Macroeconomics: Lecture 6

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Introduction

Why growth matters?
Data on infant mortality rates:

- 20% in the poorest 1/5 of all countries
- 0.4% in the richest 1/5
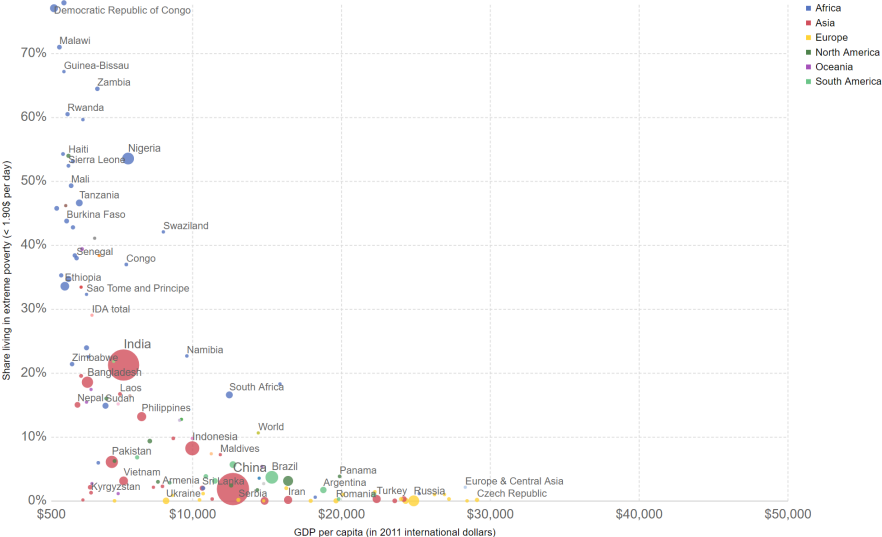- In Malawi, more than 70% of people live on less than $2/day.

One-fourth of the poorest countries have had famines during the past 3 decades.
Poverty is associated with oppression of women and minorities.

Income and Poverty in the World

The share of people living in extreme poverty vs GDP per capita, 2014
Both measures are adjusted for inflation over time and for price differences between countries (PPP adjustment) and are expressed in 'international dollars'.
Extreme poverty is defined as living with less than 1.90$ per day.

Our World in Data

Legend:
- ■ Africa
- ■ Asia
- ■ Europe
- ■ North America
- ■ Oceania
- ■ South America

Y-axis: Share living in extreme poverty (< 1.90$ per day)
X-axis: GDP per capita (in 2011 international dollars)

Selected data labels: Democratic Republic of Congo, Malawi, Guinea-Bissau, Zambia, Rwanda, Haiti, Sierra Leone, Nigeria, Mali, Tanzania, Burkina Faso, Swaziland, Senegal, Congo, Ethiopia, Sao Tome and Principe, IDA total, India, Namibia, Zimbabwe, Bangladesh, Laos, Nepal, Sudan, Philippines, South Africa, World, Pakistan, Indonesia, Maldives, Vietnam, Armenia, Sri Lanka, China, Brazil, Panama, Argentina, Kyrgyzstan, Ukraine, Serbia, Iran, Romania, Turkey, Russia, Europe & Central Asia, Czech Republic

Fact 1: **There is enormous variation in per capita income across economies. The poorest countries have per capita incomes that are less than 5 percent of per capita income in the richest countries.**

Several notes:

- Income per capita (or GDP per capita) is not the sole measure of what is good: but it's a useful summary statistic
- Income per capita ignores distribution of income within a country
- Comparing income per capita across countries is not trivial
    - You have to convert between currencies
    - Countries have different relative prices for goods
    - What is the "right" way to value haircuts, apples, or cars across countries?

Rich Countries

Country	GDP per capita 2008	GDP per worker 2008	LF Part. Rate 2008	Avg. Growth 1960-2008	Years to Double
United States	$43,326	$84,771	0.51	1.6	43
Japan	33,735	64,778	0.52	3.4	21
France	31,980	69,910	0.46	2.2	30
United Kingdom	35,345	70,008	0.51	1.9	36
Spain	28,958	57,786	0.50	2.7	26

Poor Countries

Country	GDP per capita 2008	GDP per worker 2008	LF Part. Rate 2008	Avg. Growth 1960-2008	Years to Double
China	6,415	10,938	0.59	5.6	13
India	3,078	7,801	0.39	3.0	24
Nigeria	1,963	6,106	0.32	0.6	114
Uganda	1,122	2,604	0.43	1.3	52

Growth Miracles

Country	GDP per capita 2008	GDP per worker 2008	LF Part. Rate 2008	Avg. Growth 1960-2008	Years to Double
Hong Kong	37,834	70,940	0.53	4.3	16
Singapore	49,987	92,634	0.54	4.1	17
Taiwan	29,645	62,610	0.47	5.1	14
South Korea	25,539	50,988	0.50	4.5	16

Growth Disasters

Country	GDP per capita 2008	GDP per worker 2008	LF Part. Rate 2008	Avg. Growth 1960-2008	Years to Double
Venezuela	9,762	21,439	0.46	-0.1	-627
Haiti	1,403	3,164	0.44	-0.4	-168
Madagascar	810	1,656	0.49	-0.1	-488
Zimbabwe	135	343	0.40	-1.5	-47

Distribution of Population by GDP per Worker, 2008
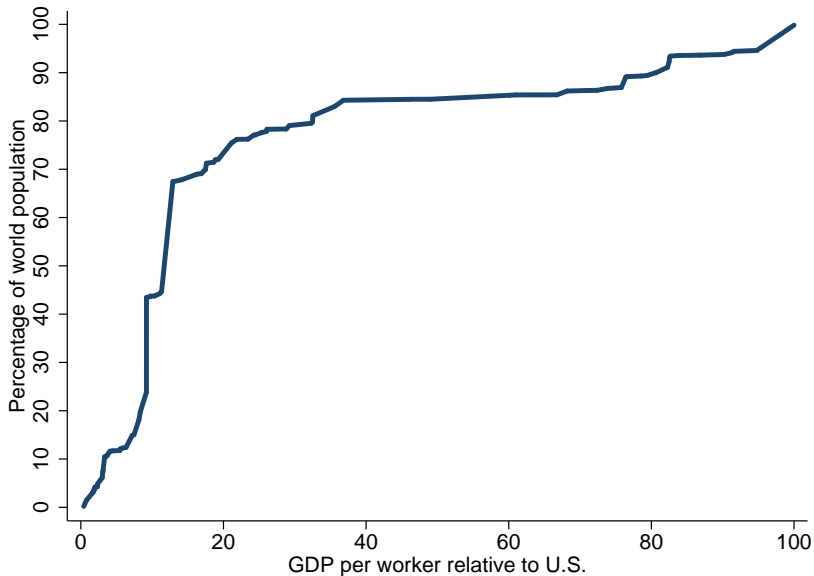
World Population by GDP per Worker, 1960 and 2008
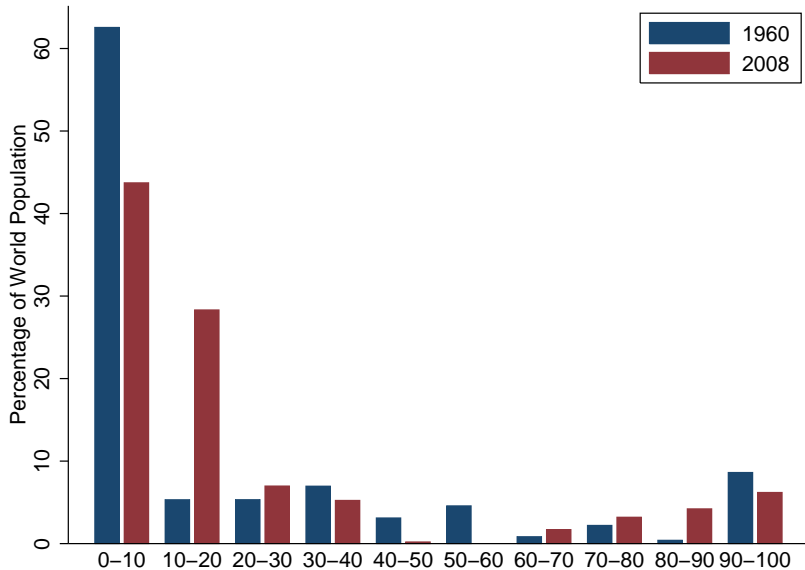
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Fact 2: **Rates of economic growth vary substantially across countries.**
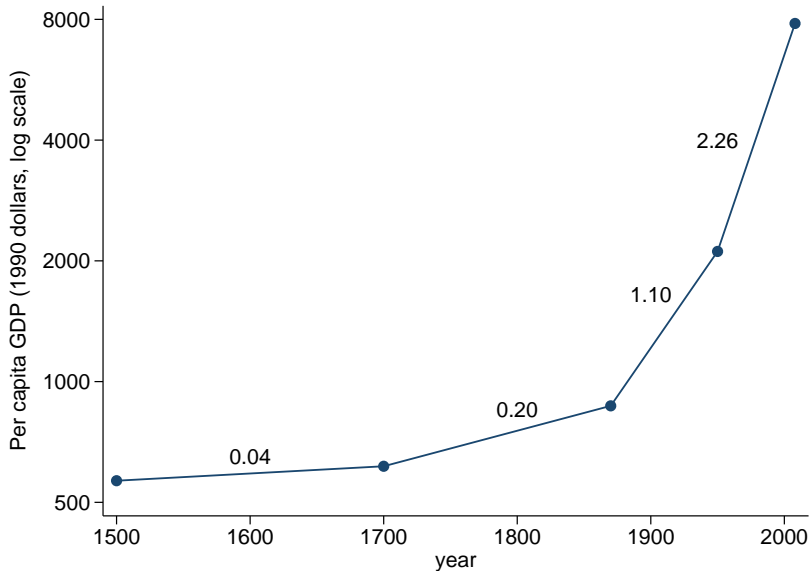
Notes:

- We will try to distinguish whether these are long-term differences or just transitional differences
- If they are long-term, then eventually some countries will be infinitely rich compared to others
- We think most differences are transitional

Fact 3: **Growth rates are not generally constant over time. For the world as a whole, growth rates were close to zero over most of history but have increased sharply in the twentieth century. For individual countries, growth rates also change over time.**

Note:
- The big changes in growth rates over history are from pre-Industrial Revolution (close to 0% growth) to modern times (roughly 1.85% growth per year for developed countries)
- The big changes in growth rates within countries tend to be as they transition from poor to rich (e.g. Japan or China), after which growth slows down.

World GDP per Capita Growth Rates

Introduction

Fact 4: **A country's relative position in the world distribution of per capita incomes is not immutable. Countries can go from being "poor" to being "rich", and vice versa.**
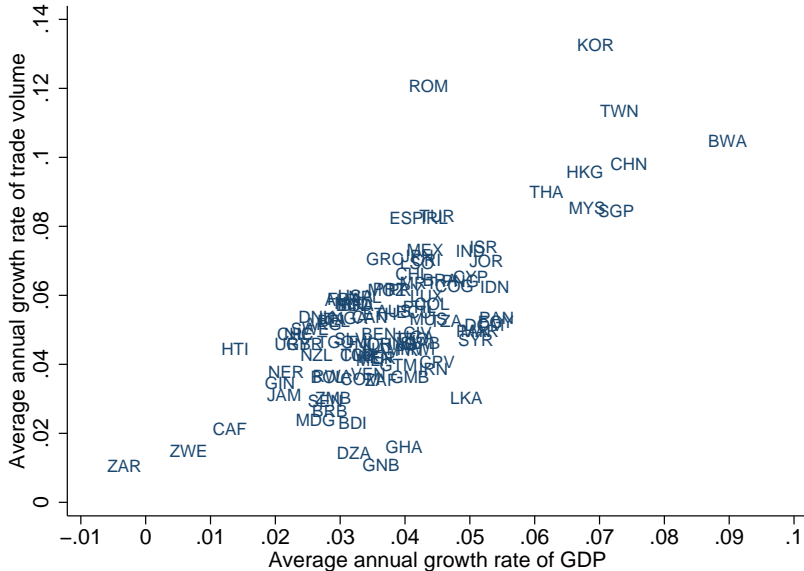
Notes:

- The "growth disasters" in the table were all very well off in 1960 compared to East Asia. Now they are well behind
- The "growth miracles" in the table were though, in 1960, to be on the path to starvation and destitution.
- What are the sources of these movements in rankings?

Fact 5: **Growth in output and growth in the volume of international trade are closely related.**

Notes:
- Growth in trade is associated with growth in output, but not necessarily level of trade (Japan does not actually trade much, but is rich)
- Rapid growth in trade is no necessarily just growth in exports from East Asia (China and Korea also import a lot more than they used to)

Growth in Trade and Growth in Output

Fact 7: **Both skilled and unskilled workers tend to migrate from poor to rich countries or regions.**

Notes:
- Implies that return to both kinds of labour is higher in developed countries
- Shouldn't scarcity in poor countries imply a large premium to skilled workers?

Big Questions

Why are some countries so rich and others so poor?

Answers?

- Level differences
- Different levels of human capital
- Different institutions supporting innovation/technology adoption/entrepreneurship

Big Questions

What is the engine of growth?

Answers?
- Technological progress - new goods, or better versions of old goods
- Not accumulation of more physical or human capital - those cannot sustain growth
- Ultimately technological progress will rely on population - more people, more ideas

Big Question

What creates growth miracles in some countries?

Answers?
- Reversing what made them poor
- Changing institutions to foster technology adoption (copying?)
- Changing institutions to create larger markets (trade, internal markets) to support innovation/adoption

PPP Measurement

Assume that the average consumer in Russia and the average consumer in the United States buy the quantities and pay the prices indicated in the table below:

	Food		Non-Food Item	
	Price	Quantity	Price	Quantity
Russia	300,000 Roubles	1	40,000 Roubles	1
United States	$10,000	1	$10,000	1

A few points:

- In Russia, an average person buys car once a 15 years.
- $1 = 10 Roubles.

It turns out that per-capita consumption in Russia is $2,000.

PPP Measurement

- We can improve upon the calculation we just did.
- It would be nice if we have some common prices.
- Let's say we use the American prices.
- If we use American prices and substitute them into Russian bundle..

PPP Measurement

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- If we use American prices and substitute them into Russian bundle..
- .. Russian consumption is $0.07 * 100 + 1 * 10,000$
- This type of computation is at the heart of PPP estimates.
- These estimates use average prices across countries.