Development Policy

ARE INCOMES CONVERGING?

Solow growth model predicts that incomes will converge

- Based on a set of restrictive assumptions
  - Constant returns to scale
  - Diminishing returns to the factors: marginal returns to capital investment should be higher in the developing world (because capital/labor ratios are lower)
  - Full employment
- But are incomes converging? Yes and no.
  - Measurement issues
  - Unit of analysis: People or countries?
  - Absolute converge vs conditional convergence

Measuring Incomes

- Problems in comparing incomes across countries – Purchasing Power Parity exchange rates

Just Pho, 252 W 31st St. New York, NY, USA

Just Raw Beef Pho		Just Cooked Beeffects Pho	
Meduim	$11.50	Meduim	$11.50
Large	$13.50	Large	$13.50

Phở 24 –, Pasteur, Quận 1, TP.HCM

PHỞ

Phở bò tái
49,000 đ

Phở bò chín
49,000 đ

Phở bò viên
49,000 đ

Phở gà
49,000 đ

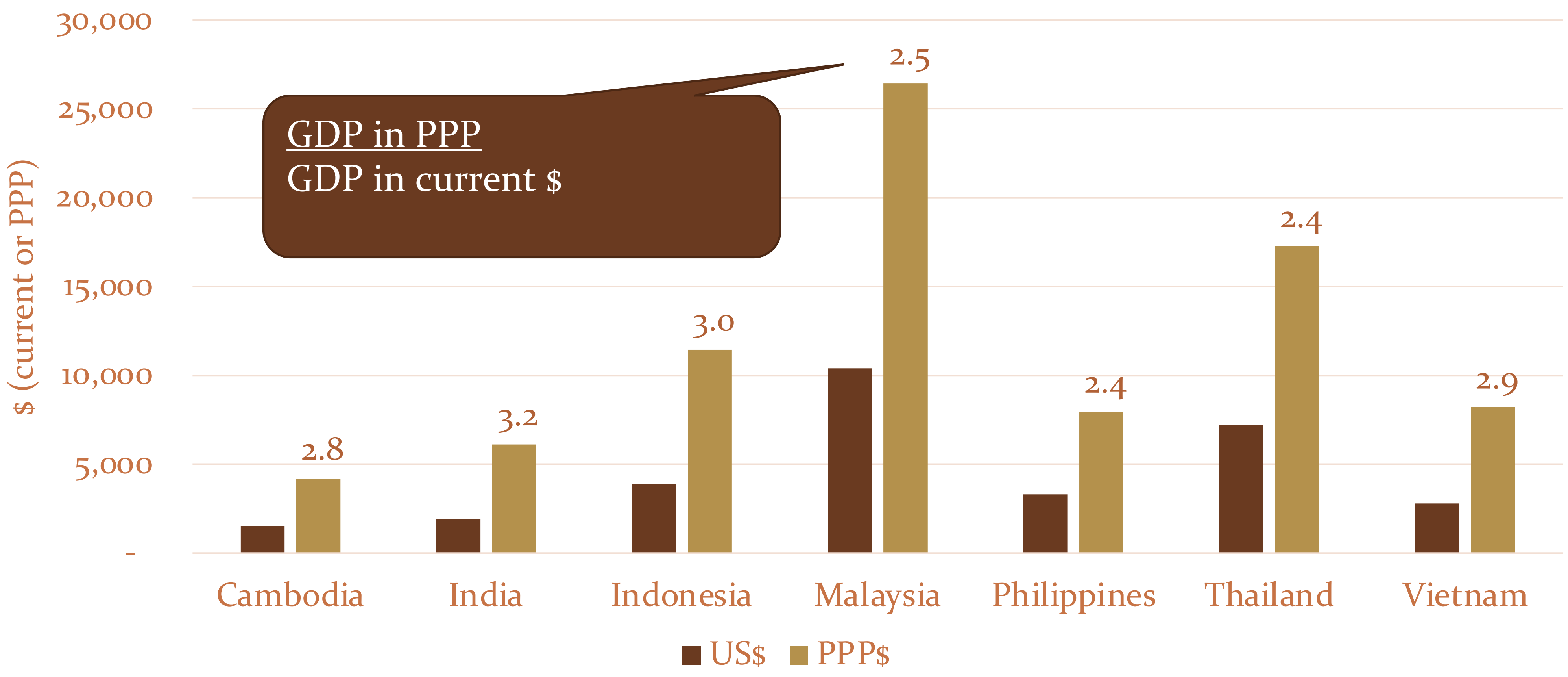
US$ 11.50 = VND 264,574 at the official exchange rate

USD$11.50 = VND 85,947 at PPP exchange rates

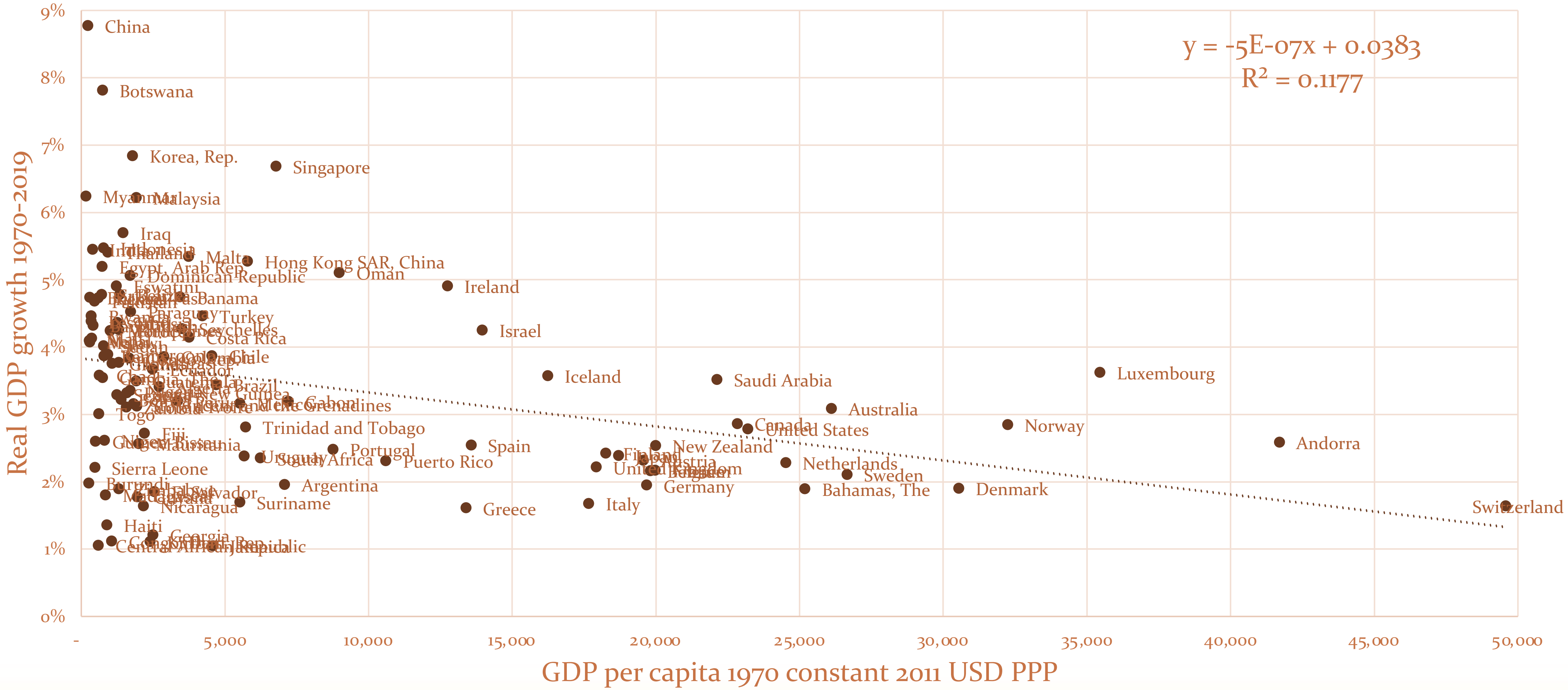
Purchasing power parity exchange rates

- Official exchange rates are affected by many factors, especially interest rates and the current account balance.
- We need a better way to compare incomes and living standards across countries because things are cheaper in poor countries (labor costs)
- Purchasing power exchange rates give us "international" dollars that can buy the same bundle of goods everywhere, but
    - People buy different "bundles" of goods and services in different countries
    - Even the same goods may be of different quality or different in other ways
    - There are no unit prices for many of the things that we buy (health care, housing)

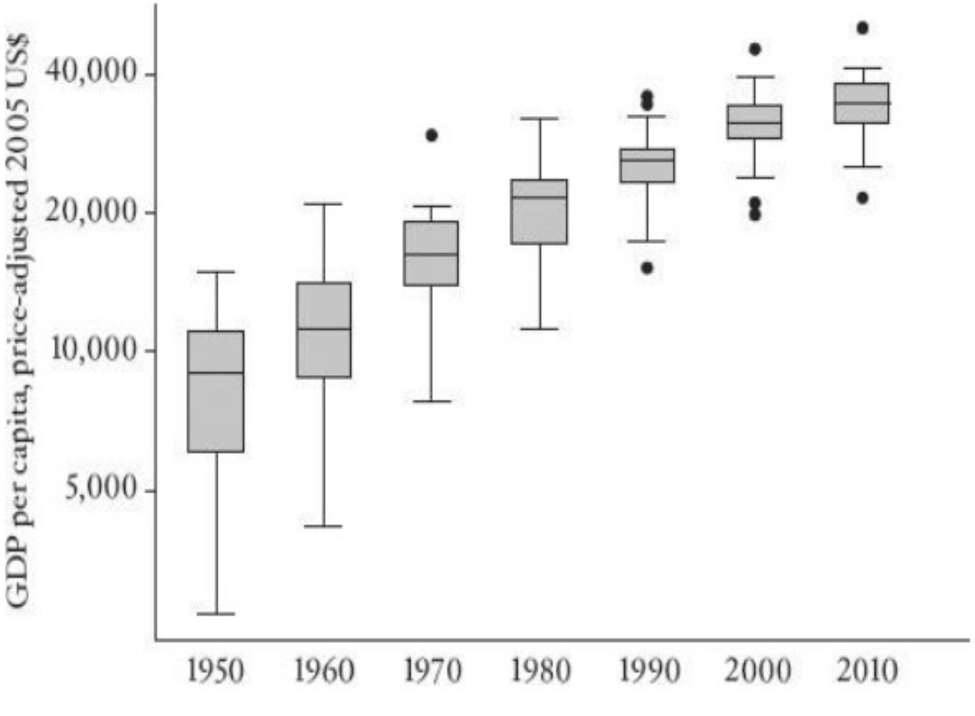
GDP per capita at official and PPP exchange rates



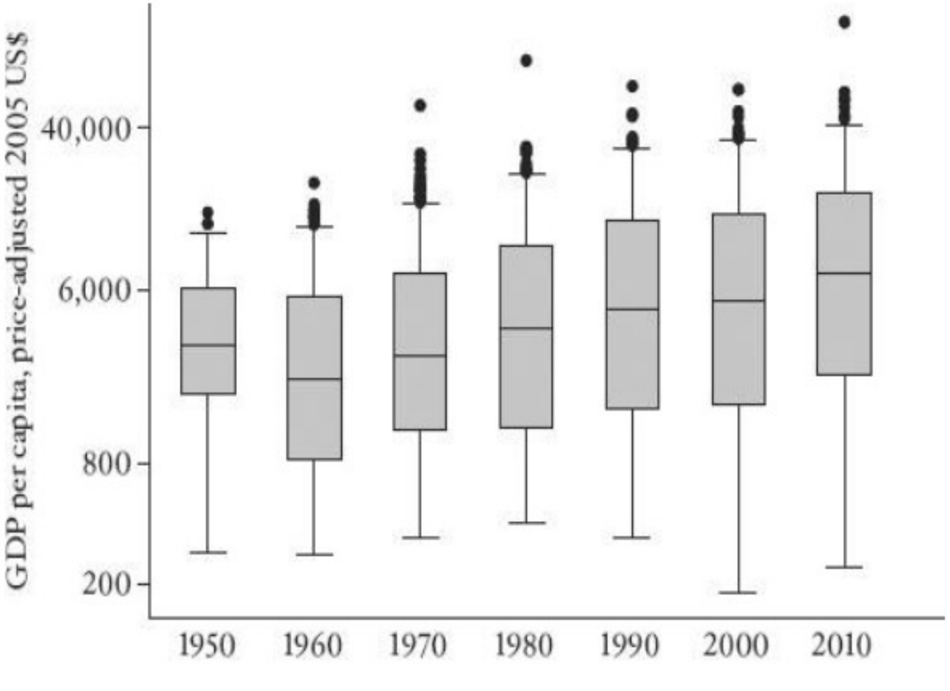
No evidence of "unconditional" convergence in income



Convergence clubs, and divergence “big time” (9:1 ratio in 1870, 50:1 in 1990 (Pritchett)



24 rich countries (Australia, Austria, Belgium, UK, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, NZ, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, USA



All countries

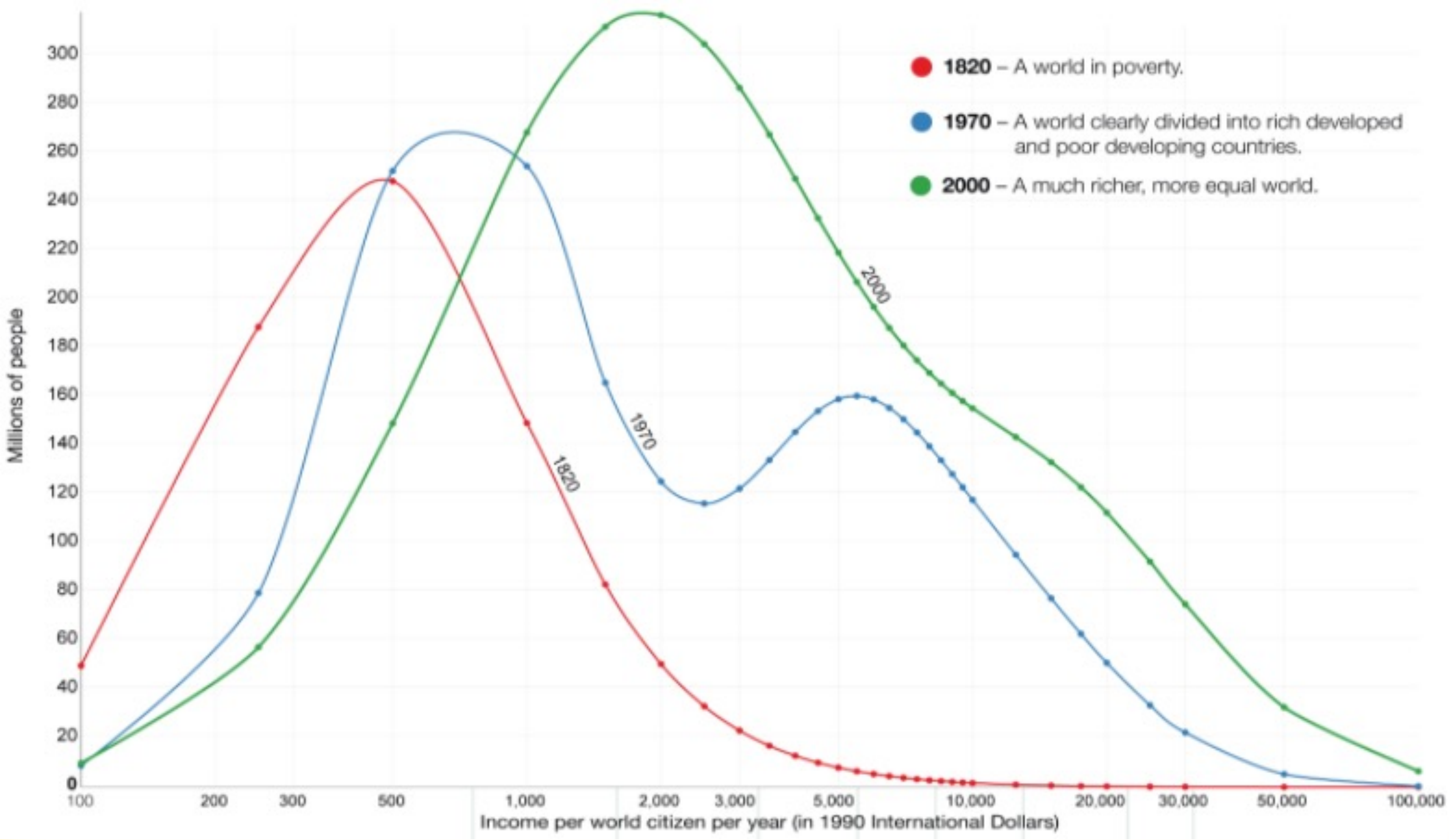
Convergence clubs

- North America, Europe, Australia and New Zealand grew rapidly after World War II and then slowed after the 1970s
- Sharing of technology, knowledge, institutions, finance
- Another convergence club formed in East Asia around Japan: Korea, Taiwan, Hong Kong and Singapore (NICS) from the 1970s
- Is there a new convergence club around China?
- Other than these two clubs were see tremendous variation in outcomes, not just between countries but also by the same countries over time (Mexico, Brazil)

But if the unit of analysis is people not countries…

- The world is becoming much more equal
- India and China have more than 40% of global population and they are growing quickly (or were until Covid-19) – but they are also becoming more unequal
- Rise of the new middle classes in Asia
- Even as inequality within countries is rising, inequality between countries is falling

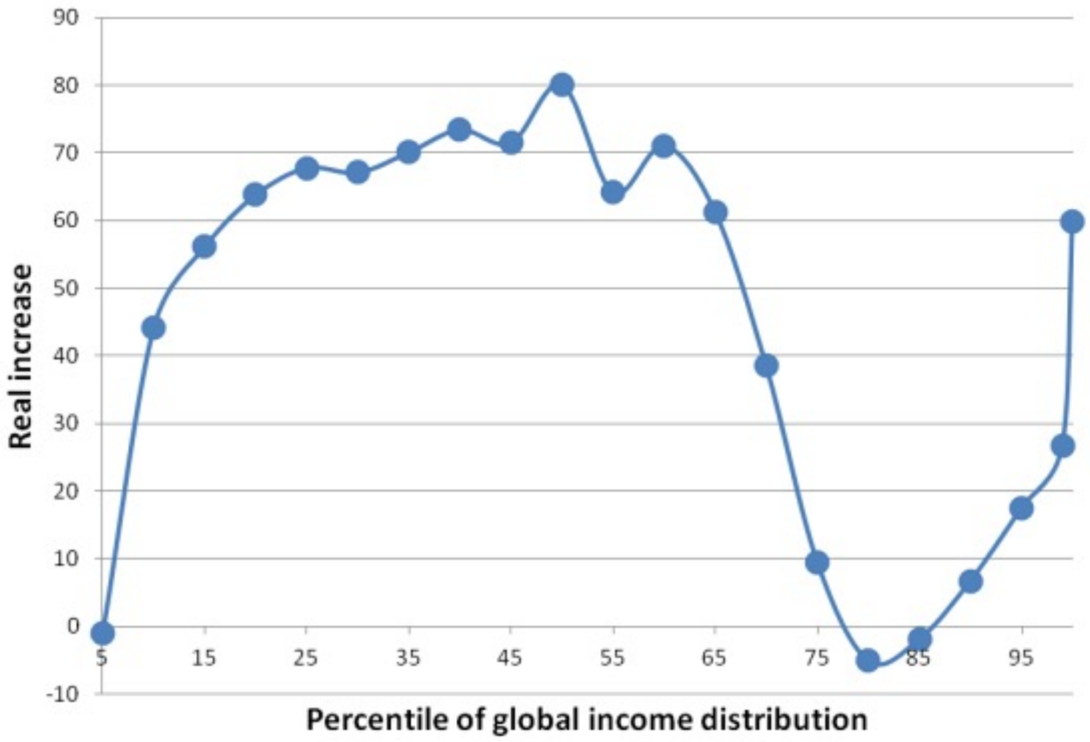
Between country inequality



Between country inequality has fallen if weighted by population

- China and India are 40% of the world's population
- They have grown faster than rich countries so global distribution of income has improved

The Elephant Chart

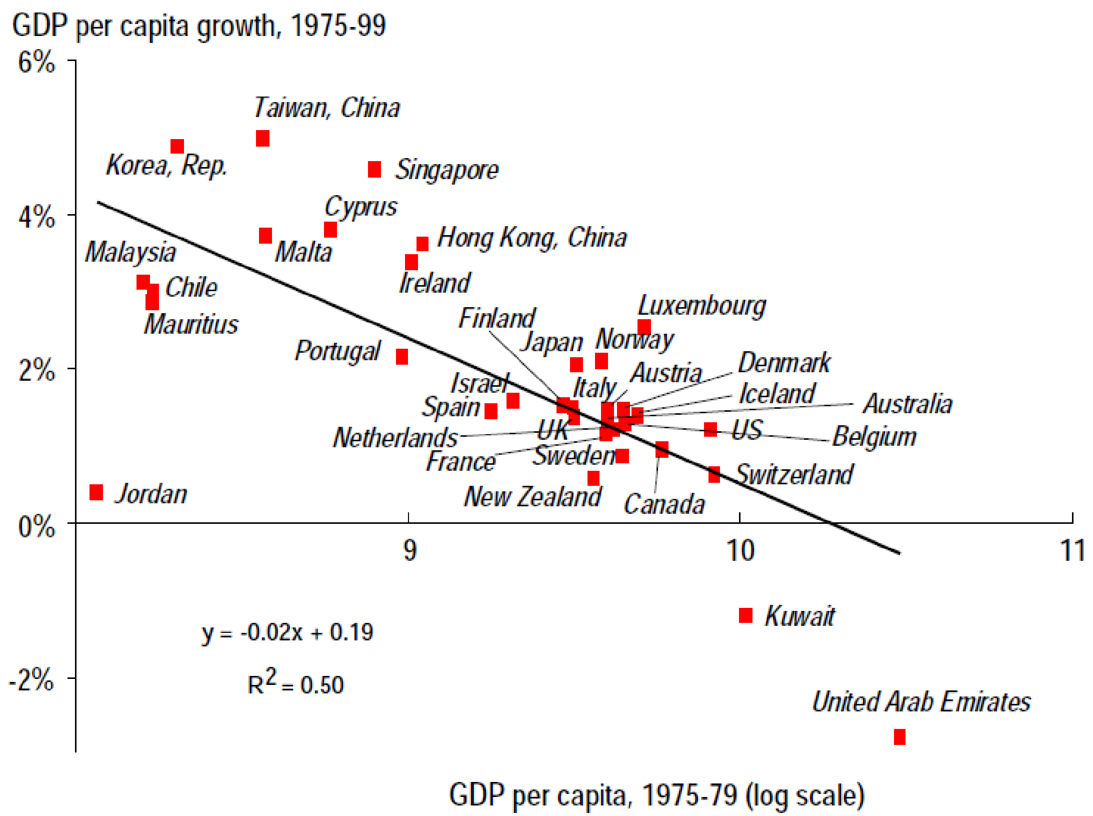


- Branko Milanovic, 2012 "Global Income Inequality by the Numbers"
- Measures changes in real income 1988-2008 for each percentile of the global distribution of income in constant US dollars
- The winners were in the middle of the global distribution: the new middle classes in Asia
- The losers were the moderately rich: The US and European middle classes

Conditional convergence

- Neoclassical economists were not happy with the absence of income convergence so they set about to explain it
- Incomes would be converging *if* certain things were happening
  - If we control for variations in human capita (Barro 1990)
  - If we control for variations in trade liberalization l (Sachs and Warner 1995)
  - If we control for variations in rule of law (Kaufmann and Kraay 1999)
  - If we control for ethno-linguistic diversity (Easterly and Levine 1997)
  - If we control for patterns of colonial settlement (Sokoloff and Engerman 2000)
  - Etc.
- Often called "beta" convergence (alpha is initial income per capita and beta is some parameter like human capital or corruption)

Convergence among countries with good rule of law



Source: Kaufmann, Kraay, and Zoido-Lobaton (1999)

But

- The betas tend to correlated with each other, and also with the rate of investment
- They show instability depending on years selected, countries selected and the functional form
- The only thing that correlates consistently with growth is investment

Summing up: Have we seen convergence in incomes?

- Pritchett: Divergence 'Big Time' → Prediction of the Solow Model have not materialized
  - Gap between the rich and poor has increased, with some exceptions
  - Growth theory explains neither the growing gap nor the few exceptions that have "caught up" with the advanced capitalist countries
- But if the unit of analysis is people the world is becoming more equal
- "Conditional" convergence:
  - Investment is the factor that is most closely associated with growth – Solow model says rate of investment has no effect on growth
  - Successful countries have increased exports to realize economies of scale (remember Adam Smith)