

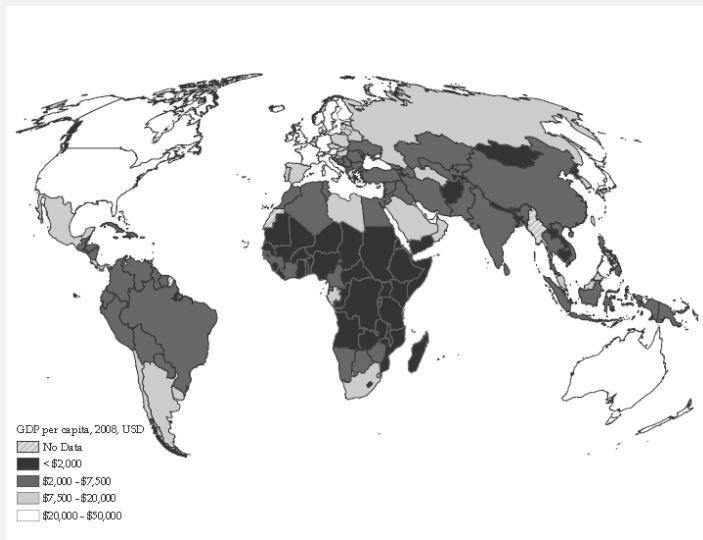
14.452 Economic Growth: Lecture 1 (first half), Stylized Facts of Economic Growth and Development

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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.

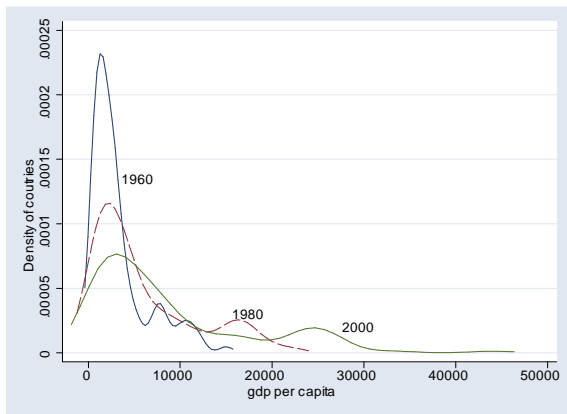


Figure: Distribution of PPP-adjusted GDP per capita.

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)

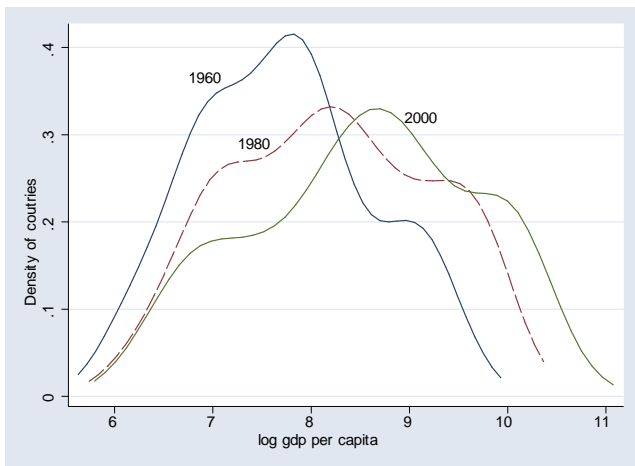


Figure: Estimates of the distribution of countries according to log GDP per capita (PPP-adjusted) in 1960, 1980 and 2000.

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)

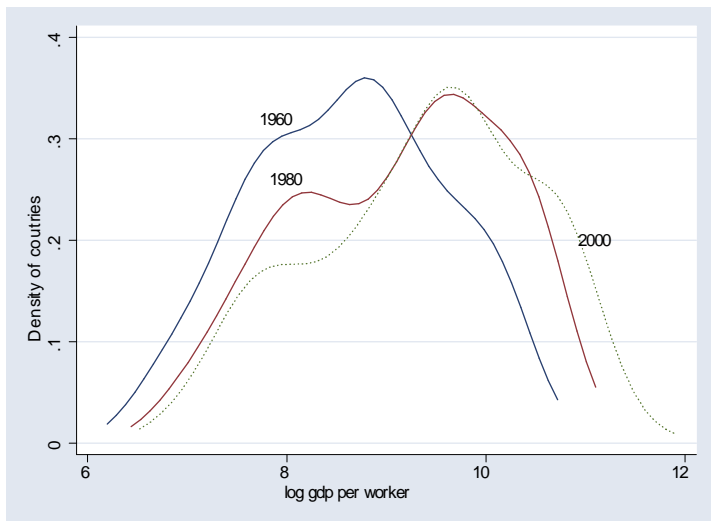


Figure: Distribution of log GDP per worker (PPP-adjusted).

Economic Growth and Income Differences

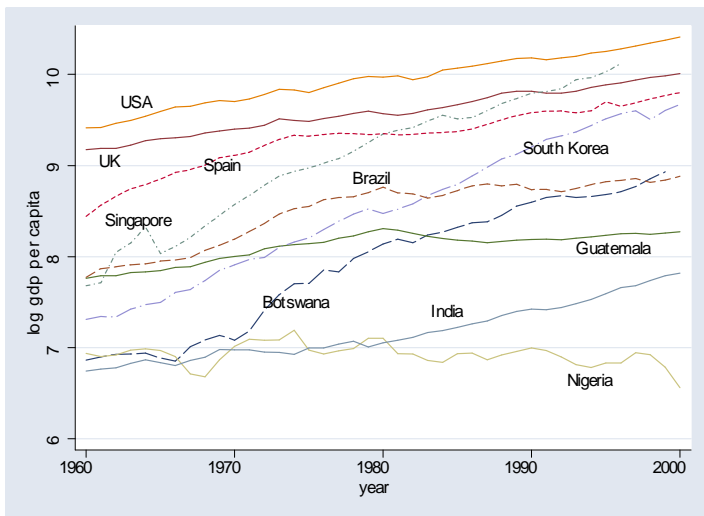


Figure: The evolution of income per capita 1960-2000.

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

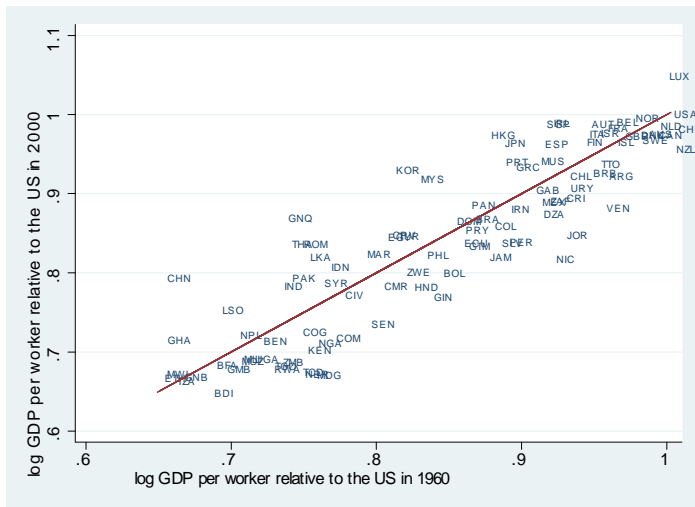


Figure: Log GDP per worker in 2000 and 1960.

Origins of Income Differences and World Growth

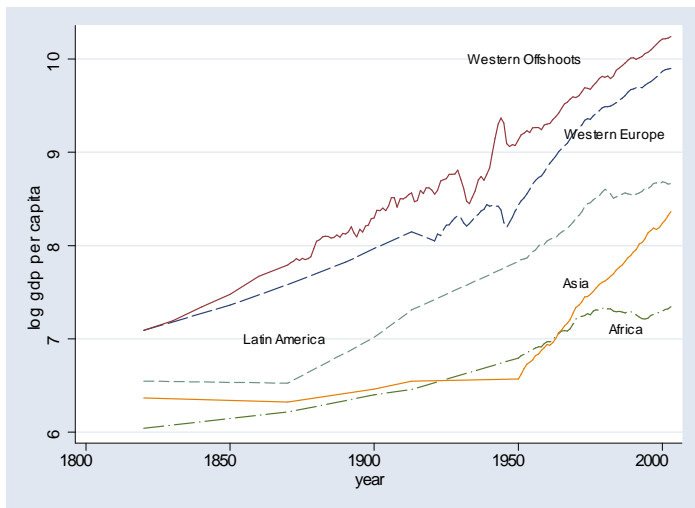


Figure: Evolution of GDP per capita 1820-2000.

Origins of Income Differences and World Growth

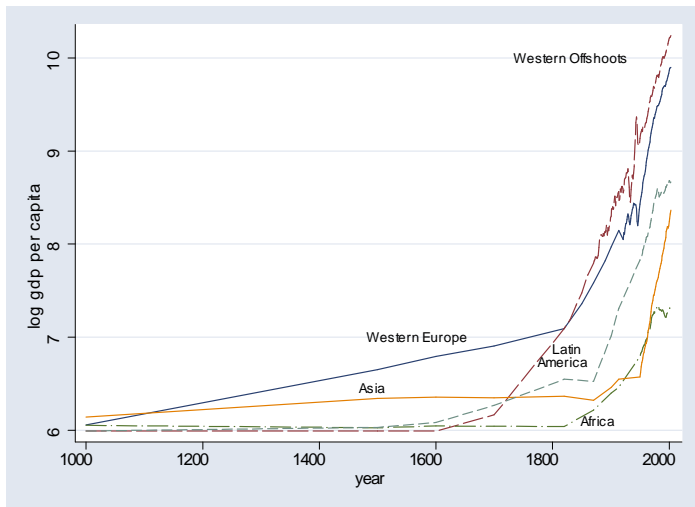


Figure: Evolution of GDP 1000-2000.

Origins of Income Differences and World Growth

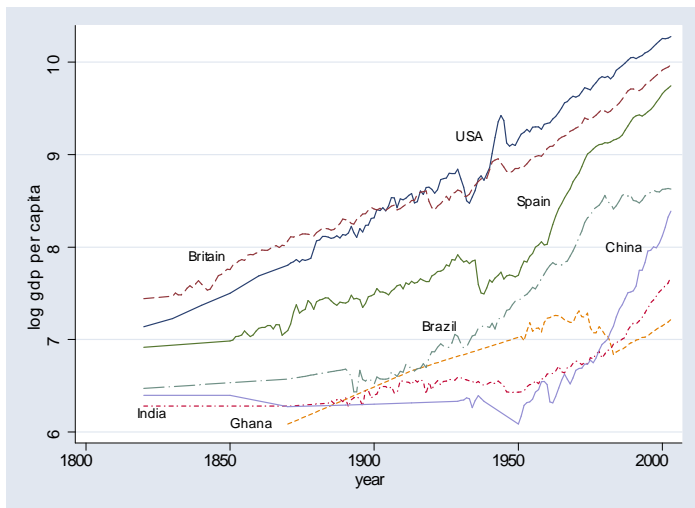


Figure: Evolution of income per capita in various countries.

Correlates of Economic Growth

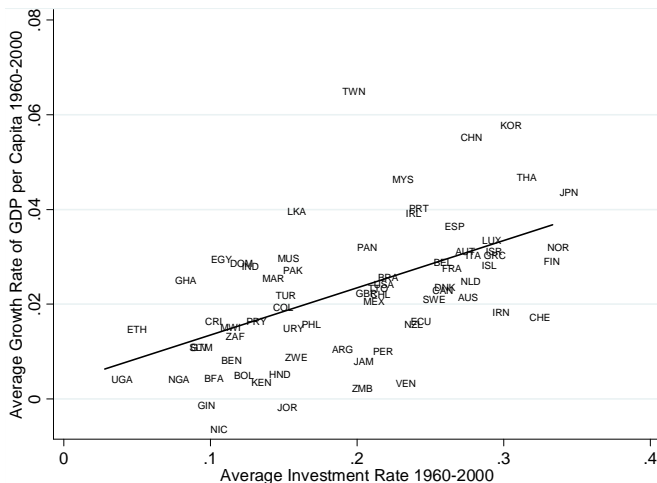


Figure: Average investment to GDP ratio and economic growth.

