1 Introduction

1.1 Definition

1.2 Motivation

- The basic question is simply: why are some countries rich and other countries poor? How much of this variation can be explained by differences in formal institutions?

- Countries vary greatly in wealth

- This variation is often correlated with variation in formal institutions

- Acemoglu et al Table 2 Column (2) shows that 54% if variation in log GDP per capital of ex-colonies can be explained by average protection against appropriation risk.

1.3 Examples of formal institutions include

2 Were the British just better colonizers?

Many past studies have tried to explain the variation in economic status and institutions of former colonies by arguing that the British left better institutions.
2.0.1 Hayek (1960)

- Argued that British common law tradition was superior to the French civil law, which was developed during the Napoleonic era to restrain judge’s interference with state policies.

2.0.2 La Porta, Lopez-Silanes, Shleifer, & Vishny (1998, 1999)

- Show importance of colonial origin.
- Common law countries and formerly British Colonies have better property right enforcement and more developed financial markets.

2.0.3 North, Sumerhill, Weingast (1998)

- Argue that former British colonies prospered relative to former French, Spanish, and Portuguese colonies because of the better institutions inherited from the British.

2.0.4 Engerman and Sokoloff (1997)

- Link institutions to factor endowments and inequality.

2.1 Do good institutions cause economic prosperity?

- The studies above gives 2 empirical facts:
  - What we want to know is if \( 1 + 2 \Rightarrow \) good institutions cause economic prosperity

3 Institutional Persistence

When we study the effect of being colonized, we are making the assumption that what happened in the past affect the present state of institutions. In other words, we assume that institutions persist.

What economic mechanisms can you think of that explains the persistence of institutions?
4 Approaching the Question Directly

We want to regress the GDP for country i today on some measure of how good it’s institutions are while controlling for other characteristics for that country.

$$\text{GDP}_i = a + b \times \text{good institutions}_i + X'_i c + \varepsilon_i$$

4.1 Establishing Causality

Given the previous evidence, it will not be surprising to find an positive and statistically significant estimate for b. However, we have to be concerned about reverse causality and omitted variable bias.

For example

- Wealthier countries can afford better institutions
- Good institutions and GDP are jointly determined by something else. Such as

4.1.1 Hall and Jones (1999)

- Use distance to equator to instrument for social infrastructure.
- They argue that distance to equator is correlated with "Western influence", which causes good institutions
- This is a difficult argument to make in light of the Belgian influence in the Congo, or the western influence in the Gold Coats during the era of slavery.

4.1.2 Weber (1976), Anderson (1983)

- Use ethnolinguistic fragmentation to instrument for institutions.
- However, fragmentation is endogenous to economic growth, political stability, and the emergence of a national market/political identity.

Both latitude and fragmentation are bad instruments because they probably have direct affects on GDP. For similar reasons, colonial origin would not be a good instrument.
5 Acemoglu, Johnson, & Robinson (2001) uses settler mortality rates to instrument for institutions.

5.1 The Background

5.1.1 European settlers were more likely to settle in colonies which face lower mortality rates caused by disease.

- Mortality rates was a key determinant for European settlements. They were mostly due to malaria and yellow fever.
  - Europeans suffered 61% mortality rates in Burlama (1792-93)
  - 72% for the Sierra Leone Company (1792-93)
  - 87% in Mungo Park’s overland trip from Gambia to the Niger (1805). All Europeans died before completing the trip

- The Pilgrims chose North America over Guyana because of the high mortality rates in Guyana.

- After the American Revolution, the British chose to Australia as the location for a penal colony over Lemane (Gambia) and South West Africa because of health reasons.

5.1.2 Colonies with more European settlers developed better institutions than colonies with few European settlers.

- Settler colonies such as Australia, the United States, and Canada developed representational government and property rights as settlers fought for the rights which they enjoyed in their home countries.

- Colonies with few European settlers developed extractionist policies.
  - Spanish and Portuguese aimed to obtain gold and other valueables. The crown granted rights to land and labor and set up a complex mercantilist system of monopolies and trade regulations to extract resource.
  - Colonial powers in Africa at first concentrated in monopolizing the slave trade.
Colonial powers invested very little back into the colonies. For example, in Northern Rhodesia, 1930-1940, Britian took 2.4 million pounds in taxes, but invested only 136,000 pounds back for development and grants.

King Leopold’s policy for the Congo was explicitly based on violent exploitation of natural and human resources.

5.2 Data

- 64 Ex colonies
- Log GDP per capita (also use output per worker in 1988)
- Political Risk Service data on protection agains expropriation
- Polity III data for constraints on the executive in 1990.
- Fraction of populaulation which is of European descent
- Measure of European Settlement
- Mortality data from military, church, and sailors.

5.3 OLS

\[ (1) \log y_i = \mu + \alpha R_i + X_i'\gamma + \varepsilon_i \]

Results on Table 2. Graph 2.

Institutions have a significant positive relationship

African countries are much poorer even controling for instutions.

5.4 Using Settler Mortality as an Instrument

\[ (2) R_i = \lambda_R + \beta_R C_i + X_i'\gamma_R + \nu_{Ri} \]
\[ (3) C_i = \lambda_C + \beta_C S_i + X_i'\gamma_C + \nu_{Ci} \]
\[ (4) S_i = \lambda_S + \beta_S \log M_i + X_i'\gamma_S + \nu_{Si} \]

R is the measure of the current institutions
C is measure of 1900 institutions
S is measure of European settlements in the colony
M is the mortality rates faced by settlers
X is a vector of covariates.

5.4.1 Can we C and S to instrument for institutions?

5.4.2 Settler Mortality

\( R_i = \psi + \beta \log M_i + X'_i \delta + \nu_i \)

The first stage equation models expropriation risk as a function of the log of settler mortality.

- What is the exclusion restriction?
- Figure 1 and Figure 3 show the relationship between settler mortality and GDP and expropriation risk.
- Table 4 show 2SLS results
  - What is the effect of log European settler mortality on expropriation risk?
  - What is the effect of expropriation risk on log GDP?
  - Does distance to the equatore have any effect?
  - Are African countries poorer if institutions are controlled for?
  - Why might this be different from the OLS?
  - Are the 2SLS estimates for expropriation larger or smaller than the OLS estimates?
  - Why might that be?

Other Results

- Find that colonial origin has a much smaller effect than suggested by LLSV. Dummy for being a former British colony is small and significant.
- Why might this be?
  - The large British effect in LLSV is mostly driven by the fact that the British chose places with low settler mortality.
• What other controls should be added as robustness checks?

• Ethnolinguistic fragmentation is endogenous to development and correlated with settler mortality. What do you think happens to the effect of institutions if we include the endogenous variable as a control?

Is the exclusion restriction satisfied?

• Maybe the instrument is capturing the effect of the overall disease environment today.

• So, the effect we are capturing is the effect of the incidence of disease on GDP.

• What evidence can you think of to argue against this?

• Can we devise a test somehow?

6 What policy advice can we take away from this?

• Policy implications are limited.

• "Institutions" is a black-box.

• We have seen that good institutions such as low risk of expropriation lead to higher GDP.

• But how do we decrease the risk of expropriation in the real world?

• In other words, institutions are equilibrium outcomes.

• We need to understand more fundamental parts of institutions (things that policy can change directly) in order to guide policy.

• We have already been doing some that in the earlier part of the course.