Institutions

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Objectives

Most economists believe that institutions are the main cause of cross-country income differences.

In this section you learn:

1. what institutions are
2. which evidence supports the importance of institutions
3. about the colonial origin of institutions

Institutions:
What are they?

Institutions

What are institutions?

Vaguely:

> *"Humanly devised constraints that shape human interaction." (North 1990)*

Examples

- Protection of property rights.
  - Russia: If a property burns down, the owner loses ownership of the land.
- Rule of law.
  - Peru: It takes 290 days to start a small business (paying 2 bribes; De Soto).
  - USA: 6 days; India: 29 days (World Bank "Doing Business").
- Freedom of speech.
  - Galileo. Navalny.

How Do Institutions Affect Output?

Reduced return on investment:

- bribery
- expropriation

Misallocation of resources:

- favorable treatment for politically connected firms

Less competition

- government monopolies

... and many more channels (which is the **key problem**).

Evidence: Institutions Matter

Great Divergence

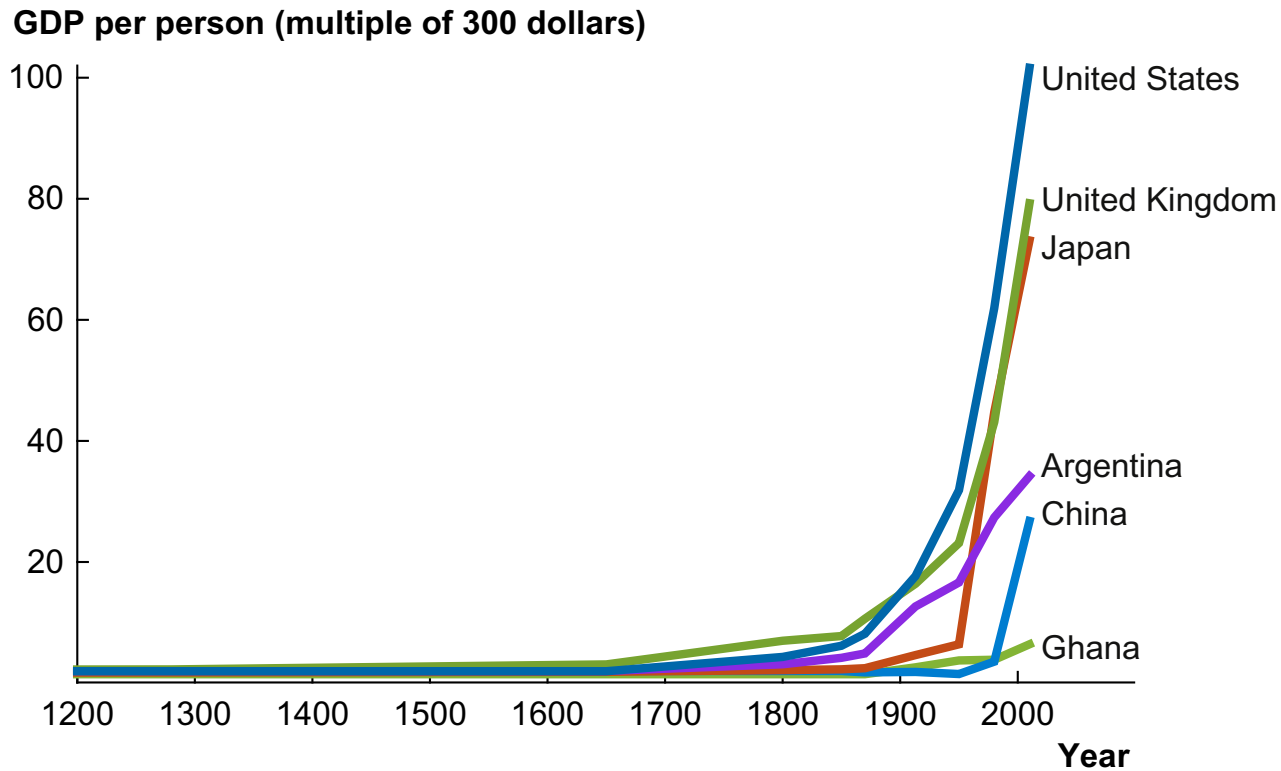


Fig. 21 The great divergence. *Note*: The graph shows GDP per person for various countries. The units

`Source: Jones (2016)`

Great Divergence

Implications:

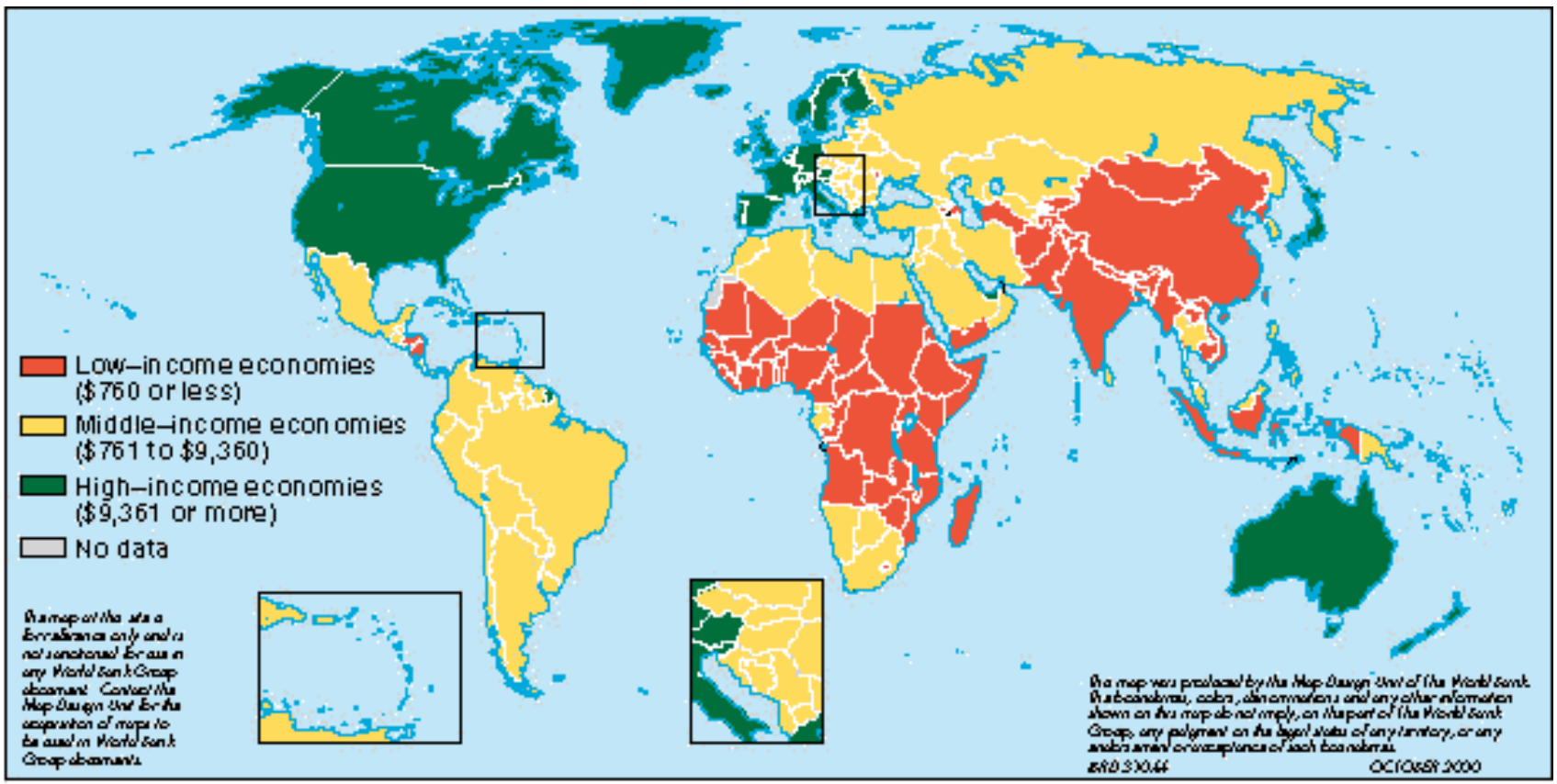
Whatever causes cross-country income gaps

- took hold around the time of the Industrial Revolution
- has affected countries persistently over centuries
- has caused countries to delay industrialization

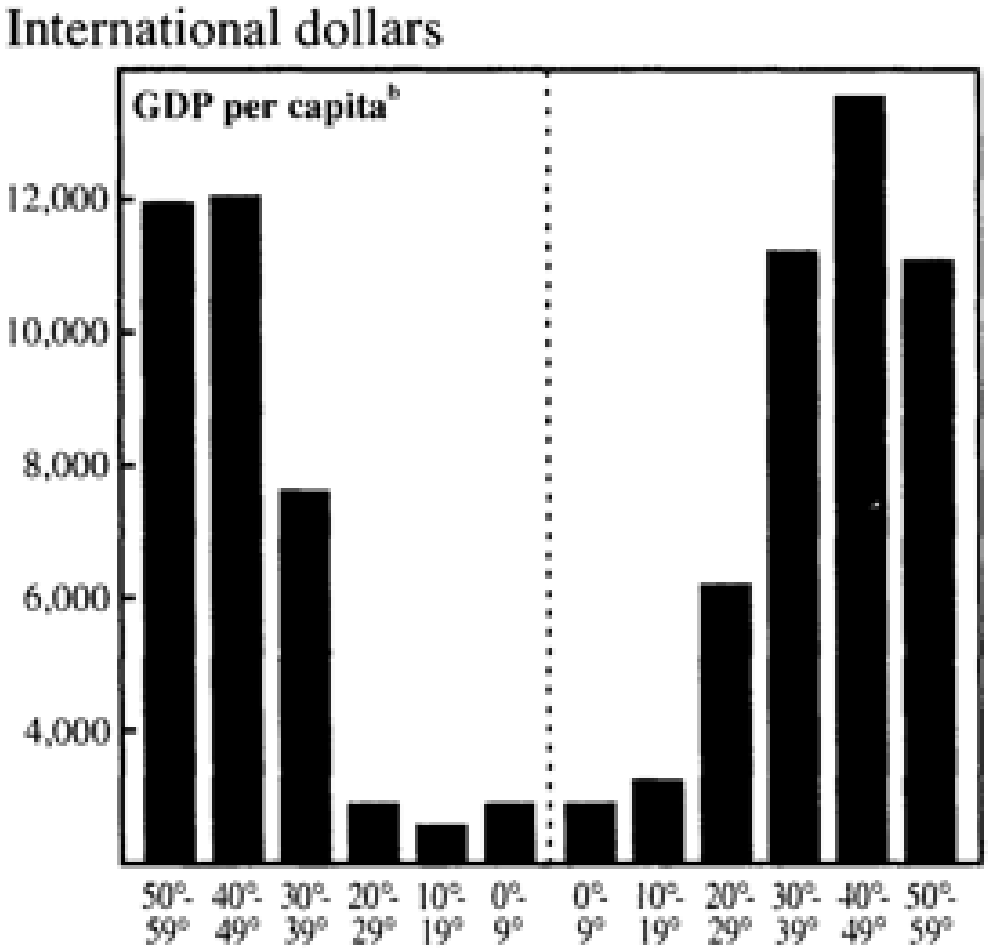
What force is this persistent? - Institutions.

Geography

Prosperity is geographically concentrated.



Geography



Bloom et al. (1998)

Countries that are close to the equator are poor.
Is this relationship **causal**?

Most economists believe that the geographic pattern reflects **institutions**.

Perhaps geography / climate cause institutions?

How to Measure Institutions?

Objective measures:

- openness to international trade
- communism

These measures are crude.

Could one do better?

How to measure institutions?

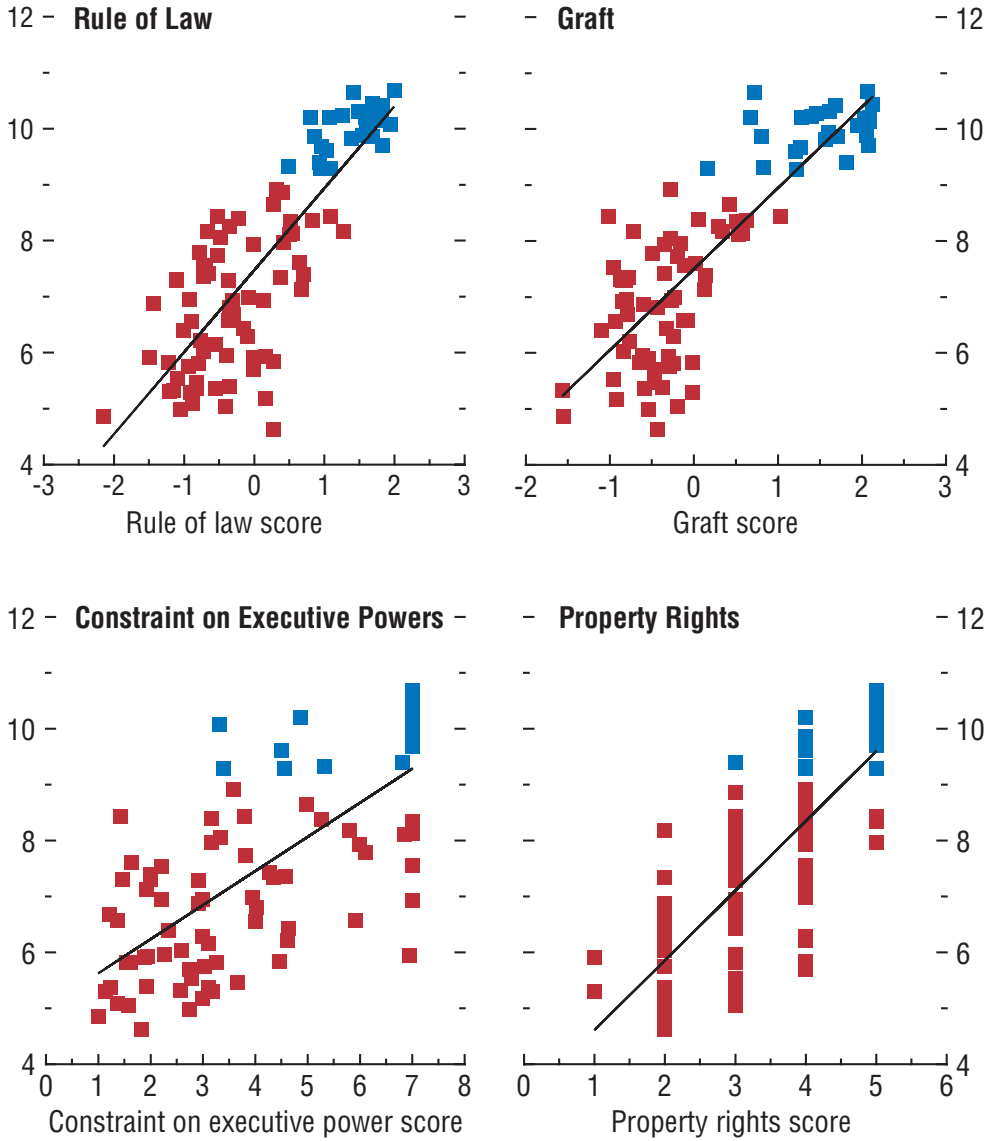
Subjective measures:

- provided by companies that advise investors
- e.g. "index of government anti-diversion policies"

Several measures are often combined into an index

- e.g. Social Infrastructure by Hall and Jones (1999)

Rich Countries Have Good Institutions



IMF (2003)

How About Causality?

We know that correlations do not imply causation.

How can we establish that institutions cause income?

A general problem in economics.

Common approaches:

1. Build a model (not yet feasible for institutions).
2. Natural experiments.

Natural Experiments

- Why is it hard to establish cause-effect?
  - because "other" variables may vary with institutions
- The science approach: controlled experiments
  - vary one variable at a time
  - hold all others constant
  - example: medical trials with control groups
  - rarely feasible in economics

Natural Experiments

- Natural experiments approximate controlled experiments.
- Look for historical cases where a "random event" changes a variable.
- Examples:
  - a war or natural disaster destroys capital – what happens to output?
  - countries are divided and adopt different institutions

Divided countries

Cases:

- East & West Germany
- South & North Korea
- Hong Kong and Taiwan vs. China

In all cases, the democratic / market oriented countries did better than the communist ones.

Divided Countries: Korea

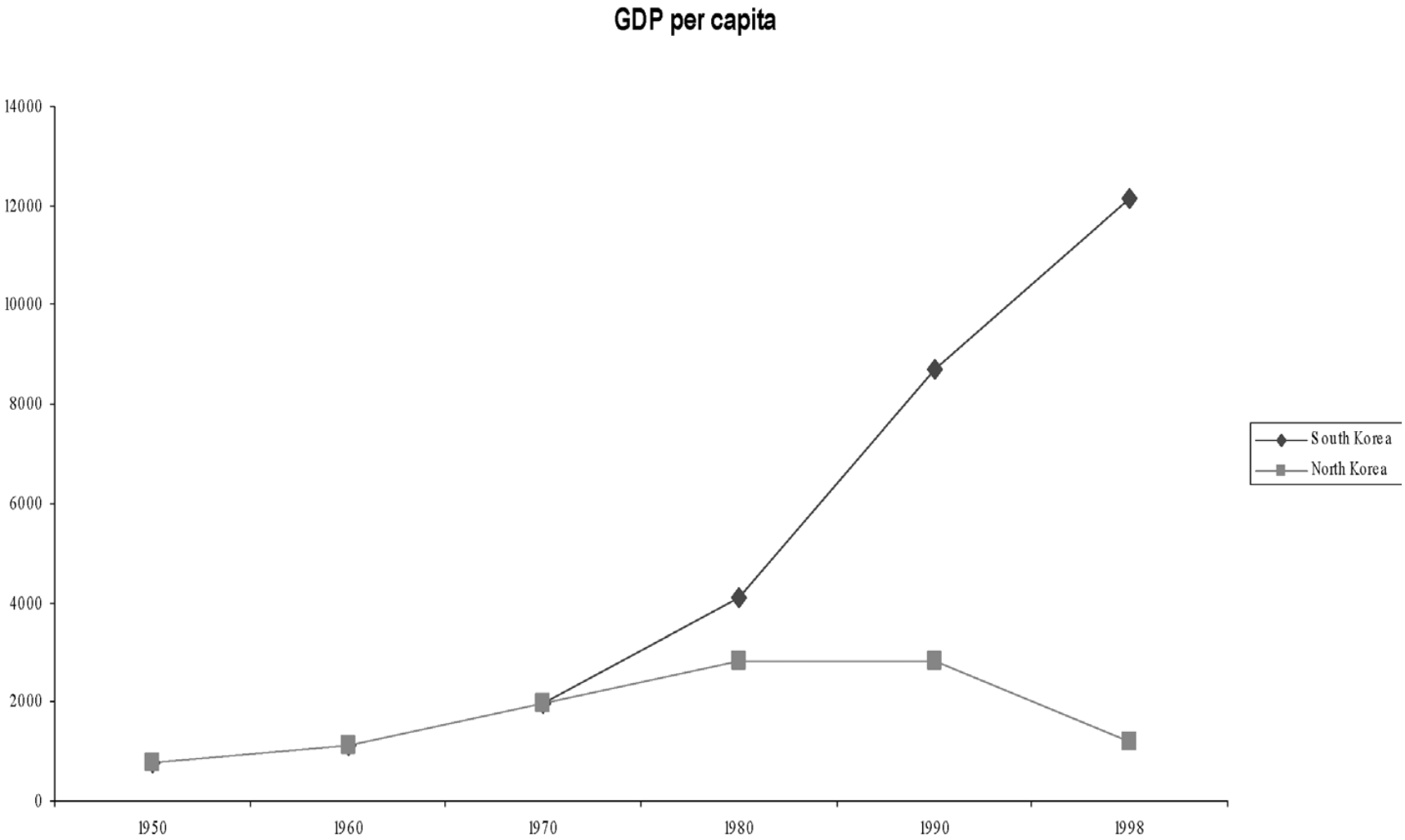


Figure 3. GDP per capita in North and South Korea, 1950–98.

Source: Acemoglu et al. (2005)

Colonies

Since there are few divided countries, we need another source of evidence.

Colonies can be used to shed light on:

- where do bad institutions come from?
- how much do they matter for output?

A remarkable fact: colonial effects persist for hundreds of years.

Colonies: The Story

A large part of the world was colonized by Europeans after 1500.

In some colonies, democratic institutions were put in place

- North America, Australia, New Zealand

In other colonies, dictatorial / expropriating institutions were put in place

- Africa

Today's institutions are strongly related to those imposed on the colonies hundreds of years ago.

Can we simply compare GDP between colonies with good versus bad institutions and be done?

Colonization as Natural Experiment

To get clean evidence, we need to look for "accidental" factors that shaped the institutions of colonies.

- then we have a **natural experiment**
- some colonies “accidentally” have bad institutions while others have good institutions
- we can estimate the effect of institutions on output by comparing the two groups

Where Did Colonizers Choose Bad Institutions?

Colonies come in two types:

1. Poor: Few resources and few people.
2. Rich: Endowed with resources that can be extracted (including labor).

In poor colonies, the only way to exploit the land is to **settle**.

- Settlers bring institutions which protect their own rights.
- Or settlers establish rights with force (USA).

In rich colonies, the most profitable strategy is to **expropriate** locals.

- Institutions protect the colonial minority's rights / deny rights to the local majority.
- Forced labor (South America, Africa).

Implications

This theory predicts a **reversal of fortunes**.

Among colonies: those who were initially rich should now have

- bad institutions
- low income

The same should not be the case among countries that were not colonized.

This idea is due to Acemoglu et al. (2002)

Evidence: Rich Colonies - Bad Institutions

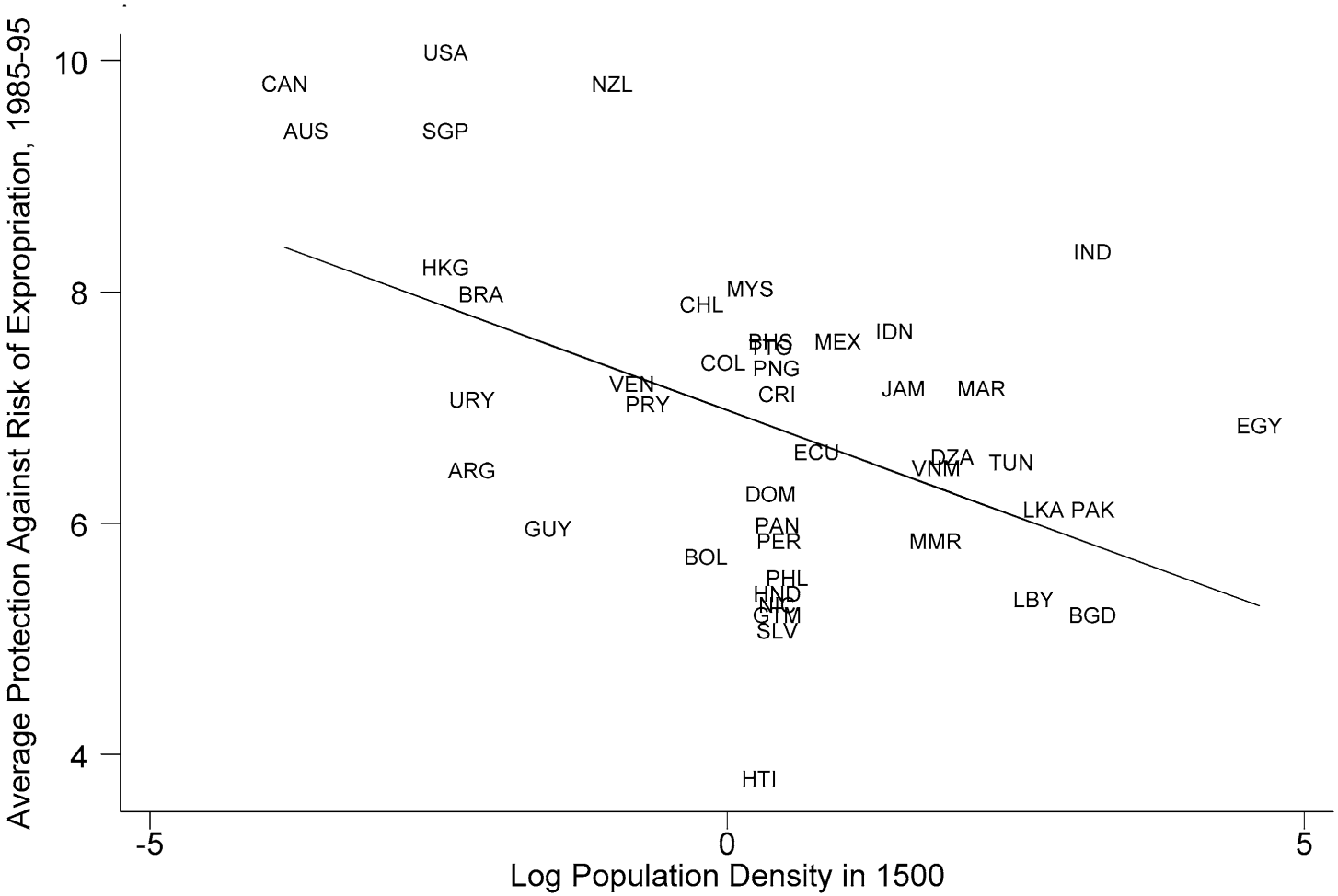


Figure 13. Log population density in 1500 and average protection against risk of expropriation 1985–95.

Source: Acemoglu et al. (2005)

Population density is a proxy for per capita income.

Reversal of Fortune

Colonies that were rich in 1500 are poor today.

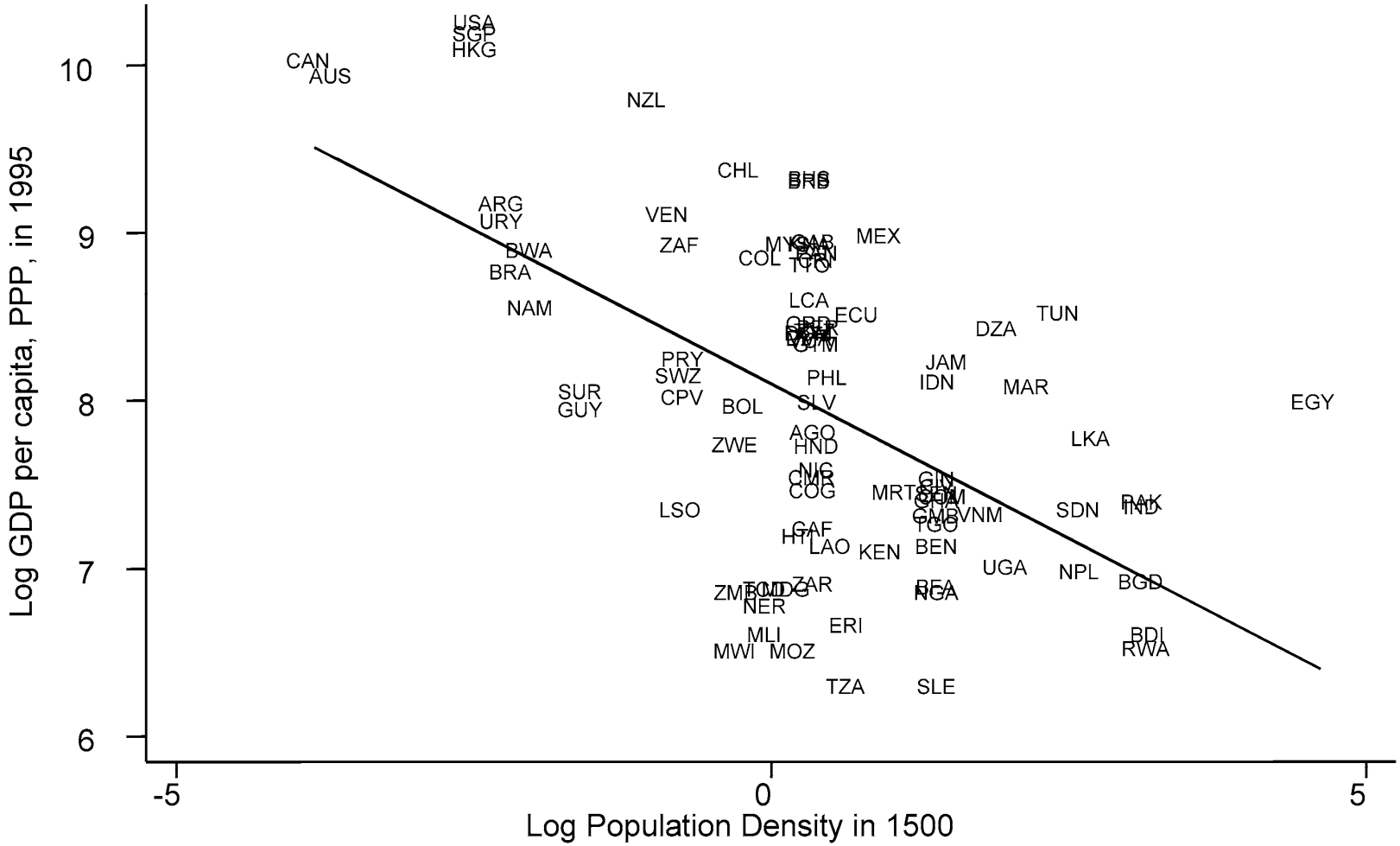


Figure 6. Log population density in 1500 and log GDP per capita in 1995, among former European colonies.

Source: Acemoglu et al. (2005)

No reversal among Non-Colonies

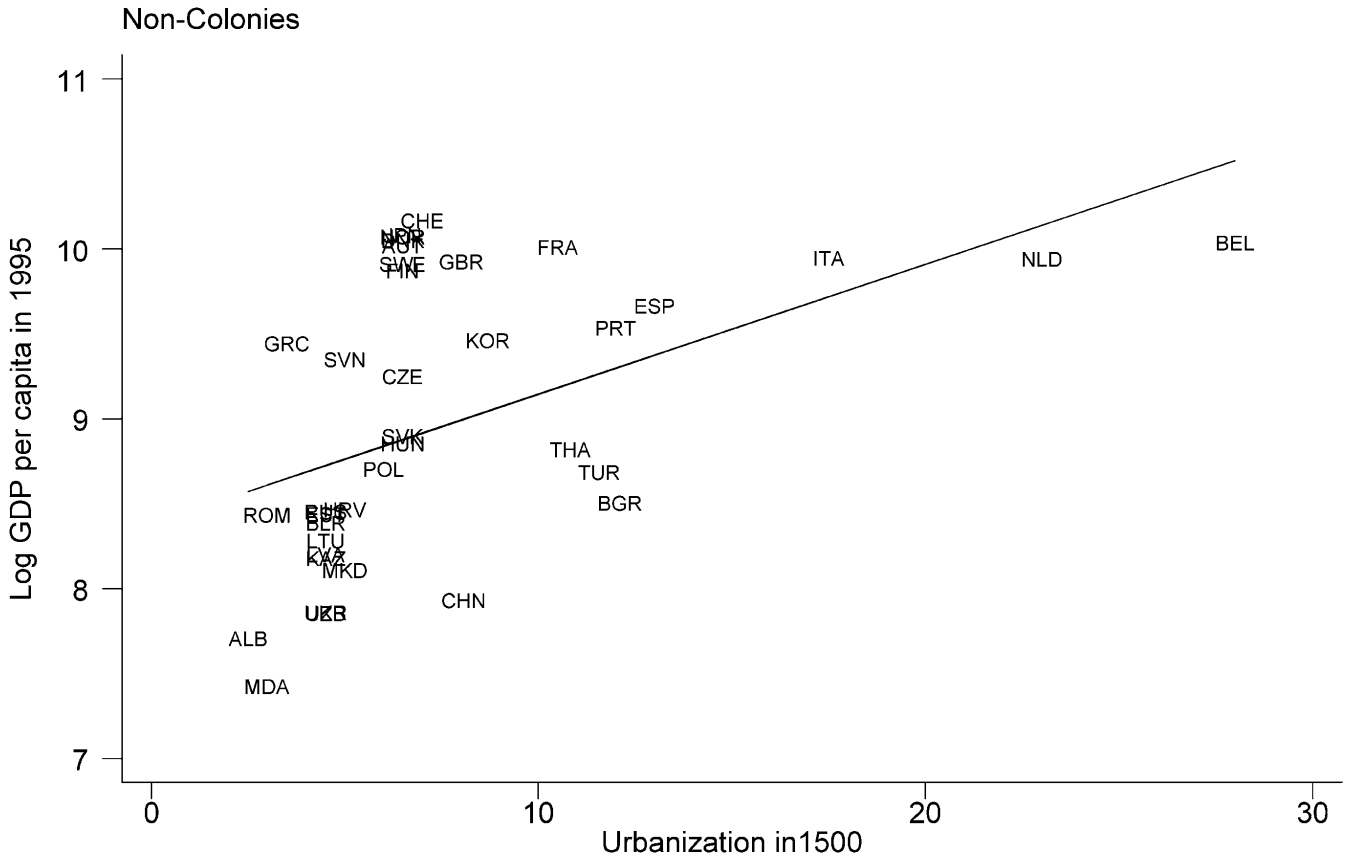


Figure 9. Urbanization in 1500 and log GDP per capita in 1995, among non-colonies.

Acemoglu et al. (2005)

Clearly inconsistent with geography as cause of development.

Quantifying the Role of Institutions

The idea:

Use variation in institutions across colonies that is "accidental."

Measure the income differences between colonies with accidentally good and accidentally bad institutions.

These income differences are **caused** by institutions.

Details in Acemoglu and Robinson (2001)

- The accidental factor is settler mortality
- Countries with lots of malaria etc could not be settled, so they were exploited

Result: Institutions account for the majority of cross-country income gaps.

Summary

- Ample evidence that institutions are important for Y/L.
  - Colonies provide a natural experiment that "randomly" assigns institutions to countries.
  - Divided countries "prove" that communist institutions reduce incomes.
- Key open questions:
  1. Which institutions are important?
  2. How much do institutions contribute to Y/L gaps?

Review Questions

1. Why is the "reversal of fortunes" evidence so compelling?
2. What could go wrong with the colonial evidence?
3. Why is it so hard to figure out which institutions are important?

Reading

- Jones (2013), ch. 7.

Advanced Reading:

- Romer (2011), ch. 3.10.
- Acemoglu et al. (2005) lays out the evidence in favor of institutions as fundamental causes of development.
- Hall and Jones (1999) attempt to quantify the role of institutions using instrumental variables.

References I

Acemoglu, D., S. Johnson, and J. A. Robinson (2002): "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution," *The Quarterly Journal of Economics*, 117, 1231–1294.

——— (2005): "Institutions as a fundamental cause of long-run growth," *Handbook of economic growth*, 1, 385–472.

Acemoglu, D. and J. A. Robinson (2001): "The Colonial Origins of Comparative Development: An Empirical Investigation," *The American Economic Review*, 91, 1369–1401.

Bloom, D. E., J. D. Sachs, P. Collier, and C. Udry (1998): "Geography, demography, and economic growth in Africa," *Brookings papers on economic activity*, 1998, 207–295.

Hall, R. E. and C. I. Jones (1999): "Why do some countries produce so much more output per worker than others?" *Quarterly Journal of Economics*, 114, 83–116.

References II

IMF (2003): "World economic outlook: Growth and institutions," .

Jones, C. I. (2016): "The Facts of Economic Growth," in *Handbook of Macroeconomics*, ed. by J. B. Taylor and H. Uhlig, Elsevier, vol. 2, chap. 1, 3–69.

Jones, Charles; Vollrath, D. (2013): *Introduction To Economic Growth*, W W Norton, 3rd ed.

Romer, D. (2011): *Advanced macroeconomics*, McGraw-Hill/Irwin.