The Future of Economic Statistics

Stefan Schipper

Statistician
Statistics and Data Innovation Unit
Economic Research and Regional Cooperation Department
Asian Development Bank

Outline of Discussion

1. ADB Data and Research
2. ADB Key Indicators
3. ADB Initiatives
4. ADB Strategy 2030

ADB

1. ADB Data and Research

1. ADB Data and Research

- Economic research and statistical work contributes to knowledge generation in ADB and help strengthen its institutional priorities and effectiveness of country operations.

- By augmenting the stock of knowledge of developing member countries and the region and disseminating it, ADB's capability to provide informed policy advice and undertake capacity building is enhanced.

- The *Economic Research and Regional Cooperation Department* produces knowledge work on various economic development issues in Asia and the Pacific.
  - Provides information on the latest ADB flagship publications, reports, working papers, and ADB's journal
  - Provides data and statistics on various economic, social, and financial indicators related to ADB's developing member countries (DMCs)

1. ADB Data and Research

The Statistics and Data Innovation Unit

A newly created unit under the Office of the Chief Economist and Director General of the Economic Research and Regional Cooperation Department

Statistical Capacity Building (SCB)

- Supports statistical capacity building through ADB-funded technical assistance (TA) projects focused on enhancing statistical methodologies, to strengthen developing member countries (i.e. NSOs) to fulfill their mandate to produce timely, relevant, and accurate economic, social and environmental statistics

Data Development

- Collect, compile, and disseminate key social and economic indicators for DMCs
- Develop and maintain a regional statistical database of socio-economic indicators

Research and Analytical Studies

- Undertake rigorous research on statistical methodology, development policy, and data and measurement issues pertaining to official statistics

ADB

1. ADB Data and Research

Statistical reports of Asia and Pacific countries

- Key Indicators (KI) for Asia and the Pacific – The Latest Facts on Asia Pacific Countries

- Asian Development Outlook (ADO) – Economic Forecasting in Asia

- Asian Economic Integration – How Asia is Working Together

- Basic Statistics – The Latest Data on Asia Pacific Countries

- Pacific Economic Monitor – Pacific Economies Development Update

ADB

2. ADB Key Indicators

The Latest Facts on Asia Pacific Countries

ADB

2. ADB Key Indicators

KEY INDICATORS
FOR ASIA AND THE PACIFIC
2018
49TH EDITION

SEPTEMBER 2018

- An ADB flagship annual statistical publication

- Presents data regarding the economic, financial, social, and environmental situations for the 49 regional members of ADB

- Designed to serve as a resource for information on development issues across the region for a wide audience, including policy makers, development practitioners, government officials, researchers, students, and the general public

ADB

2. ADB Key Indicators

Coverage

Regional ADB Member Economies :
6 subgroups & 49 economies (Niue as the newest member)

- Central and West Asia – AFG, ARM, AZE, GEO, KAZ, KGZ, PAK, TAJ, TKM, UZB (10 economies)
- East Asia – PRC, HKG, KOR, MON, TAP (5 economies)
- South Asia – BAN, BHU, IND, MLD, NEP, SRI (6 economies)
- Southeast Asia – BRU, CAM, INO, LAO, MAL, MYA, PHI, SIN, THA, VIE (10 economies)
- The Pacific – COO, FIJ, KIR, RMI, FSM, NAU, NIE, PAL, PNG, SAM, SOL, TIM, TON, TUV, VAN (15 economies)
- Developed Member Economies – AUS, JPN, NZ

Partner Agencies

- Key data sources

  - Government agencies (**National Statistics Office**, Central Bank, Ministry of Finance, etc.) in regional members through the Key Indicators Questionnaire (KIQ) and country websites

  - Websites and databases of international, private, and non-governmental organizations

ADB

2. ADB Key Indicators

- With a special chapter from 2001-2015; data chapter on SCB in 2016 and 2017; Special supplement on SCB in 2018 and 2019

- With selected SDG indicators on the 17 goals

- GVC, introduced in 2015

- Data collection from March

- Typically launched in August/September each year

- KI 2019 – 50th edition

- Website – https://www.adb.org/publications/key-indicators-asia-and-pacific-2018

ADB
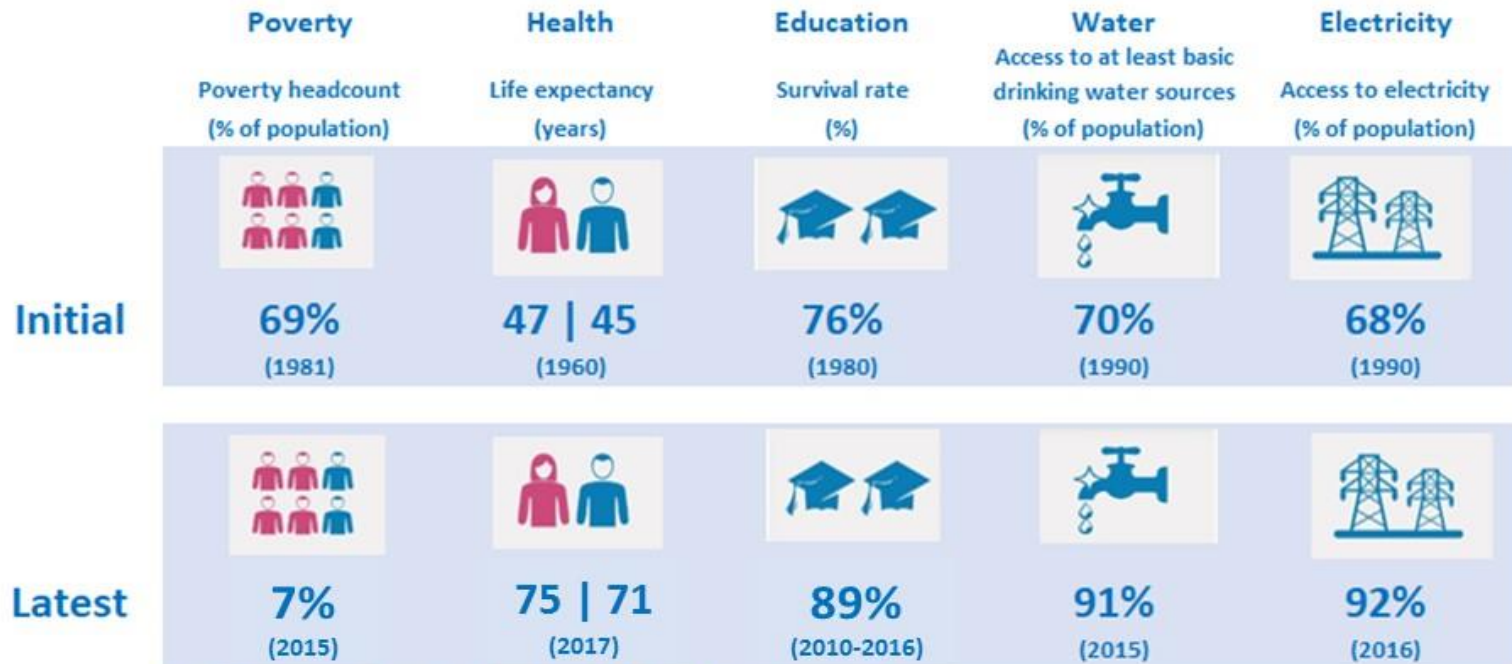
2. ADB Key Indicators
Structure

Part I. Sustainable Development Goals (SDGs)	• Comprise 169 targets across 17 goals to be achieved by 2030 • Includes data tables and brief analyses of trends of selected indicators for the SDGs in Asia and the Pacific • Indicators are presented according to the United Nations SDG global indicator framework
Part II. Region at a Glance	• Grouped into eight themes, People; Economy and Output; Money, Finance, and Prices; Globalization; Transport and Communications; Energy and Electricity; Environment; and Government and Governance • Includes brief analysis of key trends of selected indicators highlighting important recent developments in Asia and the Pacific
Part III. Global Value Chains	• Contains select indicators for depicting Asia and the Pacific economies' participation in global value chains (GVCs), and their sector-specific comparative advantage in terms of exports • Participation in GVCs involves cross-border trading transactions of inputs used in different stages of production—from raw materials, to intermediate inputs, up to the final products purchased by the end consumers.
Country Tables	• Contain information on a wide range of statistical indicators on population, labor force, national accounts, production and price indexes, energy, money and banking, government finance, external trade, balance of payments, international reserves, exchange rates, and external indebtedness.

ADB

Changing Landscape and Challenges

Development of Asia and the Pacific continues to impressive in many fronts

	Poverty	Health	Education	Water	Electricity
	Poverty headcount (% of population)	Life expectancy (years)	Survival rate (%)	Access to at least basic drinking water sources (% of population)	Access to electricity (% of population)
Initial	69% (1981)	47 | 45 (1960)	76% (1980)	70% (1990)	68% (1990)
Latest	7% (2015)	75 | 71 (2017)	89% (2010-2016)	91% (2015)	92% (2016)

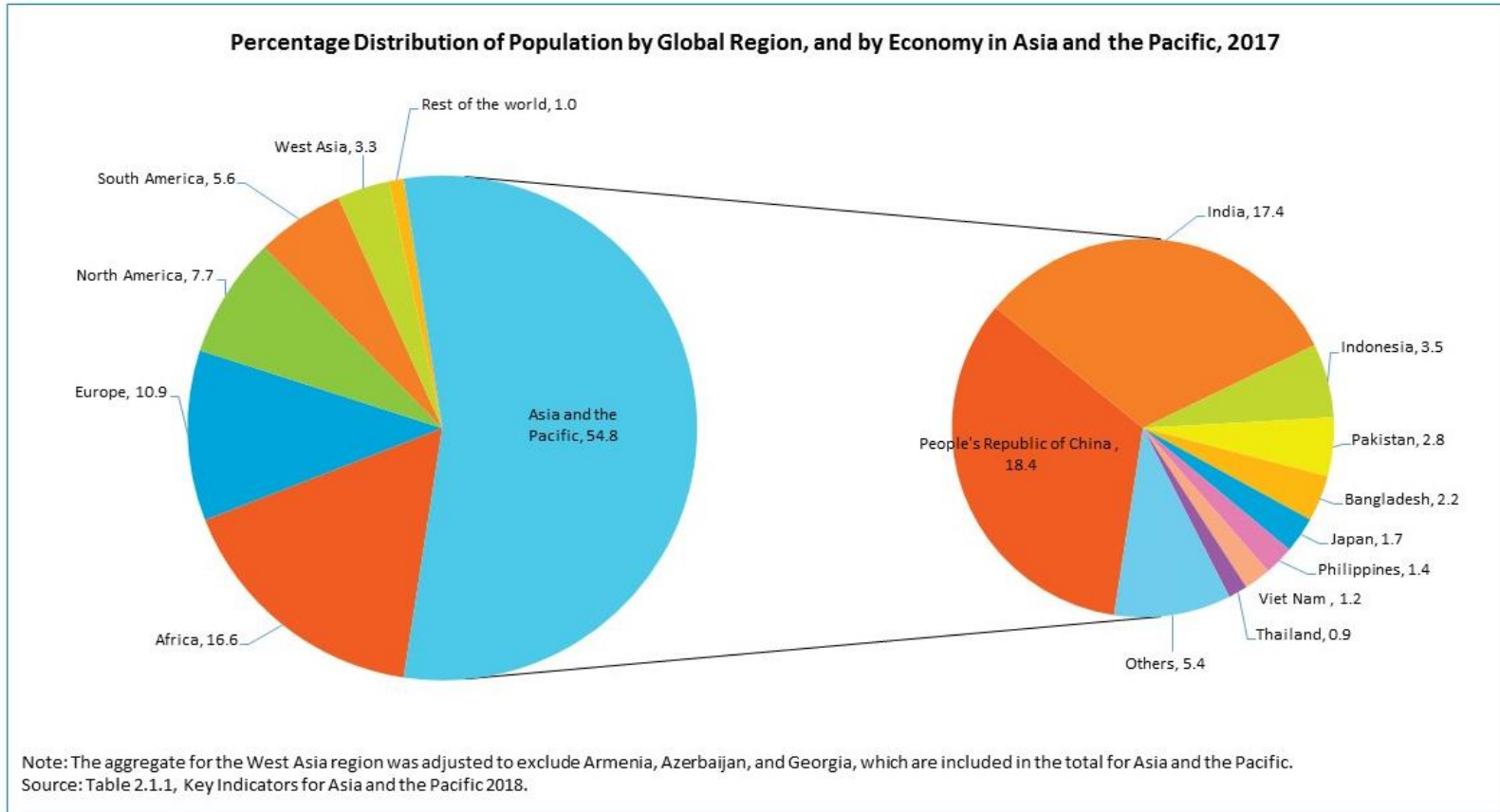Notes: Poverty headcount is based on $1.90 per day (PPP) poverty line.

Survival rate is for the last grade of primary education, both sexes.

SourceL ADB calculations using data from World Development Indicators database, World Bank.
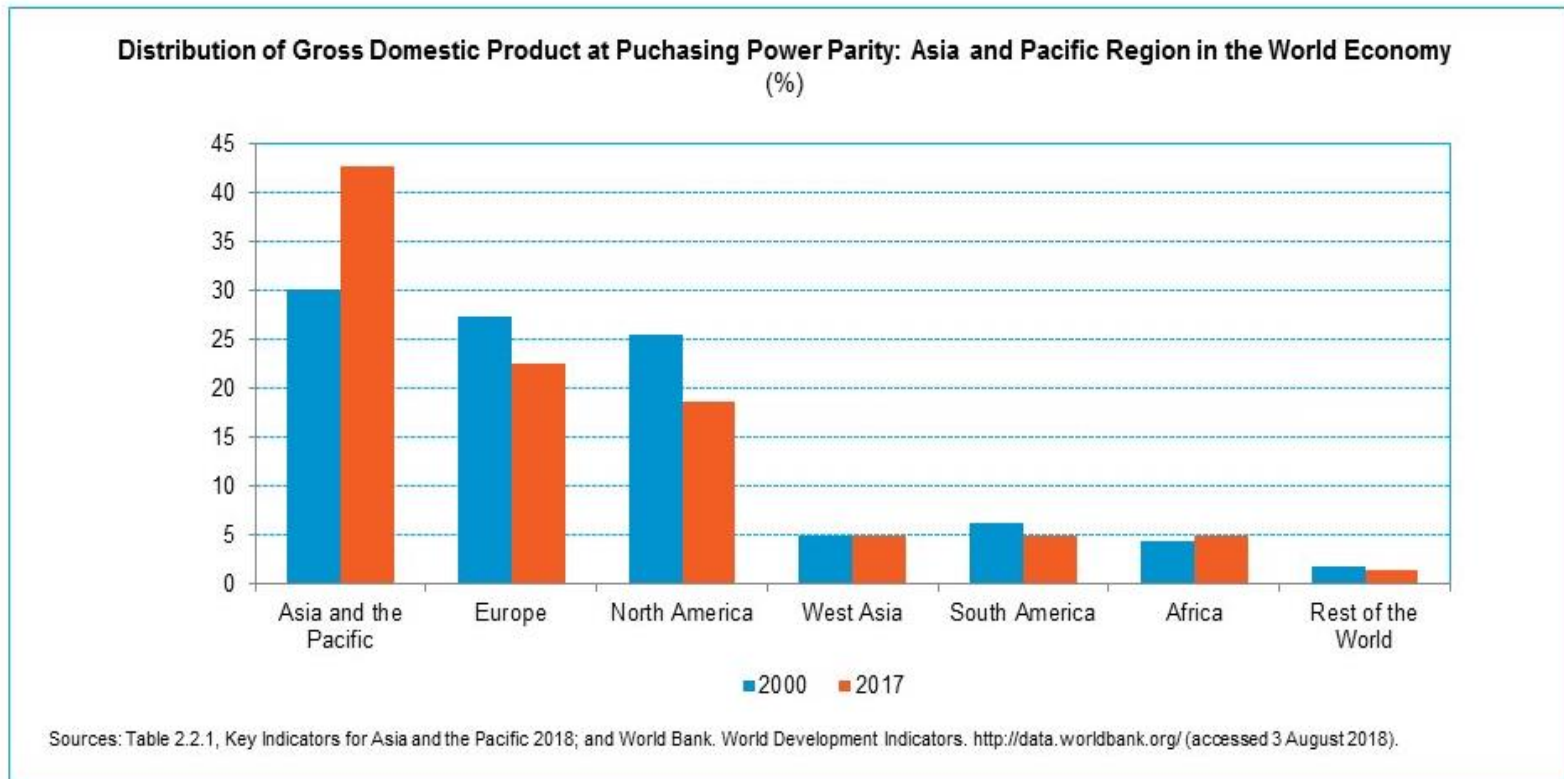
ADB

Changing Landscape and Challenges

Asia and the Pacific now accounts for roughly 55% of the global population

Percentage Distribution of Population by Global Region, and by Economy in Asia and the Pacific, 2017

Note: The aggregate for the West Asia region was adjusted to exclude Armenia, Azerbaijan, and Georgia, which are included in the total for Asia and the Pacific.
Source: Table 2.1.1, Key Indicators for Asia and the Pacific 2018.

ADB

Changing Landscape and Challenges

Asia and the Pacific accounts for about 43% of global gross domestic product (in purchasing power parity terms) - making it the fastest growing region in the world


Distribution of Gross Domestic Product at Puchasing Power Parity: Asia and Pacific Region in the World Economy (%)

Sources: Table 2.2.1, Key Indicators for Asia and the Pacific 2018; and World Bank. World Development Indicators. http://data.worldbank.org/ (accessed 3 August 2018).

Changing Landscape and Challenges

Shift in employment away from agriculture toward industry and services

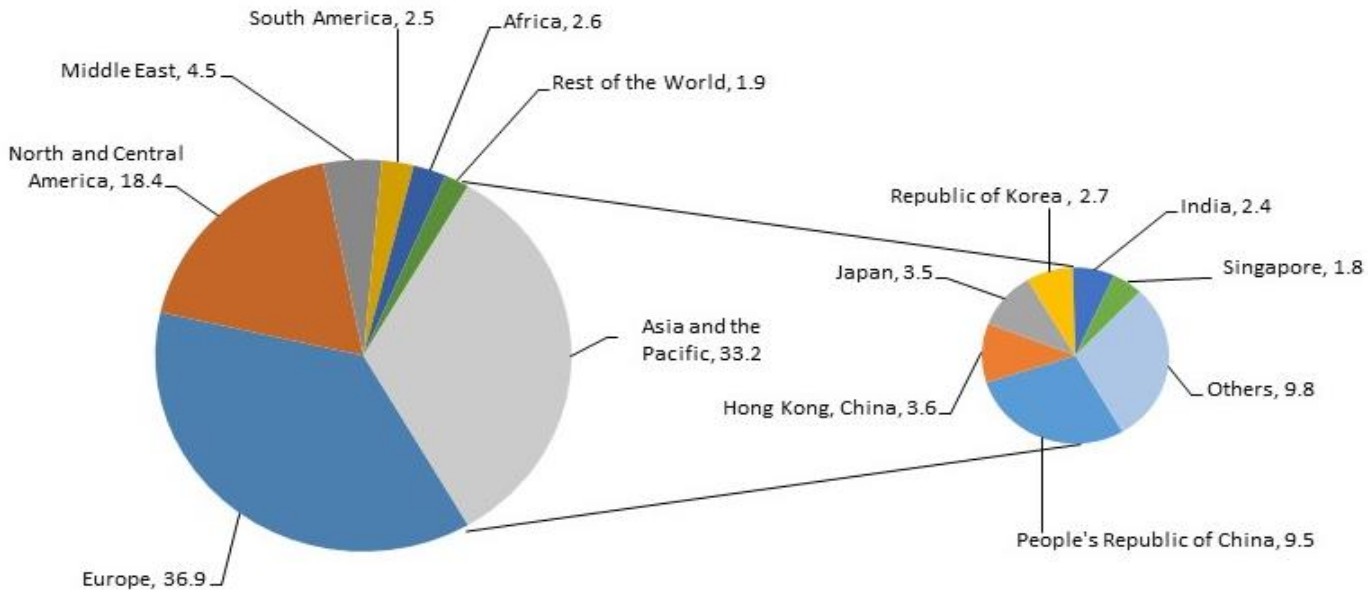**Employment in Agriculture, Industry, and Services
(% of total employment)**

15
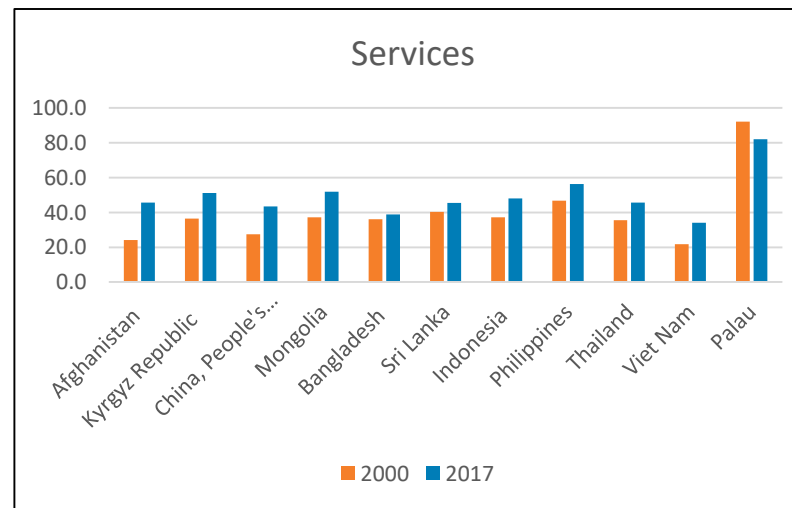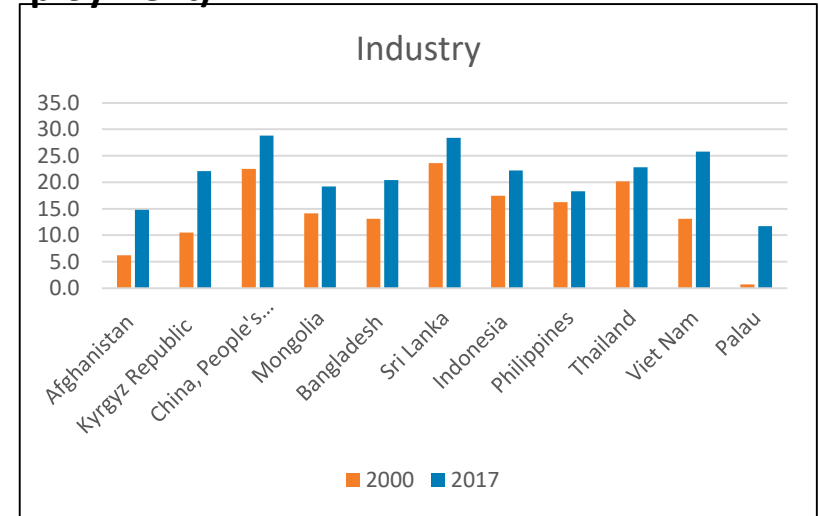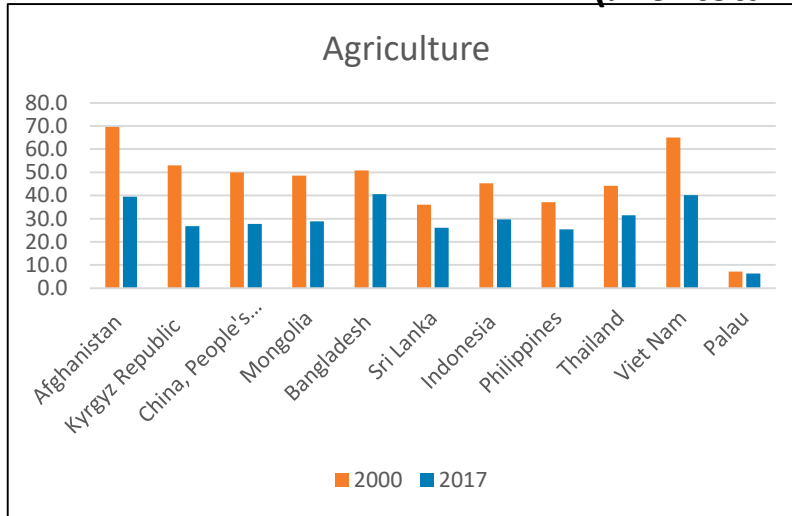
Changing Landscape and Challenges

Asia and the Pacific accounted for more than a third of global exports.

Destination of Merchandise Exports by Global Region and Major Merchandise Export Destinations in Asia and the Pacific, 2017
(%)

PRC = People's Republic of China.
Sources: Table 2.4.13, Key Indicators for Asia and the Pacific 2018; International Monetary Fund. May 2018. *Direction of Trade Statistics* (CD-ROM). Washington DC.

Changing Landscape and Challenges

Growth rate of household expenditure or income per capita was faster among the bottom 40% of the population than it was for the overall population in 11 of 16 reporting economies (most recent data).

Growth Rates of Household Expenditure or Income per Capita among the Bottom 40% and the Total Population, 2010-2015
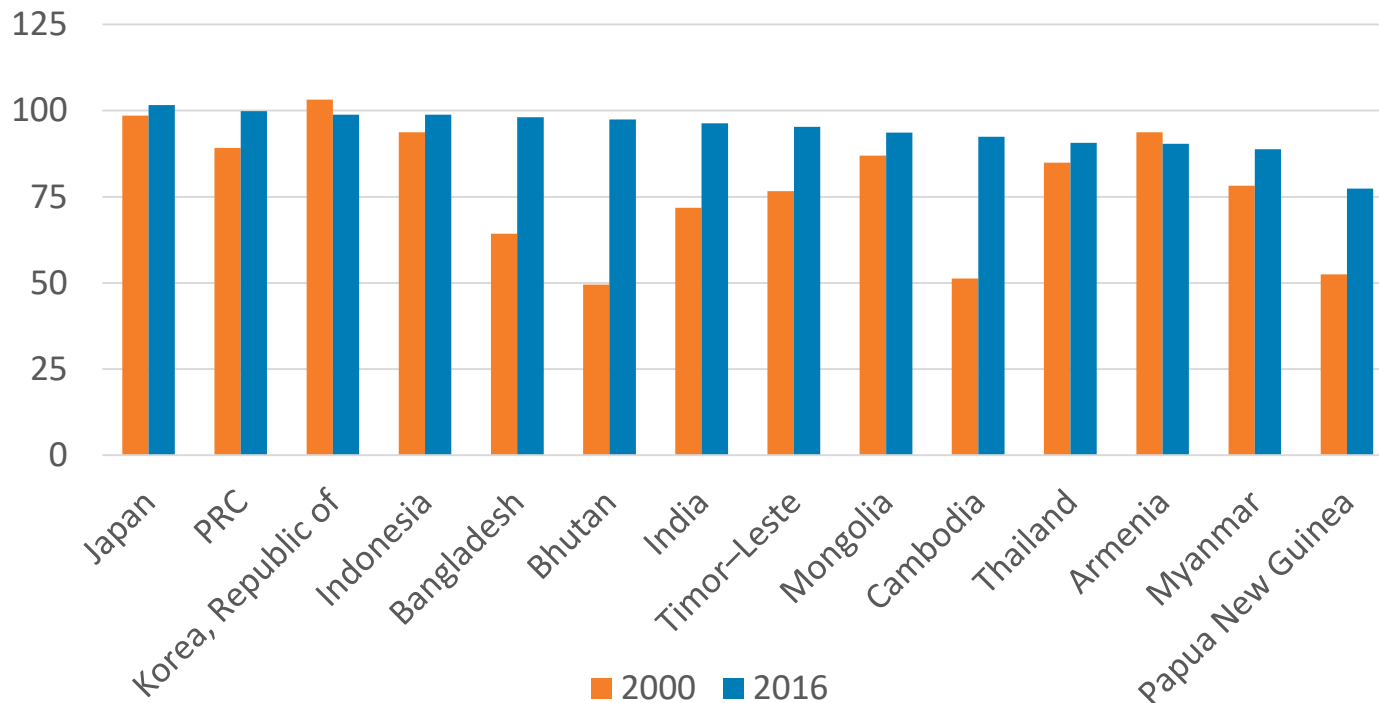(%)

■ Bottom 40   ■ Population
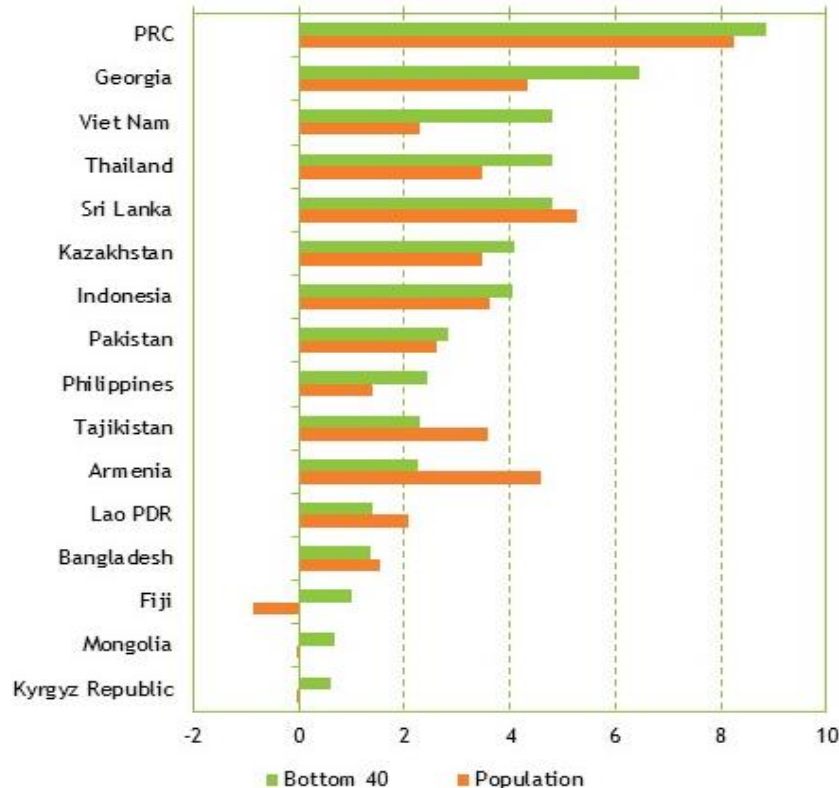
Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 1.10.1, Key Indicators for Asia and the Pacific 2018.

17

Changing Landscape and Challenges

Asia and the Pacific has made great strides in education...

Primary Education Completion Rate

PRC = People's Republic of China.
Note: For 2016, data included are for 2012 to 2017.
Source: Table 2.1.11, Key Indicators for Asia and the Pacific 2018.
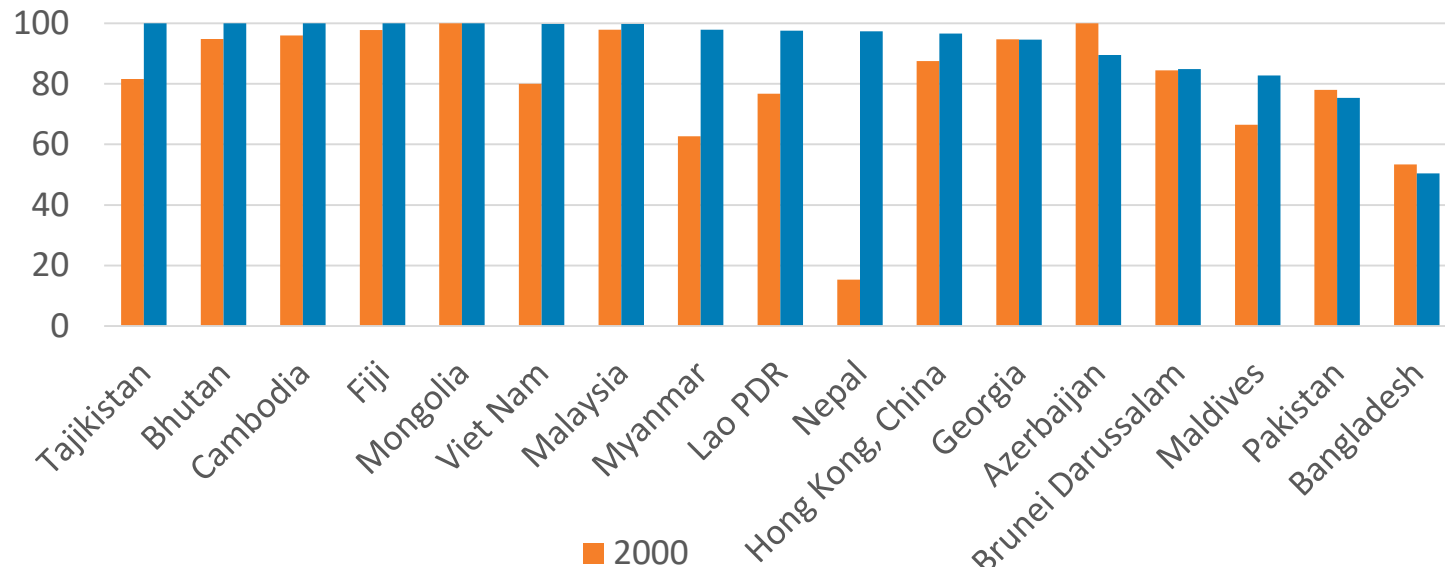
Changing Landscape and Challenges

The supply of qualified teachers has increased …

Teacher Training and Supply

Proportion of Teachers in Primary Education Who Have Received at least the
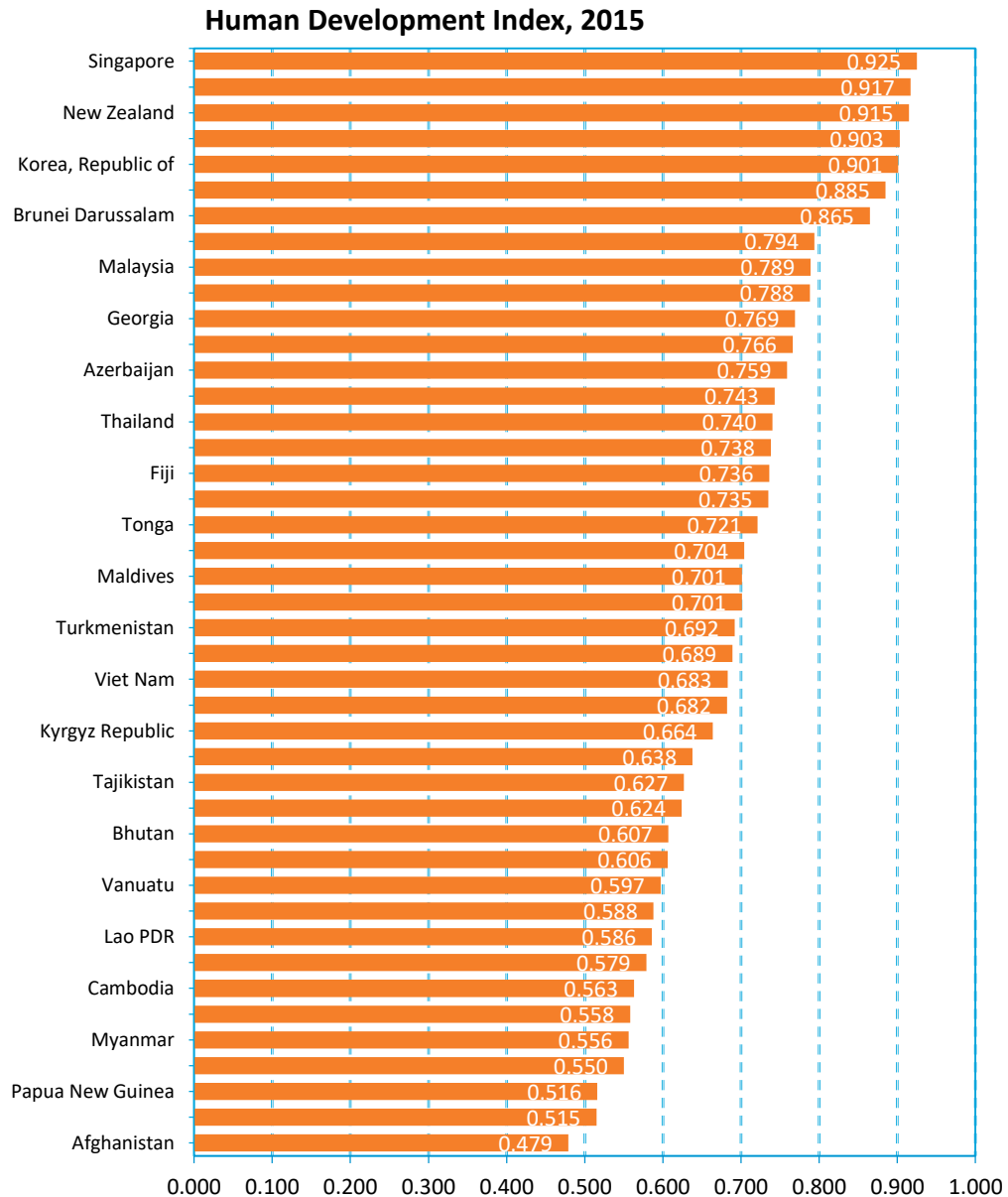Minimum Organized Teacher Training (% of total teachers)

Legend: 2000

Note: 2016 or Latest Year
Source: Table 1.4.1, Key Indicators for Asia and the Pacific 2018.

ADB

Quality of life continues to improve

Human Development Index, 2015

Country	HDI
Singapore	0.925
	0.917
New Zealand	0.915
	0.903
Korea, Republic of	0.901
	0.885
Brunei Darussalam	0.865
	0.794
Malaysia	0.789
	0.788
Georgia	0.769
	0.766
Azerbaijan	0.759
	0.743
Thailand	0.740
	0.738
Fiji	0.736
	0.735
Tonga	0.721
	0.704
Maldives	0.701
	0.701
Turkmenistan	0.692
	0.689
Viet Nam	0.683
	0.682
Kyrgyz Republic	0.664
	0.638
Tajikistan	0.627
	0.624
Bhutan	0.607
	0.606
Vanuatu	0.597
	0.588
Lao PDR	0.586
	0.579
Cambodia	0.563
	0.558
Myanmar	0.556
	0.550
Papua New Guinea	0.516
	0.515
Afghanistan	0.479

FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic,
PRC = People's Republic of China.
Note: For Taipei,China, data are obtained from DGBAS.
Source: Table 2.1.8, Key Indicators for Asia and the Pacific 2018.

20

ADB

Changing Landscape and Challenges

However, Asia and the Pacific still faces important challenges…

Remaining poverty and vulnerability in ADB's Developing Member Countries

The region was home to 264 million people living in extreme poverty (below the $1.90/day poverty line) in 2015

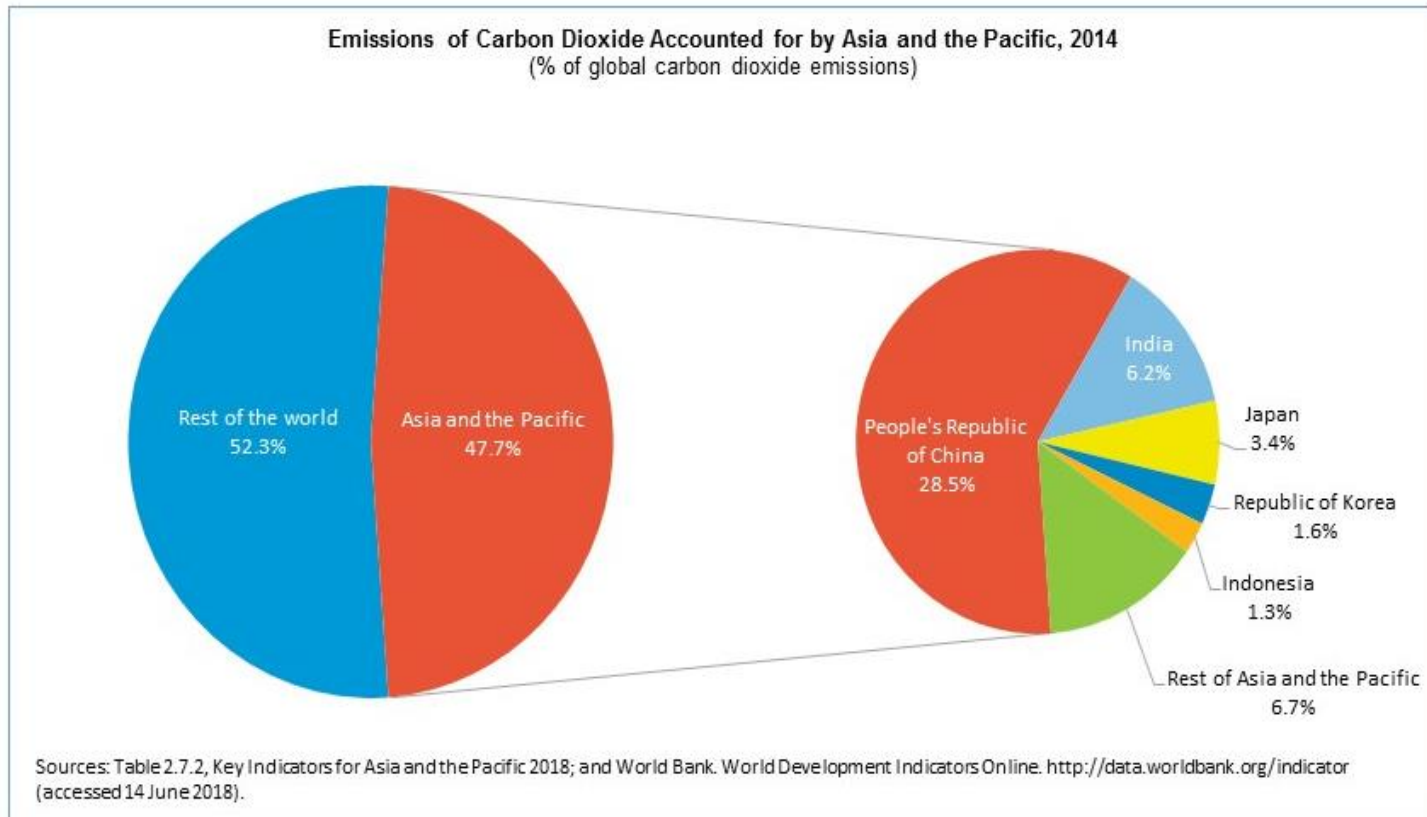| Year	People living on less than $1.90/day		People living on less than $3.20/day	
	No. of Poor (million)	Poverty Rate (%)	No. of Poor (million)	Poverty Rate (%)
1990	1,507	54.6	2,274	82.4
1999	1,231	38.8	2,241	70.6
2005	875	25.6	1,942	56.8
2011	497	13.6	1,495	41.0
2012	449	12.2	1,419	38.6
2013	348	9.4	1,267	34.1
2015	264	7.0	1,100	29.0

Notes: *September 2018 Update; Covers 34 DMCs except in 1990 where Maldives was excluded due to data unavailability.*
Source: ADB estimates based on World Bank's PovcalNet database.

Changing Landscape and Challenges
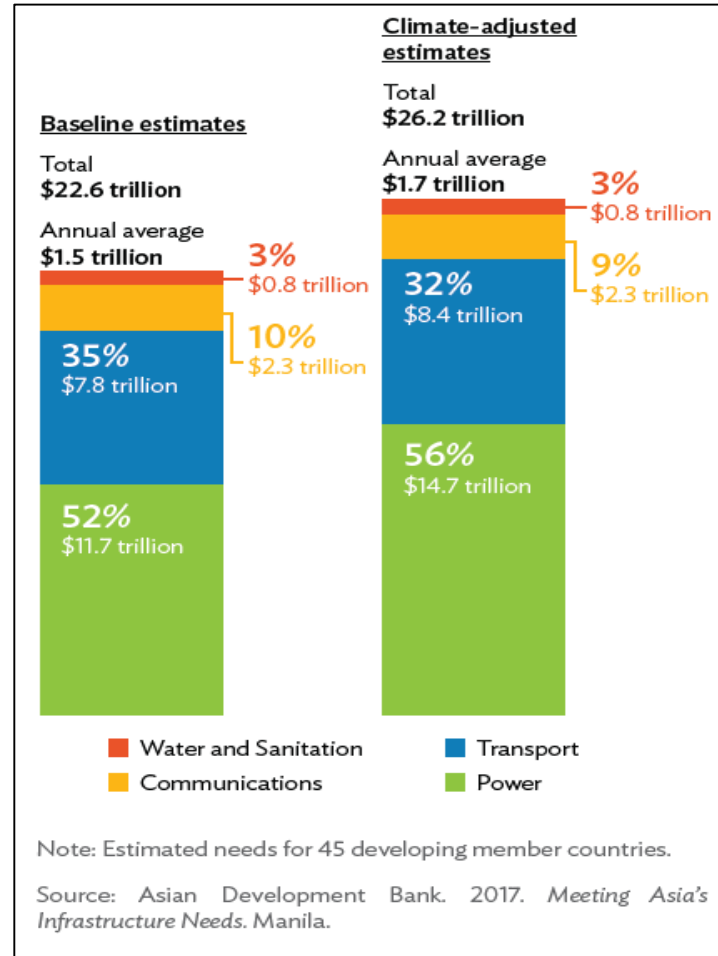
- ***Growing environmental pressures***

Emissions of Carbon Dioxide Accounted for by Asia and the Pacific, 2014
(% of global carbon dioxide emissions)

Rest of the world 52.3%

Asia and the Pacific 47.7%

People's Republic of China 28.5%

India 6.2%

Japan 3.4%

Republic of Korea 1.6%

Indonesia 1.3%

Rest of Asia and the Pacific 6.7%

Sources: Table 2.7.2, Key Indicators for Asia and the Pacific 2018; and World Bank. World Development Indicators Online. http://data.worldbank.org/indicator (accessed 14 June 2018).

ADB

- *Infrastructure deficits*

Estimated Infrastructure Investment Needs by Sector, 2016-2030 (2015 prices)

Note: Estimated needs for 45 developing member countries.

Source: Asian Development Bank. 2017. *Meeting Asia's Infrastructure Needs*. Manila.

Changing Landscape and Challenges

Other challenges

- **Rising inequality**

- **Demographic changes**

- **Rapid urbanization**

- **Technological advancements**

- **Climate change and disaster risk**

- **Ambitious development goals**

- **Governance and institutional capacity**

ADB

2. ADB Key Indicators

Sustainable Development Goals

Data Gaps and Other Data-Related Issues

- New and huge data demands
- Limited data availability for SDG indicators
- Gaps in data granularity
- Lack of data comparability
- Sparse data and irregular frequency
- Data limitations
- Measurement errors

SDGs - Data Gaps and Other Data-Related Issues

New and huge demands

- The approved framework for global monitoring of the SDGs consists of 232 indicators with greater disaggregation than the MDGs and across a wider spectrum of topics.

- This requires national statistical systems and the global statistical system to work closely with each other to identify strategies to produce more disaggregated and better-quality data.

- Currently, national statistical systems, with the assistance of their governments and the development community, are working towards addressing these data demands across all tiers of the SDG indicators.

SDGs - Data Gaps and Other Data-Related Issues

Limited data availability for SDG indicators

- Only 52% of the SDG indicators had some data (ADB and UNESCAP assessment on the extent of data availability for the SDG indicators across Asia and the Pacific)

- 11% of Tier I indicators, 34% of Tier II indicators, and 93% of Tier III indicators do not have any data available (UNESCAP, 2017)

- Only 26% of all SDG indicators are amenable to trend analysis at the regional level, with two or more data points available for these indicators for 50% or more economies in Asia and the Pacific (UNESCAP, 20217)

Figure 1.18.1: Distribution of Sustainable Development Goal Indicators, by Tier and by Data Availability
(number of indicators)

Legend: ■ Trend OK ■ Status OK ■ Status Limited ■ No Data
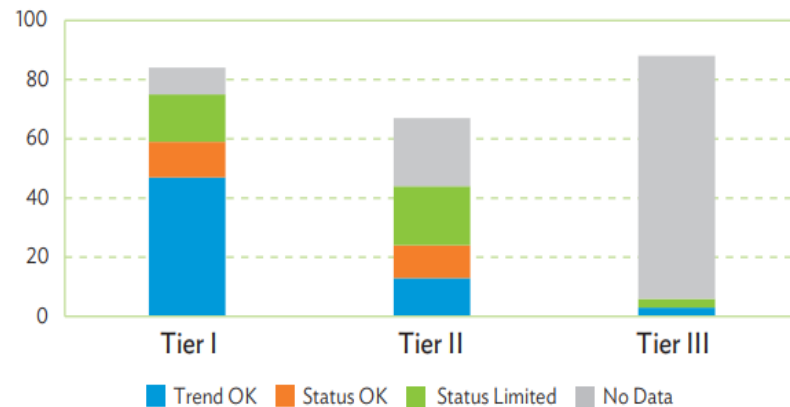
Notes:

1. Trend OK: if a particular indicator has two or more data points available for 50% (or more) of the economies in Asia and the Pacific or relevant economy grouping from 2000 to 2017.

2. Status OK: if a particular indicator has only one data point available for 50% (or more) of the economies in Asia and the Pacific or relevant economy grouping from 2000 to 2017.

3. Status Limited: if a particular indicator has at least one data point available but for less than 50% of the economies in Asia and the Pacific or relevant economy grouping from 2000 to 2017.

4. No Data: if no data points are available for any of the economies in Asia and the Pacific or relevant economy grouping from 2000 to 2017.

Source: United Nations Economic and Social Commission for Asia and the Pacific. 2017. *Statistical Yearbook for Asia and the Pacific 2017 Measuring SDG progress in Asia and the Pacific: Is There Enough Data?* Bangkok.

Gaps in data granularity

- Sex disaggregations, even for basic indicators such as extreme poverty rates based on the $1.90 a day (at 2011 purchasing power parity) are not currently available.

- Poverty numbers are currently unavailable for vulnerable groups, such as persons with disabilities or indigenous peoples

ADB

Lack of data comparability

- Proportion of the urban population living in slums or the proportion of the population with access to safely managed sanitation services, require data on housing conditions that may not be fully comparable across countries due to differences in definitions

- Comparisons across economies are likewise difficult for urban–rural disaggregation of SDG indicators, due to variations in the definition of "urban" and "rural" across time and countries

Sparse data and irregular frequency

- Indicators that provide a useful description of income inequality, such as the growth in household income of those in the bottom 40th percentile of income distribution in relation to national averages, are only currently available for a few economies.

- Indicators on material footprint and domestic material consumption, which are widely accepted as strategic sustainability indicators of production and consumption, are not produced annually.

- Data to monitor progress made towards addressing climate change are sparse.

- Frequency and coverage is also of concern e.g. coverage of protected areas in relation to marine areas, are not regularly collected alongside other challenges such as difficulty in determining whether a site conforms to standards on the definition of a protected area.

- Limitation of remote sensing techniques in assessing land use e.g. forest regrowth cannot easily be detected with remote sensing techniques.

ADB

Data limitations

- The labor share in GDP does not include the income of the self-employed, and yet a sizeable proportion of the employed population in developing Asia is made up of people who are self-employed.

- Current measures of poverty used by economies are largely based on income or consumption data, while the SDG indicators include a multidimensional poverty measure.

- The interconnectedness of these issues migration and population growth, changes in family structures, inequalities of opportunity for excluded groups and rising insecurity is not easy to explore using currently available data.

- The Red List Index does not adequately capture the deteriorating status of common species that are abundant and widespread but are declining gradually.

- Other indicators for monitoring many targets under SDG 15 (Life on Land) are also sparsely available. The absence of a framework of monitoring terrestrial ecosystems, low data availability, and the lack of good quality data has ecological implications and must be carefully addressed.

31

ADB

SDGs - Data Gaps and Other Data-Related Issues

Measurement Errors

- Farmer self-reports of land area and production are known to have significant biases (Dillon and Rao 2018).

- Calculation of mortality rates in children under the age of 5 years requires complete counts of live births and child deaths by precise age, which are not always available due to lacking civil registration systems in some developing economies of Asia and the Pacific.

- Maternal deaths are likewise not always accounted for given incomplete or inaccurate records on causes of death.

- The measurement of quality education is a challenge given the lack of standard definitions for minimum competency.

- Anthropometric measures of malnutrition (including stunted heights) are subject to measurement errors and issues around reference standards, i.e., local versus international standards.

- Access to safely managed drinking water services, access to safely managed sanitation, and information on hygiene crucially depend on more and better data, particularly administrative data sources (WHO and UNICEF 2017).

Data Issues & Comparability
Completeness of data

- Vital registration records in many of ADB's developing member economies are incomplete

- Estimates on energy and electricity from official sources are incomplete or inconsistent

- Data for the household electrification indicator are lacking

- Some regions, especially the Pacific, have incomplete or no data on road statistics (the most recent data are usually 2–3 years old at the time of review).

- Other price measurements, such as the wholesale price index and the producer price index, are generally not available in Pacific economies.

Data Issues & Comparability

Regularity and frequency of data collection
Coverage and implementation
Reference periods and methodology

- Labor force data from household surveys are not carried out in all economies on a regular basis.

- For national accounts, most economies in the region have varying reference periods (e.g., calendar year versus fiscal year) and base years (e.g. fixed base year versus chain-lininking).

- CPI coverage differs across economies - most economies try to follow the COICOP guidelines, but the implementation varies across economies

- Prices are varying across regions and coverage; subnational comparisons of price collected are limited to urban areas (or the capital city); and CPI basket of goods and services in the index is outdated

ADB

Data Issues & Comparability

Concepts/Definitions
Adherence to international standards

- Most economies generally follow the IMF's Government Finance Statistics guidelines, with some economies still using the 1986 version, while others have switched to the 2001 or 2014 guidelines. Furthermore, most economies record their transactions on a cash basis; a few, on an accrual basis.

- Data on government expenditures and revenue are derived from economy sources and are therefore not standardized throughout Asia and the Pacific.

- For the indicator on GDP per unit use of energy, the energy statistics adopt the territory principle, while national accounts are being compiled on the residency principle, which could be a potential source of inconsistency, although in practice differences are not huge (UN 2016).

3. ADB Initiatives

3. ADB Initiatives

- Establishing global research alliances
- Implementing impact evaluation at ADB
- Statistics technical assistance
- Country diagnostic studies
- Investment Climate Surveys (ICS)
- International Comparison Program (ICP)
- Economic Analysis of Projects

ADB

3. ADB Initiatives

Statistics technical assistance

- ADB formulates and provides technical assistance (TA) to developing member countries on building, strengthening and improving their statistical systems and services.

- Since 1970, ADB has implemented about 60 statistical capacity building projects, for a total of more than US$22 million.

- The 1st TA was in 1971 which aimed at helping Singapore develop capability to compile constant price national accounts and put up the estimates within the life of the TA (one year).

- Between 1971 and 1990, most of the statistics TAs were related to national accounts.

ADB

3. ADB Initiatives

Statistics technical assistance

- Between 1990 and 2000, the scope of projects included national accounts, environment/agriculture/social/demographic and labor statistics, money and banking, and institutional strengthening of national statistical offices.

- From 2001 onwards, the projects increasingly focused on monitoring poverty and the Millennium Development Goals.

- Since 2002, an Investment Climate Study (ICS) program has been undertaken in four countries (Indonesia, Lao PDR, Philippines, and Sri Lanka) jointly with the World Bank.

ADB

Technological Innovation

1. Data for Development (2017-2021)

- This TA intends to strengthen the capacity of national statistics offices (NSOs) in Asia and the Pacific to meet the increasing data demands for policy making and monitoring of development goals and targets.

- It focuses on three important areas:
  - (i) subnational disaggregation of SDGs, using various methods of small area estimation (SAE) and ways of using innovative data sources, e.g., satellite images, mobile data, or social media data to produce disaggregated data for official statistics;
  - (ii) enhanced compilation of national accounts and other key economic indicators, and
  - (iii) provision of strategic inputs for the modernization of NSSs to inform policy design and SCB initiatives of the global statistical system.

40

ADB

Technological Innovation

2. Data for Development - Phase II (2018-2022)

- This TA directly supports the SDGs through technological innovation and capacity building across five domains: (i) development of a customizable software to digitize sampling frames for administrative and survey data, (ii) enhanced compilation of national accounts and improved statistical infrastructure, (iii) quality labor statistics using modern standards and methods, (iv) data dissemination, and (v) knowledge sharing on technological innovations in statistics.

3. Implementing Information and Communication Technology (ICT) Tools to Improve Data Collection and Management of National Surveys in Support of the SDGs (2015-2019)

- This TA focuses on the use of ICT tools such as Computer-Assisted Personal Interviewing (CAPI) in improving the data collection methods of NSSs for nationally representative surveys in selected DMCs.

Economic Statistics

2017 International Comparison Program for Asia and the Pacific (2016-2020)

- This TA aims to produce robust purchasing power parities that are vital for doing cross-country analysis of levels of development and are crucial elements in evidence-based decision making by researchers, economists, national governments, and international organizations.

ADB

Social Statistics

Capacity Development of the National Statistical System – Myanmar (2013-2019)

- This TA intends to provide support for improving the strategic and institutional capacity of the NSS of Myanmar and the technical and statistical skills of staff to enable Myanmar to adopt international standards in the collection, compilation, and timely dissemination of comparable official statistics.

43

3. ADB Initiatives

Statistical Capacity Development for Social Inclusion and Gender Equality (2012-2018)

- The project aims to improve the capacity of national statistics offices in producing reliable sex-disaggregated statistics on ownership of assets and entrepreneurship by using standard methods

- Pilot surveys on measuring asset ownership and entrepreneurship from a gender perspective were conducted in Georgia, Mongolia, and the Philippines.

- Conducted to support the development of standard methodological guidelines for collecting data on ownership of assets and entrepreneurs under the global Evidence and Data for Gender Equality (EDGE) initiative.

ADB

3. ADB Initiatives

Use of Remote Sensing to Estimate Paddy Area and Production (2013-2017)

- ADB as part of its efforts to build statistical capacity for national statistical offices (NSOs) and ministries of agriculture (MoAs), piloted the use of satellite data under Regional Capacity Development Technical Assistance: Innovative Data Collection Methods for Agricultural and Rural Statistics.

- Under this technical assistance project, satellite data was used to estimate paddy area and rice production in Lao People's Democratic Republic; the Philippines; Thailand; and Viet Nam using satellite data and remote-sensing technology to enhance the quality of agricultural statistics, including estimates of paddy rice area, yield, and production.

ADB

4. ADB Strategy 2030

Achieving a Prosperous, Inclusive, Resilient, and Sustainable
Asia and the Pacific

4. ADB Strategy 2030

ADBs Vision, Value Addition, and Guiding Principles

ADB = Asian Development Bank.
Source: Asian Development Bank.

4. ADB Strategy 2030

Key Operational Priority Areas

STRATEGY 2030'S SEVEN OPERATIONAL PRIORITIES

Addressing remaining poverty and reducing inequalities

Accelerating progress in gender equality

Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability

Making cities more livable

Promoting rural development and food security

Strengthening governance and institutional capacity

Fostering regional cooperation and integration

ADB

4. ADB Strategy 2030

"One ADB" Approach

- ADB will institute a "One ADB" approach, bringing together knowledge and expertise across the organization to effectively implement Strategy 2030.

- ADB will continuously work on planning operations - identifying and working on bottlenecks to development results, and processing projects.

- ADB will develop integrated solutions incorporating advanced technologies, with support from sector and thematic groups.

- Research functions will help enhance the analytical base of operations and policy dialogue with clients.

4. ADB Strategy 2030
ADBs Role as Knowledge Institution

- Strengthening ADB's role as knowledge provider
  - *ADB will work closely with DMCs to identify their needs and produce the most relevant knowledge products and services.*

- Ensuring a more proactive role for research
  - *ADB's knowledge and evidence-based research will raise understanding and awareness about critical areas and sectors for action and support good policies and reforms by DMCs.*
  - *ADB will further strengthen its research capacity and provide high-quality policy advice to DMCs. ADB's research products will also contribute to global development discussions by offering perspectives from Asia and the Pacific.*

- Strengthening the institutional capacity of DMCs
  - *ADB will continue to work with DMC government officials to enhance their ability to address development issues and deliver projects.*

- Promoting knowledge across the institution
  - *Departments are encouraged to generate knowledge products and services and contribute to capacity building efforts in their areas of expertise.*

ADB

ADB

Thank you.