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Ballot design and intraparty fragmentation. Electronic Voting in Brazil

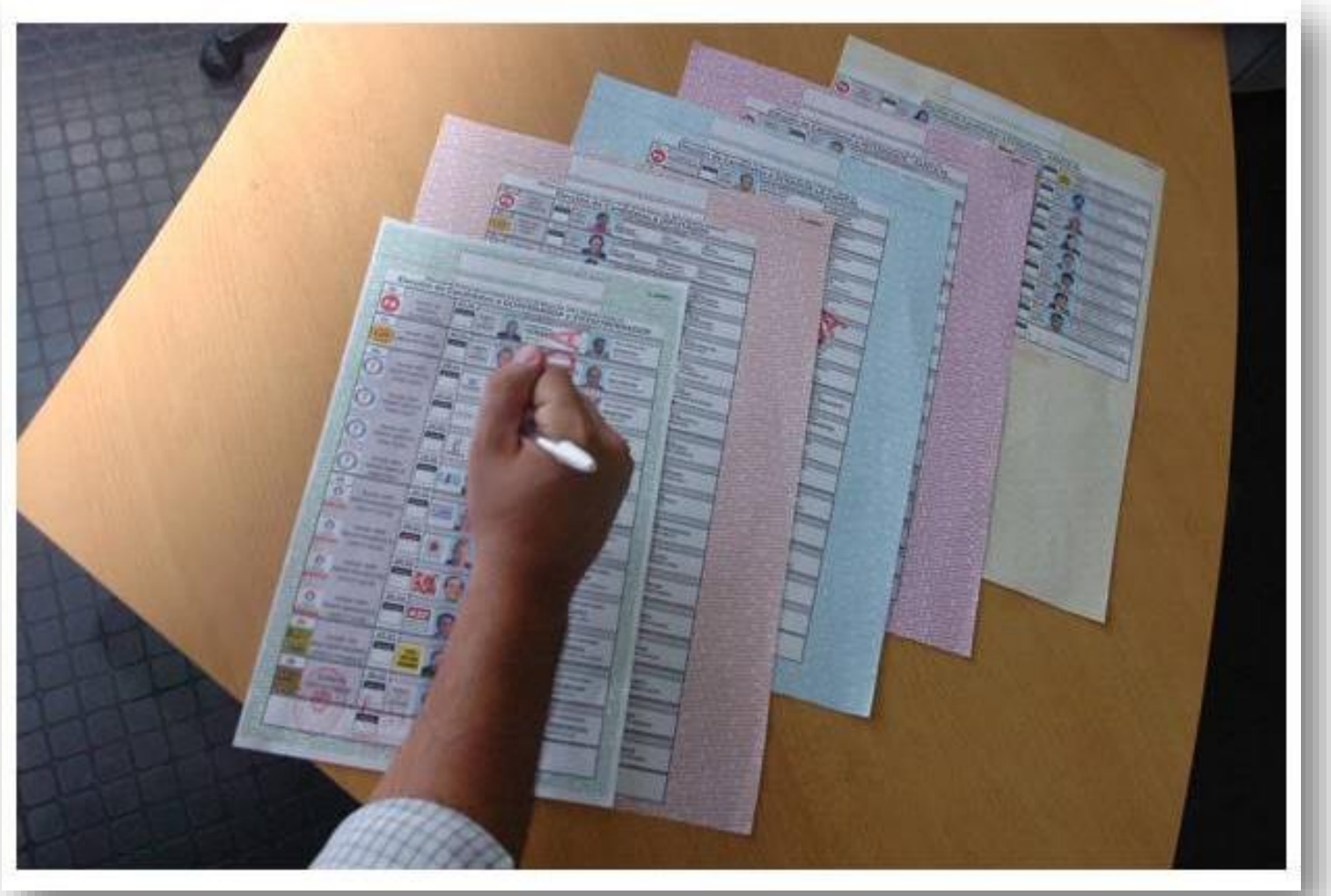
EITM • University of Houston • June 16-27, 2014

Introduction

- “… electoral laws have many more components than the system itself. Rules on ballot access, political advertising, or the financing of parties, all affect, or at least we think they may affect, the performance of parties in elections” (Bowler 2006:590)

Argentina 2011

Argentina 2011



Argentina 2011

Argentina 2011

Colombia 2014

VOTO PARA SENADO DE LA REPÚBLICA CIRCUNSCRIPCIÓN NACIONAL

PARTE A

❶ Marque aquí la casilla correspondiente para votar por el Partido, Movimiento Político o Grupo Significativo de Ciudadanos

❷ Después de marcar el Partido, Movimiento Político o Grupo Significativo de Ciudadanos, marque aquí el número del candidato de su preferencia para listas con voto preferente (Verificar cuadernillo)

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100								

Respetado Elector:
Para que su voto sea válido, diligencie una sola **PARTE A** o **B** de esta tarjeta electoral.

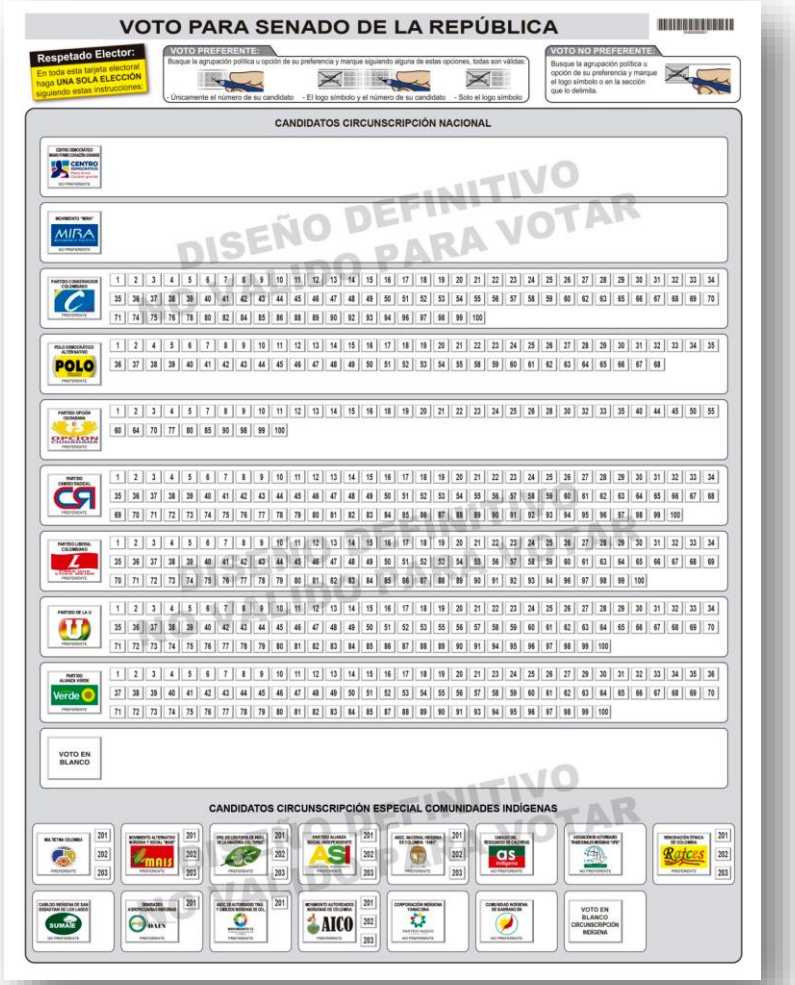
VOTO EXCLUSIVO PARA CIRCUNSCRIPCIÓN ESPECIAL COMUNIDADES INDÍGENAS SENADO DE LA REPÚBLICA

PARTE B

❶ Marque aquí la casilla correspondiente para votar por el Partido, Movimiento Político o Grupo Significativo Circunscripción Especial Comunidades Indígenas

❷ Después de marcar el Partido, Movimiento Político o Grupo Significativo, marque aquí el número del candidato de su preferencia para listas con voto preferente (Verificar cuadernillo)

201	202



VOTO PARA SENADO DE LA REPÚBLICA

Respetado Elector:
En toda esta tarjeta electoral haga UNA SOLA ELECCIÓN siguiendo estas instrucciones:

VOTO PREFERENTE:
Busque la agrupación política u opción de su preferencia y marque siguiendo alguna de estas opciones, todas son válidas:
- Únicamente el número de su candidato - El logo símbolo y el número de su candidato - Solo el logo símbolo

VOTO NO PREFERENTE:
Busque la agrupación política u opción de su preferencia y marque el logo símbolo o en la sección que lo delimita.

CANDIDATOS CIRCUNSCRIPCIÓN NACIONAL

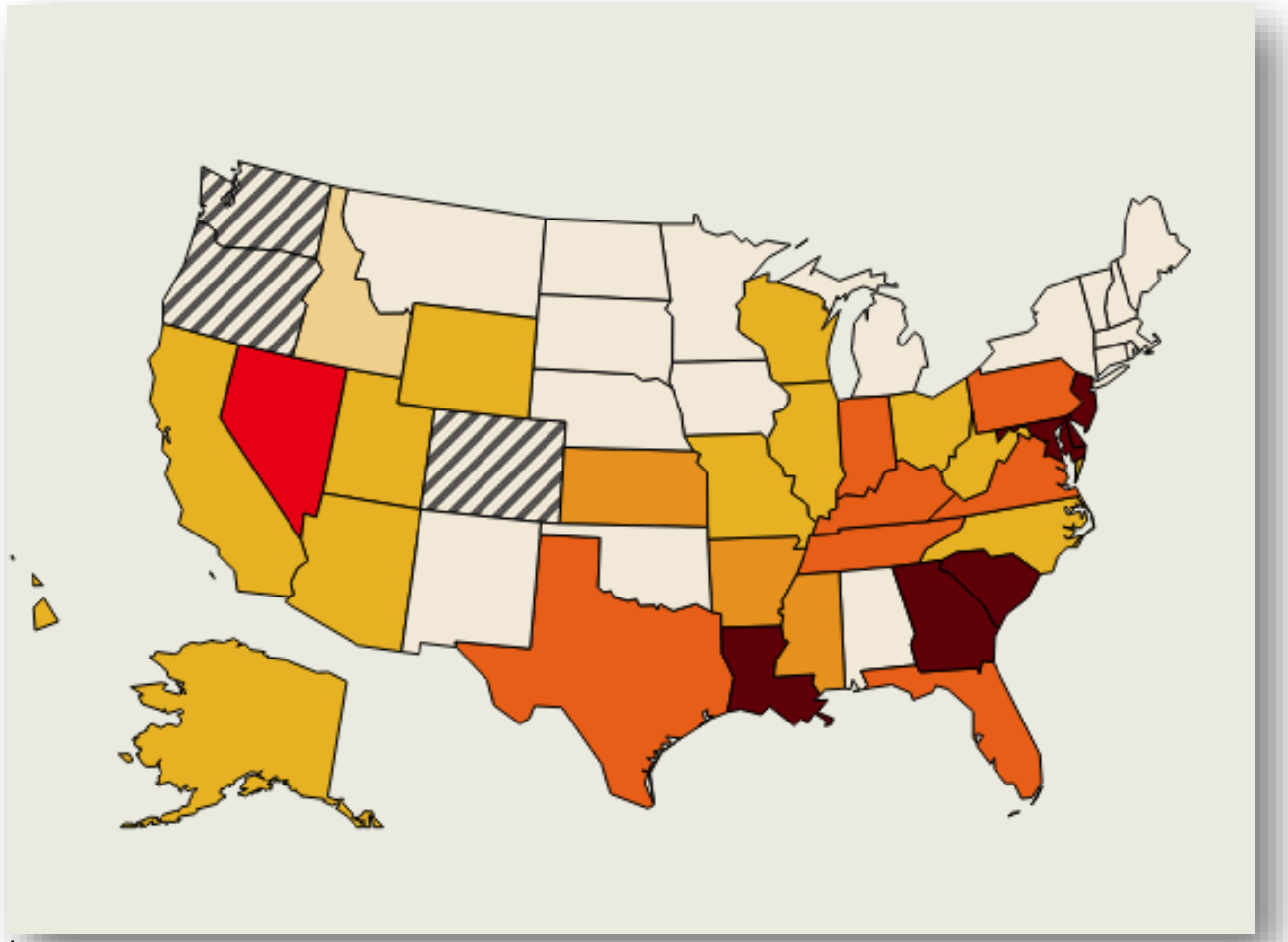
VOTO EN BLANCO

CANDIDATOS CIRCUNSCRIPCIÓN ESPECIAL COMUNIDADES INDÍGENAS

VOTO EN BLANCO CIRCUNSCRIPCIÓN INDÍGENA

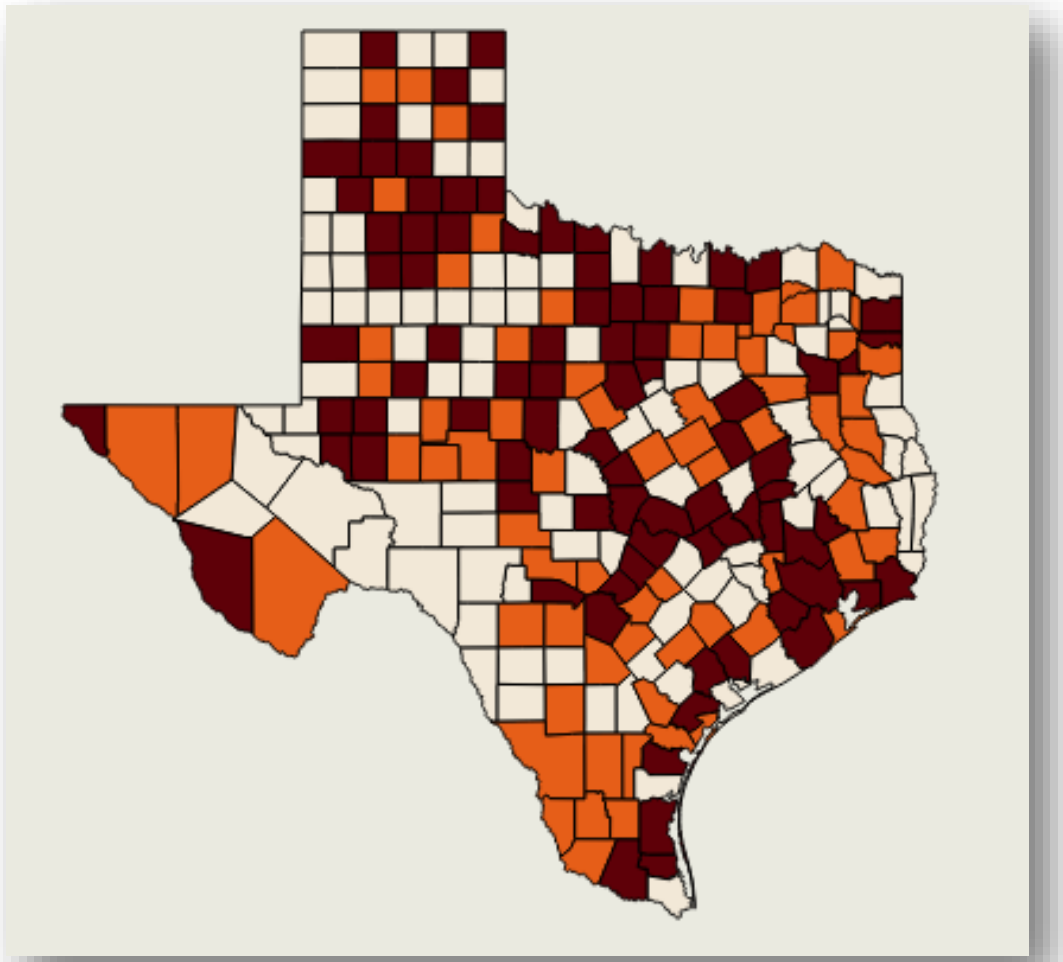
DISEÑO DEFINITIVO NO VALIDO PARA VOTAR

US 2012



Source: Verified Voting

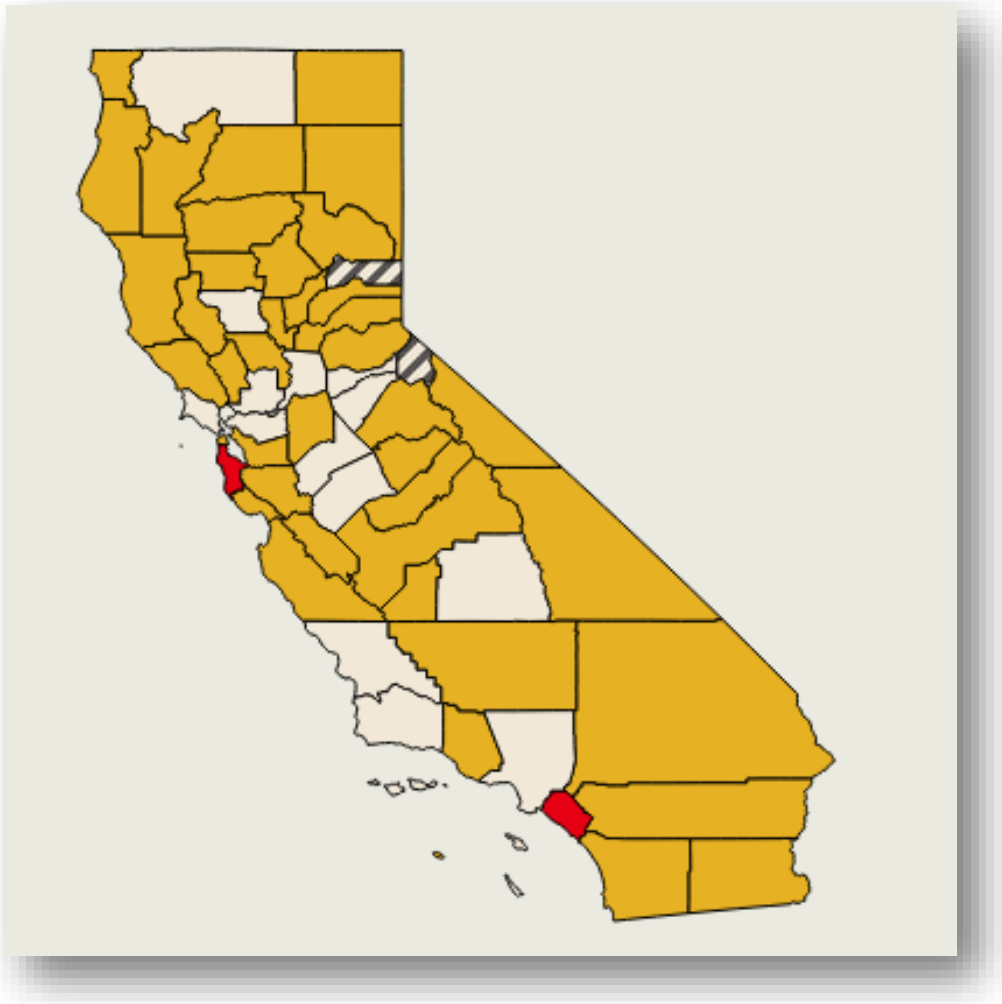
US 2012



- Paper Ballot
- All Vote By Mail
- Paper Ballot and Punch Card
- Mixed Paper Ballot and DREs with VVPAT
- Mixed Paper Ballot and DREs with and without VVPAT
- Mixed Paper Ballot and DREs without VVPAT
- DREs with VVPAT
- DREs with and without VVPAT
- DREs without VVPAT

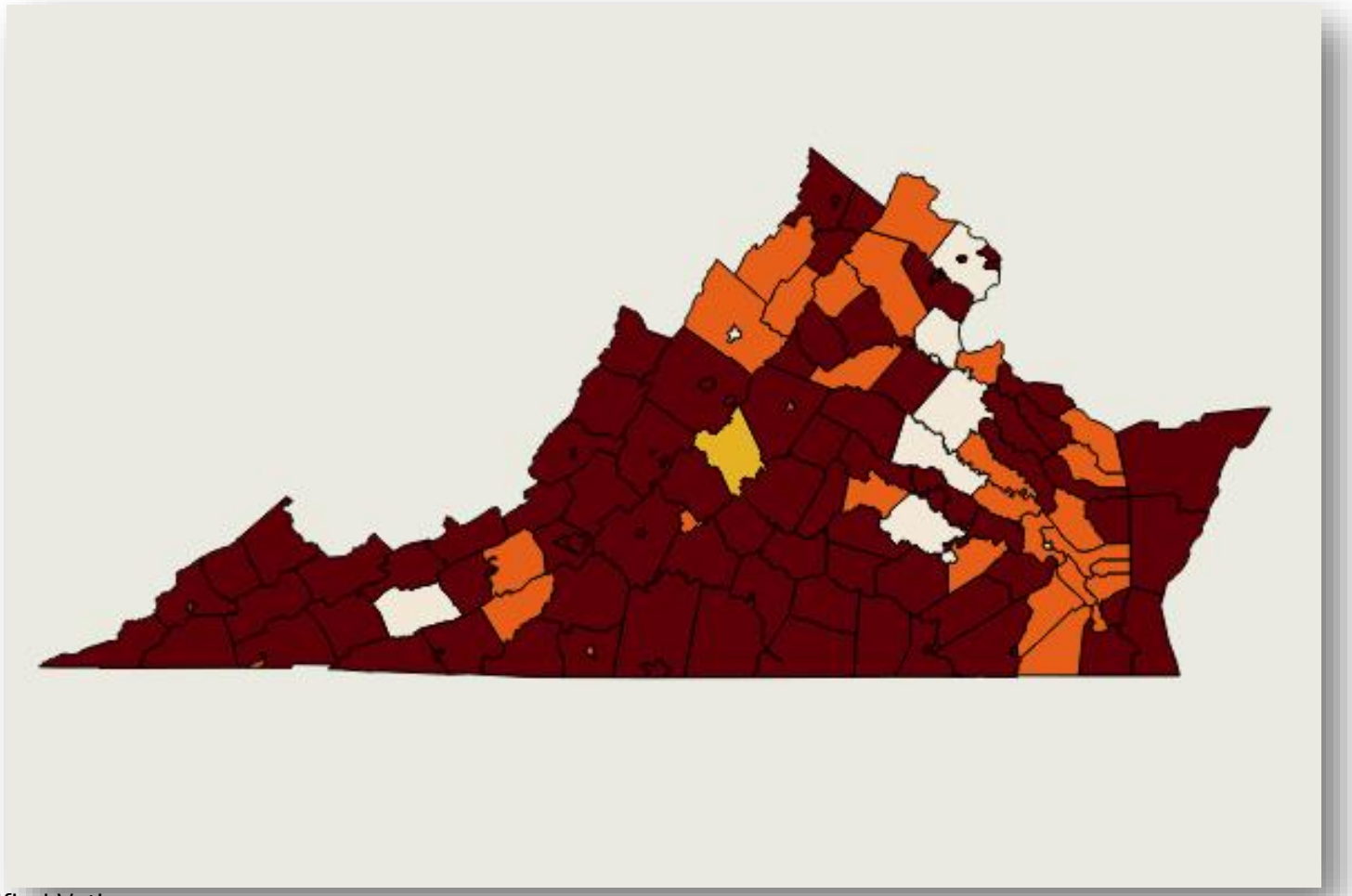
Source: Verified Voting

US 2012



Source: Verified Voting

US 2012



Paper Ballot
All Vote By Mail
Paper Ballot and Punch Card
Mixed Paper Ballot and DREs with VVPAT
Mixed Paper Ballot and DREs with and without VVPAT
Mixed Paper Ballot and DREs without VVPAT
DREs with VVPAT
DREs with and without VVPAT
DREs without VVPAT

Source: Verified Voting

Introduction

- Whether ballot design would make a difference on the expected outcomes given certain electoral system, both at the party and at the system level.
    - Minority representation
    - Party discipline and legislative behavior
    - Responsiveness
    - Fragmentation
    - Turnout

Research Question

- Can a change in ballot design affect intraparty dynamics?
- Can a change in ballot design alter voters' accessibility to political alternatives?
- Can a change in ballot design alter voter mobilization opportunities?

Literature

- Whether dynamics are candidate or party-centered is a result of type of list and district magnitude (Carey & Shugart 1995).
- SMPL and MMPR systems with open list lead to candidate-centered politics (Morgenstern 2004, Crisp et al 2004, Jones 2004).
- MMPR and open list leads to intraparty-competition and zero-sum-like game among co-partisans (Ames 2001, Mainwaring and Shugart 1997).

If, and how, ballot design affects intraparty dynamics is unexplored.

Literature

Literature on ballot designs has not addressed intraparty dynamics effect. Instead, it focuses on:

- Usability conditions according to voters' perception (Everett et al. 2006).
- Transparency and reliability in developing countries (Alvarez et al. 2009).
- Informational effects of devices on vote casting (Kimball & Kropf 2005).
- "*De facto* enfranchisement effect" of less-educated voters (Fujiwara 2010).

Whether these have an effect on intra-party competition levels has attracted little attention.

Contribution

Literature on the effect of electoral systems on parties and party systems does not include the ballot design as a relevant independent variable.

This paper aims to bridge the literature of the impact of electoral systems on parties and party systems and the literature on changes on ballot design.

EITM. The Intuition

Ballot designs and voting mechanisms vary in terms of complexity and how user friendly they are.

The simpler they are, the larger the number of voters it appeals to, and the easier to translate preferences into votes.

Thus, simpler ballot designs and voting mechanisms create the conditions for a more competitive electoral offer on the candidate side.

All things remaining equal, systems with simpler ballot designs and voting mechanisms should observe higher levels of competition and thus, a larger effective number of parties or candidates.

EITM Step 1

Theoretical concept → (intra)party competition

Statistical concept → index of party/candidate fragmentation

Theory

Access to political alternatives results from parties/candidates' outreach and voters' possibility to express their preferences.

Accessibility increases with district permeability.

If ballot structure enables voters to see past the dominant candidate(s), permeability rises.

Permeability incentivizes challengers to invest resources and target untapped voters.

When the electoral system already incentivizes intraparty competition, ballots enhancing candidate's visibility can further increase competition.

EITM Step 2

Theoretical analogue	→	minimize distance between preference and vote choice / opportunity cost minimization
Statistical analogue	→	matching and regression analysis

Case Selection

Brazil has received wide attention due to its unique political and institutional characteristics:

- Highly fragmented party system.
- Few nationwide political parties.
- Low legislative party discipline.
- Candidates cultivate personal profiles.
- Frequent party label switch.
- High district magnitude and open list combination.
- Capped number of candidate nomination.
- It is possible to vote for one deputy or for the list.
- Seats first assigned by party, then by candidates.

Case Selection

1998 Brazilian Federal House of Representatives elections.

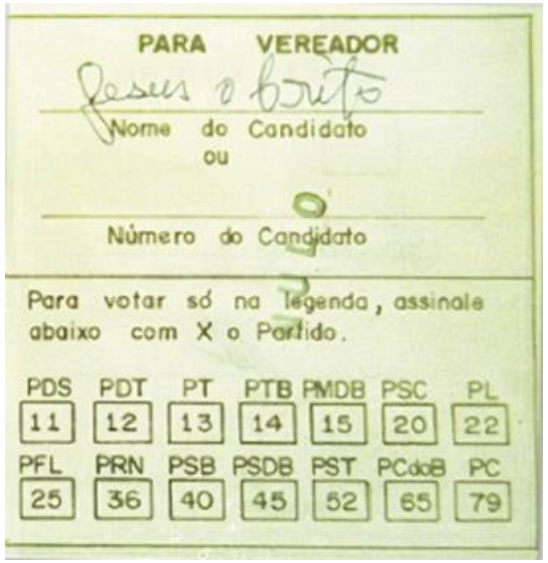
- **Change in Ballot Design** – Traditional paper-ballots were replaced by electronic voting.
- **Quasi-Experiment** – Partial implantation: Capital cities and municipalities over 40.500 voters.
- **Municipal Level Analysis** – 635 municipalities -2/3 of population- used electronic, 4,917 paper ballot.

Ballot Designs in Brazil

A Quasi-Experiment

The federal government partially implemented the ballot change, allowing to compare the old paper ballot against the new electronic voting mechanisms.

Control Group:
Paper Ballot



Treatment Group:
Electronic Ballot

- visual aids (candidate pictures),
- guidance on how to proceed,
- familiar input mechanism by using numbers (telephone resembling keypad),
- feedback to the voters.

Source: MIT Political Science

Hypothesis

H1 – Under MMPR open list system, the introduction of accessibility-enabling changes in ballot structure increases intraparty fragmentation.

Data & Research Design | H1

Observation | Party/Coalition at the Municipal level

Method | Propensity score matching with replacement

DV | Rae and Taylor's (1970) Intraparty fragmentation index = $1 - \sum_{i=1}^{n} c_i^2$

n is the number of candidates with at least one vote in each party/coalition

c_i^2 the square of each candidate's proportion of all votes

IV – Electronic/Paper Ballot (+)

IV – Legislative Incumbent (+)

IV – Executive Incumbent (+)

IV – Crowdedness of the List (+)

Match – Illiteracy Rate

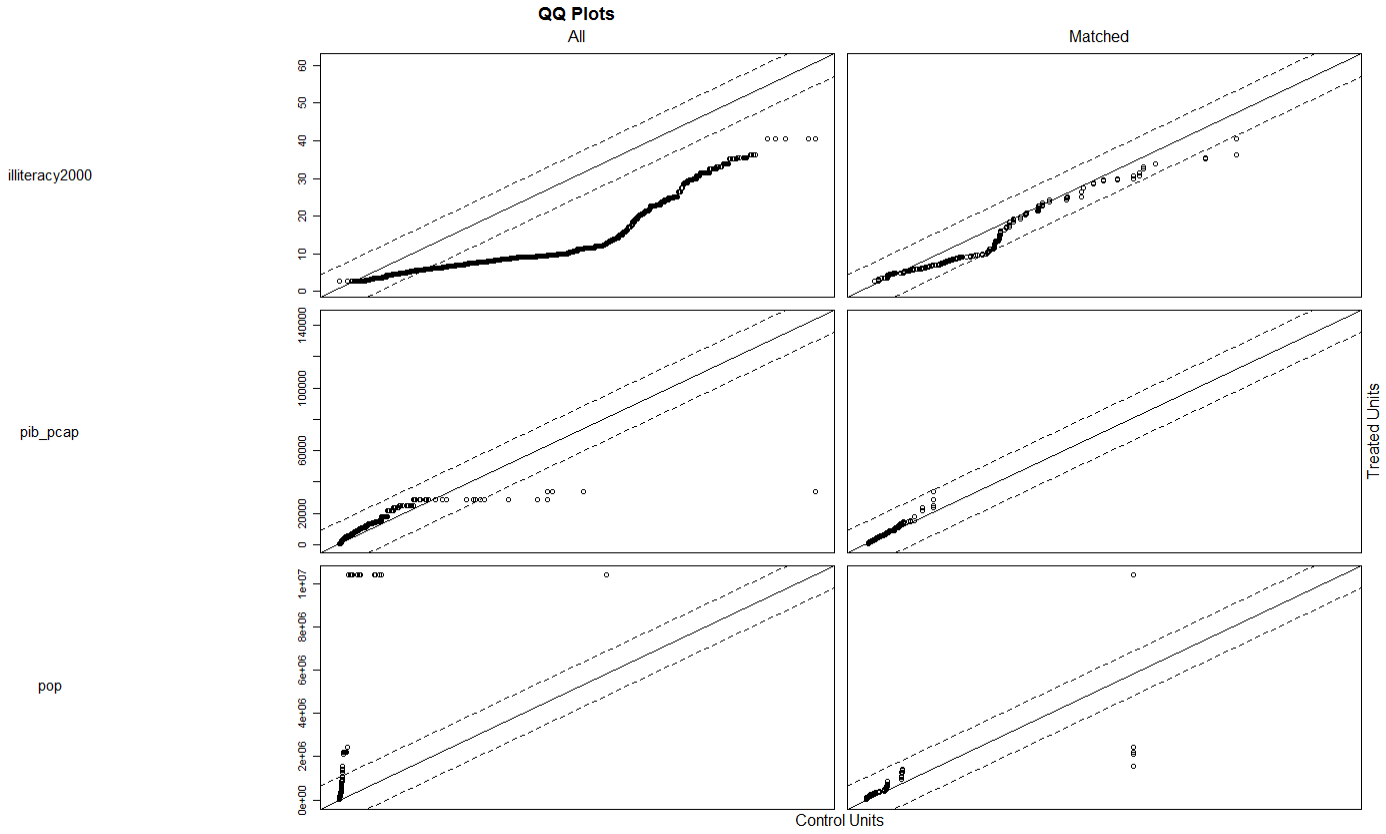
Match – Per Capita GDP

Match – Population

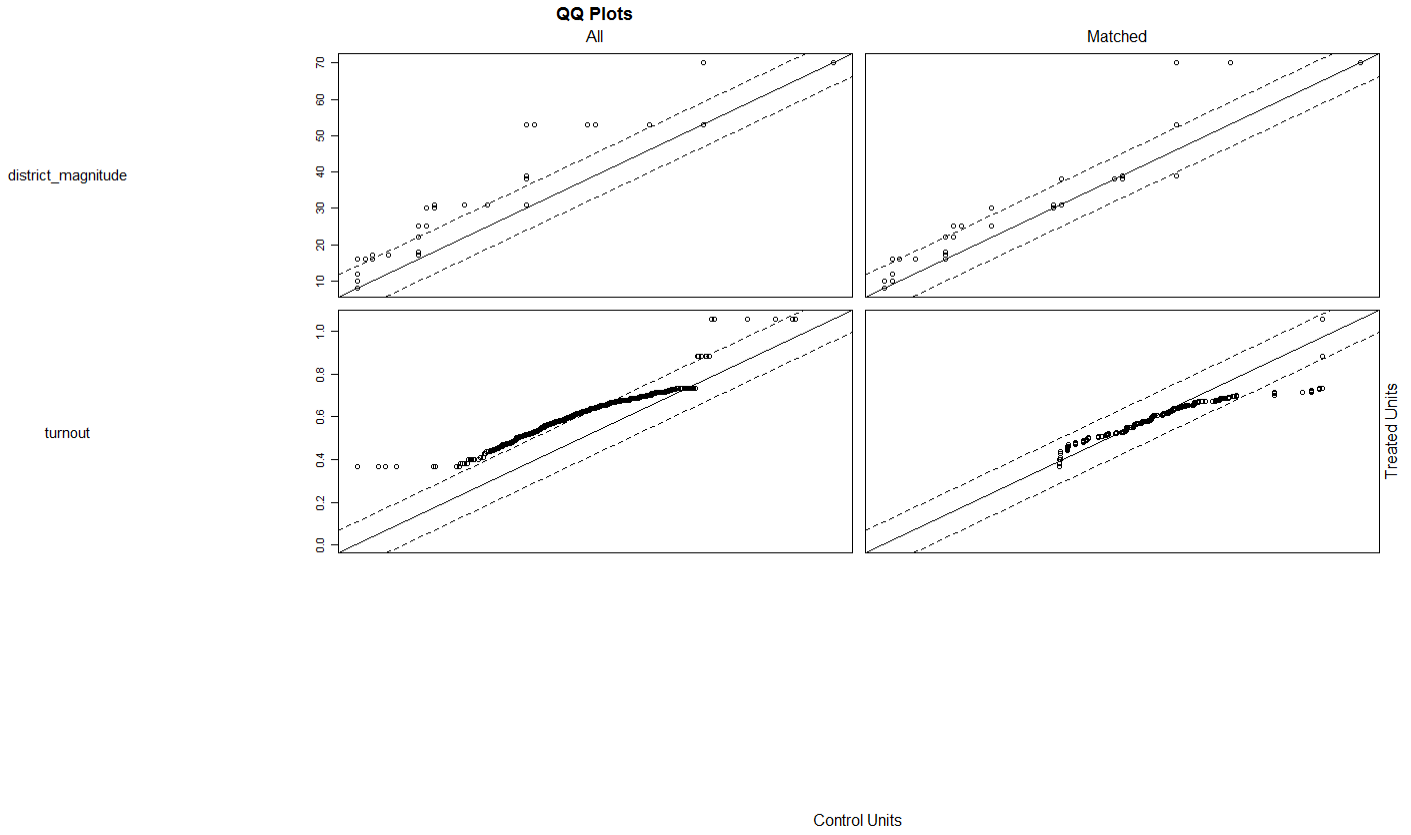
Match – District Magnitude

Match – Turnout

Balance of the Matched Sample



Balance of the Matched Sample (cont.)



Balance of the Matched Sample (cont.)

	All		Matched		
	Mean Treated	Mean Control	Mean Treated	Mean Control	Improvement
N	3,207	31,366	3,207	755	
Illiteracy	9.38	20.03	9.38	10.40	90.40
PIB p/ capita	6,775.98	4,445.87	6,775.98	6,167.49	73.89
Population	264,344.73	209,04.04	264,344.73	334,625.94	71.13
District Magnitude	47.31	38.81	47.31	34.14	-54.91
Turnout	0.61	0.49	0.61	0.69	29.62

Results (H1)

See Presentation

Results (H1)

See Presentation

Hypothesis

See Presentation

Data & Research Design | H2

Observation | Party/Coalition at the Municipal level

Method | Propensity score matching with replacement

DV | Rae and Taylor's (1970) Intraparty fragmentation index

IV – Electronic/Paper Ballot

IV – Turnout

IV – Electronic * Turnout

IV – Legislative Incumbent

IV – Executive Incumbent

IV – List Crowdedness

Match – Illiteracy Rate

Match – Per Capita GDP

Match – Population

Match – District Magnitude

Results (H2)

See Presentation

Results (H2)

See Presentation

Conclusions

Results show an overall increase of intraparty fragmentation in treatment municipalities.

Results remain unaltered when including fixed effects by region.

Electronic voting exacerbates the intraparty competition.

However, intraparty fragmentation decline conditional on turnout levels. Where turnout increased, intraparty fragmentation decreased in the places with electronic ballot.

Next Steps

Use spatial models to formalize the theory

Time series analysis

Cross sectional analysis

Experiment

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