

# Lecture 9: Political Economy and Institutions

## EC2303: Intermediate Development Economics

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## Context for this lecture

- ▶ In many of the lectures in this course, we talked about individual-level problems and solutions:
  - ▶ Low educational attainment; bad health; low agricultural productivity
  - ▶ Information about returns to education; deworming; cash transfers
- ▶ Today, we will turn to a society-level problem: low-income settings are often characterized by imperfectly functioning institutions (property rights, rule of law, etc.).
- ▶ We will look at evidence suggesting that institutions are important for growth
- ▶ How does this relate to what we talked about previously? Do the individual-level problems and solutions not matter?
  - ▶ One view: Institutions are hard to change; individual-level outcomes (like health) are easier. So while the micro-approach may not be the most effective “globally”, it may be the most effective in practice, because it’s feasible.
  - ▶ At the same time, sometimes institutions *can* be influenced. We will look at one example of this: the provision of free legal aid in disputes in Liberia.

## Institutions: What is that?

- ▶ Often used definition from Douglass North (economic historian):
  - ▶ Institutions are the “rules of the game”
  - ▶ Formally: they are “humanly devised constraints that shape human interaction. They structure incentives in exchange, whether political, social, or economic.”
- ▶ Can be formal or informal
- ▶ Examples: legal system; property rights; religion; marriage; slavery (cf. the paper by Wantchekon & Nunn that you read).

Do institutions matter? Anecdotal “evidence”

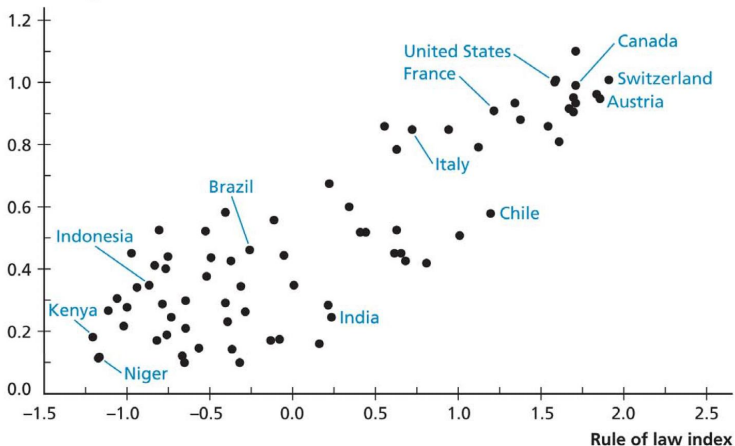


# Do institutions matter? Correlational evidence

**FIGURE 12.1**

## Rule of Law and Factor Accumulation

Factors of production relative to the United States

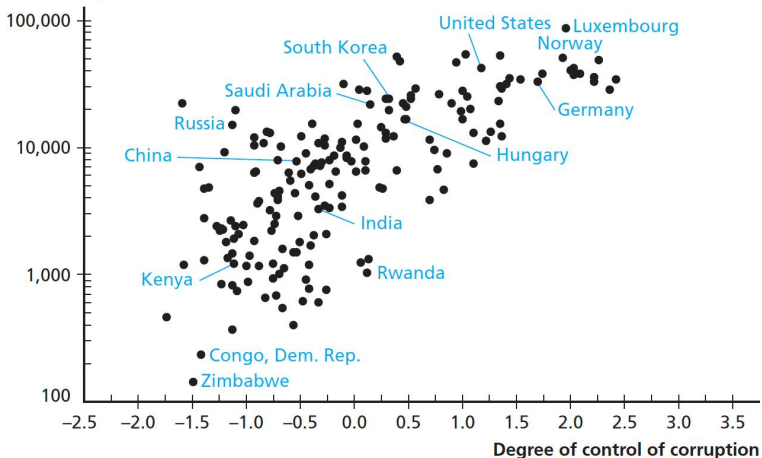


# Do institutions matter? Correlational evidence

FIGURE 12.5

## Government Corruption versus GDP per Capita, 2009

GDP per capita (2005 International Dollars, ratio scale)



# Do institutions matter? Causal evidence

Acemoglu, Johnson, & Robinson, 2001

- ▶ Acemoglu, Johnson, Robinson, 2001: “The Colonial Origins of Comparative Development”. Very important paper in development economics.
- ▶ Problem: need as-good-as-random variation in the quality of current institutions.
- ▶ Basic idea: use European settler mortality in colonies as an instrument for the quality of current institutions. Study 64 countries that are former colonies.
- ▶ Why does this approach work?
  - ▶ European settler mortality determined which institutions colonizing powers could set up
  - ▶ If mortality was high, Europeans could not settle and were more likely to set up “extractive” institutions
  - ▶ In contrast, with low mortality, they set up better institutions
  - ▶ These institutions persist until today
  - ▶ So we can use European settler mortality rates as an instrumental variable for the quality of current institutions (specifically, expropriation risk).

# Do institutions matter? Causal evidence

Acemoglu, Johnson, & Robinson, 2001

(potential) settler  
mortality  $\Rightarrow$  settlements

$\Rightarrow$  early institutions  $\Rightarrow$  current institutions

$\Rightarrow$  current performance.



## Detour: Instrumental variables

- ▶ Suppose you want to test the effect of  $X$  on  $Y$ , but you worry about reverse causality or simultaneity
  - ▶ Example:  $Y =$  current GDP,  $X =$  current institutions
- ▶ Find a variable  $Z$  (“the instrument”) that...
  - ▶ ...affects  $X$  (“relevance”; this can be tested)
  - ▶ ...affects  $Y$  only through  $X$  (“exclusion restriction” or “exogeneity”; this needs to be argued, except with random assignment)
- ▶ Here: Use European settler mortality as the instrument for current institutions
- ▶ Is this instrument relevant? Is it exogenous?

## Variables

- ▶ Instrumental variable: European settler mortality. Mortality rates of soldiers, bishops, and sailors stationed in the colonies between the seventeenth and nineteenth centuries, largely based on the work of the historian Philip D. Curtin. Europeans were well informed about these mortality rates at the time, even though they did not know how to control the diseases that caused these high mortality rates.
- ▶ Measures of early institutions:
  - ▶ European settlements in the colony in 1900: fraction of the population with European descent in 1900
  - ▶ Constraint on executive in 1900, 1970, 1990 and in first year of independence: Seven-category scale, from 1 to 7, with a higher score indicating more constraints
  - ▶ Democracy in 1900 and first year of independence: An 11-category scale, from 0 to 10, with a higher score indicating more democracy
- ▶ Measure of current institutions: Average protection against expropriation risk, 1985-1995. Risk of expropriation of private foreign investment by government, from 0 to 10, where a higher score means less risk. Mean value for all years from 1985 to 1995.

# Current GDP and current expropriation risk

Acemoglu, Johnson, & Robinson, 2001

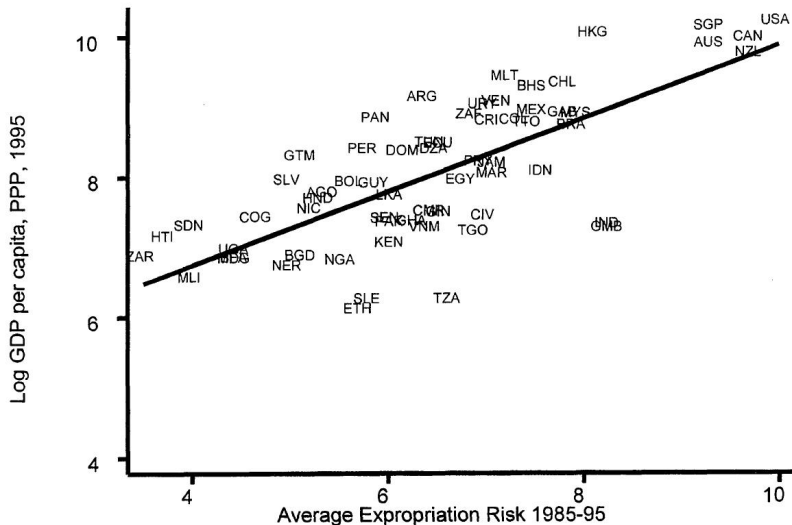


FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME

# Reduced-form relationship between settler mortality and GDP

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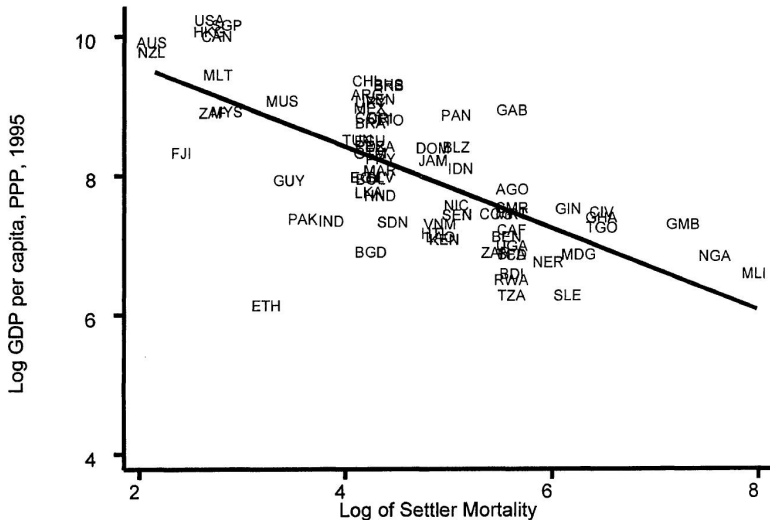


FIGURE 1. REDUCED-FORM RELATIONSHIP BETWEEN INCOME AND SETTLER MORTALITY

# First stage: Settler mortality and expropriation risk

Acemoglu, Johnson, & Robinson, 2001

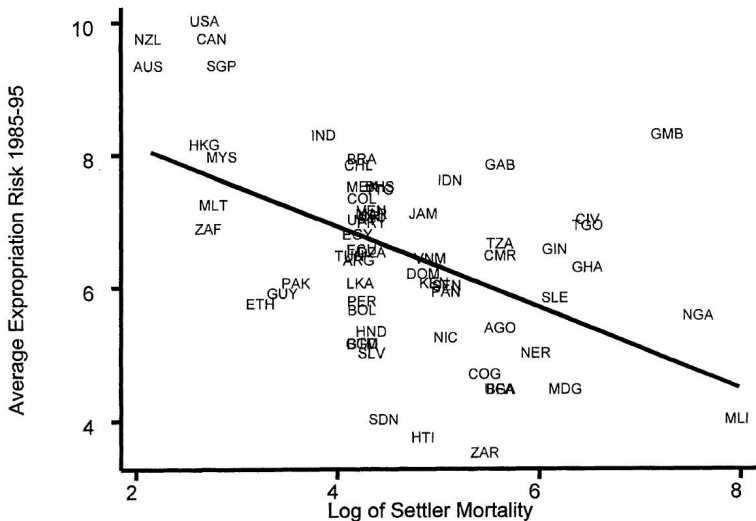


FIGURE 3. FIRST-STAGE RELATIONSHIP BETWEEN SETTLER MORTALITY AND EXPROPRIATION RISK

# First stage: Settler mortality and expropriation risk

Acemoglu, Johnson, & Robinson, 2001

TABLE 3—DETERMINANTS OF INSTITUTIONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A										
	Dependent Variable Is Average Protection Against Expropriation Risk in 1985–1995									
Constraint on executive in 1900	0.32 (0.08)	0.26 (0.09)								
Democracy in 1900			0.24 (0.06)	0.21 (0.07)						
Constraint on executive in first year of independence					0.25 (0.08)	0.22 (0.08)				
European settlements in 1900							3.20 (0.61)	3.00 (0.78)		
Log European settler mortality									-0.61 (0.13)	-0.51 (0.14)
Latitude		2.20 (1.40)		1.60 (1.50)		2.70 (1.40)		0.58 (1.51)		2.00 (1.34)
R <sup>2</sup>	0.2	0.23	0.24	0.25	0.19	0.24	0.3	0.3	0.27	0.3
Number of observations	63	63	62	62	63	63	66	66	64	64
Panel B										
	Dependent Variable Is Constraint on Executive in 1900				Dependent Variable Is Democracy in 1900				Dependent Variable Is European Settlements in 1900	
European settlements in 1900	5.50 (0.73)	5.40 (0.93)			8.60 (0.90)	8.10 (1.20)				
Log European settler mortality			-0.82 (0.17)	-0.65 (0.18)			-1.22 (0.24)	-0.88 (0.25)	-0.11 (0.02)	-0.07 (0.02)
Latitude		0.33 (1.80)		3.60 (1.70)		1.60 (2.30)		7.60 (2.40)		0.87 (0.19)
R <sup>2</sup>	0.46	0.46	0.25	0.29	0.57	0.57	0.28	0.37	0.31	0.47
Number of observations	70	70	75	75	67	67	68	68	73	73

Notes: All regressions are OLS. Standard errors are in parentheses. Regressions with constraint on executive in first year of independence also include years since independence as a regressor. Average protection against expropriation risk is on a scale from 0 to 10, where a higher score means more protection against expropriation of private investment by government, averaged over 1985 to 1995. Constraint on executive in 1900 is on a scale from 1 to 7, with a higher score indicating more constraints. Democracy in 1900 is on a scale from 0 to 10, with a higher score indicating more democracy. European settlements is percent of population that was European or of European descent in 1900. See Appendix Table A1 for more detailed variable definitions and sources.

# Income & expropriation risk, instrumented by mortality

Acemoglu, Johnson, & Robinson, 2001

TABLE 4—IV REGRESSIONS OF LOG GDP PER CAPITA

	Base sample (1)	Base sample (2)	Base sample without Neo-Europes (3)	Base sample without Neo-Europes (4)	Base sample without Africa (5)	Base sample without Africa (6)	Base sample with continent dummies (7)	Base sample with continent dummies (8)	Base sample, dependent variable is log output per worker (9)
Panel A: Two-Stage Least Squares									
Average protection against expropriation risk 1985–1995	0.94 (0.16)	1.00 (0.22)	1.28 (0.36)	1.21 (0.35)	0.58 (0.10)	0.58 (0.12)	0.98 (0.30)	1.10 (0.46)	0.98 (0.17)
Latitude		-0.65 (1.34)		0.94 (1.46)		0.04 (0.84)		-1.20 (1.8)	
Asia dummy							-0.92 (0.40)	-1.10 (0.52)	
Africa dummy							-0.46 (0.36)	-0.44 (0.42)	
“Other” continent dummy							-0.94 (0.85)	-0.99 (1.0)	
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995									
Log European settler mortality	-0.61 (0.13)	-0.51 (0.14)	-0.39 (0.13)	-0.39 (0.14)	-1.20 (0.22)	-1.10 (0.24)	-0.43 (0.17)	-0.34 (0.18)	-0.63 (0.13)
Latitude		2.00 (1.34)		-0.11 (1.50)		0.99 (1.43)		2.00 (1.40)	
Asia dummy							0.33 (0.49)	0.47 (0.50)	
Africa dummy							-0.27 (0.41)	-0.26 (0.41)	
“Other” continent dummy							1.24 (0.84)	1.1 (0.84)	
R <sup>2</sup>	0.27	0.30	0.13	0.13	0.47	0.47	0.30	0.33	0.28
Panel C: Ordinary Least Squares									
Average protection against expropriation risk 1985–1995	0.52 (0.06)	0.47 (0.06)	0.49 (0.08)	0.47 (0.07)	0.48 (0.07)	0.47 (0.07)	0.42 (0.06)	0.40 (0.06)	0.46 (0.06)
Number of observations	64	64	60	60	37	37	64	64	61

Notes: The dependent variable in columns (1)–(8) is log GDP per capita in 1995, PPP basis. The dependent variable in column (9) is log output per worker, from Hall and Jones (1999). “Average protection against expropriation risk 1985–1995” is measured on a scale from 0 to 10, where a higher score means more protection against risk of expropriation of investment by the government, from Political Risk Services. Panel A reports the two-stage least-squares estimates, instrumenting for protection against expropriation risk using log settler mortality; Panel B reports the corresponding first stage. Panel C reports the coefficient from an OLS regression of the dependent variable against average protection against expropriation risk. Standard errors are in parentheses. In regressions with continent dummies, the dummy for America is omitted. See Appendix Table A1 for more detailed variable descriptions and sources.

# Summary

Acemoglu, Johnson, & Robinson, 2001

- ▶ AJR show that European settler mortality during colonial times strongly affects the quality of current institutions (first-stage relationship)
- ▶ They argue that European settler mortality is unlikely to have affected current GDP through other channels than the quality of current institutions
- ▶ They find a strong effect of the quality of current institutions on current GDP when instrumenting institutional quality with settler mortality.
- ▶ Conclusion: the quality of institutions matters for growth.



# Can institutions be studied experimentally?

Sandefur & Siddiqi, 2013

- ▶ It's tempting to think that institutions, such as democracy or a specific legal system, are impossible to study experimentally.
- ▶ However, increasingly there are field experiments that tackle such questions. One nice example is a paper by Justin Sandefur (Center for Global Development) and Bilal Siddiqi (then a PhD student at Oxford) from 2015.
- ▶ They are interested in the justice system in Liberia; a post-conflict setting with high levels of distrust of the court system. Liberia has legal dualism:
  - ▶ Formal system: administered by courts and magistrates
  - ▶ "Customary" legal system: administered by local chiefs
- ▶ They study 4,500 legal disputes in 2,081 households. The vast majority of cases are taken to "customary", rather than formal, legal institutions.
  - ▶ "Formal courts are hard to access, expensive, and slow; few justice practitioners are legally literate; and the laws and procedures of the formal system are alien to most Liberians".
  - ▶ "In contrast, the customary system is both accessible and culturally acceptable"
- ▶ Problem: formal law protects the rights of women much better. "The customary system ... operates under patriarchal and communal norms rather than the notions of individual rights enshrined in Liberian statutory law ... [A] range of customary practices ... violate international standards."

# Study design

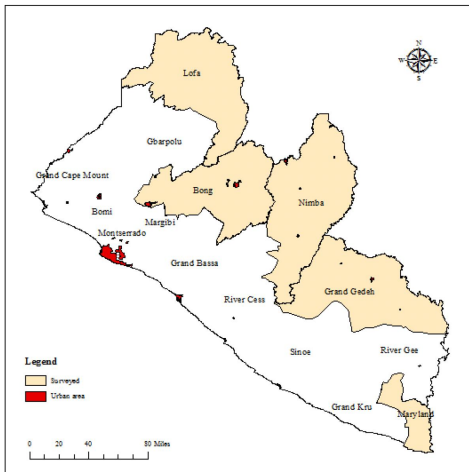
Sandefur & Siddiqi, 2013

- ▶ RCT in 76 villages across 4 counties; randomly assigned a legal empowerment intervention to a subset of those who wanted to resolve a legal dispute.
- ▶ The intervention consisted of three months of pro bono mediation and advocacy services, delivered by community paralegals trained in the formal law.
- ▶ Results:
  - ▶ Significant increase in the proportion of clients who think their case outcome was fair, left them better off, and who are satisfied with the result.
  - ▶ 10% reduction in likelihood of paying a bribe
  - ▶ Welfare impacts: 22.8% more likely to receive child support payments; 0.24 SD increase in household food security, 0.38 SD increase in child food security.
  - ▶ Larger effects found for people who experience bias in the customary system, e.g. women.

# Surveyed counties

Sandefur & Siddiqi, 2013

Figure 6: Map of surveyed counties



# Most cases go to the “customary”, not the formal system

Sandefur & Siddiqi, 2013

Table 1: Where do disputes go?

	Cases	%	% of all cases taken to:		
			None	Customary	Formal
<i>Family disputes</i>	728	15.9	61.1	37.5	1.4
<i>Economic disputes</i>	2676	58.4	60.1	36.3	3.7
Land	339	7.4	37.8	56	6.2
Debt	1374	30	69.9	28.6	1.5
Labor	125	2.7	61.6	38.4	0.0
Property (incl. theft)	838	18.3	52.9	40.5	6.7
<i>Violent disputes</i>	712	15.5	52.1	40.3	7.6
Assault	561	12.2	53.8	42.8	3.4
Rape/GBV	85	1.9	47.1	31.7	21.2
Murder	66	1.4	43.9	30.3	25.8
<i>Other disputes</i>	470	10.2	52.1	43.8	4.0
Total	4,586		58.2	37.9	3.9

*Note:* Columns 1 and 2 display the number and relative proportion of disputes of different types faced by the 2,081 households in our household survey sample. Columns 3–5 show the percentage of disputes of each type that went to “No forum”, “Customary”, and “Formal”, respectively.

# The customary system is seen as fairer

Sandefur & Siddiqi, 2013

Table 3: Subjective satisfaction measures

	Customary	Formal
Outcome was fair	92.3	85.0
Outcome was in respondent's favor	70.3	59.0
Satisfied with outcome	89.3	78.2
Satisfied with respect shown	89.2	75.7
Would return to this forum	90.5	76.4
First principal component	0.315	-0.243

*Note:* Columns 1 and 2 present respondents' average levels of subjective satisfaction for disputes taken to "Customary", and "Formal", respectively, across the 2,081 households in our household survey sample

# Paralegals in Liberia

Sandefur & Siddiqi, 2013



# The intervention improves perception of case outcomes

Sandefur & Siddiqi, 2013

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	Coefficient	Std. Err.	Obs.	Clusters	Adj. $R^2$
<i>Case results</i>					
Fair judgment	0.348**	(0.142)	348	76	0.018
Satisfied	0.370**	(0.149)	357	76	0.021
Better off	0.267**	(0.123)	356	76	0.011
Other party relations	0.233*	(0.133)	355	76	0.007
Community relations	0.134	(0.110)	357	76	0.001
<i>Mean effect index</i>	0.219**	(0.083)	398	76	0.019

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# The intervention improves household wellbeing

Sandefur & Siddiqi, 2013

	Coefficient	Std. Err.	Obs.	Clusters	Adj. $R^2$
<i>Household wellbeing</i>					
HH food security	0.240*	(0.134)	714	76	0.021
Child food security	0.380***	(0.136)	660	76	0.009
Land gained	-0.125	(0.077)	630	75	-0.000
Child support	0.228**	(0.104)	228	65	0.048
Less GBV	0.173	(0.123)	735	76	0.025
<i>Mean effect index</i>	0.124**	(0.053)	796	76	0.033



# Summary

- ▶ Institutions are important for development outcomes
  - ▶ Property rights matter for growth (Acemoglu, Johnson, & Robinson)
  - ▶ Legal support improves fairness perceptions and household well-being (Sandefur & Siddiqi)
- ▶ Perhaps contrary to common perception, even institutions can be studied experimentally on some occasions.

## Next week

- ▶ Presentations: Monday 18/10 08:00–13:00, Zoom  
([stockholmuniversity.zoom.us/my/haushofer](https://stockholmuniversity.zoom.us/my/haushofer))