

Economic Development

12th Edition

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Chapter 2

Comparative Economic Development



2.1 Defining the Developing World

- World Bank Scheme- ranks countries on GNP/capita
 - LIC, LMC, UMC, OECD (see Table 2.1 and Figure 2.1)

Table 2.1 Classification of Economies by Region and Income, 2013

Country	Code	Class	Country	Code	Class	Country	Code	Class
East Asia and the Pacific			Latin America and the Caribbean			Sub-Saharan Africa		
American Samoa‡	ASM	UMC	Antigua and Barbuda	ATG	UMC	Angola*	AGO	UMC
Cambodia*	KHM	LIC	Argentina	ARG	UMC	Benin*	BEN	LIC
China	CHN	UMC	Belize‡	BLZ	LMC	Botswana†	BWA	UMC
Fiji‡	FJI	LMC	Bolivia†	BOL	LMC	Burkina Faso*†	BFA	LIC
Indonesia	IDN	LMC	<u>Brazil</u>	BRA	<u>UMC</u>	Burundi*†	BDI	LIC
Kiribati*‡	KIR	LMC	Chile	CHL	UMC	Cameroon	CMR	LMC
(North) Korea, Dem. Rep.	PRK	LIC	Colombia	COL	UMC	Cape Verde‡	CPV	LMC
Lao PDR*†	LAO	LMC	Costa Rica	CRI	UMC	Central African Rep.*†	CAF	LIC
Malaysia	MYS	UMC	Cuba‡	CUB	UMC	Chad*†	TCD	LIC
Marshall Islands‡	MHL	LMC	Dominica‡	DMA	UMC	Comoros*‡	COM	LIC
Micronesia, Fed. Sts.‡	FSM	LMC	Dominican Republic‡	DOM	UMC	Congo, Dem. Rep.*	COD	LIC
Mongolia†	MNG	LMC	Ecuador	ECU	UMC	Congo, Rep.	COG	LMC
Myanmar	MMR	LIC	El Salvador	SLV	LMC	Côte d'Ivoire	CIV	LMC
Palau‡	PLW	UMC	Grenada‡	GRD	UMC	Eritrea*	ERI	LIC
Papua New Guinea‡	PNG	LMC	Guatemala	GTM	LMC	Ethiopia*†	ETH	LIC
Philippines	PHL	LMC	Guyana‡	GUY	LMC	Gabon	GAB	UMC
Samoa*‡	WSM	LMC	Haiti*‡	HTI	LIC	Gambia, The*	GMB	LIC
Solomon Islands*‡	SLB	LMC	Honduras	HND	LMC	Ghana	GHA	LIC
Thailand	THA	UMC	Jamaica‡	JAM	UMC	Guinea*	GIN	LIC
Timor-Leste*‡	TLS	LMC	Mexico	MEX	UMC	Guinea-Bissau*‡	GNB	LIC
Tonga‡	TON	LMC	Nicaragua	NIC	LMC	Kenya	KEN	LIC
Tuvalu	TUV	LMC	Panama	PAN	UMC	Lesotho*†	LSO	LMC
Vanuatu*‡	VUT	LMC	Paraguay†	PRY	LMC	Liberia*	LBR	LIC
Vietnam	VNM	LMC	Peru	PER	UMC	Madagascar*	MDG	LIC

Table 2.1 Classification of Economies by Region and Income, 2013 (continued) \$4046, 12535

Upper Middle Income Countries

Europe and Central Asia

Albania	ALB	LMC
Armenia†	ARM	LMC
Azerbaijan†	AZE	LMC
Belarus	BLR	UMC
Bosnia and Herzegovina	BIH	UMC
Bulgaria	BGR	UMC
Georgia	GEO	LMC
Kazakhstan†	KAZ	UMC
Kosovo	KSV	LMC
Kyrgyz Republic†	KGZ	LIC
Latvia	LVA	UMC
Lithuania	LTU	UMC
Macedonia, FYR†	MKD	UMC
Moldova†	MDA	LMC
Montenegro	MNE	UMC
Romania	ROU	UMC
Russian Federation	RUS	UMC
Serbia	SRB	UMC
Tajikistan†	TJK	LIC
Turkey	TUR	UMC
Turkmenistan†	TKM	UMC
Ukraine	UKR	LMC
Uzbekistan†	UZB	LMC

St. Kitts and Nevis‡

St. Lucia‡

St. Vincent and the

Grenadines‡

Suriname‡

Uruguay

Venezuela, RB

Middle East and North Africa

Algeria

Djibouti*

Egypt, Arab Rep.

Iran, Islamic Rep.

Iraq

Jordan

Lebanon

Libya

Morocco

Syrian Arab Rep.

Tunisia

West Bank and Gaza

Yemen, Rep.*

South Asia

Afghanistan*†

Bangladesh*

Bhutan*†

India

Maldives*‡

Nepal*†

Pakistan

Sri Lanka

KNA

LCA

VCT

SUR

URY

VEN

DZA

DJI

EGY

IRN

IRQ

JOR

LBN

LBY

MAR

SYR

TUN

WBG

YEM

AFG

BGD

BTN

IND

MDV

NPL

PAK

LKA

UMC

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LMC

Malawi*†

Mali*†

Mauritania*

Mauritius‡

Mayotte

Mozambique*

Namibia

Niger*†

Nigeria

Rwanda*†

Sao Tome and Principe*‡

Senegal*

Seychelles‡

Sierra Leone*

Somalia*

South Africa

South Sudan

Sudan*

Swaziland†

Tanzania*

Togo*

Uganda*†

Zambia*†

Zimbabwe†

MWI

MLI

MRT

MUS

MYT

MOZ

NAM

NER

NGA

RWA

STP

SEN

SYC

SLE

SOM

ZAF

SSD

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Table 2.1 Classification of Economies by Region and Income, 2013 (continued)

Country	Code	Class	Country	Code	Class	Country	Code	Class
<u>High-Income OECD Countries</u>			Spain	ESP		Guam‡	GUM	
Australia	AUS		Sweden	SWE		<u>Hong Kong, China</u>	HKG	
Austria	AUT		Switzerland	CHE		Isle of Man	IMN	
Belgium	BEL		United Kingdom	GBR		Israel	ISR	
Canada	CAN		United States	USA		Kuwait	KWT	
Czech Rep.	CZE		<u>Other High-Income Economies</u>			Liechtenstein	LIE	
Denmark	DNK		Andorra	AND		Macao, China	MAC	
Finland	FIN		Antigua and Barbuda‡	ATG		Malta	MLT	
France	FRA		Aruba‡	ABW		Monaco	MCO	
Germany	DEU		Bahamas, The‡	BHS		Netherlands Antilles‡	ANT	
Greece	GRC		Bahrain‡	BHR		New Caledonia‡	NCL	
Hungary	HUN		Barbados‡	BRB		Northern Mariana Islands‡	MNP	
Iceland	ISL		Bermuda	BMU		Oman	OMN	
Ireland	IRL		Brunei Darussalam	BRN		Poland	POL	
Italy	ITA		Cayman Islands	CYM		Puerto Rico‡	PRI	
<u>Japan</u>	JPN		Channel Islands	CHI		Qatar	QAT	
<u>Korea, Rep. (South)</u>	KOR		Croatia	HRV		San Marino	SMR	
Luxembourg	LUX		Cyprus	CYP		Saudi Arabia	SAU	
Netherlands	NLD		Estonia	EST		Singapore‡	SGP	
New Zealand	NZL		Equatorial Guinea*	GNQ		Slovenia	SVN	
Norway	NOR		Faeroe Islands	FRO		<u>Taiwan, China</u>	TWN	
Portugal	PRT		French Polynesia‡	PYF		Trinidad and Tobago‡	TTO	
Slovak Republic	SVK		Greenland	GRL		United Arab Emirates	ARE	

* least developed countries

† landlocked developing countries

‡ small island developing states

Source: Data from World Bank, *World Development Indicators*, 2013 (Washington, D.C.: World Bank, 2013) and WDI online; United Nations; and <http://www.iso.org>.



2.2 Basic Indicators of Development: Real Income, Health, and Education

- Gross National Income (GNI)
- Gross Domestic Product (GDP)
- PPP method instead of ~~exchange rates~~ as conversion factors (see Figure 2.2)

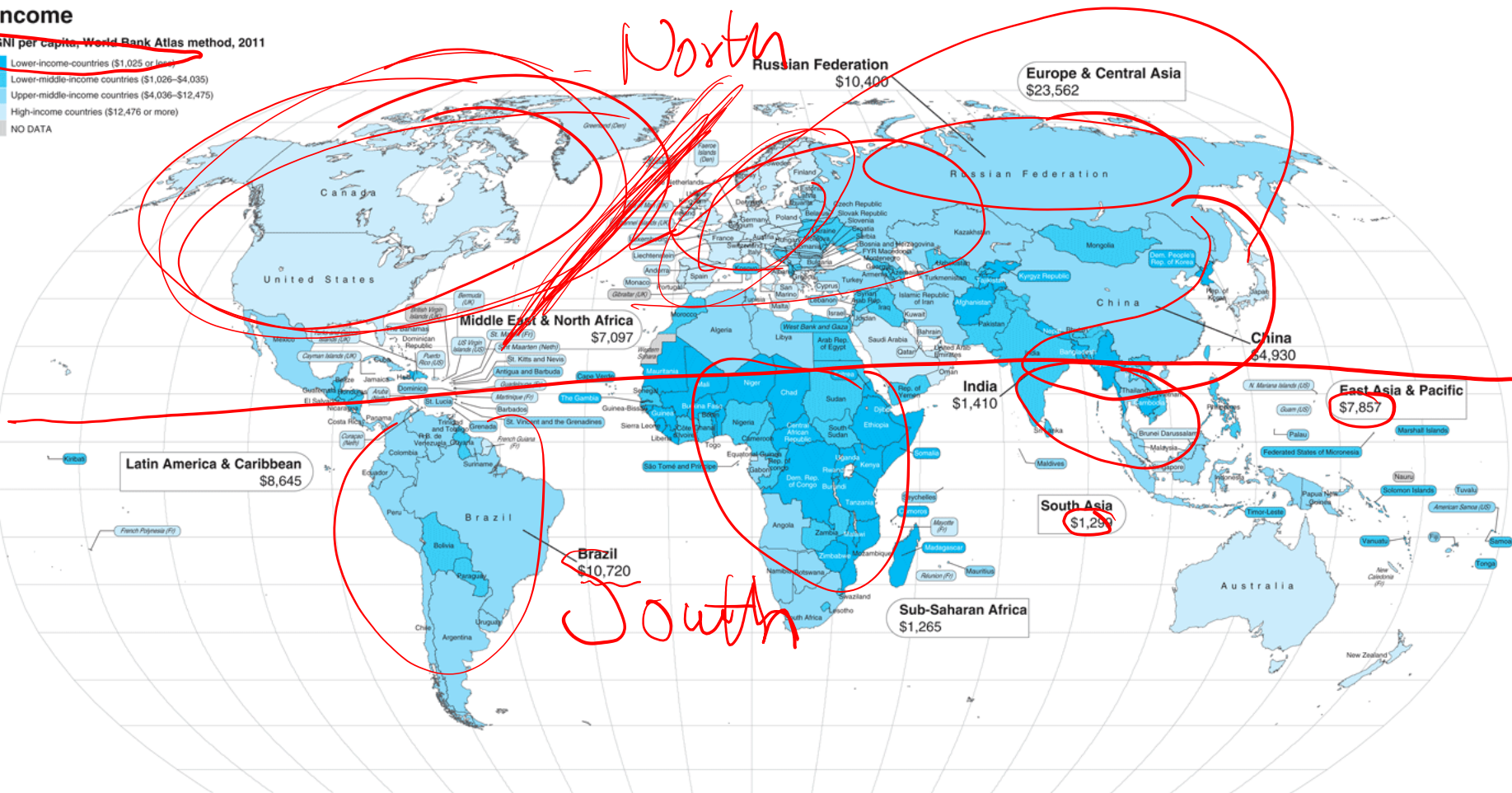
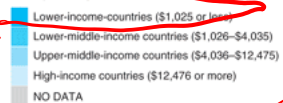
Purchasing Power Parity $1 \$ = 48 \text{ RUB}$

$1 \$ = 73.5 \text{ RUB}$
(exchange rate)

Figure 2.1 Nations of the World, Classified by GNI Per Capita

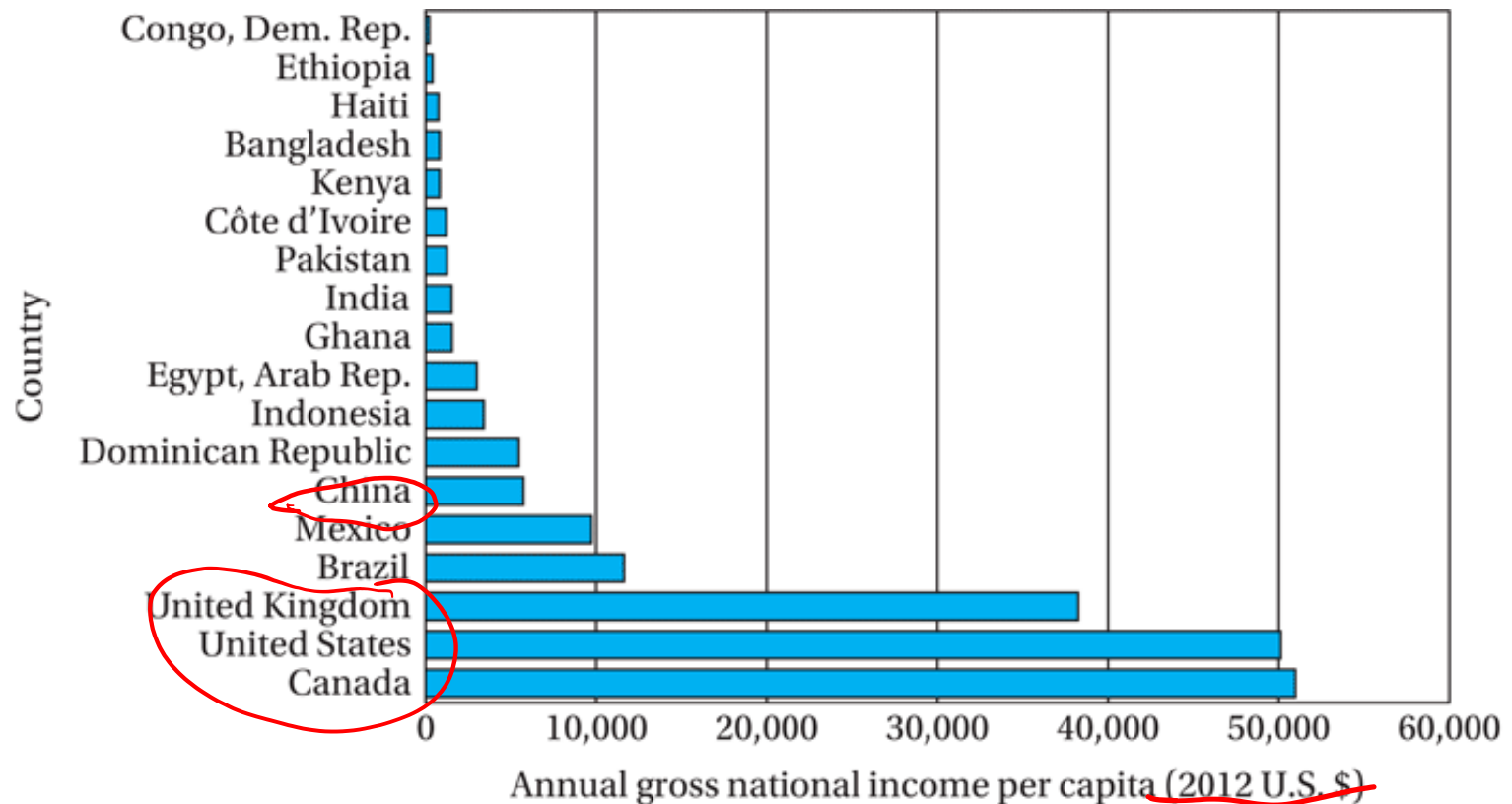
Income

GNI per capita, World Bank Atlas method, 2011



Source: Data from *Atlas of Global Development*, 4th ed., pp. 16-17: World Bank and Collins. 2013. *ATLAS OF GLOBAL DEVELOPMENT: A VISUAL GUIDE TO THE WORLD'S GREATEST CHALLENGES, FOURTH EDITION*. Washington, DC and Glasgow: World Bank and Collins. doi: 10.1596/978-0-8213-9757-2. License: Creative Commons Attribution CC BY 3.0

Figure 2.2 Income Per Capita in Selected Countries, 2011



Source: Data from World Bank, *World Development Indicators*, 2013 (Washington, D.C.: World Bank, 2013), tab. 1.1.



Table 2.2 A Comparison of Per Capita GNI in Selected Developing Countries, the United Kingdom, and the United States, Using Official Exchange-Rate and Purchasing Power Parity Conversions, 2011

Country	GNI Per Capita (U.S. \$)	
	Exchange Rate	Purchasing Power Parity
Bangladesh	770	1,910
Bolivia	2,020	4,890
Botswana	7,070	15,550
Brazil	10,700	11,410
Cambodia	800	2,180
Canada	46,730	41,390
Chile	12,270	19,820
China	4,940	8,390
Colombia	6,090	9,600
Congo, Dem. Rep.	200	360
Costa Rica	7,660	11,910
Côte d'Ivoire	1,140	1,780
Dominican Republic	5,190	9,350
Egypt, Arab Rep.	2,760	6,440
Ghana	1,420	1,830
Guatemala	2,870	4,760
Haiti	700	1,190
India	1,450	3,680
Indonesia	2,930	4,480
Kenya	810	1,690
Korea, Rep.	20,870	29,860
Mexico	8,970	15,930
Niger	330	600
Nigeria	1,260	2,270
Pakistan	1,120	2,880
Peru	5,120	9,390
Philippines	2,200	4,120
Senegal	1,070	1,940
Thailand	4,620	8,710
Uganda	470	1,230
United Kingdom	37,840	35,950
United States	48,550	48,820
Vietnam	1,270	3,250
Low income	554	1,310
Middle income	3,923	6,802
High income	36,390	36,472

Source: Data from World Bank, *World Development Indicators*, 2013 (Washington, D.C.: World Bank, 2013), tab. 1.1.



Table 2.3

Commonality and Diversity: Some Basic Indicators

	Prevalence of Malnutrition Underweight % of Children Under Age 5	Primary Completion Rate Total % of Relevant Age Group		Under-5 Mortality Rate Total per 1,000 Live Births		Life Expectancy
	2005-11	1991	2011	1990	2011	
Bangladesh	41.3	46	..	139	46	69
Bolivia	4.5	71	95	120	51	67
Botswana	11.2	89	97	53	26	53
Brazil	2.2	92	..	58	16	73
Cambodia	29	38	90	117	43	63
Central African Republic	28	28	43	169	164	48
Chile	0.5	..	95	19	9	79
China	3.4	109	..	49	15	73
Colombia	3.4	73	112	34	18	74
Congo, Dem. Rep.	28.2	49	61	181	168	48
Costa Rica	1.1	80	99	17	10	79
Côte d'Ivoire	29.4	43	59	151	115	55
Cuba	1.3	94	99	13	6	79
Dominican Republic	3.4	63	92	58	25	73
Egypt, Arab Rep.	6.8	..	98	86	21	73
Ethiopia	29.2	23	58	198	77	59
Ghana	14.3	65	94	121	78	64
Guatemala	13	..	86	78	30	71
India	43.5	63	97	114	61	65
Indonesia	18.6	89	108	82	32	69
Mexico	3.4	88	104	49	16	77
Mozambique	18.3	27	56	226	103	50
Niger	39.9	18	46	314	125	55
Nigeria	26.7	..	74	214	124	52
Pakistan	30.9	..	67	122	72	65
Peru	4.5	..	97	75	18	74
Philippines	20.7	89	92	57	25	69
Senegal	19.2	41	63	136	65	59
Uganda	16.4	..	55	178	90	54
Vietnam	20.2	..	104	50	22	75
Low income	22.6	46	67	164	95	59
Middle income	16	83	94	82	46	69
High income	1.7	97	101	12	6	79
East Asia & Pacific	5.5	84	21	72
Latin America & Caribbean	3.1	84	102	53	19	74
Middle East & North Africa	6.3	77	91	70	32	72
South Asia	33.2	63	88	119	62	66
Sub-Saharan Africa	21.4	52	69	178	109	55

Note: Some of the specific countries listed in Table 2.3 differ from those listed in Table 2.2 due to differing availability of the most recent comparable data by topic; for example, primary completion rate was not available for Haiti; and income was not available for Cuba.

Source: World Bank, *World Development Indicators 2013*, and World Bank WDI online, accessed 1 August 2013.



2.3 Holistic Measures of Living Levels and Capabilities

- Health
- Life Expectancy
- Education

Human Development Index

- HDI as a holistic measure of living levels

$$\text{HDI} = H^{1/3} E^{1/3} I^{1/3}$$

- HDI can be calculated for groups and regions in a country
 - HDI varies among groups within countries
 - HDI varies across regions in a country
 - HDI varies between rural and urban areas



2.3 Holistic Measures of Living Levels and Capabilities

- The New Human Development Index
- Introduced by UNDP in November 2010

Box 2.1 Computing the New HDI: Ghana

Example: Ghana

Indicator	Value
Life expectancy at birth (years)	64.6
Mean years of schooling	7.0
Expected years of schooling	11.4
GNI per capita (PPP \$)	1,684
Indexes	

Note: Values are rounded.

$$\text{Life expectancy index} = \frac{64.6 - 20}{83.6 - 20} = 0.701$$

$$\text{Mean years of schooling index} = \frac{7.0 - 0}{13.3 - 0} = 0.527$$

$$\text{Expected years of schooling index} = \frac{11.4 - 0}{18.0 - 0} = 0.634$$

$$\text{Education index} = \frac{\sqrt{0.527 \times 0.634} - 0}{0.971 - 0} = 0.596$$

$$\text{Income index} = \frac{\ln(1,684) - \ln(100)}{\ln(87,478) - \ln(100)} = 0.417$$

Human Development Index

$$= \sqrt[3]{0.701 \times 0.558 \times 0.417} = 0.596$$

UN income estimate will differ somewhat from World Bank estimate.

Source: UNDP, Human Development Report, 2013, Technical Notes (online); <http://hdr.undp.org/en/media/HDR%202013%20technical%20notes%20EN.pdf>.

$$\frac{0.701 + 0.558 + 0.417}{3}$$



What is new in the New HDI?

1. Calculating with a geometric mean

- How does the New HDI compare with the better-known (but no longer active) Traditional HDI?
- Probably most consequential: The index is now computed with a geometric mean, instead of an arithmetic mean
- A geometric mean is also used to build up the overall education index from its two components
- Traditional HDI added the three components and divided by 3
- New HDI takes the cube root of the product of the three component indexes
- The traditional HDI calculation assumed one component traded off against another as perfect substitutes, a strong assumption
- The reformulation now allows for imperfect substitutability which development specialists widely consider a more plausible way to frame the tradeoffs.



What is new in the New HDI?

2. Other key changes:

- Gross national income per capita replaces gross domestic product per capita
- Revised education components: now using the average actual educational attainment of the whole population, and the expected attainment of today's children
- The maximum values in each dimension have been increased to the observed maximum rather than given a predefined cutoff
- The lower goalpost for income has been reduced due to new evidence on lower possible income levels

Table 2.4 2013 New Human Development Index and its Components for Selected Countries

Country	NHDI Rank	Life Expectancy at Birth	Mean Yrs Schooling (of Adults)	Expected Years Schooling (of children)	GNI Per Capita	New HDI value	GNI Per Capita Rank Minus HDI Rank
United States	3	78.7	13.3	16.8	43,480	0.937	6
Canada	11	81.1	12.3	15.1	35,369	0.911	5
South Korea	12	80.7	11.6	17.2	28,231	0.909	15
United Kingdom	26	80.3	9.4	16.4	32,538	0.875	5
Chile	40	79.3	9.7	14.7	14,987	0.819	13
United Arab Emirates	41	76.7	8.9	12	42,716	0.818	-31
Russian Federation	55	69.1	11.7	14.3	14,461	0.788	0
Cuba	59	79.3	10.2	16.2	5,539	0.78	44
Mexico	61	77.1	8.5	13.7	12,947	0.775	4
Costa Rica	62	79.4	8.4	13.7	10,863	0.773	12
Brazil	85	73.8	7.2	14.2	10,152	0.73	-8
Turkey	90	74.2	6.5	12.9	13,710	0.722	-32
Sri Lanka	92	75.1	9.3	12.7	5,170	0.715	18
China	101	73.7	7.5	11.7	7,945	0.699	-11
Gabon	106	63.1	7.5	13	12,521	0.683	-40
Egypt	112	73.5	6.4	12.1	5,401	0.662	-6
Botswana	119	53	8.9	11.8	13,102	0.634	-55
South Africa	121	53.4	6.7	10.6	9,594	0.629	-42
Guatemala	133	71.4	4.1	10.7	4,235	0.581	-14
Ghana	135	64.6	7	11.4	1,684	0.558	22
Equatorial Guinea	136	51.4	5.4	7.9	21,715	0.554	-97
India	136	65.8	4.4	10.7	3,285	0.554	-3
Kenya	145	57.7	7	11.1	1,541	0.519	15
Bangladesh	146	69.2	4.8	8.1	1,785	0.515	9
Pakistan	146	65.7	4.9	7.3	2,566	0.515	-9
Madagascar	151	66.9	5.2	10.4	828	0.483	28
Papua New Guinea	156	63.1	3.9	5.8	2,386	0.466	-15
Côte d'Ivoire	168	56	4.2	6.5	1,593	0.432	-9
Burkina Faso	183	55.9	1.3	6.9	1,202	0.343	-18
Chad	184	49.9	1.5	7.4	1,258	0.34	-20
Niger	186	55.1	1.4	4.9	701	0.304	-4

Source: 2013 Human Development Report 2013, Table 1, pages 144-147 (New York: United Nations Development Programme, 2013)



2.4 Characteristics of the Developing World: Diversity within Commonality

- These eight characteristics are common among developing countries – on average and with great diversity - in comparison with developed countries:
 - 1.** Lower levels of living and productivity
 - 2.** Lower levels of human capital (health, education, skills)
 - 3.** Higher Levels of Inequality and Absolute Poverty
 - Absolute Poverty
 - World Poverty
 - 4.** Higher Population Growth Rates
 - Crude Birth rates



2.4 Characteristics of the Developing World: Diversity within Commonality

- 5.** Greater Social Fractionalization
- 6.** Larger Rural Populations but Rapid Rural-to-Urban Migration
- 7.** Lower Levels of Industrialization and Manufactured Exports
- 8.** Adverse Geography
 - Resource endowments



2.4 Characteristics of the Developing World: Diversity within Commonality

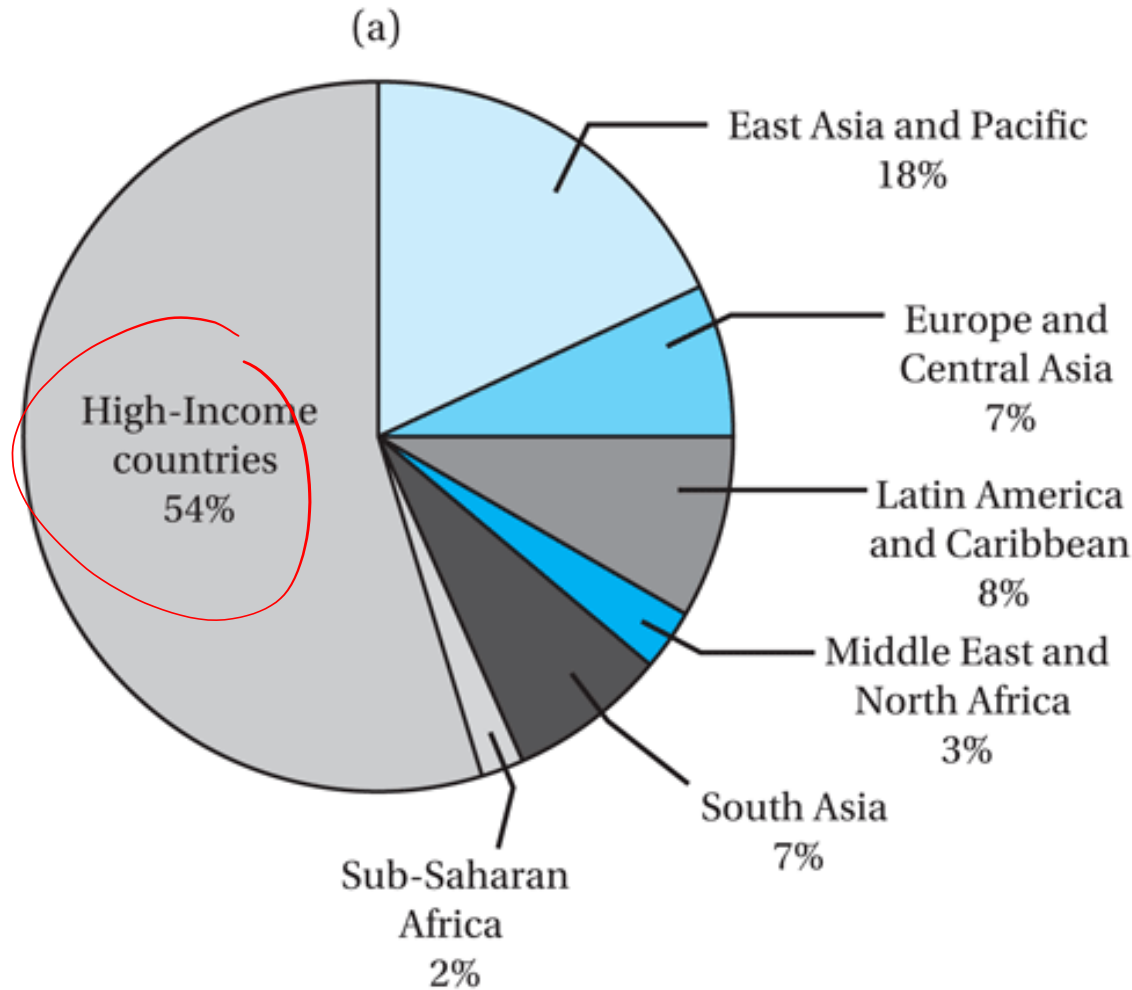
9. Underdeveloped Financial and Other markets

- Imperfect markets
- Incomplete information

10. Colonial Legacy and External Dependence

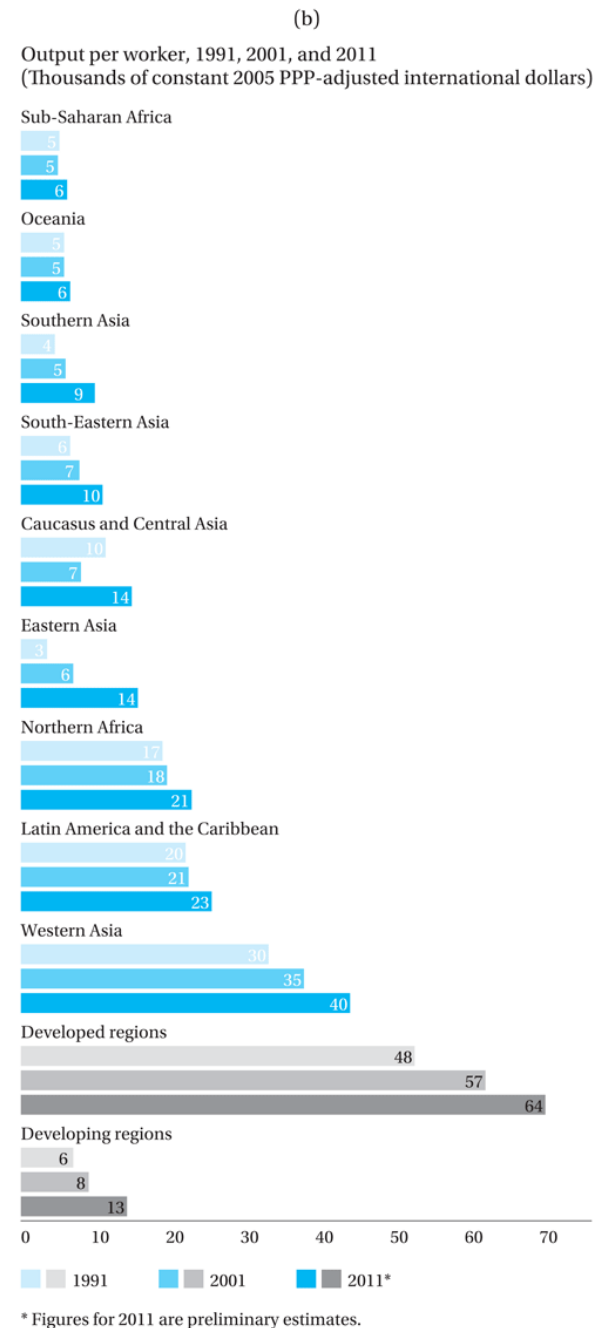
- Institutions
- Private property
- Personal taxation
- Taxes in cash rather than in kind

Figure 2.3a Shares of Global Income, 2008. (b) Developing regions lag far behind the developed world in productivity measured as output per worker.



Source: Figure 2.3a, Data from World Bank, *World Development Indicators 2013* (Washington, D. C.: World Bank, 2013), p.24.

Figure 2.3b Developing regions lag far behind the developed world in productivity measured as output per worker.



Source: Figure 2.3b, United Nations, *Millennium Development Goals Report 2012*, p.9.

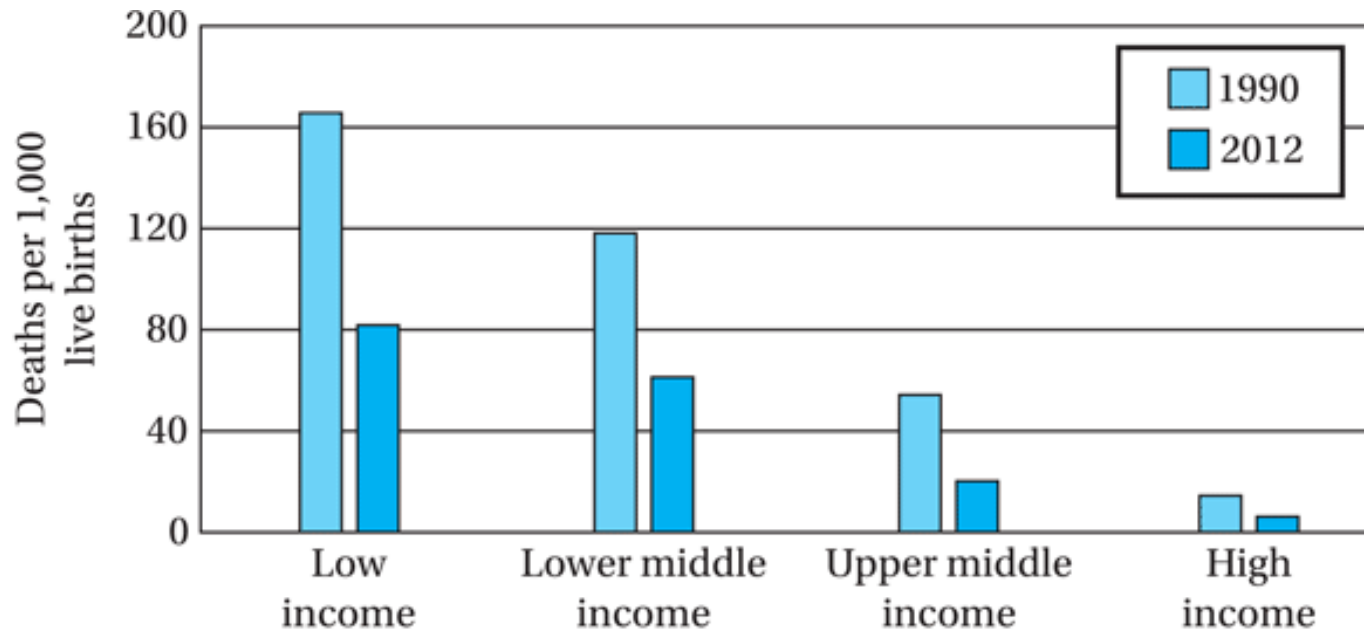
Table 2.5 The 12 Most and Least Populated Countries and Their Per Capita Income, 2008

Most Populous	Population (millions)	GNI Per Capita (U.S. \$)	Least Populous ^a	Population (thousands)	GNI Per Capita (U.S. \$)
1. China	1,325	2,940	1. Palau	20	8,630
2. India	1,140	1,040	2. St. Kitts and Nevis	49	10,870
3. United States	304	47,930	3. Marshall Islands	60	3,270
4. Indonesia	227	1,880	4. Dominica	73	4,750
5. Brazil	192	7,300	5. Antigua and Barbuda	87	13,200
6. Pakistan	166	950	6. Seychelles	87	10,220
7. Bangladesh	160	520	7. Kiribati	97	2,040
8. Nigeria	151	1,170	8. Tonga	104	2,690
9. Russian Federation	142	9,660	9. Grenada	104	5,880
10. Japan	128	38,130	10. St. Vincent and the Grenadines	109	5,050
11. Mexico	106	9,990	11. Micronesia	110	2,460
12. Philippines	90	1,890	12. São Tomé and Príncipe	160	1,030

^aCriteria for inclusion in the least-populous rankings: United Nations member as of mid-2010, with 2008 comparable population and GNI per capita data in tab. 1.6 in the source.

Source: The World Bank, *World Development Indicators, 2010* (Washington, D.C.: World Bank, 2010), tabs 1.1 and 1.6.

Figure 2.4 Under-5 Mortality Rates, 1990 and 2012



Source: Data drawn from World Bank, World Development Indicators, accessed 22 Sept. 2013
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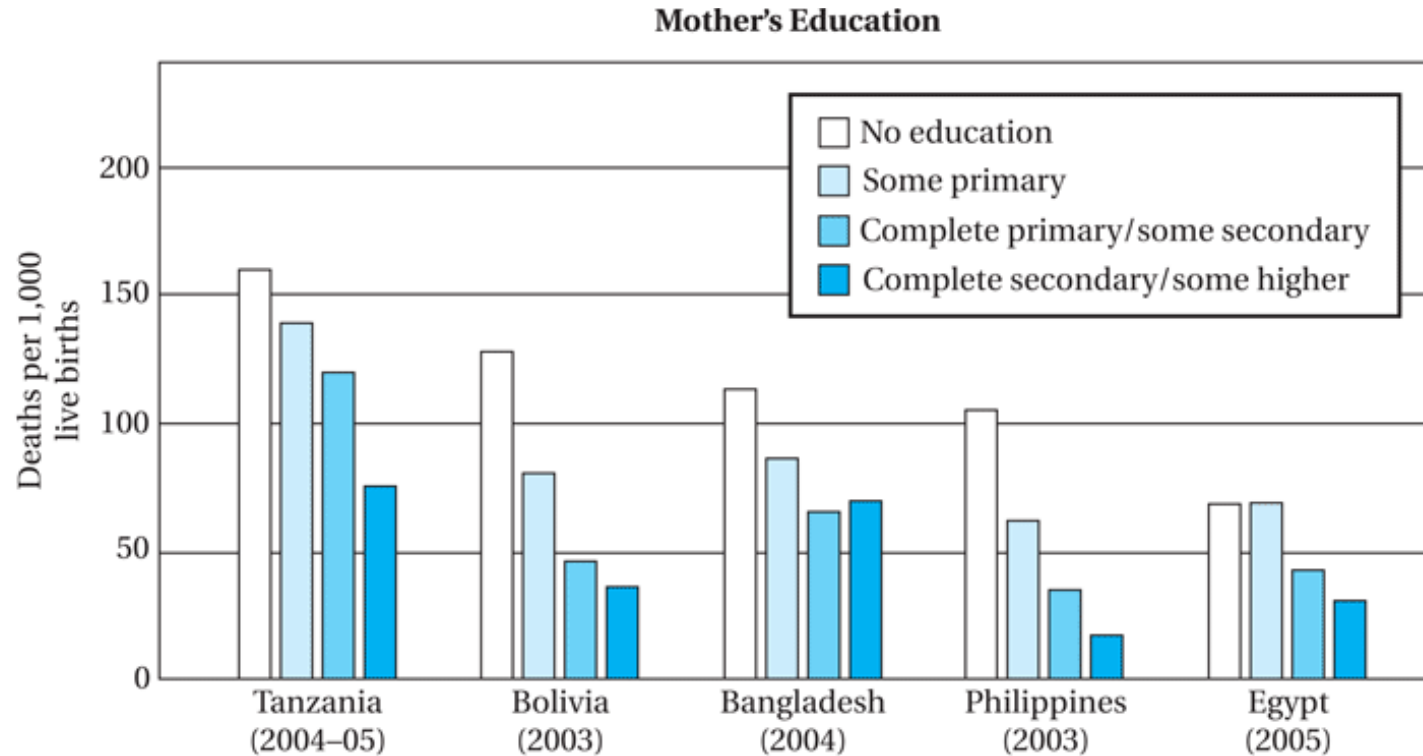
Table 2.6 Primary School Enrollment and Pupil-Teacher Ratios, 2010

Region or Group	Net Primary School Enrollment (%)	Primary Pupil-Teacher Ratio
Income Group		
Low	80	45
Lower Middle	87	23 ^a
Upper Middle	94	22
High	95	15
Region		
East Asia and Pacific	93 ^a	19
Latin America and the Caribbean	94	25
Middle East and North Africa	91	24
South Asia	86	40 ^a
Sub-Saharan Africa	73	49
Europe and Central Asia	92	16

^aData for 2009.

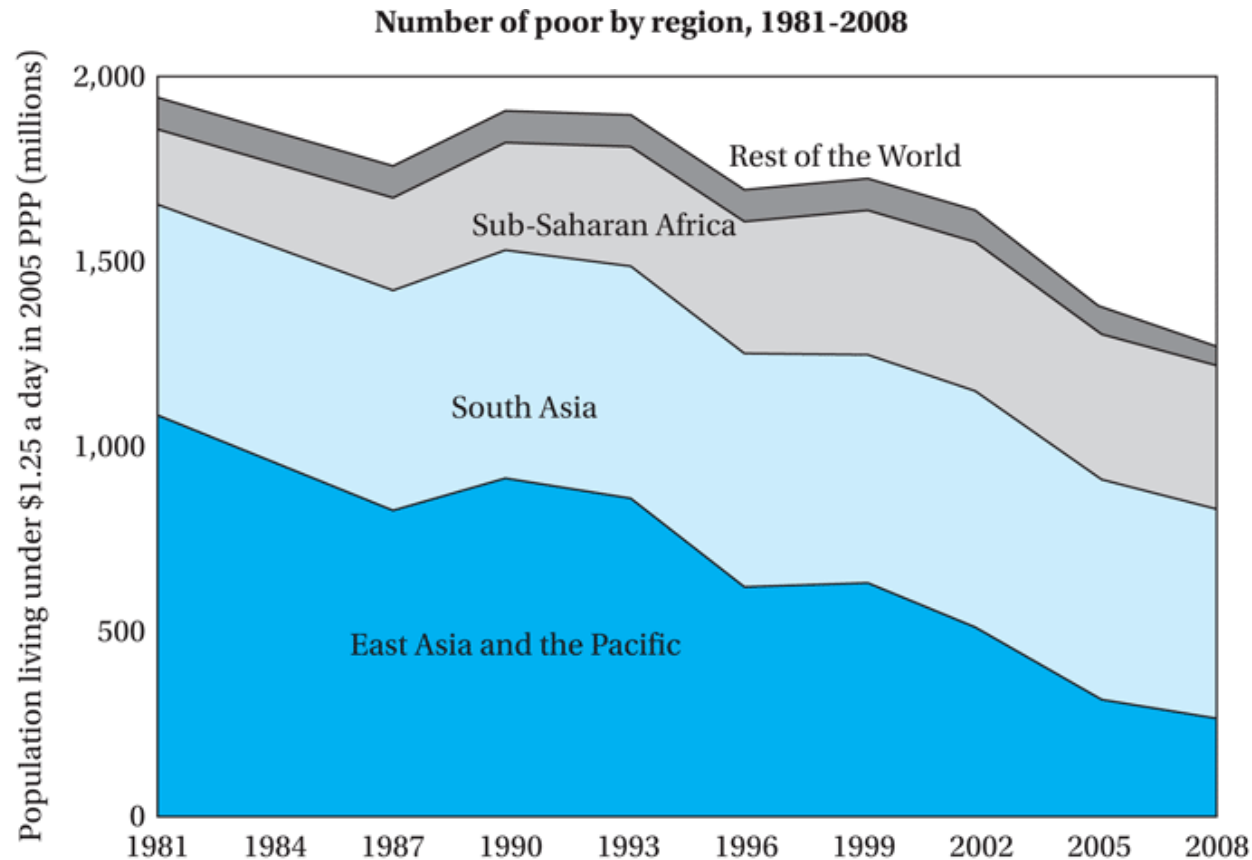
Source: Data from World Bank, *World Development Indicators, 2010* (Washington, D.C.: World Bank, 2010), tabs 2.11 and 2.12.

Figure 2.5 Correlation between Under-5 Mortality and Mother's Education



Source: International Bank for Reconstruction and Development/World Bank, *World Development Indicators*, 2007 (Washington, D.C.: World Bank, 2007), p. 119. Reprinted with permission.

Figure 2.6 Number of People Living in Poverty by Region, 1981–2008



Source: World Bank, "World Bank sees progress against extreme poverty, but flags vulnerability," April 2012, <http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTPROGRAMS/EXTPOVRES/EXTPOVCALNET/0,,contentMDK:22716987~pagePK:64168435~theSitePK:5280443~isCURL:Y,00.html>.



Table 2.7 Crude Birth Rates Around the World, 2012

of birth / 1000 persons

45+	Chad, Dem. Rep. of Congo, Mali, Niger, Uganda, Zambia
40–44	Afghanistan, Angola, Benin, Burkina Faso, Liberia, Malawi, Mozambique, Nigeria, Somalia, South Sudan, Tanzania
35–39	Central African Republic, Côte d'Ivoire, Eritrea, Iraq, Jordan, Kenya, Madagascar, Senegal, Sierra Leone, Yemen
30–34	Ethiopia, Ghana, Papua New Guinea, Sudan, Timor-Leste, Vanatu, Zimbabwe
25–29	Algeria, Bolivia, Cambodia, Egypt, Guatemala, Haiti, Honduras, Kyrgyzstan, Pakistan, Philippines, Samoa, Tonga
20–24	Dominican Republic, El Salvador, <u>India</u> , Libya, Mexico, Peru, Saudi Arabia, South Africa, Venezuela
15–19	Argentina, Brazil, Colombia, Costa Rica, Indonesia, Jamaica, Sri Lanka, Turkey, Vietnam
10–14	Australia, Canada, <u>China</u> , <u>France</u> , <u>Russia</u> , United Kingdom, United States
<10	Austria, Croatia, Germany, Hungary, Italy, Japan, South Korea, Serbia, Portugal, Taiwan

Source: Population Reference Bureau, *Population Data Sheet*, 2012.



Table 2.8 The Urban Population in Developed Countries and Developing Regions

Region	Population (millions, 2009)	Urban Share (%)
World	6,810	50
More developed countries	1,232	75
Less developed countries	5,578	44
Sub-Saharan Africa	836	35
Northern Africa	205	50
Latin America and the Caribbean	580	77
Western Asia	231	64
South-central Asia	1,726	31
Southeast Asia	597	43
East Asia	1,564	51
Eastern Europe	295	69

Source: Population Reference Bureau, 2009 World Data Sheet.

Table 2.9 Share of the Population Employed in the Agricultural, Industrial, and Service Sectors in Selected Countries, 2004–2008 (%)

	Agriculture			Industry			Services		
	Males	Females	Share of GDP (2008)	Males	Females	Share of GDP (2008)	Males	Females	Share of GDP (2008)
Africa									
Egypt	28	43	13	26	6	38	46	51	49
Ethiopia	12	6	44	27	17	13	61	77	42
Madagascar	82	83	25	5	2	17	13	16	57
Mauritius	10	8	4	36	26	29	54	66	67
South Africa	11	7	3	35	14	34	54	80	63
Asia									
Bangladesh	42	68	19	15	13	29	43	19	52
Indonesia	41	41	14	21	15	48	38	44	37
Malaysia	18	10	10	32	23	48	51	67	42
Pakistan	36	72	20	23	13	27	41	15	53
Philippines	44	24	15	18	11	32	39	65	53
South Korea	7	8	3	33	16	37	60	74	60
Thailand	43	40	12	22	19	44	35	41	44
Vietnam	56	60	22	21	14	40	23	26	38
Latin America									
Colombia	27	6	9	22	16	36	51	78	55
Costa Rica	18	5	7	28	13	29	54	82	64
Mexico	19	4	4	31	18	37	50	77	59
Nicaragua	42	8	19	20	18	30	38	73	51
Developed Countries									
United Kingdom	2	1	1	32	9	24	66	90	76
United States	2	1	1	30	9	22	68	90	77

Note: Ethiopia agricultural employment reflects limited coverage.

Source: World Bank, *World Development Indicators*, 2010 (Washington, D.C.: World Bank, 2010), tabs. 2.3 and 4.2.

Table 2.10 Share of the Population Employed in the Agricultural, Industrial, and Service Sectors in Selected Countries, 1990–92 and 2008–2011 (%)

	Agriculture				Industry				Services				Region
	Males		Females		Males		Females		Males		Females		
	% of Male Employment		% of Female Employment		% of Male Employment		% of Female Employment		% of Male Employment		% of Female Employment		
	1990–92	2008–11	1990–92	2008–11	1990–92	2008–11	1990–92	2008–11	1990–92	2008–11	1990–92	2008–11	
Cameroon	..	49	..	58	..	13	..	12	..	38	..	30	Africa
Egypt, Arab Rep.	35	28	52	46	25	27	10	6	41	44	37	49	Africa
Liberia	..	50	..	48	..	14	..	5	..	37	..	47	Africa
Mauritius	15	9	13	7	36	32	48	21	48	59	39	73	Africa
Namibia	45	23	52	8	21	24	8	9	34	53	40	83	Africa
Indonesia	54	37	57	35	15	24	13	15	31	40	31	50	Asia
Malaysia	23	16	20	9	31	31	32	21	46	53	48	71	Asia
Pakistan	45	37	69	75	20	22	15	12	35	41	16	13	Asia
Philippines	53	41	32	23	17	18	14	10	29	41	55	68	Asia
Thailand	60	41	62	37	18	23	13	18	22	37	25	45	Asia
Turkey	33	18	72	39	26	31	11	15	41	51	17	45	Asia
Chile	24	14	6	5	32	31	15	10	45	55	79	85	Latin America
Costa Rica	32	20	5	4	27	25	25	11	41	55	69	84	Latin America
Dominican Republic	26	19	3	2	23	21	21	7	52	47	76	60	Latin America
Honduras	53	50	6	12	18	19	25	21	29	31	69	67	Latin America
Mexico	34	19	11	4	25	30	19	18	41	51	70	78	Latin America
Canada	6	3	2	1	31	32	11	10	64	65	87	89	Developed
Japan	6	4	7	4	40	33	27	15	54	62	65	80	Developed
United Kingdom	3	2	1	1	41	29	16	8	55	69	82	91	Developed
United States	4	2	1	1	34	25	14	7	62	72	85	92	Developed

Note: Country selection reflects that only a limited number of countries are covered or have data over time. Data represent most recent in timeframe if average for the period is not available.

Source: World Bank, *World Development Indicators*, 2013 (Washington, D.C.: World Bank, 2013), tab. 2.3.



2.5 How Low-Income Countries Today Differ from Developed Countries in Their Earlier Stages

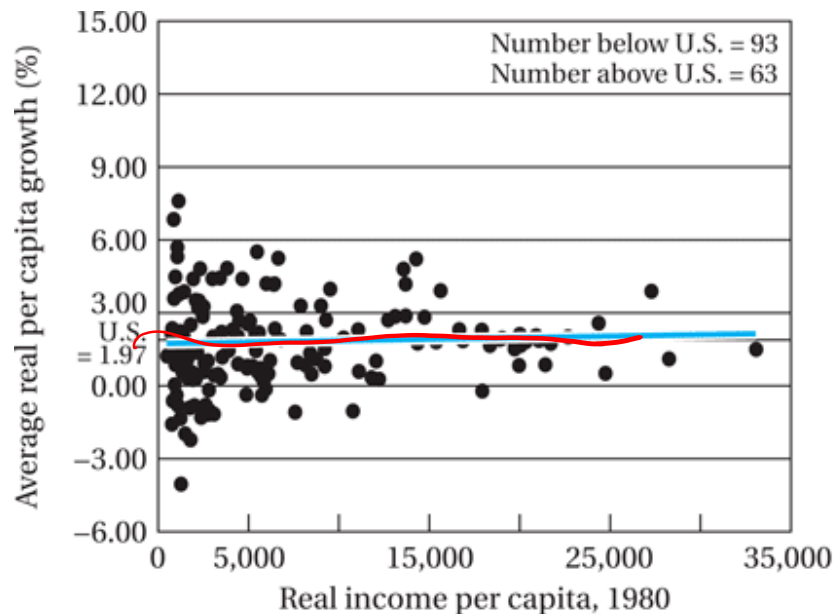
- Eight differences
 - Physical and human resource endowments
 - Per capita incomes and levels of GDP in relation to the rest of the world
 - Climate
 - Population size, distribution, and growth
 - Historic role of international migration
 - International trade benefits
 - Basic scientific/technological research and development capabilities
 - Efficacy of domestic institutions



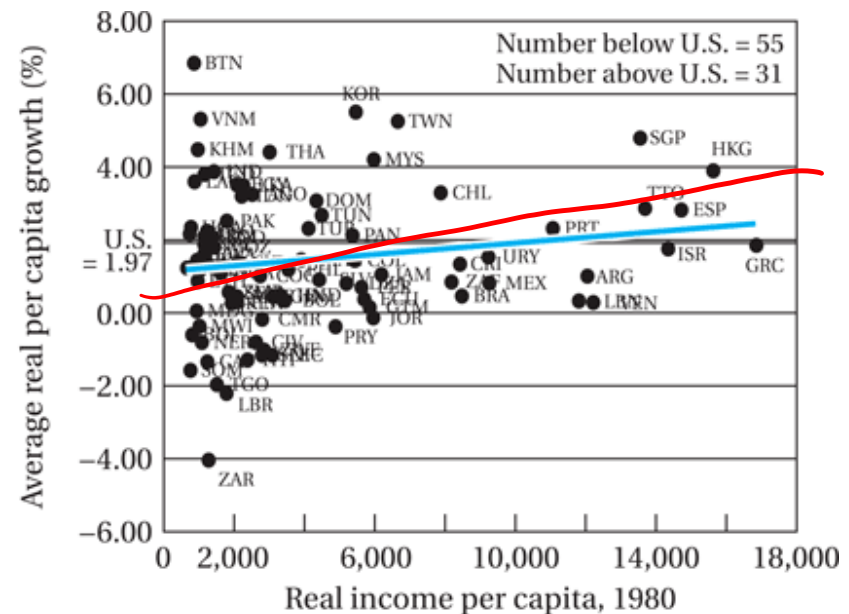
2.6 Are Living Standards of Developing and Devolved Nations Converging?

- Evidence of unconditional convergence is hard to find
- But there is increasing evidence of “per capita income convergence,” weighting changes in per capita income by population size
- (Also, in chapter 3, we return to examine the concept of conditional convergence when we study the Solow model)

Figure 2.7 Relative Country Convergence: World, Developing Countries, and OECD (continued)

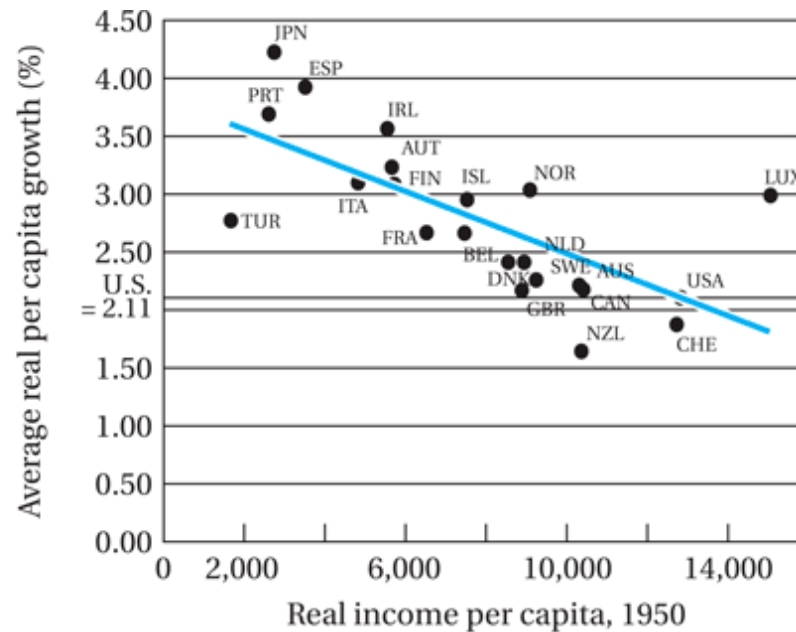


(a) Per capita growth 1980–2007 for 157 countries



(b) Per capita growth 1980–2007 for 86 developing countries

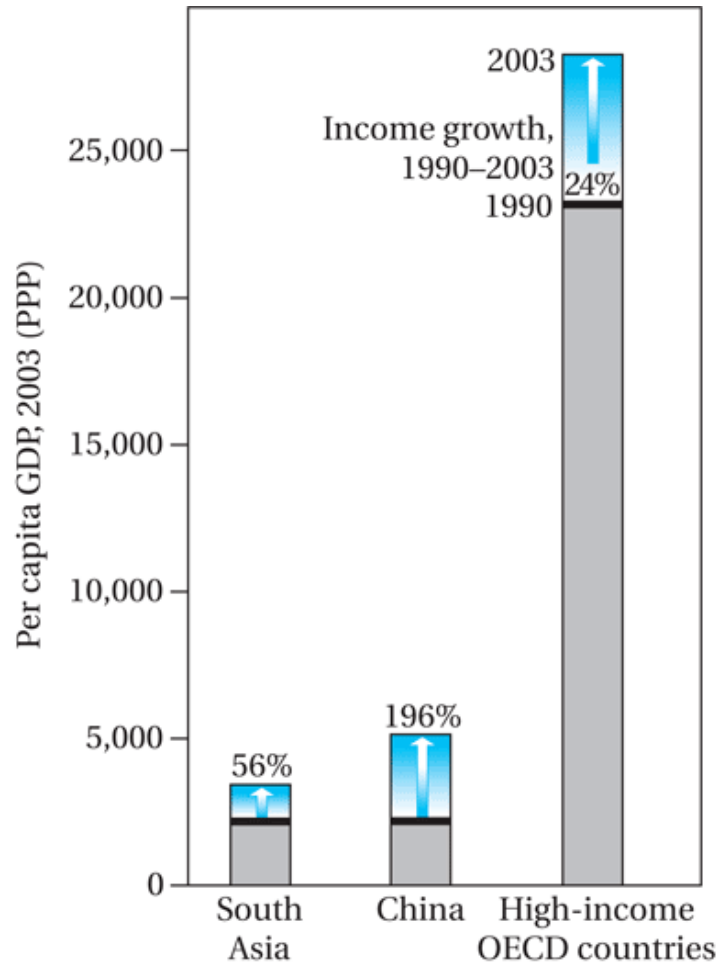
Figure 2.7 Relative Country Convergence: World, Developing Countries, and OECD



(c) Per capita growth 1950–2007 for 22 OECD countries

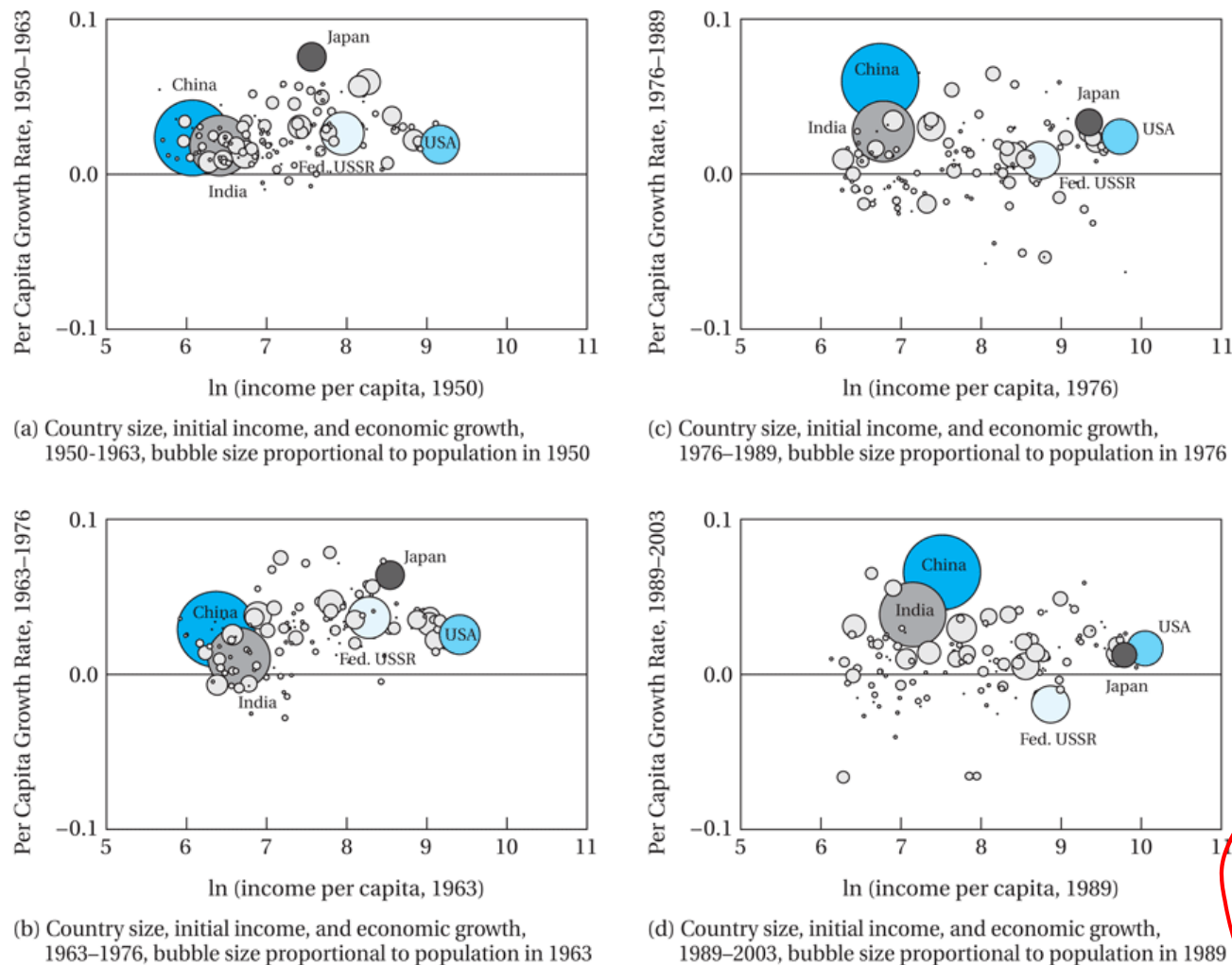
Source: Data from Center for International Comparisons, University of Pennsylvania, accessed at http://pwt.econ.upenn.edu/php_site/pwt63/pwt63_form.php.

Figure 2.8 Growth Convergence versus Absolute Income Convergence



Source: From *Human Development Report, 2005*, p. 37. Reprinted with permission from the United Nations Development Programme.

Figure 2.9 Country Size, Initial Income Level, and Economic Growth



Source: Steven Brakmana and Charles van Marrewijk, "It's a big world after all: On the economic impact of location and distance," *Cambridge Journal of Regions, Economy and Society* 1 (2008): 411-437. Reprinted by permission of Oxford University Press.

Stop



2.7 Long-Run Causes of Comparative Development

- Schematic Representation
 - Geography
 - Institutional quality- colonial and post-colonial
 - Colonial legacy- pre colonial comparative advantage
 - Evolution and timing of European development
 - Inequality- human capital
 - Type of colonial regime



Nature and Role of Economic Institutions

- Institutions provide “rules of the game” of economic life
- Provide underpinning of a market economy
- Include property rights; contract enforcement
- Can work for improving coordination,
- Restricting coercive, fraudulent and anti-competitive behavior
- Providing access to opportunities for the broad population-
- Constraining the power of elites, and managing conflict
- Provision of social insurance
- Provision of predictable macroeconomic stability
- Note: These institutions are correlated and it is not clear which of these institutions matter most; and “transitional institutions” may help in the development process

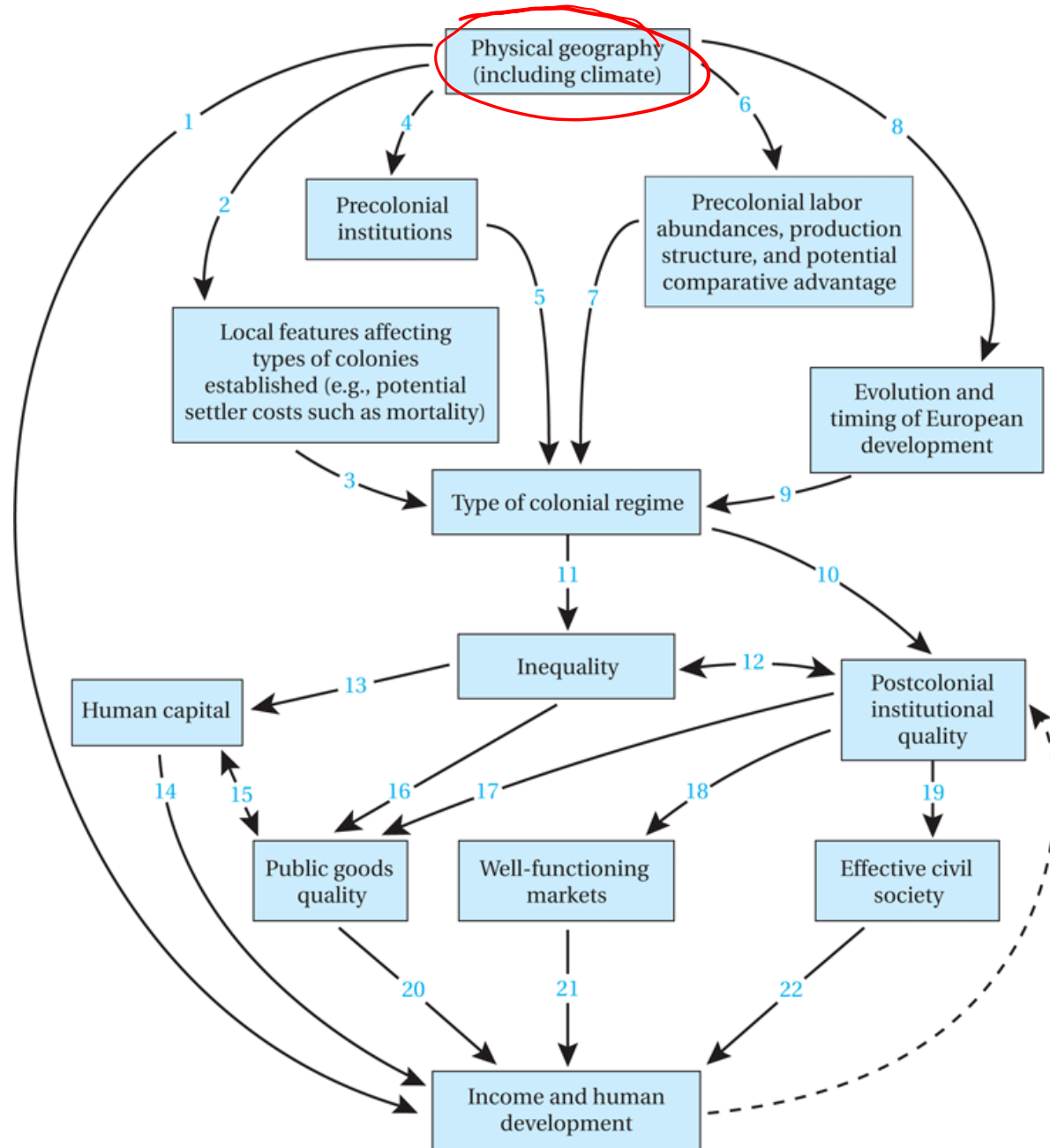


Role of Institutions

- Acemoglu, Johnson, and Robinson's "reversal of fortune" and extractive institutions
- Bannerjee and Iyer, "property rights institutions." Landlords versus cultivators



Figure 2.10
Schematic
Representation of
Leading Theories of
Comparative
Development





Concepts for Review

- Absolute poverty
- Brain drain
- Capital stock
- Convergence
- Crude birth rate
- Dependency burden
- Depreciation (of the capital stock)
- Diminishing Marginal Utility
- Divergence
- Economic Institutions
- Fractionalization
- Free trade
- Gross domestic product (GDP)
- Gross national income (GNI)
- Human capital
- Human Development Index (HDI)



Concepts for Review (cont'd)

- Imperfect market
- Incomplete information
- Infrastructure
- Least developed countries
- Low-income countries (LICs)
- Middle-income countries
- Newly industrializing countries (NICs)
- Purchasing power parity (PPP)
- Research and development (R&D)
- Resource endowment
- Terms of trade
- Value added
- World Bank



Appendix 2.1 The Traditional Human Development Index (HDI)

- Equation A2.6:

$$\text{HDI} = \frac{1}{3}(\text{income index}) + \frac{1}{3}(\text{life expectancy index}) + \frac{1}{3}(\text{education index})$$

Table A2.1.1 2009 Traditional Human Development Index for 24 Selected Countries (2007 Data)

Country	Relative Ranking	Human Development Index (HDI)	GDP Per Capita (PPP, U.S. \$)	GDP Rank minus HDI Rank
Low Human Development				
Niger	182	0.340	627	-6
Afghanistan	181	0.352	1,054	-17
Dem. Rep. Congo	176	0.389	298	5
Ethiopia	171	0.414	779	0
Rwanda	167	0.460	866	1
Côte d'Ivoire	163	0.484	1,690	-17
Malawi	160	0.493	761	12
Medium Human Development				
Bangladesh	146	0.543	1,241	9
Pakistan	141	0.572	2,496	-9
India	134	0.612	2,753	-6
South Africa	129	0.683	9,757	-51
Nicaragua	124	0.699	2,570	6
Gabon	103	0.755	15,167	-49
China	92	0.772	5,383	10
Iran	88	0.782	10,955	-17
Thailand	87	0.783	8,135	-5
High Human Development				
Saudi Arabia	59	0.843	22,935	-19
Costa Rica	54	0.854	10,842	19
Cuba	51	0.863	6,876	44
Chile	44	0.878	13,880	15
Very High Human Development				
United Kingdom	21	0.947	35,130	-1
United States	13	0.956	45,592	-4
Canada	4	0.966	35,812	14
Norway	1	0.971	53,433	4

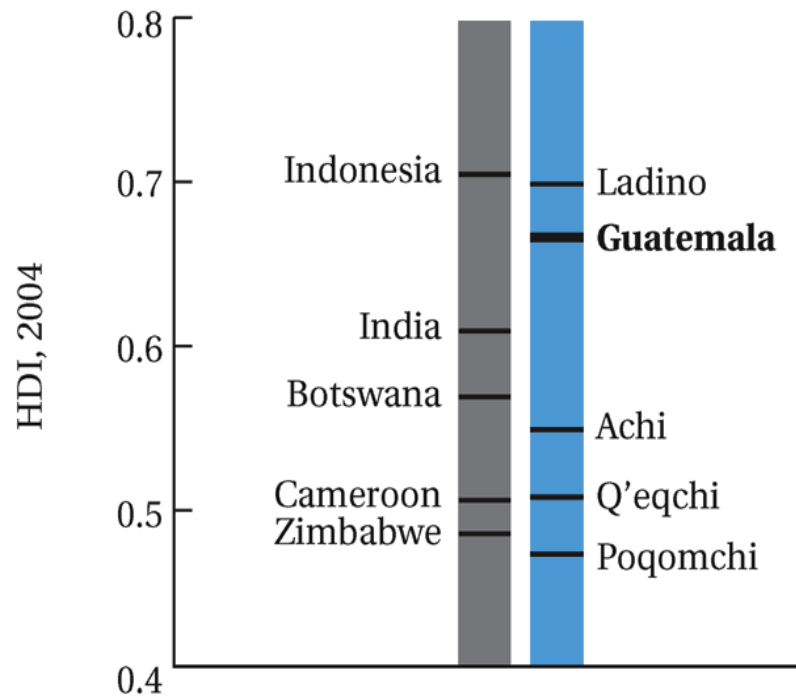
Source: Data from United Nations Development Program, *Human Development Report, 2009*, tab. 1.

Table A2.1.2 2009 Human Development Index Variations for Similar Incomes (2007 Data)

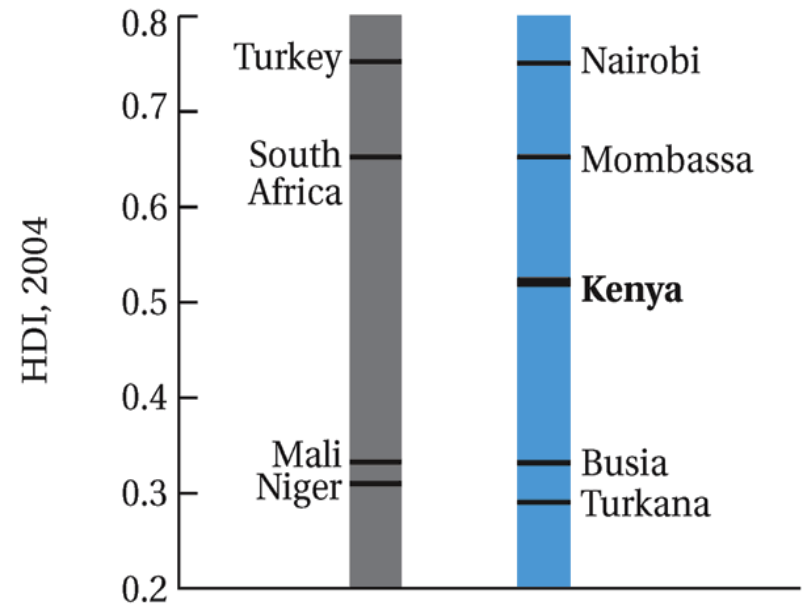
Country	GDP Per Capita (U.S. \$)	HDI	HDI Rank	Life Expectancy (years)	Adult Literacy (%)	Combined Gross Enrollment Ratio
GDP Per Capita near PPP \$1,000						
Madagascar	932	0.543	145	59.9	70.7	61.3
Haiti	1,140	0.532	149	61.0	62.1	52.1
Rwanda	866	0.460	167	49.7	64.9	52.2
Mali	1,083	0.371	178	48.1	26.2	46.9
Afghanistan	1,054	0.352	181	43.6	28.0	50.1
GDP Per Capita near PPP \$1,500						
Kenya	1,542	0.541	147	53.6	73.6	59.6
Ghana	1,334	0.526	152	56.5	65.0	56.5
Côte d'Ivoire	1,690	0.484	163	56.8	48.7	37.5
Senegal	1,666	0.464	166	55.4	41.9	41.2
Chad	1,477	0.392	175	48.6	31.8	36.5
GDP Per Capita near PPP \$2,000						
Kyrgyzstan	2,006	0.710	120	67.6	99.3	77.3
Laos	2,165	0.619	133	64.6	72.7	59.6
Cambodia	1,802	0.593	137	60.6	76.3	58.5
Sudan	2,086	0.531	150	57.9	60.9	39.9
Cameroon	2,128	0.523	153	50.9	67.9	52.3
Mauritania	1,927	0.520	154	56.6	55.8	50.6
Nigeria	1,969	0.511	158	47.7	72.0	53.0
GDP Per Capita near PPP \$4,000						
Tonga	3,748	0.768	99	71.7	99.2	78.0
Sri Lanka	4,243	0.759	102	74.0	90.8	68.7
Honduras	3,796	0.732	112	72.0	83.6	74.8
Bolivia	4,206	0.729	113	65.4	90.7	86.0
Guatemala	4,562	0.704	122	70.1	73.2	70.5
Morocco	4,108	0.654	130	71.0	55.6	61.0

Source: Data from United Nations Development Program, *Human Development Report, 2009*, tab. 1.

Figure A2.1.1 Human Development Disparities within Selected Countries

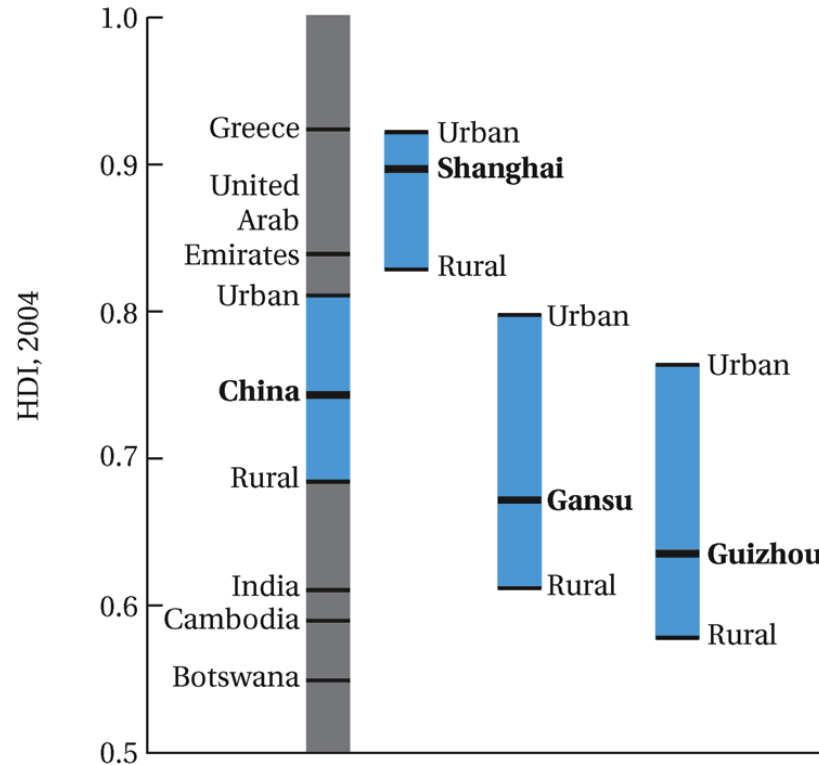


(a) Large ethnic differences in HDI in Guatemala.



(b) Wide inequalities in human development between districts in Kenya.

Figure A2.1.1 Human Development Disparities within Selected Countries (continued)



(c) Rural-urban differences intensify regional disparities in China.

Source: United Nations Development Programs, *Human Development Report*, 2006 (New York: Oxford University Press, 2006), figs. 10–12. Used by permission.