

How Economies Grow and Develop

Outline

1. Development and Economic Growth
2. Country Growth Experiences
3. Understanding Poverty
4. Inequality

Learning goals

- Explain the difference between “economic growth” and “economic development.”
- Understand the relevance to economics—and to economic growth in particular—of the Industrial Revolution.
- Describe general patterns of economic growth over time and across different regions and countries.
- Discuss the controversy concerning whether global inequality is increasing or decreasing.
- List various factors that play a role in development.
- Explain how poverty, economic growth, and human development are related.

Development and Economic Growth

Standard economic growth theory

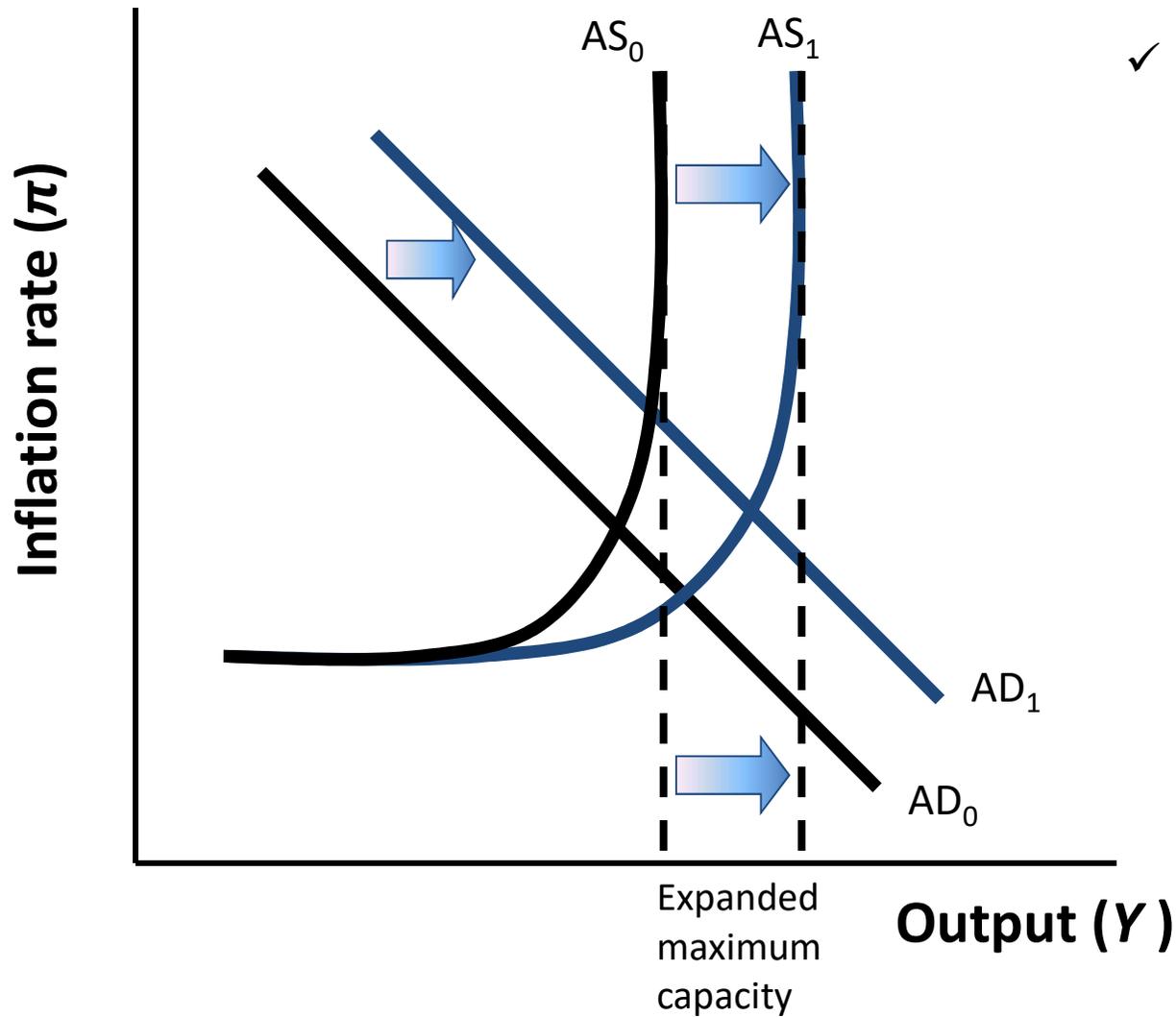
how is economic growth related to economic development?

$$\text{GDP per capita} = \frac{\text{GDP}}{\text{population}}$$

for people's incomes on average to increase over time,
GDP growth rate > rate of population growth

$$\text{growth rate of GDP} \approx \text{growth rate of population} + \text{growth rate of GDP per capita}$$

Economic growth in the AS/AD Model



- ✓ Economic growth increases the maximum productive capacity of the economy. It involves both supply-side and demand-side expansions, and does not necessarily involve a change in the rate of inflation.

What are the causes of economic output to increase?

- one way that output could increase is if there is an expansion in the inputs used to produce it:
 - natural capital
 - manufactured capital
 - human capital
 - social capital
 - financial capital

Production function

- **production function**: a mathematical relation between various inputs and the level of output
- **factors of production**: the essential inputs for economic activity, including labor, capital, and natural resources
- **technology** is the other important variable that influences economic output, and productivity depends crucially on the level of technology
- **total factor productivity** reflects all contributions to total production not already reflected in the input levels

The industrial revolution

- a process of social, technological, and economic change, which began in Britain and Western Europe in the 18th century
 - new methods of production
 - new work organization
 - greater output per worker

The 1950s: Rostow: from underdevelopment to development

- from “underdevelopment” to development :
 - I. traditional agrarian society
 - II. preconditions for take-off
 - III. takeoff
 - IV. drive to maturity
 - V. age of high mass consumption
- if domestic savings were insufficient to enable a country to reach the “takeoff ” stage, “foreign saving” should help compensate for the shortfall

The 1980s: Development through structural reforms

- The main principles of the Washington Consensus
 - fiscal discipline
 - market liberalization and privatization
 - trade liberalization and openness to foreign investment
- loans from the World Bank, the IMF, and other institutions were made conditional on structural reforms
- idea: make developing economies appealing and „safe“ for foreign investment

Table-Per capita annual real GDP growth in selected Latin American countries, 1980–2015 (%)

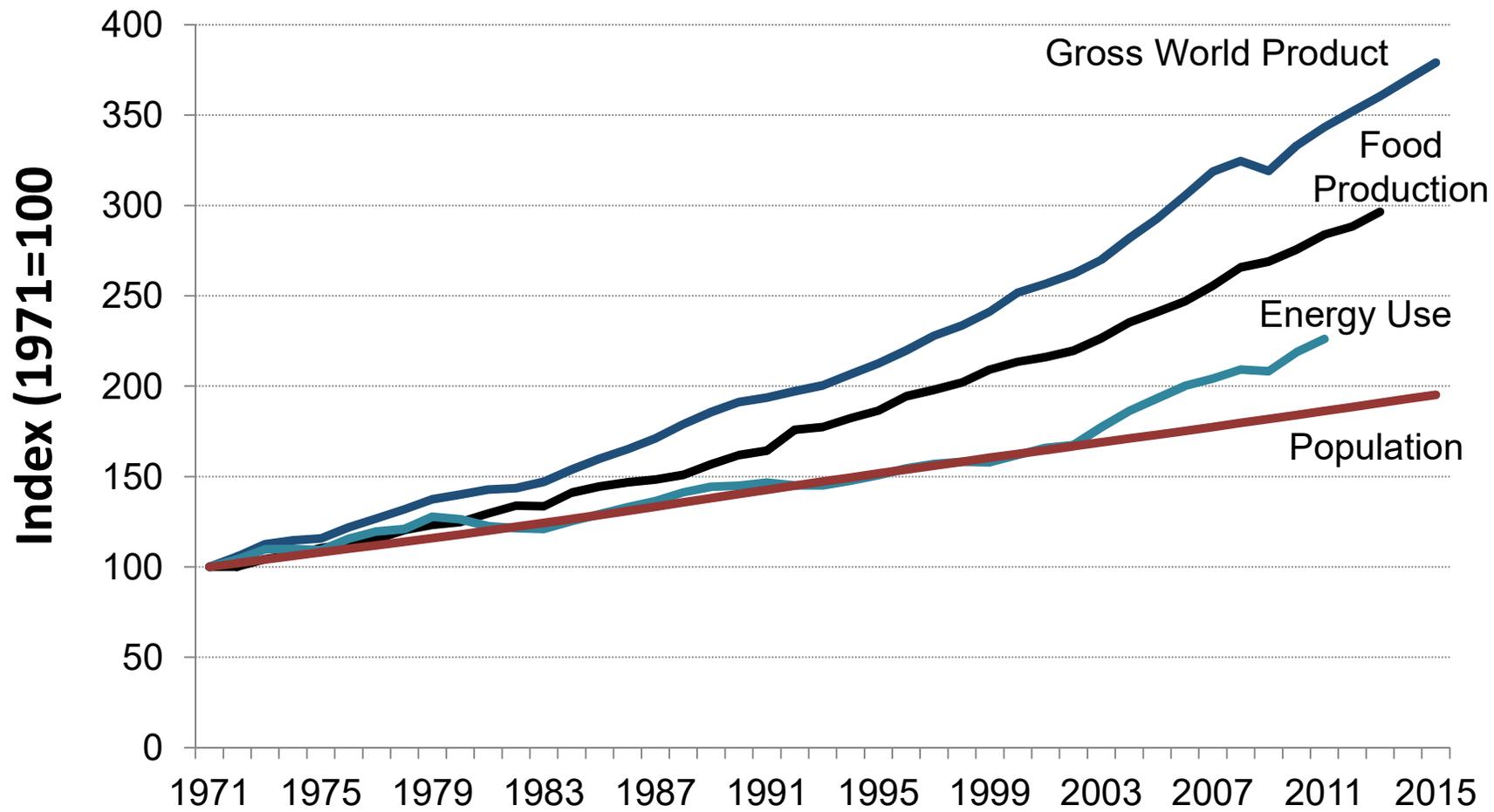
Country	Real GDP Growth (in %)
Bolivia	0.9
Brazil	1.2
Chile	3.3
Colombia	2.0
Ecuador	1.1
Mexico	0.8
Peru	1.4
Venezuela	-0.3
All Middle Income Countries average	2.7

Source: World Bank, World Development Indicators Database, 2016.

Country Growth Experiences

Figure World economic growth, 1971–2015

- ✓ All series are shown using an index of 100 for 1971 levels. During the period 1971–2015, population nearly doubled, energy use more than doubled, food production tripled, and gross world product increased by 280 percent.



Source: World Bank, World Development Indicators Database, 2016.

Table- Income, growth, and population comparisons, selected countries and country groups

Country or Category	GDP per Capita, 2015 (PPP, constant 2011 international \$)	Percent Growth in GDP per Capita (PPP, Annual Average, 1991-2015)	Percent of World Population (2011)
High Income	42,261	1.4%	16.2%
Hong Kong	53,380	2.6%	0.1%
United States	52,549	1.5%	4.4%
Japan	35,804	0.7%	1.7%
France	37,306	0.9%	0.9%
South Korea	34,387	3.9%	0.7%
Middle Income	10,104	3.3%	74.6%
Russia	23,895	0.8%	2.0%
Turkey	18,959	2.4%	1.1%
Brazil	14,455	1.4%	2.8%
China	13,400	8.8%	18.7%
India	5,730	4.8%	17.8%

Table - Income, growth, and population comparisons, selected countries and country groups

Country or Category	GDP per Capita, 2015 (PPP, constant 2011 international \$)	Percent Growth in GDP per Capita (PPP. Annual Average. 1991-2015)	Percent of World Population (2011)
Bangladesh	3,137	3.6%	2.2%
Nepal	2,313	2.5%	0.4%
Haiti*	1,658	-0.3%	0.1%
Ethiopia	1,530	3.9%	1.4%
Congo, DR	737	-1.7%	1.1%

Source: World Bank, World Development Indicators Database, 2016.

*Data for Haiti growth rate is for 1999–2015.

What accounts for the striking differences in economic growth across countries?

- economies such as the U.S., Europe, and Japan benefitted from many decades of economic growth (with periods of slowdown or recession)
- GDP increase due to a combination of factors:
 - aggregate demand
 - labor productivity
 - technological innovation
 - investment in manufactured capital
 - taking advantage of trade opportunities

Successful economic growth from taking advantage of trade opportunities

- industrialized countries used protectionism
 - tariffs and quotas to limit trade – to foster development of important domestic industries
- developed countries “kicked away” the (protectionist) ladder
- → they now insist that poor countries follow free trade rules

The virtuous cycle of the Asian tigers

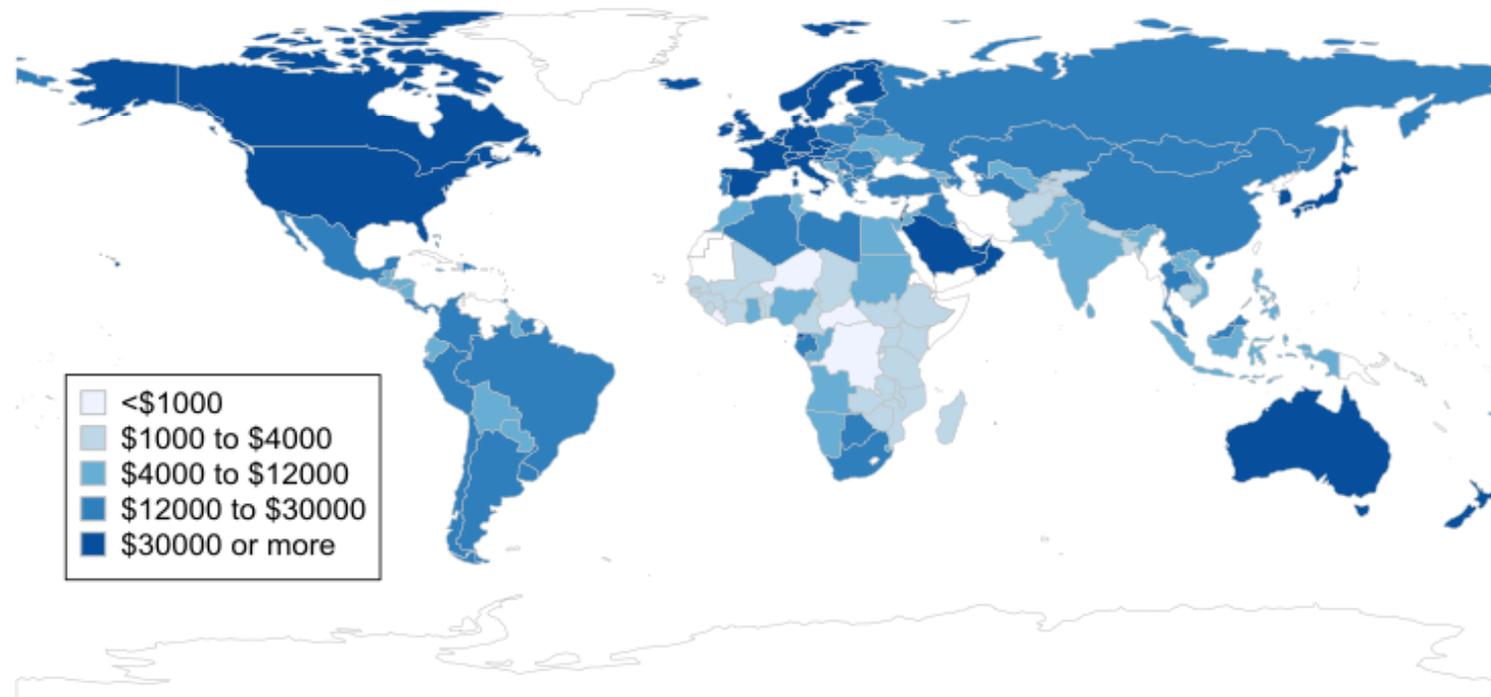
- self-reinforcing patterns of:
 - high savings and investment leading to greater productivity
 - competitive export industry
 - growth of domestic industries
 - resulting financial capital invested in machines, tools, factories, and other equipment that can enhance productivity
 - cycle begins again

Are developing countries catching up?

- **convergence:** the idea that poorer countries or regions are on a path to “catch up”
 - idea: underlying economic forces will cause poorer countries and regions to “catch up” with richer ones
- evidence suggests that while some developing countries are on a path to catch up with the richer ones in GDP terms, others are not
- since 2000 there has been significantly more progress towards convergence
 - this is mainly driven by the rapid growth in China and India, but applies to other countries also

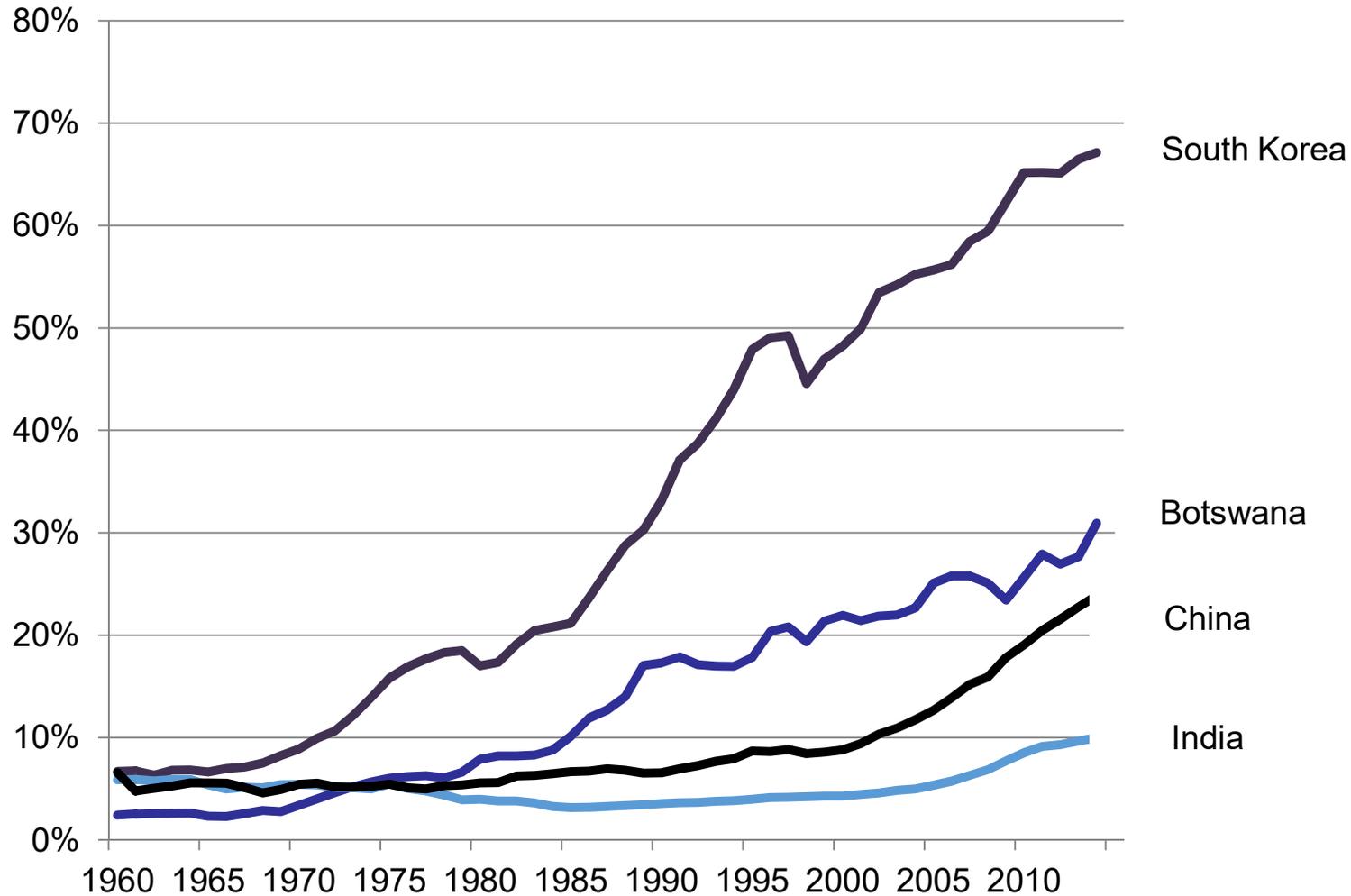
Figure-GDP per capita in 2015 (in current PPP \$ per person)

- ✓ Income per person is highest in the industrialized countries of North America and Europe, along with Japan, Australia, and New Zealand. Income per person is lowest in many African and Asian countries.



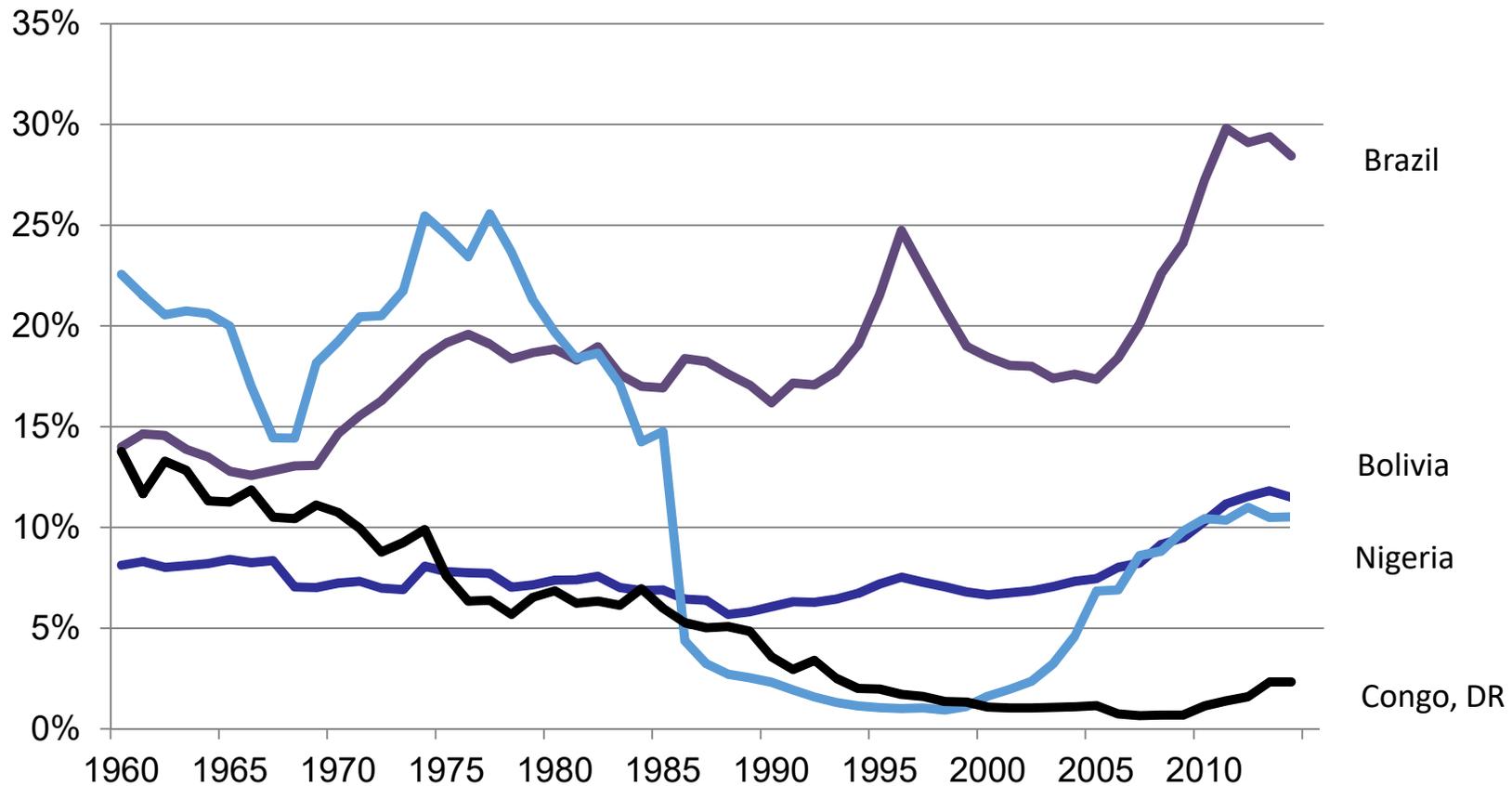
Source: World Bank, World Development Indicators Database, 2016.

Figures (a)- Per capita GDP expressed as a percentage of per-capita GDP in the USA



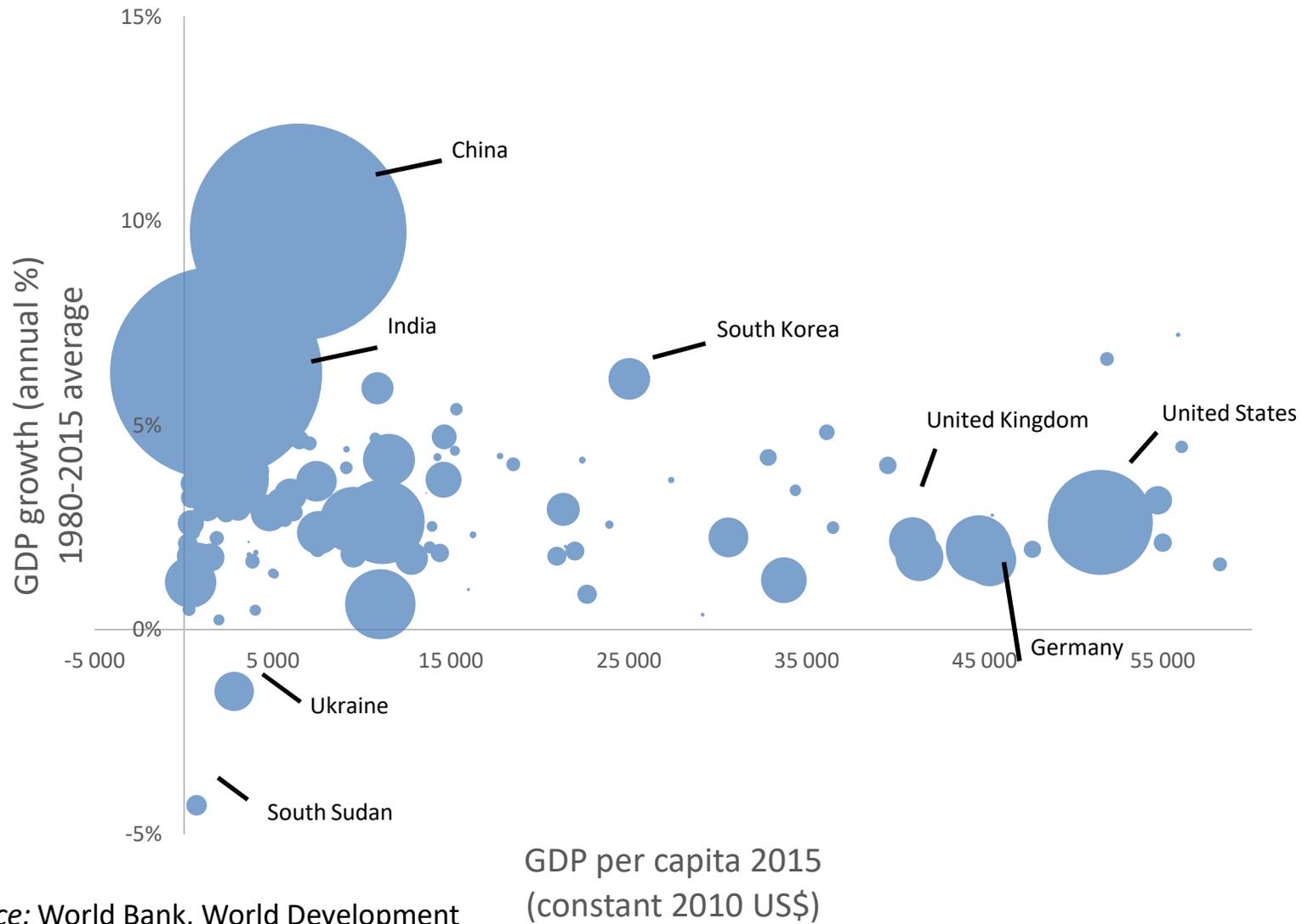
Source: Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" American Economic Review, 105(10), 3150-3182, available for download at www.ggd.net/pwt .

Figure (b) Per capita GDP expressed as a percentage of per-capita GDP in the USA



Source: Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt.

Figure 5 Growth and income relationship with area proportional to population



Source: World Bank, World Development Indicators Database, 2016.

What accounts for the striking differences in economic fortunes across countries?

- a great variety of factors plays a role in development
- their significance and the direction of effect (positive or negative) may vary greatly from country to country
- it is impossible to make all-encompassing statements about why many developing countries have failed to achieve sustained growth

Natural resources

- ✓ arable land, rich mineral and energy resources, good natural port facilities and healthy climate make it easier for a country to prosper

- ✓ overexploitation of natural resources lead to environmental degradation and economic distortion
- ✓ misdirected oil revenues can lead to corruption and waste
- ✓ other sectors are starved of investment and resources

Savings and investment

- ✓ investment in manufactured capital, agriculture and human capital are essential to growth
- ✓ education in science and technologies likely to have significant effects on growth

- ✓ additions to capital do not automatically lead to growth
- ✓ capital intensive technologies might be inappropriate in countries with high unemployment
- ✓ labor intensive products generate less export revenue

Allocation of investment

- market allocation of investment might ignore social priorities
- public goods such as environmental quality and water supplies require public role
- governments can play a role in planning industrial investments through industrial policy and to promote infant industries

Foreign sources of financial capital

- bilateral development assistance: grants or loans made by rich country's governments to poorer countries
- multilateral development assistance: aid or loans from international organizations (World Bank, IMF)
- private foreign investment
- empirical evidence is mixed:
 - aid went to corrupt leaders
 - poor countries highly indebted and spend a lot on debt service
 - FDI might crowd out local initiatives

Domestic demand versus export orientation

- level of aggregate demand important for growth
- underdeveloped domestic markets
- countries become dependent on exports
 - problematic if world demand is limited
 - terms of trade (price of exports relative to imports)

Financial, legal and regulatory institutions

- ✓ effective systems of property rights and contract enforcement allow entrepreneurs to benefit from their investments
- ✓ corporate and bank regulation

- ✓ corruption, internal conflict, and other factors make it difficult for effective institutions to take root
- ✓ political instability leads to economic inefficiency and difficulty to attract FDI
- ✓ less saving for future investment

Capitalism

- characterized by private ownership of productive assets
- laissez-faire capitalism: great reliance on exchange as a mode of coordination (with relatively little coordination by public administration)
 - UK and U.S.
- administrative capitalism: substantial reliance on public administration (as well as exchange) as a mode of coordination
 - Germany, Italy, France, Australia, Japan

Socialism

- system that relies more on public ownership
- administrative socialism: state ownership predominates and activity is coordinated primarily by public administration
 - Soviet Union, North Korea
- market socialism: state ownership predominates but economic activity is coordinated through markets
 - China, Vietnam

Understanding Poverty

How to define poverty

- **poverty line:** the income threshold below which members of a population are classified as poor
 - minimum standard to escape extreme poverty is \$1.90 per day
 - threshold for being considered at risk of poverty is calculated relative to national incomes
 - disadvantage: not useful for comparing across countries
 - advantage: allows a country to define poverty according to its own standard of living

Table - Growth rates and changes in poverty rates, selected countries

	Period	Annual growth rate in per capita GDP, %	Poverty rate at beginning of period, %	Poverty rate at end of period, %
Bangladesh	1983 - 2010	2.6	22.4	11.2
Brazil	1981 - 2013	1.1	9.8	2.8
China	1981 - 2010	8.9	43.2	2.7
Ethiopia	1982 - 2010	1.1	24.3*	9.0
India	1983 - 2011	4.3	16.1	4.3
Indonesia	1984 - 2010	3.5	27.9	2.9
Mexico	1984 - 2012	0.8	9.7	0.7
Nigeria	1985 - 2009	1.7	17.4	21.8
Philippines	1985 - 2012	1.3	9.3	2.7
South Africa	1992 - 2011	1.0	11.0	4.9
Thailand	1981 - 2012	4.3	5.0	0.0

Source: World Bank, World Development Indicators Database, 2013.

Note: The poverty rate is based on a poverty line of \$1.90 per day.

The Multidimensional Poverty Index

- based on Amartya Sen's capability approach:
 - capabilities: the opportunities that people have to pursue important aspects of well-being, such as being healthy and having access to education
- the Multidimensional Poverty Index considers several elements that are critical for a decent life:
 - physical living standards, education, and health
- in some countries, there are large discrepancies between MPI poor and income poor

Human development and the Millennium Development Goals

- human development: an approach to development that stresses the provision of basic needs such as food, shelter, and health care
- Millennium Development Goals: a set of goals declared by the United Nations in 2000 (deadline 2015 for achievement)
 - eradication of extreme poverty
 - promotion of education, gender equity and health
 - environmental sustainability
 - partnership between rich and poor countries

Were the Millennium Development Goals a success?

- ✓ between 2000 and 2015, many dimensions of human development improved more rapidly
- ✓ by 2015, global poverty rate decreased from 47% to 14%

- ✓ progress very uneven
- ✓ much misery and poverty remained
- ✓ countries did not open up markets to the products of poorer countries
- ✓ inadequate funding
- ✓ degree of incompatibility between goals and macroeconomic strategies

The Sustainable Development Goals

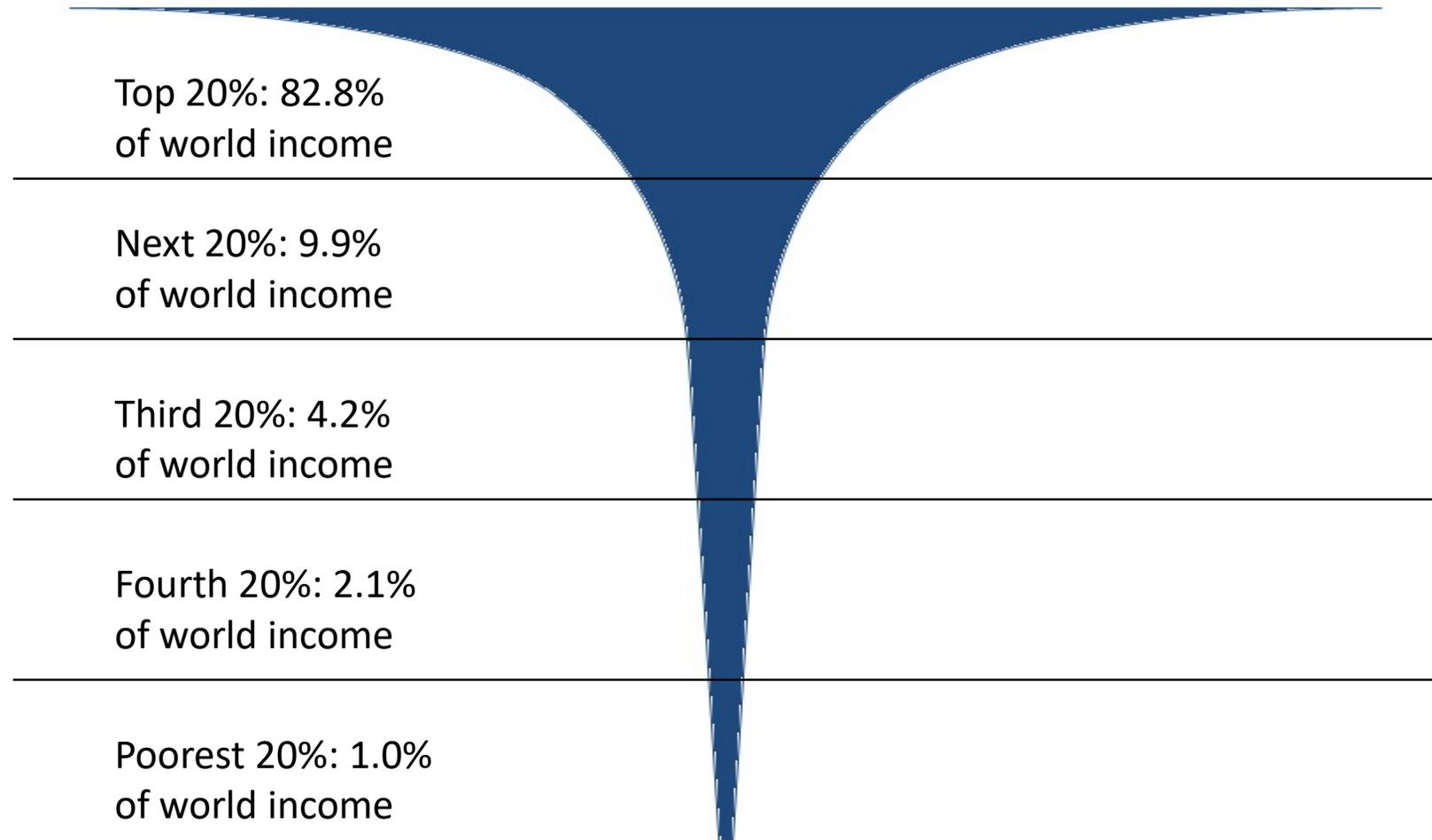
- a set of goals set forth by the United Nations in 2015, building on and expanding the Millennium Development Goals,
- including goals such as
 - battling inequality worldwide
 - promoting inclusive growth
 - limiting climate change

Inequality

The Kuznets Curve

- inverted-U relationship between economic growth and inequality
- initial stage of economic growth:
 - **inequality increases** as investment opportunities create a wealthy class
 - influx of rural laborers into cities keeps wages down
- further industrialization:
 - democratization, increases in education and safety-net policies
 - **inequality declines**

Figure - The unequal distribution of the world's income, 2007



Source: I. Ortiz and M. Cummings, "Global Inequality: Beyond the Bottom Billion," UNICEF Social and Economic Policy Working Paper, April 2011.

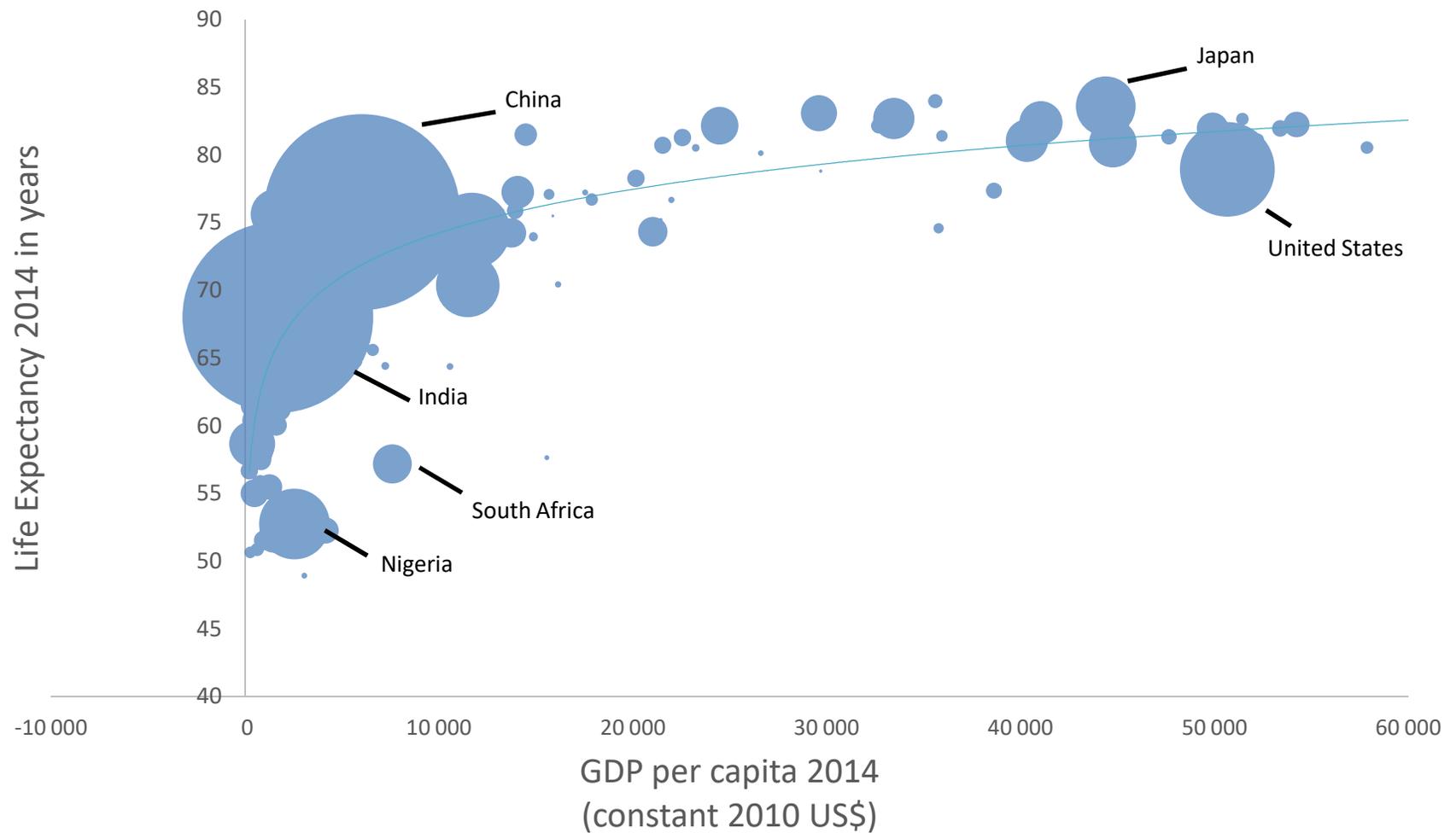
Policies that promote GDP growth and a reduction in the degree of income inequality

1. promote education
2. well-designed labor market policies and institutions
3. immigration and discrimination policies
4. tax policies

Studies of inequality

- countries that are more unequal in terms of income perform more poorly on many well-being indicators
- at very low levels of income per head, increases in per-capita income are associated with steep increases in life expectancy
- after a middle-income is reached, increases in income are associated with much more modest increases in life expectancy
- at high incomes the relationship flattens out

Figure 18.7 The relation between life expectancy and income, with area proportional to population



Source: World Bank, World Development Indicators Database, 2013.

Economic development and human development

- benefits of economic growth have been unevenly distributed
- much of the world's population has been left out in terms of living standards and well-being
- policies to achieve GDP growth should be balanced with promotion of human development goals
- indefinite GDP growth will be in the long term ecologically unsustainable

What to take home (I)

- for purposes of evaluating how economic growth is related to economic development, it is often helpful to focus on the growth rate of GDP *per capita*, that is, output *per person*.
- economic historian W.W. Rostow advanced the thesis that progress from “underdevelopment” to development invariably followed five steps
- the main principles of the Washington Consensus were: fiscal discipline, market liberalization and privatization, trade liberalization and openness to foreign investment.

What to take home (II)

- although industrialized countries have generally benefited from openness to trade, they have also typically used protectionism—tariffs and quotas to limit trade—to foster the development of important domestic industries
- poverty can be defined as the percentage of the population below what is known as the poverty line
- it is impossible to make all-encompassing statements about why many developing countries have failed to achieve sustained growth
- one factor that appears to be essential in almost every case for promoting growth and development is human capital