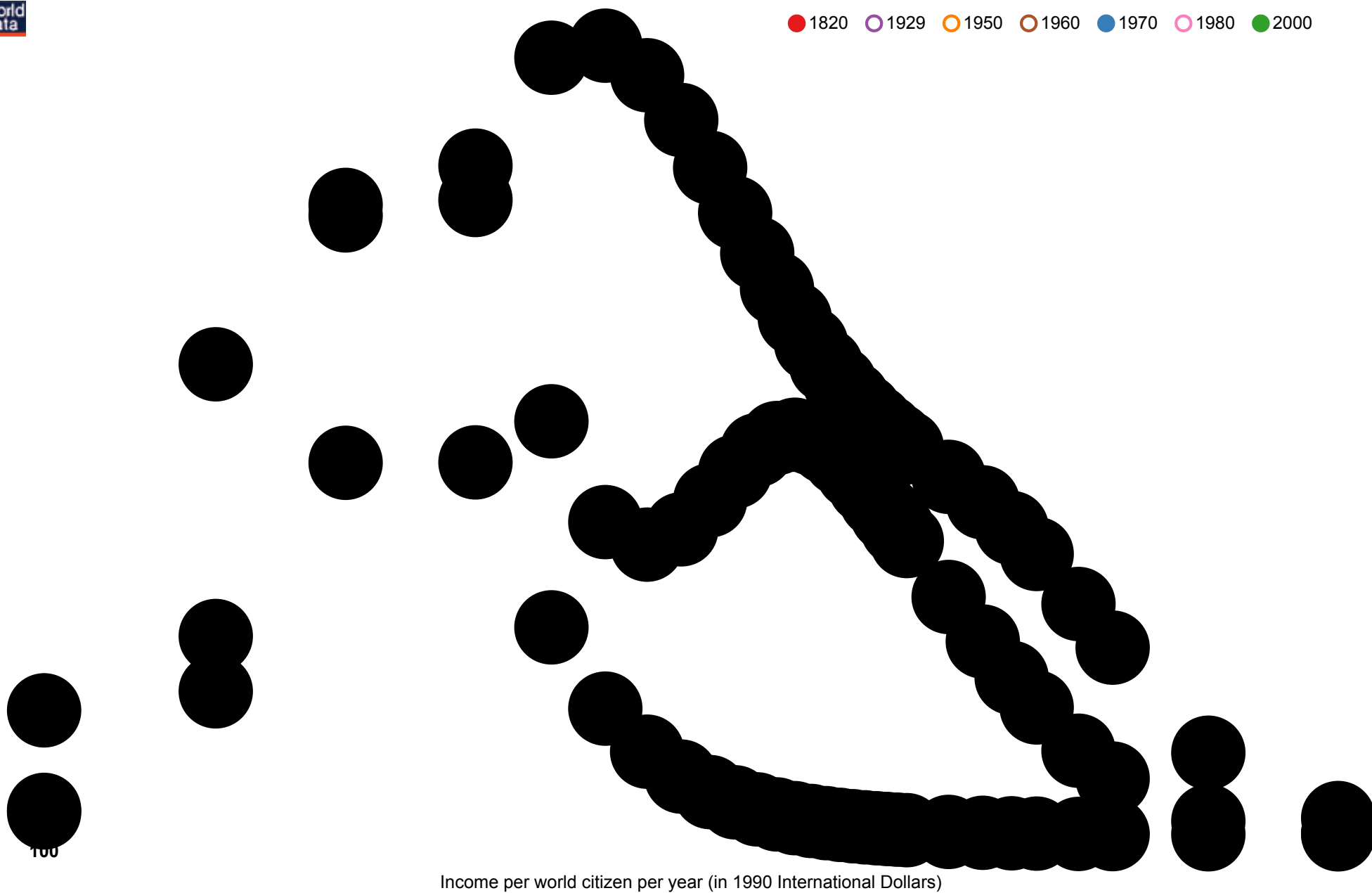


Global Inequality

ECON 499: Economics of Inequality

Winter 2018

1820 1929 1950 1960 1970 1980 2000

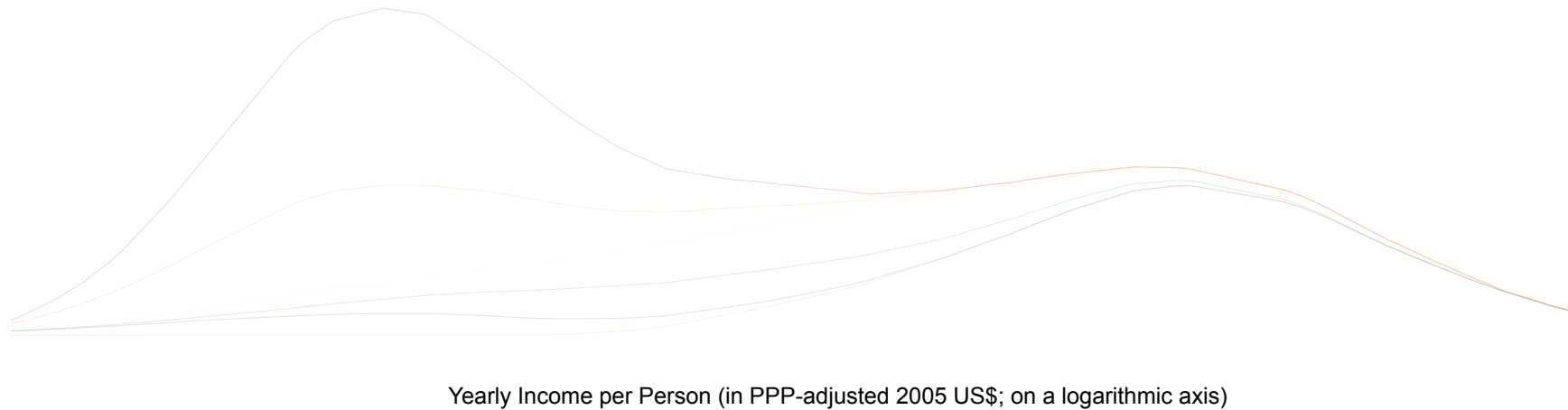


○ 1988 ○ 1993 ○ 1998 ○ 2003 ○ 2008 ○ 2011

● Stacked ○ Stream ○ Expanded

- Developed Countries
- Russia, Central Asia, SE Europe and Middle East & Northern Africa
- Other Asia
- China
- Sub-Saharan Africa
- Latin America & Caribbean
- India

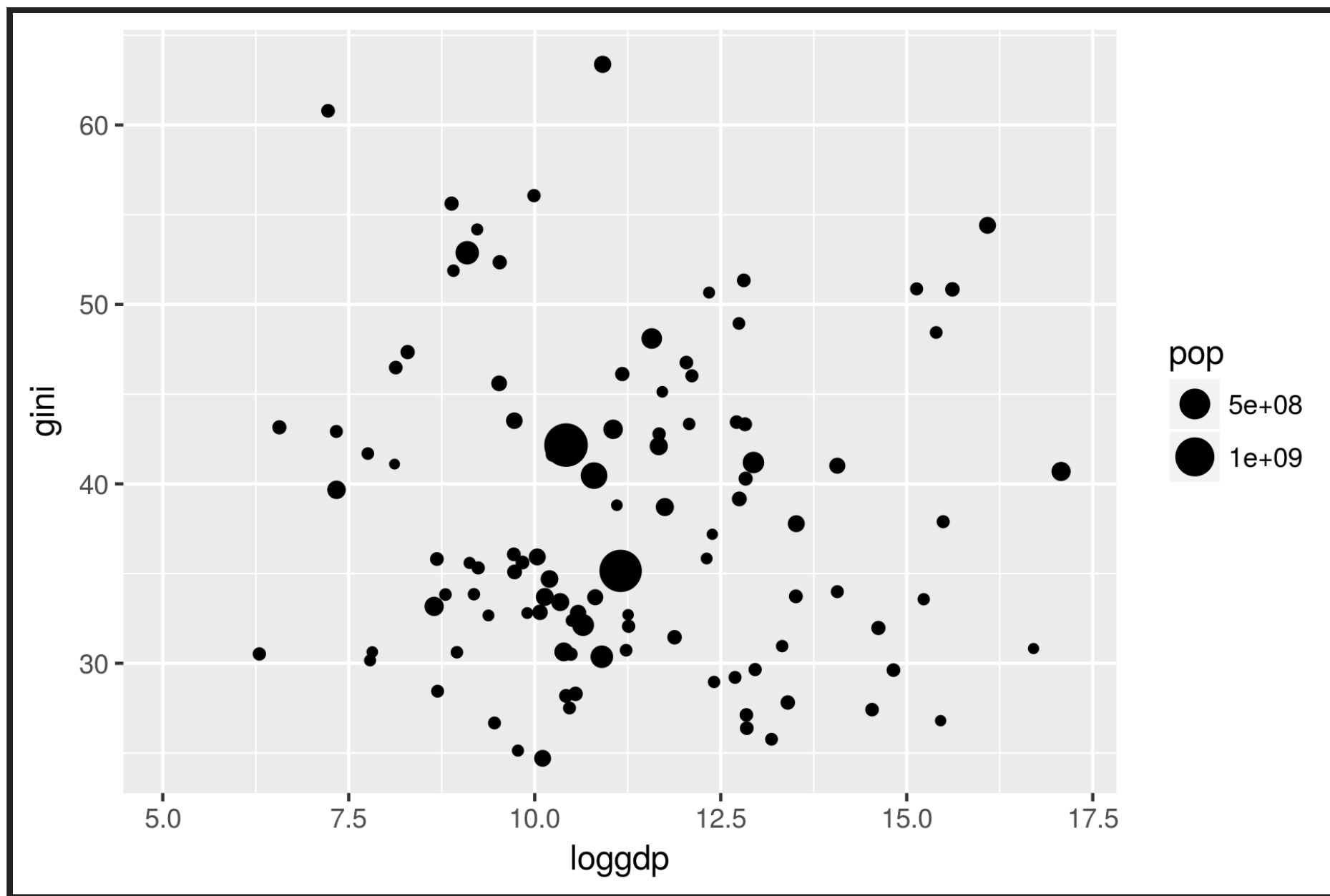
s is scaled such that the total area under the graph corresponds to the total regional (or global) population (of those countries that are included in the database)



This visualisation is licensed under a [CC BY-SA license](https://creativecommons.org/licenses/by-sa/4.0/). You are welcome to share but please refer to its source where you find more information: ourworldindata.org/data/growth-and-distribution-of-prosperity/inequality-between-world-citizens/
 Citation to the paper: [Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession](#), Christoph Lakner and Branko Milanovic, World Bank Economic Review, Advance Access published August 12, 2015.
 Data Visualization by Max Roser and Zdenek Hynek

How does growth affect inequality?

- Does inequality go up or down as countries get richer?
- Kuznets: Inequality goes up, then goes down

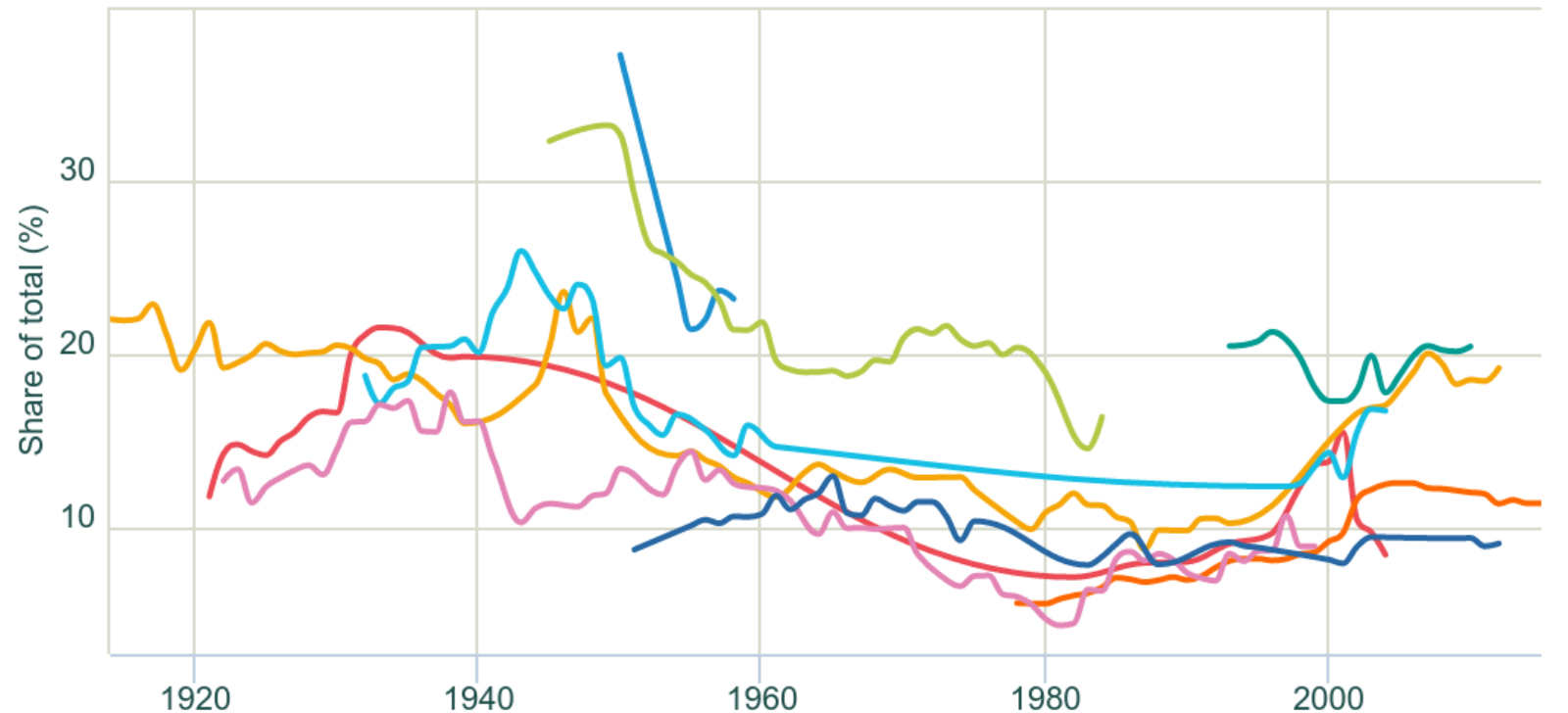


Source: World Bank

Growth and inequality

- In the cross section it does not appear the wealthier countries have lower inequality
- We would like know how inequality evolves as countries develop
- We don't have great data on this!
- Piketty, Saez, Zucman (and others): World Wealth and Income Database

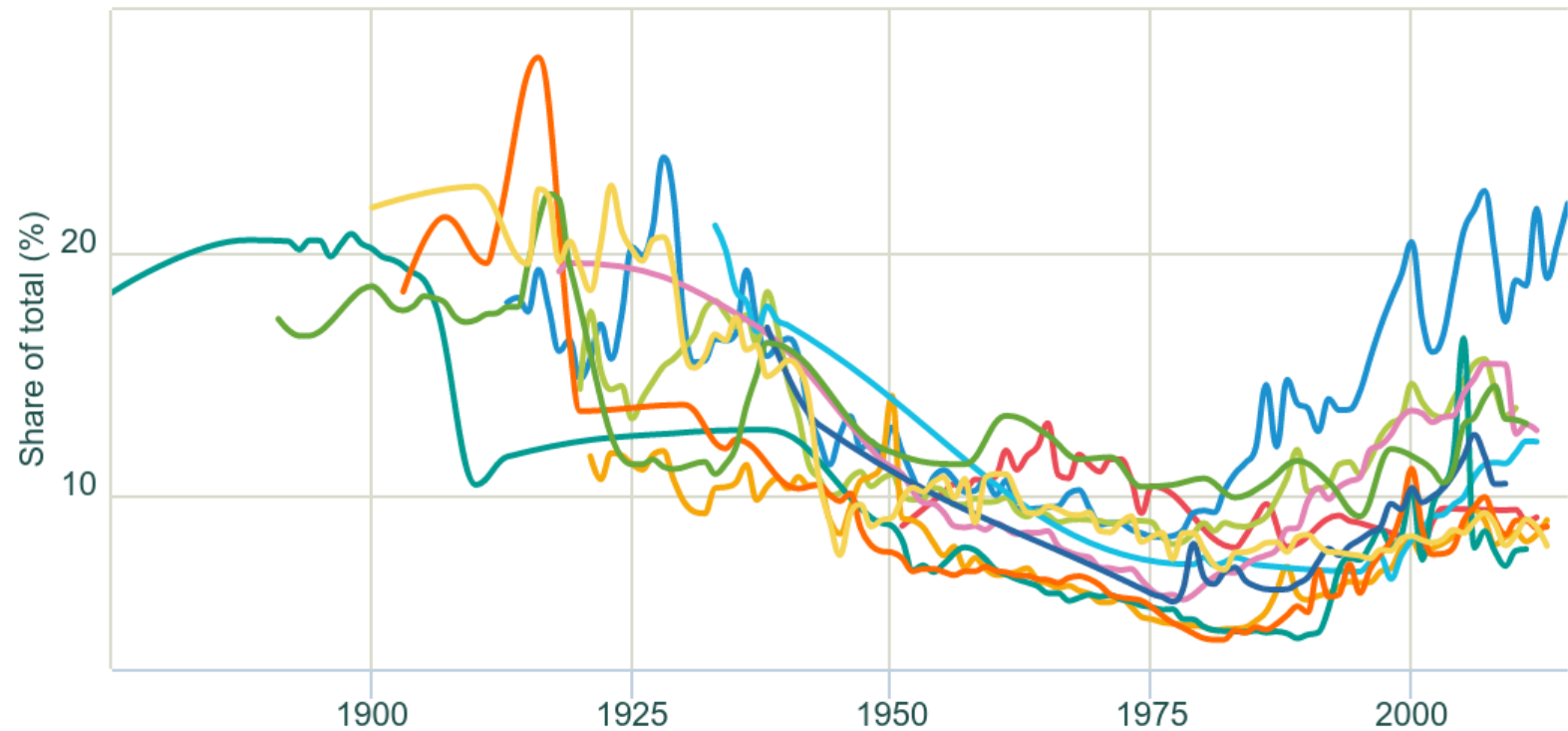
Top 1% fiscal income share



Indonesia Zambia Zimbabwe South Africa Argentina Colombia
China India Malaysia

Graph provided by www.wid.world

Top 1% fiscal income share

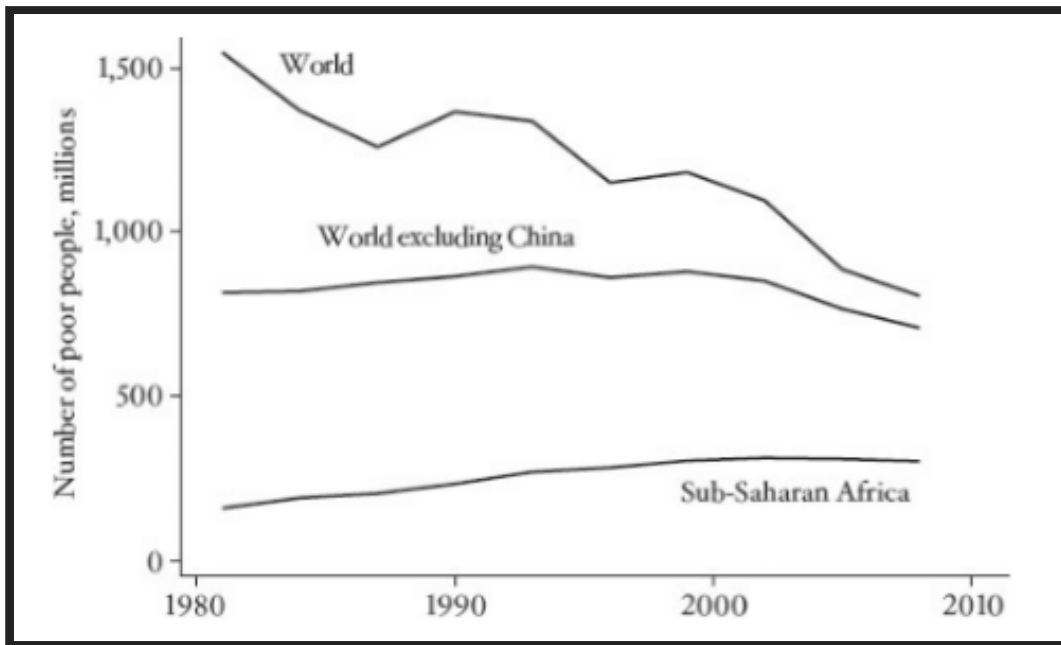


— Malaysia — USA — Canada — Australia — Korea — Norway — Sweden
— United Kingdom — Ireland — Germany — France

Graph provided by www.wid.world

Growth and inequality

- Growth doesn't appear to make top incomes diverge among developing countries
- What about low income? Are people "left behind" by development?
- We can look at poverty rates

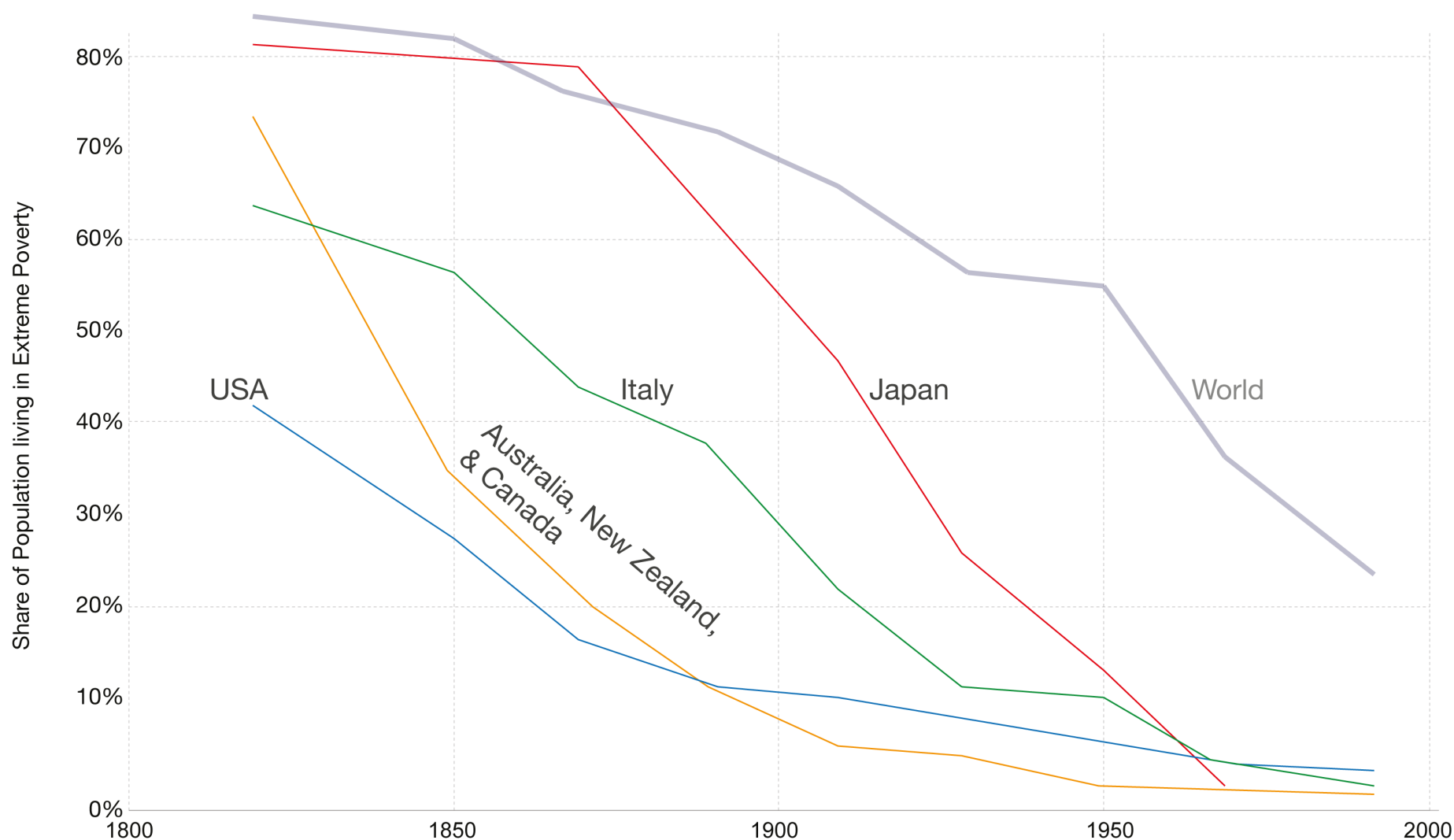


Source: Deaton (2013)

The reduction of extreme poverty in countries that are rich today, 1820–2000

The absolute poverty is defined as living with less than \$1.25/day. This is measured by adjusting for price changes over time and for price differences between countries (purchasing power parity (PPP) adjustment).

Our World
in Data



Data source: Based on data from Ravallion (2014) – “Poverty in the Rich World When It Was Not Nearly So Rich” – via World Bank.
The interactive data visualization is available at OurWorldinData.org. There you find the raw data and more visualizations on this topic.

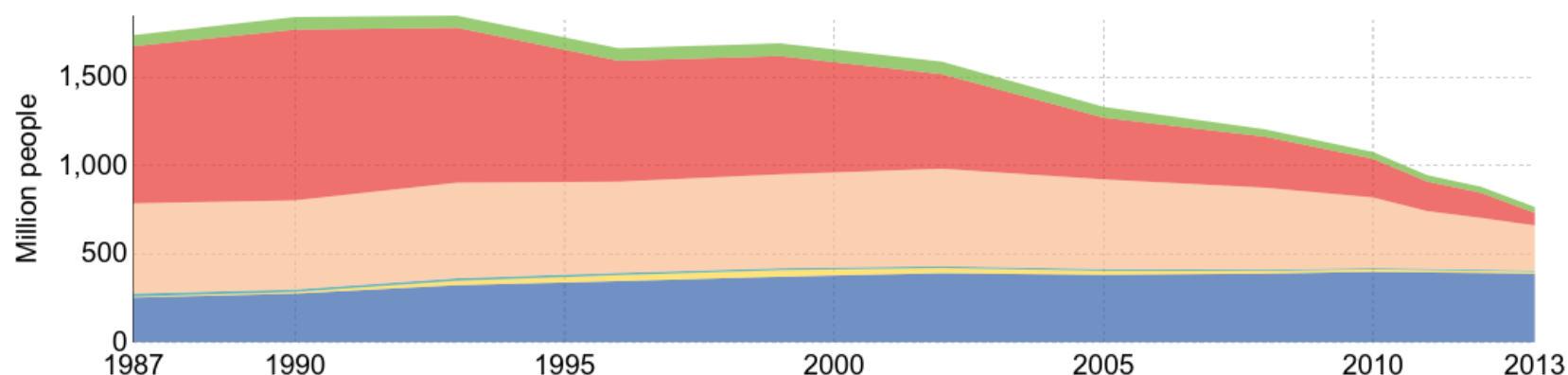
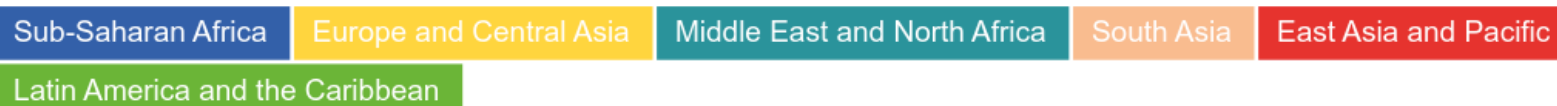
Licensed under [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) by the author Max Roser.



Total population living in extreme poverty, by world region, 1987 to 2013



Numbers are in millions of people. Extreme poverty is defined as living with per capita household consumption of less than 1.90 international dollars per day (in 2011 PPP prices). International dollars are adjusted for inflation and for differences in price levels across countries.



Data source: [World Poverty Absolute Number by Region - PovcalNet \(World Bank\)](#)

Note: Consumption per capita is the preferred welfare indicator for the World Bank's analysis of global poverty. However, for about 25% of the countries, estimates correspond to income, rather than consumption.

OurWorldInData.org/extreme-poverty/ • CC BY-SA

Poverty

- Poverty has fallen dramatically at a global level
- Poverty reductions in China and India (35% of global population) are important cause
- Poverty in sub-Saharan Africa has not changed much

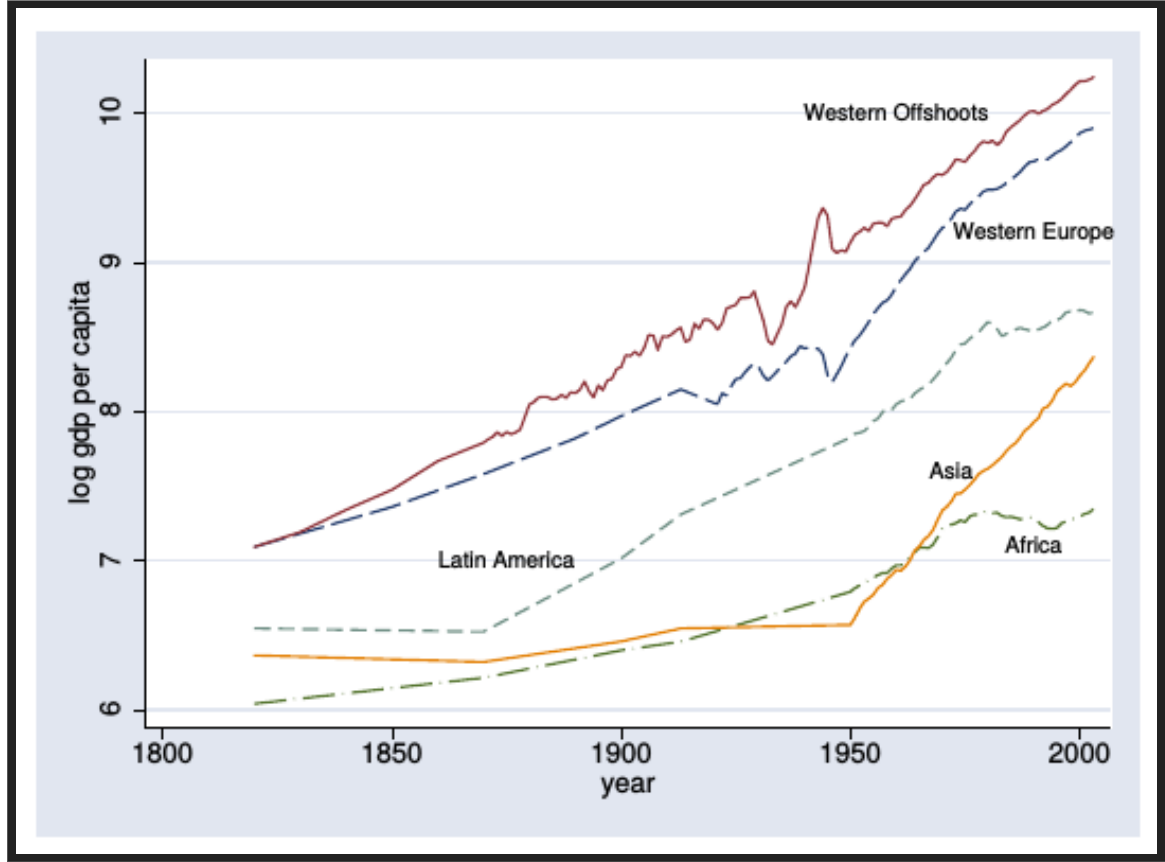
Between-country inequality

- Global inequality has been falling
- Within-country inequality has been (relatively) constant
- Between country inequality must be falling
- Poor countries must be growing faster than rich countries

Exponential growth

"Rule of 70"

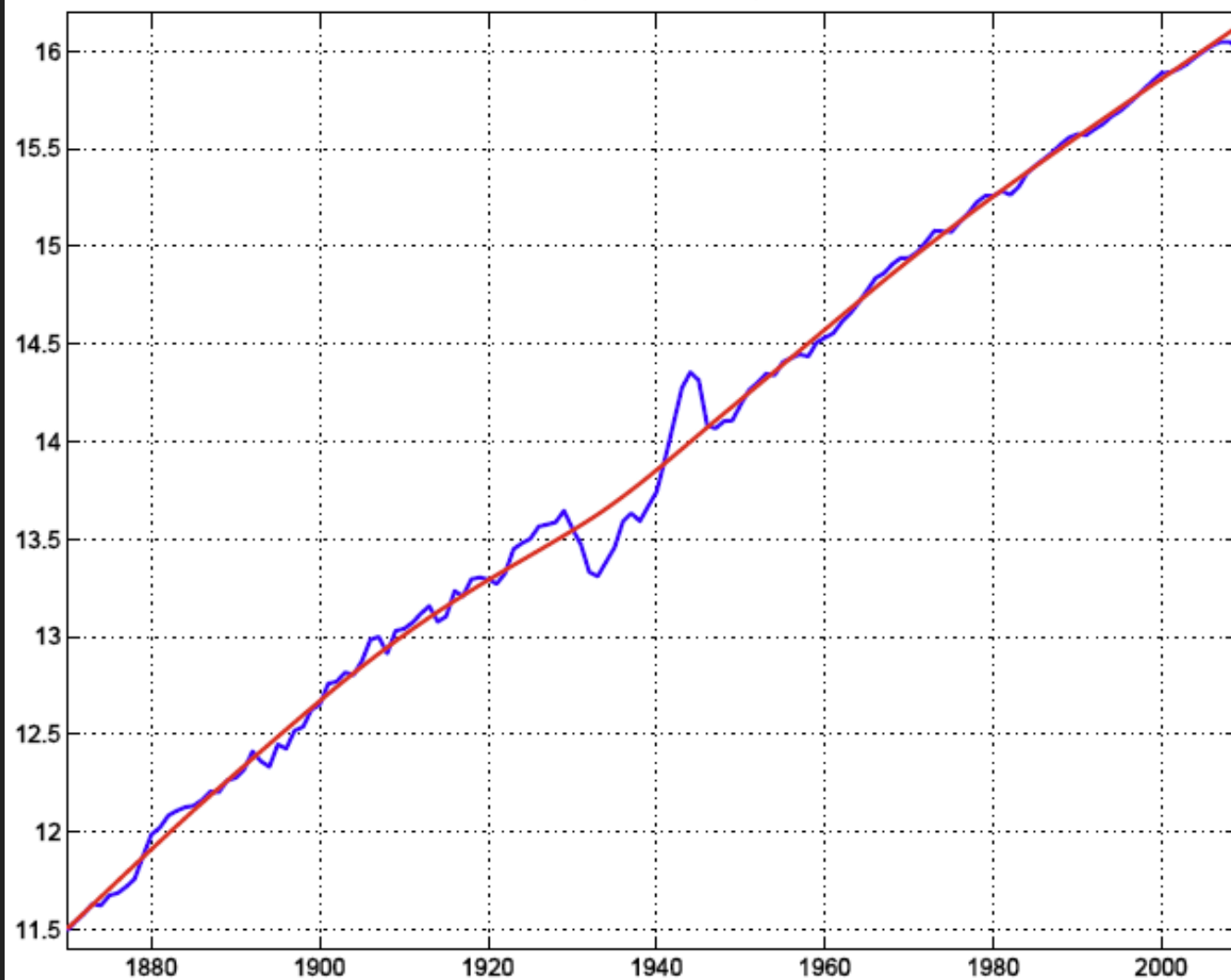
- Imagine income grows at an exponential rate $g\%$ per year
- Income will double in $70/g$ years
- USA: $g=2.5\%$ \rightarrow average income doubles every 28 years (the average person has twice as much income as their parents at the same age)
- China: $g=7\%$ \rightarrow average income doubles every 10 years
- Lucas (1988): "Once one starts to think about [economic growth], it is hard to think about anything else."



Solow growth model

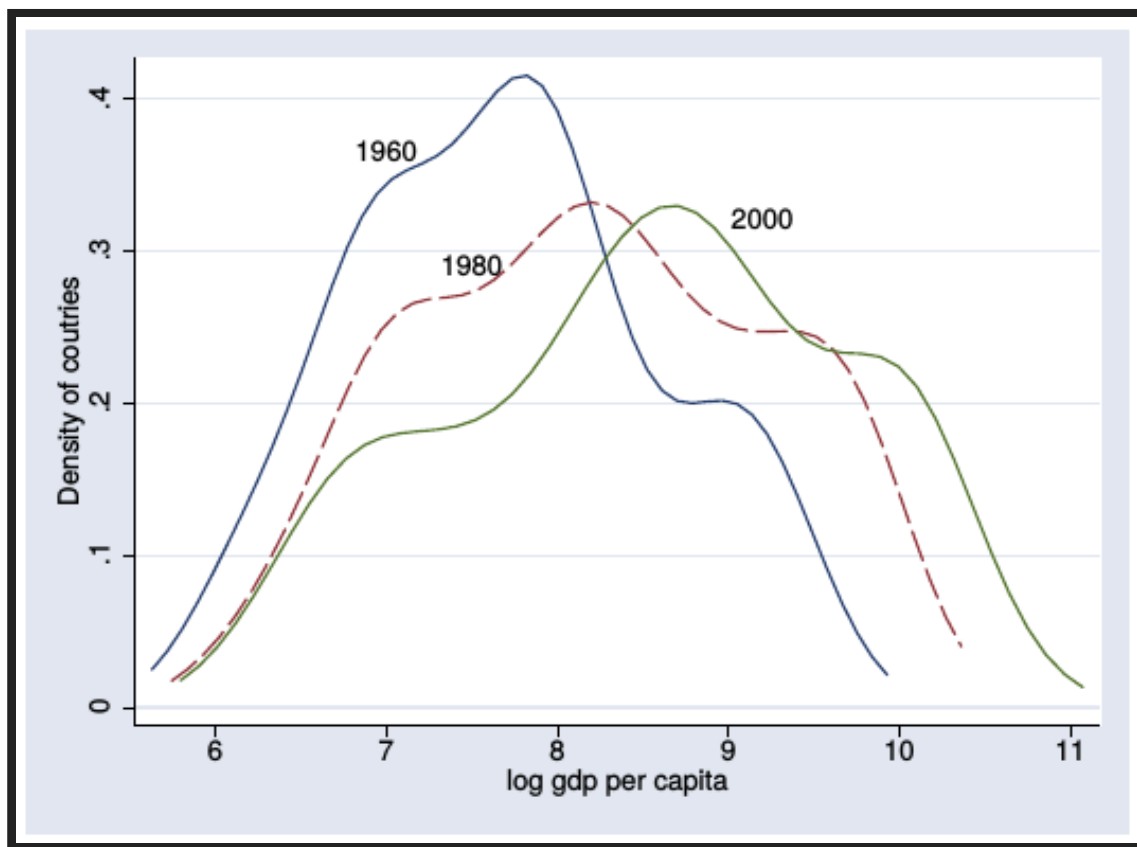
- Workers consume part of their income, save the rest
- Savings are capital investments for firms (banks loan out savings)
- Capital is productive, makes workers more efficient → wages increase
- Workers save more, causing capital to increase, etc...
- Diminishing marginal returns to capital: Eventually additional capital will not have much of an effect on productivity, growth levels off
- "Steady state:" Capital and income grow at a constant rate, determined by technological growth

U.S. REAL GDP, 1870-2008, LOG SCALE



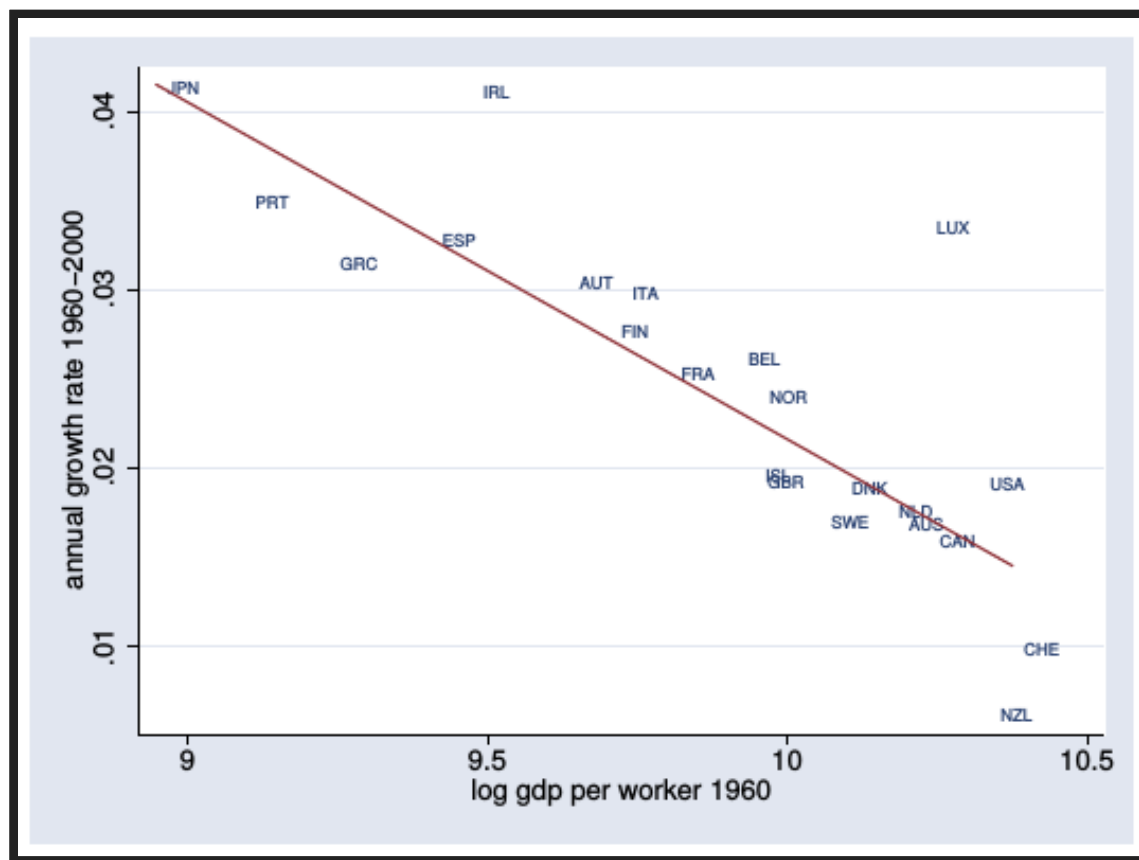
Convergence

- Technology is easily transferable, so steady state growth should be the same in every country
- Countries with below steady-state capital should grow faster than countries at steady state
- Poor countries should grow faster than rich countries



Conditional convergence

- Countries that are similar to each other tend to converge in income
- What are those similarities?
- Politics, education, institutions, technology, etc



Summary

- Decreases in inequality at global level driven by India and China
- Solow model predicts growth of middle income countries will eventually slow down (converge)
- Poor countries may be "left behind" unless they figure out how to grow
- Low growth rates in poor countries means that the gap between rich and poor will get larger over time