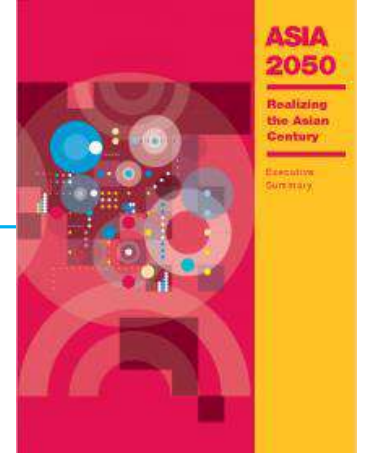


# Hurdling the middle income transition

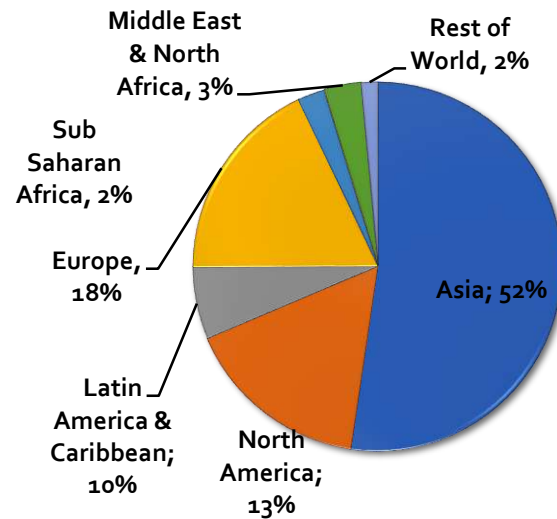




# Opportunity cost of failure

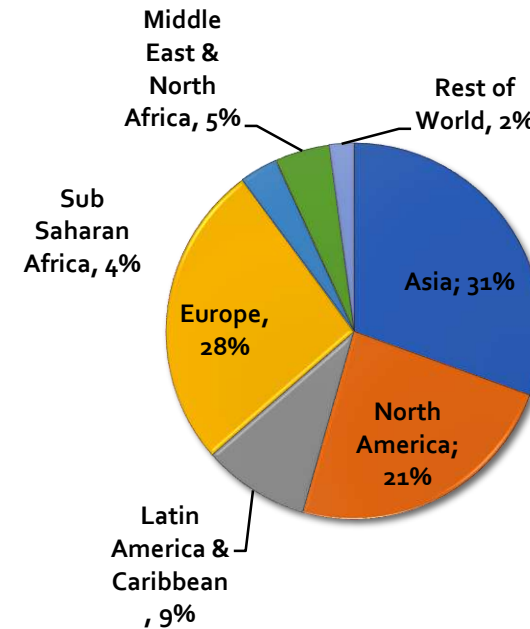


## Asian Century Scenario



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

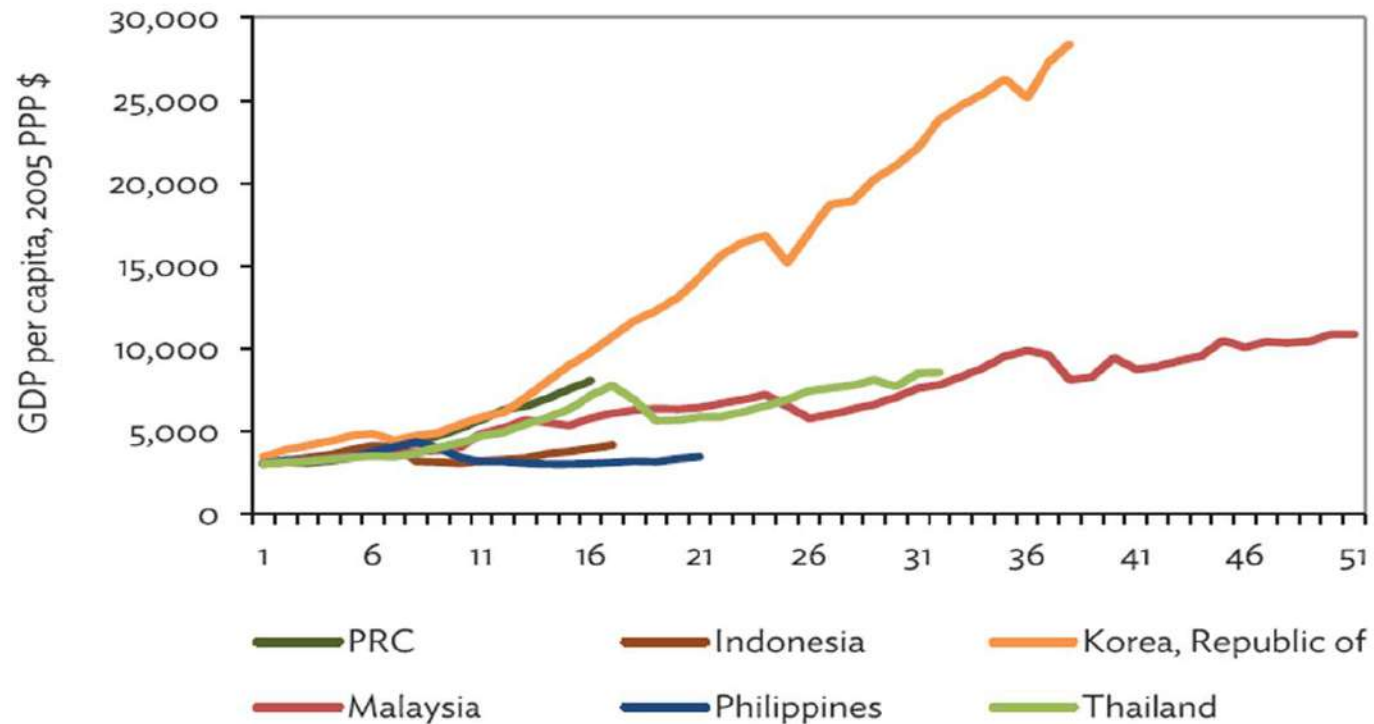
## Middle Income Trap Scenario



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

# Middle-income challenge?

Number of years elapsed since the economy reached \$3000  
GDP per capita income (in 2005 PPP \$)



Source: Felipe, J., Kumar, U. and Galope, R. 2017. "Middle-income transitions: trap or myth?", Journal of the Asia Pacific Economy, 22:3, 429-453, DOI: 10.1080/13547860.2016.1270253

# Some key challenges faced by MICs

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## Inclusion

1. Reducing inequality
2. Eradicating urban poverty

## Economic growth

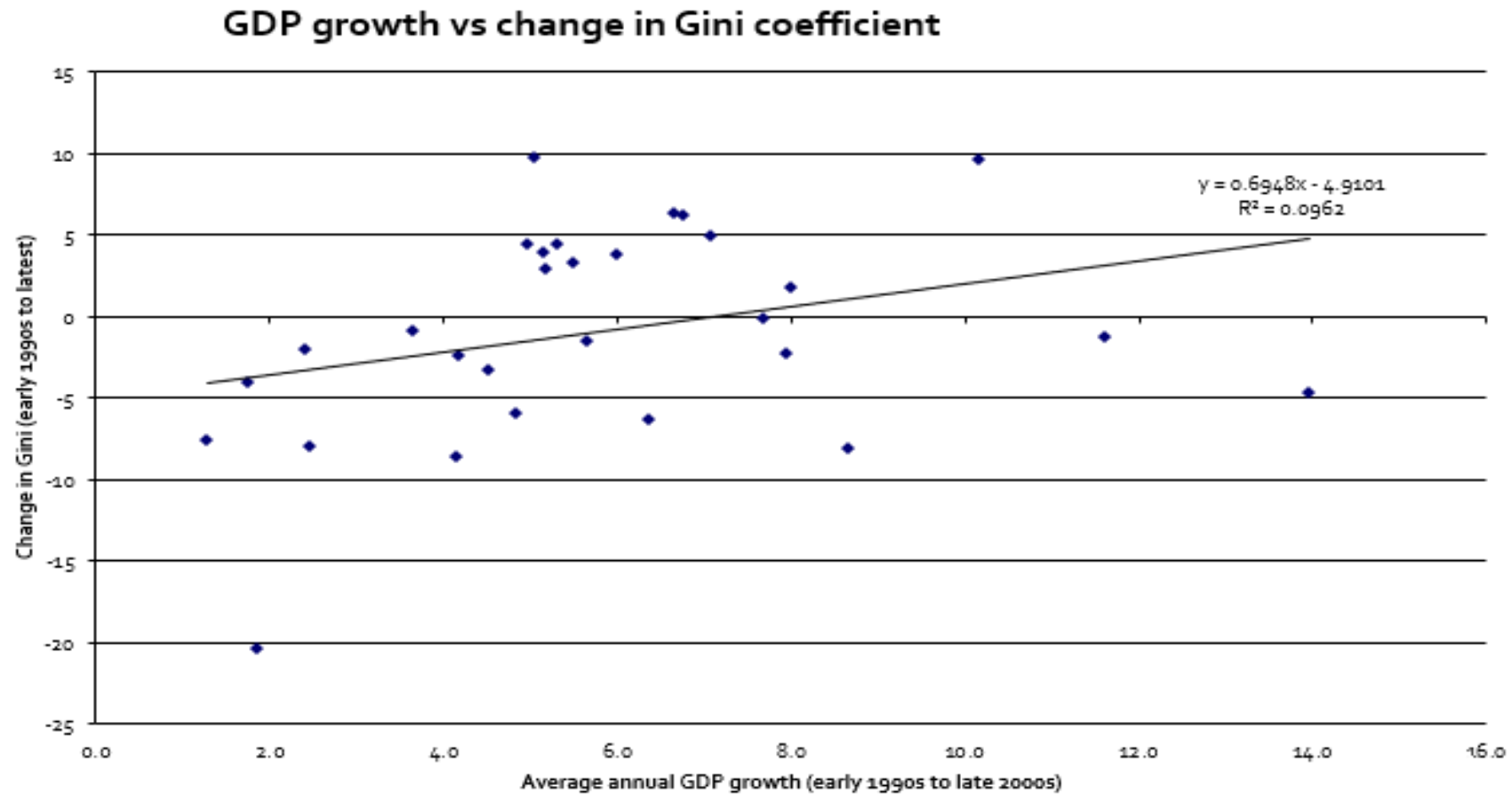
3. Tapping private sector for development

## Environmental sustainability

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

- 6) Strengthening governance and institutions

# (1) GDP growth and inequality

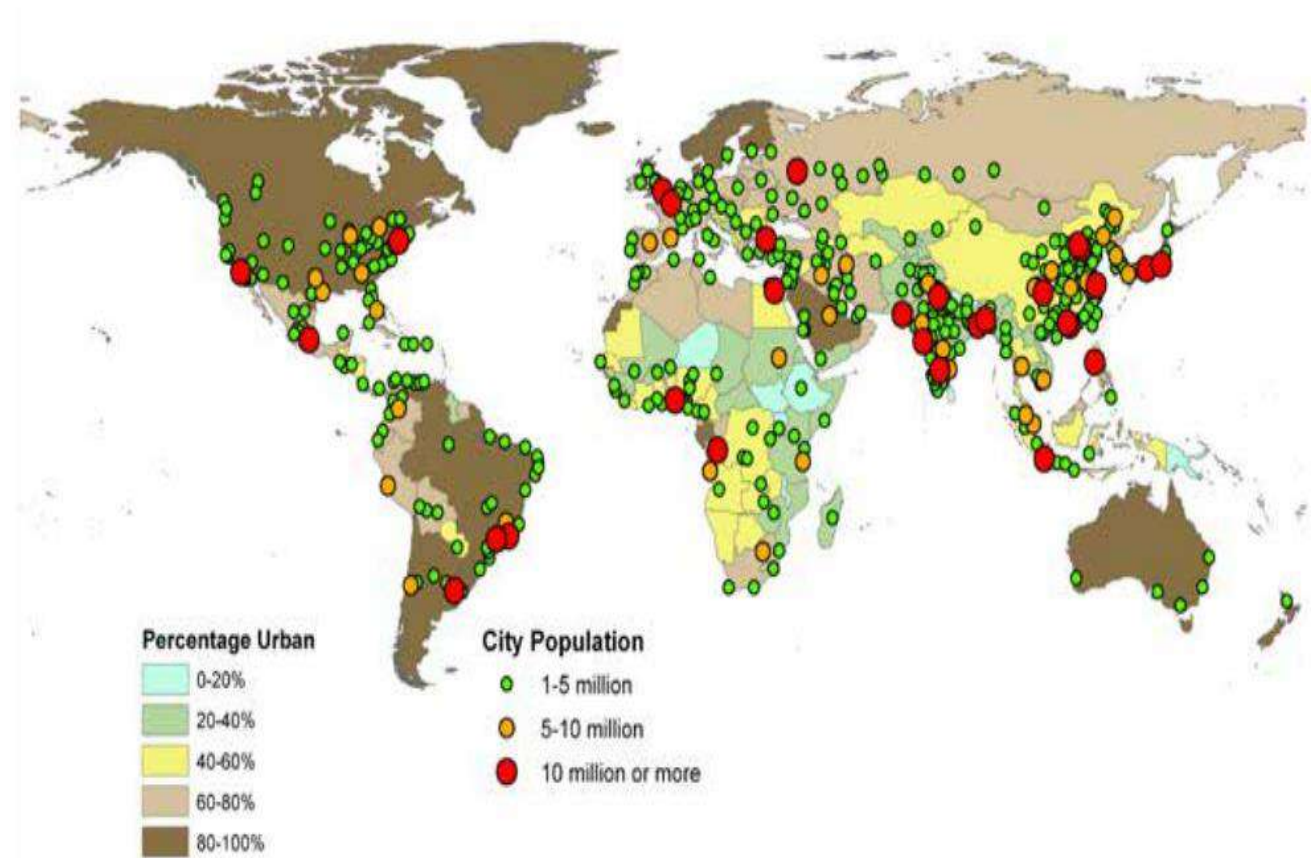




## (2) Asia's urban poverty challenge

### Global Patterns of Urbanization, 2015

- 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 is closely associated with development, the urban poor will be left behind if their concerns are not accounted for

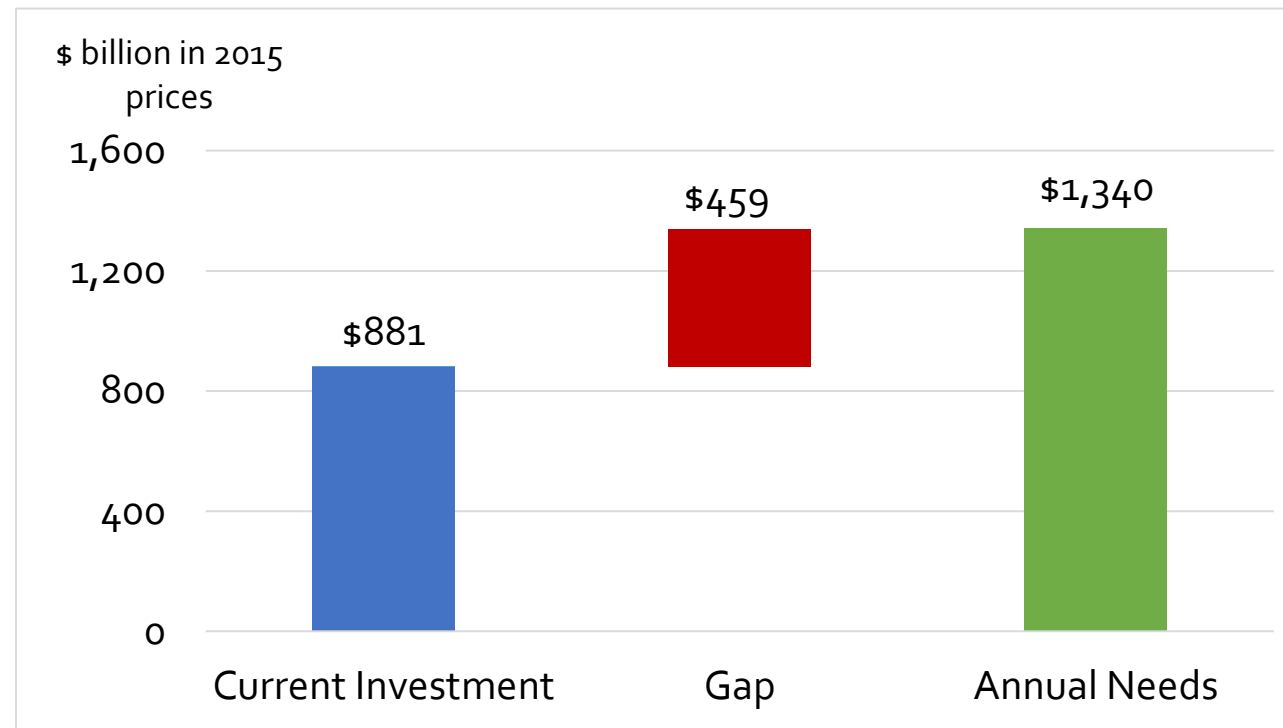


Source: UN World Cities Report 2016

### (3) Asia still has large infrastructure needs.. necessitate private sector financing

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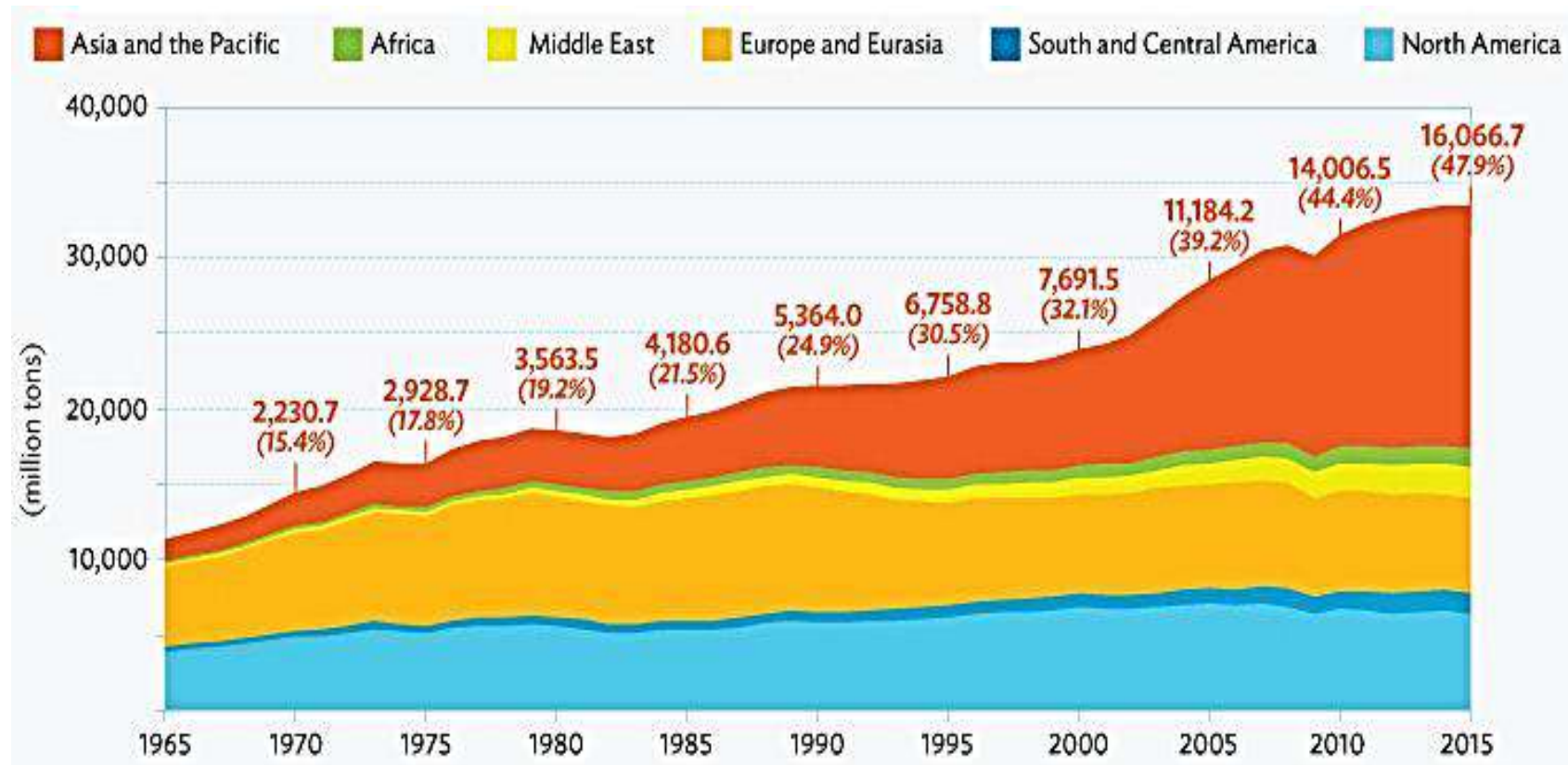
**Meeting the Investment Gaps, 2016-2020  
(annual averages)**



Source: ADB

## (4) Economic growth and the environment

CO<sub>2</sub> Emissions by Region (in million tons)



## (4) Climate vulnerability in Asia

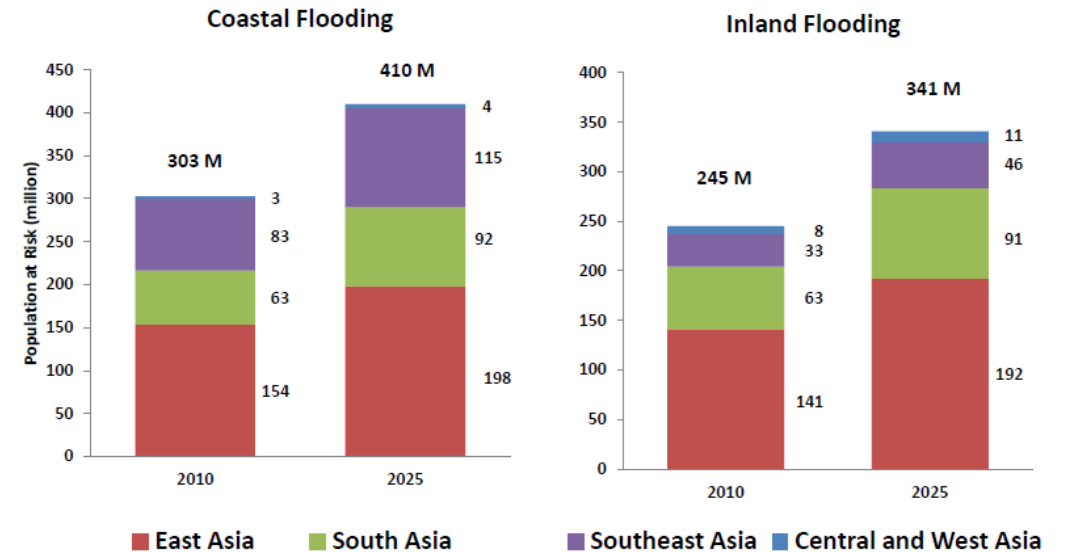
### Asia is more vulnerable to coastal flooding

Risk of Coastal Flooding by Region, 2000

	Urban population at Risk (million)	Share of Population at Risk (%)	Urban Area at Risk ('000 km <sup>2</sup> )	Share of Area at Risk (%)
Africa	32	11	18	6
Asia and Pacific	251	18	129	11
Latin America	24	8	42	6
Europe	40	7	56	7

Source: ADB estimates based on McGranahan et al. 2007.

### Vulnerability will rise with urbanization



Source: Balk and Montgomery (2012).



## (4) Most affected Asian countries by climate-related threats

<i>Droughts</i>	<i>Floods</i>	<i>Storms</i>	<i>Sea Level rise (1m)</i>	<i>Agriculture</i>
Malawi	<b>Bangladesh</b>	<b>Philippines</b>	<b>low-lying Island States</b>	Sudan
Ethiopia	<b>PRC</b>	<b>Bangladesh</b>	<b>Viet Nam</b>	Senegal
Zimbabwe	<b>India</b>	Madagascar	Egypt	Zimbabwe
<b>India</b>	<b>Cambodia</b>	<b>Viet Nam</b>	Tunisia	Mali
Mozambique	Mozambique	Moldova	<b>Indonesia</b>	Zambia
Niger	<b>Lao PDR</b>	<b>Mongolia</b>	Mauritania	Morocco
Mauritania	<b>Pakistan</b>	Haiti	<b>PRC</b>	Niger
Eritrea	<b>Sri Lanka</b>	<b>Samoa</b>	Mexico	<b>India</b>
Sudan	<b>Thailand</b>	<b>Tonga</b>	<b>Myanmar</b>	Malawi
Chad	<b>Viet Nam</b>	<b>PRC</b>	<b>Bangladesh</b>	Algeria
Kenya	Benin	Honduras	Senegal	Ethiopia
Iran	Rwanda	<b>Fiji</b>	Libya	<b>Pakistan</b>

Note: The typology is based on both absolute effects (e.g., total number of people affected) and relative effects (e.g. number affected as a share of GDP). Source: IPCC data

## (4) Economics of climate change

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- The costs and risks of climate change is equivalent to losing at least 5-20% of global GDP per year
- Economics of containing the global warming below 2°C will mean an annual cost of 1% GDP
- India and SE Asia could lose on average 2-3% and as much as a 9-13% (95 percentile) of GDP by 2100
- Based on ADB studies, economy-wide loss by 2100 can be as high as:
  - ▶ 6.7% of GDP per year for Indonesia, Philippines, Thailand and Viet Nam
  - ▶ 8.8% of GDP per year for Bangladesh, Bhutan, India, Maldives, Nepal, Sri Lanka
  - ▶ 5.3% of GDP per year for PRC, Japan, Republic of Korea, and Mongolia

## (5) Urbanization: growth at an unprecedented rate

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- Urban areas account for 84% of global GDP
- Urbanization is expected to grow by 3% annually in Asia
- 600 cities account for 60% of GDP (50% of these cities are in Asia)
- 23 megacities account for 14% of global GDP but will decline to 10% by 2025
- 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  
Vulnerable to impacts of CC- inundation,  
sea level rise

Asian URBAN  
Challenge

# Energy



Cities use about 85% of energy  
Asia - 35% CO<sub>2</sub> emissions  
Air pollution can have estimated 2%-4% negative  
impact on GDP



# Climate Change

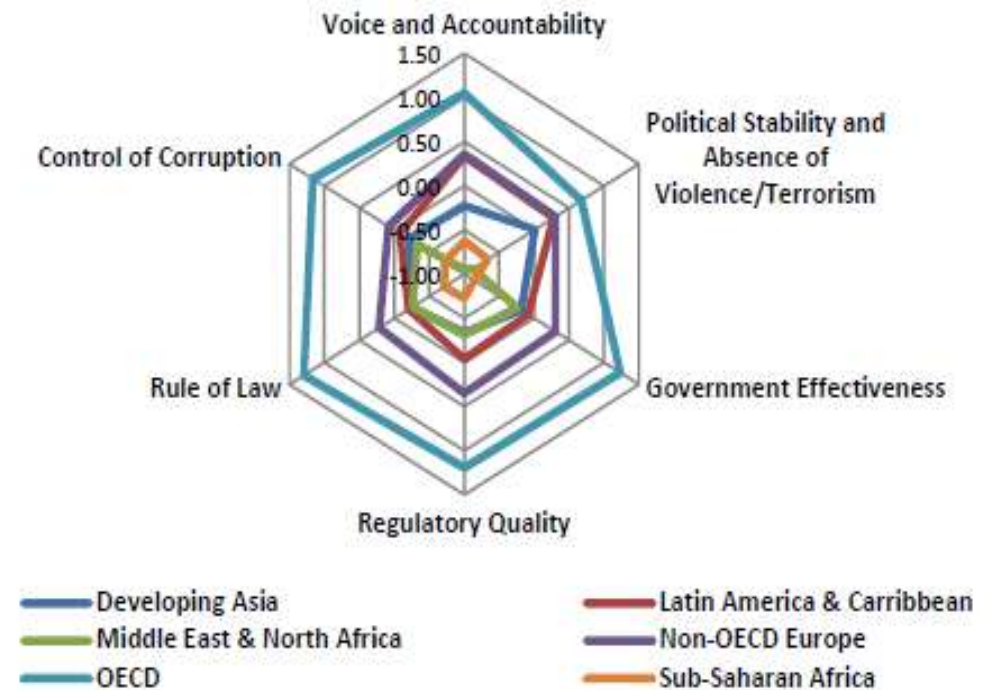


# Environment

## (6) Governance and institutions

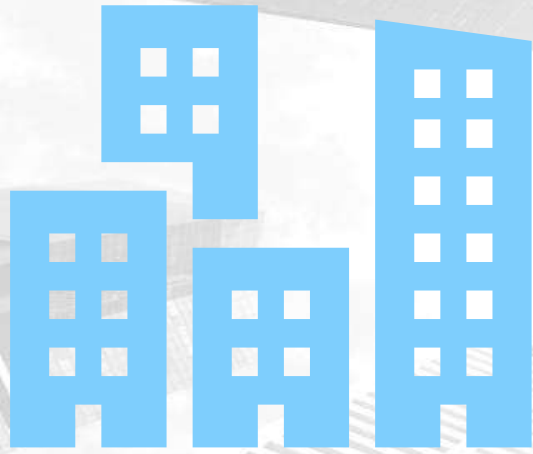
- Stronger governance and better-performing institutions are fundamental to the overall quality of growth and development
- Requires solid understanding of local political economy and governance dynamics
- Governance and institutional reform require long-term support

**State of Governance and Institutions**

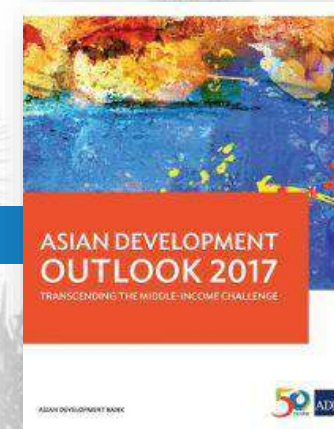


OECD = Organisation for Economic Co-operation and Development.  
Source: World Bank. Worldwide Governance Indicators.





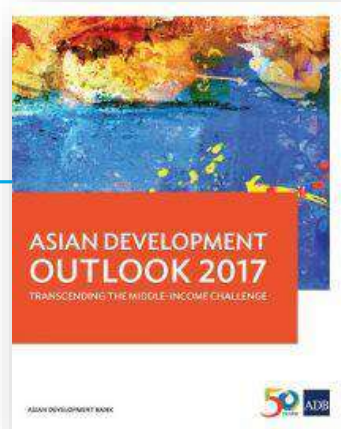
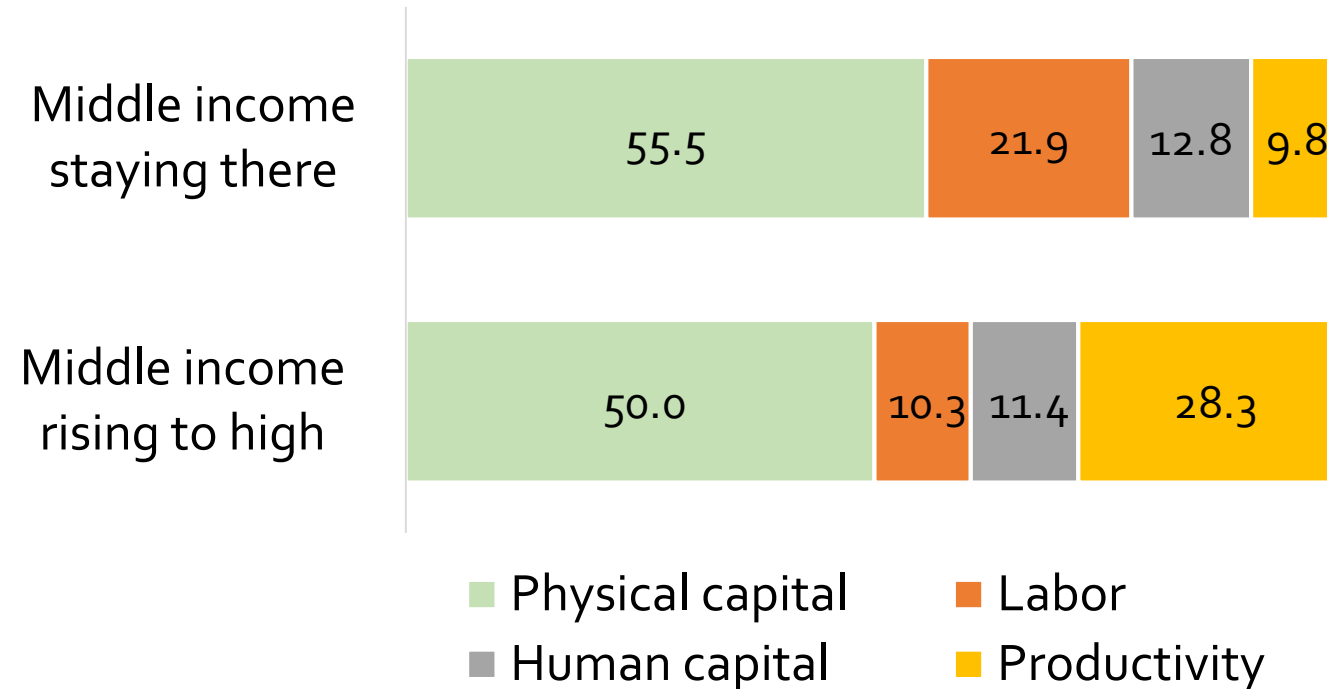
# Opportunities



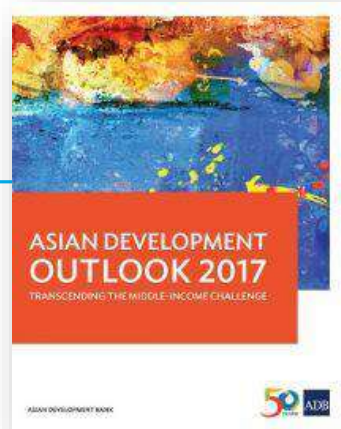
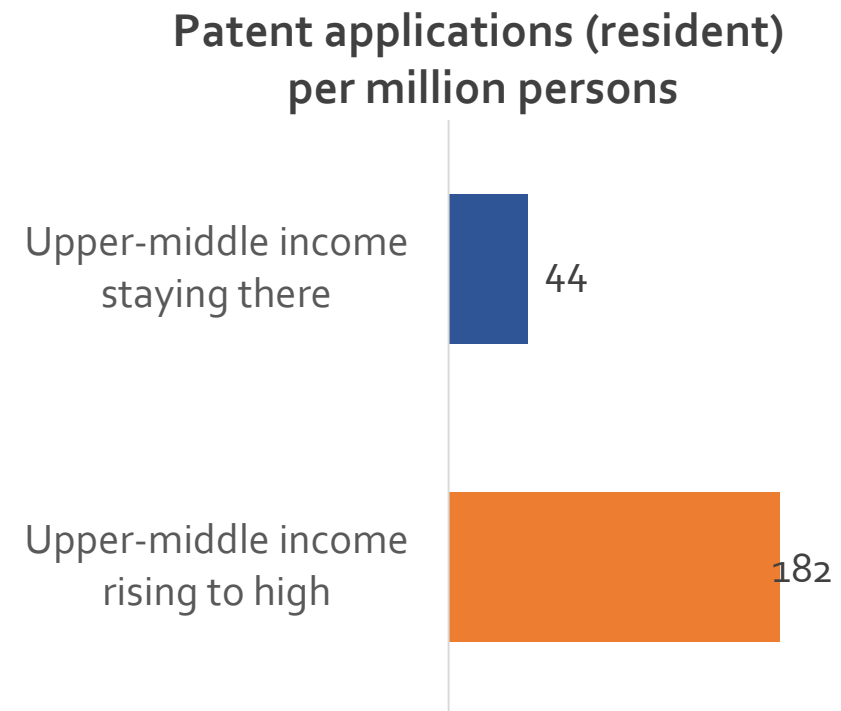
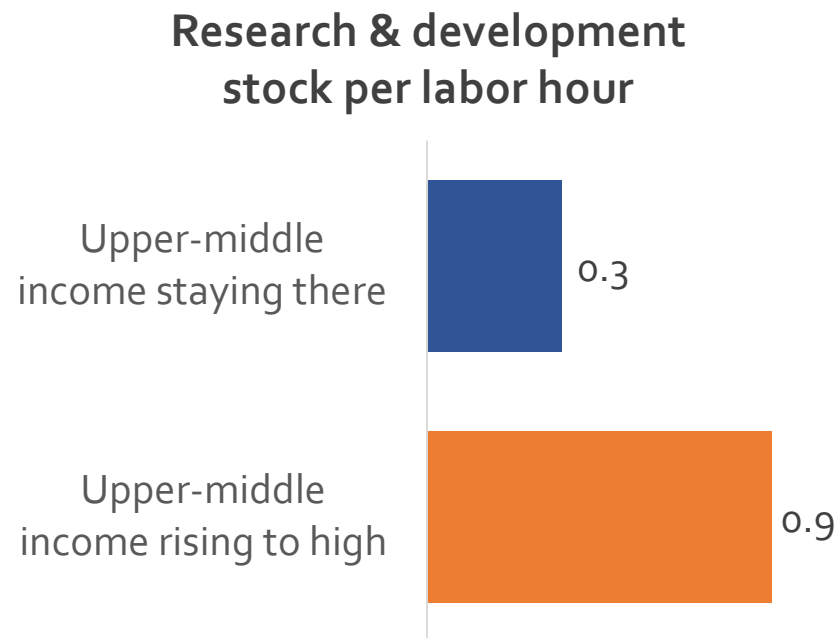


# Productivity-centered growth is needed to reach high income

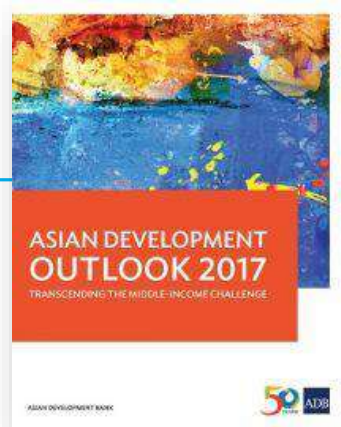
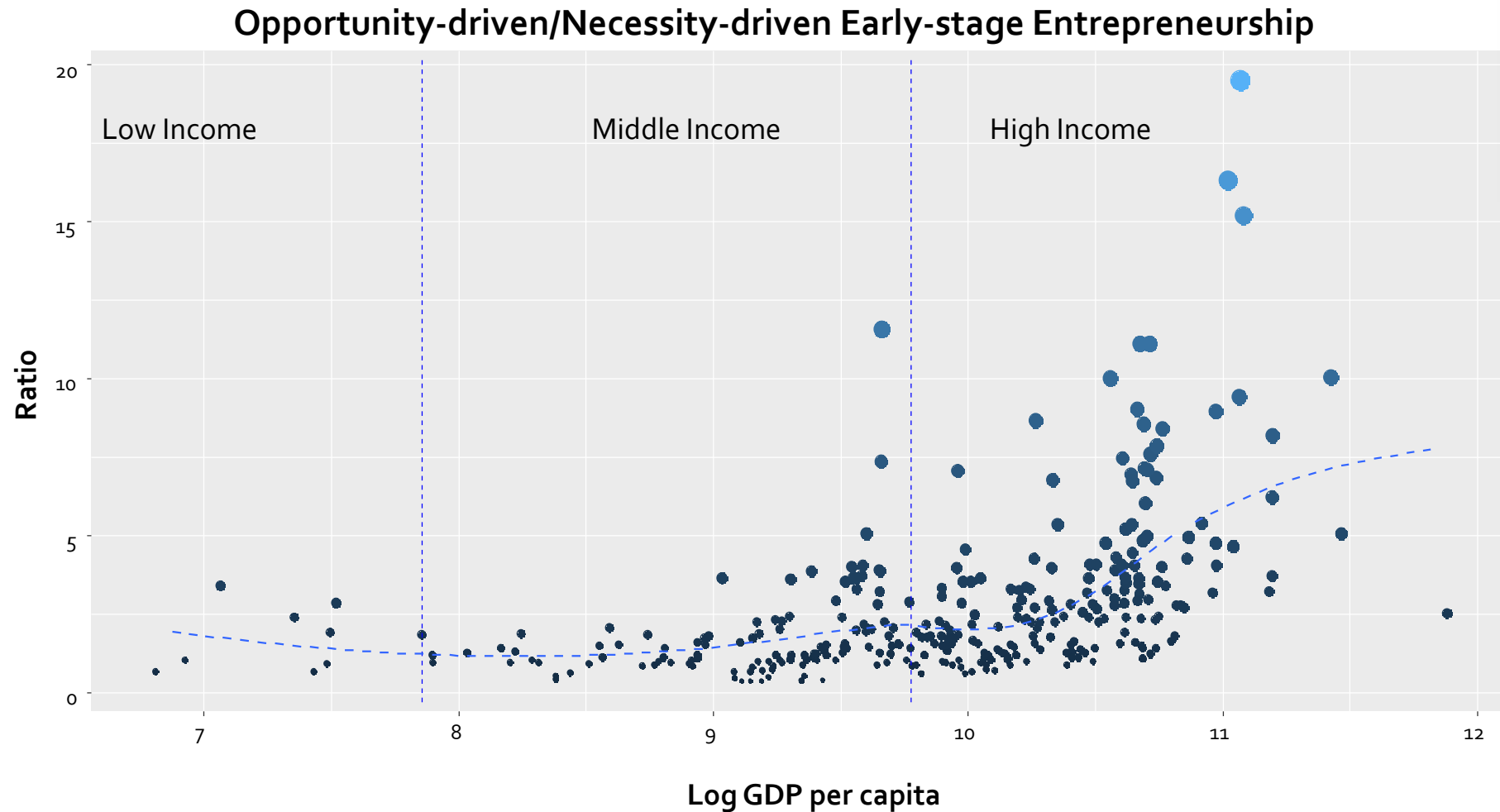
Contributions to Growth, 1960–2014 (%)



# Productivity growth will come from innovation

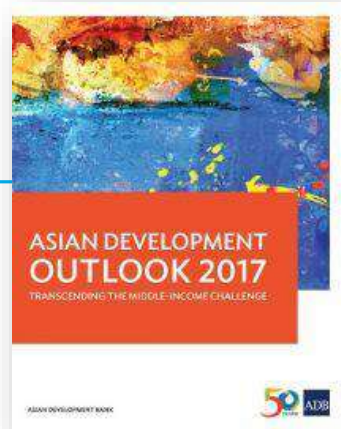
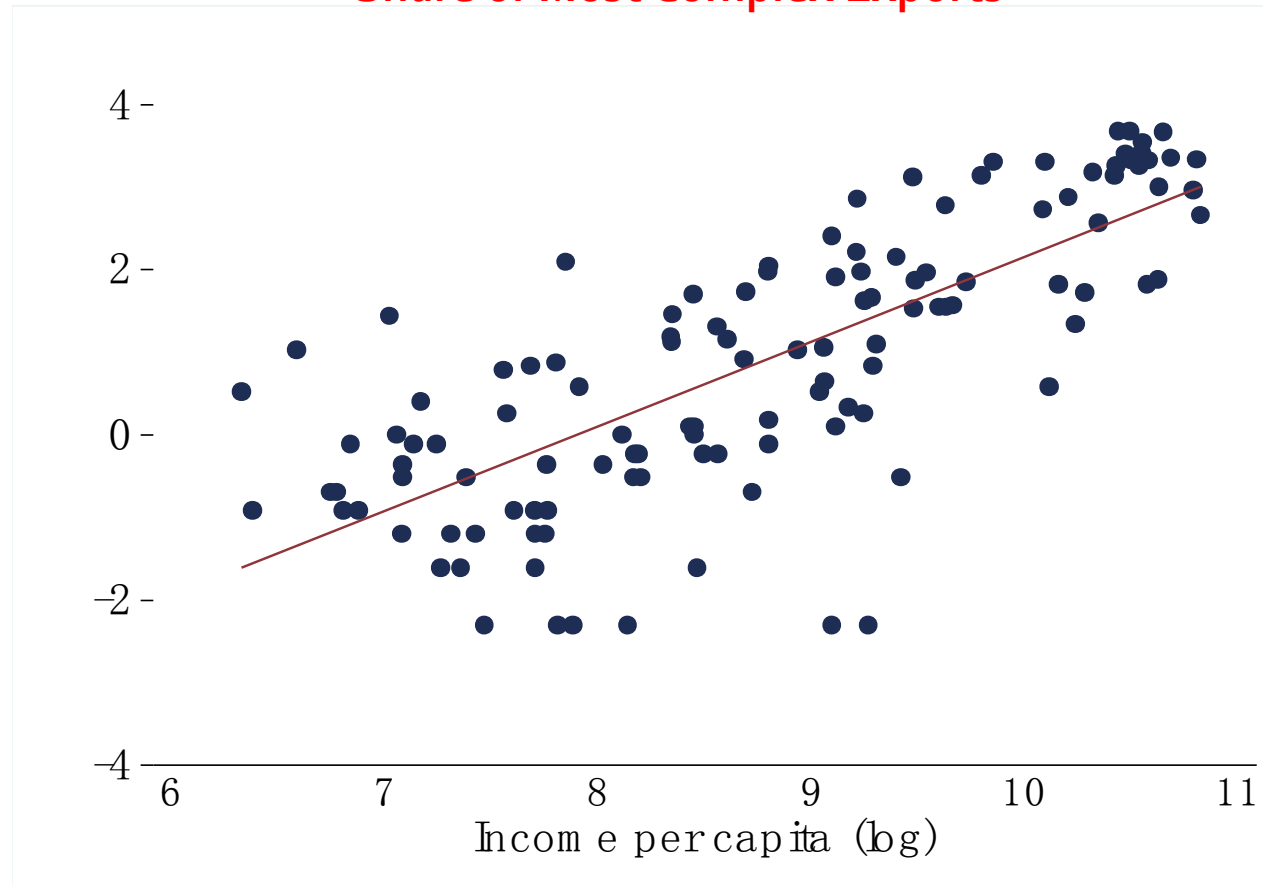


# Innovation driven by entrepreneurs



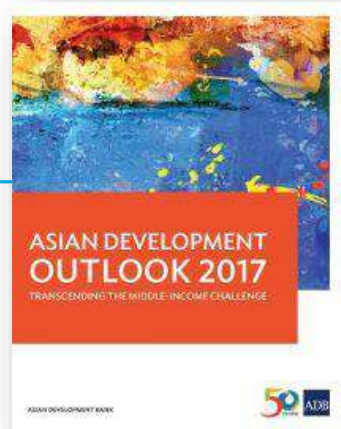
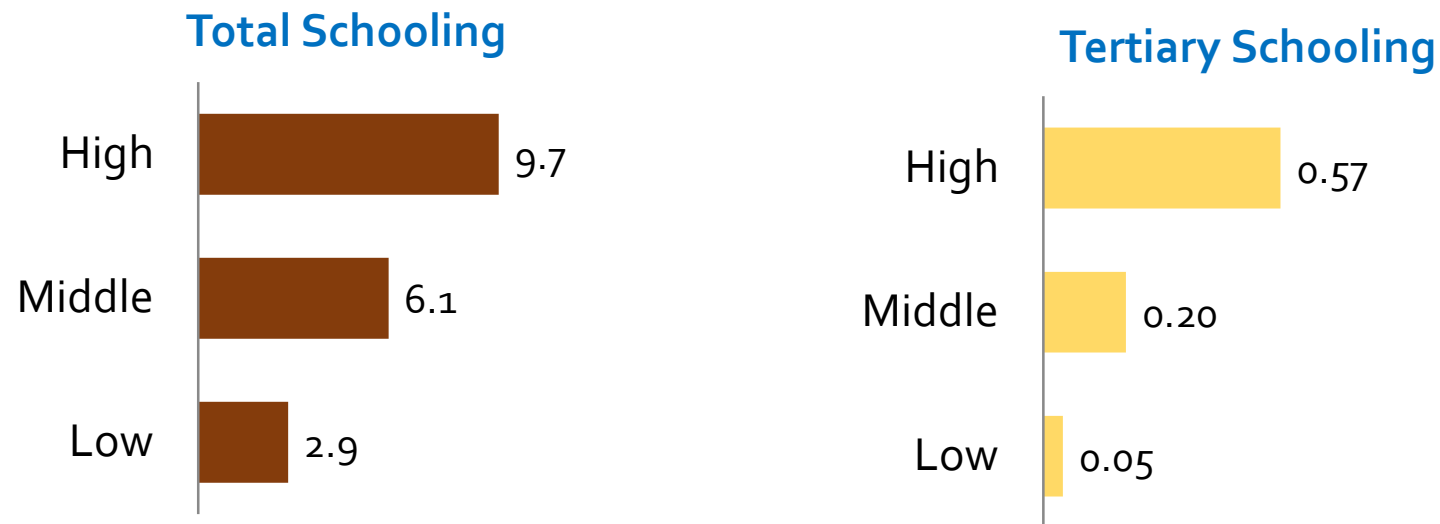
# Entrepreneurs creating more diverse, sophisticated product mix

Share of Most Complex Exports

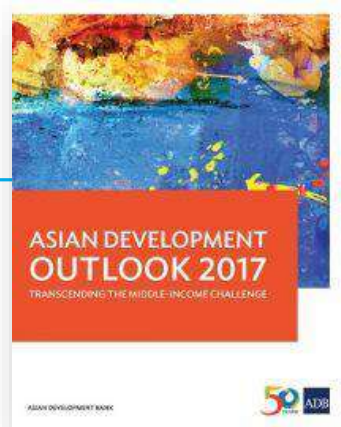


# Human capital investment fuels innovation

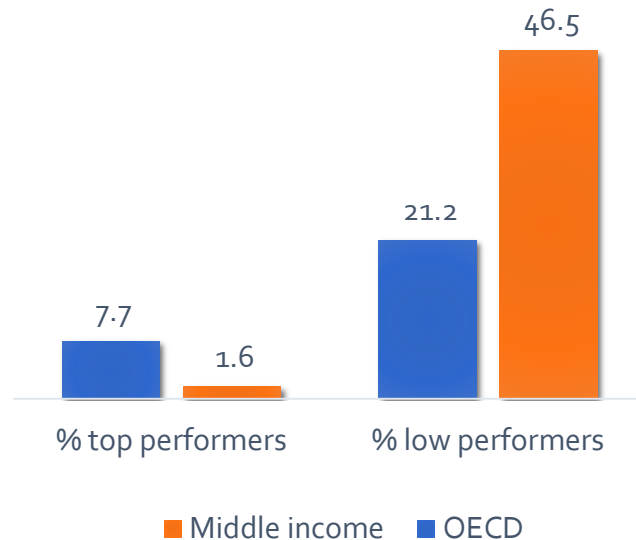
Average Schooling Years by Income Group



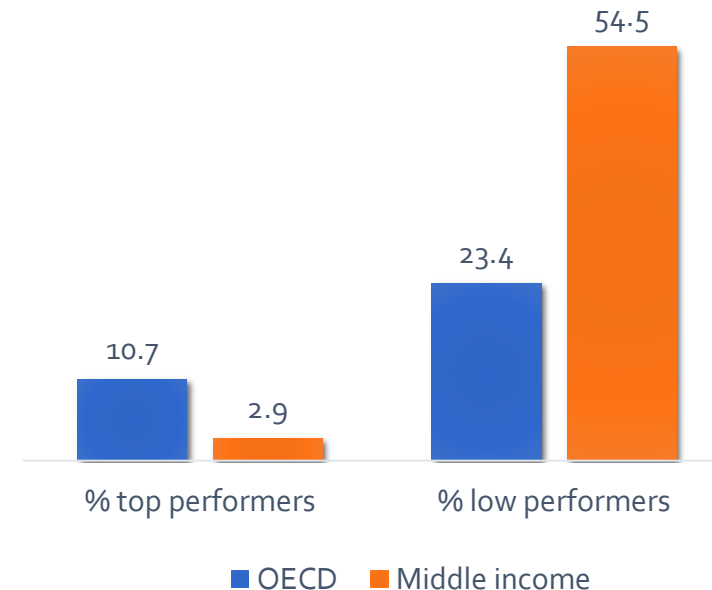
# Human investment closes the skills gaps with high-income economies



PISA (Science), 2015



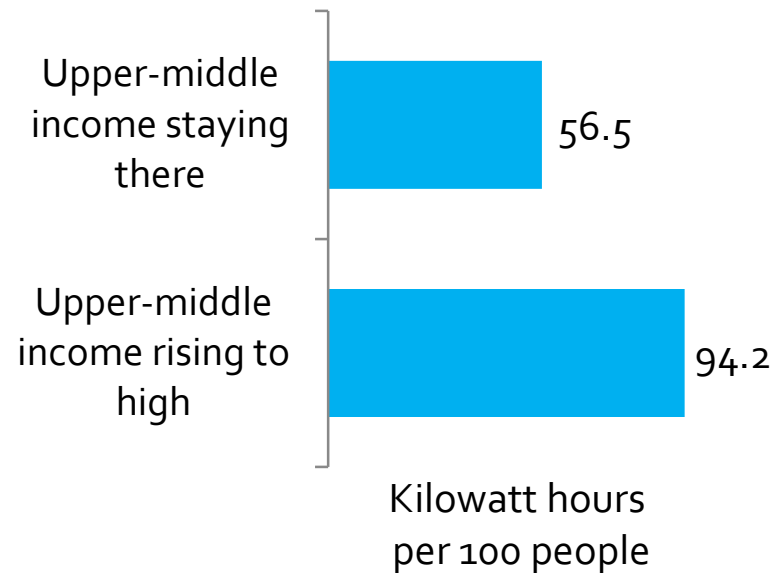
PISA (Math), 2015



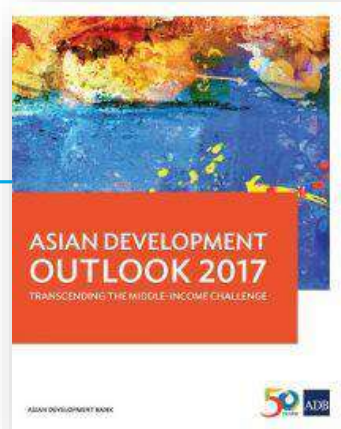
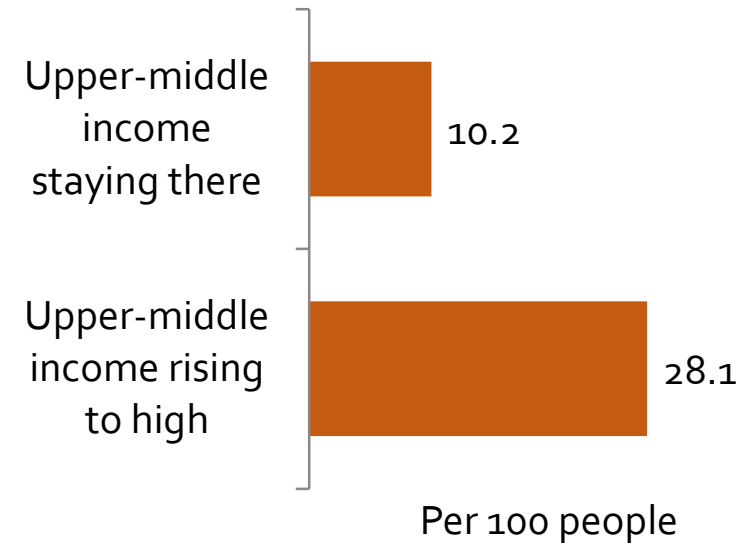
OECD = Organisation for Economic Co-operation and Development; PISA= Programme for International Student Assessment

# More innovative economies rely on advanced infrastructure

Electricity-generating capacity



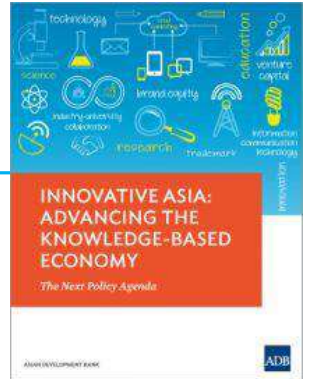
Internet users





# MICs and knowledge economies

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A knowledge-based economy is one that has:

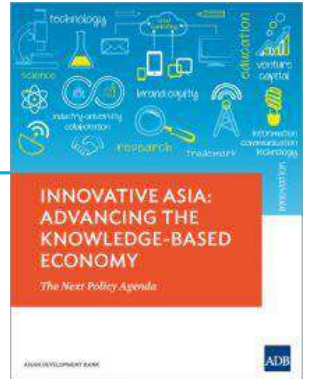
- ❑ an conducive economic incentive and institutional regime
- ❑ Effective and appropriate system of education and skills,
- ❑ Effective information and communications technology (ICT)
- ❑ Efficient research and development (R&D) and innovation

Source: Innovative Asia: Advancing the Knowledge-based Economy

# Knowledge-based economies

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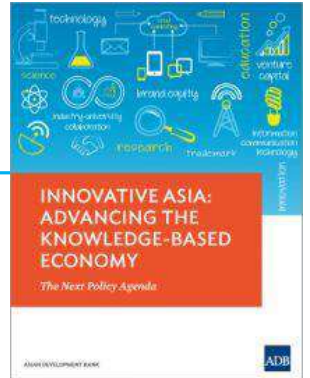
- Today's most technologically advanced economies are truly knowledge-based with knowledge generation and the use of knowledge being the key to wealth creation.
- Major OECD countries, where more than 50% of GDP are knowledge-related, exemplify this.



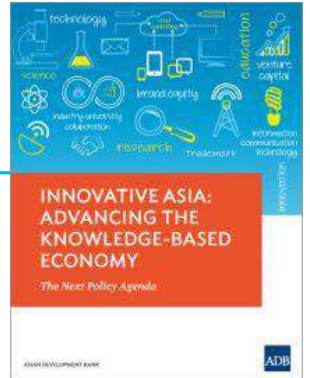
Source: OECD. 1996. The Knowledge Economy.

# 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)

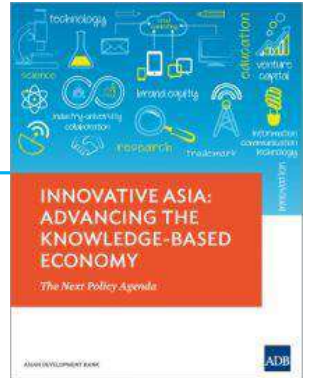


# Success stories: Singapore



- 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

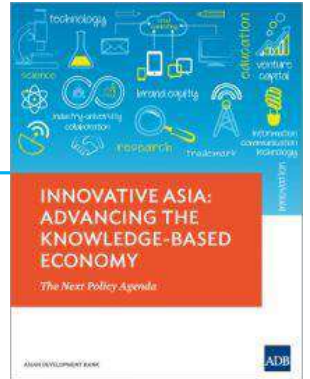
# Success stories: Finland



- ❑ 1950s: Finland was still an agriculture-based economy.
- ❑ 1990s onward: country firmly established as an innovation-based knowledge economy.
- ❑ Broad-based and engaging approach to formulating the education, research, and innovation policy agenda
- ❑ 2010-2015: 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

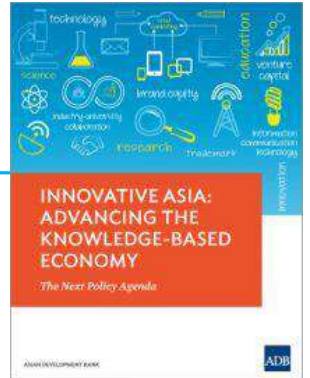
# Some key lessons

- 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



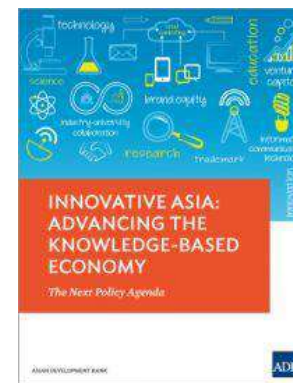
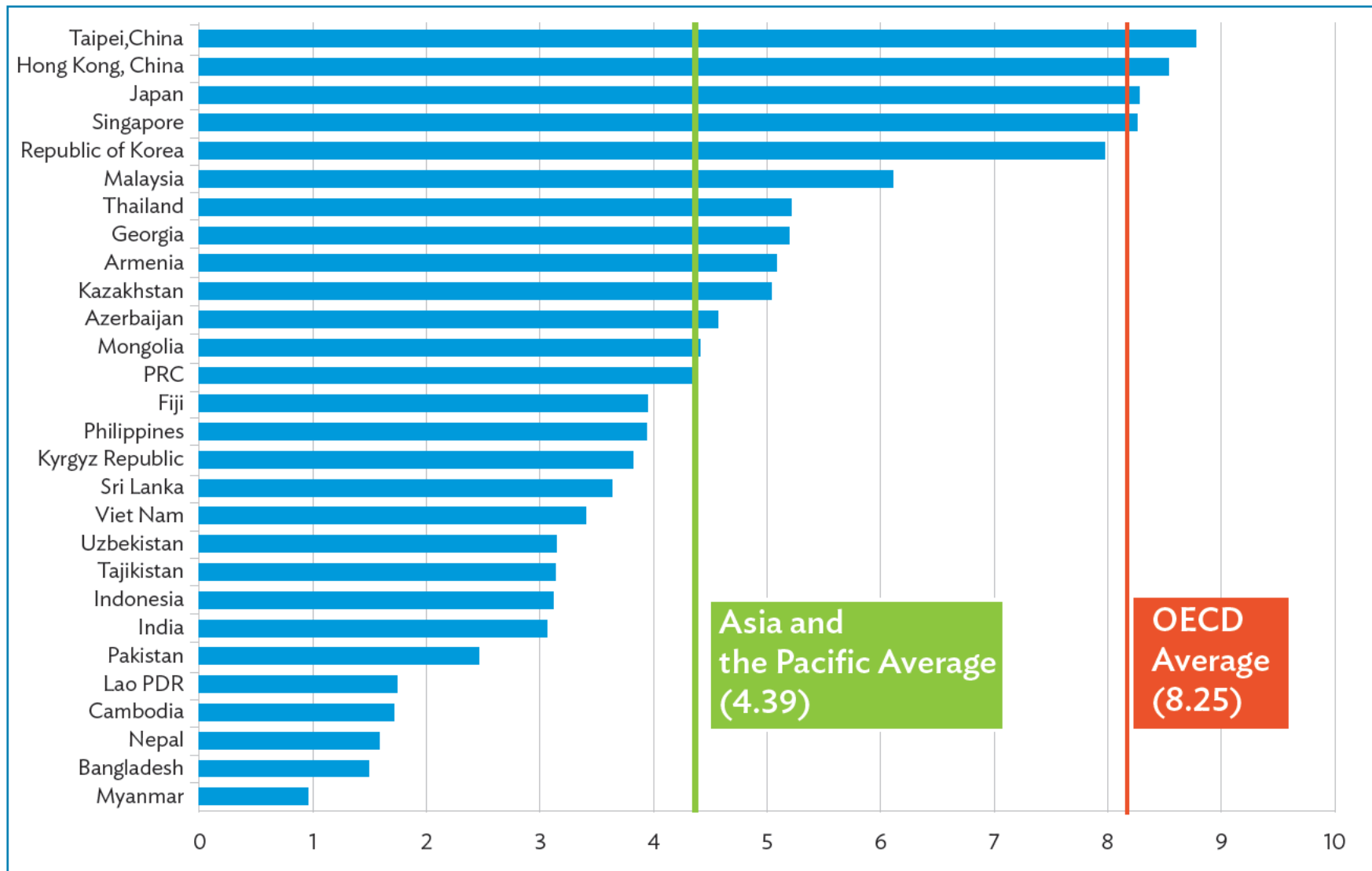
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# How has Asian economies performed as knowledge-based economies?



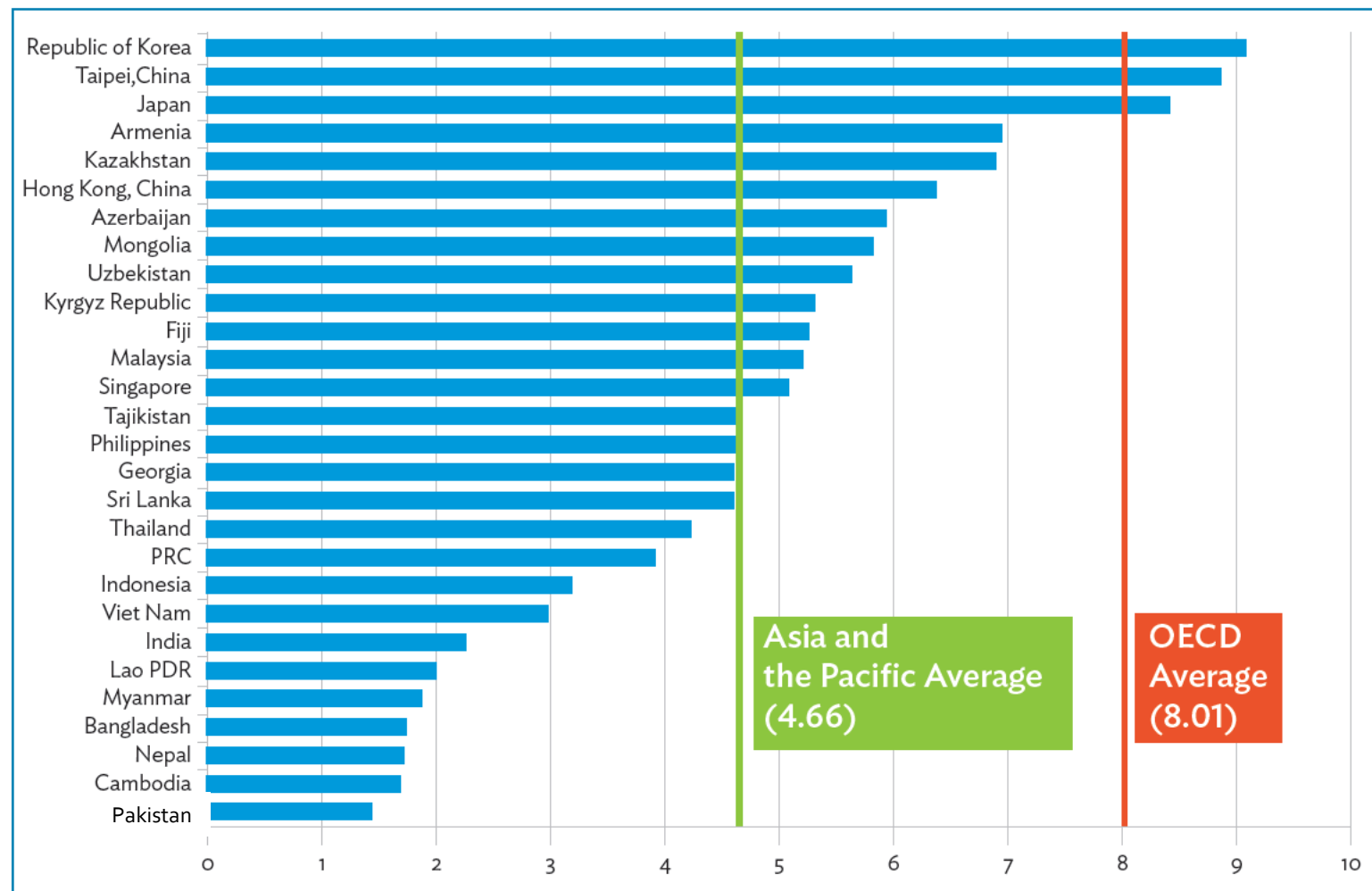


**Figure 2: Knowledge Economy Index Scores: Selected Economies of Asia and the Pacific**



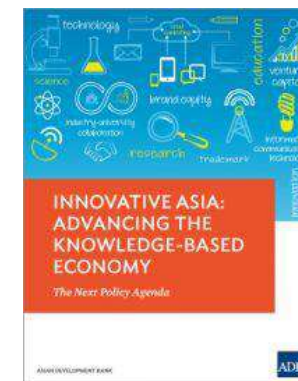
Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.  
Source: World Bank Knowledge Economy Index with data generation and analysis from ADB. [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp).

**Figure 8: Education and Skills Subindex Scores**

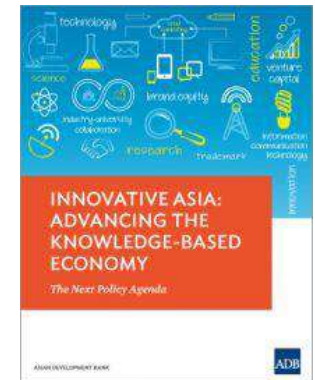
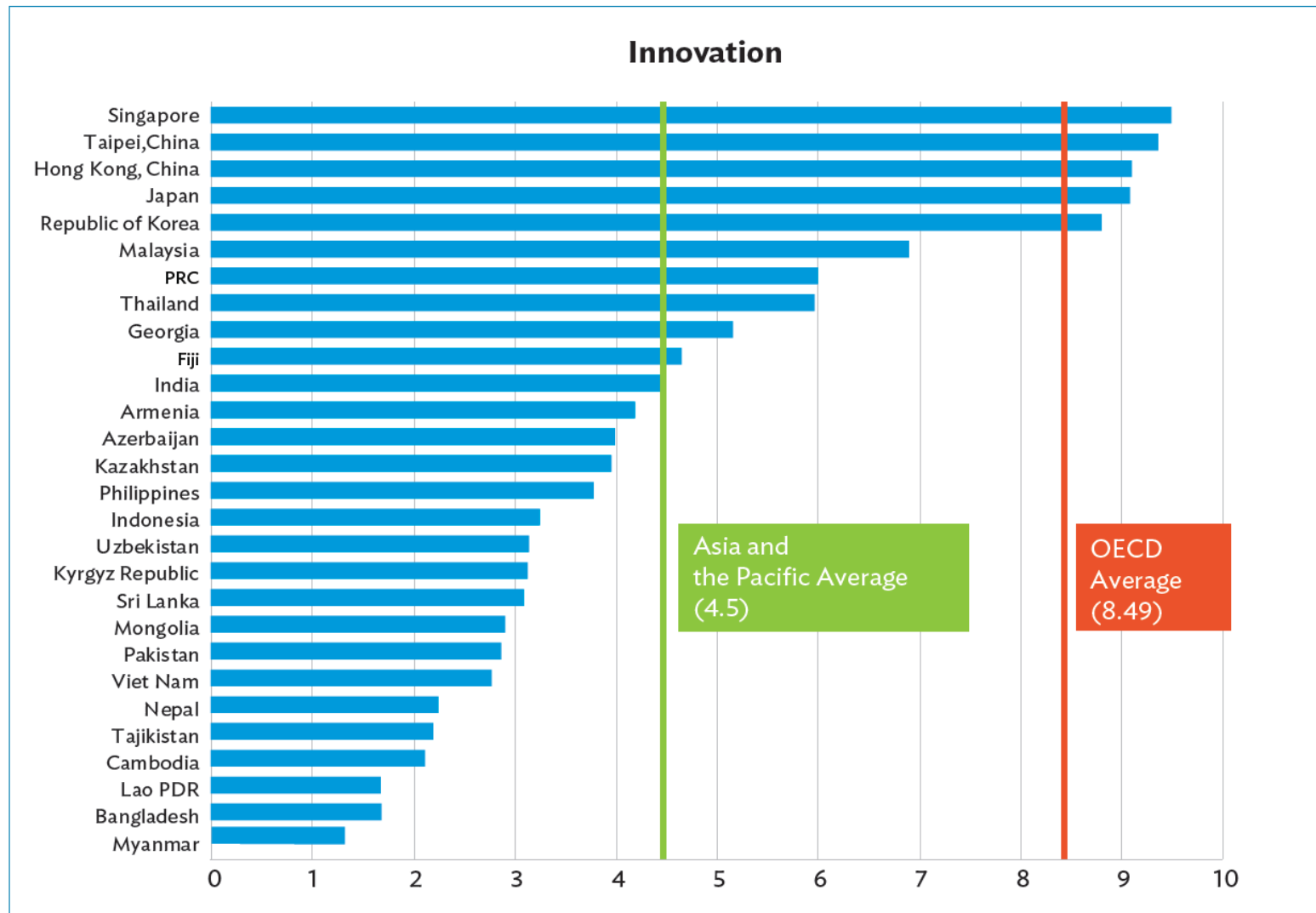


Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.

Source: World Bank Knowledge Economy Index with data generation and analysis from ADB., [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)



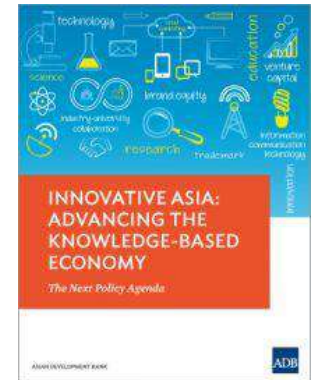
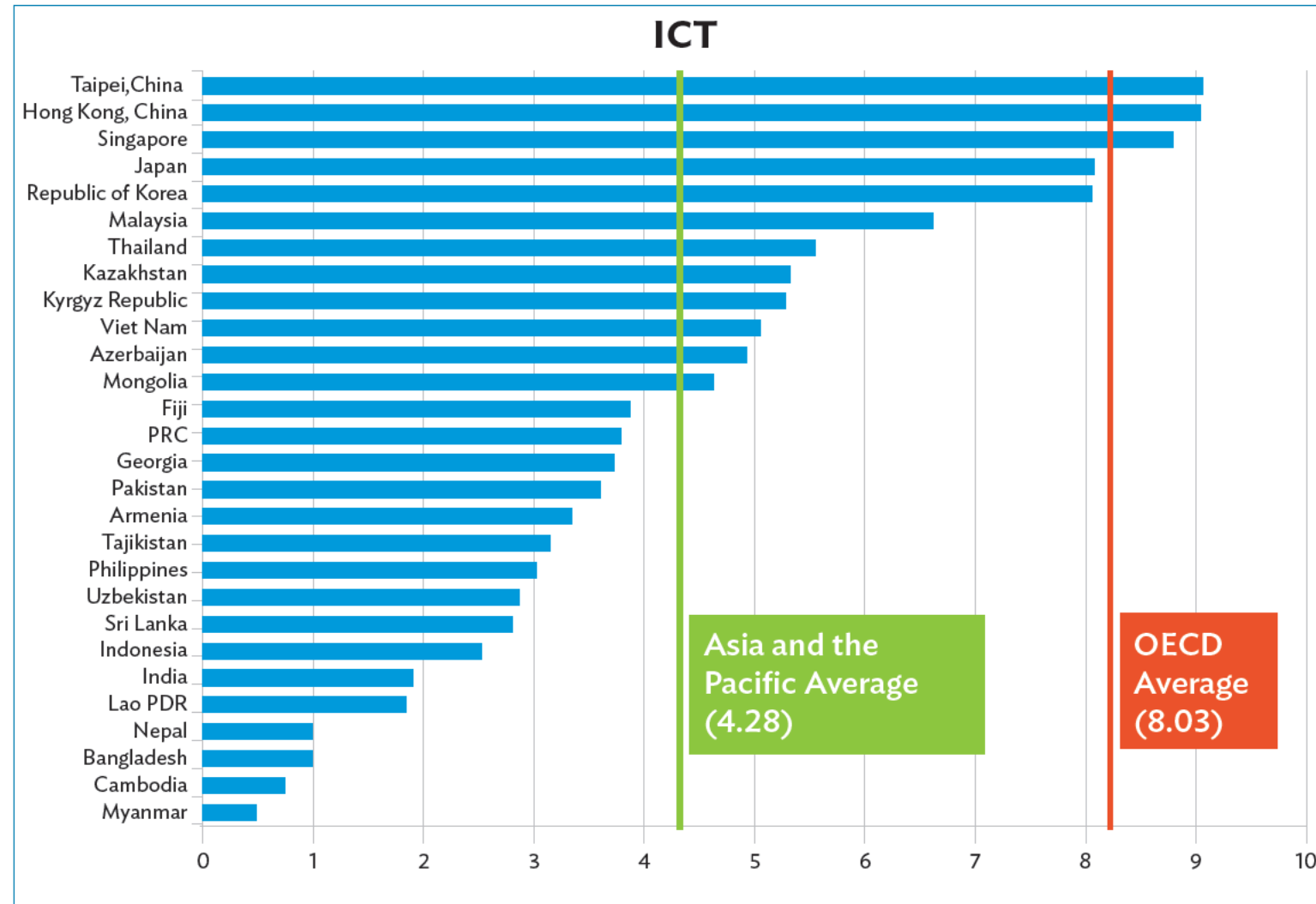
**Figure 11: Innovation Subindex Scores**



Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.

Source: World Bank Knowledge Economy Index with data generation and analysis from ADB. [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)

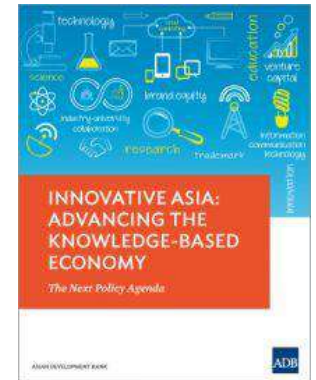
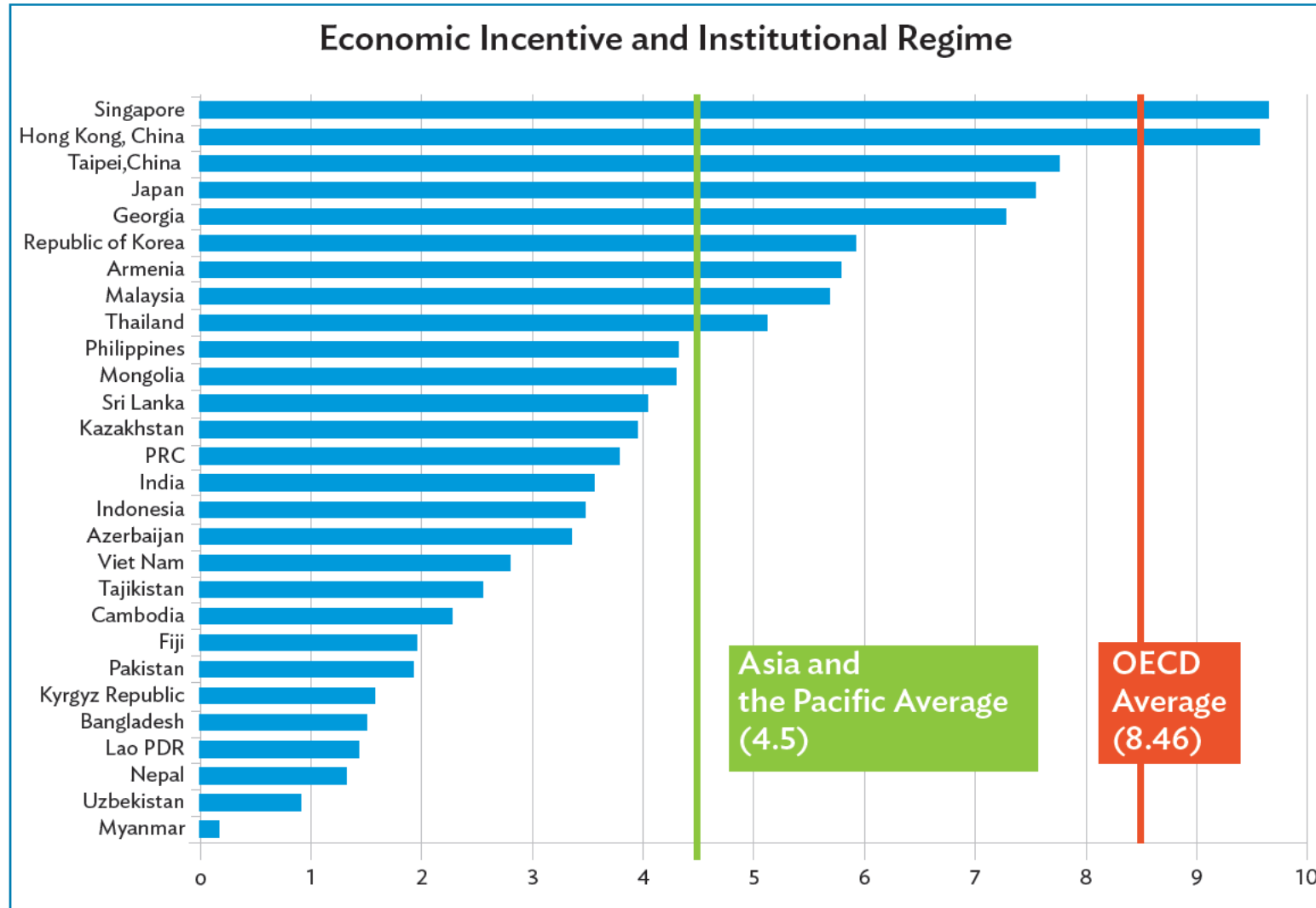
**Figure 14: Information and Communication Technology Subindex Scores of the Knowledge Economy Index**



ICT = information and communication technology, Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.

Source: World Bank Knowledge Economy Index with data generation and analysis from ADB. <http://go.worldbank.org/JGAO5XE940>

**Figure 6: Economic Incentive and Institutional Regime Subindex Scores**

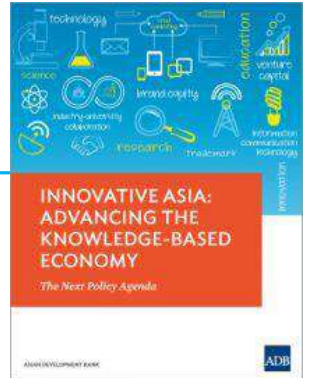


Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.

Source: World Bank Knowledge Economy Index with data generation and analysis from ADB. [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp).

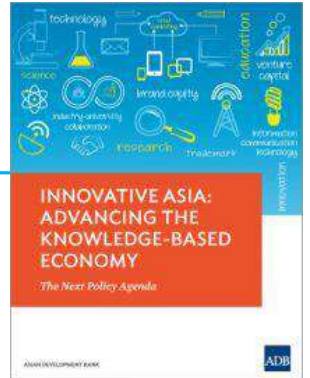
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# What can be done?



# Education and skills

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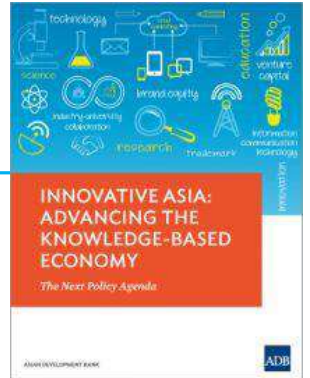


- Increasing education for employment and employability
  - ▶ Increase attainment levels and raise the quality of education
- Developing flexible systems of education, training and lifelong learning
  - ▶ Qualifications and competencies required in the marketplace
- Cater to tech or gray-collar workers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



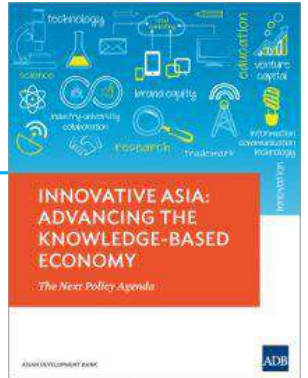
# Education and skills

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- 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

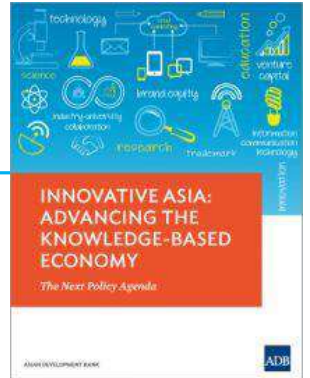


- Increase R&D expenditure to at least 1.5% of GDP
  - ▶ Except of PRC, none of emerging economies have R&D investment of 1.5%
  - ▶ Needed to advance beyond middle-income levels
  
- Promote high-impact R&D investments
  - ▶ PRC set to overtake the US as the world's largest R&D investor by 2020
  - ▶ 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

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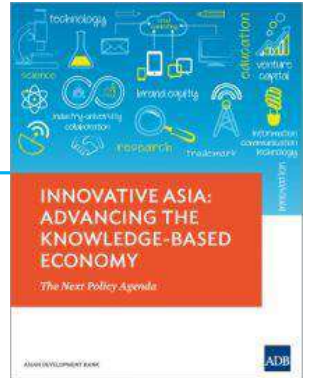
- Develop innovation intermediaries
  - ▶ Proof of concept labs, early stage financing, mentoring, business development support, market scoping, and testing
  
- Realize the potential of innovation in the services sector
  - ▶ Capitalize on offshoring opportunities
  - ▶ Invest in innovation capacity



# Innovation

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- 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



# Innovation

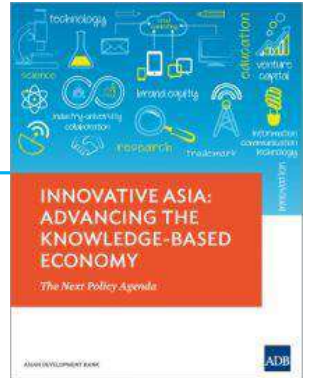
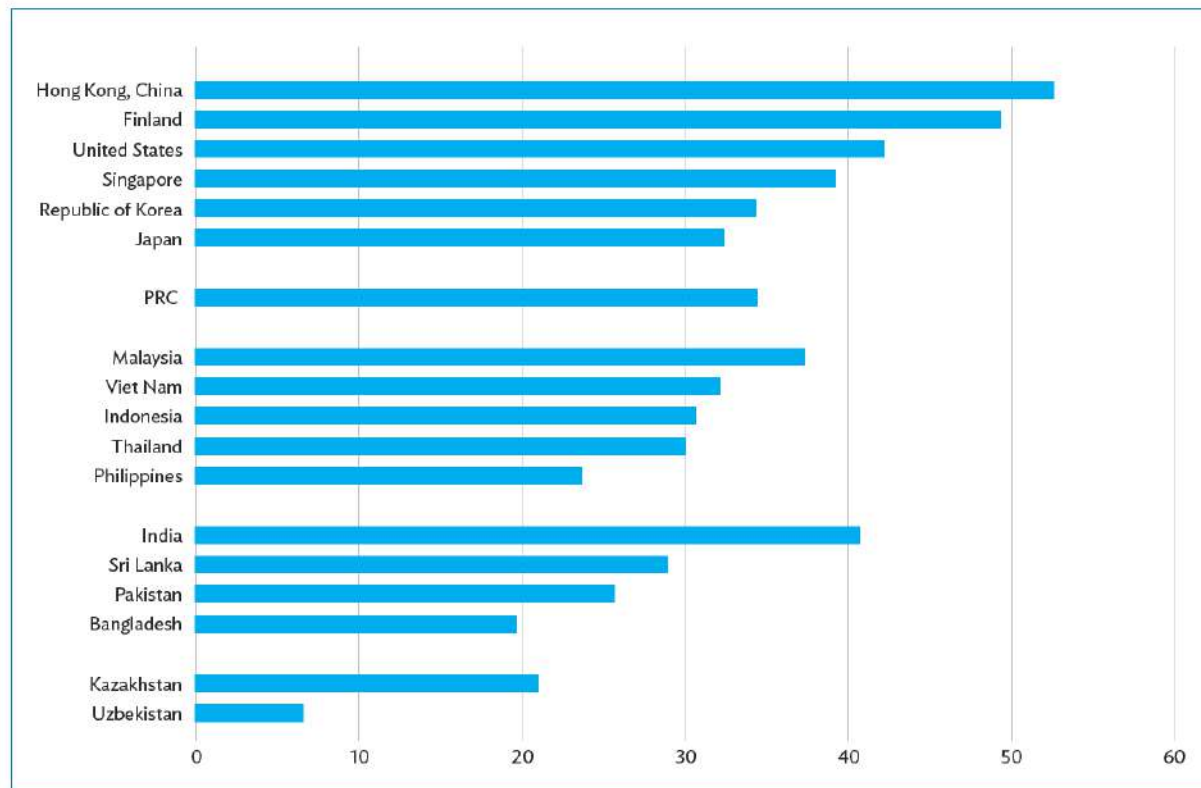


Figure 23: Creative Output Index, 2012

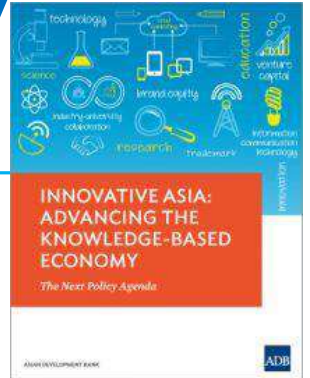


Capitalize in Asia's strong position in creative output

ASEAN = Association of Southeast Asian Nations, PRC = People's Republic of China.

Source: Calculated from the Creative Intangibles, Creative Goods and Services and Online Creativity indices of INSEAD, Global Innovation Index 2012.

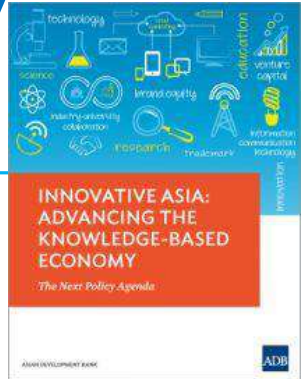
# Information and communications technology



- 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



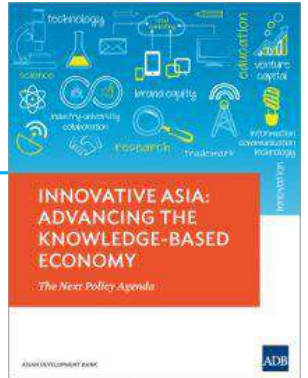
# Information and communications technology



- 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

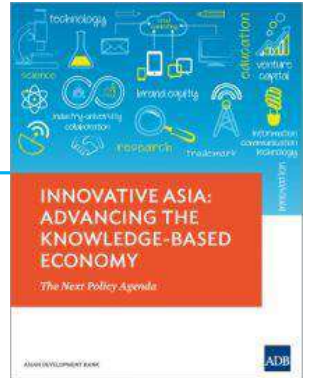
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- Improving governance and the role of government
  - ▶ Korea and Singapore are good examples
  - ▶ Coordinate knowledge economy promotion
  - ▶ Accelerate the commercialization of innovation
  - ▶ Support creative industries
  
- Tapping global knowledge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

# Economic incentive and institutional regime

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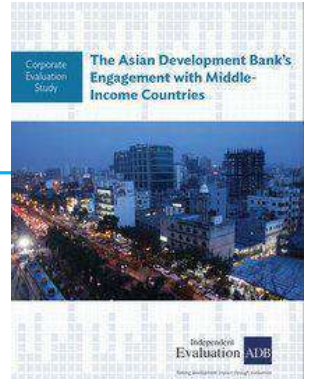
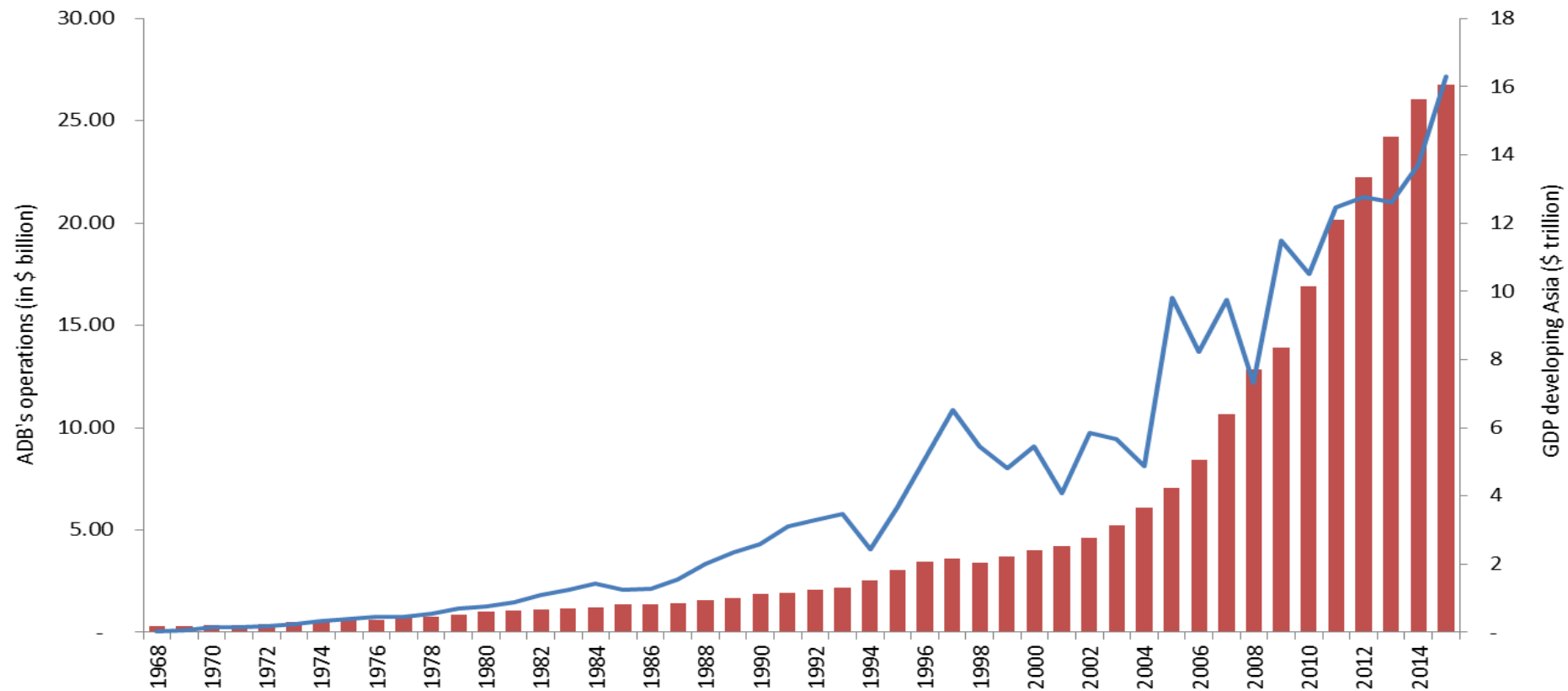


- Improving intellectual property rights regime
  - ▶ Malaysia, Sri Lanka and PRC rank above world average
  
- Improving efficiency of capital and labor markets
  - ▶ Financial underdevelopment limits the availability of credit

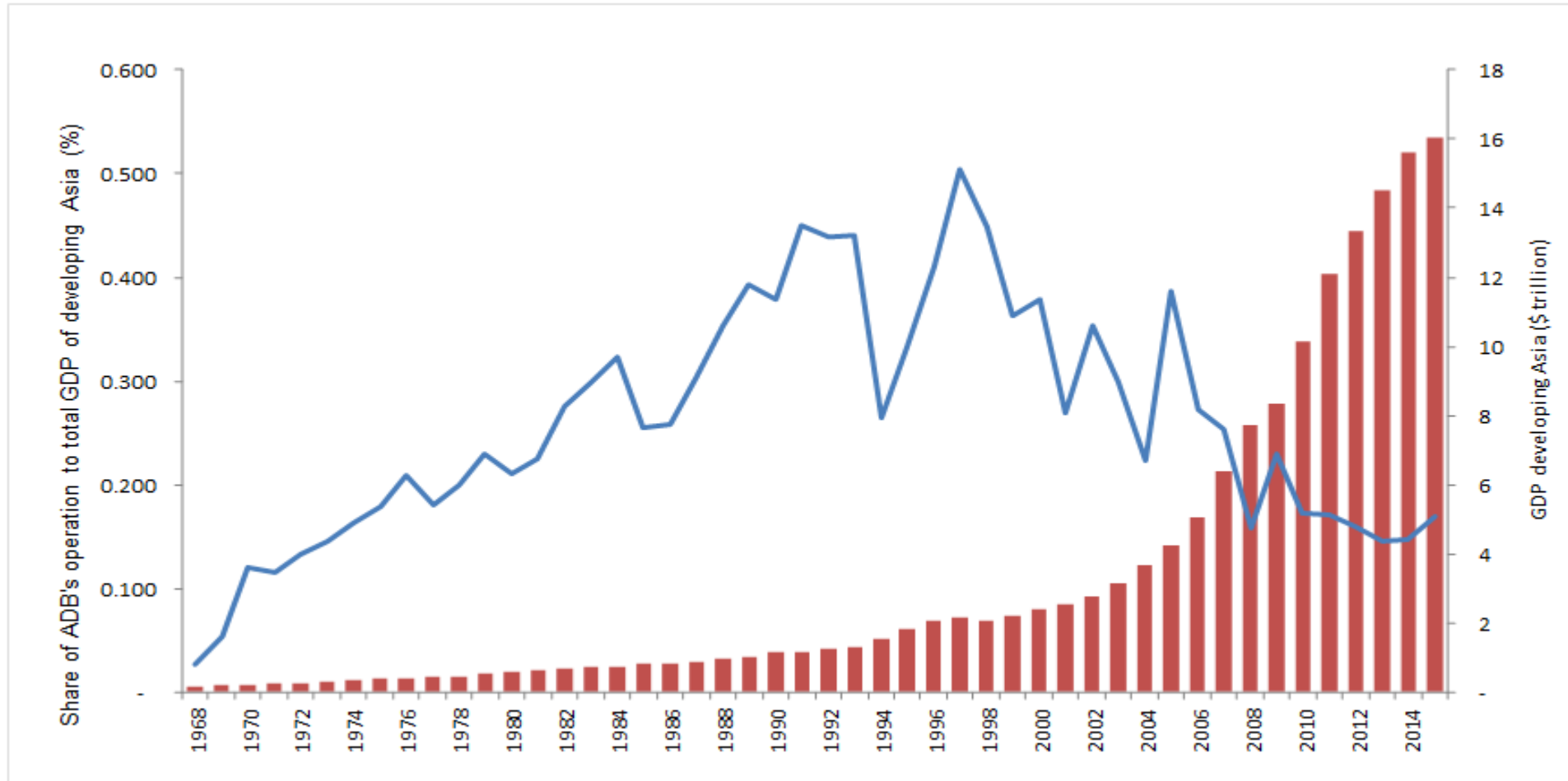
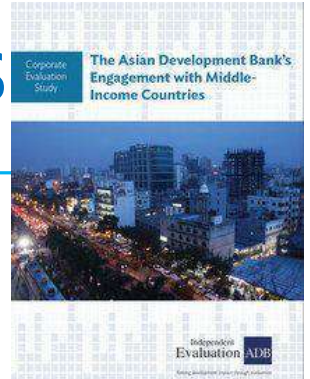


# ADB Engagement with MICs: Evaluation's View

# ADB operations and total GDP of developing Asia



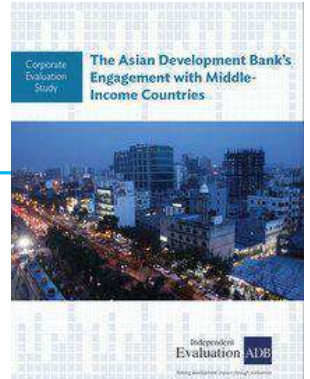
# Yet \$ share of ADB operations to total GDP of developing Asia has declined since mid-1990s





# New development challenges and opportunities in MICs

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## New MIC priority development bottlenecks

- Urban chaos, degraded environment
- Low productivity, insufficient economic diversification, limited ability to innovate
- Contagion, climate change, game-changing developments

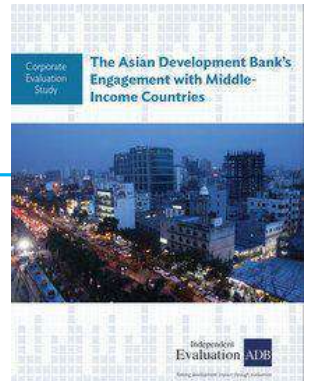
## New opportunities

- South-south cooperation; development knowledge and experience

# New thinking in multilateral finance institutions

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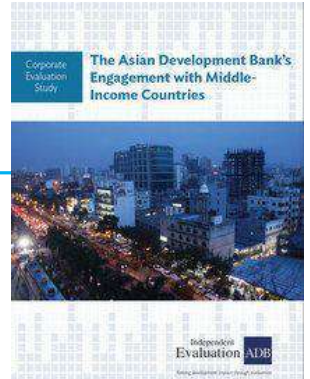
- Support all member countries (including HICs)
- Tailored approaches
- Expanded product offerings
- Scaled-up operations (*established multilateral financial institutions*)
- No exclusion of countries by income (*new MIC led MFIs*)



# New global frameworks

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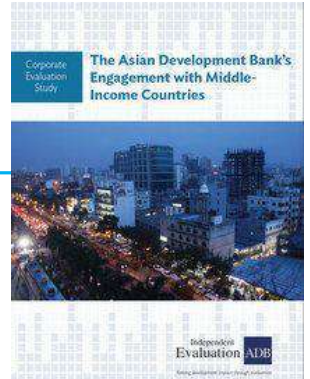
## Agreements on Long-term and Global Issues



# Lessons at the strategic level

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- ❑ Engage with MICs to realize a region free of poverty
- ❑ Respond to aspirations of growing middle-income class
- ❑ As each MIC is unique, it should be treated accordingly
- ❑ Provide knowledge solutions and broker knowledge
- ❑ Increase support for private sector development and operations

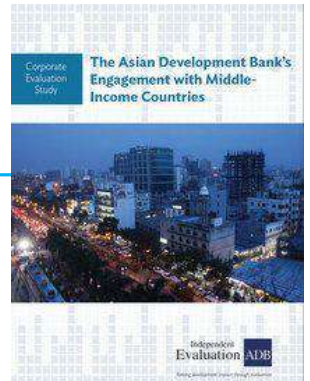


*Source: 2014 Midterm Review (MTR) of Strategy 2020, 2014 IED Review (Inclusion, Resilience, Change) of Implementation of Strategy 2020*

# Lessons at the strategic level

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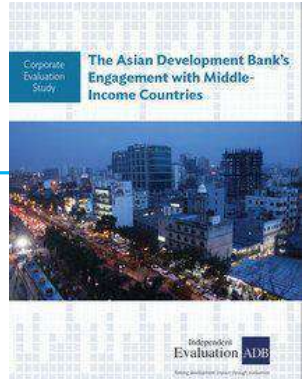
- Tailor the country partnership strategies (CPS) in keeping with country context
- Engage in more policy dialogue
- Make CPS more thematically oriented



*Source: 2014 Midterm Review (MTR) of Strategy 2020, 2014 IED Review (Inclusion, Resilience, Change) of Implementation of Strategy 2020*

# Lessons from consultations with MIC clients

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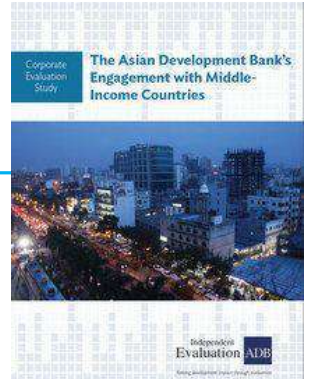


- MICs acknowledge benefits of engaging with ADB, but the need for ADB financing reduces as economies mature
- ADB could improve its development effectiveness if:
  - ▶ ADB's processes and procedures are simplified and aligned with country systems
  - ▶ ADB can help address new development challenges

*Source: IED led and SPD led country consultations*

# Strategic directions for ADB

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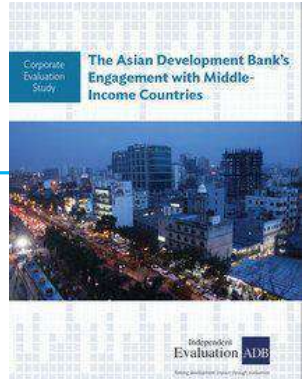


1. Anchoring finance on knowledge
2. Scaling-up operations and targeting to specific MIC needs
3. Decisively supporting private sector and PPP



# 1. Anchoring finance on knowledge

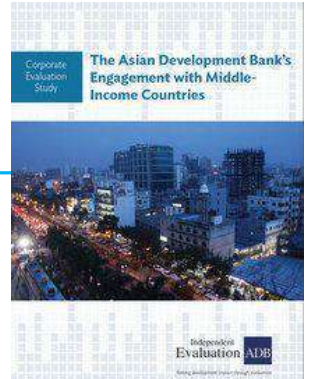
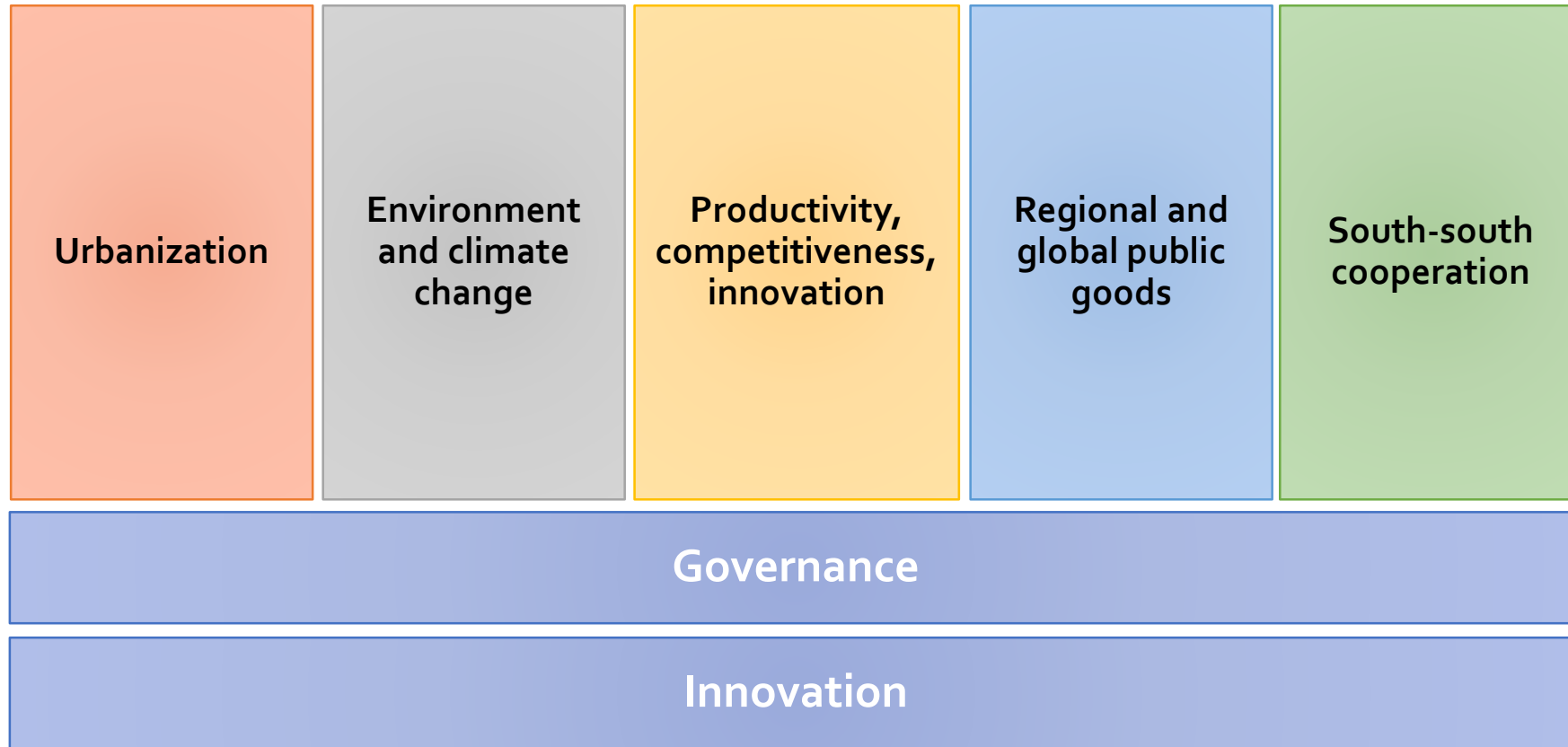
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## To provide knowledge solutions, ADB needs:

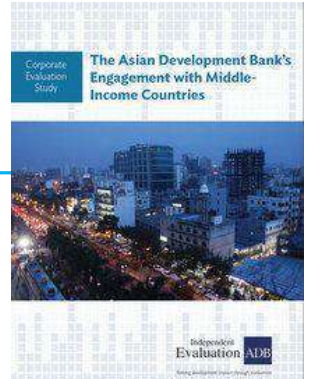
- ▶ Subject matter expertise
- ▶ Knowledge database: accessible, relevant and updated
- ▶ Tacit knowledge: to capture in a database, or to be easily accessed when required
- ▶ Knowledge sharing: the essence

## 2. Scaling up operations and targeting specific MIC needs



### 3. Decisively supporting private sector and PPP

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**The environment is conducive for increasing the role of private sector. This calls for:**

- ▶ Improving business climate and supporting investment (e.g., infrastructure / PPP)
- ▶ Encouraging private sector investment where it would otherwise not go (e.g., corporate social responsibility, global and regional public goods)
- ▶ Increasing competition (e.g., consumer goods)

A low-angle, upward-looking photograph of several modern skyscrapers reaching towards a bright sky. The buildings are rendered in a light, desaturated tone. In the foreground, the fronds of palm trees are visible at the bottom. A horizontal bar with four colored segments (light blue, dark blue, orange, and red) spans the width of the image, positioned just below the center.

**Thank you!**