14.452 Economic Growth: Lecture 1, Stylized Facts of Economic Growth and Development

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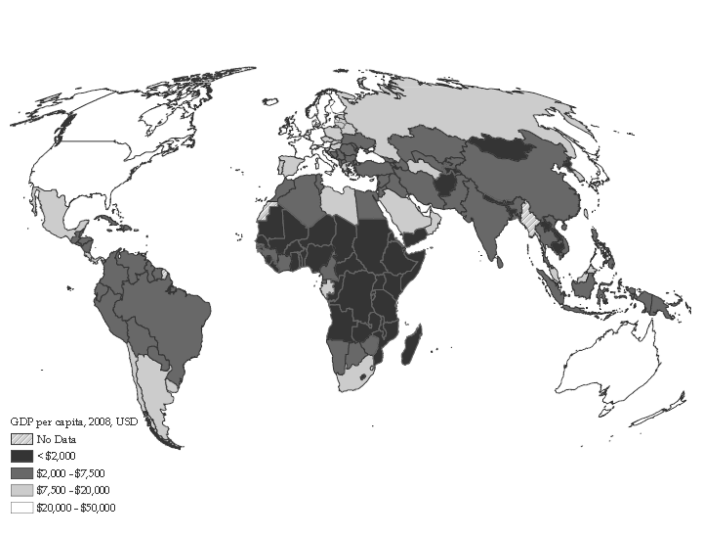
Cross-Country Income Differences



Cross-Country Income Differences (continued)

- There are very large differences in income per capita and output per worker across countries today.

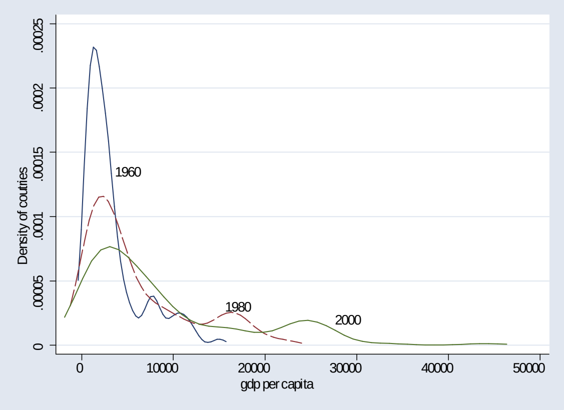


Figure: Distribution of PPP-adjusted GDP per capita.

Cross-Country Income Differences (continued)

- Part of the spreading out of the distribution in the Figure is because of the increase in average incomes.
- More natural to look at the log of income per capita when growth is approximately proportional:
  - when $x(t)$ grows at a proportional rate, $\log x(t)$ grows linearly,
  - if $x_1(t)$ and $x_2(t)$ both grow by 10%, $x_1(t) - x_2(t)$ will also grow, while $\log x_1(t) - \log x_2(t)$ will remain constant.
- The next Figure shows a similar pattern, but now the spreading-out is more limited.

Cross-Country Income Differences (continued)

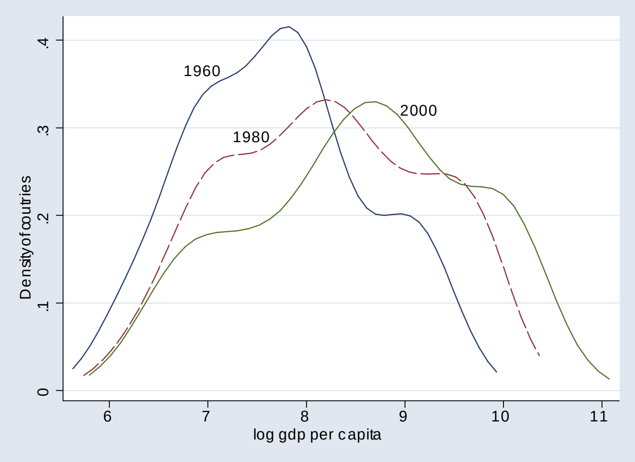


Figure: Estimates of the distribution of countries according to log GDP per capita (PPP-adjusted) in 1960, 1980 and 2000.

Cross-Country Income Differences (continued)

- Theory is easier to map to data when we look at output (GDP) per worker.
- Moreover, key sources of difference in economic performance across countries are national policies and institutions.
- The next Figure looks at the unweighted distribution of countries according to (PPP-adjusted) GDP per worker
  - "workers": total economically active population according to the definition of the International Labour Organization.
- Overall, two important facts:
  1. Large amount of inequality in income per capita and income per worker across countries.
  2. Slight but noticeable increase in inequality across nations (though not necessarily across individuals in the entire world).

Cross-Country Income Differences (continued)

Figure: Distribution of log GDP per worker (PPP-adjusted).

Economic Growth and Income Differences

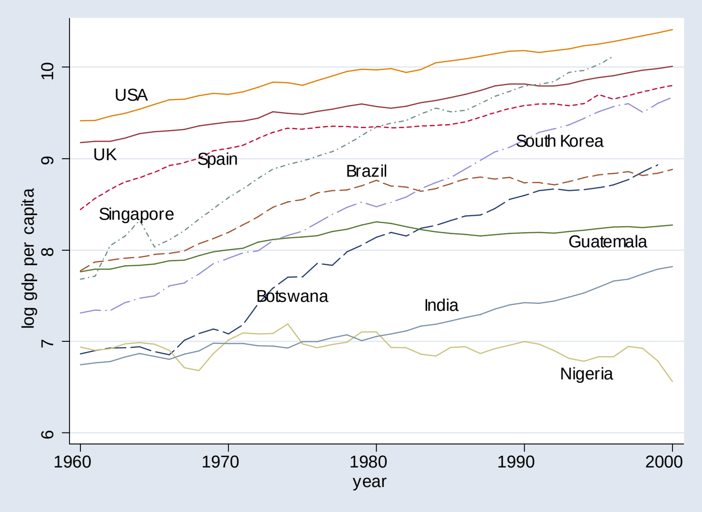


Figure: The evolution of income per capita 1960-2000.

Economic Growth and Income Differences

- Why is the United States richer in 1960 than other nations and able to grow at a steady pace thereafter?
- How did Singapore, South Korea and Botswana manage to grow at a relatively rapid pace for 40 years?
- Why did Spain grow relatively rapidly for about 20 years, but then slow down? Why did Brazil and Guatemala stagnate during the 1980s?
- What is responsible for the disastrous growth performance of Nigeria?
    - Central questions for understanding how the capitalist system works and the origins of economic growth.
    - Central questions also for policy and welfare, since differences in income related to living standards, consumption and health.
- Our first task is to develop a coherent framework to investigate these questions and as a byproduct we will introduce the workhorse models of dynamic economic analysis and macroeconomics.

Origins of Income Differences and World Growth

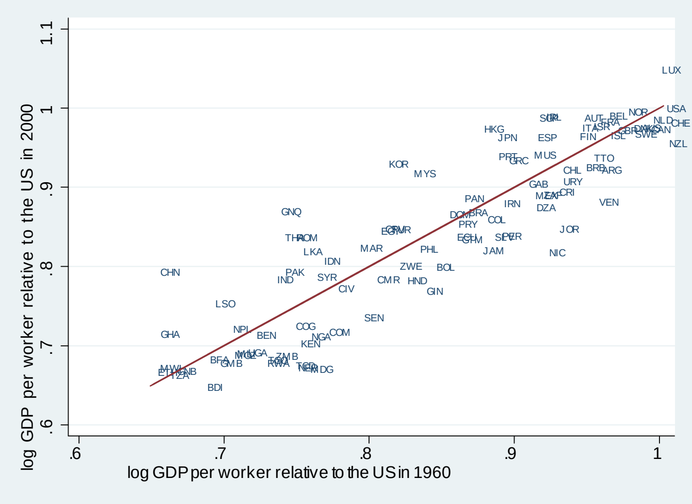


Figure: Log GDP per worker in 2000 and 1960.

Origins of Income Differences and World Growth

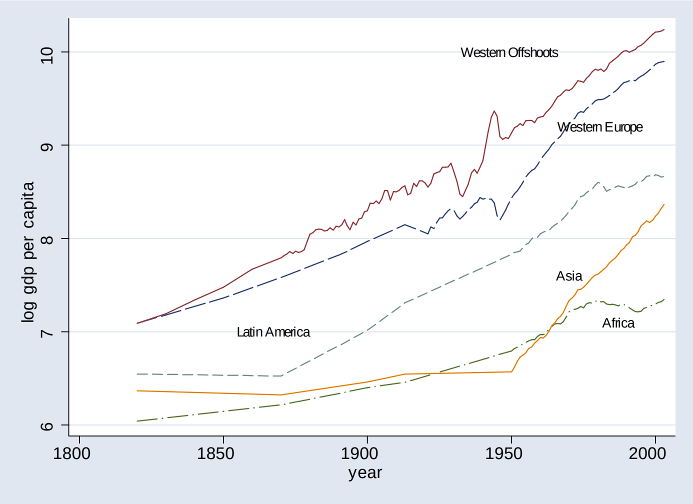


Figure: Evolution of GDP per capita 1820-2000.

Origins of Income Differences and World Growth

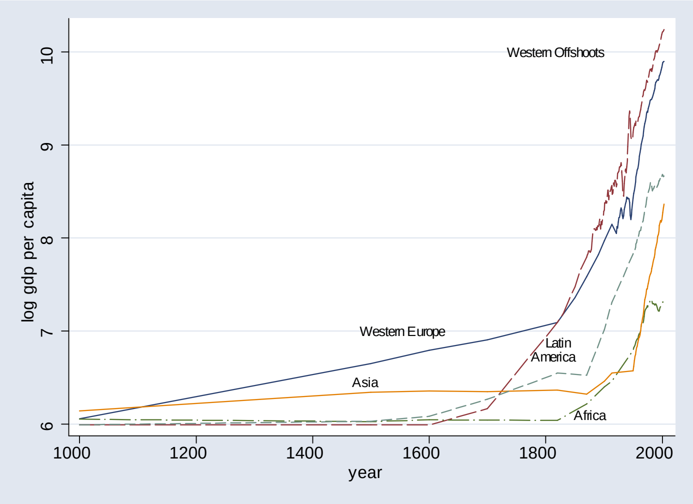


Figure: Evolution of GDP 1000-2000.

Origins of Income Differences and World Growth

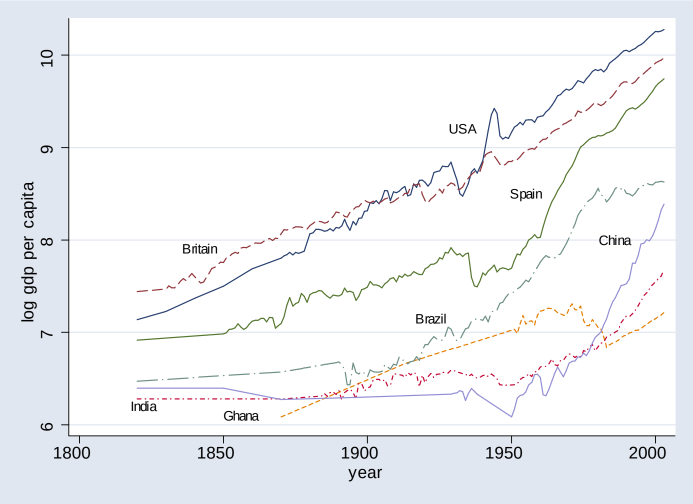


Figure: Evolution of income per capita in various countries.

Correlates of Economic Growth

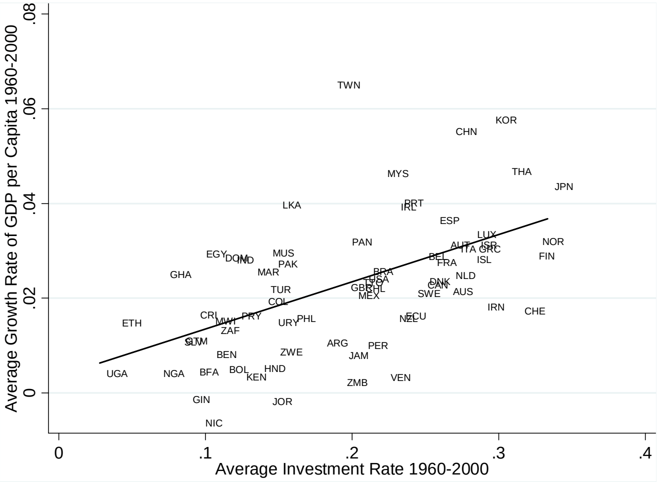


Figure: Average investment to GDP ratio and economic growth.

Correlates of Economic Growth

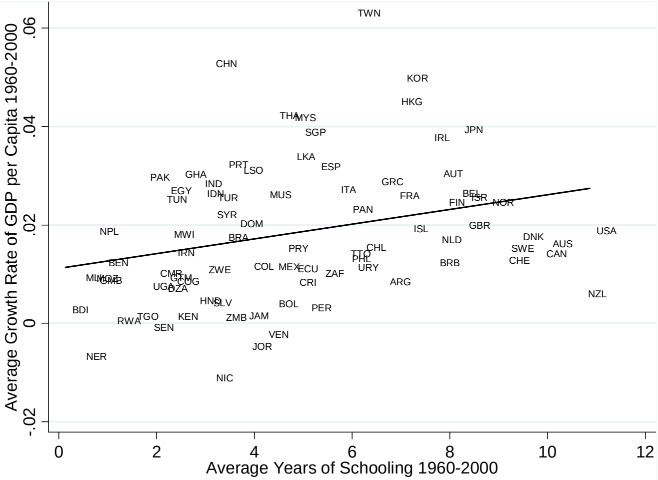


Figure: Schooling and economic growth.