

The Political Economy of Development: PPHA 42310

Lecture 6

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The Architecture of Democracy

- In the last lectures I talked about some of the most interesting theoretical work on dictatorship and some important empirical papers on the causes of democracy and its consequences.
- I tried to emphasize interactions; between the regime and the state for example.
- Aidt and Frank examined the determinants of a specific (if famous democratization in England in 1832). Are all democratizations like that?
- Jones and Olken used a simple standard scale to distinguish between more or less democratic countries.
- Burgess et al. focus on fairly clean instances of democratizations in Kenya. But what sort of democracy did they create in Kenya after?

What Architecture?

- Democracies vary a lot in their 'architecture'. An earlier literature focused on differences between presidential and parliamentary regimes and the form of electoral system (majoritarian versus proportional) (e.g. Persson and Tabellini "Constitutional rules and fiscal policy outcomes" *American Economic Review* 94, 25-46, 2004).
- I very much doubt that these differences are really significant in the context of this course. They are also endogenous in ways that this literature was never really able to deal with.
- Another literature focused on 'checks and balances' and 'constraints on the executive'. This tradition goes back to North, there is some evidence that these are associated with growth (e.g. Acemoglu, Johnson and Robinson 2005 "Rise of Europe" paper in the *AER*)
- Today I want to talk more broadly about what goes on in elections in poor countries which is a very exciting area for research. You might call this a discussion of the 'quality of democracy'. My sense is that this is much more likely to be able to explain big differences in outcomes that the previous focus.

- It's worth pointing out however that one reason why democracy might have a lower impact on development than you might think a priori is because it is often organized in a way which blocks more radical changes in terms of taxation, public good provision etc.
- Michael Albertus and Victor Menaldo have a table which I find interesting about the extent to which democracies function with constitutions written by dictatorships. I don't think they succeed in identifying the causal effect of this on outcomes in a democracy (such as the extent of income redistribution).
- There is also, I would conjecture, an interesting trend here - do modern dictatorships write more progressive constitutions than historical democracies?

TABLE 1 *Cases of Democratic Transition, 1950–2008*

Country	Transition year	Transition circumstances*	Country	Transition year	Transition circumstances*
Albania	1991	–	Liberia	2006	A
Argentina	1958	A	Madagascar	1993	A
Argentina	1963	BA	Malawi	1994	–
Argentina	1973	A	Mali	1992	B
Argentina	1983	B	Mauritania	2007	–
Bangladesh	1986	–	Mexico	2000	BA
Benin	1991	GA	Mongolia	1990	–
Bhutan	2007	–	Myanmar	1980	–
Bolivia	1979	BA	Nepal	1990	–
Bolivia	1982	BA	Nepal	2008	–
Brazil	1985	A	Nicaragua	1984	B
Bulgaria	1990	BGA	Niger	1993	BA
Burundi	1993	A	Niger	2000	BA
Burundi	2005	BA	Nigeria	1979	A
Cent. African Rep.	1993	A	Nigeria	1999	B
Chile	1990	A	Pakistan	1972	BA
Colombia	1958	BGA	Pakistan	1988	A
Comoros	1990	BA	Pakistan	2008	–
Comoros	2004	BA	Panama	1952	BA
Congo	1992	–	Panama	1989	A
Cyprus	1983	A	Paraguay	1989	A
Czechoslovakia	1989	A	Peru	1956	A
Dominican Rep.	1966	B	Peru	1963	BA
Ecuador	1979	A	Peru	1980	A
Ecuador	2002	–	Peru	2001	BA
El Salvador	1984	BA	Philippines	1986	BG
Fiji	1992	A	Poland	1989	GA
Georgia	2004	BA	Portugal	1976	B
Ghana	1969	–	Romania	1990	BGA
Ghana	1979	–	Senegal	2000	A
Ghana	1993	A	Serbia	2000	BA
Greece	1974	B	Sierra Leone	1996	B
Guatemala	1958	BA	Sierra Leone	1998	B
Guatemala	1966	A	Spain	1977	A
Guatemala	1986	A	Sri Lanka	1989	BA
Guinea-Bissau	2000	BA	Sudan	1965	GA
Guinea-Bissau	2004	BA	Sudan	1986	BA
Honduras	1957	B	Taiwan	1996	–
Honduras	1971	A	Thailand	1975	A
Honduras	1982	–	Thailand	1979	A
Hungary	1990	BGA	Thailand	1992	BA
Indonesia	1999	A	Thailand	2008	–
Jamaica	1962	–	Turkey	1961	B
Kenya	1998	A	Turkey	1983	A
Korea, South	1980	A	Uganda	1980	B
Korea, South	1988	GA	Uruguay	1985	–
Kyrgyzstan	2005	A	Venezuela	1959	BGA

Note: Includes all cases of democratic transition from 1950–2008 as coded by Cheibub, Gandhi, and Vreeland (2009). Data on revolutions as coded by Goldstone (1998) end in 1998. Data on constitutions as coded by Elkins et al. (2010) end in 2006.

*B: Revolution coded by Banks in year prior to transition. G: Revolution coded by Goldstone in year prior to transition. A: Autocratic constitution adopted prior to democratic transition.

Types of Pathologies

- I'm going to talk about a series of papers which emphasize the impact on democracy of
 - electoral violence (in Colombia)
 - family and kinship networks (in the Philippines) (coming next time)
 - our evolved psychology or perhaps social norms (in Paraguay)
- Then I'm going to back up and ask: if things like checks and balances are as good as people in political economy say (for accountability, public good provision..) then why is it that people frequently vote to abolish them?

- Though many countries, like Colombia, are counted as democracies according to standard criteria (though they only get 7 on the Polity index), a great deal of violence and coercion goes on at election time.
- All sorts of people instigate and orchestrate this but with Rafael Santos-Villagran, Daron and I studied a massive instance of this in the early 2000s where paramilitary groups attempted, and succeeded, to fix elections nationwide.



“What I said is that 35% of the Congress was elected in areas where there were states of the Self-Defense groups, in those states we were the ones collecting taxes, we delivered justice, and we had the military and territorial control of the region and all the people who wanted to go into politics had to come and deal with the political representatives we had there.”

- Salvatore Mancuso

Table 1: Top 20 Senators By Vote Share in Paramilitary Areas

Senator		Third Parties (1)	Reelection (2)	Justice and Peace Law (3)	Status (4)	% Votes In Paramilitary Zones (5)
MAURICIO	PIMIENTO BARRERA	yes	yes	yes	Arrested (Guilty)	68.30
DIEB NICOLAS	MALOOF CUSE	yes	yes	yes	Arrested (Guilty)	56.93
ALVARO	ARAUJO CASTRO	yes		yes	Arrested	54.78
JUAN CARLOS	MARTINEZ SINISTERRA	yes	yes		Arrested	51.22
SALOMON DE JESUS	SAADE ABDALA	no	yes		Investigated	41.40
CARLOS ARTURO	CLAVIJO VARGAS	yes			Arrested	39.33
JUAN	GOMEZ MARTINEZ	yes	yes			34.96
ISABEL	CELIS YAÑEZ	no				33.96
PIEDAD	CORDOBA	no	no	no		33.20
GERMAN	HERNANDEZ AGUILERA	no	yes	yes		31.46
FLOR MODESTA	GNECCO ARREGOCES	yes	yes	yes		31.27
RUBEN DARIO	QUINTERO VILLADA	yes			Arrested	30.03
BERNARDO ALEJANDRO	GUERRA HOYOS	no		no		29.48
HUGO	SERRANO GOMEZ	no	no			29.21
WILLIAM ALFONSO	MONTES MEDINA	yes	yes	yes	Arrested (Not Guilty)	28.48
LUIS GUILLERMO	VELEZ TRUJILLO	no	yes	yes		28.44
CONSUELO	DE MUSTAFA	no	yes			28.22
JOSE RENAN	TRUJILLO GARCIA	no	yes	yes		26.80
VICTOR RENAN	BARCO LOPEZ	no	yes	yes	Investigated	26.11
GUILLERMO	GAVIRIA ZAPATA	no	no	yes	Investigated	25.07

Notes: Senators that obtained the twenty highest shares of votes in municipalities with high paramilitary presence. High paramilitary presence is measured by a dummy that takes the value of one if the municipality had a total number of attacks by the paramilitaries per 1.000 inhabitants above the 75th percentile in the 1997-2001 period. A Yes indicates that the senator belongs to a third party in the election of 2002 (column (1)), voted yes to approve reelection (column (2)) or yes to reintroduce Sedition and Reduction of Sentences articles in the Justice and Peace Law (column (3)). The status of the senator (column (4)) is that on May 21 of 2009 and is taken from Indepaz <http://www.indepaz.org.co> (for reelected senators) and from the news. A blank space in columns (2) or (3) means that the senator did not vote on the measure.

The Model

- We consider a two-period model of political competition between two parties.
- Party A is initially (at $t = 0$) in power and at $t = 1$, it competes in an election against party B .
- The country consists of a large equal-sized number, N , of regions, with each region inhabited by a large number of individuals. We denote the collection of these regions by \mathcal{N} .
- The party that wins the majority of the votes over all regions wins the election at the time $t = 1$.
- Regions differ in terms of their policy and ideological preferences and, in addition, some regions are under paramilitary control.
- We assume as in standard Downsian models that parties can make commitments to their policies, but their ideological stance is fixed and captures dimensions of policies to which they cannot make commitments.

Electoral Competition without Paramilitaries

- Initially ignore the regions that are under paramilitary control.
- The utility of individual i in region $j \in \mathcal{N}$ (i.e. $j = 1, \dots, N$) when party $g \in \{A, B\}$ is in power is given by

$$U_{ij} \left(q, \tilde{\theta}^g \right) = u_j \left(q \right) - Y \left(\tilde{\theta}_j - \tilde{\theta}^g \right) + \tilde{\varepsilon}_{ij}^g,$$

where $q \in Q \subset \mathbb{R}^K$ is a vector of policies, u_j denotes the utility of individuals in region j , $\tilde{\theta}_j$ is the ideological bliss point of the individuals in region $j \in \mathcal{N}$, so that $Y \left(\tilde{\theta}_j - \tilde{\theta}^g \right)$ is a penalty term for the ideological distance of the party in power and the individual.

- Finally, $\tilde{\varepsilon}_{ij}^g$ is an individual-specific utility term where

$$\tilde{\varepsilon}_{ij}^A - \tilde{\varepsilon}_{ij}^B = \zeta + \varepsilon_{ij},$$

where ζ is a common valance term and ε_{ij} is an iid term.

- ζ and each ε_{ij} have uniform distributions over $\left[-\frac{1}{2\phi}, \frac{1}{2\phi} \right]$.

Electoral Equilibrium

- Standard arguments: probability of winning for Party A:

$$P^A(q^A, q^B | \theta) = \frac{1}{2} + \frac{\phi}{N} \sum_{j=1}^N [u_j(q^A) - u_j(q^B) + \theta_j]$$

where $\theta_j \equiv Y(\tilde{\theta}_j - \tilde{\theta}^A) - Y(\tilde{\theta}_j - \tilde{\theta}^B)$.

- In the election at time $t = 1$, the two parties' problems are

$$\max_{q \in Q} P^A(q, q^B | \theta) R^A, \quad (1)$$

$$\max_{q \in Q} [1 - P^A(q^A, q | \theta)] R^B, \quad (2)$$

where R^A and R^B are rents from holding office.

- An *electoral equilibrium* at time $t = 1$ is a tuple (q^A, q^B) that solves problems (1) and (2) simultaneously (given the ideological biases θ).

Proposition 1

- Strict concavity of each u_j immediately implies that $q^A = q^B = q^*$.
- Therefore, party A will win the election at time $t = 1$ with probability

$$P^A(q^*, q^* | \theta) = \frac{1}{2} + \frac{\phi}{N} \sum_{j=1}^N \theta_j. \quad (3)$$

Proposition

Without paramilitaries, there exists a unique equilibrium in the electoral competition at $t = 1$ where $q^A = q^B = q^$. If q^* is interior, it satisfies $\sum_{j \in \mathcal{N}} \nabla u_j(q^*) = 0$. Party A wins the election with probability given by (3).*

- 1 Without paramilitary presence, national policies are chosen to cater to the preferences of all voters in all regions.
- 2 Average ideological bias across all regions determines the probability of reelection for party A (which is currently in power).

Elections under Passive Paramilitaries

- A subset of the regions, denoted by \mathcal{Z} are under paramilitary control.
- Denote the total number of these regions by Z .
- In paramilitary-controlled areas voting is not free but influenced by the implicit or explicit pressure of the paramilitaries.
- With *passive paramilitaries*, we take the behavior of the paramilitaries, and of citizens in paramilitary-controlled areas, as given.

Winning Probability under Passive Paramilitaries

- In each region $j \in \mathcal{Z}$, a fraction \tilde{m}_j of the voters will vote for party A regardless of policies.
- Denote the complement of the set \mathcal{Z} by $\mathcal{J} = \mathcal{N} \setminus \mathcal{Z}$ and the total number of regions in this (non-paramilitary-controlled) set by J where $J = N - Z$. Define $m_j \equiv \tilde{m}_j - 1/2$.
- Then with an identical reasoning to that in the previous subsection, the probability that party A will win the election at time $t = 1$ is

$$\begin{aligned}
 & P^A \left(q^A, q^B \mid \theta, \mathbf{m} \right) \\
 &= \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} \left[u_j \left(q^A \right) - u_j \left(q^B \right) + \theta_j \right] + \frac{1}{J} \sum_{j \in \mathcal{Z}} m_j,
 \end{aligned}$$

where \mathbf{m} denotes the vector of m_j 's (together with information on which j 's are in the set \mathcal{Z}).

Proposition 2

Proposition

With passive paramilitaries, there exists a unique equilibrium in the electoral competition at $t = 1$ where $q^A = q^B = q^$. If q^* is interior, it satisfies $\sum_{j \in \mathcal{J}} \nabla u_j(q^*) = 0$. Party A wins the election with probability*

$$P^A(q^*, q^* | \theta, \mathbf{m}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} \theta_j + \frac{1}{J} \sum_{j \in \mathcal{Z}} m_j.$$

- Both parties target their policies to the voters in the non-paramilitary areas \implies public goods and other amenities will be reduced in the paramilitary-controlled areas beyond the direct effect of our paramilitary presence.
- Electoral outcomes will now be dependent on the influence of the paramilitaries on voting behavior. If $\sum_{j \in \mathcal{Z}} m_j > 0$, then the probability that party A will win the election is greater.

The State and the Paramilitaries

- Taking the electoral equilibrium at time $t = 1$, now consider the decisions of the government (party A) at time $t = 0$ and study the decision of the incumbent to eliminate the paramilitaries.
- Suppose that at time $t = 0$, the objective of the governing party is

$$\sum_{j \in \mathcal{R}} \gamma_j + P^A(q, q^B | \theta) R^A, \quad (4)$$

where $\mathcal{R} \subset \mathcal{Z}$ is a subset of the areas previously controlled by the paramilitary that are “reconquered” and γ_j is the net benefit of reconquering area $j \in \mathcal{R}$.

- The objective of party A also includes the probability that it will remain in power. If some area $j \in \mathcal{Z}$ is reconquered, then in the subsequent electoral equilibrium at time $t = 1$, party A will obtain a fraction $1/2 + \phi\theta_j$ of the votes from this region as opposed to receiving $\tilde{m}_j = m_j + 1/2$ of the votes had this place remained under paramilitary control.

Proposition 3

- A *subgame perfect equilibrium* of this game is defined as an electoral equilibrium at date $t = 1$ together with decisions by party A at date $t = 0$ that maximizes its utility taking the date $t = 1$ equilibrium as given.

Proposition

Among areas under paramilitary control (in the set \mathcal{Z}), Party A will reconquer

$$\text{all } j \text{ such that } \gamma_j - (m_j - \phi\theta_j) \frac{R^A}{J} > 0$$

and will not reconquer

$$\text{any } j \text{ such that } \gamma_j - (m_j - \phi\theta_j) \frac{R^A}{J} < 0.$$

Interpreting Proposition 3

- The willingness of the state to reconquer areas controlled by the paramilitaries is affected not only by the real costs and benefits of doing so, but also by the implications for electoral outcomes.
- If paramilitary-controlled areas have $m_j > \phi\theta_j$, then party A will be reluctant to reconquer these areas.
- The areas that are most valuable in the hands of the paramilitaries are those that have both low θ_j and high m_j ; that is, areas that would have otherwise voted for party B , but paramilitaries can force citizens to vote in favor of party A .
- A government that does not require electoral support would reconquer all areas with $\gamma_j > 0$.

Electoral Competition under Active Paramilitaries

- *Active paramilitaries*: change their support according to policies.
- Suppose that, as with the citizens, the preferences of the paramilitaries controlling region $j \in \mathcal{Z}$ is given by

$$W_j(q, \theta^g) = w_j(q) - \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^g) + \tilde{\varepsilon}_j^g,$$

where \hat{Y} also increasing in $|\tilde{\theta}_j - \tilde{\theta}^g|$;

- $\tilde{\theta}_j$: policy preference of the group of paramilitaries controlling region j .
- Define

$$\hat{\theta}_j \equiv \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^A) - \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^B)$$

as the ideological leanings of the paramilitaries in region j in favor of party A .

- Suppose that $\tilde{\varepsilon}_j^A - \tilde{\varepsilon}_j^B$ has a uniform distribution over $\left[-\frac{1}{2\hat{\phi}}, \frac{1}{2\hat{\phi}}\right]$.

The Probability of Winning with Coerced Voters

- Assume that paramilitaries can force all voters in their sphere of influence to vote for whichever party they prefer.
- Then the probability that party A will win the election becomes

$$P^A(q^A, q^B | \hat{\theta}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} [u_j(q^A) - u_j(q^B) + \theta_j] \\ + \frac{\hat{\phi}}{J} \sum_{j \in \mathcal{Z}} [w_j(q^A) - w_j(q^B) + \hat{\theta}_j],$$

where now $\hat{\theta}$ denotes the vector of all ideological preferences, including those of the paramilitaries.

- **Result:** electoral competition will lead to the same policy choice for both parties.

Proposition 4

Proposition

With active paramilitaries, there exists a unique equilibrium at $t = 1$ where $q^A = q^B = q^$. Party A wins the election with probability*

$$P^A(q^*, q^* | \hat{\theta}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} \theta_j + \frac{\hat{\phi}}{J} \sum_{j \in \mathcal{Z}} \hat{\theta}_j.$$

At time $t = 0$, among areas under paramilitary control (in the set \mathcal{Z}),

Party A will reconquer all j such that $\gamma_j - (\hat{\phi}\hat{\theta}_j - \phi\theta_j) \frac{R^A}{J} > 0$,

and will not reconquer any j such that $\gamma_j - (\hat{\phi}\hat{\theta}_j - \phi\theta_j) \frac{R^A}{J} < 0$.

Interpreting Proposition 4

- When paramilitaries are active the two parties change their policies in order to “appease” the paramilitaries.
- Two features determine how slanted towards the paramilitaries policies are:
 - 1 The size of the paramilitary-controlled areas (the greater is z the more influential are the paramilitaries in shaping equilibrium policy).
 - 2 The relative responsiveness of the paramilitaries to policy concessions (the greater is $\hat{\phi}$ relative to ϕ , the more responsive are policies to paramilitary preferences relative to citizen preferences).
- Because electoral competition makes both parties cater to the wishes of the paramilitaries their ideological preferences still play a central role in whether they force the population to vote for party A or party B .
- Similar results if parties choose their ideologies.

Empirical Predictions of the Model

- We investigate the predictions of the model using Colombian data.
- ① Non-state armed actors (AUC) once they became sufficiently powerful, should start influencing electoral outcomes favoring 'conservative' candidates. In presidential elections supporting President Uribe.
- ② Paramilitaries located in areas that voted for Uribe in great numbers but in past elections tended to vote for more liberal politicians are more likely to persist between the presidential election in 2002 and the later years in our sample.
- ③ There is a policy quid pro quo between President Uribe and the Senators and Congressmen elected from high parameter areas.

Measuring Paramilitary and Guerrilla Presence

- We use two types of data on paramilitary presence and several measures:
 - 1 The sum of *Paramilitary Attacks* between 1997 and 2005 in municipality m per 10,000 inhabitants where the population measure is the average population between 1993 and 2005.
 - 2 A dummy that takes the value of 1 if municipality m has a value of *Paramilitary Attacks* above the 75th percentile.
 - 3 The sum of displaced people that reported being displaced from municipality m by the paramilitaries between 1997 and 2006 per 10,000 inhabitants. The population measure is the average population between 1993 and 2005, and similarly constructed dummy.
 - 4 Dummy combining information from Attacks and Displaced.
 - 5 Principal component of two measures.
- Identical measures for guerrilla.

Other Data

- We classify parties into 'third,' 'traditional' (Liberals or Conservatives) and 'Socialist' (the 'Democratic Pole' alliance) and compute vote shares for senate and congress elections.
- We measure electoral concentration by the vote share of the most popular list in municipality m .
- Roll call votes were extracted from the *Gacetas del Senado*.
- Other covariates from CEDE database at the University of the Andes in Bogotá.

Basic Econometric Model

- We estimate a panel data model of the following form:

$$y_{m,t} = d_t + \delta_m + \alpha_t \cdot P_m + \beta_t \cdot G_m + \mathbf{X}'_{m,t} \cdot \boldsymbol{\pi} + \varepsilon_{m,t}, \quad (5)$$

where $y_{m,t}$ is the outcome variable in municipality m at time t , the d_t denote time effects, the δ_m are municipality fixed effects, $\mathbf{X}_{m,t}$ is a vector of covariates, and $\varepsilon_{m,t}$ is a disturbance term.

- P_m is paramilitary presence and G_m guerilla presence.
- The term $\alpha_t \cdot P_m$ estimates a potentially differential growth effect for every time period (relative to the baseline).
- Our working hypothesis that the AUC influenced elections after it developed a political strategy implies that we should see $\alpha_t = 0$ for dates before 2002 and $\alpha_t > 0$ after 2002.
- Also allow for time-varying measures $P_{m,t-1}$ and $G_{m,t-1}$.

Paramilitary Presence and Third Party Vote Share

- Table 3 investigates impact of paramilitary presence on third-party vote share in Senate.
- Large quantitative effect: about 10 percentage points gained in third-party vote share relative to a base of 15%.
- Results very robust to different specifications, controls and alternative measures of paramilitary presence.
- Guerrilla presence has no effect on third-party vote share or socialist party vote share.
- Similar results for Congress elections.

Table 3: Paramilitary Presence and Third Parties Share of Votes in the Elections for the Senate

<i>Dependent Variable is Vote Share obtained by Third Parties in the Elections for the Senate</i>									
	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1998-2006	Panel 1998-2006	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Armed Actors Presence is Measured by:								
	Attacks			Attacks Dummy			Time Varying Attacks Dummy		
Paramilitary Presence							-11.35	-10.79	
							(2.67)	(2.75)	
Paramilitary Presence X 1994	4.95	0.79	0.57	4.15	1.91	1.33			
	(1.54)	(1.47)	(1.61)	(1.25)	(1.24)	(1.31)			
Paramilitary Presence X 1998	4.22	0.34	0.41	2.86	0.12	0.29			
	(1.99)	(2.09)	(2.20)	(1.68)	(1.73)	(1.86)			
Paramilitary Presence X 2002	20.97	15.88	15.80	13.71	10.62	10.47	17.81	17.02	
	(3.14)	(3.18)	(3.23)	(1.98)	(1.94)	(2.01)	(2.87)	(3.01)	
Paramilitary Presence X 2006	22.10	10.79	10.29	14.54	8.48	8.31	18.02	17.21	
	(3.19)	(3.03)	(3.04)	(1.99)	(1.66)	(1.73)	(3.01)	(3.15)	
Guerrilla Presence									-1.06
									(1.78)
Guerrilla presence X 1994			0.20			2.49			
			(0.56)			(1.54)			
Guerrilla Presence X 1998			-0.06			-0.72			
			(0.66)			(1.89)			
Guerrilla Presence X 2002			0.07			0.66			2.00
			(0.70)			(1.99)			(2.16)
Guerrilla Presence X 2006			0.45			0.70			2.79
			(0.61)			(1.80)			(2.32)
Controls Interacted with Year Dummies	No	Yes	Yes	No	Yes	Yes	No	No	No
Observations	5379	4915	4915	5379	4915	4915	3286	3286	

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of third parties lists (not Conservative, nor Liberal, nor from the left) in the elections for the Senate. We report results with three different measures of paramilitary presence: **i.** The sum of paramilitary attacks per 1,000 inhabitants in municipality m during the 1997-2005 period in columns (1), (2) and (3); **ii.** A time invariant dummy that takes the value of one if the sum of paramilitary attacks per 1,000 inhabitants in municipality m during the 1997-2005 period is above the 75th percentile in columns (4), (5) and (6); **iii.** A time varying attacks dummy that takes the value of one in municipality m and time t if time varying measure of attacks over population is above the 75th percentile (calculated over all municipalities and years) in columns (7) and (8). When guerrilla presence is included, in columns (3), (6) and (8), it is measured as the corresponding paramilitary presence measure. Columns (2), (3), (5) and (6) include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

Paramilitary Presence and President Vote Share

- Table 4 looks at the vote share of the winning presidential candidate.
- Significant effect in 2002 (2.5-3 percentage points).
- Much larger in 2006 (7-11 percentage points).
- Plausible: President Uribe became much more popular with paramilitaries during his first term, particularly, because of his policies concerning demobilization and the Justice and Peace Law.
 - Jairo Angarita, former leader of the AUC's Sinú and San Jorge blocs and Salvatore Mancuso's deputy, in September 2005:

"[proud to be working for the] reelection of the best President we have ever had".

Tables 4: Paramilitary Presence and Winning Presidential Candidate Share of Votes

<i>Dependent Variable is Winning Presidential Candidate Vote Share</i>								
	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Armed Actors Presence is Measured by:							
	Attacks			Attacks Dummy			Time Varying Attacks Dummy	
Paramilitary Presence							-6.92 (3.59)	-6.91 (3.65)
Paramilitary Presence X 2002	10.16 (1.99)	5.31 (1.53)	7.43 (1.59)	3.11 (1.45)	1.26 (1.11)	2.14 (1.13)	8.87 (3.58)	10.49 (3.65)
Paramilitary Presence X 2006	21.60 (2.41)	13.67 (1.71)	12.32 (1.64)	11.45 (1.67)	8.17 (1.21)	6.66 (1.20)	12.53 (3.77)	12.23 (3.86)
Guerrilla Presence								-3.54 (1.61)
Guerrilla Presence X 2002			-1.73 (0.34)			-3.71 (1.14)		-5.53 (1.73)
Guerrilla Presence X 2006			1.22 (0.41)			6.47 (1.45)		1.70 (2.21)
Controls Interacted with Year Dummies	No	Yes	Yes	No	Yes	Yes	No	No
Observations	3297	2951	2951	3297	2951	2951	3297	3297

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of the winning presidential candidate. We report results with three different measures of paramilitary presence: **i.** The sum of paramilitary attacks per 1,000 inhabitants in municipality m during the 1997-2005 period in columns (1), (2) and (3); **ii.** A time invariant dummy that takes the value of one if the sum of paramilitary attacks per 1,000 inhabitants in municipality m during the 1997-2005 period is above the 75th percentile in columns (4), (5) and (6); **iii.** A time varying attacks dummy that takes the value of one in municipality m and time t if time varying measure of attacks over population is above the 75th percentile (calculated over all municipalities and years) in columns (7) and (8). When guerrilla presence is included, in columns (3), (6) and (8), it is measured as the corresponding paramilitary presence measure. Columns (2), (3), (5) and (6) include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

Paramilitary Persistence—Econometric Model

- Baseline model

$$P_{m,t>2002} = \alpha P_{m,t<2002} + \beta v_{m,2002}^u \quad (7)$$

$$+ \gamma v_{m,2002}^u \cdot v_{m,1998}^p + \delta \cdot v_{m,1998}^p + \mathbf{X}'_m \cdot \boldsymbol{\chi} + \varepsilon_m$$

where $v_{m,2002}^u$ is the vote share of President Uribe in municipality m in 2002 and $v_{m,1998}^p$ is the vote share of Pastrana in 1998.

- Our model predicts that $\beta > 0$, a greater share of votes for Uribe would lead to greater paramilitary presence after 2002, and $\gamma < 0$, so that the higher was Pastrana's vote share in 1998, the more confident Uribe would be of winning a lot of votes, and the less he would need the support of the paramilitaries.
- We also use a more direct way of addressing this hypothesis by using the variable $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$, which captures the vote advantage of Uribe in 2002 relative to Pastrana's vote in 1998.
- Again, large quantitative effects.

Table 6: Persistence of Paramilitaries and Vote Share for Alvaro Uribe

<i>Dependent Variable is Paramilitary Presence in 2004-2005</i>	Cross-Section (1)	Cross-Section (2)	Cross-Section (3)	Cross-Section (4)	Cross-Section (5)	Cross-Section (6)	Cross-Section (7)	Cross-Section (8)	Cross-Section (9)	Cross-Section (10)	Cross-Section (11)	Cross-Section (12)	
<i>Sample is Restricted to Municipalities with Paramilitary Presence in 2000-2001</i>													
Armed Actors Presence is Measured by:													
	Attacks				Log Attacks			Displaced			Log Displaced		Principal Component Attacks and Displaced
Max{0, Uribe-Pastrana vote share}				0.25 (0.15)		0.56 (0.30)		10.16 (2.95)		0.39 (0.13)		2.57 (0.83)	
Uribe Vote Share	0.14 (0.08)	0.15 (0.09)	0.15 (0.08)		0.11 (0.27)		4.09 (1.98)		0.32 (0.10)		1.17 (0.49)		
Pastrana Vote Share	-0.22 (0.08)	-0.09 (0.10)	-0.09 (0.11)		0.07 (0.41)		-0.85 (2.81)		0.31 (0.17)		-1.30 (0.66)		
Uribe Vote Share X Pastrana Vote Share	-0.63 (0.33)	-0.41 (0.33)	-0.42 (0.36)		-0.46 (0.22)		-12.68 (5.60)		-0.10 (0.09)		-3.65 (1.46)		
Paramilitary Presence in 2000-2001	0.42 (0.17)	0.42 (0.18)	0.42 (0.19)	0.40 (0.18)	0.35 (0.12)	0.34 (0.12)	0.04 (0.02)	0.03 (0.02)	0.22 (0.06)	0.21 (0.06)	0.37 (0.15)	0.35 (0.14)	
Guerrilla Presence in 2000-2001			-0.00 (0.02)	0.00 (0.02)	0.00 (0.10)	0.01 (0.10)	0.05 (0.02)	0.05 (0.02)	0.21 (0.06)	0.21 (0.06)	-0.08 (0.09)	-0.08 (0.09)	
Controls	No	Yes	Yes	Yes									
Observations	299	291	291	291	88	88	616	616	503	503	643	643	
R-squared	0.25	0.27	0.27	0.27	0.64	0.61	0.19	0.20	0.43	0.41	0.21	0.22	

Notes: Robust standard errors in parentheses. Cross Section regressions restricting the sample to municipalities with paramilitary presence in 2000-2001. Dependent variable is paramilitary presence in 2004-2005. We report results with three measures of paramilitary presence: **i.** Attacks by the paramilitaries in columns (1) to (6) is the sum of paramilitary attacks per 1,000 inhabitants in municipality m during the 2004-2005 period (dependent variable) and during the 2000-2001 period (paramilitary presence before 2002 variable); **ii.** Displaced by the paramilitaries in columns (7) to (10) is the sum of people displaced by the paramilitary per 1,000 inhabitants in municipality m during the 2004-2005 period (dependent variable) and during the 2000-2001 period (paramilitary presence before 2002 variable); **iii.** The principal component of attacks by the paramilitary and displaced by the paramilitary in columns (11) and (12). Guerrilla presence before 2002 is measured as paramilitary presence before 2002. In columns (5), (6), (9) and (10) all variables are in logs. Uribe and Pastrana vote shares are the vote shares of Álvaro Uribe in 2002 and Andrés Pastrana in 1998 (first round), respectively. These two variables are measured in a scale from zero to one for ease of exposition (to report fewer decimals) and they are also demeaned to interpret the derivatives at the mean of the interactions in all columns except in columns (4), (8) and (12). In these columns, the variable of interest is the maximum between zero and the difference between Álvaro Uribe's vote share in 2002 and Andrés Pastrana's vote share in 1998 in municipality m . All specifications include the same controls as in Table 3: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

Table 7 : Reelection and Senators Elected from High Paramilitary Presence Areas

<i>Dependent Variable is the Fraction of Senators in List l that Voted Yes for Changing the Constitution to Allow the Reelection of the President</i>	Cross	Cross	Cross	Cross	Cross	Cross	Cross
	Section	Section	Section	Section	Section	Section	Section
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Armed Presence Measured By:						
	Attacks			Displaced			
Dummy Conservative	0.48 (0.11)			0.36 (0.12)			0.33 (0.12)
Dummy Left	-0.52 (0.11)			-0.48 (0.11)			-0.50 (0.12)
Dummy Third Parties	0.31 (0.13)			0.30 (0.12)			0.28 (0.13)
<i>Share of Votes From:</i>							
Paramilitary Areas		1.26 (0.41)	1.79 (0.55)	1.61 (0.60)	1.02 (0.41)	1.28 (0.44)	0.63 (0.36)
Guerrilla Areas		-0.92 (0.73)	-1.87 (0.82)	-1.39 (0.80)	-0.88 (0.79)	-1.05 (0.78)	-0.21 (0.65)
Right Oriented Areas			1.81 (0.36)	1.11 (0.34)		1.55 (0.34)	0.88 (0.32)
Left Oriented Areas			-0.17 (0.24)	-0.02 (0.21)		-0.27 (0.23)	-0.16 (0.21)
Observations	76	76	76	76	76	76	76
R-squared	0.38	0.07	0.21	0.45	0.04	0.17	0.39

Notes: Robust standard errors in parentheses. OLS regressions linking votes in the Senate to votes obtained in areas with presence of non-state armed actors. Dependent variable is the proportion of senators in list *l* that voted yes (since only three lists have more than one candidate in the senate in the legislature of 2002-2006 and since candidates in the same list voted in the same manner, the dependent variable is a dummy). The vote is for changing the constitution to allow the president to be elected for a second consecutive term. To measure the share of votes of list *l* from a given area we first create dummies for places with high presence of paramilitary, guerrilla, right-oriented preferences or left-oriented preferences (municipality *m* is a high presence area if the value of the corresponding variable in municipality *m* is above the 75th percentile; paramilitary and guerrilla presence measures are the sum of attacks per 1,000 inhabitant in the 1997-2001 period, just before the elections of 2002). Then, with each of these dummies, we compute the share of votes in national elections obtained by list *l* in areas where the dummy takes the value of one. Columns (2) to (4) use attacks to define the presence dummies, columns (5) to (7) use displaced.

Conclusions

- We developed a new approach to state formation focusing on the creation of the monopoly of violence. This is the sine qua non of an effective state. The approach emphasizes the political disincentives of eliminating non-state armed actors. We built a model of this in a democracy and tested some of its' implications in Colombia.
- The data broadly consistent with the empirical predictions of the model.
- Different interpretations—maybe people in paramilitary areas are naturally pro-law and order (but fixed effects, controls for 'baseline conservatism', and other evidence).
- External validity...
 - But Waziristan in Pakistan; Kurdish areas in Iraq; the Mafia in the south of Italy; Southern United States after the Hayes-Tilden agreement of 1877.

Reciprocity and Vote Buying

- A very original paper is the one by Finan and Schechter. They started with a great puzzle: why is it that vote buying and clientelism seem to survive even the introduction of the secret ballot in elections?
- Vote buying seems to be a contract type relationship, I pay you money and you vote the way I ask, but if I cannot observe your voting behavior how do I know?
- (Recall my brief discussion of my “Land and Power” paper - a big difference between what they found in Paraguay and what we found in Chile may be the very different natures of the states in those countries and the greater ability of the Chilean state to enforce rules, or maybe it is actually about the different nature of Chilean society - could those two things be related to each other?)

The Hypothesis

- Inspired by the behavioral economics literature and psychology Finan and Schechter argue that vote buying can be thought of as reciprocal gift exchange: I give you money and you give me your vote in return but once I give you money you feel obliged to return the gift.
- But we know from experimental evidence that how 'reciprocal' people are varies at the micro level, hence more reciprocal people would be more likely to go through with the deal and if they could be identified it would be more likely that they would receive offers of money for their votes.
- Key here is that vote buying takes place via intermediaries (this seems very general to me) who know the community well and can, possibly, identify the extent to which individuals are reciprocators
- The paper investigates empirically the claim that intermediaries are well informed about people's preferences and likely behavior.

- A one standard deviation increase in your reciprocitiness increases the probability your vote will be bought by 44%.
- This is not confounded by network characteristics.
- They used several sources of data. A question about vote buying from a 2006 household survey which asked people whether political parties had offered them “money, food, payment of utility bills, medicines, and or other goods”.
- To measure reciprocitiness they used the trust game. A person has an endowment of 8,000 and can send 0, 2000, 4000, 6000 or all of it. Whatever he sends in tripled and then the second person decides how much to send back. They got people to say how much they would return in different scenarios (the strategy method) and subtracted how much they would return if they got 6,000 to partial out altruism (why not just use the dictator game?).

TABLE II
MIDDLEMEN'S KNOWLEDGE OF VILLAGERS' CHARACTERISTICS^a

	Obs.	Mean	Standard Deviation	10th Percentile	90th Percentile	<i>p</i> -Value
						<i>H_a</i> : mean > random selection
A. Share of villagers for whom the middleman correctly predicted						
Spouse's name	38	0.838	0.137	0.600	1.000	NA
Still alive	38	0.996	0.015	1.000	1.000	0.00
Has moved from the village	38	0.988	0.020	0.960	1.000	0.00
Voted in 2006 municipal elections	38	0.711	0.113	0.556	0.821	0.00
Identified with the Colorado party	38	0.771	0.109	0.643	0.889	0.00
Identified with the Liberal party	38	0.830	0.104	0.706	0.944	0.00
Identified strongly with the Colorado party	38	0.736	0.106	0.565	0.840	0.00
Identified strongly with the Liberal party	38	0.826	0.120	0.679	0.964	0.07
Sent half or more in the dictator game	38	0.666	0.177	0.455	0.913	0.01
Would always punish a person if they put them in a difficult situation	38	0.737	0.161	0.536	0.923	0.02
Trusted less than half the people in their village	37	0.740	0.112	0.655	0.828	0.00
						<i>H₀</i> : mean = 0
B. Average correlation between middleman's reported and villagers' actual						
Years of schooling	38	0.734	0.168	0.456	0.913	0.00
Amount of land owned (ha)	38	0.633	0.214	0.237	0.863	0.00
Amount sent in a dictator game	35	0.084	0.281	-0.287	0.472	0.08

TABLE III
VOTE-BUYING AND RECIPROCITY

	Dependent Variable ^a					
	Individual Offered Something in Exchange for Vote				Individual Offered Something in Exchange for Vote (as Reported by the Middlemen)	Demanded
	(1)	(2)	(3)	(4)	(5)	(6)
Reciprocity	1.259 [0.512]**	1.318 [0.568]**	1.207 [0.640]*	1.294 [0.579]**	0.382 [0.223]*	-0.027 [0.358]
Observations	139	139	103	139	314	309
Mean of dependent variable	0.23	0.23	0.23	0.23	0.47	0.30
Main controls	N	Y	Y	Y	Y	Y
Controls for other personal traits	N	N	Y	N	N	N
Controls for social network	N	N	N	Y	N	N

Endogenous Checks and Balances

- Apart from the nature of the state or democracy, another institutional feature which people since at least the 18th century (Montesquieu, James Madison) has been emphasizing is the extent of checks and balances.
- The preponderance of the political economy literature emphasizes that 'checks and balances' are a good thing, for example they help citizens stop politicians extracting rents (e.g. the model of Persson, Roland and Tabellini (1997) "Separation of Powers and Political Accountability," Quarterly Journal of Economics, 112, 4, 1163-1202.
- But the curious thing is that if checks and balances are so good for voters why do people so often vote to get rid of them? Very common in 'populist' experiences in Latin America.
- Acemoglu, Torvik and I tried to pose this question and develop a simple model of it

The Basic Model

- Static economy populated by a continuum of agents, with measure normalized to 1
- A proportion $1 - \delta > 1/2$ of the population are “poor” with pre-tax income $y^p > 0$, while the remaining δ are “rich” and have pre-tax income $y^r > y^p$
- Utility is simply equal to consumption
- Average income in the society is defined as

$$\bar{y} \equiv (1 - \delta) y^p + \delta y^r,$$

- The share of total income accruing to rich is defined as

$$y^r \equiv \frac{\theta}{\delta} \bar{y},$$

Thus θ is a measure of inequality: greater θ corresponds to greater inequality

The Policy Vector

- The government determines taxes and income redistribution.
- There is a proportional tax rate denoted by $\tau \in [0, 1]$, and income redistribution to all citizens, $T \geq 0$.
- In addition, tax revenues also finance rents for politicians. We assume that there is a maximum tax rate $\bar{\tau} < 1$, so that $\tau \in [0, \bar{\tau}]$.
- The government consists of a president, denoted by P , and a legislature. For now, we simplify the analysis and assume that the legislature consists of a single agent, denoted L .
- We use $R^P \geq 0$ to denote the rents captured by the president and $R^L \geq 0$ for the rents captured by the legislator.
- The government budget constraint then requires

$$T + R^L + R^P \leq \tau \bar{y}.$$

Policy can be represented by a vector $\{\tau, T, R^L, R^P\}$.

The Constitution

- 1 The constitution may specify **checks and balances**, denoted by $\gamma = 1$, in which case the president and the legislator will jointly set policies. In particular, we model constitution with checks and balances in a simple manner: we assume that the president makes an offer of a policy vector with tax rate, redistribution and rents $\{\tau, T, R^L, R^P\}$. The legislature can only change the allocation of rents $\{R^L, R^P\}$.
- 2 The constitution may specify no checks and balances, $\gamma = 0$, in which case all decision-making power is delegated to the president. The president then determines the entire policy vector $\{\tau, T, R^L, R^P\}$.

Politicians

- Politicians belong to one of the two income groups. Politicians care about the utility of their income group and about their own rents and bribes
- A politician j from income group $i \in \{p, r\}$ has utility given by

$$V^{j,i} = \alpha v(R^j + b^j) + (1 - \alpha) U^i,$$

where $\alpha \in (0, 1)$, $b^j \geq 0$ denotes the bribes for politician j , and v is a strictly increasing concave differentiable utility of political rents and bribes

- $V^{l,i}$ is the utility of a politician of income group $i \in \{p, r\}$ holding office $l \in \{L, P\}$

Candidates

- For both the office of the presidency and the legislature, there are two candidates, each randomly elected from one of the income groups. Thus there will be one rich and one poor candidate for presidency, and one rich and one poor candidate for the legislature
- Our assumption that $\delta > 1/2$ implies that the poor form the majority and will have an electoral advantage
- We assume that the rich are better organized, and are sometimes able to exert additional influence by bribing (or lobbying) politicians
- This is possible when the rich are able to solve the collective action problem which happens with probability $q \in [0, 1]$
- When the rich are able to solve their collective action problem, we denote this by $\kappa = 1$, with $\kappa = 0$ denoting the converse

Lobbying

- When the rich are able to do so, they can pay a bribe $b^P \geq 0$ to the president and/or $b^L \geq 0$ to the legislature. We assume bribes are paid conditional on the delivery of a certain policy
- A bribe offer to politician j is a vector $\{\hat{b}^j, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\}$ such that if the politician implements $\{\hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\}$, he receives \hat{b}^j and otherwise he receives 0
- If the rich pay a total bribe of $B = b^L + b^P$, each rich agent contributes equally, an amount B/δ . Given a policy vector $\{\tau, T, R^L, R^P\}$, the utilities of poor and rich agents are

$$U^P = (1 - \tau)y^P + T$$

and

$$U^r = (1 - \tau)y^r + T - \frac{b^L + b^P}{\delta}$$

Timing of Events

- 1 Referendum on checks and balances. Whichever constitution receives an absolute majority is implemented
- 2 Elections are held simultaneously for president and legislature. Whichever candidate receives an absolute majority is elected
- 3 Becomes common knowledge whether the rich will be able to solve their collective action problem
- 4 If $\kappa = 1$ the rich make bribe offers to the president and the legislator
- 5 If the constitution does not include checks and balances, then the president decides the entire policy vector $\{\tau, T, R^L, R^P\}$. If the constitution includes checks and balances, then the president proposes the vector $\{\tau, T, R^L, R^P\}$. After observing this policy vector, the legislator decides whether to change the allocation of rents $\{R^L, R^P\}$
- 6 Policies are implemented, bribes are paid, and all payoffs are realized

Constitution without Checks and Balances

- Suppose that the referendum has led to a constitution $\gamma = 0$. In this case, all policies are made by the president
- Consider $\kappa = 0$: rich cannot act collectively
- In the policy-making subgame, the president will solve the program

$$\max_{\{\tau, T, R^L, R^P\}} V^{P,P} [\kappa = 0, \gamma = 0] = \alpha v(R^P) + (1 - \alpha) ((1 - \tau)y^P + T)$$

subject to the government budget constraint

- Solution: incomes are taxed at the maximum rate and all the proceeds spent on rents to the president and transfers to the poor.
- The rents to the president $R^P = R^*$ and transfers satisfy

$$v'(R^*) = \frac{1 - \alpha}{\alpha}, T = \bar{\tau}\bar{y} - R^*.$$

The Case with Lobbying

- The rich lobby can make a bribe offer, $\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\}$
- The utility that the president derives from accepting this offer is $V^{P,P}(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P)$
- The president can always obtain $V^{P,P}[\kappa = 0, \gamma = 0]$
- The bribe offer must satisfy the president's participation constraint

$$V^{P,P}(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P) \geq V^{P,P}[\kappa = 0, \gamma = 0].$$

The problem of the rich lobby is

$$\max_{\{\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P\}} U^r(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P) = (1 - \hat{\tau})y^r + \hat{T} - \frac{\hat{b}^P}{\delta},$$

subject to the budget constraint and the participation constraint of the president

- If the solution to this program gives the rich a utility level lower than $U^r[\gamma = 0, \kappa = 0]$, then $\hat{b}^P = 0$

No Gains from Trade

- The rich lobby can never get strictly higher utility by offering a bribe for policy proposal
- At the margin, public income is used as transfers. In turn this implies that if the rich lobby proposed a lower tax rate they would need to offer a bribe greater than what they save in taxes. In turn, the utility (income) of the poor is the same irrespective of if the rich elite offers a bribe or not. Thus $\hat{b}^P = 0$.

Proposition

Suppose $\gamma = 0$. Then the equilibrium policy always has $\tau = \bar{\tau}$, $R^P = R^$, $R^L = 0$, $b^P = 0$, $b^L = 0$, and $T = \bar{\tau}\bar{y} - R^*$. The utility of poor agents is*

$$U^P [\gamma = 0, \kappa = 0] = \frac{(\bar{\tau}(\theta - \delta) + 1 - \theta)\bar{y} - (1 - \delta)R^*}{1 - \delta}$$

Constitution with Checks and Balances

The Legislature

- Suppose now $\gamma = 1$ with checks and balances. In this case the the president sets the tax rate and transfers, and given this the legislator decides rents

When $\kappa = 0$: In the policy-making subgame, the legislator will solve the program

$$\max_{\{R^L, R^P\}} V^{L,P}[\tau, T, \kappa = 0, \gamma = 1] = \alpha v(R^L) + (1 - \alpha) ((1 - \tau)y^P + T)$$

subject to the government budget constraint and the policy vector $\{\tau, T\}$ decided by the president

- This problem has the solution $R^P = 0$ and

$$R^L = \tau \bar{y} - T$$

Constitution with Checks and Balances

The President

- Given this the president sets the tax rate and redistribution to the poor so as to maximize

$$\max_{\{\tau, T\}} V^{P,P}[\kappa = 0, \gamma = 1] = \alpha v(R^P) + (1 - \alpha) ((1 - \tau)y^P + T),$$

subject to $\{R^L, R^P\} \in \arg \max V^{L,P}[\tau, T, \kappa = 0, \gamma = 1]$.

- Inserting $R^P = 0$ we get

$$\begin{aligned}\{\tau, T\} &= \arg \max [\alpha v(0) + (1 - \alpha) ((1 - \tau)y^P + T)] \\ &= \arg \max U^P\end{aligned}$$

- Thus the president sets the policy vector $\{\tau, T\}$ so as to maximize utility of the poor
- The utility of poor agents in this case is given by

$$U^P[\gamma = 1, \kappa = 0] = \frac{(\bar{\tau}(\theta - \delta) + 1 - \theta) \bar{y}}{1 - \delta} > U^P[\gamma = 0, \kappa = 0]$$

The Case with Lobbying

- The rich lobby will make bribe offers $\{\hat{b}^L, \hat{R}^L, \hat{R}^P\}$ and $\{\hat{b}^P, \hat{\tau}, \hat{T}\}$ to the legislator and the president, respectively. For the politicians to accept these bribe offers they must satisfy

$$V^{L,P}(\hat{b}^L, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P) \geq V^{L,P}[\kappa = 0, \gamma = 1],$$

and

$$V^{P,P}(\hat{b}^P, \hat{\tau}, \hat{T}, \hat{R}^L, \hat{R}^P) \geq V^{P,P}[\kappa = 0, \gamma = 1].$$

Consider first bribing of the legislature. Since no politician get rents the rich has nothing to gain by bribing the legislator to change the allocation of rents. Thus $\hat{b}^L = 0$

- Consider next bribing of the president. Since the president gets no rents the marginal utility of bribes is higher than the president's marginal utility of transfers the poor, it will always pay for the rich elite to pay a positive bribe

Problem for the Lobby

The rich lobby then solves the program

$$\begin{aligned} & \max_{\{\hat{b}^P, \hat{\tau}, \hat{T}\}} (1 - \hat{\tau})y^r + \hat{T} - \frac{\hat{b}^P}{\delta} \text{ subject to} \\ & \alpha v(\hat{b}^P) + (1 - \alpha) ((1 - \hat{\tau})y^p + \hat{T}) \geq (1 - \alpha) ((1 - \bar{\tau})y^p + \bar{\tau}\bar{y}) \\ & \hat{\tau} \geq 0, \hat{\tau}\bar{y} \geq \hat{T}. \end{aligned}$$

The solution to this Kuhn-Tucker problem tells us what the optimal bribing proposal for the rich elite looks like

The bribing proposal will always contain direct bribes to the president and may also contain income transfers to the poor

Critical Value of Benevolence

- When $\alpha > \alpha^*$ then $\hat{\tau} = 0$. The utility of poor agents in this case is given by

$$U^P [\gamma = 1, \kappa = 1] = \frac{(1 - \theta) \bar{y}}{1 - \delta}$$

- When $\alpha < \alpha^*$ then $\hat{\tau} > 0$. In this case we have that

$$\hat{\tau} = \bar{\tau} - \frac{v(b^*)}{v'(b^*) (\theta - \delta) \bar{y}} < \bar{\tau}$$

The utility of poor agents in this case is given by

$$U^P [\gamma = 1, \kappa = 1] = \frac{(\bar{\tau}(\theta - \delta) + 1 - \theta) \bar{y} - \frac{v(b^*)}{v'(b^*)}}{1 - \delta}$$

Proposition

Suppose $\gamma = 1$.

Suppose first that $\kappa = 0$ so that there is no bribing. Then $\tau = \bar{\tau}$, $R^P = R^L = 0$, and $T = \bar{\tau}\bar{y}$

Suppose next that $\kappa = 1$ so that there is bribing

If $\alpha > \alpha^*$ then $\tau = 0$, and $R^P = R^L = 0$, $b^P > 0$, $b^L = 0$, $T = 0$

If $\alpha < \alpha^*$ then $\tau = \bar{\tau} - \frac{v(b^*)}{v'(b^*)(\theta - \delta)\bar{y}}$, $R^P = R^L = 0$, $b^P = b^*$, $b^L = 0$,
 $T = \tau\bar{y}$

Interpretation

- Checks and balances limit the possibility that politicians divert public resources to personal rents. Under checks and balances the president knows that he will not receive any rents. In turn, this has the implication that he chooses policy so as to maximize the utility of the poor. Checks and balances discipline politicians
- But the president under checks and balances becomes weak and get no rents. In turn, this makes him cheap to buy, and thus when the rich elite are able to overcome the collective action problem they bribe him into limiting redistribution to the poor

Elections

- We now determine how citizens vote in the presidential election and in the election of the legislature.
- These elections are (in our model) not very interesting: Politicians representing the poor win as there is no incentive to deviate from sincere voting and the poor are in majority
- The referendum on checks and balances is more interesting

The Referendum

- In the referendum on checks and balances the poor voters will be the decisive ones. We then have:

Proposition

Equilibrium checks and balances: (i) When $\alpha > \alpha^$ the constitution will be without checks and balances when and only when*

$$q > \frac{(1 - \delta)R^*}{(\theta - \delta)\bar{\tau}\bar{y}}$$

(ii) When $\alpha < \alpha^$ the constitution will be without checks and balances when and only when*

$$q > \frac{v'(b^*)(1 - \delta)R^*}{v(b^*)}$$

Some Implications

Corollary

When $q = 0$, so that the rich are never able to solve the collective action problem, the constitution will always include checks and balances

- The only reason why poor voters may support a constitution without checks and balances is political corruption

Political Institutions and Comparative Development

- We have been examining two big sets of political institutions, the state and the regime, along with different ideas about how they might vary and what consequences this may have for development.
- There is a lot of variation in the way both states and regimes work. We try to make this variation manageable by projecting into simple bins {Weberian state; Patrimonial state} or {democracy; dictatorship} or within democracy {Presidential; Parliamentary}. This is useful because despite there being heterogeneity within these categories, there are covariances amongst the types of heterogeneity.
- It's an open question what distinctions matter critically. I think there is still a lot of work to do to conceptualize just how states and regimes actually work. Could be, for example, that the nature of society determines the extent of how patrimonial a state is and how democracy works and this is a big omitted variable in thinking about why some countries have effective states and high quality democracies and others don't.