



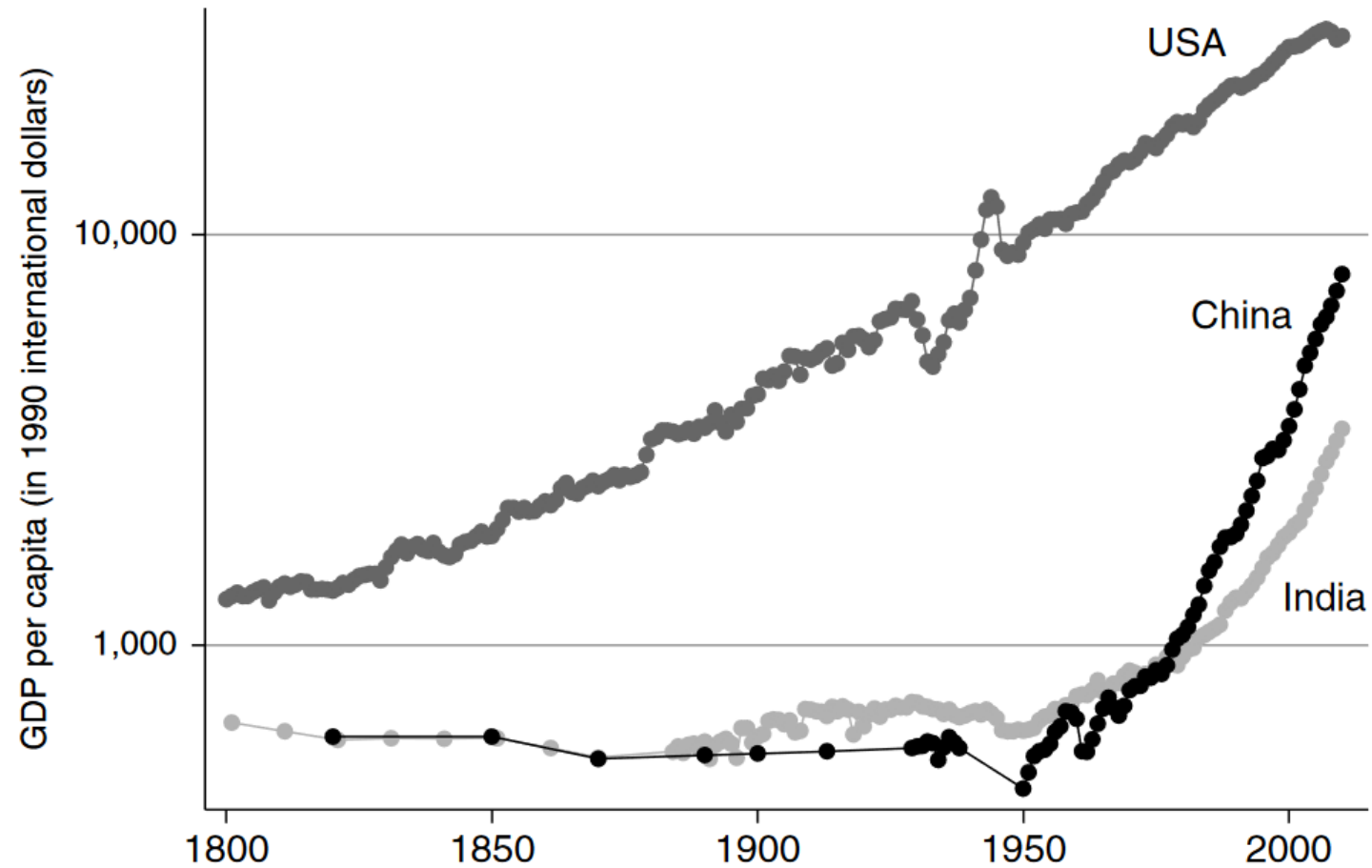
FULBRIGHT  
UNIVERSITY  
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FULBRIGHT SCHOOL OF  
PUBLIC POLICY AND MANAGEMENT

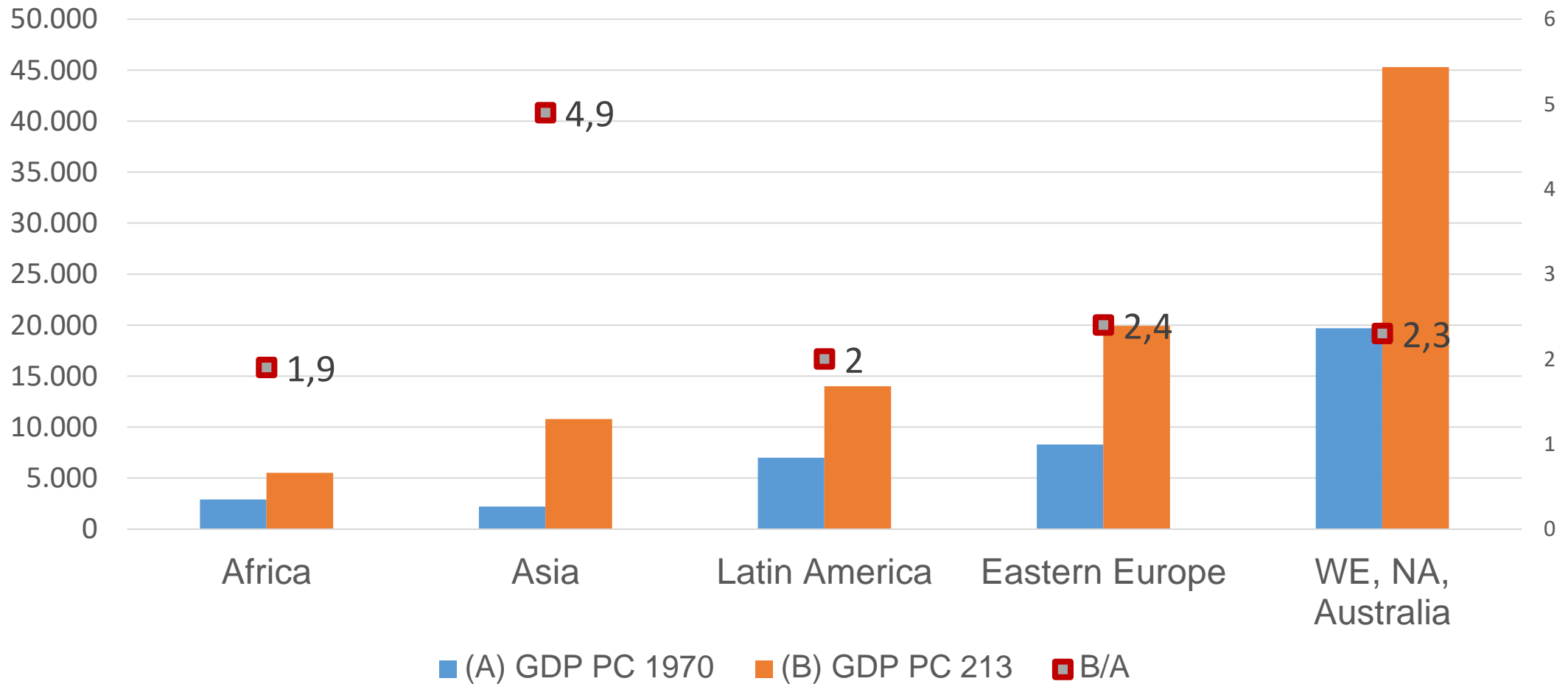
# Convergence in Incomes

Development Policy  
Summer 2023

# Global income convergence: Awakening giants



# Global income divergence: Africa and Latin America falling further behind





# Measuring income: Purchasing Power Parity exchange rates

Just Pho, 252 W 31<sup>st</sup> St. New York, NY, USA

## Just Raw Beef Pho

Medium. . . . . \$11.50  
Large. . . . . \$13.50

## Just Cooked Beef Pho

Medium. . . . . \$11.50  
Large. . . . . \$13.50

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

Phở 24 —, Pasteur, Quận 1, TP.HCM

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

PHỞ



**Phở bò tái**  
49,000 đ



**Phở bò viên**  
49,000 đ



**Phở bò chín**  
49,000 đ



**Phở gà**  
49,000 đ

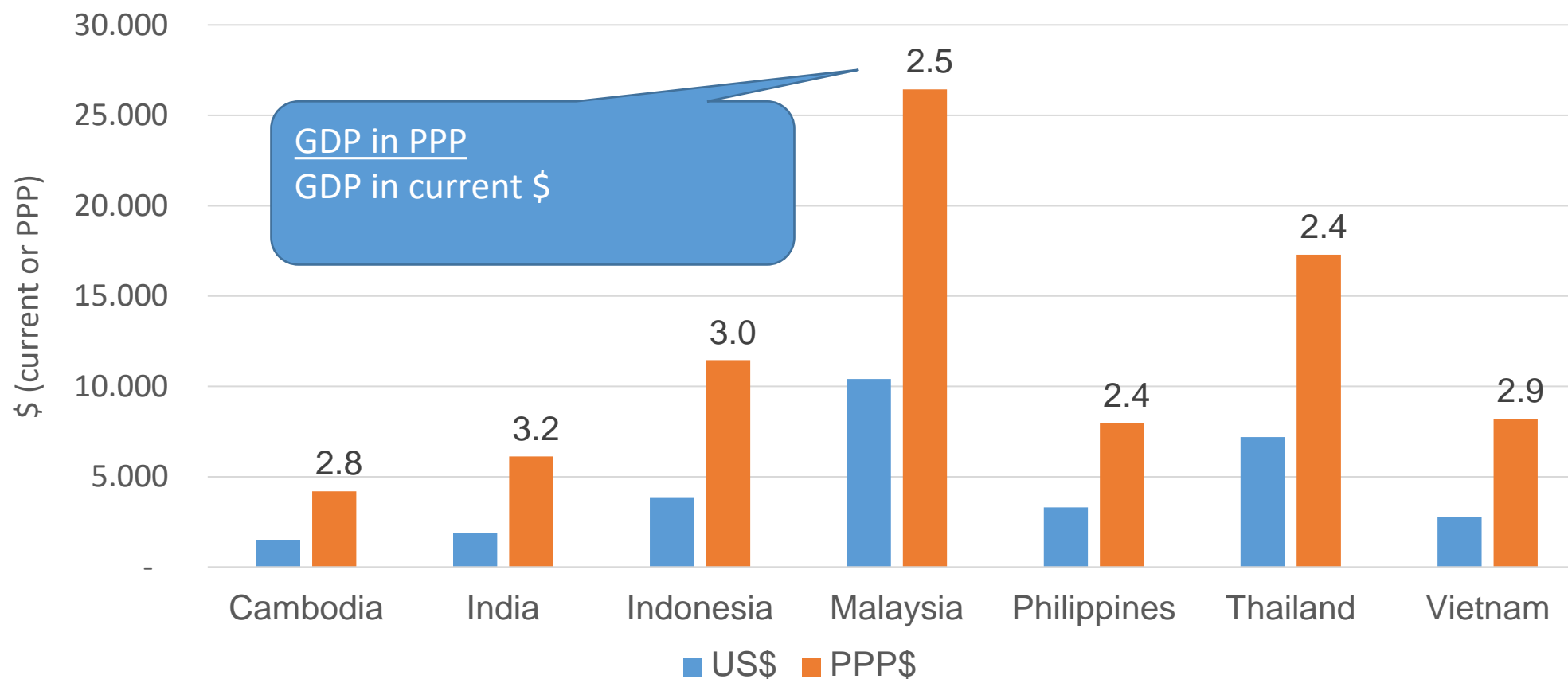


# Purchasing Power Parity exchange rates

- 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)

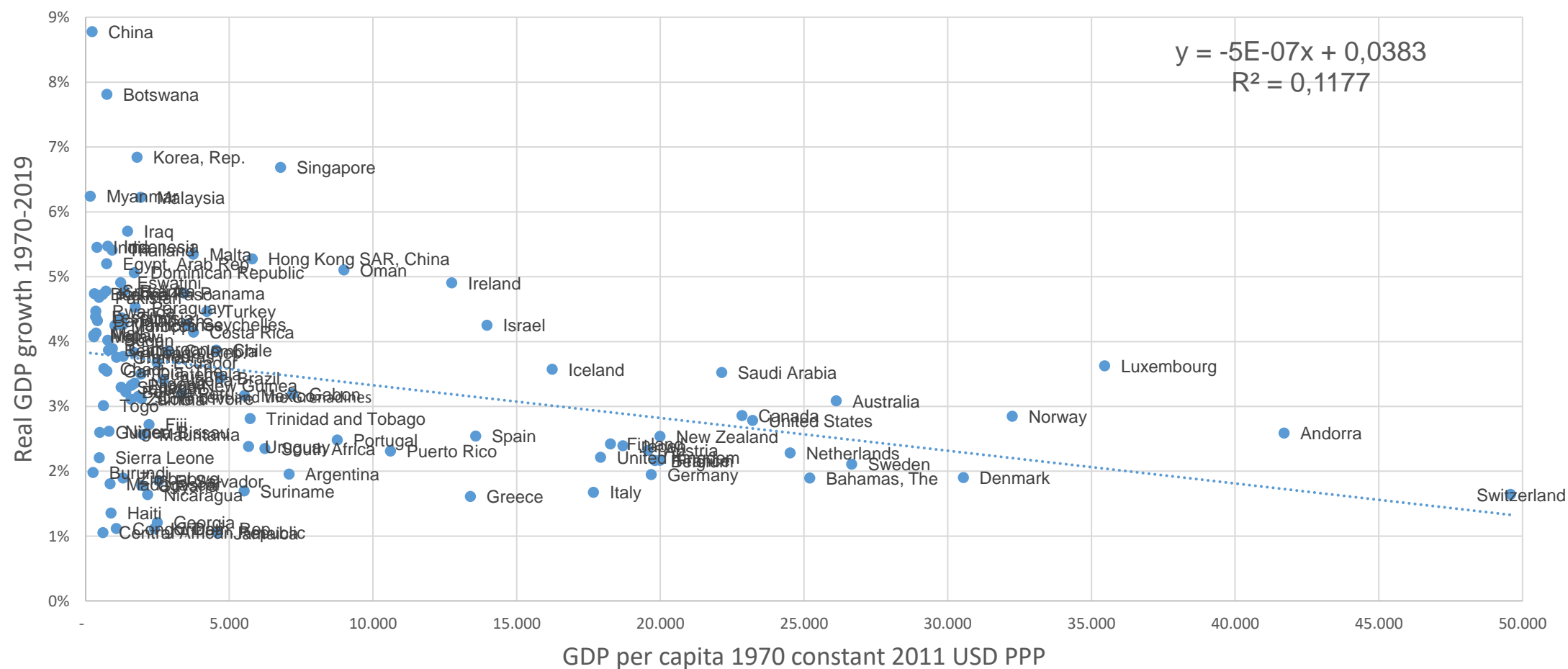


# GDP at official and PPP exchange rates





# No “unconditional” income convergence





## “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 I (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)





## “Conditional” convergence

- There does tend to be a negative relationship between growth rates and initial per capita incomes
- However, the “beta” coefficients are not stable (depend on which variables are included, the countries included in the sample and the years)
- The only consistent relationship is between growth and investment.
- If investment is included, none of the betas are significant.

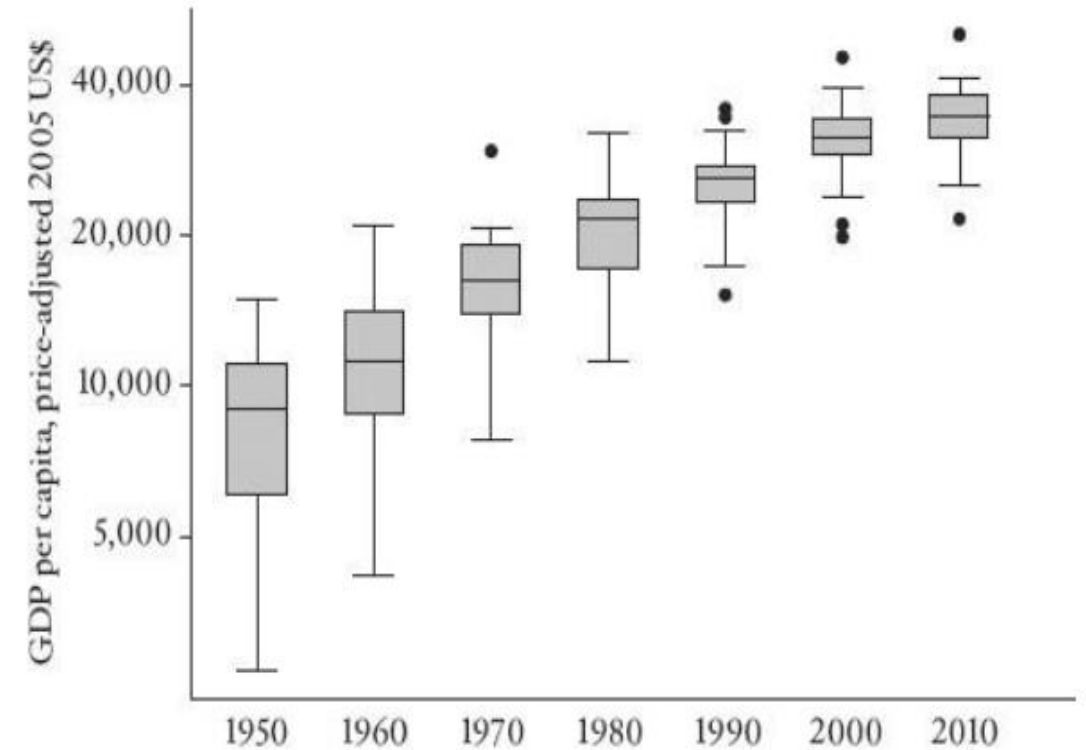
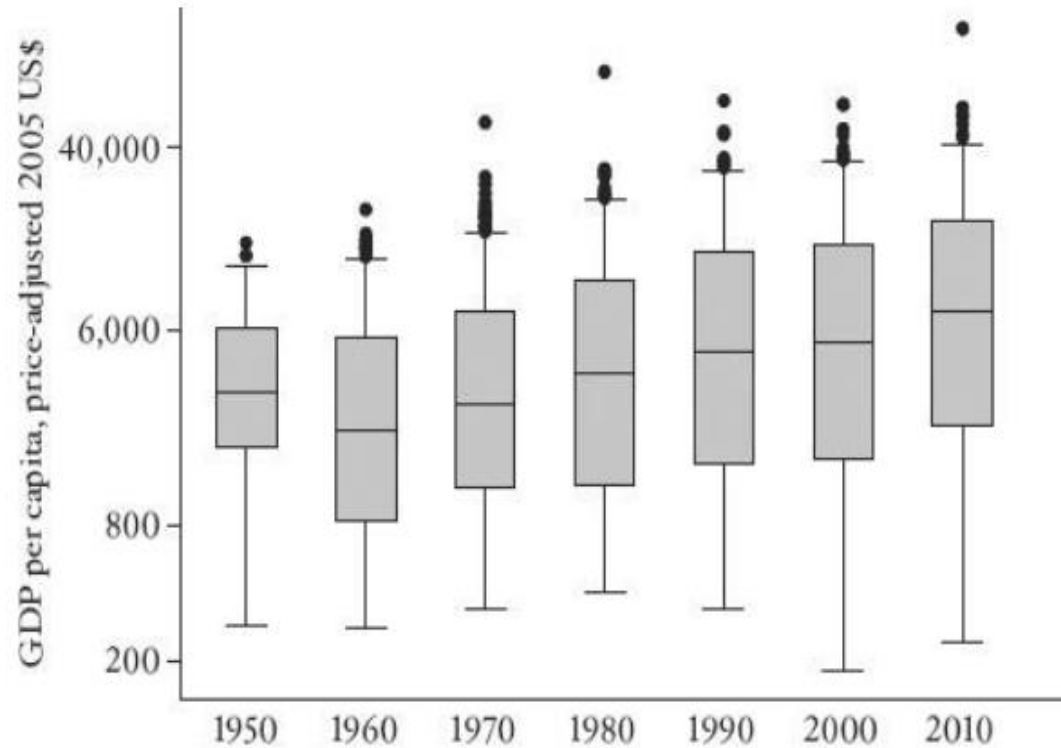


## Convergence clubs

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- 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?
- No evidence of convergence for Latin America and Africa since 1970

# Divergence “big time” (9:1 ratio in 1870, 50:1 in 1990 (Pritchett) and Convergence Clubs



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)

## But if the unit of analysis is people not countries...

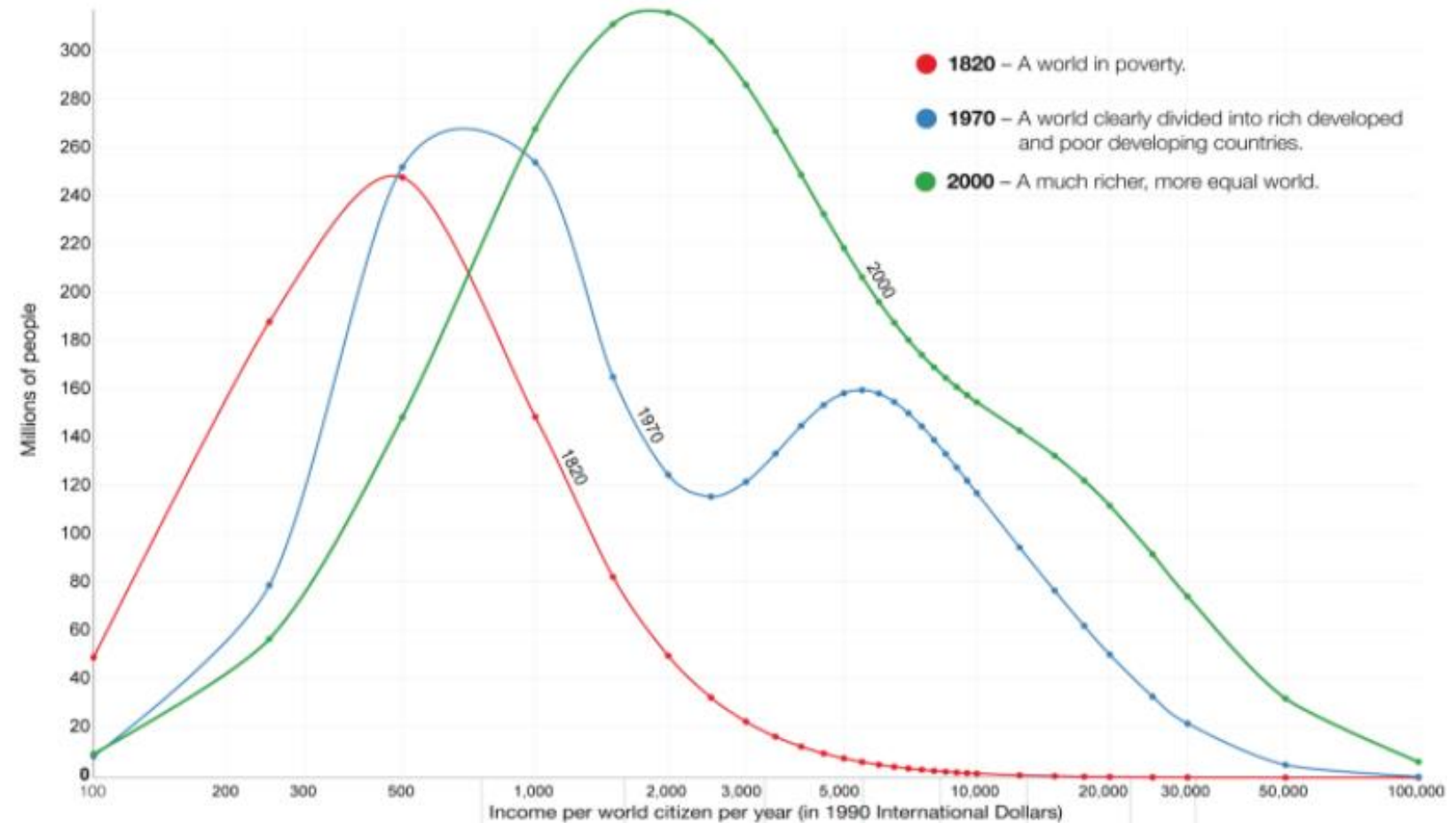


- The world is becoming much more equal
- India and China have more than 40% of global population and they are growing quickly (or were until Covid-19) – but they are also becoming more unequal
- Rise of the new middle classes in Asia
- Even as inequality within countries is rising, inequality between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

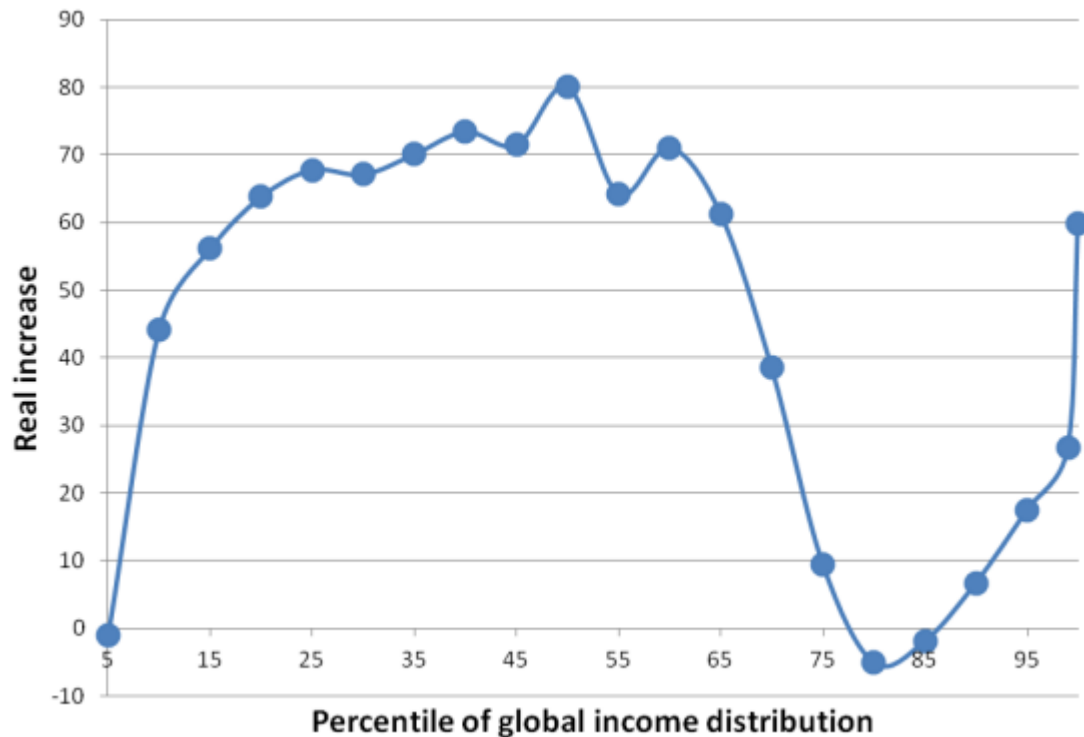


# Inequality between countries

- 1820 most people are poor and few people very rich
- 1970 rich and poor countries
- 2000 a richer, more equal world



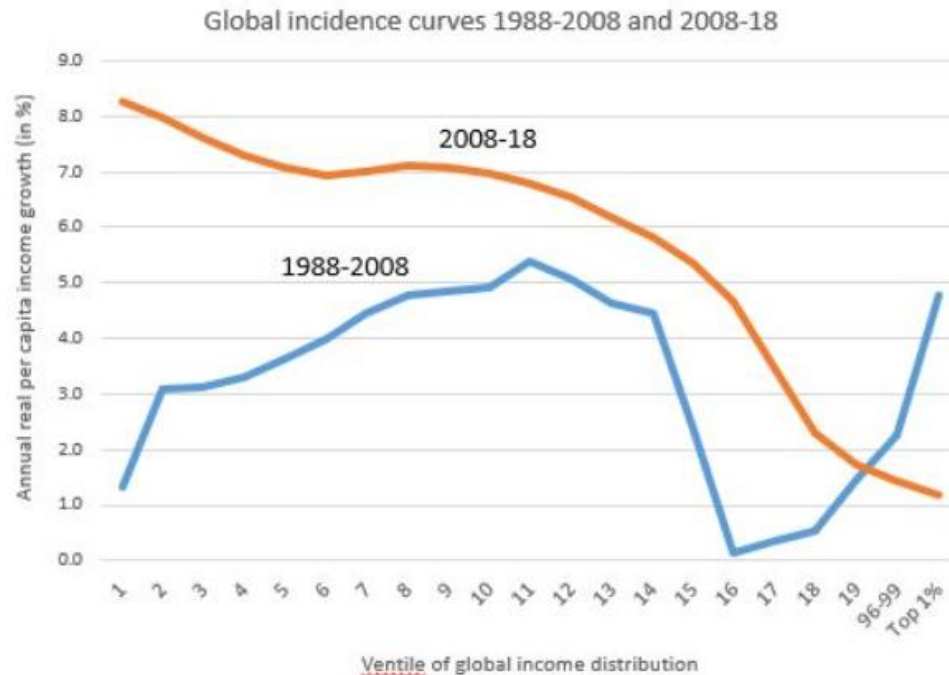
# The elephant chart



- 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



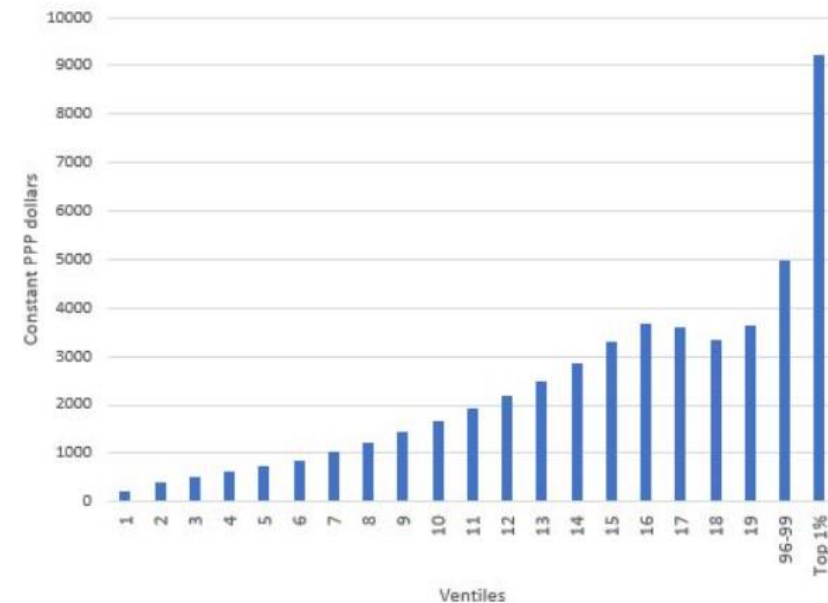
# The end of the elephant



- Top earners are so rich that even a large absolute increase results in a lower relative increase in incomes
- Their *absolute* income gains were still less than the rich, but their *relative* gains were greater

- After 2008 the poor recorded larger real increase in incomes
- Their absolute income gains were still less than the rich, but their relative gains were greater

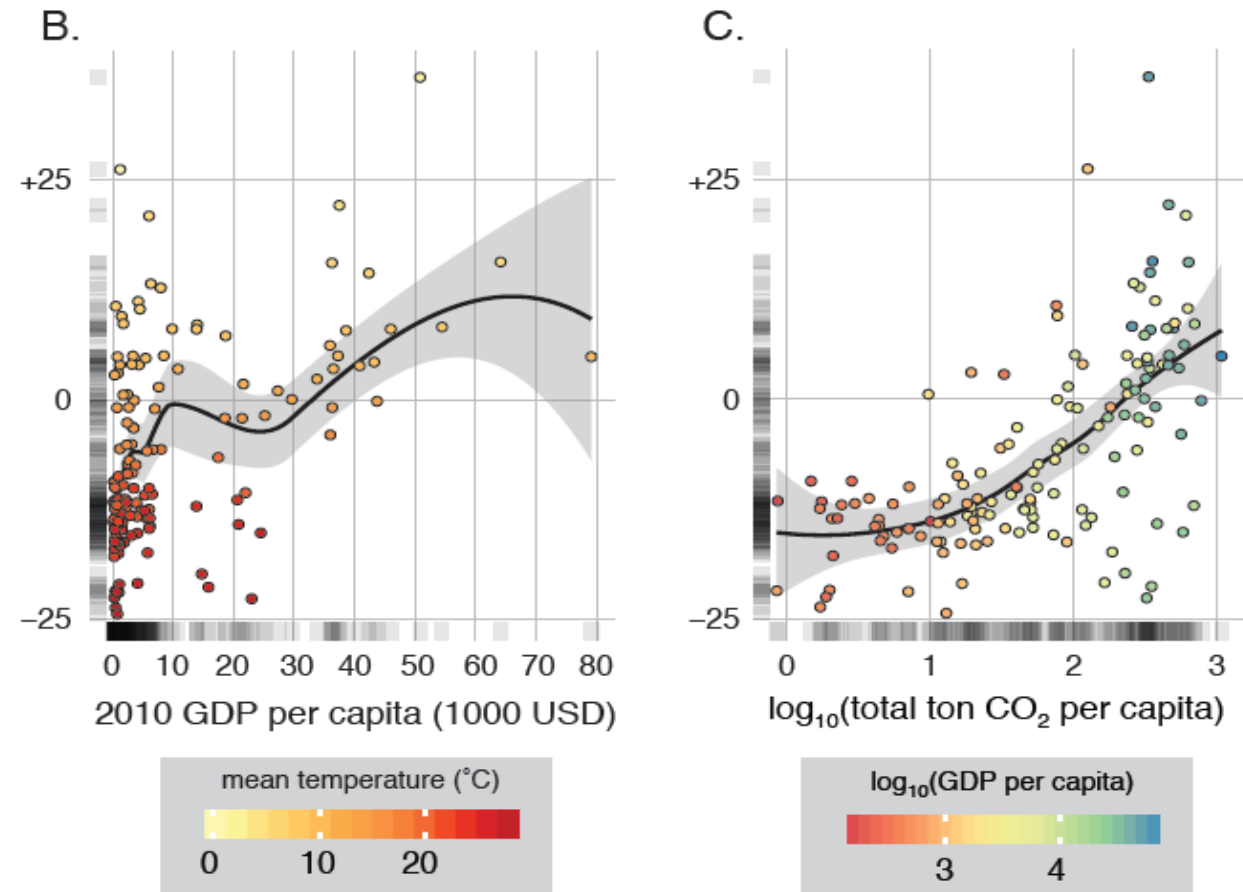
Absolute real income gains (2008-18) remain strongly pro-rich



# Global warming could bring an end to the equalizing tendencies of the post-1970 period



- Global warming has probably increased GDP in temperate climates and reduced GDP in the tropics
- Poor countries have hotter climates and have suffered greater GDP loss from climate change
- But rich countries have been the main cause of global warming.



Diffenbaugh and Burke (2019)





## Discussion questions

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1. What are the assumptions of the neoclassical growth model? Are they relevant to economic growth in Vietnam?
2. What are the factors relevant to economic growth that are not addressed in the Solow Model or “new” growth theory?