

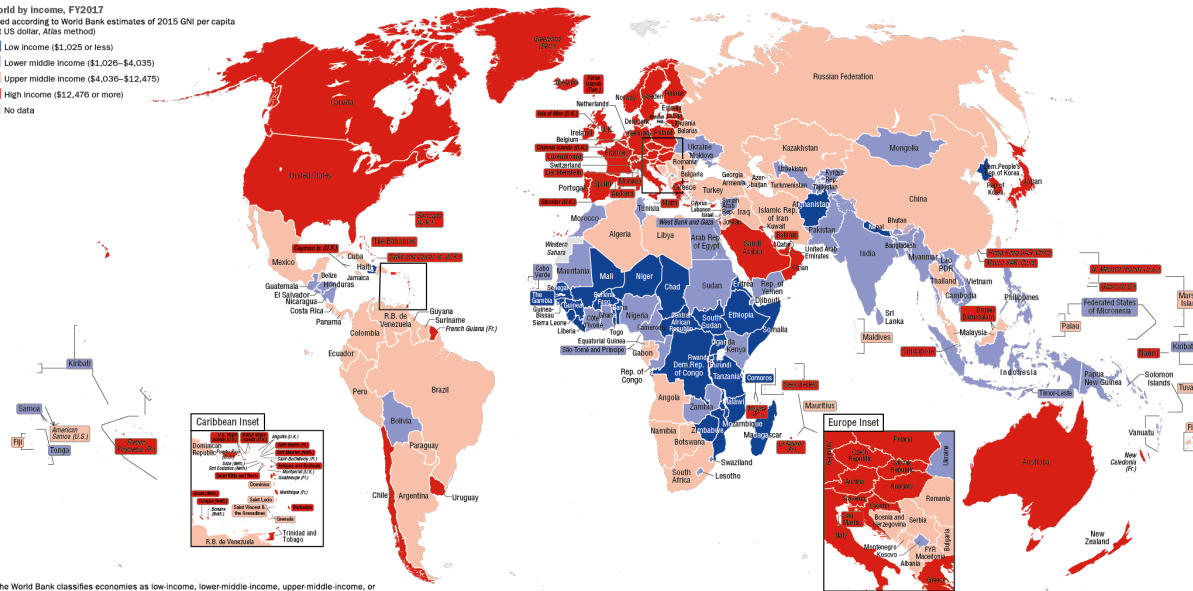
**TOPICS IN DEVELOPMENT
ECONOMICS
EC310**

Professor Sharun W. Mukand

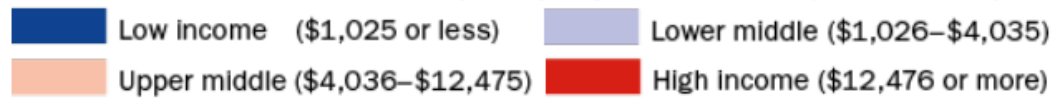
LEVELS OF INCOME ACROSS THE WORLD

The world by income, FY2017
Classified according to World Bank estimates of 2015 GNI per capita
(current US dollar, Atlas method)

- Low income (\$1,025 or less)
- Lower middle income (\$1,026–\$4,035)
- Upper middle income (\$4,036–\$12,475)
- High income (\$12,476 or more)
- No data



World Bank estimates of 2015 GNI per capita (current US dollar, Atlas method)

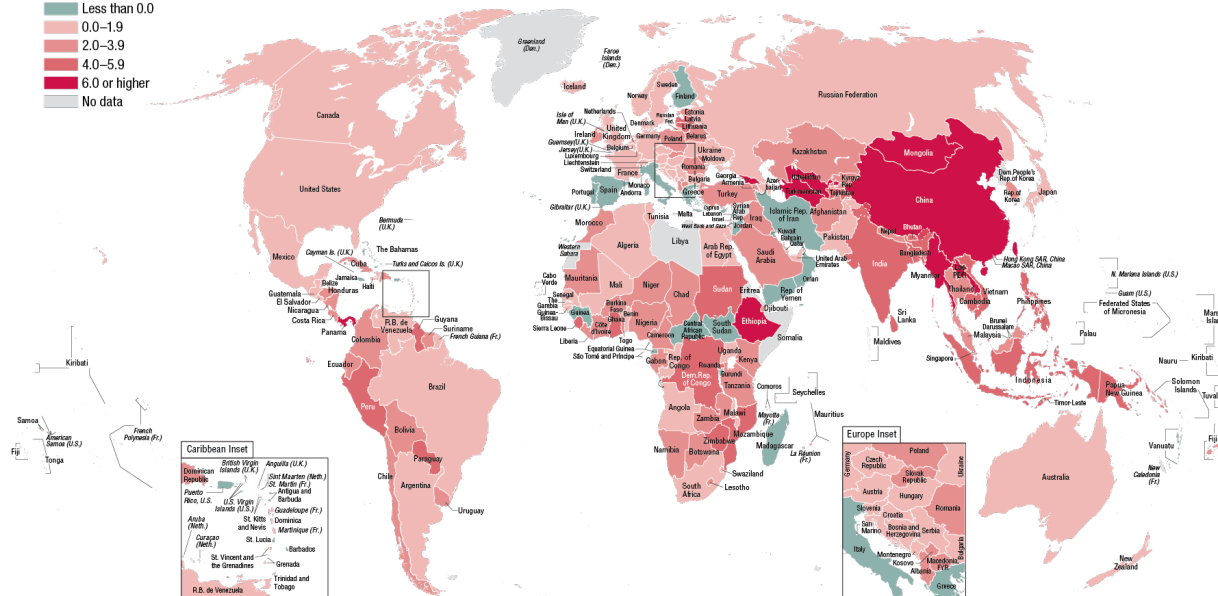
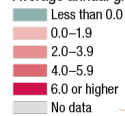


See <https://data.worldbank.org/products/wdi-maps> for more indicators.

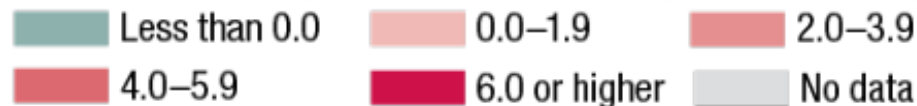
GROWTH OF INCOME ACROSS THE WORLD

Economic growth

Average annual growth in GDP per capita in local currency units, 2009–15 (%)



Ave annual growth in GDP pc in local currency, 2009–15 (%)



See <https://data.worldbank.org/products/wdi-maps> for more indicators.

WHY STUDY DEVELOPMENT?

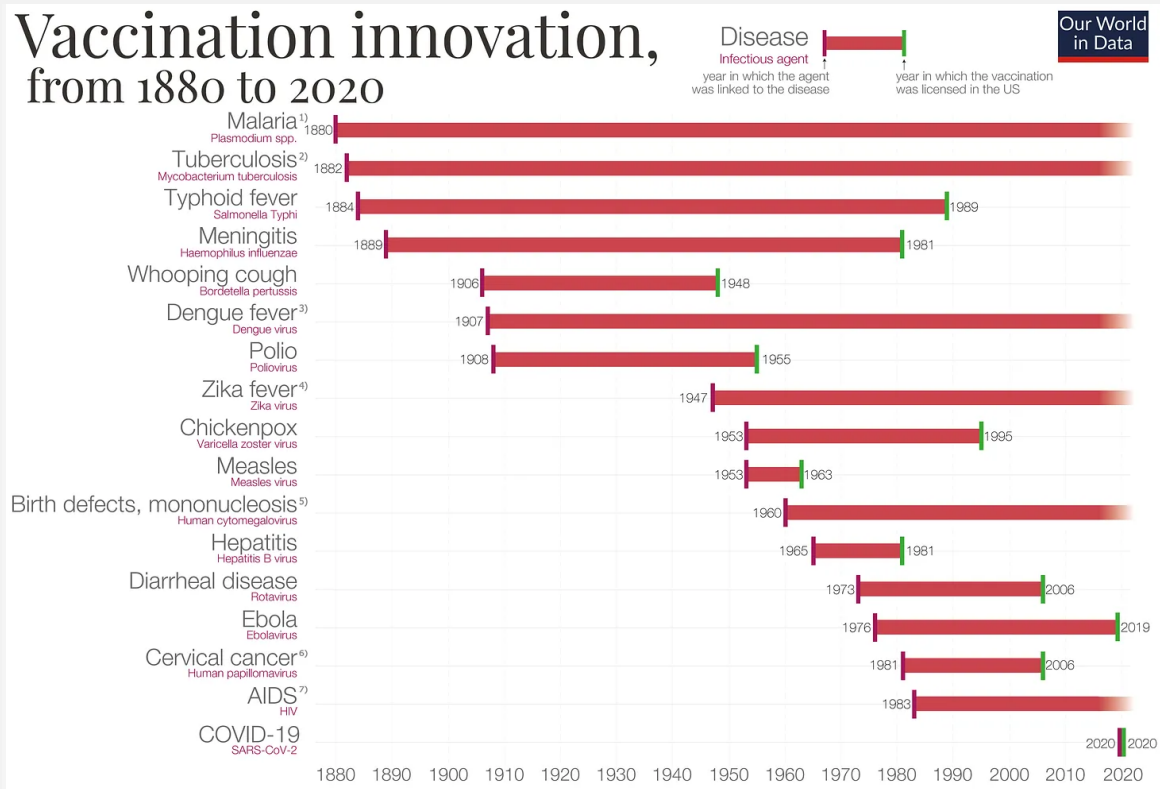
- Most countries are poor, and most people live in poor countries
- *“Most of the people in the world are poor, so if we knew the economics of being poor, we would know much of the economics that really matters.”*

Ted Schultz (1979 Nobel Lecture)

- Development economics encompasses all parts of economics, and developing countries are actually very different
- **YOUR** life will increasingly be affected by what is happening in the rest of the world! Insulation is not possible: immigration, climate change, conflict....

WHY NO VACCINE FOR MALARIA IN 20TH CENTURY?

IN 20TH CENTURY ALONE – MALARIA TOOK 150-300 MILLION LIVES.



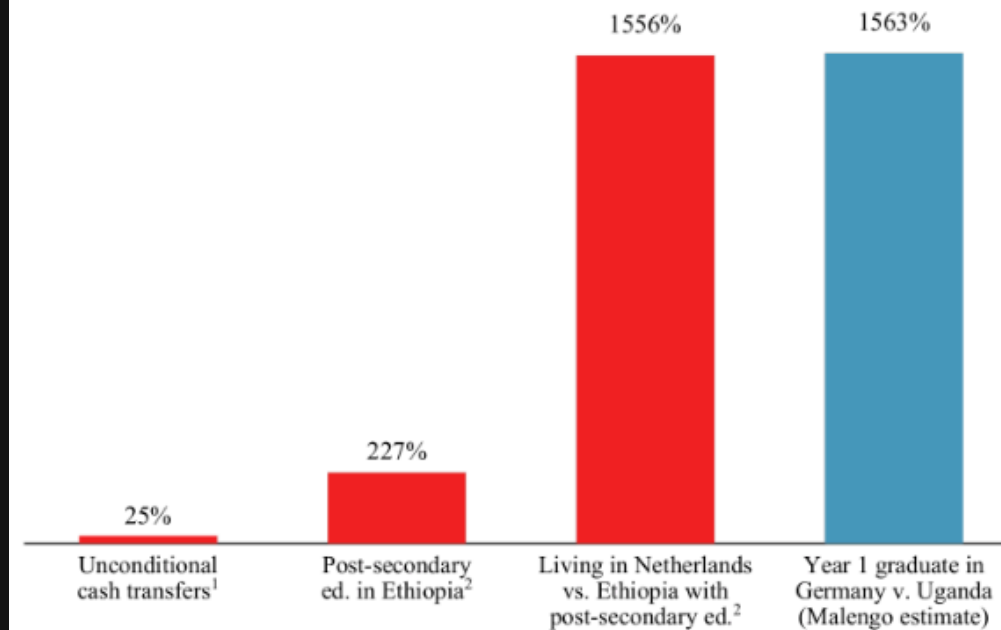
1) – 2016 vaccine RTS,S undergoing pilot trials in select countries after being approved by European regulators in 2015.
 2) – The only approved vaccine is bacilli Calmette-Guérin (BCG), developed in 1921 but its efficacy in adults is variable. Other tuberculosis vaccines are currently in development.
 3) – 2016 partially effective vaccine CYD-TDV, sold under the brand name Dengvaxia.
 4) – Successful first human clinical trials of a vaccine against the virus in 2016. Only in 2016 did the WHO issue statements of concern about the zika virus' links to Guillain-Barré Syndrome (GBS) and microcephaly.
 5) – A number of vaccine candidates are under investigation.
 6) – Not all cervical cancers are caused by the HPV virus and the HPV vaccine can protect against other cancers caused by the HPV virus.
 7) – 2009 efficacy findings for vaccine candidate RV 144 has shown some promise. In stage III human trials.

OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Max Roser

WHAT IS THE EASIEST WAY TO REDUCE POVERTY?

(IF YOU REALLY CARED ABOUT POOR PEOPLE)

Comparing income gains associated with cash, education, and mobility



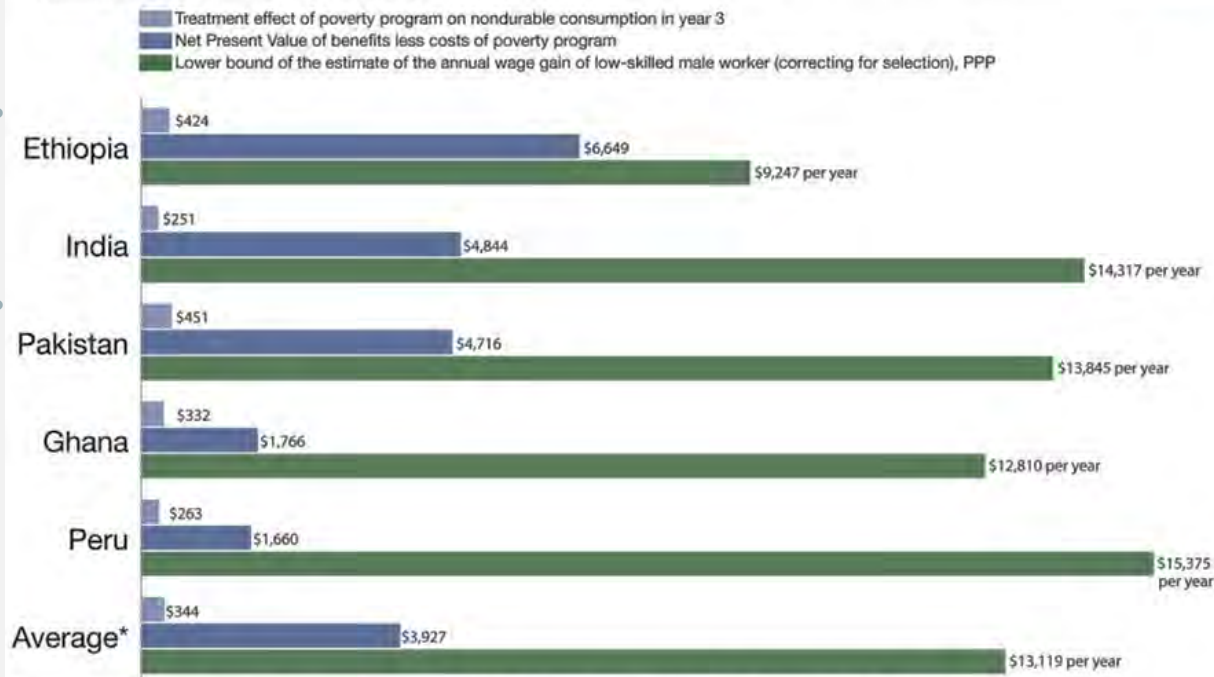
1. Give Directly RCTs; 2. Pritchett and Hani 2020, Smith and Hani 2020

Figure 2: Cross-country estimates of effects on income of cash transfers, post-secondary education, and international migration.

WHAT IS THE EASIEST WAY TO REDUCE POVERTY? (IF YOU REALLY CARED ABOUT POOR PEOPLE)

Gains from multifaceted anti-poverty program vs. gains from emigration to the US Our World in Data

The anti-poverty program that has six elements: (1) a productive asset transfer, (2) consumption support, (3) technical skills training, (4) high frequency home visits, (5) a savings program, (6) some health education. The program was evaluated in six country sites and was evaluated using a randomized control trial (RCT).



The idea for this visualization is from [Justin Pritchett \(2016\) - The Least You Can Do for Global Poverty Is Better than the Best You Can Do](#). Published on the CGDev website.

Data sources: [Banerjee, Duflo et al \(2015\)](#) in Science for the RCT result and [Clemens, Montenegro and Pritchett \(2016\)](#) for the emigration gains (Working Paper at CGDev).

*The Average and the entire visualization excludes Honduras

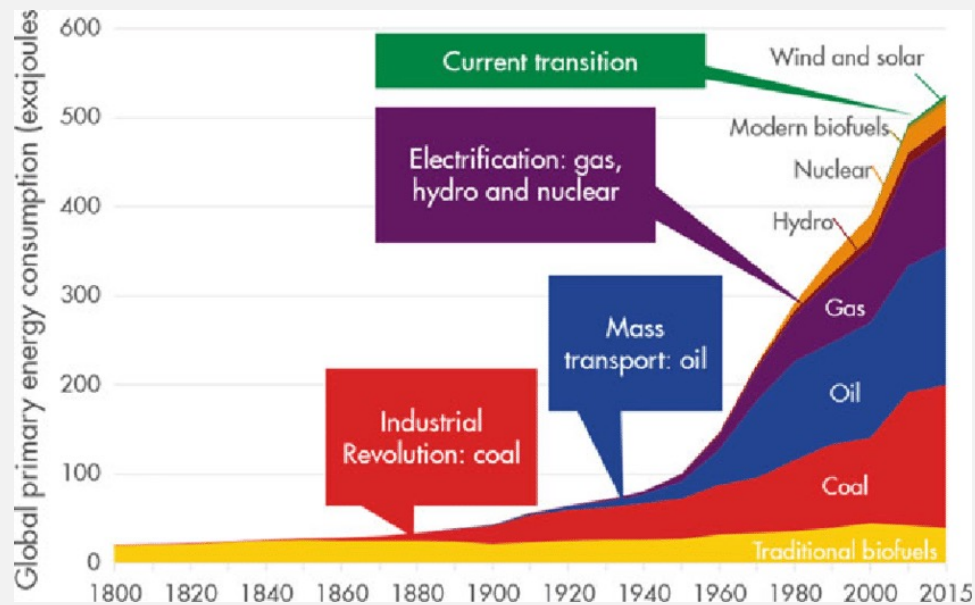
This data visualization is available at [OurWorldInData.org](https://ourworldindata.org). There you more visualizations and research on this topic.

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IT POSSIBLE TO HAVE ECONOMIC DEVELOPMENT WITHOUT ADVERSE IMPACT ON THE ENVIRONMENT (I)?

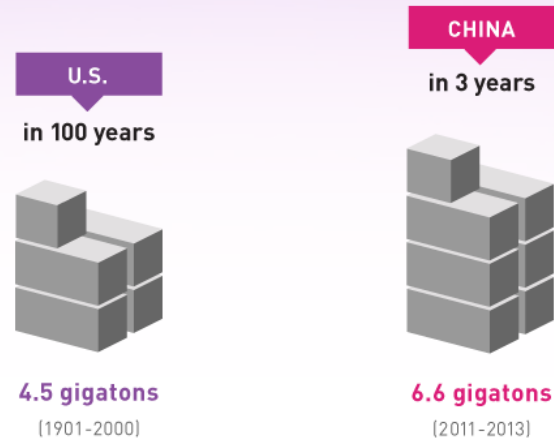
- from Vaclav Smil



IT POSSIBLE TO HAVE ECONOMIC DEVELOPMENT WITHOUT ADVERSE IMPACT ON THE ENVIRONMENT (II)?

- Cement production is the biggest user of fossil fuels (after steel)....
- From Vaclav Smil

China used more cement in the last three years than the U.S. used in the entire 20th century.



SOURCES: USGS, Cement Statistics 1900-2012; USGS, Mineral Industry of China 1990-2013

SOME QUESTIONS - I

- Why are some countries Rich and others Poor?
 - a) What policy would you recommend the government of Equatorial Guinea to enact so that it becomes more like Botswana?
 - b) Why has it not already enacted such policies?
- Political Economy of Policymaking. Why do governments often enact policies that they know to be inefficient?

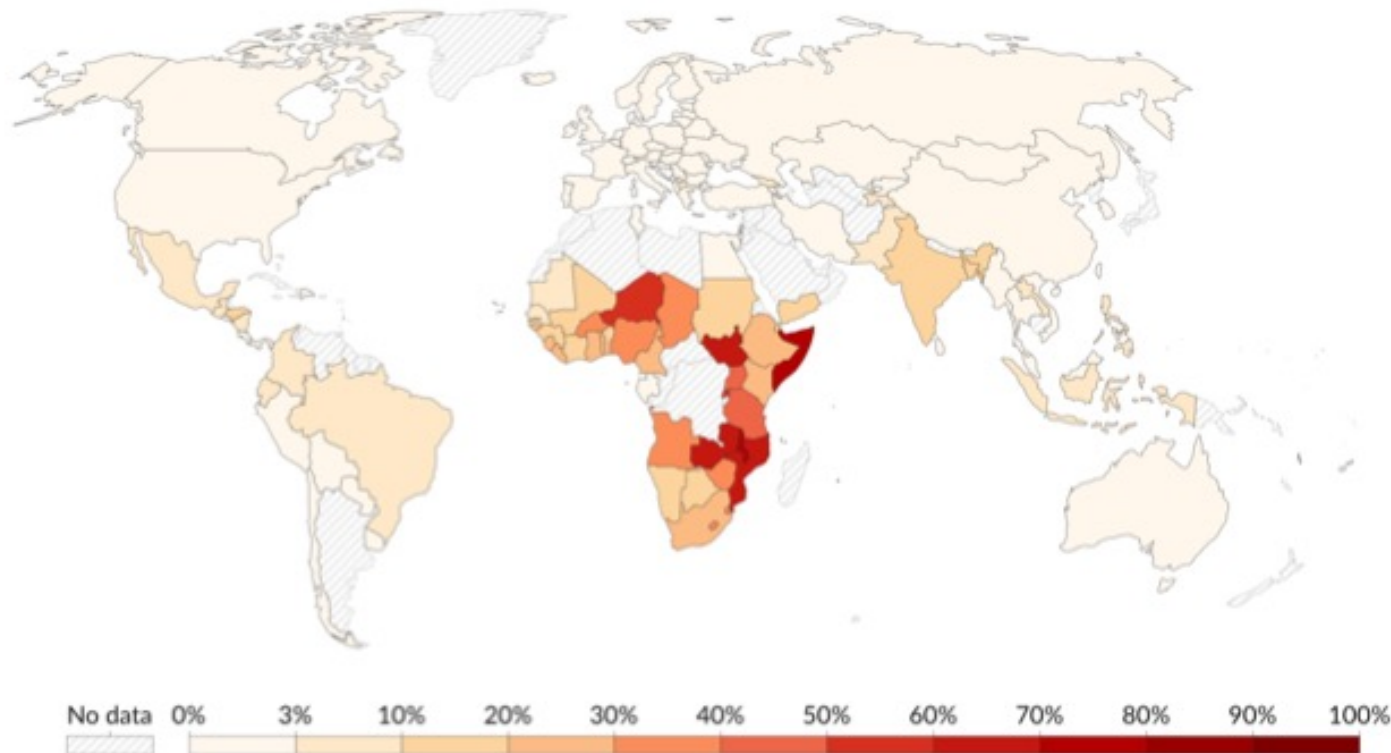
SOME QUESTIONS - II

- Political Economy of Policymaking. Why do governments often enact policies that they know to be inefficient?
- Corruption: Why are some countries corrupt and not others? Why is corruption so hard to tackle? Any suggestions?

Share of population living in extreme poverty, 2019

Our World
in Data

Extreme poverty is defined as living below the International Poverty Line of \$2.15 per day. This data is adjusted for inflation and for differences in the cost of living between countries.



Data source: World Bank Poverty and Inequality Platform (2022)

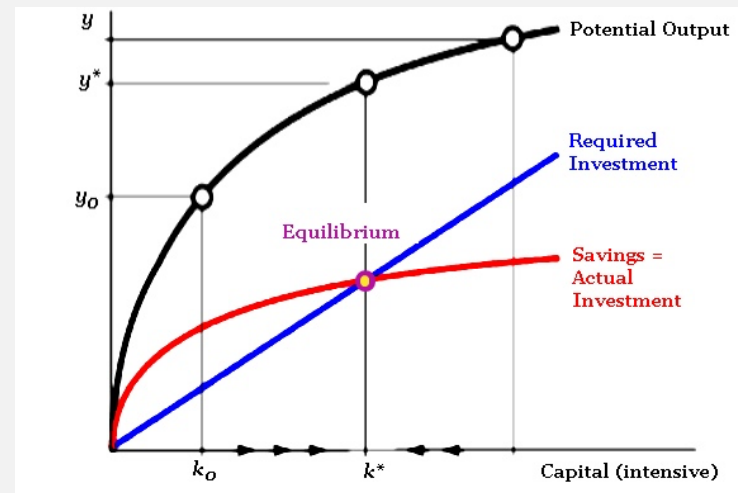
OurWorldInData.org/poverty | CC BY

Note: This data is expressed in international-\$¹ at 2017 prices. Depending on the country and year, it relates to income measured after taxes and benefits, or to consumption, per capita².

ECONOMIC GROWTH: SOLOW MODEL

(A QUICK RECAPITULATION)

- $Y = A F(K, L)$
 - A = Ideas (assumed to be (i) public good (ii) exogenous)
 - K = Physical Capital
 - L = Labor
- Implications:
- GDP per capita is a function of
 - (i) Savings/Investment (+)
 - (ii) Human Capital (+)
 - (iii) Population Growth (-)



<https://www.nobelprize.org/prizes/economic-sciences/1987/solow/lecture/>

SOLOW MODEL: IMPLICATIONS

(A QUICK RECAPITULATION)

- (i) Countries with lower capita income grow faster.
- (ii) Growth slows over time as countries get richer → In the long run, all the countries with the same parameters, but different initial capital stock reach to the same GDP per capita.
Convergence...
- (iii) Sustained economic growth requires sustained technological progress...
- (iv) ...

ALSO RAISED MANY QUESTIONS...

SOLOW MODEL: IMPLICATIONS (A QUICK RECAPITULATION)

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ALSO RAISED MANY QUESTIONS...

- (v) Could it be Culture? e.g. Victorian values??

(i) Work hard and save (ii) Study hard (human K) (iii) Don't have Sex! (i.e. limit childbearing)

(vi) Productivity/ideas were treated as exogenous to the model. But...much of growth is about growth in ideas. And most Idea generations takes place as R&D in firms...(OECD ~60-80%)

-- Ideas are **non-rivalrous** and cannot be produced in competitive markets since marginal cost is zero (some monopoly power required to profit from ideas)... (PAUL ROMER)

-- **Ideas create spillovers!** Universities, Patents, Human K in Research, trade, market size and role of Rules, Equality before the law,....

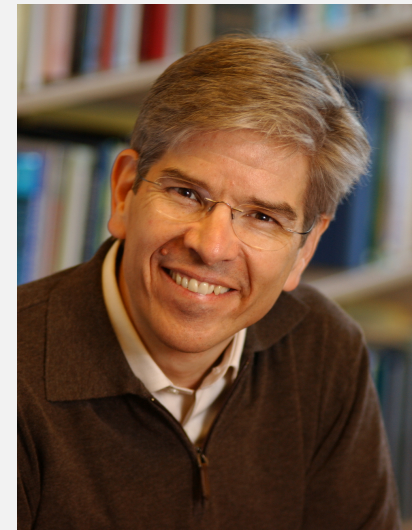
- **Bob Solow**

<https://www.nobelprize.org/prizes/economic-sciences/1987/solow/lecture/>



- **Paul Romer**

• <https://www.nobelprize.org/prizes/economic-sciences/2018/romer/lecture/>



CORRELATES OR FUNDAMENTAL CAUSES? GROWTH OVER LAST 200 YEARS

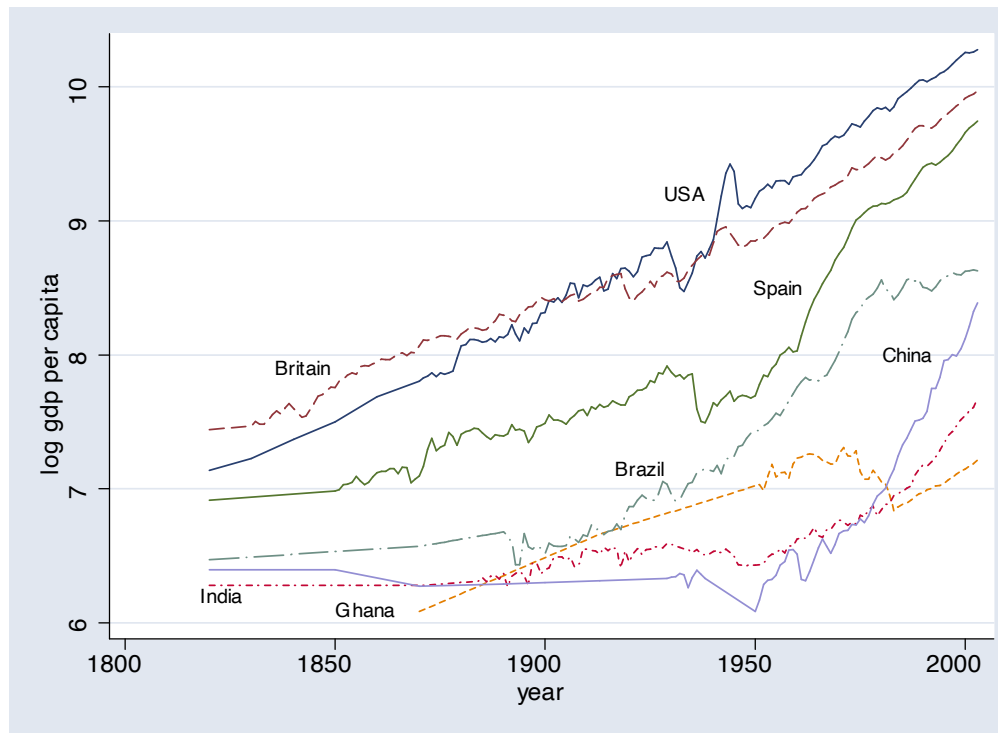
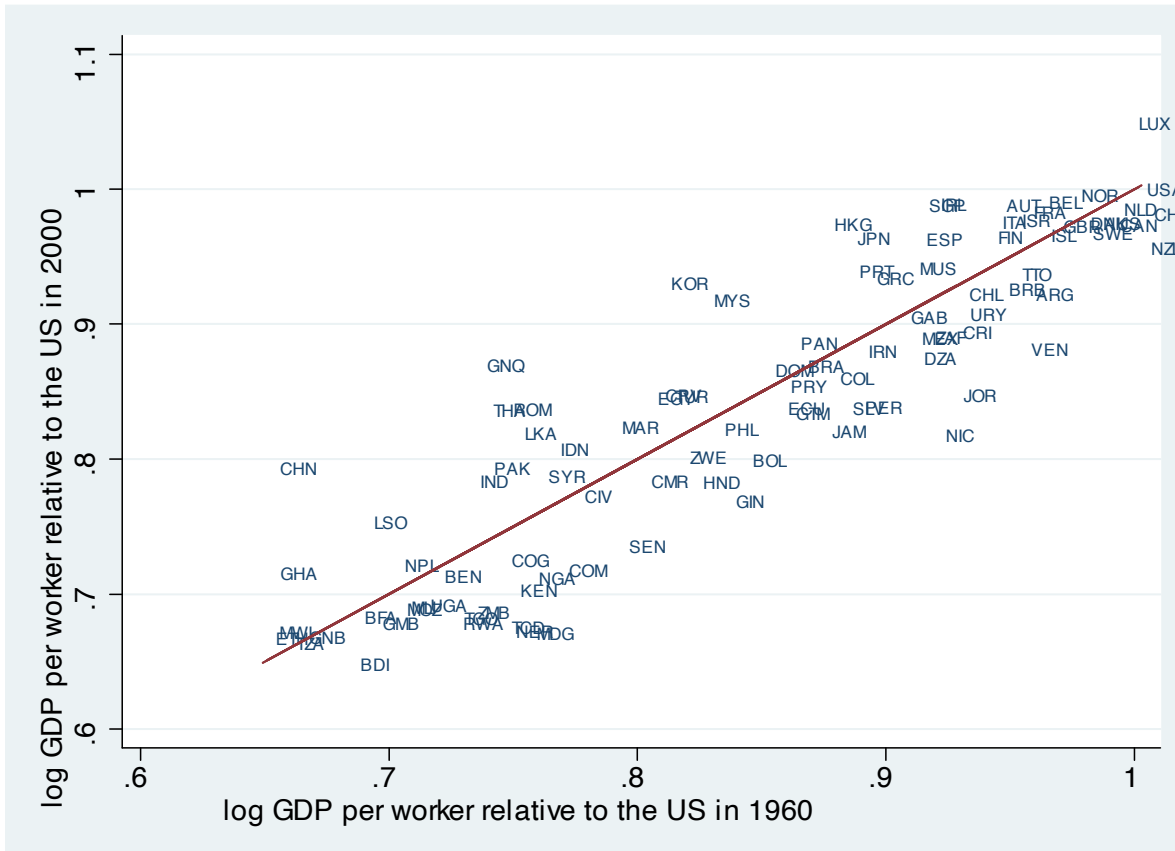


Figure: Evolution of income per capita in various countries.

- Correlates of economic growth: Physical K, Human K and technology.....

CORRELATES OR FUNDAMENTAL CAUSES? PERSISTENCE OF PROSPERITY



- Correlates of economic growth: Physical K, Human K and technology.....

CORRELATES OR FUNDAMENTAL CAUSES? ECONOMIC GROWTH & INCOME DIFFERENCES

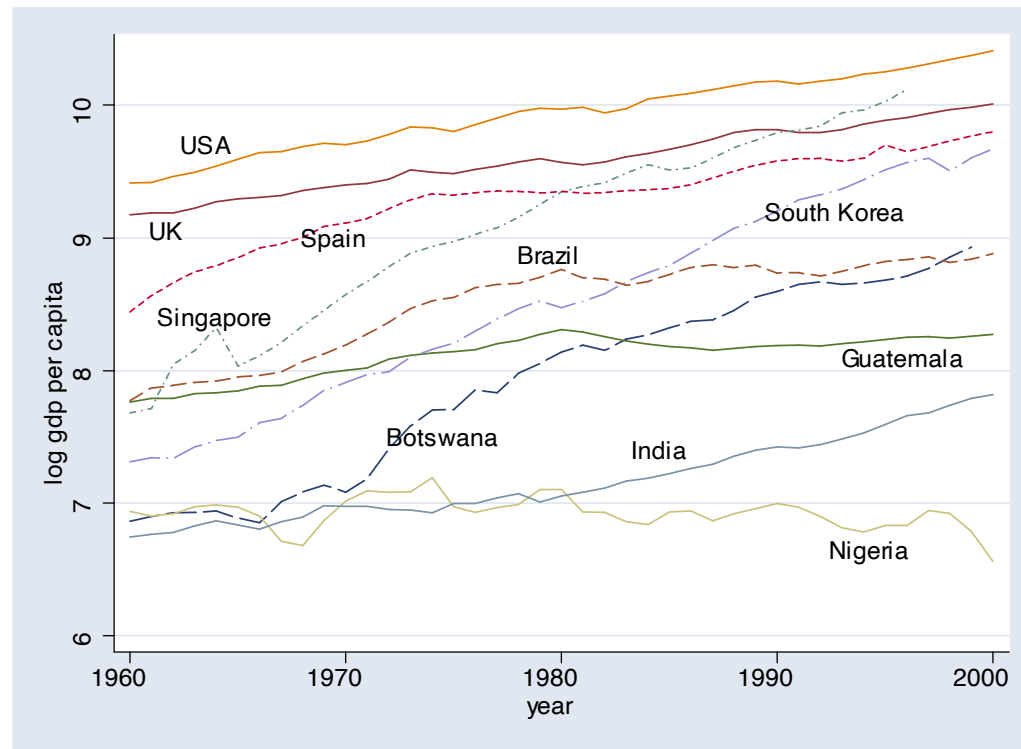


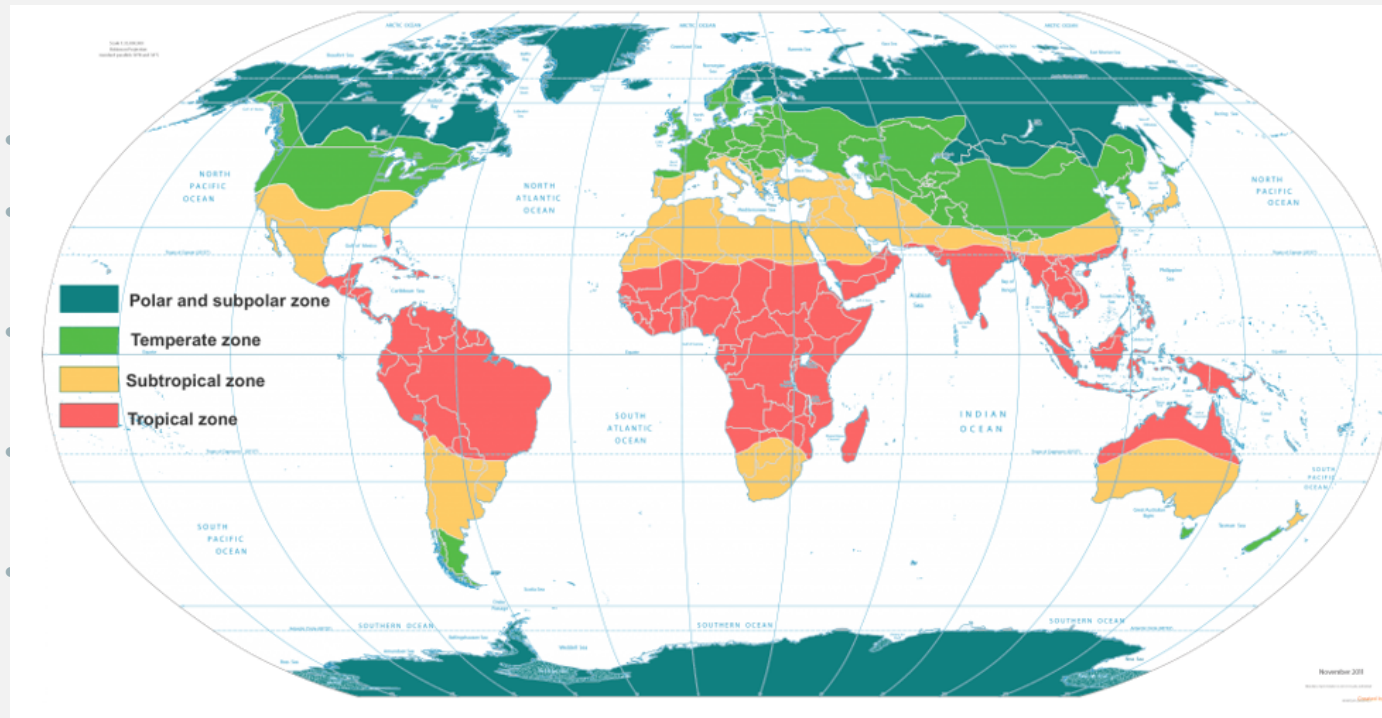
Figure: The evolution of income per capita 1960-2000.

WHY SOME RICH AND OTHERS POOR?

PROXIMATE OR FUNDAMENTAL FACTORS

- Questions raised:
- Why do certain societies fail to improve their technologies, invest more in physical capital, and accumulate more human capital?
- How did South Korea and Singapore manage to grow, while Nigeria failed to take advantage of the growth opportunities?
- If physical capital accumulation is so important, why did Nigeria not invest more in physical capital?
- If education is so important, why our education levels in Nigeria still so low and why is existing human capital not being used more effectively?
- **Proximate** versus **Fundamental** Causes.

WHY SOME RICH AND OTHERS POOR: IS IT **GEOGRAPHY**?



- **Proximate versus Fundamental Causes.**

WHY SOME RICH AND OTHERS POOR:
IS IT **INSTITUTIONS**?



WHY SOME RICH AND OTHERS POOR: IS IT **CULTURE**?

