Rethinking the Wealth of Nations

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The State of the World Economy

- Vast differences in prosperity across countries today.
  - Income per capita in sub-Saharan Africa on average $1/20^{th}$ of U.S. income per capita
  - In Mali, Democratic Republic of Congo (Zaire), and Ethiopia, $1/35^{th}$ of U.S. income per capita
- What explains the different economic outcomes?
- How could we understand development and underdevelopment?
- This talk: overall perspective and a theoretical introduction.

Why Such Large Differences?

- Simple answer: growth differences over the past 200 years.
- Countries that are rich today are those that have grown rapidly during the critical period of industrialization and new technologies between 1800 and 1940.
  - And perhaps another critical period after mid 1970s, with the arrival of another generation of new technologies
  - Contrast East Asia and Latin America.
- Thus we have to understand why some countries can fail to invest in promising growth opportunities for extended periods and fail to grow.

Adam Smith's Legacy

- We have to understand the functioning of markets and organizations to understand the wealth of nations.
  - The invisible hand and markets
  - The division of labor
  - Skills Policies

Sources of Prosperity: Modern Answers

- Standard economic answers (a la Smith):
  - Physical capital differences (poor countries dont save enough)
  - Human capital differences (poor countries dont invest enough in education and skills)
  - "Technology differences (poor countries dont invest enough in R&D and technology adoption, and dont organize their production efficiently)
  - Markets (markets dont function in poor countries).
- But these are proximate causes.
- We need to understand why poor countries dont save enough, dont invest enough, dont develop and use technologies and dont have functioning markets.
- Potential answer: differences in incentives.

Potential *Fundamental* Causes of Growth

- Institutions; humanly-devised rules shaping incentives.
  $\Rightarrow$ political economy of growth.
- Geography; exogenous differences of environment.
- Culture; differences in beliefs, attitudes and preferences.

Sources of Prosperity: Incentives

- Where do incentives come from?

  Adam Smith:

  > "little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things.".

- Potential answer: institutional differences.
- Institutions: organization of society, rules of the game.
- To understand the wealth of nations, we need to understand institutional differences.

What Are Institutions?

- Douglass North (1990, p.3):

  "Institutions are the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction."

- Economic institutions (e.g., property rights, entry barriers)
  - shape economic incentives, contracting possibilities, distribution
- Political institutions (e.g., form of government, constraints on politicians)
  - shape political incentives and distribution of political power.

Institutions Matter?

- Big differences in economic and political institutions across countries.
  - Enforcement of property rights.
  - Legal systems.
  - Corruption.
  - Entry barriers.
  - Constraints on politicians and political elites.
- But do these have causal effects on economic growth? Long-run economic development?

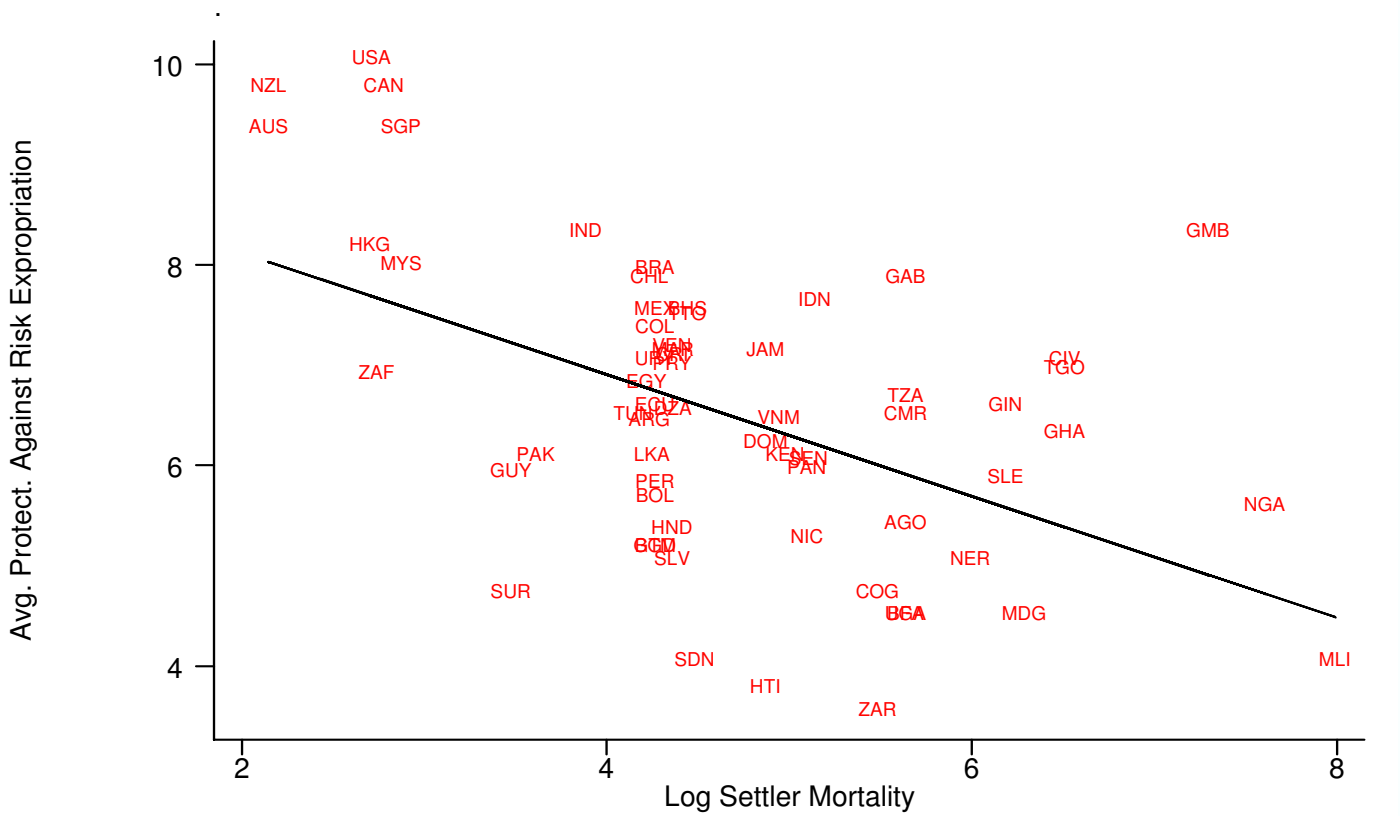
European Colonization as a "Natural Experiment"

- Why need a "natural experiment"?
  - Answer questions related to causality.
- Why European colonization?
  - Major event of history, changing institutions and fortunes in many countries.
  - Many factors, including geography, ecology and climate, are held constant, while Europeans set up different institutions in different parts of the globe.
- Potential "Instrument'' suggested by this historical episode: settler mortality.

Settler Mortality As an Instrument: The Argument

- Settler mortality affects settlement decisions of colonizers.
- With high settler mortality, colonizer chooses extractive institutions, which are bad for long-run growth.
- With low settler mortality, colonizer more likely to settle and choose developmental institutions.
- Colonial institutions have a tendency to persist.
- Settler mortality has no direct effect on current performance, except its desired effect through institutional development.
  - Identification assumption: check by controlling for various channels of influence and falsification exercises.
- Mechanism: (potential) settler mortality $\Rightarrow$ settlements $\Rightarrow$ early instit's $\Rightarrow$ current instit's $\Rightarrow$ current performance

Settler mortality and current institutions



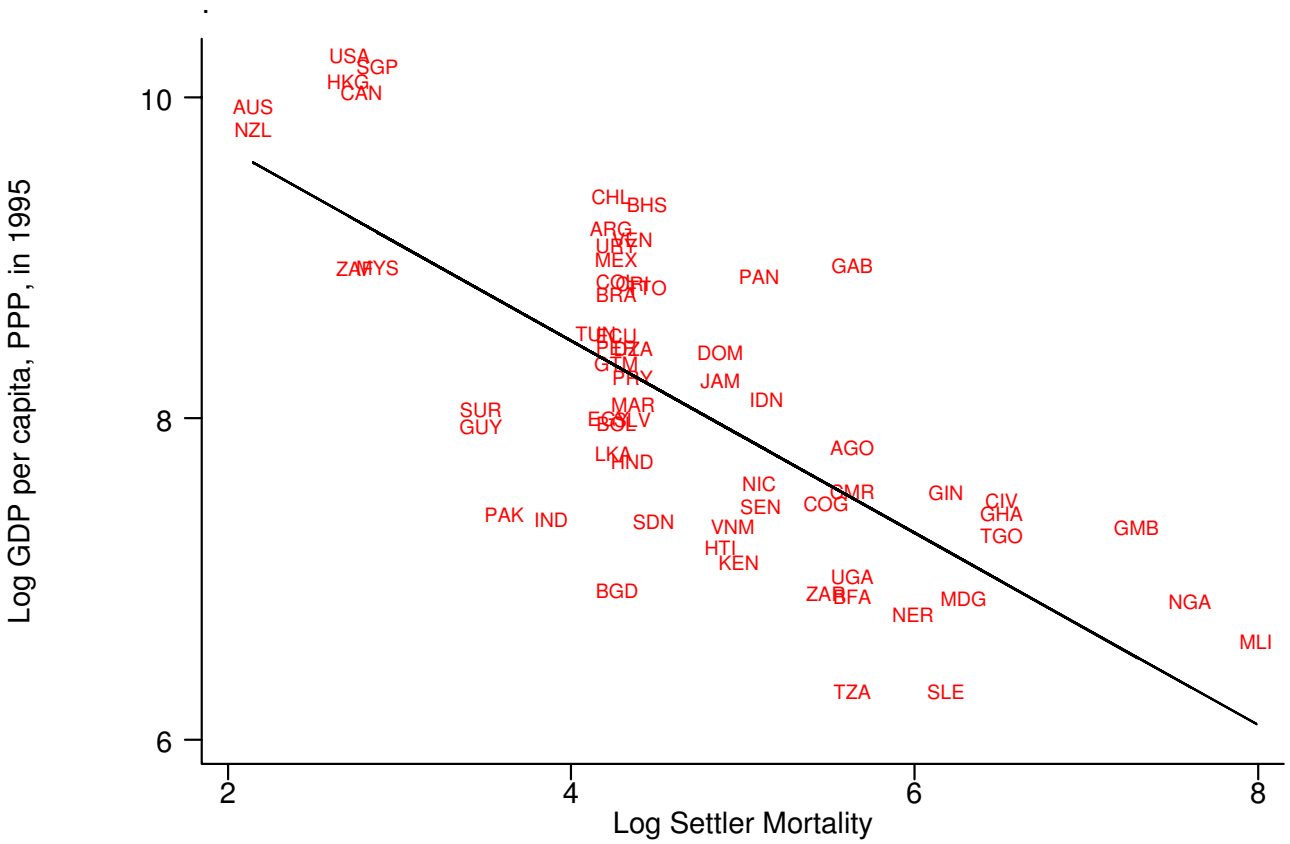
The first stage

First Stage Regressions:
Dependent variable is protection against risk of expropriation

	All former colonies	All former colonies	All former colonies	Without neo-Europes
Settler Mortality	-0.61	-0.5	-0.43	-0.37
	(0.13)	(0.15)	(0.19)	(0.14)
Latitude		2.34		
		(1.37)		
Continent Dummies (p-value)			[0.25]	
R-Squared	0.26	0.29	0.31	0.11
Number of Observations	63	63	63	59

Standard errors in parentheses
Sample limited to countries for which have GDP per capita data

The reduced form: settler mortality and income per capita today



The causal effect of institutions: basic 2SLS estimates

Second Stage Regressions:
Dependent variable is log GDP per capita in 1995

	All former colonies	All former colonies	All former colonies	Without neo-Europes
Protection Against Risk of Expropriation, 1985-95	0.99 (0.17)	1.11 (0.26)	1.19 (0.39)	1.43 (0.45)
Latitude		-1.61 (1.57)		
Continent Dummies (p-value)			[0.09]	
Number of Observations	63	63	63	59

The causal effect of institutions: robustness

Second Stage Regressions: all former colonies
Dependent variable is log GDP per capita in 1995
Instrument is:

	Log Settler Mortality	Log Settler Mortality	Log Settler Mortality	Log Settler Mortality	Yellow Fever
Protection Against Risk of Expropriation, 1985-95	1.07 (0.27)	0.98 (0.17)	0.87 (0.32)	1.18 (0.84)	0.82 (0.22)
Temperature (p-value)	[0.71]				
Humidity (p-value)		[0.64]			
Malaria			-0.28 (0.59)		
Life Expectancy				-0.014 (0.07)	
Number of Observations	63	63	62	62	63

The Role of Culture? (1)

- What is culture?
  - A relatively fixed characteristic of a group or nation affecting beliefs and preferences; e.g. religion.
- Does culture matter in the colonial experiment?
  - Popular view going back to Adam Smith and Winston Churchill that British cultural and political influence was beneficial, it least relative to the French or the Spanish.
- Answer: it does not. The identity of the colonizer is insignificant.

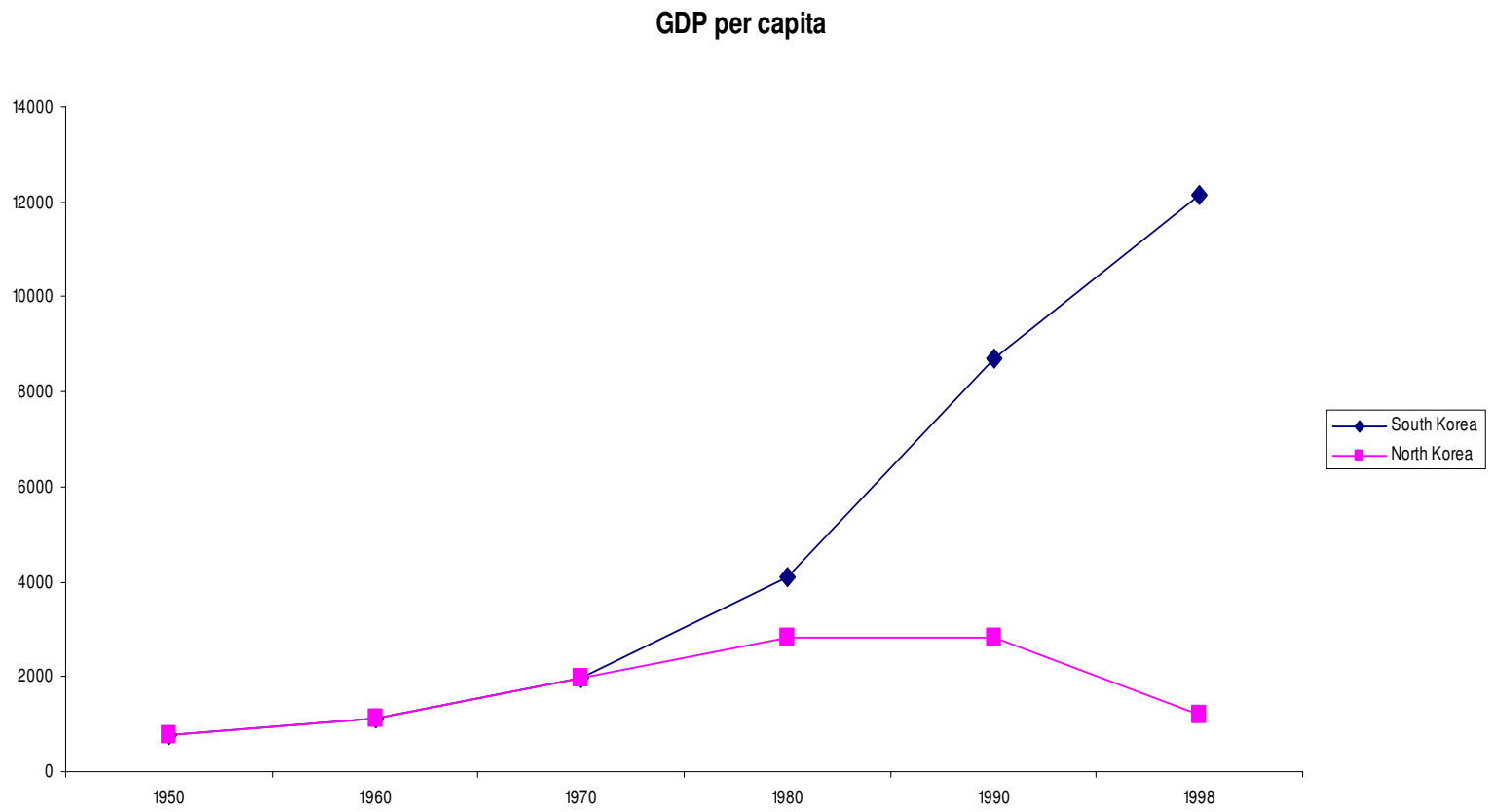
Revisiting the British effect

	Dependent variable is log GDP per capita in 1995	
	Former Colonies	Former Colonies
Second Stage		
Protection Against Expropriation	1.12	1.17
	(0.23)	(0.22)
British Colony Dummy	-0.96	
	(0.39)	
English Legal Origin Dummy		-1.05
		(0.37)
First Stage		
Log Settler Mortality	-0.53	-0.53
	(0.14)	(0.13)
British Colony Dummy	0.67	
	(0.35)	
English Legal Origin Dummy		0.70
		(0.34)
R-Squared in First Stage	0.30	0.30
Number of Observations	63	63

The Role of Culture? (2): The Korean Experiment

- Korea: economically, culturally and ethnically homogeneous at the end of WWII.
- If anything, the North more industrialized.
- "Exogenous" separation of North and South, with radically different political and economic institutions.
  - ie separation not related to economic, cultural or geographic conditions in North and South
- Big differences in economic and political institutions
  - Communism (planned economy) in the North
  - Capitalism, albeit with government intervention and early on without democracy, in the South
  - Huge differences in economic outcomes.

North and South Korea



The Harder Question: Political Economy of Growth

- If institutions matter so much, why do societies "choose" non-growth-enhancing institutions?
- Answer: social conflict.
- (Economic) institutions shape incentives and determine the allocation of resources
  - Each set of institutions creates beneficiaries and losers; certain groups obtain high incomes, rents and privileges.
  - Thus "distributional" implications from institutional choices.
  - Preferences over institutions determined (at least partly) by their distributional implications.
    - e.g., a monopolist would be opposed to a reduction in entry barriers even if these increase aggregate income.

Social Conflict and Political Economy

- How do societies make collective choices when there is social conflict?
- Political economy: aggregating conflicting preferences.
- Two important pillars:
  - political power; which individuals and groups are more likely to influence choices.
  - political institutions; how is political power distributed and what are the constraints on it.
- A useful theory should generate:
  - Clear mechanics of how social conflict works
  - Empirically useful comparative statics.

Historical Example: Land Relations in Dutch Indies (1)

- Dutch East India Company (V.O.C.) monopolizing the production of valuable spices (nutmeg, cloves and mace) in the Moluccas, in particular in Ambon and Banda islands.
- Different indigenous organization between the islands.
- van Zanden (1993):
  - "[in Ambon] The Company ... took over the existing feudal structure of raising tribute," monopolizing supply (excluding the British and Portuguese).
- They also used this feudal structure to increase the output of cloves.

Land Relations in Dutch Indies (2)

- In Banda, in contrast, there were many small autonomous city states, but
  - "There was no hierarchial social and political structure that could impose the will of the V.O.C. ...", especially stopping locals from selling nutmeg to the British and Portuguese.
- The V.O.C. decided to change the economic institutions on Banda, via a radical solution:
  - "Through military action, the V.O.C. kiled most of the population in 1621..." and completely reorganized the production of nutmeg and established a slavery system, with the slaves supplied by the V.O.C. and its former employees as planters.

Financial Institutions in Mexico and the U.S. (1)

- Big differences in the structure of banking between the U.S. and Mexico in the 19^{th} century, during the critical period of divergence.
- Haber(2001)
  - "Mexico had a series of segmented monopolies that were awarded to a group of insiders. The outcome, circa 1910, could not have been more different: the U.S. had roughly $25,000$ banks and a highly competitive market; Mexico had 42 banks, two of which controlled 60 percent of total banking assets, and virtually none of which actually competed with another bank."
- Adverse consequences for Mexican industry.
  - Lending by monopoly banks to inefficient firms of friends and associates, and of the politically powerful.

Financial Institutions in Mexico and the U.S. (2)

- Why? Because of the power of insiders and state governments in Mexico, supported by the dictatorship of Porfirio Diaz.
- In 1789, the U.S. also similar.
  - Haber: [in the U.S. in late 18^{th} century] "... it was not in the interest of state governments to charter large number of banks and create a competitive market for banking services"
  - Many U.S. politicians in fact wished to create monopolies.
- But expanding frontier, which caused interstate competition, and universal male suffrage made this system unsustainable.
- Insiders did not have enough political power to impose their preferred (potentially inefficient) institutions.

Price Regulation(1)

- Another form of economic institution: marketing boards regulating agricultural prices.
  - Originally, introduced to prevent large fluctuations in farm revenues
- Bates (1981): very different form of price regulation in LDC agricultural markets.
- Ghana and Zambia: low prices paid to farmers through marketing boards, surplus transferred to politicians or urban groups.
- Kenya and Colombia: much more pro-farmer policies and institutions.

Price Regulation(2)

- Why?
- In Ghana and Zambia, but not in Kenya and Colombia, farmers had little political power.
  - In Ghana, cocoa farmers small and unorganized, and also from different ethnic group than the ruling party, while urban groups politically more powerful.
  - In Kenya, large farmers with greater political power.
  - In Colombia, farmers with greater power through more democratic and competitive politics.
    - Interestingly, during the military regimes of the '50s when democratic politics suspended, pricing was set to extract surplus from farmers.

Summary of the Three Cases

- Institutions not dictated purely by history, but chosen by society.
- Moreover, they are chosen, not mainly for efficiency nor because of differences in beliefs, but for their distributional consequences.
  - Social conflict and political power important.
  - In all cases, economic institutions chosen for their consequence, and particularly *the rents* created for the politically powerful groups.
  - In almost all cases, the resulting economic institutions harmful for certain groups, and in many cases harmful for society at large.

Further Lessons from the Examples

- Key lesson:
  - political power ⇒ economic institutions
- Kenya vs. Ghana suggests a link between economic institutions and political power;
  - Kenyan farmers that were larger and wealthier had political power, while small farmers in Ghana did not.

    economic institutions ⇒ political power
- Mexico vs. U.S. and Colombia vs. Ghana show the influence of political institutions on political power
  - political institutions ⇒ political power
- But also:
  - political power ⇒ political institutions.

Political Economy of Growth: Comparative Statics

- When do we expect a society to adopt good institutions?
  1. When those holding political power also will benefit from well-enforced property rights (and financial development, free entry, functioning markets, etc.)
  2. When there are relatively few resources to be extracted or exploited using political power.
  3. When constraints on political power preclude expropriation or the imposition of institutions detrimental to excluded groups.
  4. When the scope for manipulation of factor prices is relatively small.

Comparative Statics at Work

- Can we use these comparative statics to understand the colonial experience?
  - Colonial powers chose better institutions when they themselves would benefit from well-enforced property rights, because they were the main inhabitants of the land.
  - Moreover, they also tended to opt for better institutions when there was less to extract, especially less labor to exploit.
  - In low-settler-mortality places they developed democratic institutions and these institutions placed further checks on the development of bad policies in the future.

Towards a Formal Model: Why Iceland Starved?

- Stagnant economy in 16^{th}-19^{th}.
- Typical pattern of underdevelopment.
  - Backward techniques of agriculture;
  - Famines of increasing frequency;
  - Declining average height of the population.
- Eggertsson (2005, p. 102): "The central paradox in Iceland's economic history is Icelanders' failure to develop a specialized fishing industry and exploit on a large scale the country's famous fisheries."
- Key question: why did better technologies (fisheries) not develop?

Why Iceland Starved? An Answer

- Political economy of growth in the face of competition.
- The elite would be hurt by the development of the fisheries, because
  - Eggertsson: Landlords had political power and "realized that the development of a specialized fishing industry would draw farm workers away, substantially increasing labor costs." (p. 111).
- Lessons:
  - modelling inefficient institutions;
  - investigate the particular channels through which the elite is hurt by development.

Economic Model: Overview

- Three groups: workers, elite producers and "middle-class producers".
- Economic and hence political conflict between all three groups.
- The elite are in power and will choose policies/economic institutions in order to transfer resources from the two other groups to themselves.
- Two central economic mechanisms:
  - Revenue extraction
  - Factor price manipulation
- **Political mechanism**: the elite will also try to manipulate economic allocations in order to protect their political power.

Economic Model: Preferences

- All agents have preferences at time $t = 0$:

$$U_0^j = \mathbb{E}_0 \sum_{t=0}^{\infty} \beta^t c_t^j. \tag{1}$$

- Mass of workers equal to 1, set of elite agents S^e with mass θ^e, and set of middle-class agents S^m with mass θ^m.

- Elite and middle-class producers have access to technology:

$$y_t^j = \frac{1}{1-\alpha}(A_t^j)^{\alpha}(k_t^j)^{1-\alpha}(l_t^j)^{\alpha}, \tag{2}$$

  where k denotes capital and l labor. Capital depreciates fully after use.

- Key difference between the two groups is their productivity.
  - A^m for the middle class and A^e for the elite.

Economic Model: Policies

- Activity-specific tax rates on production, $\tau^e \geq 0$ and $\tau^m \geq 0$.
- Important: no other fiscal instruments
  - In particular, no lump-sum non-distortionary taxes.
- Lump-sum transfers targeted towards each group, $T^w \geq 0$, $T^m \geq 0$ and $T^e \geq 0$.
- Return from natural resources R.
- Parameter $\phi \in [0, 1]$, related to "state capacity," measures how much of the tax revenue can be redistributed.
- Government budget constraint is therefore:

$$T_t^w + \theta^m T_t^m + \theta^e T_t^e \leq \text{Revenue}_t \equiv \phi \int_{j \in S^e \cup S^m} \tau_t^j y_t^j dj + R. \tag{3}$$

The Labor Market

- Only workers work, so market clearing implies

$$\int_{j \in S^e \cup S^m} l_t^j dj \leq 1, \tag{4}$$

- Key condition for excess supply:

$$\theta^e + \theta^m \leq \frac{1}{\lambda}, \tag{ES}$$

- If this condition is not satisfied, then there will be full employment.

Equilibrium: Preliminaries

- Firm-maximization:

$$\max_{k_t^j, l_t^j} \frac{1-\tau_t^j}{1-\alpha}(A^j)^\alpha (k_t^j)^{1-\alpha}(l_t^j)^\alpha - w_t l_t^j - k_t^j,$$

which yields

$$k_t^j = (1-\tau_t^j)^{1/\alpha} A^j l_t^j, \tag{5}$$

and

$$l_t^j \begin{cases} = 0 & \text{if } w_t > \frac{\alpha}{1-\alpha}(1-\tau_t^j)^{1/\alpha} A^j \\ \in [0,\lambda] & \text{if } w_t = \frac{\alpha}{1-\alpha}(1-\tau_t^j)^{1/\alpha} A^j \\ = \lambda & \text{if } w_t < \frac{\alpha}{1-\alpha}(1-\tau_t^j)^{1/\alpha} A^j \end{cases} . \tag{6}$$

Equilibrium Wages

- Combining (6) with (4), equilibrium wages are obtained as follows:
  1. If Condition (ES) holds, there is excess supply of labor and $w_t = 0$.
  2. If Condition (ES) does not hold, then there is "excess demand" for labor and the equilibrium wage is

$$w_t = \min\langle \frac{\alpha}{1-\alpha}(1-\tau_t^e)^{1/\alpha} A^e, \frac{\alpha}{1-\alpha}(1-\tau_t^m)^{1/\alpha} A^m \rangle. \tag{7}$$

- Whichever group has lower marginal product (given policies) determines the equilibrium price of labor.
- This opens the way for **factor price manipulation**.

Inefficient Policies

- Suppose there is an upper bound on taxation, so that

$$\tau_t^m \leq \bar{\tau} \text{ and } \tau_t^e \leq \bar{\tau},$$

- The timing of events within each period is as follows:
  - *first*, taxes are set;
  - *then,* investments are made.
- This implies no holdup.
- Also to start with, focus on Markov Perfect Equilibria (MPE).

Revenue Extraction

- Let us start with pure revenue extraction.
- This means shutting off the factor price interactions, i.e., assume that (ES) is satisfied.
- The elite would like to tax the middle class up to the peak of the Laffer curve.

  Proposition 1 Suppose Condition (ES) holds and $\phi > 0$, then the unique political equilibrium features $\tau_t^m = \tau^{RE} \equiv \min\{\alpha, \bar{\tau}\}$ for all t.

- Note: political equilibrium Pareto efficient, but not growth-enhancing.
- Pareto efficiency "too weak a concept" in the analysis of the political economy of growth.

Factor Price Manipulation

- Let us next turn to pure factor price manipulation.
- For this reason, assume that ϕ =0.

  Proposition 2 Suppose Condition (ES) does not hold, and $\phi = 0$, then the unique political equilibrium features $\tau_t^m = \tau^{FPM} \equiv \bar{\tau}$ for all t.

- Political equilibrium again Pareto efficient.

Revenue Extraction and Factor Price Manipulation Combined

- Now let us allow both effects to operate.

  Proposition 3 Suppose Condition (ES) does not hold and $\phi > 0$. Then the unique political equilibrium features

$$\tau_t^m = \tau^{COM} \equiv \min\{\frac{\kappa(\lambda, \theta^e, \alpha, \phi)}{1 + \kappa(\lambda, \theta^e, \alpha, \phi)}, \bar{\tau}\}. \tag{8}$$

  for all t. Equilibrium taxes are increasing in θ^e and α and decreasing in ϕ.

- Important comparative statics.

Political Consolidation

- Another motive: is preservation of political power.
- The elite enjoy revenues and profits because of their political power, thus likely to take actions to preserve and **consolidate their political power**.
- Suppose, in a reduced-form way, that the elite can lose political power to the middle-class, and when the middle class is richer, this is more likely to happen. Then:

  Proposition 4 Consider the economy with political replacement. Suppose also that Condition (ES) holds and $\phi > 0$, then the political equilibrium features $\tau_t^m = \tau^{PC} > \tau^{RE}$ for all t. This tax rate is increasing in R and ϕ.

- Interesting comparative statics with respect to R and ϕ, different from before.

Subgame Perfect Equilibria versus MPE

- Does the restriction to MPE matter?
- Given the timing of events, the answer is no.

  Proposition 5 The MPEs characterized in Propositions 1-4 are the unique SPEs.

- Why? Because there is no commitment problem.
- Closely related to the fact that political equilibria were Pareto efficient.

Holdup

- Inefficiencies become more serious when there is an issue of holdup.
- More explicitly, we say that there is holdup if in the timing of events the elite set taxes after the middle class choose investments.
- Let us now focus on MPE.

  Proposition 6 With holdup, there is a unique political equilibrium with $\tau_t^m = \tau^{HP} \equiv \bar{\tau}$ for all t.

- Therefore, with holdup there is excessive taxation even from the viewpoint of the elite.

Subgame Perfect Equilibria versus MPE Again

- With holdup, there is over-taxation, so MPE and SPE are no longer identical.

  Proposition 7 Consider the holdup game, and suppose that Condition (ES) holds and $\bar{\tau} = 1$. Then for $\beta \geq 1 - \alpha$, there exists a subgame perfect equilibrium where $\tau_t^m = \alpha$ for all t.

- Implicit commitment to low taxes using trigger strategies if parties are sufficiently patients.
- Potential alternative to "good institutions", but imperfect.

Technology Adoption

- Let us now consider technology adoption, whereby producers (in particular the middle class) choose their technology, A^m) at Time $t = 0$ at some cost $\Gamma(A^m)$.
- Similar to hold up, but worse because there is only one time investment.
- When the objective of the elite is factor price manipulation, this doesn't matter.

  Proposition 8 Consider the game with technology adoption and suppose that Condition (ES) does not hold, and $\phi = 0$, then the unique political equilibrium features $\tau_t^m = \tau^{FPM} \equiv \bar{\tau}$ for all t. Moreover, if the elite could commit to a tax sequence at time $t = 0$, then they would still choose $\tau_t^m = \tau^{FPM} \equiv \bar{\tau}$.

Technology Adoption (continued)

- However, when there is at least some element of revenue extraction, lack of commitment introduced by technology adoption at the beginning is harmful to all groups.

  Proposition 9 Consider the game with technology adoption, and suppose that Condition (ES) holds and $\phi > 0$, then the unique political equilibrium (either SPE or MPE) features $\tau_t^m = \tau^{RE} \equiv \min\{\alpha, \bar{\tau}\}$ for all t. If the elite could commit to a tax policy at time $t = 0$, they would prefer to commit to $\tau^{TA} < \tau^{RE}$.

- Note that SPE does not help.

- Because punishment strategies not possible (only one-time investment).

- What can be done? **Economic institutions**...

Inefficient Economic Institutions

- We now start thinking about economic institutions.
- Since we know preferences over policies, we can derive induced preferences over economic institutions.
- In particular, let us consider two stylized institutions.
  - **security of property rights**, modeled as limits on taxes.
  - **regulation of technology**, modeled as barriers to technology adoption by the middle class.

Security of Property Rights

- General principle: in the absence of holdup issues, the elite have no interest to grant further property rights to other groups (even if they can).
- This conclusion is modified in the presence of technology adoption or holdup.
- Simple model: imagine that the elite can commit (somehow credibly) to some maximum tax rate $\bar{\tau}$ instead of some higher-level $\bar{\tau}^H$.

  Proposition 10 Without holdup and technology adoption, the elite prefer $\bar{\tau} = \bar{\tau}^H$.

Security of Property Rights (continued)

- The picture changes with holdup or technology adoption.

  Proposition 11 Consider the game with holdup and suppose that Condition (ES) does not hold and $\phi > 0$, then as long as τ^{COM} given by (8) is less than $\bar{\tau}^H$, the elite prefer $\bar{\tau} = \tau^{COM}$.

  Proposition 12 Consider the game with holdup and technology adoption, and suppose that Condition (ES) holds and $\phi > 0$, then as long as $\tau^{TA} < \bar{\tau}^H$, the elite prefer $\bar{\tau} = \tau^{TA}$.

- General principle: factor price manipulation and political consolidation effects potentially much more damaging to economic efficiency.

Regulation of Technology

- Would the elite like the middle class to be productive?
- The answer depends on the economic mechanism at work.
  - **Yes**, if they want to extract revenues.
  - **No**, if they want to manipulate factor prices or preserve their political power.
- Suppose that government policy $g \in \{0, 1\}$ influences the productivity of middle class producers, with $A^m(g = 1) > A^m(g = 0)$.
- Thus $g = 0$ like blocking of technological progress.

Proposition 13 Suppose Condition (ES) holds and $\phi > 0$, then $w = 0$ and the the elite always choose $g = 1$.

Regulation of Technology (continued)

- Different conclusions when factor price manipulation or political replacement effects are in play.

  Proposition 14 Suppose Assumption (A1) holds, Condition (ES) does not hold, $\phi = 0$, and $\bar{\tau} < 1$, then the elite choose $g = 0$.

  Proposition 15 Consider the economy with political replacement. Suppose also that Condition (ES) holds and $\phi = 0$, then the elite prefer $g = 0$.

- Same general principle: blocking of technology is a major problem when issues of factor price manipulation and/or political consolidation are present.

Why Iceland Starved? Taking Stock

- Development was blocked in Iceland because factor price manipulation was the dominant motivation for the elite.
  - Eggertsson: "The farm community was conscious of latent upward pressures on labor costs and fought those pressures. When the pull of the fisheries was relatively strong, courts reaffirmed the regulations in the labor market, and authorities tightened enforcement."
- This took the form of blocking innovations in the fishing industry:
  - Eggertsson: "New incentive schemes for the fishermen were seen as a threat to the system and forbidden. ... The farming community also saw improvements in fishing gear and the resulting increase in labor productivity as upsetting the balance."

Inefficient Political Institutions

- The model showed inefficiencies of dictatorship of the elite...
- Is it any better than dictatorship of the middle class, or democracy?
- Not necessarily.
  - In general, there is no guarantee that one system is better than another.
- But more important, there are no natural mechanisms for the more efficient system to emerge in any case.

Conclusions (1)

- Institutions a key determinant of economic growth.
- Social conflict implies possible choices of non-growth-enhancing institutions.
- Non-growth-enhancing institutions most likely when creative destruction important, when there is competition in the factor markets or in the political arena, and when political stakes are high.
- Next step: model dynamics of political power and political institutions.
  - Active and exciting area for theoretical and empirical research.

Conclusions (2)

- Summary: towards a dynamic theory