REVIVING STATISTICAL YEARBOOKS TO MEET THE CHANGING NEEDS OF USERS

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OVERVIEW

- Background
- Content and presentation
  - Review of selected publications
  - General findings
  - Themes/domains/indicators
- Aggregation methods
  - Review of aggregation methods of selected international organizations
  - Proposed approach
  - Why method selection matters
- The way forward

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KEY INDICATORS FOR ASIA AND THE PACIFIC 2013

- ADB's flagship annual statistical publication
- Since 1969 (44th edition)
- Most downloaded ADB research publication (annually)
- Collaboration with regional NSOs, Central Banks, MoFs, etc.

- Lasting impact
  - KI 2012 still in top 20 downloads for Q2 2013 (data tables)
  - Still receiving inquiries for KI 2010, other special chapters

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BACKGROUND TO THE INITIATIVE

- The opportunity of the 45th issue (KI2014) is being used to revive the publication
  - To ensure continuous relevance to its key users
  - To ensure that it takes account of recent developments
- **Content and presentation revision/update**
  - Review content of other international statistical publications, other relevant sources (both printed and on-line)
  - Review content of key national yearbooks (both printed and on-line)
  - Consultation within ADB
  - Consultation with other user
  - Rationalize the content of the publication
- Review of the country questionnaire (use of SDMX)
- Review of the format, design, etc
- **Standardization of table presentation and aggregation methods**

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Content and presentation

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REVIEW OF PUBLICATIONS

NATIONAL	INTERNATIONAL
Statistical Yearbook, India 2013	UN ESCAP Statistical Yearbook for Asia and the Pacific 2011
Japan Statistical Yearbook 2013	Eurostat Yearbook 2011 and 2012
China Statistical Yearbook 2012	OECD Factbook 2013
Statistical Yearbook Kazakhstan in 2011	WB World Development Indicators 2013
Statistics Yearbook Malaysia 2011	IMF World Economic Outlook 2013**
Netherlands Statistical Yearbook in 2011	
Yearbook of Statistics Singapore 2012	
2012 Year Book Australia	
New Zealand Official Yearbook 2010	

**A Survey by the IMF staff usually published twice a year. It presents IMF staff economists' analyses of global economic developments during the near and medium term. Contains an extensive statistical appendix (IMF, 2013).

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SELECTED COVERS
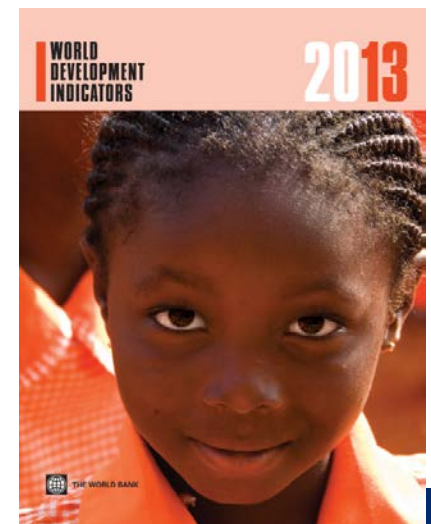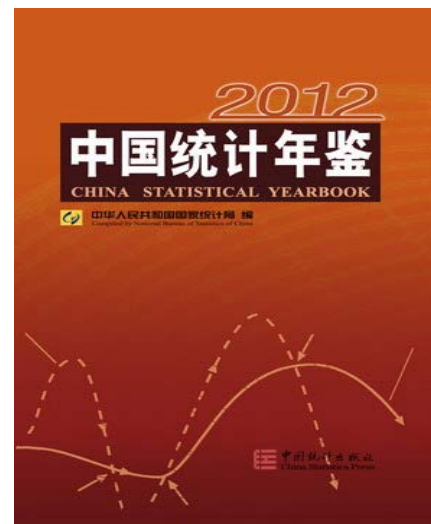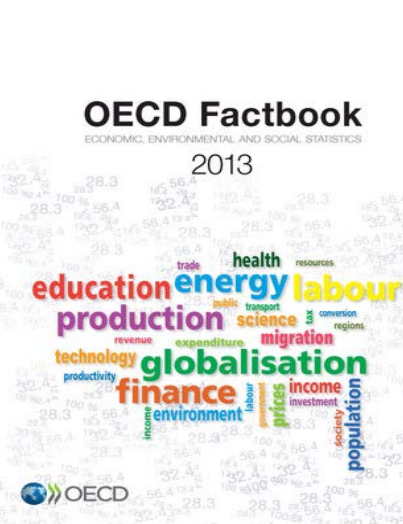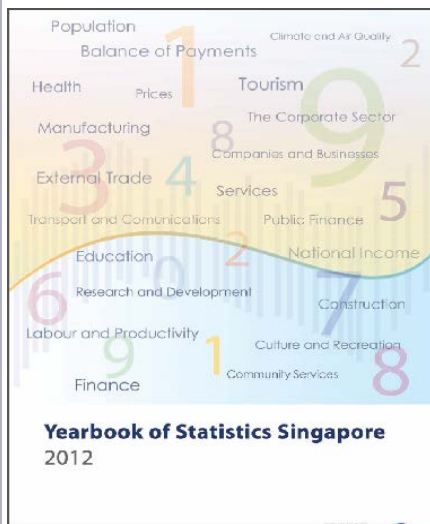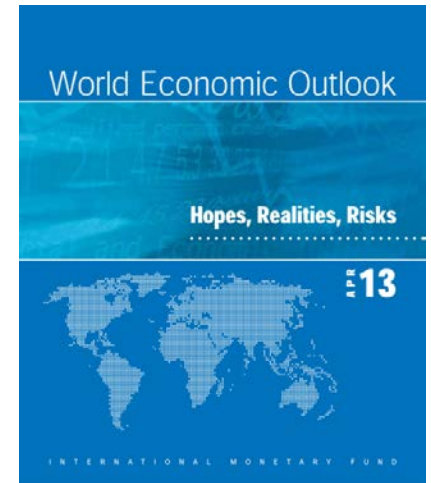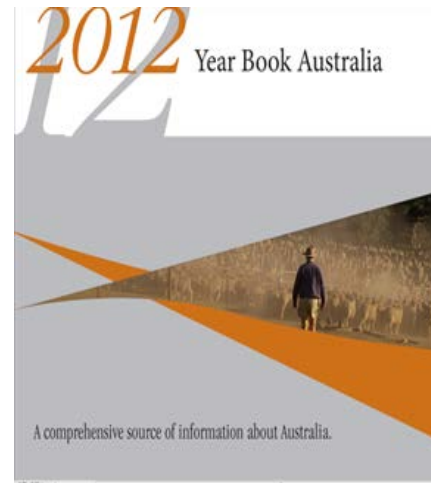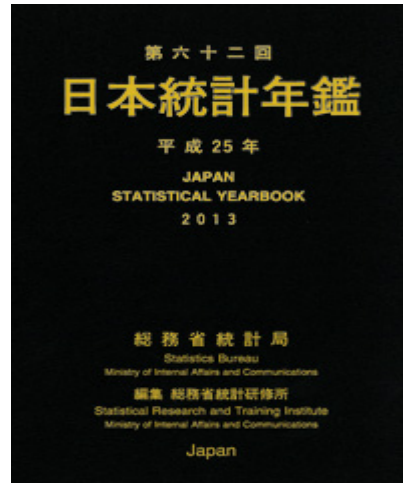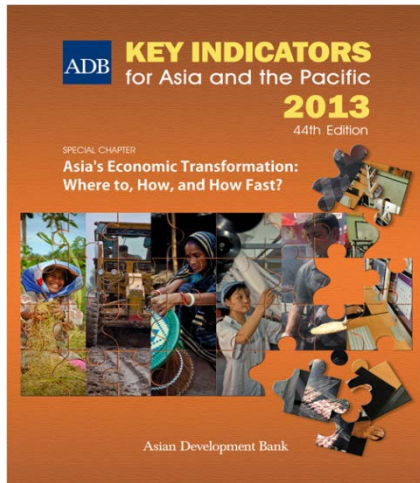
NUMBER OF PAGES
(EXCLUSIVE OF FRONT & BACK COVERS)

INTERNATIONAL PUBLICATIONS	Total Number of Pages
EUROSTAT	698
ADB KI	386
UN ESCAP	310
OECD Factbook	265
IMF WEO	203
WB WDI	143

NATIONAL PUBLICATIONS	Total Number of Pages
China Statistical Yearbook 2012	1061
2012 Year Book Australia	903
Japan Statistical Yearbook 2013	858
New Zealand Official Yearbook 2010	544
Statistics Yearbook Malaysia 2011	355
Yearbook of Statistics Singapore 2012	319
Netherlands Statistical Yearbook 2011	234
Kazakhstan in 2011	211

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NUMBER OF ECONOMIES AND YEARS COVERED

Publication	Number of economies covered	Span of years covered*
ADB KI[a]	48 (Regional Member Economies)	21 Yrs. (1990 - earliest; 2012 - latest)
EUROSTAT[b]	27 (Member States of EU)	11 Yrs. (most tables start in 1999, some go back to 1960 – earliest; 2010 – latest),
IMF WEO[c]	188	8 Yrs. (2005 – earliest; 2012 – latest)
OECD Factbook[d]	40	12 Yrs. (most tables start in 1999 , some go back to 1970 – earliest; 2011 –latest)
UN ESCAP[e]	58 (Regional Member States)	20 Yrs. (1990 – earliest; 2010 –latest)
WB WDI[f]	214	23 Yrs. (1990– earliest; 2012 – latest)

a)Based on Regional Trends and Tables section; Includes Annual Data for 1990 (earliest); Annual Time Series Data from 1995 to 2011 (latest); Average Data for periods 1990-1995, 1995-2000, 2000-2005, 2005-2010, 1990-2000, 2000-2010; Annual Data with 5-year & 10-year intervals; Two Years Data (for Comparison)
b)Annual Data for 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1994-1995, 1997-2010; Average Data for period 2005-2009
c)Based on tables in Statistical Appendix Section; Annual Time Series Data from 2005 to 2012; Average Data for periods 1991-1998, 1995-2002, 1995-2004, 1997-2006, 1999-2006, 2002-2004, 2003-2010, 2005-2014
d)Annual Data for 1970, 1971, 1976, 1980, 1985, 1990, 1995, 1998-11; Average annual growth rates for 1985-2010; Percentage Point Change for 1995-2009
e)Annual Data for 1990-1992, 1995-1997, 2000, 2002-2010 ; Average Data for periods 1985-1994, 1995-2004, 2005-2009
f)Annual Data for 2005, 2009 to 2012; Average Data for periods 2005-2011, 2007-2011, 2000-2010, 1990-2011; Growth Rate Data for periods 2000-2011, 2010-2011, 2011-2012
* From printed copy of the Statistical Yearbooks

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OTHER GENERAL OBSERVATIONS

STRUCTURE	DESCRIPTION	ADB	UN ESCAP	EUROSTAT	WB	OECD	IMF
Data Figures (graphs & maps)	Part of text analysis	✓	✓	✓	✓	✓	✓
Statistical Tables (indicators)	Presented after the text analysis	✓	✓	✓	✓	✓	✓
Statistical Tables (indicators)	Grouped & Presented by Theme	✓	✓	✓	✓	✓	✓
Special Chapter	Adopts a specific theme every year	✓	x	x	x	✓	x
MDGs	Discusses MDGs and/or progress	✓	✓	x	✓	x	x
References Section	Presented at the end of major chapter/section	✓	x	x	✓	x	✓
Definitions	Arranged by Theme/Subtopic	✓	✓	x	✓	✓	x

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ON-LINE/PDF VERSIONS – SOME GOOD PRACTICES

- Making the on-line/html/pdf versions more interactive – without necessarily changing the content
- Making chapters/tables more self-contained - remembering that users might be accessing only a particular section/chapter without necessarily looking at the rest of the publication - (abbreviations and acronyms, symbols, links, etc)
- Linking data presented in the tables with the corresponding data in the on-line database – providing users with the opportunity to easily access complete/updated time series
- Linking charts/figures with the specific tables in the publication
- Using hyperlinks in the table of content – permitting easy navigation
- Providing links in text permitting users to go directly to the referred materials
- Including links and/or addresses to the organizations which contributed data and other materials

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THEMES/DOMAINS COVERED

ADB	UN ESCAP	WB	EUROSTAT	OECD
MDGs	People - MDG	World View - MDGs	Economy & Finance	Population & Migration
People			Population	Production & Productivity
Economy & Output	Environment - MDG	People	Health	Household Income & Wealth
Money, Finance & Prices			Education & Training	
		Environment	Labor Market	Globalization
Globalization	Economy - MDG		Living Conditions & Social Protection	Prices
Transport, Electricity & Communications		Economy		Energy & Transportation
	Connectivity		Industry, Trade & Services	
Energy & Environment		States & Markets	Agriculture, Forestry & Fisheries	Labor
			International Trade	Science & Technology
Government & Governance		Global Links	Transport	
			Environment	Environment
			Energy	Education
			Science & Technology	Government
				Health

THEMES/DOMAINS COVERED

KAZAKHSTAN
General Survey
Socio-demographic Indicators
Living Standards
Labor Market & Remuneration
Prices
National Economy
Real Sector of Economy
Financial System

SINGAPORE	
Key Indicators	External Trade
Climate & Air Quality	Transport and Communications
Population	Tourism
Labor & Productivity	Finance
National Income & Balance of Payments	Public Finance
Research & Development	Prices
The Corporate Sector	Education
Companies & Businesses	Health
Agriculture, Animal Production and Fisheries	Hawkers and Food Establishments
Manufacturing	Community Services
Construction and Real Estate	Culture & Recreation
Services	Miscellaneous

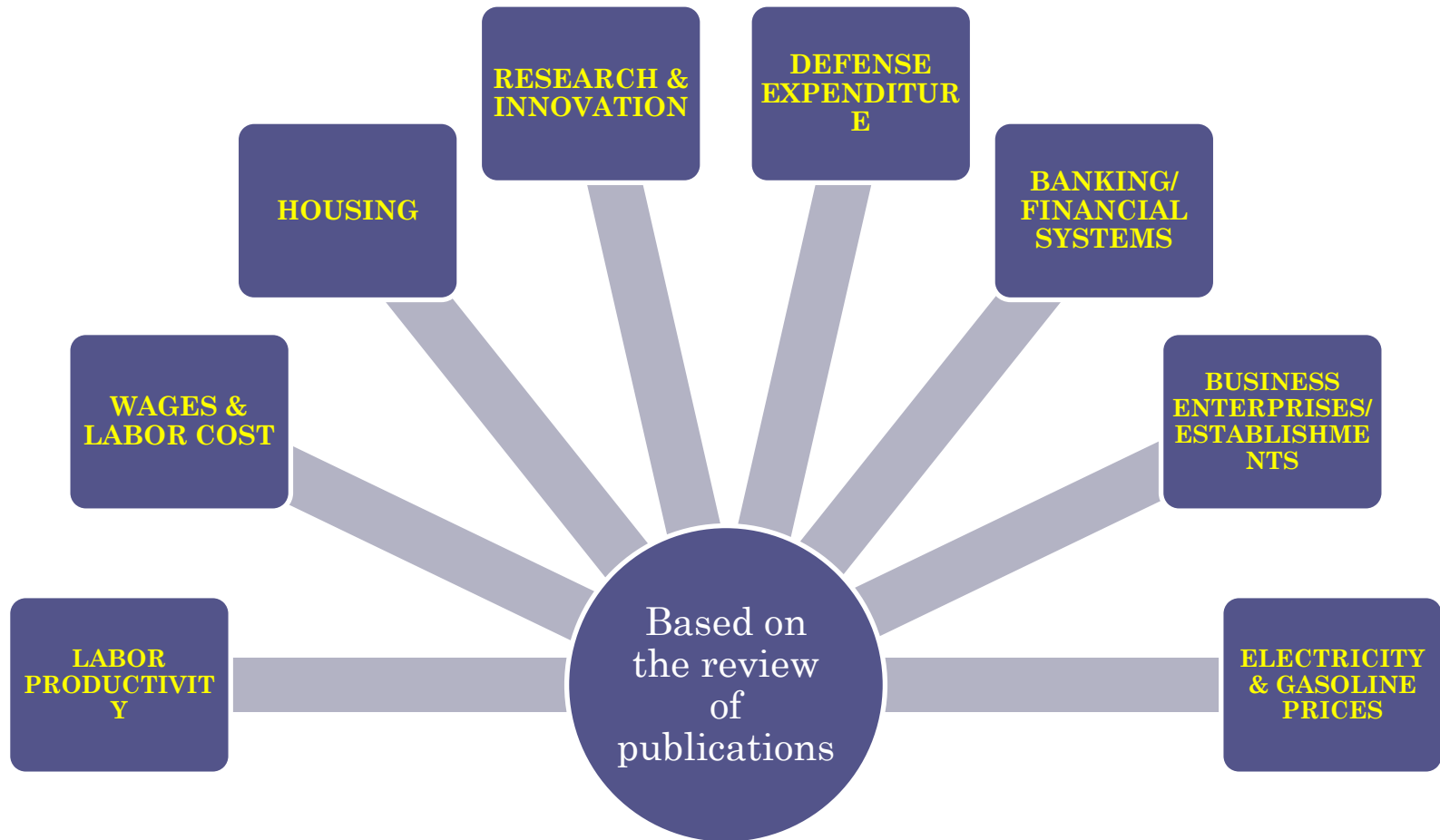| AUSTRALIA	
Geography And Climate	Agriculture
Environment	Forestry & Fishing
Aboriginal And Torres Strait Islander Peoples	Mining
Government	Energy
International Relations	Manufacturing
Defense	Construction
Population	Services Industries
Labor	Tourism
Income & Welfare	Transport
Housing	Information And Communication Technology
Health	Research & Innovation
Education & Training	Financial System
Crime & Justice	Government Finance
Culture & Recreation	Prices
Industry Structure & Performance	National Accounts
	International Accounts & Trade

THEMES/DOMAINS COVERED

CHINA
General Survey
National Accounts
Population
Employment & Wages
Investment In Fixed Assets
Foreign Trade & Economic Cooperation
Energy
Government Finance
Price Indices
People's Living Conditions
General Survey Of Cities
Resources & Environment
Agriculture
Industry
Construction
Transport, Postal & Telecommunication Services
Wholesale & Retail Trades
Hotels, Catering Services & Tourism
Financial Intermediation
Education, **Science & Technology**
Public Health & **Social Services**
Culture & Sports
Public Management, **Social Security** & Others

INDIA	
Area & Population	Banks
National Product & Related Aggregates	**Insurance**
Balance Of Payments	Tourism
National Finance	Hotels
Direct & Indirect Taxes	**Housing**
Five Year Plans	Education
Agriculture	**Health & Family Welfare**
Horticulture	Post & Communication
Livestock & Fisheries	Labour & Employment
Sericulture	Environment & Forest
Irrigation	Rainfall
Economic Census	Rural & Urban Development
Industry	Newspapers & Periodicals
Mining	**Crime**
Energy	Accident
Trade	Prices
Indian Railways	Exchange, Coinage & Currency
Motor Vehicles	**Trade Unions**
Roads	Local Bodies
Shipping	**Electoral Statistics**
Civil Aviation	Cooperative Societies
Companies	

MALAYSIA
Area
Climate
Population & Vital Statistics
Labor Force Statistics
Education
Welfare Services
Health
Public Safety
Prices
Household Income, Household Expenditure & Incidence Poverty
External Trade
Agriculture
Manufacturing, **Construction,** Mining & Quarrying, Electricity And Index Of Industrial Production
Services
Transport & Communications
Finance
National Accounts
Balance Of Payments
Foreign Tourists
Environment

THEMES/DOMAINS COVERED

JAPAN
Land & Climate
Population & Households
National Accounts
Currency & Flow of Funds
Public Finance
Business Activities
Agriculture, Forestry & Fisheries
Mining and Manufacturing
Construction
Energy & Water
Information & Communication
Transport & Tourism
Domestic Trade & Services
Finance & Insurance
Foreign Trade, BOPs & International Cooperation
Labour & Wages
Prices
Housing & Estate
Family Income & Expenditure
Social Security
Health & Sanitation
Education
Culture
Government Employees & Elections
Justice & Police
Environment, Disasters & Accidents

NETHERLANDS
Fewer Birds On Farm Land
Retiring At 70? (Retirement)
Has Anyone Got A Car?
Agriculture
Construction & Housing
Education
Enterprises
Financial & Business Services
Government
Health & Welfare
Income & Spending
International Trade
Labor & Social Security
Leisure & Culture
Macroeconomics
Manufacturing & Energy
Nature & Environment
Prices
Population
Security & Justice
Trade, Hotels & Restaurant
Traffic & Transport

NEW ZEALAND	
Geography	Labor Market
History	Science & Technology
Government	Land & Environment
International Relations & Defense	National Economy
Population	Agriculture
Social Framework	Forestry & Fishing
Social Development	Energy & Minerals
Health And Safety	Manufacturing
Justice And Law	Housing & Construction
Education	Transport
Communications	Commerce & Services
Arts & Cultural Heritage	Overseas Trade
Leisure & Tourism	Banking & Money
	Public Sector Finance

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EXAMPLES OF CONSIDERED CHANGES

RESEARCH & INNOVATION

DEFENSE EXPENDITURE

HOUSING

BANKING/ FINANCIAL SYSTEMS

WAGES & LABOR COST

BUSINESS ENTERPRISES/ ESTABLISHMENTS

LABOR PRODUCTIVITY

Based on the review of publications

ELECTRICITY & GASOLINE PRICES

EXAMPLES OF CONSIDERED CHANGES

WATER

SOCIAL PROTECTION

ENERGY

FINANCIAL SYSTEMS

Responding to ADB Needs
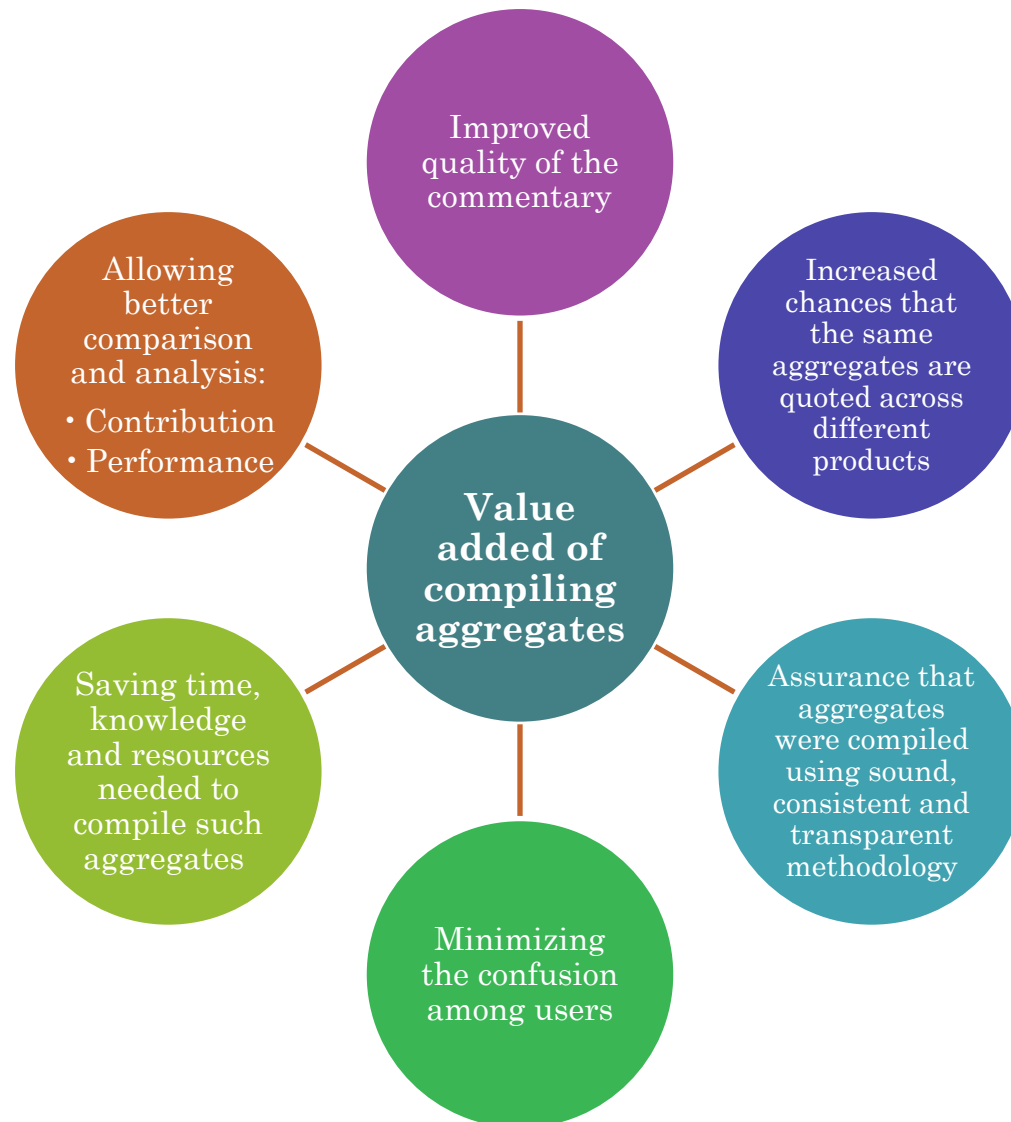
TRANSPORT

URBANIZATION

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Aggregation methods

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STANDARDIZATION OF TABLE PRESENTATION AND AGGREGATION PRACTICES

Presentation and aggregation practices are not fully consistent across the different tables

- Developing Member Economies
  - Central and West Asia
  - East Asia
  - South Asia
  - Southeast Asia
  - The Pacific
- Developed Member Economies
  - presented in most tables but aggregates in selected only
- Developing Member Economies
  - presented in selected tables only
- Regional Members
  - presented in selected tables only
- World
  - presented in a subset of selected tables only

Country data

Aggregates

ADB

Value Added of Compiling Aggregates

Improved quality of the commentary

Increased chances that the same aggregates are quoted across different products

Allowing better comparison and analysis:
• Contribution
• Performance

Value added of compiling aggregates

Saving time, knowledge and resources needed to compile such aggregates

Assurance that aggregates were compiled using sound, consistent and transparent methodology

Minimizing the confusion among users

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AGGREGATION PRACTICES OF INT. ORGANIZATIONS

	Total/ World	Subregion/ region	Level of development	Level of income	Population size	Geo-political and economic	Other
ADB							
Key Indicators (2013 issue)	Selected T	Selected T	Selected T	N	N	N	N
Statistical Database (SDBS)	KI T only	KI T only	KI T only	N	N	N	N
World Bank							
World development report (2012)	Y	Y	Y	Y	N	N	N
Online database	Y	Y	Y	Y	N	Y	Y
IMF							
World Economic Outlook (Apr 2012)	Y	Y	Y	N	N	Y	N
World Economic Outlook Databases	Y	Y	Y	N	N	Y	Y
UNSD							
UN Statistical Yearbook (2012)	Most T	Most T	N	N	N	N	N
UNdata Global Indicator Database	Y	Y	N	N	N	N	N
UN ESCAP							
Statistical Yearbook (2011 edition)	Y	Y	Y	Y	Y	Y	Y
Online statistical database	Y	Y	Y	Y	Y	Y	Y
OECD							
OECD Factbook 2011-2012	Selected T	Selected T	N	N	N	Selected T	N
Online database	Selected T	Selected T	N	N	N	Selected T	N
Eurostat							
Eurostat yearbook 2011	Y	N	N	N	N	Y	N
On-line database	Y	N	N	N	N	Y	N
Inter-American Development Bank							
2012 Macroeconomic Report	Y	N	N	N	N	N	N
Macro Watch Data Tool	Y	Y	N	N	N	N	N

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AGGREGATION PRACTICES OF INT. ORGANIZATIONS

	Required number of observations	Imputation of missing values	Consistency across periods	Specific methods
ADB Key Indicators		No		
ADB Asian Development Outlook (2012)			Consistent sum	Growth rates - computed using weights derived from levels of GNI in current US$ following Atlas method
World Bank *World Development Report* (2012)	• sums – 2/3 • ratios - 2/3 • growth rates – ½ • medians – ½ of countries with population >1m	• group and world totals – yes • sums – no • ratios – yes	Consistent set of economies	• Ratios - denominator used as weight • Growth rates – weighted average
IMF *World Economic Outlook* (October 2012)	90% or more of the share of group weights is represented			Arithmetically weighted averages are used for all data for the emerging market and developing economies group except inflation and money growth, for which geometric averages are used.
OECD *Economic Outlook* (November 2012)	• 2/3 for the zone in terms of base-year GDP • Aggregates are compiled below 2/3 but published as "OECD estimates"	Yes		• The weighting method used in is broadly consistent with current National Accounts practices and is a chain-linked method • Ratios - the denominator of the variable to be aggregated • Growth rates –depends on the particular nature of the variable to be aggregated
UN *Statistical Yearbook* (55th issue)	aggregates compiled from statistical publications and databases of the United Nations and the specialized agencies and are based on the methods of organizations from which the statistics are sourced			
UNESCAP *Statistical Yearbook for Asia and the Pacific* (2011)	• 2/3 of the population for social indicators • 2/3 of the GDP for economic indicators • For data not expected to be available for every country – 2/3 of countries for which data are expected to be non-missing	Yes, for most indicators	Sum of the total of all country-level data within each aggregation group	• Ratios - denominators are used as weights • Ratios, growth rates - weighted average of all data within each aggregation group • Growth rates, other - weights determined by ESCAP
Eurostat *Europe in Figures* (2011)	all of the countries, or imputed for missing information	Yes	latest membership applied retrospectively	

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PROPOSAL

- Presentation of statistics is standardized as much as possible across all the statistical tables

- Where possible, statistics are shown for all 48 regional members, with countries classified/grouped by level of development (classification 1) and subregion (classification 2)

- With the exception of a few tables where aggregation is not possible or appropriate, aggregates are compiled for the following sub-totals and totals:

  - Central and West Asia
  - East Asia
  - South Asia
  - Southeast Asia
  - The Pacific
  - Developing Member Economies
  - Developed Member Economies
  - Regional Members

	2009	2010	2011
Developing Member Economies			
Central and West Asia	B	B	B
Afghanistan	a	a	a
Armenia	a	a	a
Azerbaijan	a	a	a
Georgia	a	a	a
Kazakhstan	a	a	a
Kyrgyz Republic	a	a	a
Pakistan	a	a	a
Tajikistan	a	a	a
Turkmenistan	a	a	a
Uzbekistan	a	a	a
East Asia	B	B	B
China, People's Rep. of	a	a	a
Hong Kong, China	a	a	a
Korea, Rep. of	a	a	a
Mongolia	a	a	a
Taipei,China	a	a	a
South Asia	B	B	B
Bangladesh	a	a	a
Bhutan	a	a	a
India	a	a	a
Maldives	a	a	a
Nepal	a	a	a
Sri Lanka	a	a	a
Southeast Asia	B	B	B
Brunei Darussalam[a]	a	a	a
Cambodia	a	a	a
Indonesia	a	a	a
Lao PDR	a	a	a
Malaysia	a	a	a
Myanmar	a	a	a
Philippines	a	a	a
Singapore	a	a	a
Thailand	a	a	a
Viet Nam	a	a	a
The Pacific	B	B	B
Cook Islands	a	a	a
Fiji	a	a	a
Kiribati	a	a	a
Marshall Islands	a	a	a
Micronesia, Fed. States of	a	a	a
Nauru	a	a	a
Palau	a	a	a
Papua New Guinea	a	a	a
Samoa	a	a	a
Solomon Islands	a	a	a
Timor-Leste[b]	a	a	a
Tonga	a	a	a
Tuvalu	a	a	a
Vanuatu	a	a	a
Developed Member Economies			
Australia	a	a	a
Japan	a	a	a
New Zealand	a	a	a
DEVELOPING MEMBER ECONOMIES	B	B	B
DEVELOPED MEMBER ECONOMIES	B	B	B
REGIONAL MEMBERS	B	B	B
WORLD (Presented in Selected Tables only)			

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REQUIRED NUMBER OF OBSERVATIONS FOR AGGREGATION

Type of statistics	Minimum number of observations required for compilation of aggregates
Economic (most)	2/3 of the GDP (constant, US$ prices, most recent year for which statistics for all countries are available) of countries for which statistics are available (Rule A)
Social (most)	2/3 of the population (for most recent year for which statistics for all countries are available) of countries for which statistics are available (Rule B)
Environmental	Expert decision either rule A or B or if these are not appropriate: 2/3 of the share of group weights represented (Rule C)
Pacific	Expert decision: either rule A, B or C or 2/3 of number of countries (Rule D)
Other, including selected (if any) economic and social statistics for which rules A and B might not be suitable	Expert decision: either rule A, B, C or D

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CONSISTENCY ACROSS PERIODS AND IMPUTATION OF MISSING VALUES

- Consistency
  - Aggregates to be compiled (both sums and weighted averages) on the basis of a consistent set of economies
- Imputation
  - only be done to permit the compilation of aggregates, with no imputed values published
  - All aggregates compiled using imputed values will be footnoted accordingly, informing the users of the methods employed
  - Expert opinion be used concerning the most suitable methodology with the overall aim of minimizing the possible risk of imputed values incorrectly affecting the aggregates

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Specific Aggregation Methods for Different Types of Statistics

- **Sums:** by deriving the total of all country–level data for each aggregation group in accordance with the "consistent set of economies" rule

- **Ratios:** by using, where appropriate, the denominator as the weight to compute the weighted average

- **Growth rates, averages, medians, other:** by using an expert opinion and "best fit" approach to select the most suitable weights

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WHY METHOD SELECTION MATTERS

Indicator	Approach 1	Approach 2
Inflation (% per year) (period averages)	GNI in current $US following the WB Atlas method	Household (private) consumption expenditure component of the GDP
Current account balance (% of GDP) (current prices in US$)	GNI in current $US following the WB Atlas method	GDP valued at current prices (same as denominator)

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WHY METHOD SELECTION MATTERS

Current account balance (% of GDP) (current prices in US$)				
	2008	2009	2010	2011
Approach 1 (GNI Cur)	5.6	4.0	3.0	2.2
Approach 2 (GDP Cur)	5.5	3.9	3.0	2.3

Inflation (% per year) (period averages)				
	2008	2009	2010	2011
Approach 1 (GNI Cur)	7.1	2.3	5.0	6.0
Approach 2 (HFCE, data gaps, Pacific)	7.7	3.2	5.6	6.1
Share of total				
GNI				
China	50.7	53.0	52.3	54.6
India	13.6	14.4	15.0	13.9
HFCE* (data gaps, Pacific)				
China	38.6	41.0	40.6	43.7
India	17.1	18.1	18.7	18.3

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WHY METHOD SELECTION MATTERS

Current account balance (% of GDP)
(current prices in US$)
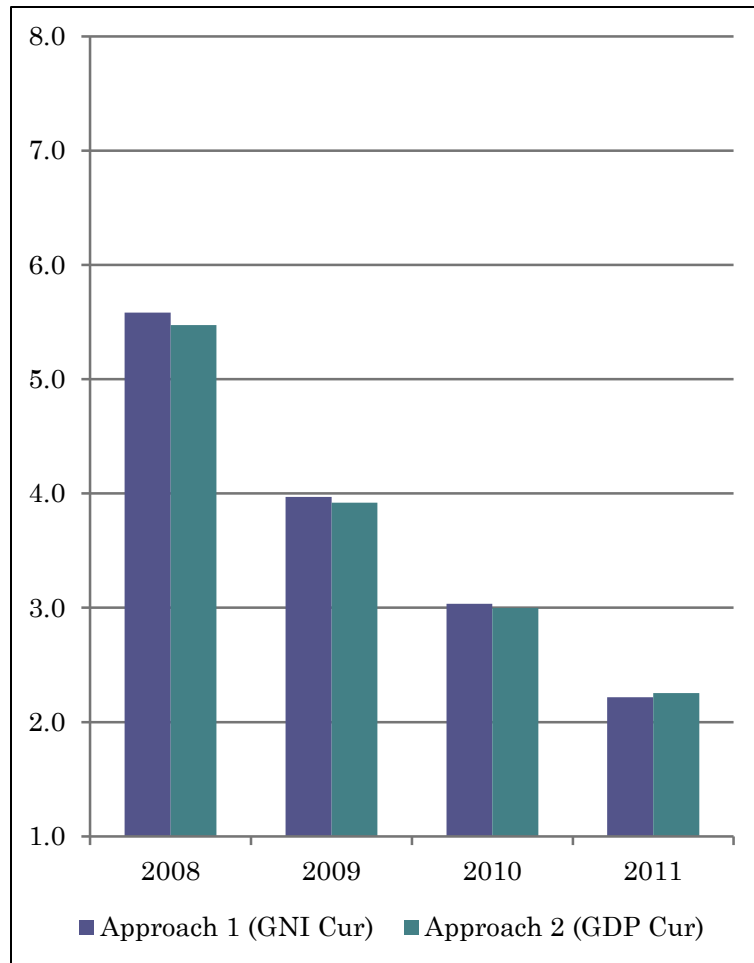
Inflation (% per year) (period averages)
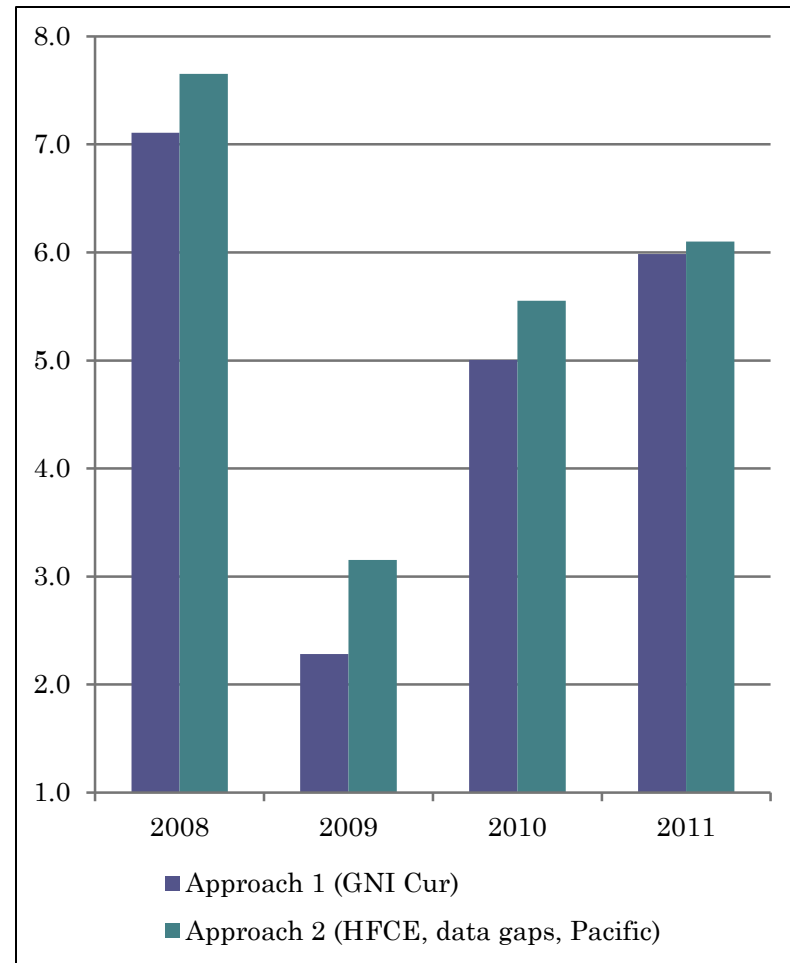
CHALLENGES AND LIMITATION OF AGGREGATION

- Educating users of the limitations
- Ensuring transparency in methods and practices
- Understanding, being able to justify, and where possible addressing differences in methods and practices across different products within the organization
- Quality of data
- Availability of data

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THE WAY FORWARD

- Seek feedback from ADB colleagues and other users
- Based on the comments received, revise:
  - content
  - presentation including presentation of statistical tables
  - aggregation methods and practices
- Redesign the systems to introduce the changes
- Implement changes in time for Key Indicators 2014

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KEY INDICATORS
for Asia and the Pacific
2013
44th Edition

SPECIAL CHAPTER

Asia's Economic Transformation:
Where to, How, and How Fast?