

Ethnic Conflicts and the Informational Dividend of Democracy

J. LAURENT-LUCCHETTI¹ D. ROHNER^{2,3} M. THOENIG^{2,3}

¹ University of Geneva ² University of Lausanne ³ CEPR

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Motivation

- Broad question: Why do we observe democratic transitions ?
- Prevailing narrative: Democracy is an institutional arrangement that solves a class conflict between a rich elite and the rest of the population.
 - Democratic transition entails a **transfer of power** (de jure) from the rich elite to the population and **more redistribution**
 - see for example Meltzer and Richard's (1981), Acemoglu and Robinson (2001, 2006, 2008), Fearon (2011) or Bidner et al. (2015).
 - Considerable explanatory power when political cleavage is between rich & poor (19th century Europe)
- Post-decolonization period:
 - Ethnic rather than class conflicts (Esteban and Ray, 2008)
 - Less than 1/3 of all transitions driven by distributive conflicts between elites and masses (Haggard and Kaufman, 2012).

Our Research Question: What is the logic of democratic transitions when ethnic tensions are more salient than poor/rich divide?

Our contribution I - Applied Theory

Theory of free elections as a means of solving ethnic conflict

1. Ruling/opposition groups negotiate over allocating economic surplus
⇒ Civil conflict caused by bargaining failure under imperfect information on war payoffs (under-estimating opponent's strength).
2. For each group, military & electoral mobilization capacities correlate
⇒ Both rest on non-pecuniary elements that are hardly observable:
Strength of ethnic attachment
3. Free and fair elections reduce information asymmetries
⇒ They restore bargaining efficiency and peace ... but involve a risk of losing power

Democratic transition (R1) is rationally chosen by strong autocrats; (R2) prevents conflicts and (R3) increases the Ruling Group Rent because informational rent of the opposition is reduced.

Our contribution II - New Empirical Regularities

Correlational evidence, country- & ethnic- level panel, post-decolonization

1. **Transition toward majoritarian democracy exacerbates ethnic favoritism**
 - "Coethnics benefit from patronage and public policy decisions when members of their ethnic group control the government"
 - Major source of underdevelopment
2. Democratic transition not necessarily associated with alternation of power
 - Measuring Free and Fair elections \neq Window-Dressing elections (e.g. search for legitimacy) \rightarrow Cheibub et al. (2010) and their "alternation rule".
 - Example: Jerry Rawlings in Ghana in 1993
3. We expect a higher probability of incumbent victory in majoritarian system than in proportional regimes.
4. Civil conflict is more likely in autocracy than in democracy.

Related Literature

- ▶ The imperfect information problem of the autocrat
 - "Dictator Dilemma" (Wintrobe, 1990, 1998, Sartori 2005).
- ▶ Free and fair elections reduce asymmetric information
 - Sartori, 1976; Malesky and Shuller, 2011 or Morgenbesser, 2016.
 - Evidence on Colombia, Vietnam, Mexico, Egypt.
- ▶ War mobilization correlates with political mobilization capacities
 - Herodotus, Condorcet 1785, Simmel 1950, Przeworski, 2009, Chacon, Robinson and Torvik, 2011, etc.
 - Evidence on Ancient Greece, Spanish civil war, Colombia.

Theoretical Setup

Setup I

Continuum of risk-neutral individuals belonging to two "ethnic" groups, $G \in \{A, B\}$, each of unit mass and led by a benevolent leader

Timing: Initially leader of group A in power (Autocrat)

1. **Institutional Change:** A proposes (or not) a majoritarian democracy with free elections. B accepts/declines to participate. Endogenous electoral competition (probabilistic voting model).
2. **Tax:** Ruler $\in \{ \text{Autocrat } A, \text{ Elected Leaders } A/B \}$ sets a take-it-or-leave-it discriminatory tax (inter-group monetary transfers).
3. **War?** If tax is rejected by the Opponent, war is declared unilaterally with endogenous mobilization of troops; victorious group sets the tax.
4. **Production and consumption:** Individuals produce, tax is collected, consumption takes place.

Setup II

- **Individuals action set:** choose candidate A/B (if elections); { fight for her group; not fight } (if war).
- **Technology:** non-fighters produce 1 unit of good; fighters produce $0 \leq 1 - \phi < 1$ unit (time cost).
- **Individuals' utility** comprises real wage and non-economic (psychological) benefits attached to pro-ethnic actions

$$u_i = w_i + \mathbb{I}_{\text{proethnic}} \times \tilde{e}_i$$

Setup III

$$u_i = w_i + \mathbb{I}_{\text{proethnic}} \times \tilde{e}_i$$

- A1 Pro-ethnic Voting and Fighting **both** involve psychological benefits [Identity; compliance to social norms of intra-group cooperation]
- A2 Ethnic attachment is heterogeneously distributed across individuals $\tilde{e}_i \sim \text{unif}(\theta_G, 1 + \theta_G)$ with a group-specific shifter $\theta_G \in \{-\mathcal{E}, +\mathcal{E}\}$
 \Rightarrow Two types of ethnic group (leader): Cohesive/Divided (Strong/Weak)
- A3 θ_A publicly observable (tractability) but θ_B is privately observed.
We denote $\mu \equiv \mathbb{P}_A(\theta_B = +\mathcal{E})$
- Each benevolent leader maximizes aggregate materialistic welfare of her group $W_G = \max \int_{i \in G} w_i di$

The Autocrat's Trade-off: Ballots or Bullets ?

- Peace Pareto-dominates war because of fighting cost: $\phi > 0$

Total Economic Surplus in **Peace**: $1 \times 1 + 1 \times 1 = 2$

Total Economic Surplus in **War**: $2 - \phi \times (\text{army}_A + \text{army}_B)$

\Rightarrow there always exists a transfer that prevents war to happen.

- But the Autocrat may fail to implement such a peace-maintaining transfer due to imperfect information
- By revealing information, political competition can limit bargaining failure and war.

Autocrat's trade-off \Rightarrow **By organizing free-elections the autocrat benefits from more information but takes the risk of losing office.**

Civil Conflict

Stage 3 – Ethnic Mobilization for War

Summary

- We model a voluntary mobilization game where group members fight if the reward is sufficiently high.
- Fighting success is modelled using contest success functions.

Detailed micro-foundations in paper, but punchline is that $W^{G,-G} \equiv \mathbb{E}[W_G | \text{war}, \theta_G, \theta_{-G}]$ is increasing in θ_G and decreasing in θ_{-G} .

- The following ordering of welfare holds

$$W^{-+} < W^{++} < W^{--} < W^{+-}$$

Given my type, I prefer to fight a "-" than a "+" (all $\phi \leq 1$).

Given the other type, I prefer to be a "+" than a "-" (not true for $\phi \approx 1$).

- Our theoretical predictions result from this ordering + Assumption that Peace Pareto-dominates War. No extra parameter restriction required.

Autocracy

Stage 2 – Transfers under Autocracy

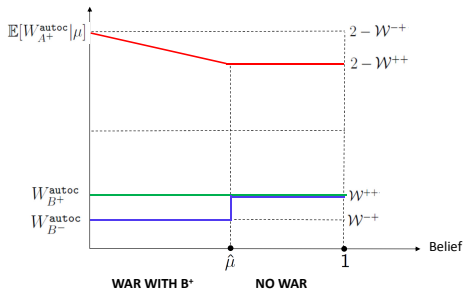
- Case of a strong Autocrat A^+ who sets a tax holding a belief μ on her opponent's type θ_B .
- If Peace is maintained, $1 - \text{tax}$ is the after-tax income of group B ; group A gets the **Ruling Group Rent** $\equiv 1 + \text{tax}$.
- The high type is more costly to buy off:

Tax maintains peace of type B^+ iff $\mathcal{W}^{++} \leq 1 - \text{tax}$

Tax maintains peace of type B^- iff $\mathcal{W}^{-+} \leq 1 - \text{tax}$

\Rightarrow Compare 3 pacification strategies: $1 - \text{tax} \in \{0; \mathcal{W}^{-+}; \mathcal{W}^{++}\}$

Stage 2 – Autocratic Equilibrium



- $\mathcal{W}^{++} - \mathcal{W}^{-+}$ is the informational rent of B^- .
- Perfect information: $\mu \in \{0, 1\} \Rightarrow$ **No War**
- War Zone $\mu \leq \hat{\mu}$

Decreases with the economic war loss and increases with the informational rent.

Democratic Transition

Stage 1 – Institutional Change

Setup

- Autocrat A in power with belief μ on her opponent's type θ_B
- A proposes (or not) a **majoritarian** democracy with free & fair elections

→ A costly state verification technology and a commitment device that prevent any manipulation of the election outcome (e.g. external observers; international sanctions, constitutional safeguards).

→ Small implementation cost C_E , financed by tax.

Roadmap

1. Modeling Political Competition \Rightarrow Due to reverse engineering of vote shares, election reveals θ_A and θ_B .
2. Post-Election Democratic Equilibrium
3. Autocrat's decision to propose elections

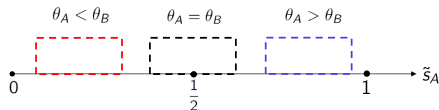
Stage 1 – Institutional Change

Information Revelation

We consider a Probabilistic Voting Model (Persson and Tabellini, 2000) where voters' preferences over candidates correlate with their ethnic attachment \tilde{e}_j .

Parametric restrictions yields

Figure: Distribution of voting shares



⇒ Elections outcome fully reveals θ_A and θ_B

- Under milder parametric restrictions the supports of vote shares overlap and information revelation is partial. In this situation we may observe "fragile democracy", prone to conflict (see extensions).

Stage 1 – Institutional Change

Autocrat Dilemma

- A strong autocrat **always** proposes majoritarian elections for a non-empty range of beliefs where risk of war is sufficiently high and risk of losing office is sufficiently low (as it avoids a conflict).
- A weak autocrat **never** proposes majoritarian elections: Risk of losing office is too high...
- ...however, a weak autocrat prefers proportional rule (where decision power is shared between A & B according to their respective voting shares) over majority rule.

Theoretical Predictions

Ethnic Favoritism – Ruling Group Rent is largest in majoritarian democracies, followed by autocracies and proportional democracies.

- Informational rent is reduced after elections: larger discriminatory tax set by the ruler.
- Under a proportional regime, post-election RGR is mitigated by power sharing.

Office Change – Democratic transition is not necessarily associated with a transition of power.

- A strong autocrat leading a cohesive group can be maintained in power through free and fair elections.

Institution building – We expect a higher probability of incumbent victory in Majoritarian regimes than in Proportional Regimes.

- A^+ selects majoritarian regime; A^- selects proportional;

Violence – We should observe fewer civil conflicts under democracy.

- Baseline setup: No conflict in democracy because elections are perfectly revealing. See extension for a less contrasted result.

Data and Empirical Results

Democracy and Institutions

- ▶ **Democracy**: regime with frequent free and fair multi-party elections (Cheibub et al., 2010). Cover 198 countries, 1946-2008. We also use Polity IV index.
- ▶ **Regime type (majoritarian, proportional...)**: De jure institutional provisions and electoral procedures, from the Institutions and Elections Project (IAEP) dataset (Wig et al.). Covers 163 countries, 1960-2012. Alternative institutional measures from "Democratic Electoral Systems" (DES) dataset.

Democratic and Power Transitions

Democracy and democratic transitions:

- ▶ **Democratic transitions:** first free and fair elections after a period of autocracy, based on Cheibub et al. (2010). "Alternation rule": non-alternation of power in election is coded as democratic if leader resigns peacefully when his term ends. We observe 101 Democratic transitions over the period 1949-2008 (71 countries).
- ▶ **Leader stability:** same leader as the year before (based on effective leader name from Cheibub et al., 2010).

Ethnic Favoritism (RGR) - Measurement

- ▶ **Ethnic Homeland Night Light:** night-lights as proxy of economic activity at a high spatial resolution (NOAA); 7,653 homelands, 140 countries, 1992-2013, De Luca et al. (2018).
- ▶ **Ruling Group Rent:** Country-level measure of horizontal inequalities. Ethnic group location and access to power (Cederman et al., 2015). Cover 113 countries, 1992-2008.

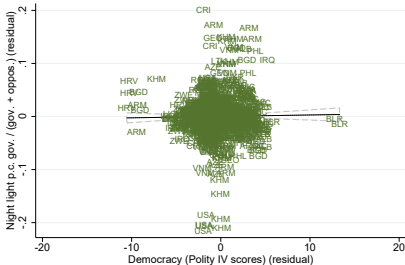
We build RGR as the ratio of the average (per capita) night light of the governing ethnic groups divided by the sum of the average (per capita) night lights of the governing and of the opposition ethnic groups.

$$\text{RGR}_{ct} = \frac{\frac{\sum_{e \in \text{GOV}_{ct}} Y_{et}}{\sum_{e \in \text{GOV}_{ct}} \text{POP}_{et}}}{\frac{\sum_{e \in \text{GOV}_{ct}} Y_{et}}{\sum_{e \in \text{GOV}_{ct}} \text{POP}_{et}} + \frac{\sum_{e \in \text{OPP}_{ct}} Y_{et}}{\sum_{e \in \text{OPP}_{ct}} \text{POP}_{et}}} \quad (1)$$

Ethnic favoritism (RGR) and democracy

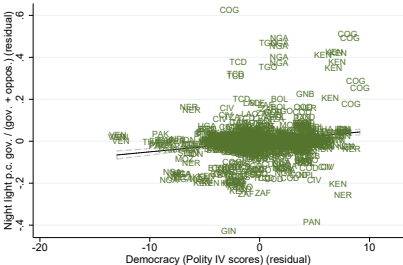
136 countries, 1992-2009, Controls: Ctry FE, year FE, GDP per cap, Population, Trade Openness, Age of Democracy

Low Ethnic Frac.



Sample with below-median ethnic frac. (from Alesina et al.; ethnic frac. < 0.495).
Coefficient = 0.02 (P-value = 0.63), 906 Obs. Confidence intervals are set at 90%.

High Ethnic Frac.



Sample with above-median ethnic frac. (from Alesina et al.; ethnic frac. >= 0.495).
Coefficient = 0.19 (P-value < 0.01), 890 Obs. Confidence intervals are set at 90%.

Ethnic Favoritism (RGR) and Regime Types

Table: Democracy and ethnic favoritism: Country-level

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ruling group rent (RGR)								
Democratic Transition	0.068 (0.041)	0.031 (0.027)	0.004 (0.023)	0.067 (0.040)	0.029 (0.026)	0.003 (0.022)	0.069 (0.042)	0.032 (0.028)	0.004 (0.024)
Democratic Transition × Majoritarian		0.107* (0.060)	0.131** (0.052)		0.106* (0.061)	0.132** (0.055)		0.107* (0.061)	0.130** (0.052)
Trans. demo. last		10 years			8 years			12 years	
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1586	1579	1580	1618	1611	1612	1554	1547	1548
R-squared	0.829	0.835	0.838	0.830	0.835	0.838	0.828	0.834	0.837

Note: Panel with an observation being the country-year, covering 116 countries and the years 1992 to 2009. The democratic transition measure comes from Cheibub et al. (2010) and the electoral system variable (proportional vs majoritarian) comes from IAEP data. All explanatory variables lagged by one year. Country fixed effects and annual time dummies included in all columns. We control for mature democracy in all columns and its interaction with majoritarian democracy in columns 2,3,5,6,8,9. Robust standard errors clustered at the country level (in parenthesis). *—significant at the 10% level, **—significant at the 5% level, ***—significant at the 1% level.

Ethnic Favoritism (RGR) and Regime Types

Table: Democracy and ethnic favoritism: Heterogeneous effects

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	ruling group rent (RGR)					
Sample restrictions:	Low EP	High EP	High EP New leader	High EP Same Leader	High EP Same leader New democ.	High EP Same leader Same ethnic composition
Democratic Transition	0.025 (0.020)	0.023 (0.032)	-0.032 (0.042)	0.023 (0.032)	0.021 (0.036)	0.013 (0.023)
Democratic Transition × Majoritarian	-0.035 (0.026)	0.204** (0.088)	0.070 (0.052)	0.212** (0.085)	0.215** (0.089)	0.233** (0.108)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	751	781	161	573	297	527
R-squared	0.892	0.805	0.878	0.855	0.816	0.865

Note: Panel with an observation being the country-year, covering 116 countries and the years 1992 to 2009. The democratic transition measure comes from Cheibub et al. (2010) and the electoral system variable (proportional vs majoritarian) comes from IAEP data. All explanatory variables lagged by one year. Country fixed effects and annual time dummies included in all columns. We control for mature democracy and its interaction with majoritarian democracy in all columns. In column 1 (resp., 2), the sample is restricted to countries with below-median (resp., above-median) ethnic polarization (EP). In column 3 (resp., 4), the sample is restricted to observations with high EP and with a new leader accessing power (resp., last period's leader remaining in office). In column 5, the sample is restricted to countries that over the sample period had at least one instance of transition to democracy, that have the last period's leader remaining in office and that have above-median ethnic polarization. In column 6, the sample is restricted to countries with above-median ethnic polarization and to observations with the last period's leader remaining in office. It also excludes countries that had a change in the ethnic group composition of government in the year of transition to democracy or in the first year after transition. Robust standard errors clustered at the country level (in parenthesis). *—significant at the 10% level, **—significant at the 5% level, ***—significant at the 1% level.

Robustness

Results are robust to:

- ▶ Alternative night light measures (total and not per capita, overlapping ethnic groups...).
- ▶ Introduction of continent-year fixed effect.
- ▶ Alternative institutional measures ("Democratic Electoral Systems" (DES) dataset).
- ▶ Continent splits: our results are driven by Africa and Asia (high levels of past ethnic conflict and high ethnic fractionalization).

Ethnic Favoritism and Regime Types (disaggregated)

Table: Impact (types of) democracy on ruling group rent (RGR): Analysis at ethnic group level

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:				Nighttime light		
Sample restrictions:				High EP	High EP Same lea.	High EP Same lea. New dem.
Leader × democracy	0.051** (0.024)					
Leader × anocracy	0.088 (0.058)	0.087 (0.062)				
Leader × dictatorship	0.043 (0.079)	0.041 (0.085)				
Leader × demo.PR		0.037 (0.052)	0.037 (0.052)	0.043 (0.082)	0.057 (0.086)	0.092 (0.152)
Leader × demo.majo.		0.071*** (0.022)	0.072*** (0.022)	0.093*** (0.015)	0.052*** (0.014)	0.219* (0.105)
Leader × non-demo.			0.073 (0.058)	0.088 (0.079)	0.082 (0.072)	-0.004 (0.132)
Ethnic group fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	141164	120581	120581	59683	57127	20614
R-squared	0.947	0.951	0.951	0.952	0.955	0.941

Note: Panel with an observation being the ethnic group-year, covering 140 countries and the years 1992 to 2013. Ethnic group and country-year fixed effects included in all columns. In column 4, we restrict the analysis to countries with above-median ethnic polarization. In column 5, this same restriction is implemented, but on top of it we focus on observations for which ethnic leadership is unchanged with respect to the previous year. In column 6, we maintain the two restrictions of column 5, but in addition restrict the sample to contain only countries that have experienced at least one instance of transition to democracy over the period. Robust standard errors clustered at the country level (in parenthesis). * = significant at the 10% level, ** = significant at the 5% level, *** = significant at the 1% level.

Table 4: Democratic and Power Transitions

Focusing on the first free and fair election – 1949 to 2008

Table: Type of democracy and tenure of leader in office – sample of democratic transitions

	(1)	(2)	(3)	(4)
Dependent variable:	Dummy same leader as last year			
Majoritarian democracy	0.210* (0.111)	0.143* (0.076)	2.248 (1.445)	0.254* (0.127)
Data source regime type	IAEP	DES	IAEP	IAEP
Estimator	LPM	LPM	Logit	LPM
Decade fixed effects	Yes	Yes	Yes	Yes
Continent fixed effects	Yes	Yes	Yes	Yes
Control variables	No	No	No	Yes
Observations	65	79	54	56
(Pseudo-)R-squared	0.234	0.236	0.183	0.294

Note: Panel with country-year unit of observation. The sample consists of transitions to democracy in 53 countries, from 1949 to 2008.

Decade fixed effects and continent fixed effects are included in all columns. The controls in column 4 include lagged GDP per capita, lagged population, lagged trade share of GDP, and lagged age of democracy. LPM estimations in columns 1, 2, and 4, and logit in column 3. For coding the variable of majoritarian democracy, columns 1, 3, and 4 use data from the Institutions and Elections Project (IAEP) of Wig et al (2015), while column 2 uses data from the Democratic Electoral Systems (DES) dataset of Bormann and Golder (2013). Robust standard errors in parenthesis. *—significant at the 10% level, **—significant at the 5% level, ***—significant at the 1% level.

Table 5: Democratic and Power Transitions

All country-years with democracy – 1947 to 2008

Dependent var.:	(1)	(2)	(3)	(4)
		Dummy same leader as last year		
Majorit. demo.	-0.060 (0.058)	-0.137 (0.090)	0.126** (0.057)	0.043 (0.068)
Transition to demo.	-0.559*** (0.060)	-0.160 (0.098)	-0.623*** (0.044)	-0.278*** (0.080)
Majorit. * Transit.	0.230** (0.102)	0.305* (0.158)	0.132 (0.089)	0.357*** (0.124)
Data source Majo.		IAEP		DES
Sample	All demo. (Cheibub)	All demo. & elec. yrs	All demo. (Cheibub)	All demo. & elec. yrs
Time dummies	Yes	Yes	Yes	Yes
Country fixed eff.	Yes	Yes	Yes	Yes
Observations	2647	661	3646	748
R-squared	0.204	0.381	0.220	0.373

Note: Panel with an observation being the country-year, covering 132 countries and the years 1947-2008. LPM regressions in all columns. Country fixed effects, annual time dummies as well as lagged years in office of the leader included in all columns. The additional controls included in columns 2, 4, 6 and 8 include lagged GDP per capita, lagged Population, lagged Trade share of GDP and lagged Age of democracy. For coding the variable of majoritarian democracy, columns 1-4 use data from the "Institutions and Elections Project" (IAEP) of Wig et al. (2015), while columns 5-8 use data from the "Democratic Electoral Systems" (DES) dataset of Bormann and Golder (2013). Robust standard errors clustered at the country level. t-stat in parenthesis. * = significant at the 10% level, ** = significant at the 5% level, *** = significant at the 1% level.

Robustness

Results are robust to:

- ▶ Logit estimation.
- ▶ Continent-year fixed effects.
- ▶ Country-specific time trends.

Conclusion

Conclusion

- ▶ Simple theory of **democracy as an institutional mechanism to reduce asymmetric information.**
- ▶ Can account for several puzzles in ethnically divided countries (democratic transitions also happening without transition of power; democracy not reducing inequality; inequality not causing conflict) ...
- ▶ ... and generates some novel predictions on conflict outcomes and institution building.