

# Introduction

Jesús Fernández-Villaverde

University of Pennsylvania

May 6, 2017





# Our starting point

## Sherlock Holmes, *A Scandal in Bohemia*

“It is a capital mistake to theorize before one has data.”

- ▶ Let us start with some data.
- ▶ Look at evolution of income per capita across countries and over time.
- ▶ Not a perfect picture of world economic relations, but a reasonable snapshot.



# Differences across countries I

1. The average American income is around 5 bigger than the average Mexican, around 14 times bigger than the average Indian, and 35 times bigger than the average African's, all in PPP terms.
2. Life expectancy in rich countries is 77 years, 67 years in middle income countries, and 53 years in poor countries.
3. Out of 7.3 billion people, 0.8 do not have access to enough food, 0.7 to safe drinking water, and 2.4 to proper sanitation.

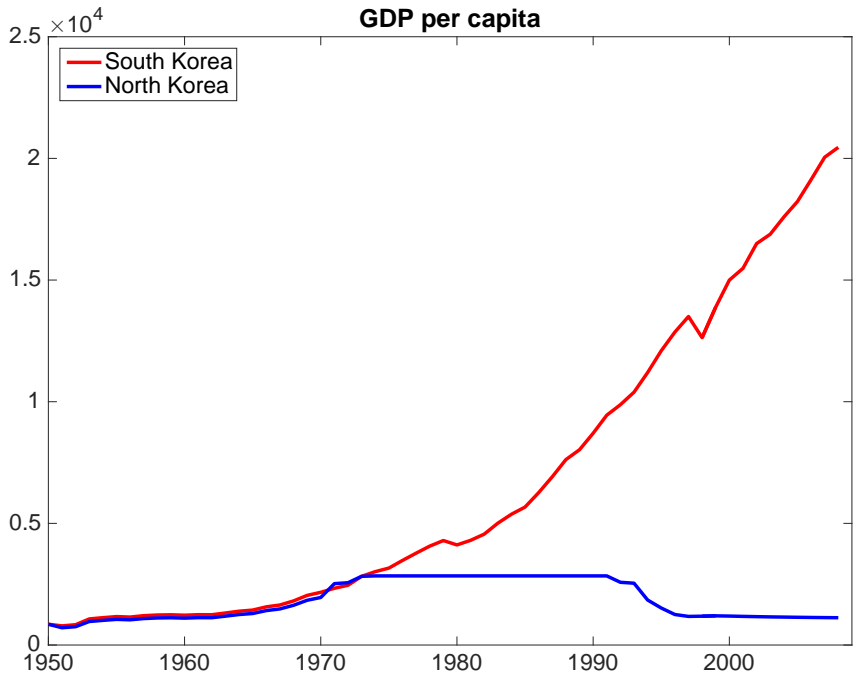
# Differences across countries II



- ▶ Some of these differences are quite recent.
- ▶ Two striking examples:
  1. North Korea versus South Korea.
  2. Cuba versus Spain.



# GDP per capita





# Cuba vs. Spain

- ▶ Let's go back to 1959. Why?
  1. Fidel Castro takes power in Cuba.
  2. Spain liberalizes its economy and opens to international trade.
  
- ▶ How were things in 1958?
  1. Cuba had roughly the same income per capita than Spain.
  2. Cuba had higher life expectancy, lower children mortality, and higher literacy rates.
  
- ▶ How are things in 2016?
  1. Spain is around 9 times richer than Cuba.
  2. When Fidel Castro required a high tech operation in 2006, he fled in a team of Spanish doctors from the Spanish National Health System.

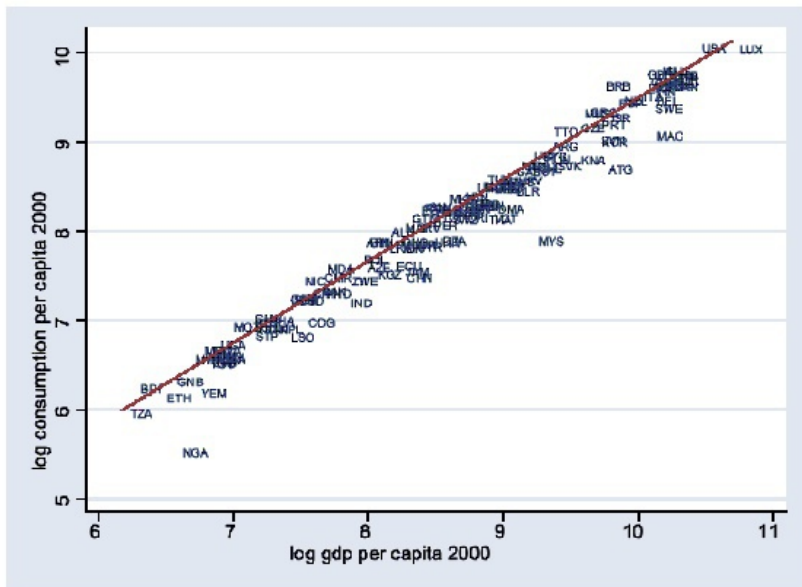


FIGURE 1.1. The association between income per capita and consumption per capita in 2000.



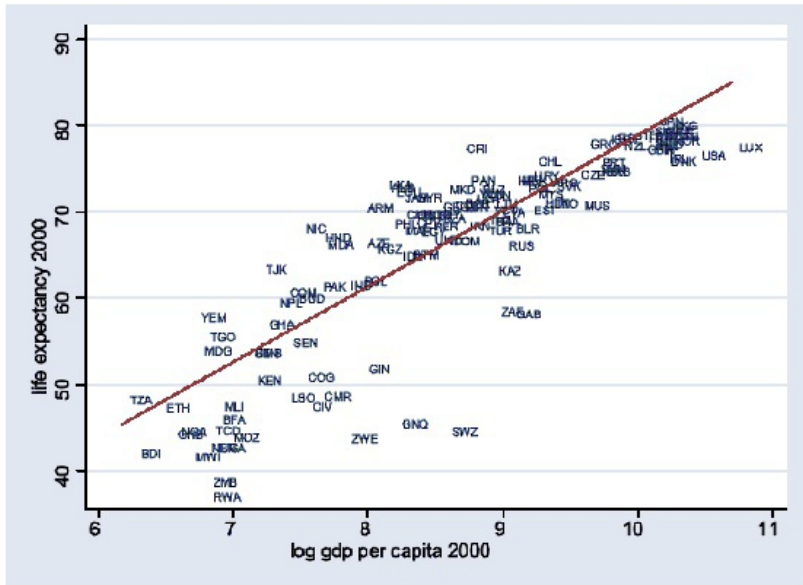


FIGURE 1.2. The association between income per capita and life expectancy at birth in 2000.



## Differences across time

1. The average modern American is around 20 times richer than the average colonial American.
2. An American worked 61 hours per week in 1870, today 34.
3. Japanese boy born in 1880 had a life expectancy of 35 years, today 81 years.
4. A tale of riches.





## A tale

- ▶ In June 1836, Nathan Rothschild was the richest man in the world. His personal wealth was around 0.62% of the U.K. national income (roughly equivalent to \$18 billion nowadays).
- ▶ Nathan leaves London for Frankfurt to attend the wedding of his son Lionel with his niece Charlotte (family business).
- ▶ Nathan is 59 years old and his health seems to be excellent.
- ▶ During the trip, he gets a bump at the bottom of his back.
- ▶ Since the bump is painful, he calls one of the best surgeons of the world, who opens and cures the wound.
- ▶ On July 28, Nathan dies.
- ▶ We do not know the C.O.D. for sure, but from symptoms, most likely a simple infection easily treated with antibiotics.
- ▶ **Niall Ferguson**, [The House of Rothschild](#).

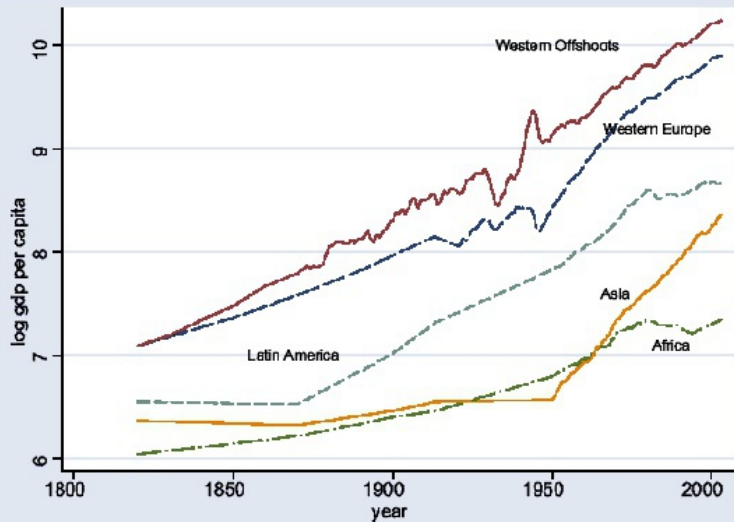


FIGURE 1.3. The evolution of average GDP per capita in Western Offshoots, Western Europe, Latin America, Asia and Africa, 1820-2000.

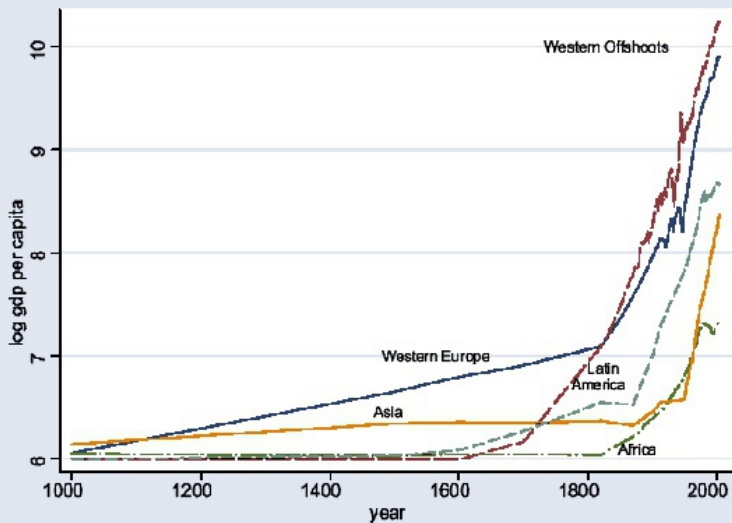


FIGURE 1.4. The evolution of average GDP per capita in Western Offshoots, Western Europe, Latin America, Asia and Africa, 1000-2000.

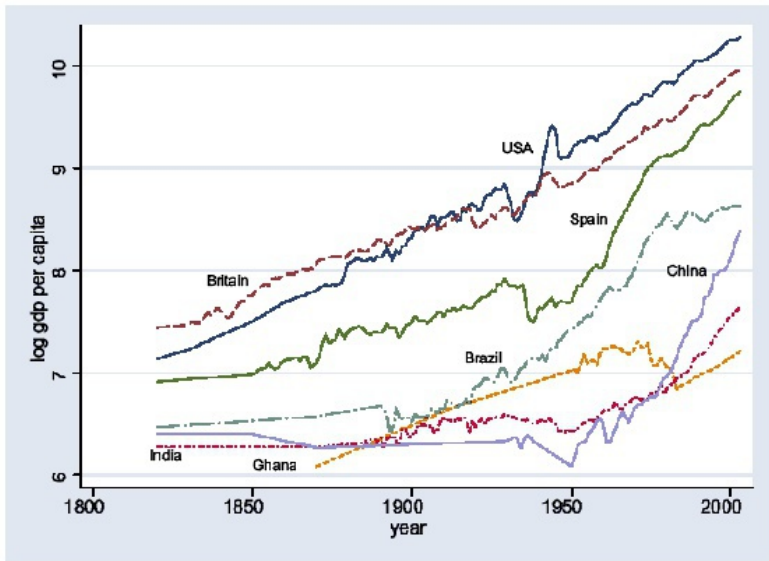


FIGURE 1.5. The evolution of income per capita in the United States, Britain, Spain, Brazil, China, India and Ghana, 1820-2000.

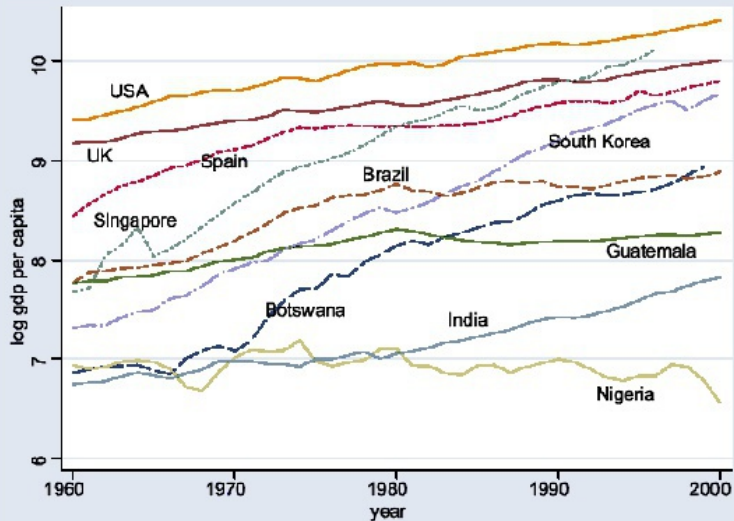


FIGURE 1.6. The evolution of income per capita in the United States, United Kingdom, Spain, Singapore, Brazil, Guatemala, South Korea, Botswana, Nigeria and India, 1960-2000.



# A question



Robert Lucas, 1988, p. 5

I do not see how one can look at figures like these without seeing them as representing *possibilities*. Is there some action a government could take that would lead the Indian economy to grow like Indonesia's or Egypt's? If so, *what* exactly? If not, what is it about the "nature of India" that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.



# The approach

- ▶ In this class, I will bring economics and history together from an global perspective to understand the emergence of modern economic growth.
- ▶ A road of two directions: we will look at the historical record and ask ourselves what we can learn from it.
- ▶ But also how we can use economics to understand history.
- ▶ Carlo Cipolla says economic history is **between two cultures**.
- ▶ The goal is to make you:
  1. More informed citizens.
  2. Better managers (either in the private or in the public sector).
  3. And, hopefully, better world leaders.



# Why economics?

- ▶ A systematic study of human behavior: imperialism of economics.
- ▶ Emphasizes analytic approach: simplification and abstraction.
- ▶ Mainly rational choice.
  1. Competitive behavior.
  2. Game theory.
- ▶ Equilibrium perspective.
- ▶ Tight connection of theory and data.



# Why history?

## Past and Present

“Incomprehension of the present is inevitably born of ignorance of the past. But it may be just as pointless to exhaust oneself understanding the past if one knows nothing of the present.” Marc Bloch, *Apologie pour l'Historie*, p. 95.

- ▶ History is not the only way to study society. In fact, I define myself as an economist, not as a historian.
- ▶ But it is a very good one:
  1. History is the study of continuity and change.
  2. History tells us about constant human tension between cooperation and conflict.
  3. History forces us to think about sources:
    - 3.1 What is a fact?
    - 3.2 Selection bias: too much and too little data.



# Perspectives

Our approach will be a:

1. global narrative.
2. analytic narrative.
3. comprehensive narrative.
4. comparative narrative.
5. parachute narrative.



# A global narrative

## A German Father of History

“A general world history is necessary but impossible.” Leopold von Ranke.

- ▶ Let us look at ourselves.
- ▶ Transcending traditional Western History. Example: Cameron and Neal's textbook.
- ▶ At the same time, this is not a course on the West against the Rest either.
- ▶ Overcome the fetishism of Nation-State.
- ▶ Focus on constant interactions. No civilization of the week.
- ▶ That is why, in the interest of time, we start *circa* 1400 CE: multiplication of contacts.



## Questions

“I need a quote here...”

- ▶ We will think about structures and evolution: tension between continuity and change.
- ▶ We will ask analytic questions.
- ▶ We will not pay too much attention to concrete epiphenomena.
- ▶ But we need to know the basic outline of what happened.
- ▶ We will bring many sources of evidence: environment, climate, plagues, time,...



## Beyond the Economy

“Economic history cannot be done in separation with social history, cultural history, history of mentalities, political history....” Pierre Vilar.

- ▶ We will focus on economic history.
- ▶ But this will also force us to deal with many aspects outside pure economic aspects.
- ▶ Interaction between economy and other aspects of society.
- ▶ Direction of causation?





# A comparative narrative

## Comparison

“The study of the past can become effective only when it is fully realized that all peoples have histories, that these histories run concurrently and in the same world, and that the act of comparing them is the beginning of knowledge.” Frederick Teggart, *Rome and China*.

- ▶ Comparison is the origin of understanding.
- ▶ Basic tool in social sciences.
- ▶ Variation is the source of identification.

## Difficulties

“Comparative history is a risky business.” Rodney Hilton, *English and French Towns in Feudal Society: A Comparative Study*.

# A parachute narrative



## A Taxonomy

“There are two types of historians: parachutists, who scour large areas of territory and truffle hunters who unearth a buried treasure.” Emmanuel Le Roy Ladurie.

- ▶ We will be parachutist.
- ▶ Time constraints.
- ▶ Perhaps only viable alternative when one deals with global history.
- ▶ But we will love and respect truffle hunters.



## From mechanisms to causes

- ▶ We can investigate mechanisms of growth.
- ▶ But saying that a country grows because it invests more is not particularly deep.
- ▶ Instead, we want to study the fundamental causes of growth.
- ▶ In particular, we want to study the reason behind institutions and policies adopted by societies.

### Our question

Why do some societies choose institutions and policies that discourage growth, while other societies, often otherwise similar to the previous ones, choose growth-enhancing social arrangements?



## A framework for analysis

- ▶ Political institutions: rules under which individuals interact.
- ▶ Economic policies: decisions made under given political institutions.
- ▶ Then, we are interested in understanding

$$\Omega \xrightarrow{\mu(\cdot)} \mathcal{P} \xrightarrow{\pi(\cdot)} \mathcal{R} \xrightarrow{\rho(\cdot)} \mathcal{X} \xrightarrow{u(\cdot)} \mathbb{R}$$

where:

1.  $\Omega$  is the set of possible initial conditions.
2.  $\mathcal{P}$  is the set of feasible political institutions.
3.  $\mathcal{R}$  is the set of feasible economic policies.
4.  $\mathcal{X}$  is the set of allocations.
5.  $u(\cdot)$  is a utility function.



# Political economy

- ▶ Political economy is the formal study of collective decision-making.
- ▶ Closely linked with formal political theory (sometimes called rational choice theory).
- ▶ Emphasis:
  1. We want to analyze, not to judge.
  2. We want to explain, not to describe. Clifford Geertz refers to old approach as *thick description*.
  3. Methodological individualism.
- ▶ Motivating example: King Leopold II of Belgium (1865-1909).



## Key themes

1. Social conflict is nearly universal. Nearly all changes to institutions and policies imply winners and losers.
2. Aggregation of individuals preferences over outcomes is nontrivial.
3. Commitment problems are pervasive.
4. Groups with political power will tend to chose distortionary policies.
5. Asymmetric information



# Key theme 1: social conflict

- ▶ Nearly all economic policy decisions will generate winners and losers:
  1. Social security reform.
  2. Trade liberalization.
  3. Tax changes.
- ▶ The position of agents in the social conflict depends of the technology, endowments, and distribution of income.
- ▶ We will adopt a *consequentialist* approach: agents only care about the outcomes of the economic policy decision and not about the policy decision per se.

## Key theme 2: aggregation of preferences is nontrivial



- ▶ Imagine that we have 3 senators deciding the size of the U.S. army:
  1. Senator from South Carolina (right): Big Army  $\succ$  Small Army  $\succ$  Medium Army.
  2. Senator from Vermont (left): Small Army  $\succ$  Medium Army  $\succ$  Big Army.
  3. Senator from Ohio (center): Medium Army  $\succ$  Big Army  $\succ$  Small Army.
- ▶ After several meetings, they realize that their preferences are fixed. So they decide to vote.
- ▶ They first vote using a majority rule. However, each option gets exactly 1 vote.
- ▶ They decide to switch to a run-off system. Soon, they realize this is more tricky than it seems.





# A Condorcet paradox I

- ▶ The Senator from South Carolina wants to vote first on Small Army versus Medium Army and then face the winner with Big Army. Why?
  1. Small Army versus Medium Army: Small Army is a winner (South Carolina+Vermont versus Ohio).
  2. Small Army versus Big Army: Big Army is a winner (South Carolina+Ohio versus Vermont).

# A Condorcet paradox II



- ▶ The Senator from Vermont wants to vote first on Big Army versus Medium Army and then face the winner with Small Army. Why?
  1. Big Army versus Medium Army: Medium Army is a winner (Vermont+Ohio versus South Carolina).
  2. Small Army versus Medium Army: Small Army is a winner (Vermont+South Carolina versus Ohio).

# A Condorcet paradox III



- ▶ The Senator from Ohio wants to vote first on Big Army versus Small Army and then face the winner with Medium Army. Why?
  1. Big Army versus Small Army: Big Army is a winner (South Carolina+Ohio versus Vermont).
  2. Big Army versus Medium Army: Medium Army is a winner (Vermont+Ohio versus South Carolina).



## Condorcet winners and cycles

- ▶ The choice of voting order is called “control of the agenda.”
- ▶ Note that none of the procedures is better or fairer than the others under any reasonable criteria.
- ▶ This situation is known as a Condorcet cycle. Why?
- ▶ A Condorcet winner is the choice that will defeat all the other alternatives in pairwise contests.
- ▶ Condorcet cycles are not pathological. As the number of alternatives goes to infinity, we will have a Condorcet cycle with probability 1.
- ▶ Example of infinite alternatives: “divide-the-dollars” game.



## Key theme 3: lack of commitment

- ▶ Ex ante statements about future courses of action are not credible.
- ▶ Example:
  1. NATO forces in Western Europe were outnumbered by the Soviet army.
  2. U.S. announced that it will use the nuclear weapons if the Soviet army reached the Rhine.
  3. The idea was, of course, to dissuade the Soviet Union from grabbing Western Europe.
  4. But, once the Soviet army breaks through the Fulda Gap and it is ALREADY at Köln, will a U.S. president sacrifice New York or Boston to save Paris?
  5. Hence, the threat was not credible: De Gaulle was right! (Soviet Union never went for Europe probably because conventional NATO forces were sufficiently strong to make this choice a very risky strategy).
- ▶ Application in economic policy: taxes on capital.
- ▶ Hold-up problem.



# Consequences

Two possible outcomes:

1. Societies find commitment devices (for example, “doomsday machine” in Dr. Strangelove, or Constitutions). Problems:
  - ▶ Difficult to implement.
  - ▶ Cut flexibility that we may need in the future.
  - ▶ Are there real commitment devices?
2. Societies settle down in outcomes that are subgame perfect. Unfortunately, often subgame perfect outcomes are quite inefficient (even Pareto-inferior).



## Key theme 4: powerful groups choose distortionary policies

- ▶ Revenue extraction:
  1. Decoupling between political and economic power.
  2. Absence of lump-sum taxation.
  
- ▶ Factor price manipulation.
  
- ▶ Political replacement (James Michael Curley, 4 times Boston mayor).



## Key theme 5: asymmetric information

- ▶ Basic problem in economics: information is disperse and private.
- ▶ Example:
  1. Quality of the good I am selling.
  2. Amount of effort I put into my work.
  3. Preferences.
- ▶ Consequently, in general we cannot get to first best.
- ▶ Key in all economic systems: evidence of quality problems in Stalin's Soviet Union.
- ▶ Political economy:
  1. Provision of a public good.
  2. Quality/true preferences of a politician.
  3. Intensity of preferences for some policy.
- ▶ Good design of institutions: mechanism design.