Institutions, Political Economy and Growth

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Introduction: From Proximate to Fundamental Causes

- Huge cross-country differences in income per capita.
  - Largely due to significant differences in growth over the last 200 years.
- Empirical work in economic growth has successfully decomposed these differences in levels and growth rates into contributions from physical capital, human capital and residual (technology).
- But why do these factors vary so much across countries?
- Some possible **fundamental causes**:
  1. Geography
  2. Institutions
  3. Culture
  4. Luck

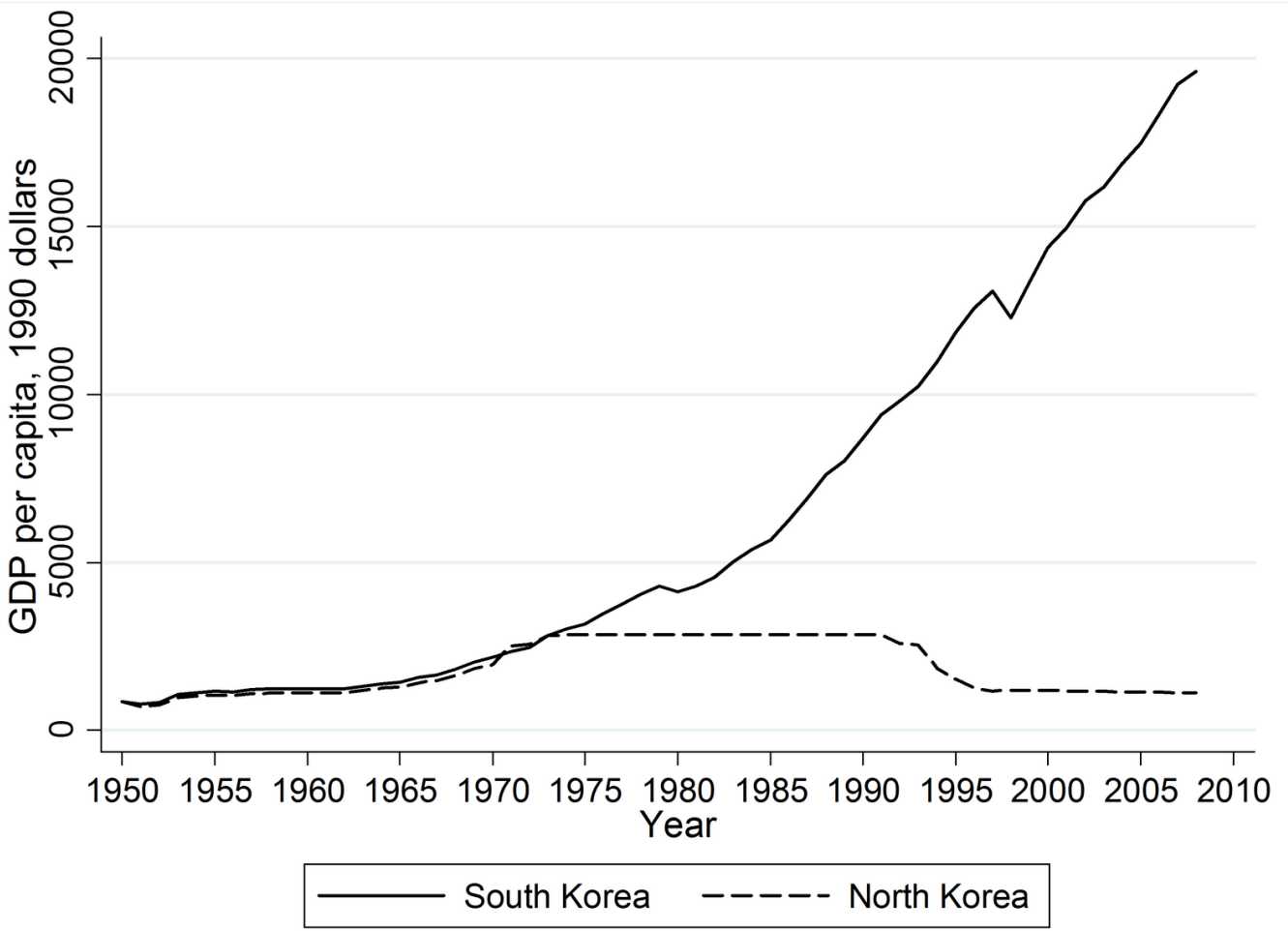
What Are Institutions?

"Institutions are the rules of the game in a society,..., the humanly devised constraints that shape human interaction"
Douglass North

- Key points: institutions are
  - (1) are humanly devised; (2) set constraints; (3) shape incentives.
- But important that institutions have to be *broadly construed*—economic, political and social; de facto and de jure.
- But crucially, institutions are all about **politics**, because different sets of institutions lead to different distributions of resources.
- Thus the investigation of the institutional origins of prosperity is largely about the politics of institutions:
  - who has power to mold institutions
  - what are the limits of that power
  - the dynamics of political power
- And institutions have their origins in **history**.

Distinguishing Institutions from Other Fundamental Causes

- Natural experiments of history: e.g., the division of Korea into North and South:

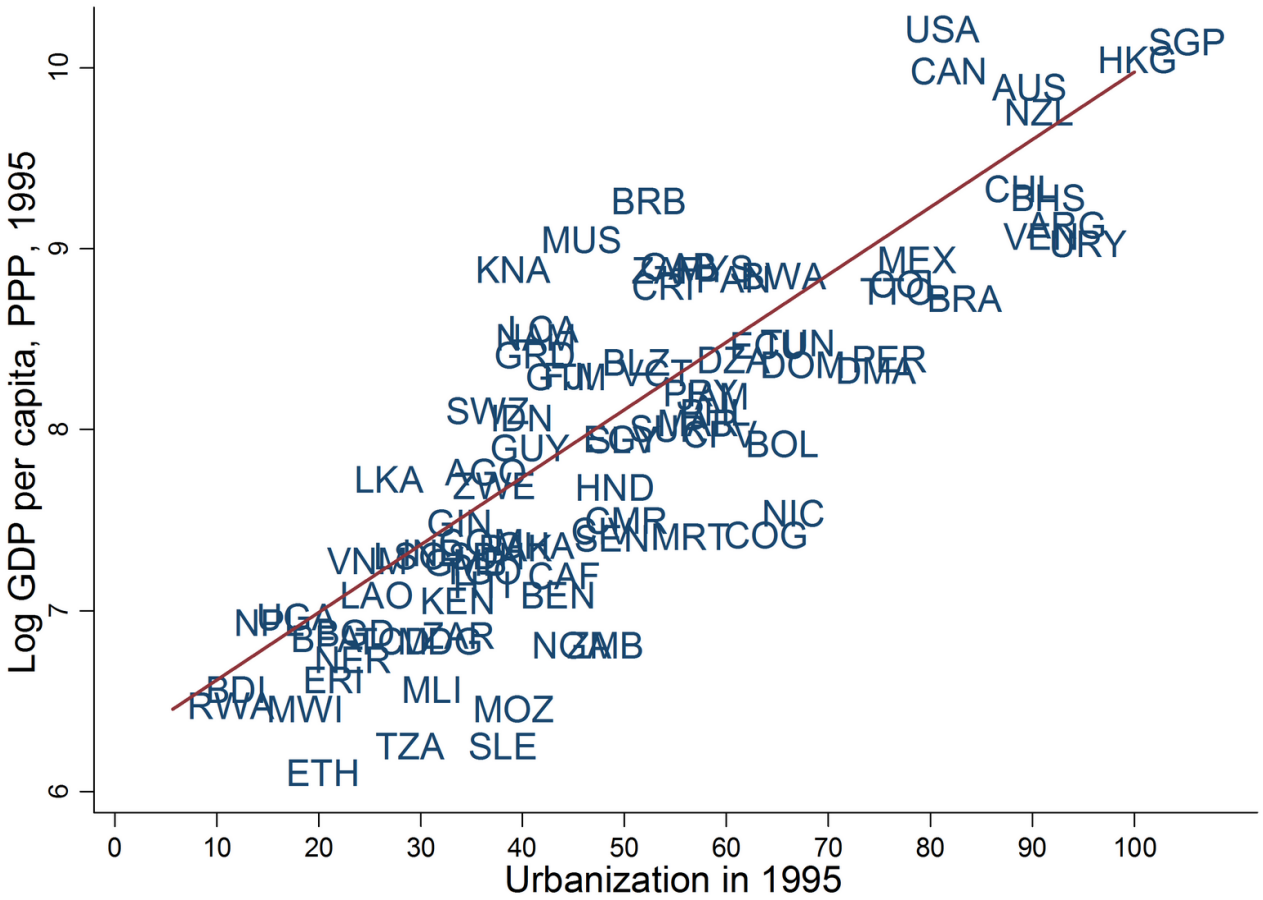


Geography vs. Institutions in Colonial History

- Colonial history gives us another window for thinking about the role of institutions vs. geography.
- The economic and political institutions of most former European colonies have been shaped by their colonial history, in many cases with significant differences across colonies and changes relative to the past:
  - e.g., compare the United States to Barbados.
- How has this affected long-run prosperity?

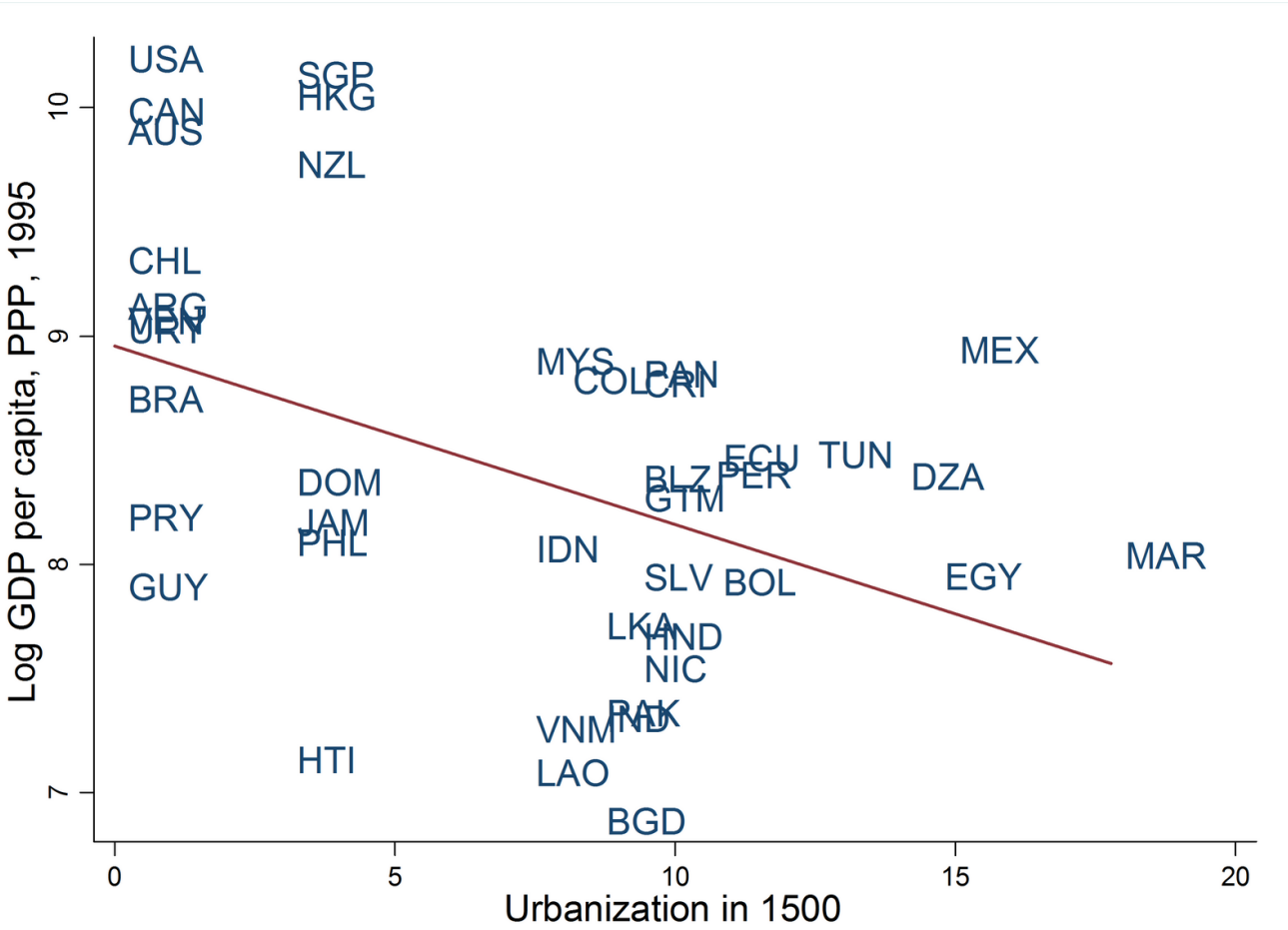
Measuring Prosperity Before National Accounts

- Only societies that have reached a certain level of productivity can support urban populations doing preindustrial times.
- Even today, urbanization and GDP per capita strongly correlated.



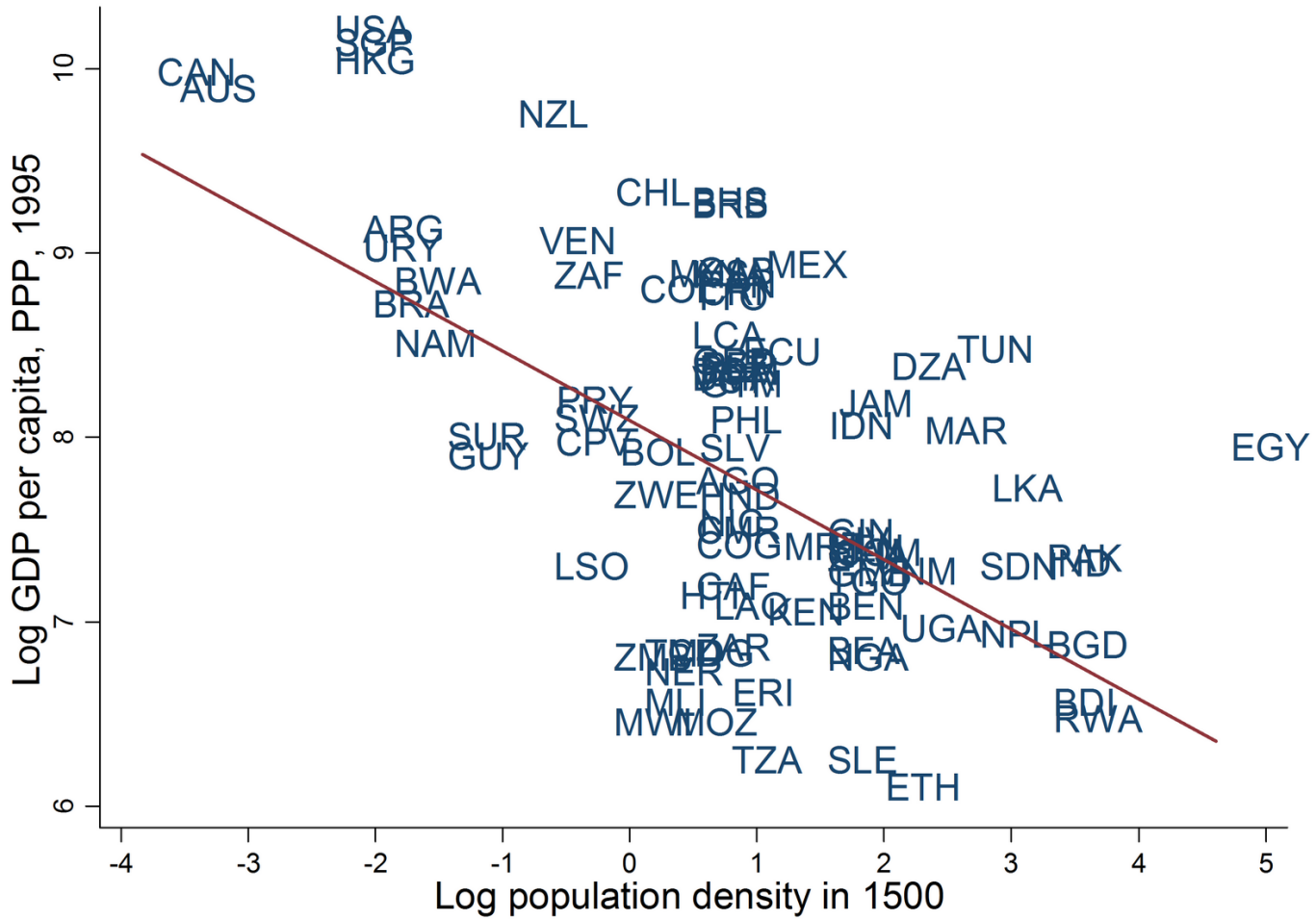
Reversal of Fortune: Urbanization

- *Acemoglu, Johnson and Robinson "Reversal of Fortune" QJE 2002*: Former colonies that were relatively prosperous before colonization are comparatively poor today:



Reversal of Fortune: Population Density

- The same relationship using population density to proxy for precolonial prosperity and level of civilization.



Reversal of Fortune: Interpretation

- The reversal due to the fact that Europeans set up more **extractive institutions** in places that had developed more complex civilizations and reached greater prosperity.
  - Historical and econometric evidence shows that this is mostly because of population density
  - Europeans were more likely to set up extractive institutions in places with large population is to dominate
- The reversal then follows because of the pre-colonial correlation between population density and prosperity.

Historical Example

- Juan Díaz de Solís colonizes Río de la Plata in 1516, 'River of Silver' and Pedro de Mendoza founds Buenos Aires in 1534.
- But Solís and de Mendoza unable to enslave and put to work the hunter gatherer Indians of the area, Charrúas and the Querandí. Starving Spaniards soon left the area.
- In 1537, Juan de Ayolas found the sedentary and more densely settled Guaraní up the Paraná river, in Paraguay. The Spaniards could successfully take over the Guaraní hierarchy, enslave them and put them to work to produce food for them.
- A very similar pattern to the colonization of the Aztecs and the Incas.
- Contrast this with the colonization of North America.

Colonial Origins of Comparative Development

- Can we exploit colonial history to get more leverage about the impact of historically-shaped institutions on long-run growth?
- *Acemoglu, Johnson and Robinson "Colonial Originsof Comparative Development" AER 2001*: Use "exogenous" variation in colonial institutions to generate variation in current institutions:

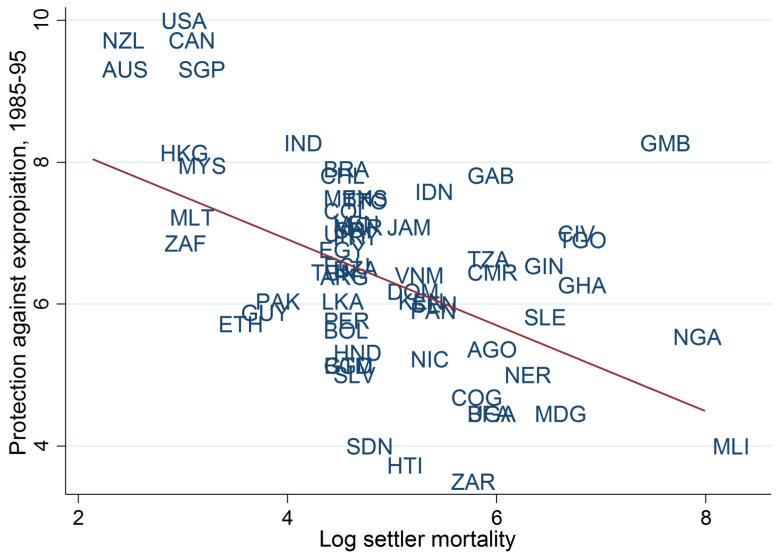
$$\begin{array}{c}\text{(potential) settler} \\ \text{mortality}\end{array} \Rightarrow \text{settlements} \Rightarrow \begin{array}{c}\text{early} \\ \text{institutions}\end{array}$$

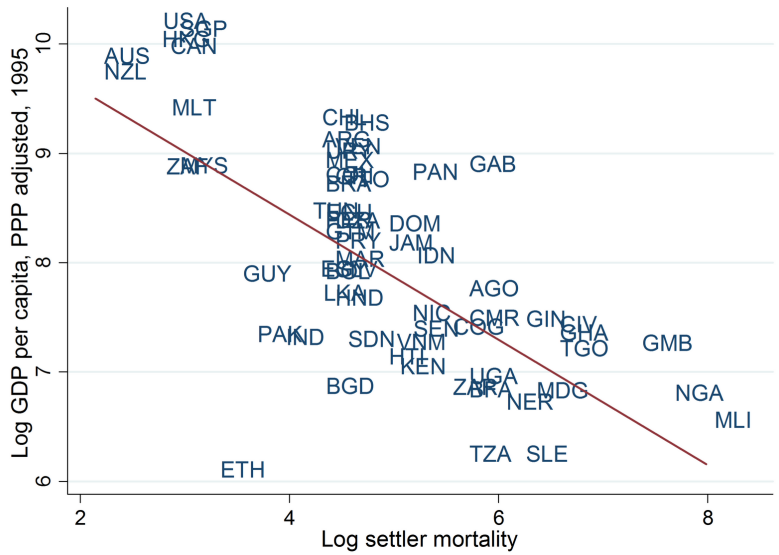
$$\Rightarrow \begin{array}{c}\text{current} \\ \text{institutions}\end{array} \Rightarrow \begin{array}{c}\text{current} \\ \text{performance}\end{array}$$

- Try to use this theory to generate a strategy for a *two-stage least squares* analysis.
- Use "estimates" of potential settler mortality as instrument for institutions in the regression of current GDP (as cumulative measure of growth) on institutions.
- Important: here institutions have to be "very broadly construed".

First Stage and Reduced Form

- Potential settler mortality strongly correlated with current institutions and GDP per capita.





Instrumental-Variables Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Two-Stage Least Squares for log GDP per capita							
Average protection against	0.94	1.00	1.21	0.82	1.16	0.83	0.72
expropriation risk, 1985-1995	(0.16)	(0.22)	(0.35)	(0.26)	(0.34)	(0.21)	(0.30)
Latitude		-0.65	0.94	-0.26	-0.75	0.07	-0.57
		(1.34)	(1.46)	(1.21)	(1.70)	(1.60)	(1.04)
Africa dummy				-0.35			
				(0.32)			
British colonial dummy					-0.80		
					(0.39)		
French colonial dummy					-0.06		
					(0.42)		
Temperature and humidity [p]						[0.82]	
Malaria in 1994							-0.60
							(0.47)
Panel B: First stage for average protection against expropriation risk 1885-1995							
Settler mortality	-0.61	-0.51	-0.39	-0.43	-0.43	-0.59	-0.38
	(0.13)	(0.14)	(0.14)	(0.17)	(0.16)	(0.17)	(0.19)
Latitude		2.00	-0.11	2.04	1.97	2.70	1.70
		(1.34)	(1.50)	(1.34)	(1.40)	(2.00)	(1.40)
Africa dummy				-0.31			
				(0.39)			
British colonial dummy					0.55		
					(0.37)		
French colonial dummy					-0.12		
					(0.44)		
Temperature and humidity [p]						[0.36]	
Malaria in 1994							-0.65

Interpretation

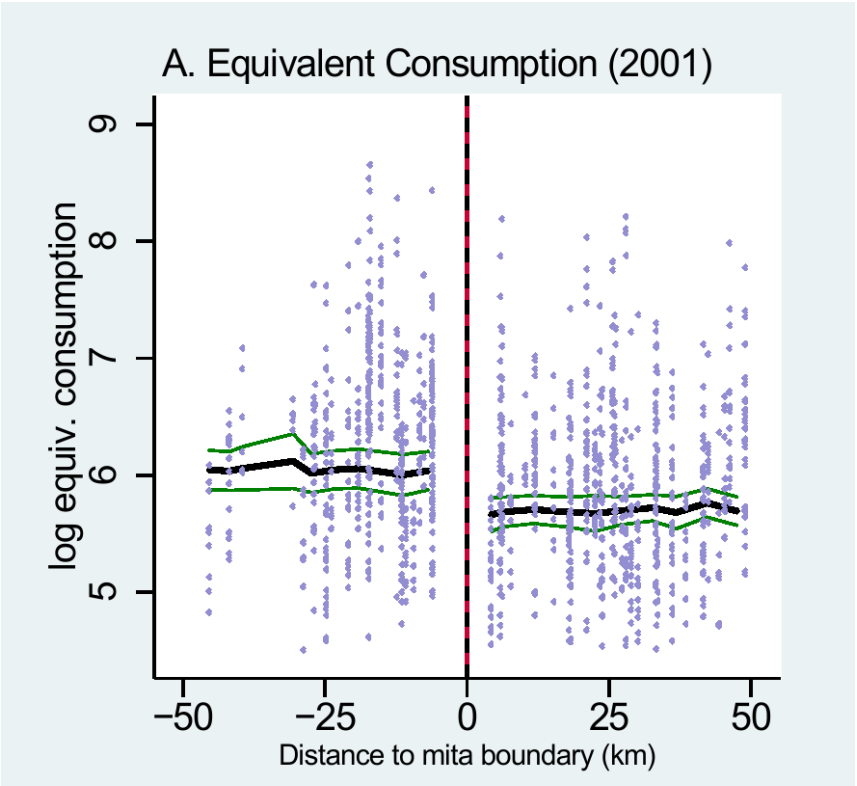
- Controlling for plausible confounding historical and contemporaneous factors, similar colonies that ended up with different historical institutions because of the ease of European settlement have today different institutions.
- These institutions have, over the last several hundred years and today, had a major effect on prosperity.
- This evidence suggests:
  1. a major effect from institutions to economic performance;
  2. a major impact of historical events, particularly during critical junctures, on the evolution of institutions.

Other Approaches

- *Diamond Guns Germs and Steel, 1994*: the availability of wild species and animals determines timing of transition to agriculture, and together with geographic factors constraining spread of agriculture, the timing of the emergence of complex civilizations and technology.
- *Hall and Jones "Why Do Some Countries Produce so Much More Output per Worker Than Others" QJE 1999*: geography and language as determinants of the spread of European technology.
- *La Porta, Lopez-de-Silanas, Shleifer and Vishny "Law and Finance" JPE 1998*: legal system of colonizers determines current legal system, institutions and financial development.
- *North, Summerhill and Weingast "Order, Disorder and Economic Change: North Vs. Latin America" 1999:* political traditions of colonizers determine current institutions and economic development.
- *Engerman and Sokoloff "Factor Endowments, Institutions, and Differential Paths of Growth among New World Economies" 1997:* factor endowments (e.g., sugar) leading to persistent inequality and lock-in in South America, leading to a divergence with the North.

Forced Labor in Colonial Peru

- Many of the relevant institutions vary within countries.
- *Dell "Persistent Effects of the Mining Mita" Econometrica 2011:* Exploit the fact that forced labor was imposed on those in a catchment area around the mine, thus creating a geographic regression discontinuity.



Institutions and History Matter

- The overwhelming evidence is that institutions, broadly construed, have a defining effect on long-on economic development.
- The origins of many of these institutions are in historical intrusions and perhaps events during **critical junctures**.

How History Matters

- *Not simple lock-in* of a given set of institutions
  - There is no longer slavery or formal coerced labor anywhere in Latin America; almost all former colonies are now independent.
  - *Acemoglu and Robinson "Persistence of Institutions, Elites and Power" AER 2008*: creation of different facets of institutions with the same functions in response to shocks and endogenous changes in rules and formal institutions.
- Not a simple linear process:
  - Suppose institutions can be represented by a two-state Markov chain. Then to obtain persistence over hundreds of years, one needs switch probability close to zero. But then this is inconsistent with major changes during several critical junctures.
- The solution to both challenges us to think of persistence is **path dependence** (rather than simple lock-in):
  - Current institutions shape the likelihood and nature of change for future institutions.
  - E.g.: independence in the United States vs. Mexico.

Modeling Economic Institutions

- How are different economic institutions chosen?
- How do extractive institutions create distortions?
- Roadmap:
  - Modeling extractive institutions: coercion and control of labor (based on *Acemoglu "Modeling Inefficient Institutions" 2005, Acemoglu "Oligarchic Vs. Democratic Societies" JEEA, 2008, and Acemoglu and Wolitzky "The Economics of Labor Coercion" Econometrica 2011*).
  - Why aren't inefficient institutions reformed? (based on *Acemoglu "Why Not a Political Coase Theorem" JCE 2004, Acemoglu and Robinson "Economic Backwardness in Political Perspective" APSR, 2006, Acemoglu, Egorov and Sonin "Dynamics and Stability of Constitutions, Coalitions and Clubs" AER 2012*).
  - Modeling persistence and path dependence (based on *Acemoglu and Robinson "'Why Did the West Extend the Franchise?" QJE 2000, Acemoglu and Robinson Economic Origins of Dictatorship and Democracy, 2006*).

Example: Coercion and Control of Labor

- Suppose that political power rests in the hands of a homogeneous elite with access to the production function

$$F^E\left(K^E, L^E\right),$$

where K^E is capital and L^E is labor employed by the elite. The cost of capital is taken as given at $R > 0$.

- Labor supply is endogenous and given by

$$L^S\left(w + g\right),$$

where w is the equilibrium wage rate and g is "guns," i.e. a measure of coercion, and L^S is a strictly increasing function;

  - greater coercion amounts to extracting more labor from workers than they would have been willing to supply at the going wage.
  - *Acemoglu and Wolitzky (2011)*: deriving this from a principal-agent relationship embedded in a market equilibrium.

Coercion and Control of Labor (continued)

- Labor demand also comes from another sector not controlled by the elite, say from the "middle class":

$$L^M(w, b),$$

where b is a policy, such as an entry barrier, tax or distortion, imposed on the middle class. Suppose that L^M is strictly decreasing.

- Labor market clearing:

$$L^E + L^M(w, b) = L^S(w + g).$$

- Finally, the cost of guns is $h(g)$ with $h'(0) = 0$.

Equilibrium Coercion

"in the context of universal history, free labor, wage labor, is the exception" Moses Finley.

- The maximization problem of the elite can be written as:

$$\max_{K^E, L^E, g, b} F^E\left(K^E, L^E\right) - RK^E - wL^E - h\left(g\right),$$

subject to labor market clearing.

- **Coercion:**
  - Let us first ignore labor demand from the middle class.
  - The solution to this problem will involve $g > 0$ in order to reduce equilibrium wages.
  - This is *Pareto inefficient*—costly guns are being used to transfer resources inefficiently from the workers to the elite.

Equilibrium Control

- **Control:**
  - Let us ignore coercion.
  - Then the solution will involve $b > 0$ again in order to reduce equilibrium wages.
  - This is again *Pareto inefficient*—misallocation of resources.
- **Coercion and control:**
  - Combining both the solution involves $g > 0$ and $b > 0$.
- What about taxation?
  - Allowing taxes on middle-class producers ameliorates but does not remove the problem (see *Acemoglu (2005)*, also *Besley and Persson Pillars of Prosperity 2011).*
  - Allowing fully non-distortionary taxation of wages would prevent the need for coercion and control, but typically not possible.
- Overall: an example of extractive economic institutions imposed in order to affect the distribution of resources, though this involves distortions and inefficiencies.

Why Not a Political Coase Theorem?

- Why not reform inefficient economic institutions? Two broad answers
  1. Limited instruments (as we have seen).
  2. Political losers (as we see next).
- Example (*Acemoglu, Egorov and Sonin (2012)*):
  - Three states: absolutism, constitutional monarchy, full democracy
  - Two groups: the elite and middle class. The elite have political power under absolutism, and power gets transferred to the middle class both under constitutional monarchy and full democracy
  - Payoffs:

$$\begin{aligned} \textit{Elite}\text{: democracy} &< \text{absolutism} < \text{constitutional monarchy} \\ \textit{Middle class}\text{: absolutism} &< \text{constitutional monarchy} < \text{democracy} \end{aligned}$$

  - Myopic elite: absolutism$\rightarrow$constitutional monarchy$\rightarrow$democracy
  - Forward-looking elite: *stay in absolutism* $\rightarrow$ *Pareto inefficiency.*

Lessons

- Those that have the political power in their hands will often have an incentive to distort economic institutions in order to affect the distribution of resources in their favor.
  - Depending on what instruments are available and what sort of dynamics are induced, this can generate significant inefficiencies.
- What's missing:
  1. **Political institutions:** it is often political institutions, again broadly construed, that give some groups the power, or fail to constrain their power, to mold economic institutions in their interests.
     - One needs to dominate political institutions in order to be able to mold economic institutions.
     - *Corollary to Finley*: throughout history, extractive political institutions have been the norm and have been used to coerce and control labor.
     - The logic of distorting political institutions is similar to that of economic institutions but more dynamic (*Acemoglu and Robinson Why Nations Fail 2012*).
  2. **Institutional dynamics**

Some General Ideas about Dynamics

- Important distinction between de jure and de facto power:
  - **de jure power** allocated and regulated by institutions; **de facto power** generated by resources, solutions to collective action problems and coalitions.
- Big picture dynamics:

$$\left.\begin{array}{r} \text{political} \\ \text{inst's}_t \end{array}\right\} \Longrightarrow \left.\begin{array}{c} \text{de jure} \\ \text{political} \\ \text{power}_t \\ \& \\ \text{de facto} \\ \text{political} \\ \text{power}_t \end{array}\right\} \Longrightarrow \left.\begin{array}{c} \text{econ.} \\ \text{inst's}_t \\ \\ \\ \text{pol.} \\ \text{inst's}_{t+1} \end{array}\right\} \Longrightarrow \left\{\begin{array}{c} \text{econ.} \\ \text{perf}_t \\ \& \\ \text{dist. of} \\ \text{resources}_t \end{array}\right.$$

$$\left.\begin{array}{r} \\ \text{dist. of} \\ \text{resources}_t \end{array}\right\} \Longrightarrow$$

The Emergence of Democracy

- Example of dynamics (from *Acemoglu and Robinson (2000, 2006)*).
- Elites control non-democracy, but citizens can sporadically solve their collective action problem, exercise de facto power and threaten a revolution or social unrest
- Elites can respond with:
  1. repression;
  2. concessions with unchanged political institutions;
  3. change in political institutions, e.g., democracy.

Logic of Institutional Change: Transition to Democracy (continued)

- Concessions generally "cheapest" option, but not credible because:
  - De facto power of citizens often transitory. E.g., citizens can solve their collective action problem with probability q.
  - If $q \simeq 1$, then de facto power of citizens is almost permanent and can balance the power of the elite. Then concessions become credible.
  - If q is small, then *concessions are not credible*—in MPE or subgame perfect equilibria.
- Democracy arises when repression is too costly and concessions are non-credible.
- Democracy gives a commitment to future pro-citizen policies $\longrightarrow$ turning temporary de facto power into more durable de jure power.

Key Parameters

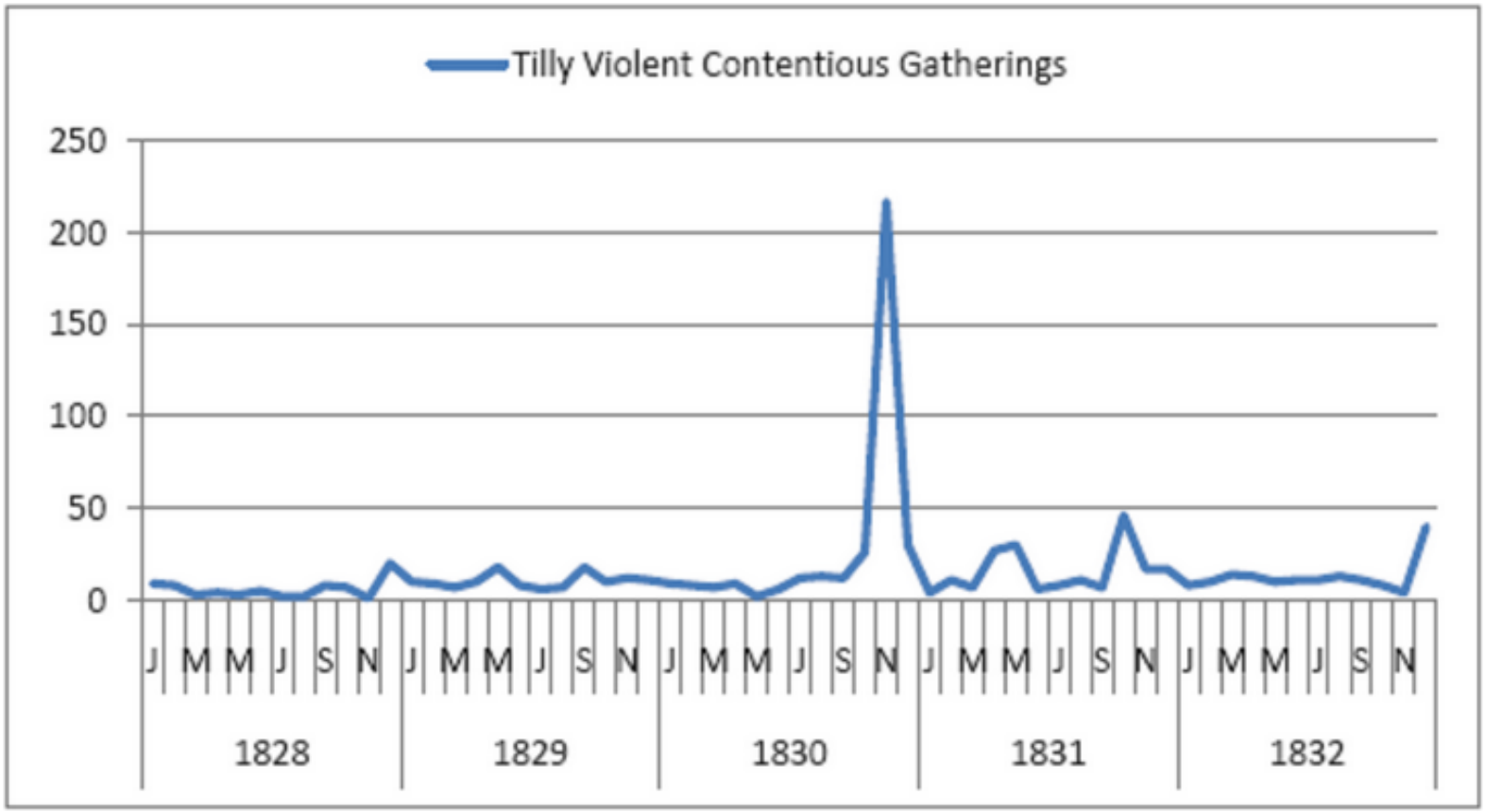
- Inequality: benefits of democratization for citizens and costs of democratization for the elite
- Persistence of de facto power
- Civil society: other aspects of empowerment of citizens
- Cost of repression: how costly the repression alternative will be.

Patterns of Political Development

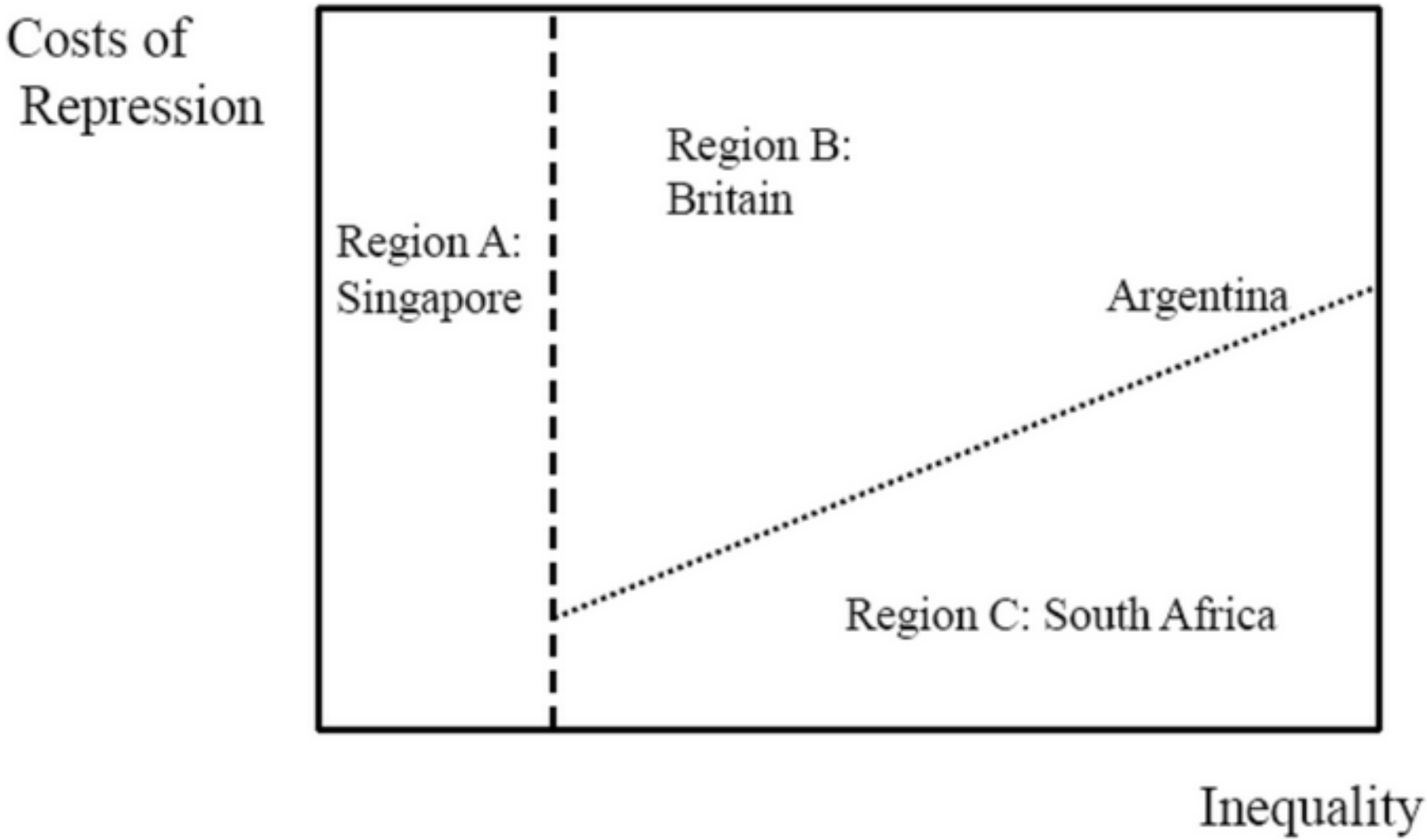
- Britain in the 19th century; democratization and democratic consolidation
- Argentina in the 20th century; democracy-coup cycles
- Singapore; persistent nondemocracy with limited repression
- South Africa until the end of Apartheid; persistent nondemocracy with repression
- What accounts for this diversity?

De Facto Power

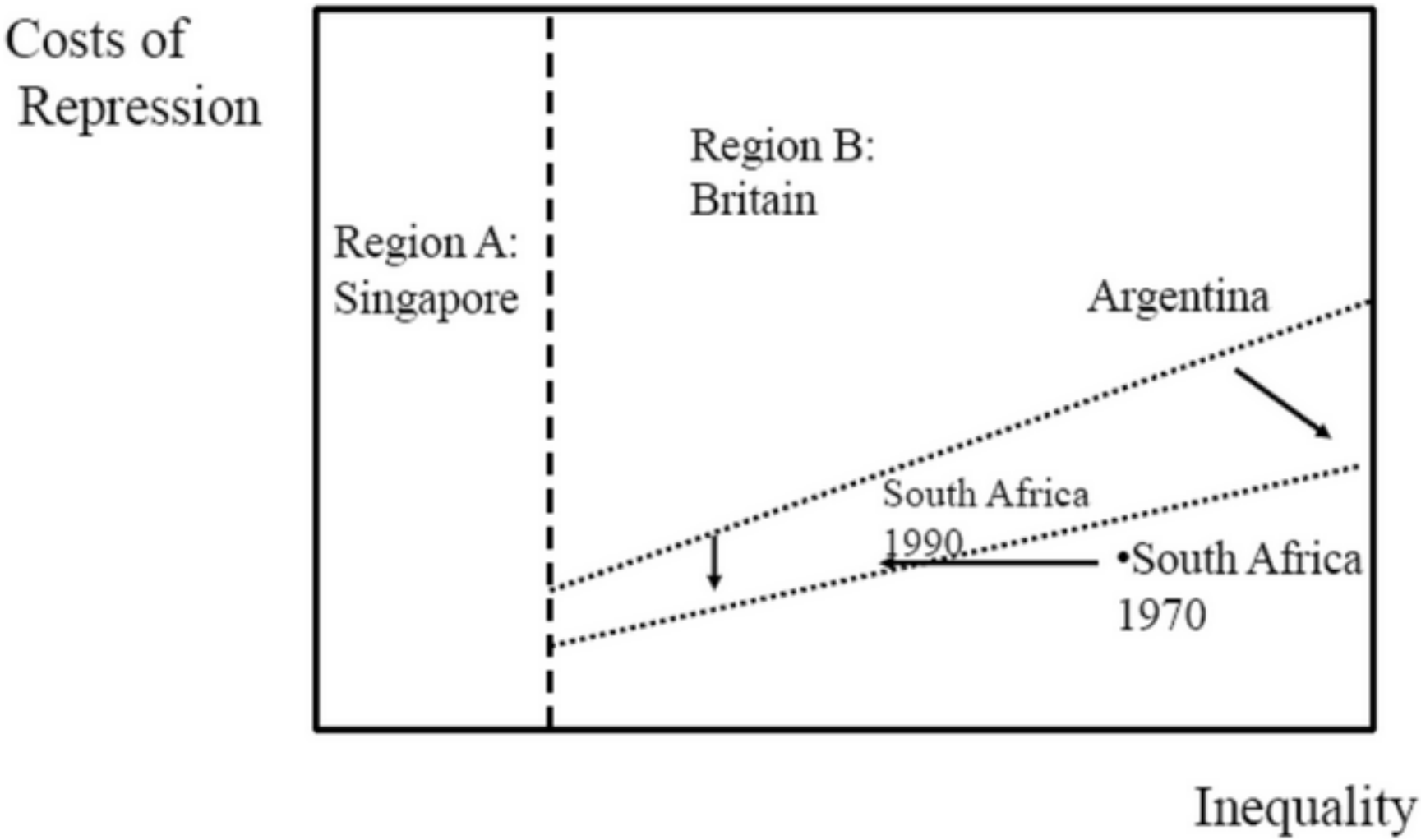
- In almost all cases of democratization, de facto power of the disenfranchised important.
- In the British case, leading up to the First Reform Act (data from *Toke Aidt*):



Revisiting the Patterns

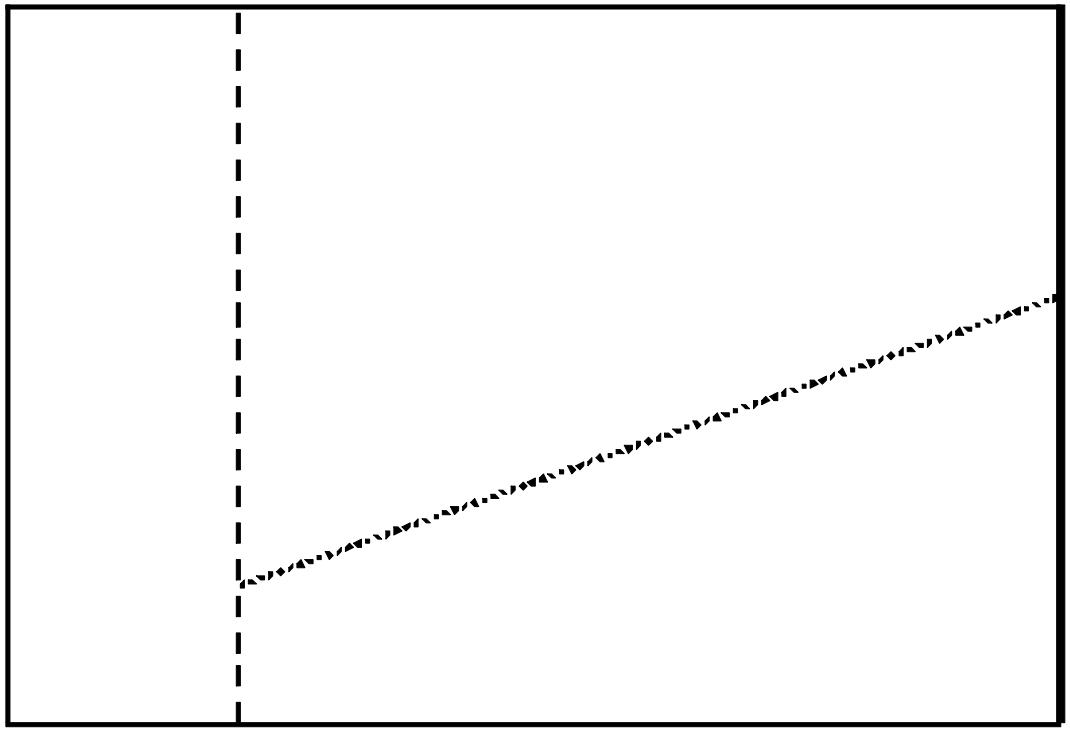


Democratization in South Africa



Democracy in the Middle East

- If this framework useful for thinking about the emergence and consolidation of democracy in the Middle East?



Understanding Path Dependence

- Persistence is easy to understand:
  - In terms of the above framework, political institutions, which allocate political power, create continuities, and distribution of resources create feedback effects (the politically powerful get rich and the rich become politically powerful).
  - But change throughout history is ubiquitous.
  - Persistence often much richer than lock-in of a given set of arrangements or continued dominance of the same people and families.
- Instead, **path dependence.** Examples:
  - the US South. After the Civil War, slavery is abolished and blacks are enfranchised. But a new set of institutions (vagrancy laws, black codes, convict leasing programs, literacy tests, Jim Crow justice and Ku Klux Klan) emerge and perform the same sort of extraction and ensure a similar distribution of political power is antebellum institutions;
  - independence in the United States and Mexico;
  - post-colonial African leaders adopting similar economic and political arrangements as the colonial ones for their own benefit.

Understanding Path Dependence (continued)

- Models:
  - *Acemoglu and Robinson (2008)*: when de jure power is reallocated away from an organized group (e.g. the elite), this group may invest more in their de facto power in order to achieve similar objectives, but with very different-looking institutions.
  - *Acemoglu and Robinson (2012)*: critical junctures and institutions

$$\text{institutions}_t \xrightarrow[\text{drift}]{} \text{institutions}_{t+1} \longrightarrow \begin{array}{ll} \nearrow & \text{institutional} \\ \uparrow\ \searrow & \text{divergence} \end{array}$$

critical juncture

  - Mathematically, persistence can be thought of as $\mathbf{x}_t = \boldsymbol{\beta}\mathbf{x}_{t-1} + \boldsymbol{\varepsilon}_t$, and eigenvalues of $\boldsymbol{\beta}$ close to 1.
  - Path dependence instead as:

$$\mathbf{x}_t = f_t\left(\mathbf{x}_{t-1}, \boldsymbol{\varepsilon}_t\right),$$

so that there is change in $\mathbf{x}_t$ regardless of its initial values and thus change interacts with shocks. Only ∇f_t evaluated at some point has eigenvalues close to 1.

Social Norms, Persistence and Path Dependence

- Persistence of social arrangements can also result from persistent **social norms** and "cultural practices".
- **"Culture"** is a big tent. Some aspects of it are competing explanations to institutional ones, and some of them are complementary.
- Culture as an alternative explanation (e.g., *Tabellini "Institutions and Culture" JEEA 2008*):
  - Religion or other very very slowly-changing practice takes (e.g., African culture, Spanish culture, English culture, Chinese culture);
  - Multiple equilibria and exogenous equilibrium selection.
- Culture as a complement to institutions:
  - Social norms and beliefs central for the functioning of both formal institutions and politics in general (including collective action, monitoring, exercise of de facto power, etc.).
  - Social norms often change rapidly and also political in nature—as I discuss next.

Fluid Social Norms

- *Edward Banfield* and *Robert Putnam*: differences in trust, cooperation and social capital account for differences between the south and north of Italy.
  - *Banfield*: persistent "amoral familism" and lack of "generalized trust" in the south. *Putnam*: lack of social capital in the south has its origins in the Norman period.
- But social norms are not cast in stone.
  - *Richard Locke*: large changes in social norms in different parts of the south of Italy.
- *Acemoglu and Jackson "History, Expectations and Leadership in the Evolution of Social Norms" 2011*: persistent social norms evolving as "frames of reference" useful for interpreting signals, but endogenously changing both slowly ("reversion to the mean" in social norms) and more rapidly in response to unusual events and leadership.
- *Acemoglu and Jackson "Norms and the Enforcement of Laws" 2012:* a deeply political process.

Politics and Emergence of Social Norms

- Even the most "exogenous-looking" social norms, e.g., religious norms, may have political origins.
- Why have Jews always been so educated?
  - A common explanation: religious norms for reading the Torah.
  - *Boticini and Eckstein "Jewish Occupational Selection" 2005*: yes, but the origins of this are not in the Torah itself or early Jewish occupational specialization, but developed after the destruction of the Second Temple in the 1st century.
  - This emerged out of the political maneuver by the Pharisees wresting control of the Jewish community from the Sadducees (when Jews were still farmers). They used education as a way of cementing their control.
- Fasting, facing Jerusalem (and then Mecca) in prayer, non-pork diet and circumcision in Islam.
  - *Montgomery Watt, Jonathan Berkey, Robert Wright*: these date from the Medina period, and have their origins in Mohammed's efforts to convert Jews (no or few Jews in Mecca).
  - When circumstances changed, Mohammed did break with the Jews.

Politics and Emergence of Social Norms (continued)

- In fact, many interpretations of the origins of Islam follow *Ernest Renan*:

  "the Muslim movement was produced almost without religious faith; but, putting aside a small number of faithful disciples, Mohammad really worked with but little conviction in Arabia".

- Even if this conclusion is extreme, a lot of evidence suggests that a major objective and achievement of Mohammad was state building in Arabia.
  - Similar to origins of other religions, including Judaism, Buddhism, Confucianism and Christianity under Constantine.

Politics and the Persistence of Social Norms

- But do social norms and "culture" have their own autonomous dynamics once unleashed?
- Yes and no.
- There is a social norm of (expectation of) "rule of law" in Britain. Perhaps its in the Magna Carta and even before.
- But its persistence was a very political process.
- The Whigs, for example, were restrained on how they could use the law to prosecute protests and encroachments against there (often newly-enclosed and acquired) property. Why?
- *EP Thompson Whigs and Hunters*:

> *"immense efforts were made ... to project the image of the ruling class which was itself subject to the rule of law, and whose legitimacy rested upon the equity and universality of the legal forms....*
>
> *...they could not break those rules or the whole game would be thrown away."*

Conclusions

- Institutions, construed broadly, to include both formal rules and the nature of interactions economic, political and social spheres are crucial for understanding economic incentives and long-run economic development.
- An emerging literature provides new empirical approaches (evidence) to more precisely pinpoint how work and influence economic outcomes, and the conceptual framework for modeling their impact and dynamics.
- All of this very much work in progress.

Conclusions (continued)

- Much remains to be done. For example:
  - much more on institutional dynamics and path dependence—e.g., why did institutions change radically in South Korea over the last 60 years but not so much in Sierra Leone;
  - much more on empirically identifying how specific dimensions of institutions matter for certain outcomes and interact with other economic and institutional aspects of a society—e.g., what's the impact on economic growth and institutional equilibria of the formal legal system? Titling? Privatization?;
  - much more on policy and interventions in a world in which institutions are endogenous and historically-determined—e.g., when does a policy such as central bank independence backfire;
  - more on the interactions between social norms and institutions—e.g., can bad social norms be broken?.