

POLITICAL ECONOMY OF GROWTH:
UNDERSTANDING POLITICAL
DYNAMICS

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Taking Stock

- Lecture 1:
 - Institutions matter.
 - The role of social conflict and inefficient institutions.
- Lecture 2:
 - Elites may block development, depending on their motivations (factor price manipulation versus rent extraction).
 - Different political regimes produce different results.

This Lecture

- Focus on regime **dynamics**.
- Role of social conflict.
- Why and when does **democracy** emerge?
- Why and when does it **consolidate**?
- How can we understand long-lived **repressive regimes**?
- This lecture a framework for thinking about these issues.
 - This framework building on Acemoglu and Robinson **Economic Origins of Dictatorship and Democracy**.

Four Alternative Paths of Political Development

- **Great Britain** (1832-1928): Gradual move to consolidated democracy
- **Argentina** (1912-1983): Large swings between democracy and oligarchy
- **Singapore** (1948-1963): From democracy to stable one-party rule.
- **South Africa** (1900-1994): From repressive apartheid to democracy.

How Does Democracy Emerge

- Although examples of democracies following revolutions exist, the typical pattern is a voluntary extension of the franchise by the current elite.
- This is typically followed by greater redistribution, pro-poor policies and removal of the privileges of the elites.
- Why would the current elite extend the franchise?
- Especially if they anticipate the changes in policies?
- Answer: though voluntary, changes in institutions respond to threats and social conflict.

The British 1832 Reform Act

- First Reform Act (1832) increases total electorate from 492,700 to 806,000, about 14.5% of the adult male population.
- Reforms clearly a response to **revolutionary threat**.
 - Luddite Riots from 1811-1816, Spa Fields Riots of 1816, Peterloo Massacre of 1819, Swing Riots of 1830, July Revolution in Paris, 1830
- Reforms thought to prevent future revolution:
 - Prime Minister Earl Grey (1831): “There is no-one more decided against annual parliaments, universal suffrage and the ballot, than I am. My object is not to favour, but to put an end to such hopes and projects ... The principle of my reform is, **to prevent the necessity of revolution** ... reforming to preserve and not to overthrow.”.

The British Case Continued

- 1832 Reform Act was only one step towards universal suffrage.
- In its aftermath, the majority of the British people still without the rights to vote, and with considerable scope for patronage, including rotten-boroughs.
- The Chartist movement trying to rectify these political inequities, but largely unsuccessful.
- But in the second half of the century, social unrest and revolutionary threat strengthened.
- This led first to [the 1867 Reform Act](#), and then finally to the more important changes with [the 1884 Reform Act](#) and the [Redistribution Act of 1885](#).

Lessons from the British Case

- The British case therefore illustrates the **gradual process** of democratization as a series of franchise extensions.
- But it also shows that it was in response to the **threat** of revolution and social unrest.
- **Question:** why democratization in response to threats of social unrest?

Main Idea: Political Institutions as Commitment

- Role of political institutions: regulate future allocation of **de jure** political power.
- Democracy changes **political institutions** and allocates de jure political power towards the poor.
- Political institutions are relatively **durable**: → changing political institutions a credible commitment to future policies.
- Therefore: democracy as **credible commitment** to pro-citizen policies.

Problems of Credibility

- **Credibility** is an issue because in non-democracy what the poor have is **de facto** political power.
- Recall that de facto political power relies on solutions to **the collective action problem**.
- Therefore, by its nature **transitory**.
- Democratization is a credible transfer of power, because it manipulates the distribution of **de jure** political power.

Basics of the Theory of Democratization

- Elites control non-democracy, but citizens can sporadically exercise **de facto power** and threaten a revolution.
- Elites can respond with
 - repression;
 - concessions with unchanged political institutions;
 - democracy.
- Democracy arises when repression is too costly and concessions are non-credible.

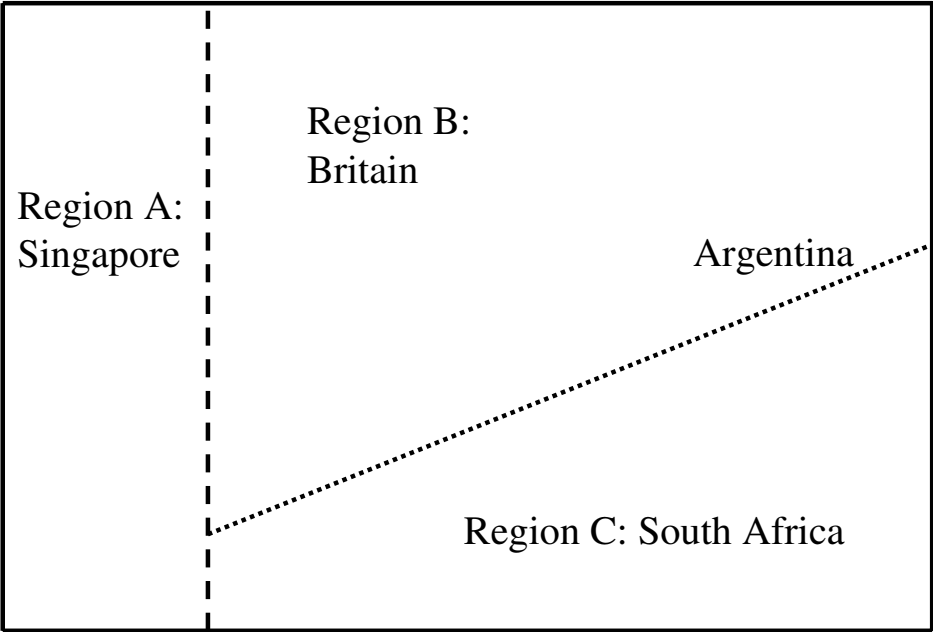
Comparative Statics At a Glance

- Democracy more likely to arise when repression is costly;
 - The role of **civil society**.
- Democracy more likely to arise when inequality is limited so that the elite **less willing** to use repression.
- However, in a very equal society, the threat of revolution may never be strong enough to induce political change.
- Therefore, democracy most likely at **intermediate** levels of inequality.
- Most important: comparative statics with respect to economic structure:
 - Democracy more likely in more industrial, **capital-intensive** societies.
 - Repression more likely in rural, **land-abundant** economies.

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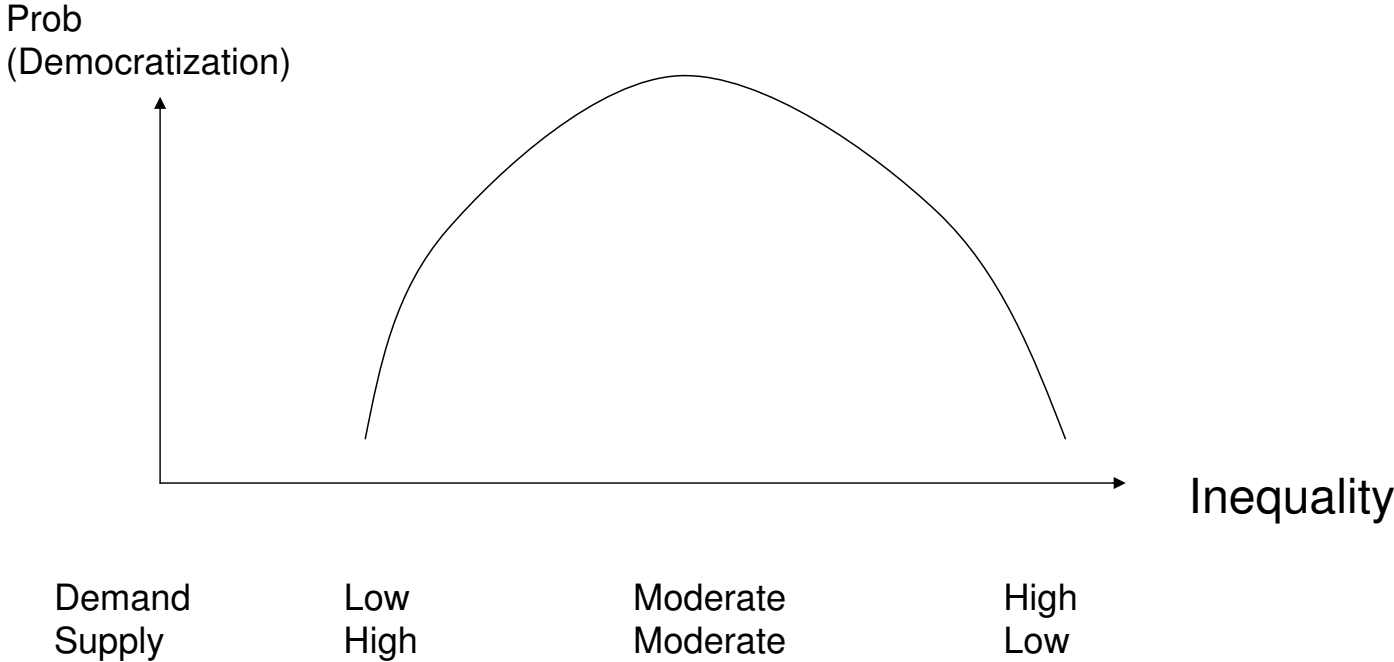
Democratization

Costs of
Repression



Inequality

A Summary of the Main Argument

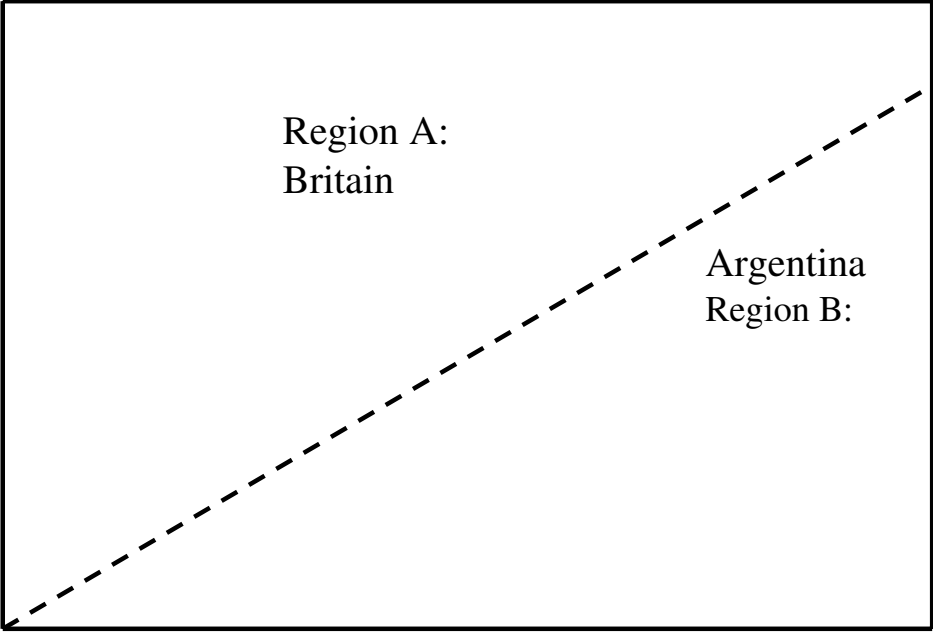


Democratic Consolidation

- When will democracy **consolidate**?
 - Similar reasoning to the creation of democracy.
 - If coups are not very costly for groups opposed to democracy, consolidation less likely.
 - Again the role of **civil society**.
 - Also, democracy more likely to consolidate when inequality is limited.
 - And also again the importance of **land rents**.
- Therefore, democracy-dictatorships cycles more likely in societies with weak civil society, high inequality and low capital-land ratios.

Democratic Consolidation

Costs of
Coups



Inequality

A Dynamic Model of Democratization

- Total population is normalized to 1, a fraction $1 - \delta > 1/2$ are poor with income y^p , fraction δ is rich with income $y^r > y^p$.
- Mean income is \bar{y} , and we use θ to parameterize inequality,

$$y^p = \frac{(1 - \theta) \bar{y}}{1 - \delta} \text{ and } y^r = \frac{\theta \bar{y}}{\delta} \text{ with } \delta < \theta. \quad (1)$$

Redistribution

- The political system determines a linear tax rate $\tau \geq 0$.
- Tax proceeds of are redistributed lump-sum.
- Cost of taxation captured as $C(\tau) \bar{y}$.
- Therefore, the post-tax income level of an agent with income y^i is

$$\hat{y}^i = (1 - \tau) y^i + (\tau - C(\tau)) \bar{y}. \quad (2)$$

Fiscal Preferences

- Tax rate maximizing the utility (income) of a poor agent is $\tau^p > 0$ satisfying

$$\left(\frac{\theta - \delta}{1 - \delta} \right) = C'(\tau^p). \quad (3)$$

- Rich agent prefers $\tau^r = 0$.
- Standard result:

$$\frac{d\tau^p}{d\theta} > 0.$$

Dynamic Preferences

- Utility is defined over the discounted sum of post-tax incomes with discount factor $\beta \in (0, 1)$

$$U^i = \sum_{t=0}^{\infty} \beta^t \hat{y}_t^i = \sum_{t=0}^{\infty} \beta^t [(1 - \tau_t) \Delta_t^i(\omega) y^i + (\tau_t - C(\tau_t)) \bar{y}],$$

- $\Delta_t^i(\omega)$ is the cost due to repression for agent (or group) i , with $\omega = 0$ denoting no repression and $\omega = 1$ denoting repression, with $\Delta_t^i(\omega = 1) = \kappa$, $\Delta_t^i(\omega = 0) = 1$.
- Therefore, κ is the cost of repression.

Political System

- Initially there is a nondemocracy.
- The elite choose tax policy, whether or not to repress, whether or not to create democracy.
- If created democracy is fully consolidated (no coups); later allow for coups.
- If a revolution takes place the game ends.
- In a democracy the median voter (a poor agent) will determine policy.

De Facto Power of Poor

- Poor agents can mount a revolution in any period $t \geq 0$, if attempted it always succeeds, but a fraction $1 - \mu_t$ of income is destroyed forever.
- If there is a revolution at time t , each poor agent receives a per period return of $\mu_t \bar{y} / (1 - \delta)$. Thus no collective action problem.
- μ changes between two values: μ^H and $\mu^L = 0$, with $\Pr(\mu_t = \mu^H) = q$.
- The fact that μ fluctuates captures the importance of the **transitory** nature of de facto political power.

Timing of Events in the Stage Game

- The state μ is revealed.
- The elite decide whether to repress, $\omega \in \{0, 1\}$.
- The elite decide whether or not to extend the franchise, $\phi \in \{0, 1\}$. If $\omega = \phi = 0$, they set the tax rate.
- If $\omega = 0$, the poor decide whether or not to initiate a revolution, $\rho \in \{0, 1\}$. If $\omega = 1$, the poor cannot undertake a revolution. If $\rho = 0$ and $\phi = 1$, the tax rate is set by the median voter (a poor agent).

Dynamic Game

- This economy can be represented as a dynamic game between two players, the rich and the poor.
- Let us first focus on pure strategy Markov Perfect Equilibria.
- Key object: [revolution constraint](#)

$$V^p(R, \mu^H) \leq V^p(N, \mu^H), \quad (4)$$

- The value of revolution for the poor has to be less than living in non-democracy.

Dynamic Game (continued)

- If the Revolution constraint is violated, i.e., if $\mu^H > 1 - \theta$, the poor prefer to initiate a revolution when $\mu = \mu^H$.
- However, repression can stop revolution.
- Also, redistribution or franchise extension may induce the poor not to use their evolution option.
- Define μ^{H*} as the value of μ^H such that (4) holds with equality.

Revolution

- In general, revolution could be so attractive that it may not be prevented.
- This is a possibility in very unequal societies, with limited ability to use fiscal redistribution even when democratic.
- Assume that democratization prevents a revolution:

$$V^p(D) \geq V^p(R, \mu^H):$$

$$1 - \theta + \tau^p(\theta - \delta) - (1 - \delta)C(\tau^p) \geq \mu^H. \quad (5)$$

Preventing Revolution

- How to prevent revolution?
 1. The elite can choose to maintain political power, $\phi = 0$, but redistribute at rate $\hat{\tau}$ giving the poor $V^p(N, \mu^H, \hat{\tau})$. But this is generally not sufficient, because the elite can not commit to future redistribution.
 2. The elite can use repression. Effective against the revolution threat, but costly.
 3. If these two options are not attractive or feasible, then democratize. **Effective commitment to future redistribution** by shifting political power to the citizens.

Main Result

Proposition 1 There exists a unique Markov Perfect Equilibrium such that:

- When $1 - \theta \geq \mu^H$, there is never any threat of revolution, the rich never redistribute and the society remains nondemocratic.
- When $1 - \theta < \mu^H$, then we have:
 1. If $\mu^H \leq \mu^{H*}$ and $\kappa < \kappa^*$, then the revolution threat in the state $\mu = \mu^H$ will be met by temporary redistribution.
 2. If $\mu^H > \mu^{H*}$ and $\kappa \geq \bar{\kappa}$, or if $\mu^H \leq \mu^{H*}$ and $\kappa \geq \kappa^*$, then the revolution threat will be met by repression in the state $\mu = \mu^H$.
 3. If $\mu^H > \mu^{H*}$ and $\kappa < \bar{\kappa}$, then the revolution threat in the state $\mu = \mu^H$ will be met by [democratization](#).

Subgame Perfect Equilibria

- Does the restriction to Markov matter?
- Potentially it might, since with the Markov assumption there is less commitment (i.e., no trigger strategies).
- Nevertheless, even when we look at subgame perfect equilibria, there is still **limited commitment** on the part of the elite, because they can always renege on their promises.
- So results very similar:

Proposition 2 The form of the best subgame perfect equilibrium from the viewpoint of the elite (or of the citizens) is identical to that of Proposition 1.

Key Comparative Statics

- A **non-monotonic** (inverted U-shaped) relationship between inequality and the likelihood of transition to democracy. Democracy unlikely in very egalitarian (Singapore) or very inegalitarian (South Africa) societies.
- The structure of assets matter for democracy; e.g., land versus capital.
- Civil society—poor need to be sufficiently organized for revolution to be a threat.
- Importance of **shocks and crises**.
- Costs of repression: related to “**coercive institutions**”; how costly it is to use coercion.
 - Potentially related to underlying structure of power, organization of the state, military etc..

A Theory of Coups and Consolidation

- Consider the case where democracy is in place. When does it consolidate? When does it fall to a coup?
- Are Argentinian-style cycles between democracy (D) and non-democracy (N) possible?.
- For this, we assume that in democracy, if the rich obtain de facto power and a coup is attempted, it succeeds with probability one and transitions to a non-democratic regime.
- In the meantime, a fraction φ_t of income is destroyed at time t . φ_t changes between two values: φ^H and $\varphi^L = \infty$, with $\Pr(\varphi_t = \varphi^H) = s$.
- As a result, the regime switches next period to non-democracy where $\mu_{t+1} = 0$.

Timing of Events in the Stage Game

- Write the political regime as $j \in (N, D)$. If $j = N$, the timing is as before. If $j = D$, the timing is as follows:
 1. The state φ is revealed.
 2. The elite decide whether to mount a coup, $\zeta \in \{0, 1\}$.
 3. If $\zeta = 1$, $j_{t+1} = N$ and $\mu_{t+1} = 0$

Value Functions in Democracy

- Value of individual i in democracy as a function of cost of coup and tax rate:

$$V^i(D, \varphi^L) = y^i + NR^{iDL} + \beta[sV^i(\varphi^H) + (1-s)V^i(D, \varphi^L)], \quad (6)$$

$$V^i(D, \varphi^H, \tau^D) = y^i + NR^{iDH} + \beta[sV^i(\varphi^H) + (1-s)V^i(D, \varphi^L)], \quad (7)$$

- Value of individual i in democracy, when coup is possible:

$$V^i(\varphi^H) = \zeta(V^i(N, \mu^L) - \varphi^H y^i) + (1 - \zeta)V^i(D, \varphi^H, \tau^D) \quad (8)$$

where NR^{ijk} is the net redistribution to individual i in regime j , $\zeta = 1$ stands for a coup, and $\varphi_t = \varphi^k$.

Value Functions in Nondemocracy

- Let us assume that there is no repression or revolution in equilibrium.
- Then the value functions for individual i are:

$$V^i(N, \mu^L) = y^i + \beta[qV^i(\mu^H) + (1 - q)V^i(N, \mu^L)], \quad (9)$$

$$V^i(N, \mu^H, \tau^N) = y^i + NR^{iNH} + \beta[qV^i(\varphi^H) + (1 - q)V^i(N, \mu^L)], \quad (10)$$

$$V^i(\mu^H) = \phi V^i(D, \varphi^L) + (1 - \phi)V^i(N, \mu^H, \tau^N) \quad (11)$$

Fully Consolidated Democracy

- Define a democracy as **fully consolidated** if:

$$V^r(N, \mu^L) - \varphi y^r \leq V^r(D, \varphi^H, \tau^P), \quad (12)$$

- If this inequality holds, the rich would never want to mount a coup.
- Policy can be determined without any reference to the threat of coups.
- More formally, define $\hat{\varphi}^H$ to be the value of φ^H such that (12) holds with equality.
- For any $\varphi^H < \hat{\varphi}^H$, democracy is not fully consolidated and coups would occur if the poor pick their preferred tax rate.

Semi Consolidated Democracy

- Define a democracy as **semi consolidated** if:

$$V^r(N, \mu^L) - \varphi^H y^r \leq V^r(D, \varphi^H, 0), \quad (13)$$

- If this inequality holds, zero taxes for the elite are sufficient to discourage a coup.
- Now define φ^{H*} to be the value of φ^H such that (13) holds with equality.
- For any $\varphi^H > \varphi^{H*}$, there is a tax rate such that the poor can stave off a coup.

Main Result

Proposition 3 Assume that $\mu^H < \mu^{H^*}$, then

- If $\varphi \geq \varphi^{\hat{H}}$, democracy is fully consolidated.
- If $\varphi \in [\varphi^{H^*}, \varphi^{\hat{H}})$, democracy is semi consolidated.
- If $\varphi < \varphi^{H^*}$, democracy is unconsolidated.

Comparative Statics of Consolidation

- Greater inequality makes democracy more redistributive and coups more likely.
- Shocks and crises again important.
- Costs of coups. May depend on nature of assets in the economy and “coercive institutions.”

Economic Structure and Democracy

- Now imagine that incomes are derived from assets.
- In land-intensive societies, democracy is more likely to be redistributive, since land is **more inelastic** than capital.
- Therefore, **more repression** in **more land-intensive** societies; consistent with Barrington Moore's famous thesis.
- Moreover, if economic institutions are such that they generate **large rents** for the elite, **repression** more likely.
 - Potential explanation for persistence of repressive institutions and some former colonies discussed in Lecture 1.

Manipulating Democracy

- A less pro-poor democracy may make the elite more willing to concede democracy.
 - e.g., concessions in South Africa.
- A less pro-poor democracy may also be more likely consolidate.
 - e.g., Chilean consolidation under Pinochet's constitution.
- But if democracy is manipulated too much by the elite, it becomes so unattractive for the poor that they may prefer a revolution.

Role of the Middle Class

- Extend the model to allow for a third group, the middle class.
- Result: if the median voter is a member of the middle class, democracy is *less redistributive*.
- The elite is more willing to democratize and less willing to use repression.
- Therefore, *the middle class as a buffer*.

Globalization and Democracy

- How does trade opening affect democracy in poor countries?
- It increases the revenue of the **abundant** factor.
- Conclusions depend on what is the abundance factor in marginal democracies or non-democracies.
- Most common scenario: labor is the abundant factor, so that trade reduces inequality.
 - Likely outcome; **democracy more likely**.
 - But recall that there is an inverted U-shape relationship between inequality and democracy.
- Alternative scenario: land is the abundant factor, as in Latin America earlier during this century.
 - Then, trade may make democratic consolidation **less likely**.

Summary

- Simple model for the analysis of equilibrium political institutions.
- Much more research necessary to understand the process of political reform.
- For example, forms of democracy affecting stability of democracy (e.g., presidential versus parliamentary systems).
- What makes institutions durable, credible? How can they be made more **credible and flexible?**

Institutional Persistence

- In the above model, changes in political institutions always lead to changes in policies and economic institutions.
- In practice, this is not always so.
- Democratization in Western Europe did lead to major changes in economic institutions and economic policies.
- However, end of colonial rule did not.
- Abolition of slavery in the US South after the Civil War did not.
- Why?

Basic Approach: Back to the General Framework

- Need for a framework that allows for **coexistence** of change and persistence in institutions.
- Distinction between **de jure** and **de facto** power.
- De jure power coming from formal political institutions.
- De facto power coming from solving the collective action problem, brute force, lobbying, bribery, paramilitaries.
- Main broad idea: institutional persistence **equilibrium** result of interaction between de jure and de facto power.
 - Change in de jure institutions not sufficient for changing equilibrium institutions.
 - Main focus of analysis here: **dynamic interaction** of de jure and de facto political power.

Main Mechanism

- Institutional change alters the distribution of de jure power.
 - e.g., switch from dictatorship to democracy
- Groups that can solve their collective action problem can intensify their investments in de facto political power to **undo** the adverse effects of the changes in de jure power.
 - **Mosca:** “The domination of an organized minority ... over the unorganized majority is inevitable. The power of any minority is irresistible.... At the same time, the minority is organized for the very reason that it is a minority.”
 - Main example for the model: organized traditional landed elites versus disperse peasants and citizens.
- Key choice over economic institutions in agriculture;
 - competitive wages versus labor repression.

Motivation: Southern Equilibrium in the United States

- In the antebellum period, the South run by plantation owners, and the system of slavery and labor-intensive cotton production.
- Relatively poor (about 70% of the national level of GDP per-capita).
- The Civil War: major change in political institutions; the abolition of slavery and the enfranchisement of the freed slaves.
- One might have anticipated a dramatic change in economic institutions.
- But what emerged was a labor-intensive, low wage, low education and repressive economy—just like the antebellum South.

Persistence of the Southern Equilibrium

- Why?
- Despite losing the Civil War, traditional landed elites could sustain their political control of the South, particularly after the Reconstruction ended in 1877.
- Blocking of economic reforms that might have undermined their power, such as the distribution of 50 acres and a mule to each freed slave.
- Use of de facto political power to disenfranchise blacks.
- Use of Ku Klux Klan and Jim Crow.
- Result: low-education black labor force, working as cheap labor.

Postcolonial Institutions in Latin America

- Traditional elites able to control politics after the end of colonial era via
 - control of the party system (e.g., Central America, Columbia)
 - violence and paramilitaries (e.g., Colombia)
- Outcome:
 - colonial labor practices such as the [encomienda](#), the [mita](#), and slavery vanish,
 - but only to be replaced by other methods of ensuring cheap labor in agriculture.

Model: Environment

- Mass 1 of citizens and M traditional landed elites, each owning L/M units of land.
 - Below results with finite number of citizens.
- All factors of production supplied inelastically.
- All agents infinitely-lived indiscreet time with discount factor β .
- Two economic institutions: competitive markets, rent per unit of land R^c and labor oppression, rent per unit of land $R^r > R^c$.

Model: Political Power

- Traditional elites can invest in de facto power and will do so since there is a finite number of them.
- Elite i invests $\theta_t^i \geq 0$ in the group's de facto power:

$$P_t^E = \phi \sum_{i \in \mathcal{E}} \theta_t^i. \quad (14)$$

- Political power of the citizens:

$$P_t^C = \omega_t + \eta I(s_t = D), \quad (15)$$

where $I(s_t = D)$ is an indicator function for $s_t = D$.

- ω_t is a random variable drawn independently and identically over time from a given distribution $F(\cdot)$.
- When $P_t^E \geq P_t^C$, $\pi_t = 0$ and the elite have more political power and make the key decisions; **economic institutions today**, τ_t , and **political regime tomorrow**, $s_{t+1} = D$ or $s_{t+1} = N$.

Timing of Events

- At each date t , society starts with a state variable $s_t \in \{D, N\}$. Given this, the following sequence of events take place:
 1. Each elite i simultaneously chooses how much to spend to acquire de facto political power for their group, $\theta_t^i \geq 0$, and P_t^E is determined according to (14).
 2. The random variable ω_t is drawn from the distribution F , and P_t^C is determined according to (15).
 3. If $P_t^E \geq P_t^C$ (i.e., $\pi_t = 0$), a representative elite agent chooses (τ_t, s_{t+1}) , and if $P_t^E < P_t^C$ (i.e., $\pi_t = 1$), a representative citizen chooses (τ_t, s_{t+1}) .
 4. Given τ_t , transactions in the land and labor market take place, R_t and w_t are paid to elites and workers respectively, and consumption takes place.
 5. The following date, $t + 1$, starts with state s_{t+1} .

Model: Equilibrium Concepts

- Let us focus on Markov Perfect Equilibria (MPE), so that no punishment strategies within the elite.
- Also let's start with symmetric MPE.
- Later look at non-symmetric MPE and subgame perfect equilibria.

Model: Value Functions

- Consider nondemocracy and suppose that all other elite agents, except i , have chosen $\theta(N)$ and agent i chooses θ^i .
- Then, the elite will have political power with probability

$$p(\theta^i, \theta(N) | N) = F(\phi((M-1)\theta(N) + \theta^i)). \quad (16)$$

- The net present discounted value of agent i is

$$V(N) = \max_{\theta^i \geq 0} \left\{ -\theta^i + p(\theta^i, \theta(N) | N) \left(\frac{R^r L}{M} + \beta V(N) \right) + (1 - p(\theta^i, \theta(N) | N)) \left(\frac{R^c L}{M} + \beta V(D) \right) \right\}, (17)$$

Model: Value Functions in Democracy

- Similarly in democracy,

$$p(\theta^i, \theta(D) | D) = F(\phi((M-1)\theta(D) + \theta^i) - \eta), \quad (18)$$

$$V(D) = \max_{\theta^i \geq 0} \left\{ -\theta^i + p(\theta^i, \theta(D) | D) \left(\frac{R^r L}{M} + \beta V(N) \right) + (1 - p(\theta^i, \theta(D) | D)) \left(\frac{R^c L}{M} + \beta V(D) \right) \right\} \quad (19)$$

Equilibrium Conditions

- Suppose we have an interior equilibrium.
- Then the first-order conditions of the above value functions are

$$\phi f(\phi M \theta(N)) \left(\frac{\Delta RL}{M} + \beta V(N) - \beta V(D) \right) = 1, \quad (20)$$

$$\phi f(\phi M \theta(D) - \eta) \left(\frac{\Delta RL}{M} + \beta V(N) - \beta V(D) \right) = 1. \quad (21)$$

- These two equations imply:

$$\theta(D) = \theta(N) + \frac{\eta}{\phi M}. \quad (22)$$

and

$$p(D) \equiv p(\theta(D), \theta(D) | D) = p(\theta(N), \theta(N) | N) \equiv p(N), \quad (23)$$

Simplifying Assumptions

- Let us assume the following regularity and boundary conditions (for a unique and interior equilibrium):

Assumption F is defined over $(\underline{\omega}, \infty)$ for some $\underline{\omega} < 0$, is everywhere strictly increasing and twice continuously differentiable (so that its density f and the derivative of the density, f' , exist everywhere). Moreover, $f(\omega)$ is single peaked (in the sense that there exists ω^* such that $f'(\omega) > 0$ for all $\omega < \omega^*$ and $f'(\omega) < 0$ for all $\omega > \omega^*$) and satisfies $\lim_{\omega \rightarrow \infty} f(\omega) = 0$.

- and

Assumption

$$\min \left\{ \phi f(0) \frac{\Delta RL}{M}, \phi f(-\eta) \frac{\Delta RL}{M} \right\} > 1.$$

Model: Main Result

Proposition 4 (*Invariance*) There exists a unique symmetric MPE. This equilibrium involves $p(D) = p(N) \in (0, 1)$, so that the probability distribution over economic institutions is non-degenerate and independent of whether the society is democratic or nondemocratic.

- Even if de jure power changes, overall power does not change.
- The equilibrium distribution of economic institutions invariant to political institutions—[invariance](#).
- Intuition:
 - technology of de facto power the same for the elite in democracy and nondemocracy;
 - marginal cost of contribution must equal the marginal benefit for each agent, which equalizes probabilities of different economic institutions in the two regimes.

Model: Main Result—Extension

- Does it matter that there is a continuum of citizens?
- Suppose that there are $K < \infty$ citizens and $M < \infty$ elites.

Proposition 5 (*Extended Invariance*) Supposed that there are $K < \infty$ citizens and $M \ll K$ elites. Then there exists a unique symmetric MPE that is identical to that in Proposition 4.

- Intuition: first-order conditions for investing in lobbying can only hold for one of the two groups, and they will do so for the group that has “fewer” members.

Model: Comparative Statics

Proposition 6 (*Comparative Statics*)

1. Economic rents:

$$\frac{\partial \theta^* (N)}{\partial \Delta R} > 0, \quad \frac{\partial \theta^* (D)}{\partial \Delta R} > 0 \quad \text{and} \quad \frac{\partial p^*}{\partial \Delta R} > 0.$$

2. Discount factor:

$$\frac{\partial \theta^* (N)}{\partial \beta} > 0, \quad \frac{\partial \theta^* (D)}{\partial \beta} > 0 \quad \text{and} \quad \frac{\partial p^*}{\partial \beta} > 0.$$

3. Number (cohesion) of the elite:

$$\frac{\partial \theta^* (N)}{\partial M} < 0, \quad \frac{\partial \theta^* (D)}{\partial M} < 0, \quad \text{and} \quad \frac{\partial p^*}{\partial M} < 0.$$

4. Democratic advantage of the citizens:

$$\frac{\partial \theta^* (N)}{\partial \eta} > 0, \quad \frac{\partial \theta^* (D)}{\partial \eta} > 0, \quad \text{and} \quad \frac{\partial p^*}{\partial \eta} > 0.$$

Democracy As an Absorbing State

Proposition 7 Suppose there exists $\bar{\theta}(N) > 0$ such that

$$\phi f(\phi M \bar{\theta}(N)) \left(\frac{\Delta RL/M - \beta \bar{\theta}(N)}{1 - \beta F(\phi M \bar{\theta}(N))} \right) = 1, \quad (24)$$

and that

$$\eta > -\underline{\omega} \quad (25)$$

Then in the baseline model, there exists a symmetric MPE in which $p(N) \in (0, 1)$ and $p(D) = 0$.

- Therefore, an equilibrium with permanent democracy. But, the equilibrium characterized above might still exist.
- Finally, the above boundary condition can be relaxed to:

Assumption A There exists $\bar{\theta}(N) > 0$ satisfying (24), and

$$\phi f(-\eta) \left(\frac{\Delta RL/M - \beta \bar{\theta}(N)}{1 - \beta F(\phi M \bar{\theta}(N))} \right) > 1.$$

Model: Non-Symmetric MPE and SPE

- Same results without symmetry:

Proposition 8 (*Non-Symmetric MPE and Invariance*)

Any MPE involves $p(D) = p(N) \in (0, 1)$.

- Define Pareto optimal SPE as those in which no elite can be made better off without some other elite agent be made worse off.

Proposition 9 (*Subgame Perfect Equilibrium and*

Invariance) There exists $\bar{\beta} \in [0, 1)$ such that that for all $\beta \geq \bar{\beta} \in [0, 1)$, the symmetric Pareto optimal SPE induces equilibrium probabilities of labor repressive institutions $p(D) = p(N) \in (0, 1)$. Moreover, as $\beta \rightarrow 1$, any Pareto optimal SPE involves $p(D) = p(N) \in (0, 1)$.

Institutional Persistence and Change

- Above model: invariance, but democracy as likely to follow democracy as to follow nondemocracy.
- Let us now generalize the above model to get a richer form of persistence.
- In particular, so far probability of different economic institutions and different future political institutions independent of current political institutions.
- Two alternative models:
 - Limits on the de facto political power of the elite
 - Sluggish economic institutions

Limits on the De Facto Power of the Elite

- Suppose that there are limits on the de facto political power of the elite in democracy. In particular ϕ replaced by $\phi_D \in (0, \phi)$ in democracy.

- Then:

Proposition 10 (*Limits on De Facto Power*) Any symmetric MPE of the modified model with limits on the elite's de facto power in democracy leads to a Markov regime switching structure where the society fluctuates between democracy with associated competitive economic institutions ($\tau = 1$) and nondemocracy with associated labor repressive economic institutions ($\tau = 0$), with switching probabilities $p(N) \in (0, 1)$ and $1 - p(D) \in (0, 1)$ where $p(D) < p(N)$.

Comparative Statics

- Now we have:

Proposition 11 (*Comparative Statics for the Model with Limits on De Facto Power*) The following comparative static results hold:

1. Economic rents:

$$\frac{\partial \theta^*(N)}{\partial \Delta R} > 0, \quad \frac{\partial \theta^*(D)}{\partial \Delta R} > 0, \quad \frac{\partial p^*(N)}{\partial \Delta R} > 0 \quad \text{and} \quad \frac{\partial p^*(D)}{\partial \Delta R} > 0.$$

2. Discount factor:

$$\frac{\partial \theta^*(N)}{\partial \beta} > 0, \quad \frac{\partial \theta^*(D)}{\partial \beta} > 0, \quad \frac{\partial p^*(N)}{\partial \beta} > 0 \quad \text{and} \quad \frac{\partial p^*(D)}{\partial \beta} > 0.$$

3. Number (cohesion) of elites:

$$\frac{\partial \theta^*(N)}{\partial M} < 0, \quad \frac{\partial \theta^*(D)}{\partial M} < 0, \quad \frac{\partial p^*(N)}{\partial M} < 0 \quad \text{and} \quad \frac{\partial p^*(D)}{\partial M} < 0.$$

- Weaker than before because of the regularity conditions.

Durable Institutions and Captured Democracy

- All the models until now, perfect correlation between economic and political institutions.
- In practice, political institutions change, while economic institutions persist.
- Assume that influencing economic institutions easier than changing political institutions (natural given the **durability** of the institutions).

Captured Democracy: Modified Environment

- Let us model durable political institutions as follows:
- When $P_t^C + \xi > P_t^E \geq P_t^C$, where $\xi > 0$, the elite can choose economic institutions but cannot change the political system.
- If $P_t^E \geq P_t^C + \xi$, the elite can choose both economic institutions and the future political system.
- Symmetrically when $P_t^E + \xi > P_t^C \geq P_t^E$, the citizens have political power, and they can choose economic institutions, but cannot change the political system.
- Denote the probabilities of regime change towards nondemocracy by $\hat{p}(N)$ and $\hat{p}(D)$, and the probabilities of labor repressing economic institutions by $p(N)$ and $p(D)$.

Captured Democracy: Assumptions

- Let us also strengthen the assumption on the distribution of ω .

Assumption F is defined over $(\underline{\omega}, \infty)$ for some $\underline{\omega} < 0$, is everywhere strictly increasing and twice continuously differentiable (so that its density f and the derivative of the density, f' , exist everywhere), and moreover we have $f'(\omega) < 0$ for all ω and $\lim_{\omega \rightarrow \infty} f(\omega) = 0$.

- Also, modify preferences so that citizens derive direct utility from democracy, so they are happy to choose democracy even if their income is lower under democratic political institutions.

Captured Democracy: Main Result

Proposition 12 (*Captured Democracy*) The modified model with durable political institutions leads to a Markov-switching process for political change, with $1 > \hat{p}(N) > \hat{p}(D) > 0$. Moreover, democracy is captured in the sense that $0 < p(N) < p(D) < 1$, i.e., democracy will survive but choose economic institutions in line with the elite's interests with even a higher probability than does nondemocracy.

- Striking result: economic institutions **even worse** under democracy than nondemocracy.
- Intuition: elites more willing to invest in their de facto political power in democracy because of the added benefit of potential switch to nondemocracy.
 - This indirect effect strong enough that $p(N) < p(D)$.

Ending Persistence: Effective Reform

- The model suggests that very significant or simultaneous reforms necessary to end dysfunctional persistence.
- Examples:
 - Reform in formal institutions, switching from nondemocracy to democracy, but at the same time limiting the exercise of de facto political power by the elite.
 - Simultaneous reform in politics and economic institutions that are irreversible or hard to reverse, so that the economic rents the elite will gain by reversing the reforms are lower.
- Example of successful radical reform: Glorious Revolution of 1688 in England; simultaneous change in the distribution of de jure and de facto political power.

Summary

- Towards our most general framework for thinking about coexistence of institutional change and persistence.
- De jure power and constitutions are not everything.
- We need to take de facto political power seriously.
- Interaction of de jure and de facto political power useful in thinking about persistence of institutions in the US South, in Central America, Colombia, Liberia.

Conclusions and Questions for the Future

- Framework for analysis.
- But much more work needs to be done. Many questions to be answered.
- Will Iraq or much of Africa become democratic?
- What can be done in order to encourage political and economic reform that will be conducive to economic growth?
- Detailed analysis of how different institutions result inherent social conflicts in society necessary.