Bypassing the Enemy: Distributive Politics, Credit Claiming, and Nonstate Organizations in Brazil

Supplemental Material

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This appendix reports additional analyses, including those mentioned in the text. It is organized following the sections of the main paper. Please see section 7 for the Data Sources and Data Guide for this study.

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1 Introduction

No supplementary analyses.

2 The Distributive Politics of Nonstate Welfare Provision

2.1 Hypotheses and Tests

No supplementary analyses.

2.2 Nonstate Organizations and Transfers: Evidence from Brazil

- Official data on hospital admissions and beds in nonstate welfare providers: `http://www.brasil.gov.br/saude/2013/12/saude-destina-mais-recursos-para-santas-casas-e-hospitais-filantropicos` (accessed in July, 2014).

Table S.B.1: NSPs' Areas of Expertise (2003-2011)

NSP Areas of Expertise	Pct. (%)
Social Welfare	20.66
Labor and Capital Associations	9.19
Culture & Recreation	10.45
Development and Rights	13.68
Education & Research	8.46
Housing	0.01
Environment & Animal Protection	1.21
Religious	1.47
Health	21.81
Unions, Federations, and Confederations	3.93
Other	9.04
N/A	0.08
Number of contracts	23,787

Source: Collected from SigaBrasil and IPEA.

Table S.B.2: Types of Organizations (2003-2011)

Type of Organizations	Pct. (%)
Associations	72.06
Cooperatives	0.12
Unions	3.88
Foundations	9.82
Hospitals and *Santas Casas*	14.01
Social Service	0.04
N/A	0.08
Number of contracts	23,787

Source: Collected from SigaBrasil and IPEA.

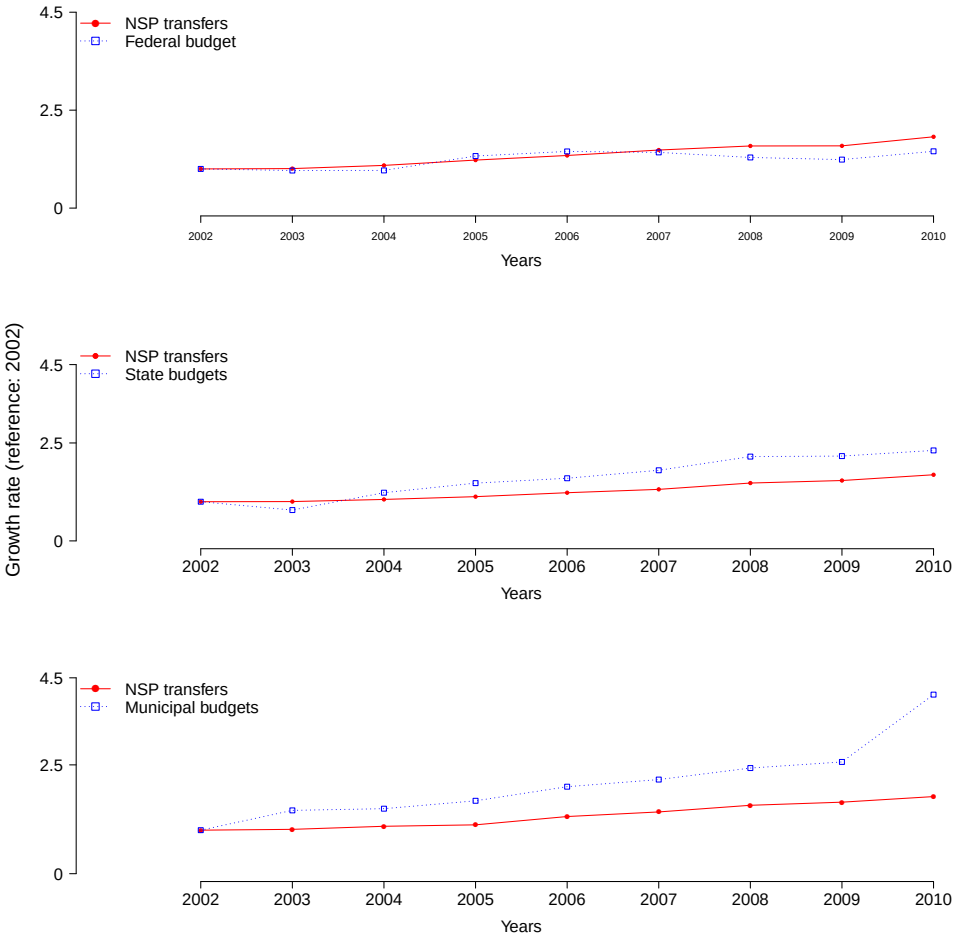
Table S.B.3: NSPs' Sources of Funding (2009-2015)

Sources of Funding	Pct. (%)
Own Funds (services and members' fees)	48.57
Private donations	12.71
Public Funds	46.9
International Funds	2.47
Missing	2.71
Number of organizations	813

Notes: Data for 45% organizations in close races (5%). Scraped from CNES-MJ and matched with Siconv.

Figure S.B.1 describes a broader trend of transfers to NSPs at all levels of government. The most impressive growth has been at the municipal level, but there has been positive growth compared to the growth of the non-debt budget at all levels of government, which attests to the overall use of NSPs.

Figure S.B.1: Growth of NSP transfers compared to overall budget growth, 2002–2011 in millions of *reais* (July 2012 values)



Source: Collected from Finbra.

2.2.1 Additional Data on NSP Transfers

Table S.B.4: Number of recipient organizations per municipality (2008-2015)

Summary Statistics	Number of organizations
Min.	1
1st Qu.	1
Median	3
Mean	11.82
3rd Qu.	8
Max.	1,272
Number of municipalities	1,321
Number of organizations	4,125

Source: Collected from Siconv.

Table S.B.5: Share of Federal Transfers to a Municipality per Organization (2008-2015)

Summary Statistics	Share
Min.	0.00
1st Qu.	0.00
Median	0.03
Mean	0.30
3rd Qu.	0.70
Max.	1.00
Missing	135
Number of municipalities	1,321
Number of organizations	4,125

Source: Collected from Siconv.

Table S.B.6: Top 10 Ministries in Transfers to NSPs (2008–2015)

Ministries	*Reais*
Ministry of Health	6,340,636,572.49
Ministry of Social Assistance	1,473,948,616.67
Ministry of Sports	1,160,270,406.29
Ministry of Labor	854,057,354.54
Ministry of Tourism	726,876,736.51
Ministry of Agrarian Development	498,649,857.17
Ministry of Culture	451,895,258.14
Human Rights Secretary	290,341,581.13
Ministry of Industry	191,417,232.31
Ministry of Science	180,415,263.45

Source: Collected from Siconv.

Table S.B.7: Top 10 Ministries in Transfers to Mayors (2008–2015)

Ministries	*Reais*
Ministry of Cities	9,374,627,015.20
Ministry of Tourism	6,500,145,786.82
Ministry of Sports	4,248,534,700.03
Ministry of Agriculture	3,865,008,558.07
Ministry of National Integrations	1,985,323,863.08
Ministry of Health	1,861,314,225.09
Ministry of Defense	1,476,221,880.92
Ministry of Social Assistance	1,332,274,690.48
National Health Foundation	1,197,729,757.66
National Institute of Agrarian Reform	1,068,730,021.03

Source: Collected from Siconv.

2.2.2 Definition of nonstate provider and transfers to nonstate providers

Data on transfers to nonstate providers typically includes organizations and types of transfers that do not fit my definition of nonstate organizations. My definition is a bit stricter than that used by Zucco and Samuels (2015)[1] and closer to IBGE's definition, albeit with key differences I describe below.[2] In addition to excluding public notaries and condominiums (n = 9), I excluded political parties (n = 17), and a host of organizations that I classify as "para-state" organizations – organizations that, although are legally classified as non-profits, depend on the state for most of its activities or are part of state organizations. In my opinion, the best example of this type of organization are research foundations associated with public federal universities. These research or research support foundations were created as a way to facilitate conducting extra-mural courses, agreements, and partnerships for public federal universities in Brazil, which are almost entirely funded by public federal funds. In addition to these research foundations (n = 7,322),[3] this type of organizations are: social organizations (OS) (n = 250),[4] autonomous social service (*Sistema S*) (n = 837),[5] international organizations (n=9),[6] and public interest organizations (OSCIP) (n = 887).[7] In terms of transfers, I excluded transfers

[1] Zucco and Samuels (2015) excluded notary publics (*cartórios*) and condominiums (*condomínios*).

[2] The IBGE provides a definition of non-profit which correspond to non-profits that meet five criteria that are accepted internationally as the definition of non-profit organizations: (1) entirely private (2) not primarily for profit, and any profit generated is reinvested entirely; (3) legally incorporated; (4) self-administered; and (5) voluntary.

[3] These are transfers to research foundations often related to public federal universities.

[4] Social Organizations were created by the law 9.637/1999. Social Organizations are allowed to perform public services, in lieu of the state, through "contrato de gestão" and their governing boards (*conselhos administrativos*) must include members of the state. This a somewhat recent type of organization that was created with the objective of facilitating governments' contracts to substitute state organizations.

[5] "Sistema S" organizations were created in the 1988 constitution to represent professional and economic groups that receive resources collected by the federal state.

[6] I am focusing on domestic organizations.

[7] OSCIPs were created by the law 9.790/1999. Public Interest Organizations are less closely related to the state (governing boards are not required to include members of the state) than OSs, but nevertheless often share public services through *termos de parceria*. Just like OSs, OSCIPs are a recent type of organizations that was created with the objective of facilitating governments' contracts to substitute state organizations. However, OSs more clearly fall in the "para-state" category than OSCIPs, which is a more ambiguous case. I took a more conser-

that were clearly funded by international organizations (n = 15)[8] and to special indigenous health districts (n = 32).[9] Unfortunately, I was unable to do so for state transfers to non-state providers and federal transfers to nonstate providers using SICONV data (from 2012 to 2015). The closest strategy for SICONV federal transfers data was to exclude transfers from state agencies that are not federal ministries and secretaries – thus, excluding federal universities, research foundations, secondary federal schools, indirect federal agencies (*autarquias*) (n = 2,534). In all analyses, I was able to exclude all transfers selected by the legislative and judiciary branches: federal transfers (n = 42) and state transfers (n = 58). In state transfers, it is important to highlight that I focused on investment tranfers, which are those over which the governor has most discretion to spend. Regarding mayoral federal transfers, I included all types of transfers using FINBRA (2003-2011) as it does not allow me to parse out transfers from indirect federal agencies from direct federal agencies and then, for consistency, kept all mayoral transfers using data from SICONV (2012-2015).

vative strategy and excluded both of them. However, keeping OSCIPs does not change results in a meaningful way.

[8]Transfers determined through a partnership with the Inter-American Development Bank.

[9]Indigenous populations' health provision is organized by the federal government following Law 9.836/1999, and its provision is often organized in *Distritos Sanitários Especiais Indígenas (DSEI)*, that may or may not overlap with municipalities.

3 Testing the Bypassing Strategy

Equations (1) and (2) represent the average effect of exposure to treatment; that is, mayoral alignment. Municipalities whose mayor belongs to the president's party are aligned and municipalities whose mayor belongs to any other party are unaligned. Equation (1) represents the average treatment effect, $\tau_{RD,NSP}$, of the aligned candidate's victory on money to nonstate providers. Let $Y_{i,t+1,NSP}(1)$ and $Y_{i,t+1,NSP}(0)$ denote NSP transfers allocated to municipality i when the mayor belongs to the president's party and when the mayor belongs to any other party, respectively. These are potential outcomes, since only one is observed for each municipality. The study group (N) is composed of municipalities in which there were close mayoral electoral races at time t. Similarly, let $Y_{i,t+1,M}(1)$ and $Y_{i,t+1,M}(0)$ represent mayoral transfers distributed to municipality i when the mayor and president are co-partisans and when the mayor belongs to any other party, respectively. Thus, $\tau_{RD,M}$ in equation (2) represents the average treatment effect of the aligned candidate's victory on mayoral transfers. I follow Dunning (2012) to estimate $\tau_{RD,M}$.

$$\tau_{RD,NSP} = \frac{1}{N}\sum_{i=0}^{N}\Big[Y_{i,t+1,NSP}(1) - Y_{i,t+1,NSP}(0)\Big] \tag{1}$$

$$\tau_{RD,M} = \frac{1}{N}\sum_{i=0}^{N}\Big[Y_{i,t+1,M}(1) - Y_{i,t+1,M}(0)\Big] \tag{2}$$

I fit different regression models, within the RDD bandwidth, to estimate this limit parameter (τ_{lim}), represented in equation (3). Let c denote the point of discontinuity and r denote the values of the running variable that define the set of units included in the RD study group.[10] In regressions with kernel smoothers, bandwidth refers to the width of the kernel. I follow Calonico, Cattaneo and Titiunik (2014) and Imbens and Kalyanaraman (2012) to estimate τ_{lim}.

$$\tau_{lim} = \lim_{r \Downarrow c}[\overline{Y_i}(1)|R_i = r] - \lim_{r \Uparrow c}[\overline{Y_i}(0)|R_i = r] \tag{3}$$

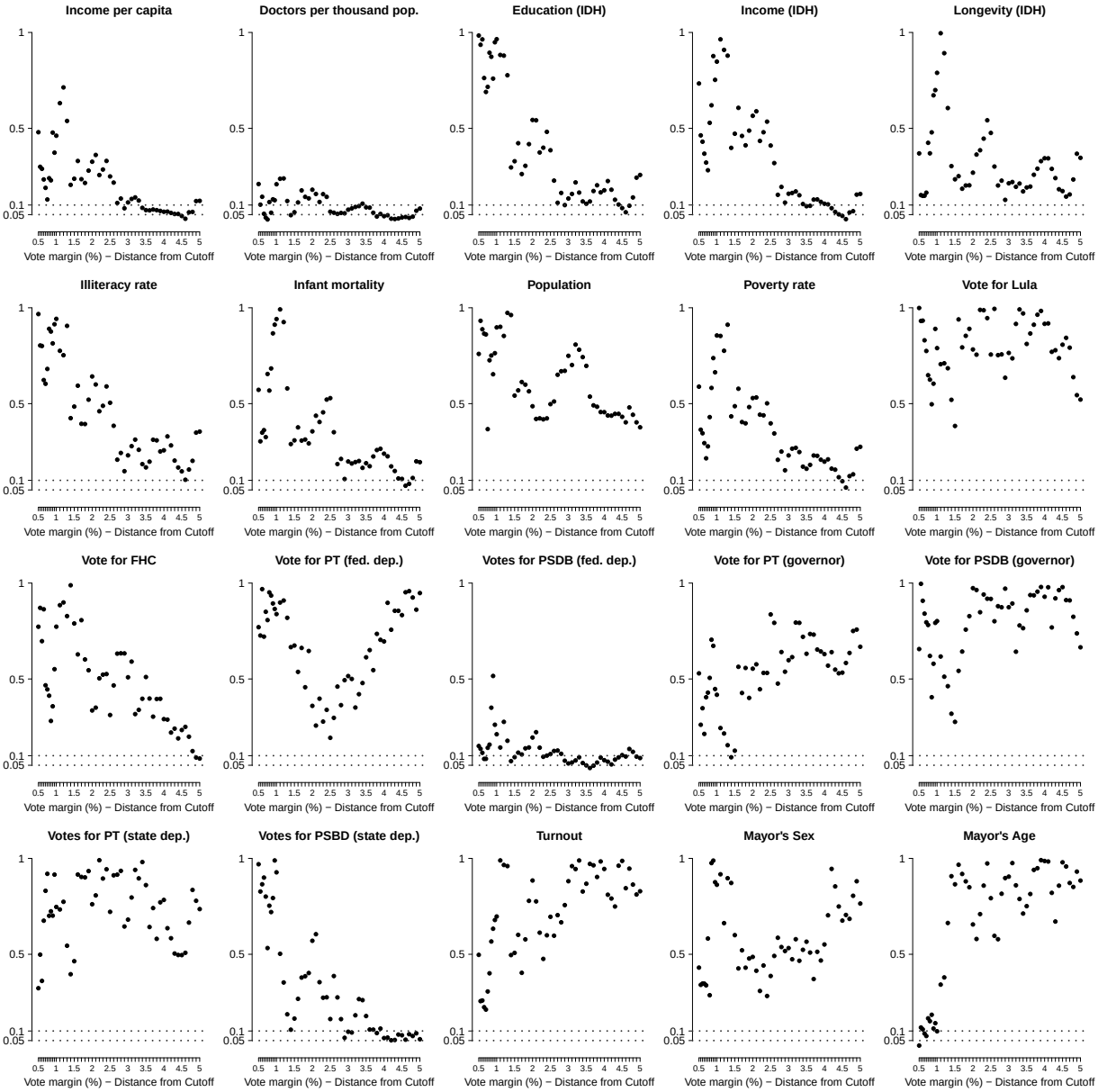
3.1 A Natural Experiment on Partisan Alignment

Figure S.C.1 and Figure S.C.2 present the p-values of a difference in means and Wilcoxon rank-sum tests of the treatment indicator on pre-treatment covariates – Table S.C.2 presents the difference in means and standard errors for the same set of covariates (randomization inference p-values). These plots present results for a larger set of values of the running variable

[10] This parameter is sometimes presented using expectations rather than average population values, i.e. the causal effect is $\mathrm{E}[(Y_i(1) - Y_i(0))|R_i = c]$.

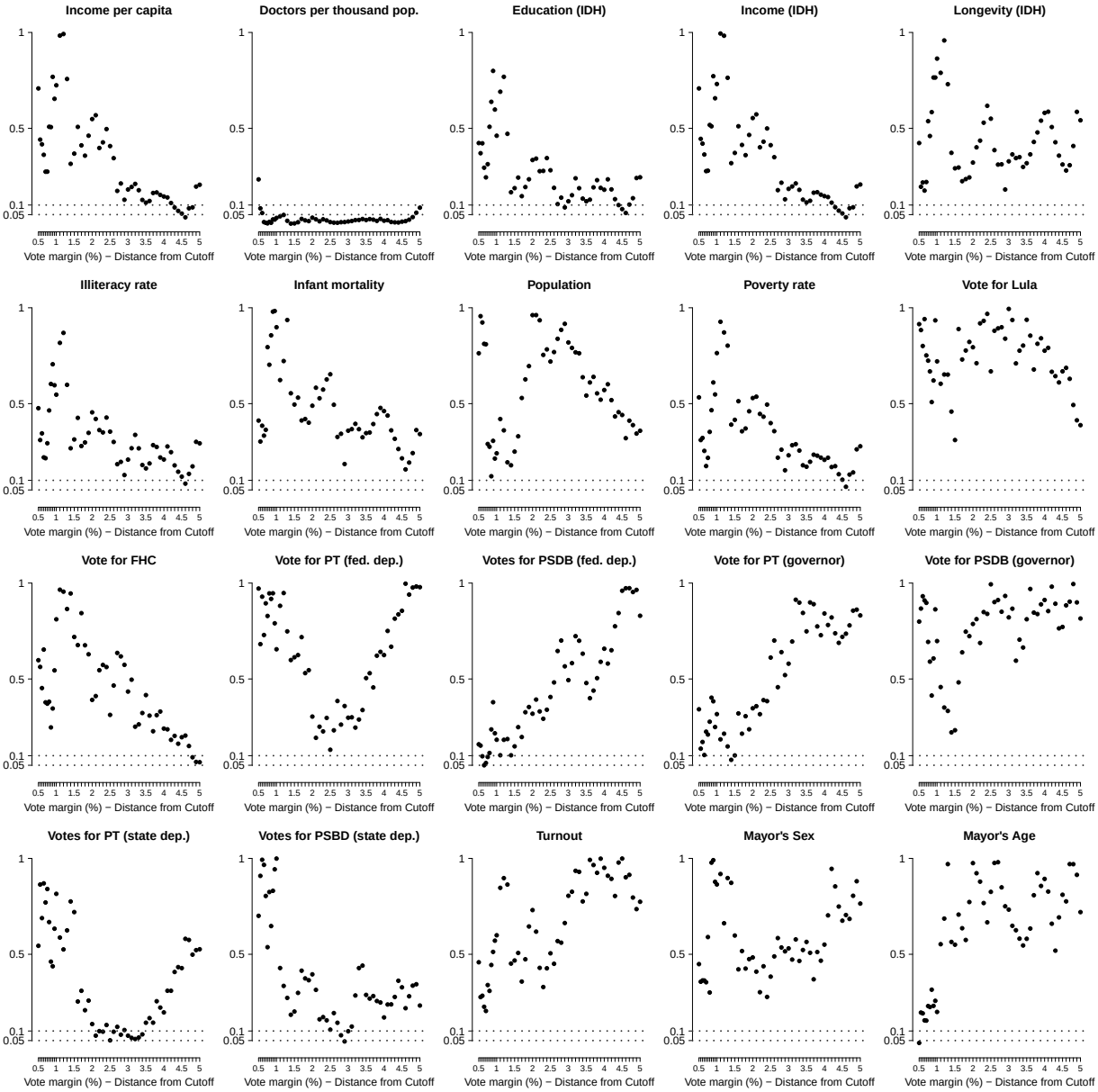
than the p-value plot shown in the main text. In Figure S.C.3, I show the p-values for an F-test of a regression of the treatment indicator on all pre-treatment covariates. The graphs in Figure S.C.4 present estimates using a local linear regression across different bandwidths (including the optimal bandwidths, following the approach suggested by Imbens and Kalyanaraman 2012). Table S.C.3 presents balance tests using local linear regressions at the optimal bandwidth (using approach suggested by Calonico, Cattaneo and Titiunik 2014).

Figure S.C.1: P-value plot, difference of means



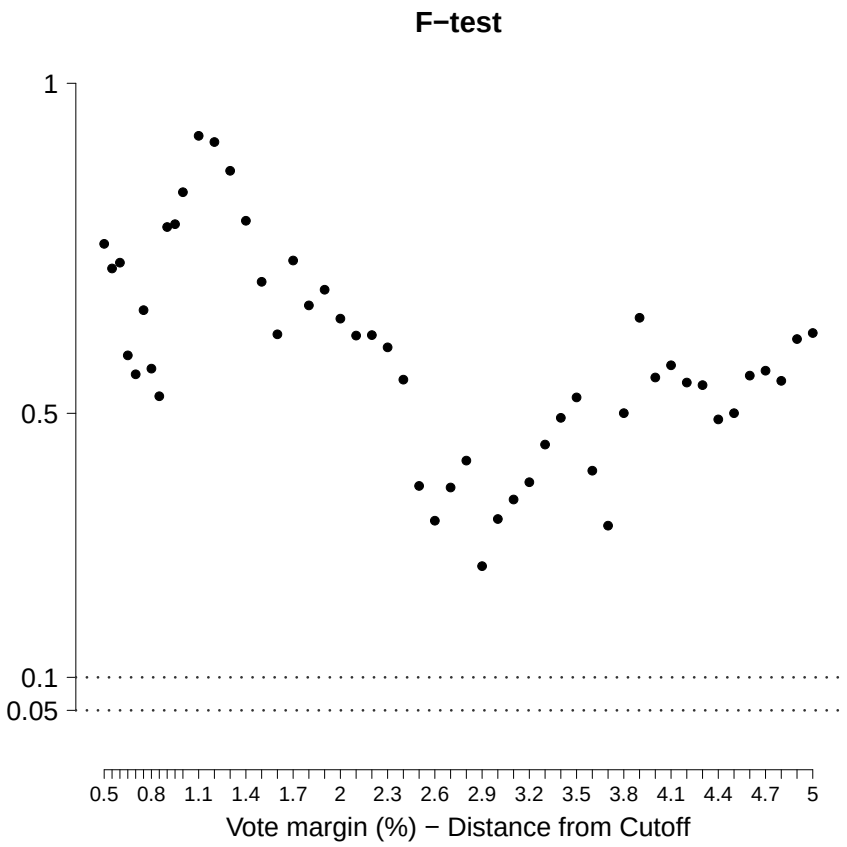
Note: All p-values are two-sided.

Figure S.C.2: P-value plot, rank sum tests



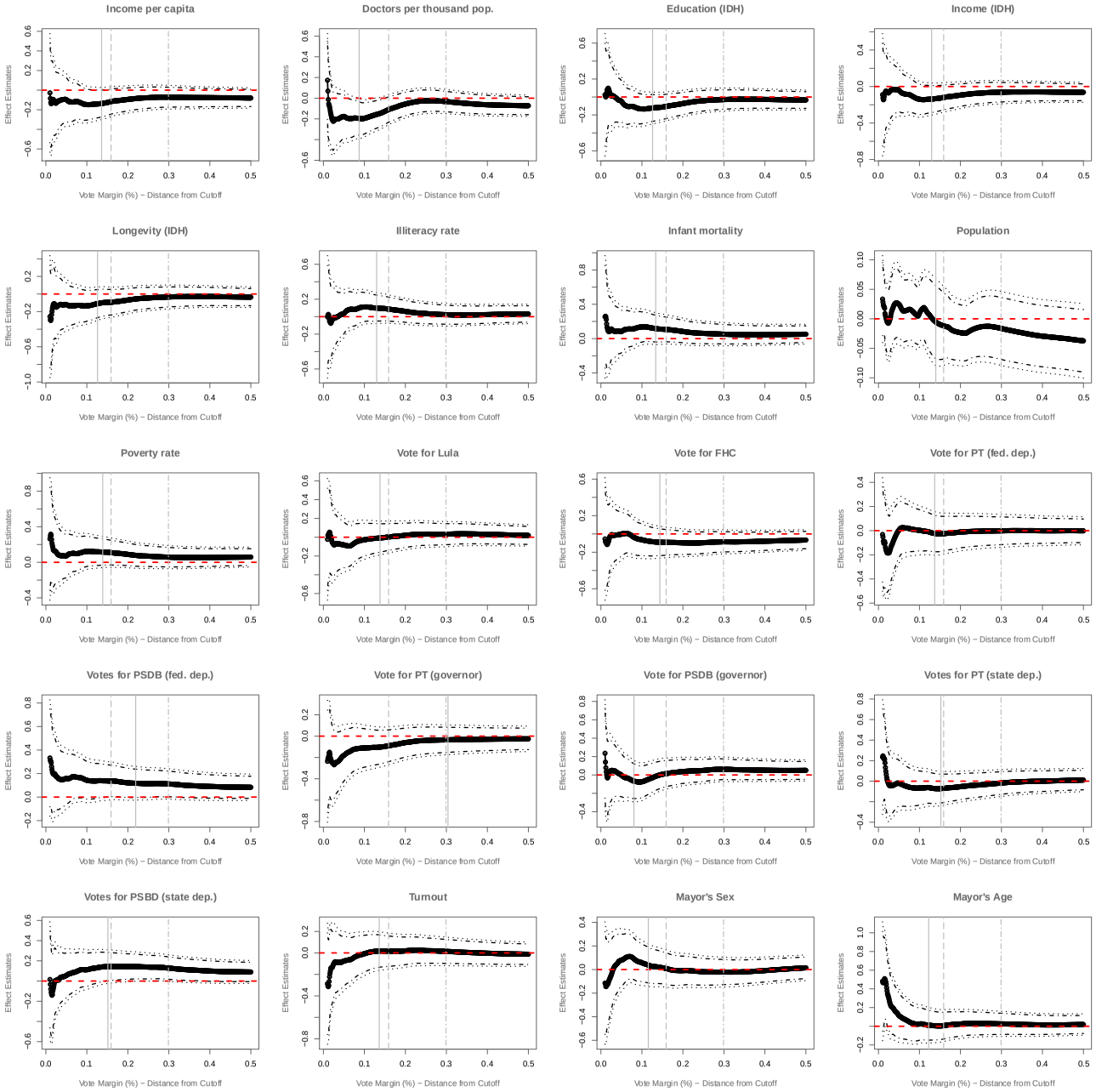
Note: All p-values are two-sided.

Figure S.C.3: P-value plot, F-test



Note: Regression of treatment on all twenty pre-treatment covariates.

Figure S.C.4: Balance tests, local linear regression



Note: The solid vertical gray line is the optimal bandwidth for that covariate. The other dashed vertical lines at approximately 16% and 30% of the vote margins represent the optimal bandwidths for NSP and mayoral transfers per capita, respectively (all estimated using Imbens and Kalyanaraman 2012). Local linear regression uses a triangular kernel.

Table S.C.1: Descriptive Statistics: Municipalities in which the aligned mayor was either a winner or runner-up, 2003-2015

	Number of observations	Min	Mean	Median	Std. dev.	Max	Missing
Vote Margin	3,557	-100	-2.74	-0.82	24.33	100	0
Fed. NSP Transfers (per capita)	3,556	0.00	12.97	0.00	147.40	7630.10	1
Fed. Mayoral Transfers (per capita)	3,556	0.00	126.71	54.48	237.53	5224.57	1
Total Valid Votes Mun	3,557	641	36,097.57	7,697.00	219,199.36	6,243,085	0
Income per capita	3,530	31.93	192.93	179.60	110.18	834.00	27
Doctors	3,530	0.00	0.38	0.00	0.68	7.27	27
IDH Education	3,530	0.42	0.80	0.82	0.09	0.97	27
IDH Income	3,530	0.35	0.62	0.64	0.10	0.90	27
IDH Longevity	3,530	0.50	0.73	0.74	0.08	0.89	27
Illiteracy rate	3,530	2.02	23.45	19.03	14.86	70.26	27
Infant mortality	3,530	5.38	30.79	26.51	17.28	98.12	27
Population	3,530	795	63,706.66	13,135.00	386,007.22	10,434,252	27
Poverty rate	3,530	2.89	42.54	38.68	22.88	93.02	27
Vote for Lula	3,532	0.02	0.29	0.26	0.14	0.73	25
Vote for FHC	3,532	0.07	0.57	0.58	0.15	0.88	25
Vote for PT (fed. dep.)	3,532	0.00	0.11	0.06	0.12	0.73	25
Votes for PSDB (fed. dep.)	3,532	0.00	0.16	0.08	0.20	0.98	25
Vote for PT (governor)	3,532	0.00	0.14	0.09	0.15	0.69	25
Vote for PSDB (governor)	3,532	0.00	0.19	0.06	0.23	0.91	25
Votes for PT (state dep.)	3,532	0.00	0.10	0.05	0.12	0.77	25
Votes for PSBD (state dep.)	3,532	0.00	0.14	0.06	0.19	0.98	25
Turnout	3,532	0.30	0.77	0.78	0.09	0.96	25
Mayor's sex	3,557	0.00	0.90	1.00	0.31	1.00	0
Mayor's age	3,556	29.12	55.14	54.69	8.98	88.40	1

Note: Electoral covariates are measured in 1998 and demographic are measured in 2000. Population data measured after 2000 was used to calculate per capita transfers for municipalities with missing population data in 2000 (this population data was not included in the balance tests).

Table S.C.2: Balance Tests, Difference of Means

	Vote Margin (%)					
Covariates	0.5	1	2	3	4	5
Income per capita	-0.14	-0.10	-0.10	-0.13	-0.13	-0.10
Std. error	0.19	0.14	0.09	0.08	0.07	0.06
Doctors per thousand pop.	-0.22	-0.18	-0.12	-0.13	-0.13	-0.10
Std. error	0.17	0.14	0.09	0.07	0.06	0.06
Education (IDH)	0.00	-0.01	-0.06	-0.13	-0.10	-0.08
Std. error	0.21	0.13	0.10	0.08	0.07	0.07
Income (IDH)	-0.07	-0.03	-0.06	-0.12	-0.12	-0.10
Std. error	0.21	0.14	0.10	0.08	0.07	0.07
Longevity (IDH)	-0.20	-0.04	-0.12	-0.11	-0.08	-0.07
Std. error	0.23	0.15	0.10	0.09	0.08	0.07
Illiteracy rate	-0.01	-0.01	0.05	0.11	0.09	0.06
Std. error	0.22	0.14	0.10	0.09	0.07	0.07
Infant mortality	0.13	0.01	0.10	0.12	0.09	0.09
Std. error	0.23	0.14	0.10	0.09	0.08	0.07
Population	0.01	0.01	0.02	-0.01	-0.02	-0.02
Std. error	0.03	0.04	0.03	0.03	0.02	0.02
Poverty rate	0.12	0.03	0.07	0.11	0.10	0.08
Std. error	0.22	0.14	0.10	0.09	0.07	0.07
Vote for Lula	-0.01	-0.04	0.03	-0.03	0.01	0.04
Std. error	0.21	0.15	0.11	0.09	0.08	0.07
Vote for FHC	-0.06	-0.04	-0.11	-0.06	-0.08	-0.12
Std. error	0.21	0.14	0.11	0.09	0.08	0.07
Vote for PT (fed. dep.)	-0.01	-0.07	0.08	0.05	0.02	-0.01
Std. error	0.19	0.14	0.10	0.09	0.08	0.07
Votes for PSDB (fed. dep.)	0.26	0.15	0.12	0.15	0.13	0.12
Std. error	0.19	0.13	0.10	0.08	0.08	0.07
Vote for PT (governor)	-0.14	-0.13	-0.07	-0.05	-0.04	-0.03
Std. error	0.19	0.15	0.11	0.09	0.08	0.07
Vote for PSDB (governor)	0.05	0.02	-0.01	-0.03	-0.00	0.02
Std. error	0.21	0.14	0.11	0.09	0.08	0.07
Votes for PT (state dep.)	0.15	-0.06	0.02	-0.04	-0.03	-0.03
Std. error	0.18	0.14	0.10	0.09	0.07	0.07
Votes for PSBD (state dep.)	-0.05	-0.02	0.04	0.13	0.13	0.13
Std. error	0.19	0.13	0.10	0.08	0.08	0.07
Turnout	-0.10	-0.03	-0.01	-0.01	0.01	0.02
Std. error	0.20	0.14	0.11	0.09	0.08	0.07
Mayor's Sex	-0.11	0.00	0.08	0.06	0.05	0.03
Std. error	0.20	0.13	0.10	0.08	0.07	0.07
Mayor's Age	0.52	0.25	0.06	0.02	0.01	-0.01
Std. error	0.21	0.14	0.11	0.09	0.08	0.07

Notes: Robust standard errors. Socio-economic covariates and electoral covariates were measured in 2000 and 1998 respectively. All covariates were standardized to have mean 0 and standard deviation 1.

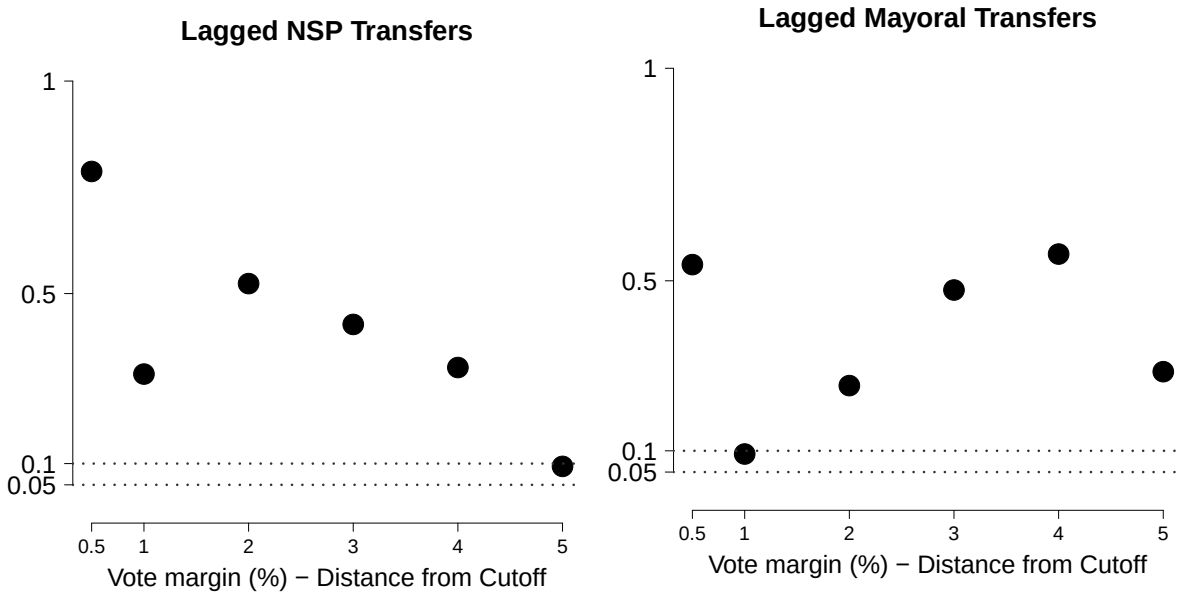
Table S.C.3: Balance tests, local linear regression (CCT)

	Estimate Local Linear	Std. error Robust
Income per capita	-0.12	(0.09)
Doctors per thousand inhabitants	-0.10	(0.08)
Education (HDI)	-0.10	(0.09)
Income (HDI)	-0.14	(0.10)
Longevity (HDI)	-0.12	(0.11)
Illiteracy rate	0.08	(0.09)
Infant mortality	0.13	(0.11)
Population	0.02	(0.04)
Poverty rate	0.13	(0.10)
Vote for Lula	-0.03	(0.11)
Vote for FHC	-0.08	(0.10)
Vote for PT (fed. dep.)	-0.02	(0.11)
Votes for PSDB (fed. dep.)	0.15	(0.09)
Vote for PT (governor)	-0.12	(0.11)
Vote for PSDB (governor)	-0.02	(0.10)
Votes for PT (state dep.)	-0.08	(0.10)
Votes for PSBD (state dep.)	-0.16	(0.10)
Turnout	0.01	(0.10)
Mayor's Sex	0.02	(0.10)
Mayor's Age	0.02	(0.08)

Note: Local linear regression with triangular kernel uses optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014); robust standard error, and bias estimated with quadratic polynomial.

I also test balance using lagged outcome variables (treatment measured in 2008 and 2012 and the lagged outcome measured between 2005-2007 and 2009-2011).

Figure S.C.5: P-value plots, lagged outcomes

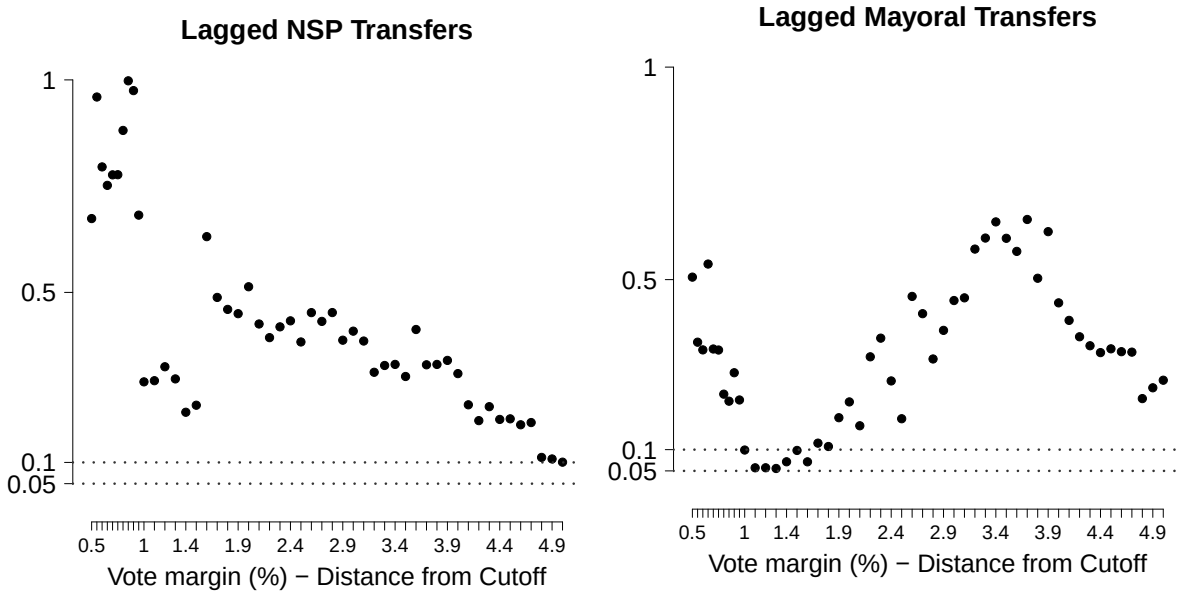


(a) Lagged NSP Transfers (reais per capita)

(b) Lagged Mayoral Transfers (reais per capita)

Note: 100,000 simulated randomizations generated the sampling distribution of the estimated average effect under the null hypothesis of no effect. All p-values are two-sided.

Figure S.C.6: P-value plots, lagged outcomes (difference of means)

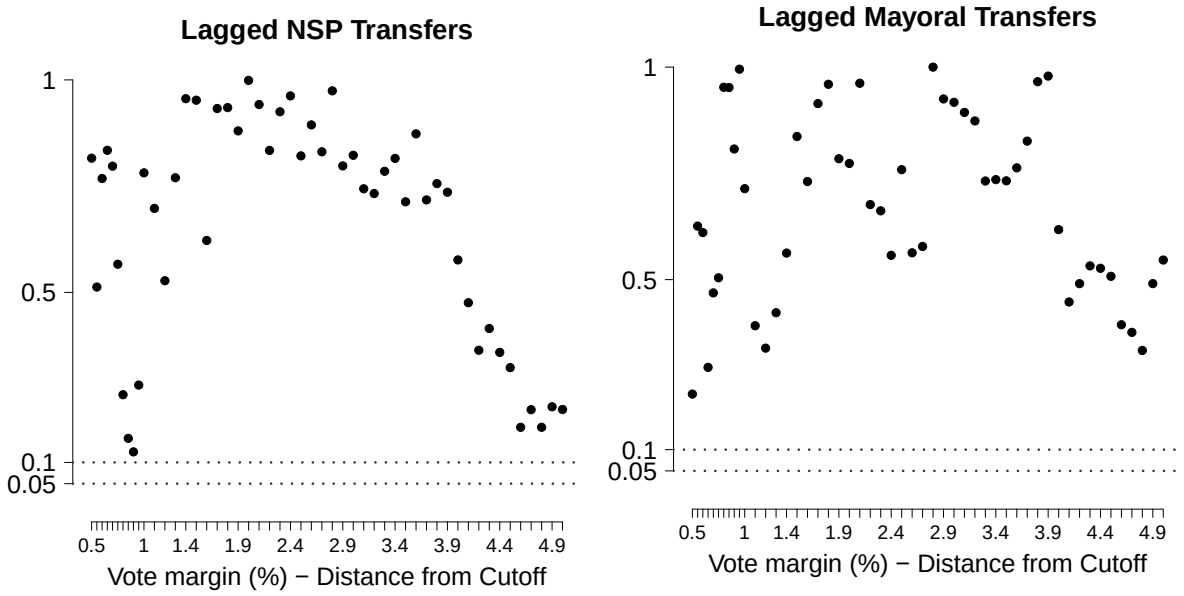


(a) Lagged NSP Transfers (reais per capita)

(b) Lagged Mayoral Transfers (reais per capita)

Note: All p-values are two-sided.

Figure S.C.7: P-value plots, lagged outcomes (Wilcoxon Rank-Sum)



(a) Lagged NSP Transfers (reais per capita)

(b) Lagged Mayoral Transfers (reais per capita)

Note: All p-values are two-sided.

Table S.C.4: RDD Estimates, NSP and Mayoral Lagged Federal Transfers, 2005-2007 and 2009-2011 (*reais per capita*)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-2.06	-7.66	-2.83	-2.53	-2.56	-3.77	-2.29	0.49	0.49
Std. error†	4.86	7.16	4.50	3.16	2.59	2.34	3.91	4.45	4.72
p-value‡	0.34	0.14	0.27	0.21	0.16	0.05	0.28	0.46	0.46
Mean dep. var.	4.19	7.45	7.16	6.00	6.09	6.48	8.69	8.19	8.19
Std. dev. dep. var.	22.75	50.65	37.71	32.12	29.72	30.91	49.99	47.98	47.98
non zero	7	22	45	60	83	112	302	375	375
n	55	117	226	326	415	512	1279	1628	1628
clusters	54	114	216	305	389	476	1041	1260	1260
	Mayoral Transfers								
Estimates	10.32	28.02	12.48	7.44	-14.60	-18.20	-2.22	8.78	8.78
Std. error†	15.47	16.85	9.99	9.83	19.09	16.23	15.80	12.10	12.75
p-value‡	0.25	0.05	0.11	0.22	0.22	0.13	0.44	0.23	0.25
Mean dep. var.	42.92	49.72	41.62	46.50	55.62	56.53	60.58	58.36	58.36
Std. dev. dep. var.	32.53	41.07	45.70	72.95	249.44	234.86	178.09	186.59	186.59
non zero	41	93	174	246	314	395	961	803	803
n	55	117	226	326	415	512	1,242	1,037	1,037
clusters	54	114	216	305	389	476	1,013	881	881

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (14% for NSP Transfers and 14% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 21% for NSP Transfers and 11% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Using the McCrary test, I fail to reject the null hypothesis of no sorting (p-value: 0.25).

Table S.C.5: Tests of Manipulation of the Running Variable

	Unrestricted, triangular kernel	Unrestricted, uniform kernel	Restricted, triangular kernel
p-value	0.735	0.829	0.61

Notes: Two-tailed p-value, using approach suggested by (Cattaneo, Jansson and Ma, 2017).

Figure S.C.8: Density of running variable (vote margin, %)

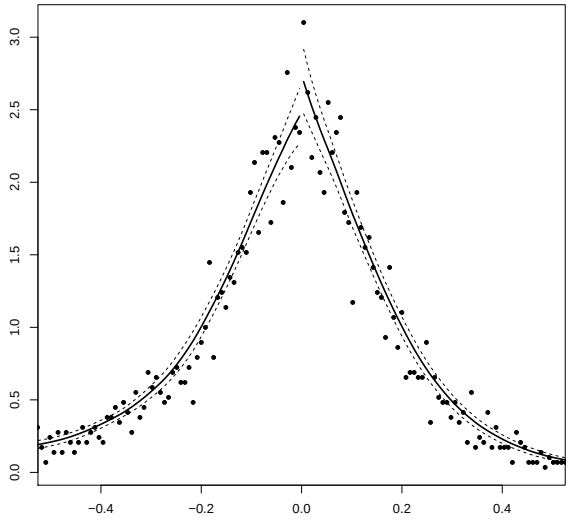


Table S.C.6: Placebo Treatments, Transfers to NSPs (2003-2015)

	Coeff	Std. Err.	z	p-value	CI Lower	CI Upper
Pos. half bandwidth	14.10	6.27	2.25	0.02	1.81	26.39
Neg. half bandwidth	-3.58	13.25	-0.27	0.79	-29.54	22.39
Pos. double bandwidth	-7.85	7.55	-1.04	0.30	-22.65	6.95
Neg. double bandwidth	-5.52	6.40	-0.86	0.39	-18.06	7.01

Notes: Local linear regressions with an uniform kernel; robust standard errors (Calonico, Cattaneo and Titiunik, 2014).

Table S.C.7: Placebo Treatments, Transfers to Mayors (2003-2015)

	Coeff	Std. Err.	z	p-value	CI Lower	CI Upper
Pos. half bandwidth	-21.17	25.33	-0.84	0.40	-70.82	28.47
Neg. half bandwidth	-19.26	24.17	-0.80	0.43	-66.64	28.12
Pos. double bandwidth	15.89	46.70	0.34	0.73	-75.63	107.42
Neg. double bandwidth	-3.52	55.60	-0.06	0.95	-112.50	105.46

Notes: Local linear regressions with a triangular kernel; robust standard errors (Calonico, Cattaneo and Titiunik, 2014).

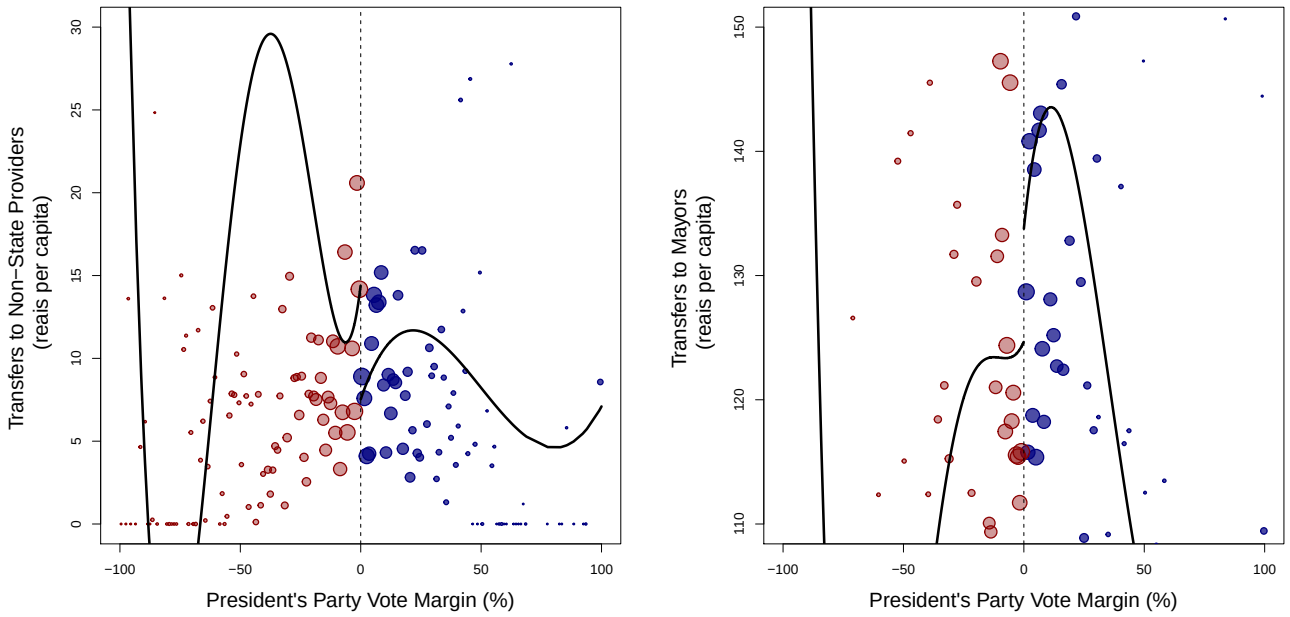
3.2 The Effect of Alignment on Transfers

Table S.C.8: Sum of RDD Estimates, NSP and Mayoral Federal Transfers, 2003–2015 (*reais per capita*)

Vote Margin (%)	0.5	1	2	3	4	5
Estimates	45.64	28.92	20.44	21.05	13.16	10.85
Std. error	41.06	29.34	20.40	16.53	17.10	15.79
p-value	0.14	0.16	0.16	0.12	0.27	0.29
n	92	194	358	534	680	828

Notes: Bootstrapped standard errors (10,000 replicates); p-values were calculated using a normal approximation and a one-tailed test statistic.

Figure S.C.9: NSP and Mayoral Transfers (2003–2015)



(a) NSP Transfers (reais per capita)

(b) Mayoral Transfers (reais per capita)

Notes: Negative vote margins represent unaligned mayors, positive margins represent aligned mayors. Points represent evenly-spaced binned means, selected to mimic the underlying variability of the data. Size of the bins reflect number of observations. The solid line represents predicted values from a local polynomial (fourth-degree) regression Calonico, Cattaneo and Titiunik (2015).

In Tables S.C.10 and S.C.11, treatment is measured whether or not a mayor belongs to a federal coalition party. Governing coalition is defined by two criteria: 1. if the party holds a cabinet position, and 2. if the party has publicly declared support for the president.[11] Finally, because of changes in the coalition during mayoral terms, I consider that the party belongs to the federal coalition during at least half of the mayor's term.

Table S.C.9: Political Parties in the Governing Coalition

Years	Political Parties in the Coalition
2003-2004	PT, PSB, PL, PC do B, PDT, PTB, PPS, PV
2005-2008	PT, PMDB, PP, PPB PSB, PR, PL, PC do B, PTB
2009-2012	PT, PMDB, PP, PSB PR, PL, PC do B, PDT PTB, PRB
2012-2015	PT, PMDB, PP, PPB, PR, PL, PC do B, PDT, PRB

[11] I thank Joyce Luz at NECI–Cebrap for sharing the data on federal coalitions with me.

Table S.C.10: RDD Estimates (Coalition), NSP and Mayoral Federal Transfers, 2003-2015 (*reais per capita*)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-1.82	-1.40	-1.46	-2.07	-4.09	-3.39	-3.73	-3.74	-3.74
Std. error†	1.85	1.02	0.88	1.06	2.34	1.89	1.65	3.32	4.01
p-value‡	0.16	0.09	0.05	0.03	0.04	0.04	0.01	0.13	0.18
Mean dep. var.	13.95	11.17	12.69	12.74	12.83	13.52	10.17	9.80	9.80
Std. dev. dep. var.	128.60	94.01	116.90	111.85	159.17	150.37	96.82	100.25	100.25
non zero	161	348	653	1,024	1,377	1,717	4,829	4,322	4,322
n	805	1,598	3,126	4,851	6,376	7,985	22,752	20,308	20,308
clusters	385	757	1,386	2,010	2,506	2,968	5,082	4,922	4,922
	Mayoral Transfers								
Estimates	14.54	8.08	5.20	4.72	1.63	1.49	2.05	2.17	2.17
Std. error†	8.15	5.84	3.58	3.27	2.93	2.45	2.88	7.16	8.11
p-value‡	0.04	0.08	0.07	0.07	0.29	0.27	0.24	0.38	0.39
Mean dep. var.	92.53	106.35	109.47	122.50	123.57	121.65	122.07	122.02	122.02
Std. dev. dep. var.	139.52	178.28	172.28	230.13	255.36	240.69	215.70	217.61	217.61
non zero	161	348	653	1024	1377	1717	4,829	4,233	4,233
n	805	1,598	3,126	4,851	6,376	7,985	22,752	19,934	19,934
clusters	385	757	1,386	2,010	2,506	2,968	5,082	4,883	4,883

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (19% for NSP Transfers and 40% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 15% for NSP Transfers and 16% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.11: RDD Estimates (ministries run by the Workers' Party), NSP and Mayoral Transfers *(reais per capita)*

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers (2003-2015)								
Estimates	-16.95	-7.66	-9.63	-7.30	-6.59	-10.30	-9.38	-11.41	-11.41
Std. error†	16.91	7.55	5.66	3.85	3.13	5.14	4.45	5.09	5.80
p-value‡	0.16	0.16	0.04	0.03	0.02	0.02	0.02	0.01	0.02
Mean dep. var.	12.87	9.87	10.91	8.90	8.39	10.88	8.95	10.10	10.10
Std. dev. dep. var.	102.65	69.30	67.54	55.83	51.92	100.74	65.20	77.16	77.16
non zero	24	56	92	141	178	226	579	410	410
n	92	194	358	534	680	828	2,218	1,527	1,527
clusters	88	183	324	470	583	699	1,448	1,130	1,130
	Mayoral Transfers (2009-2015)								
Estimates	72.73	25.72	25.18	56.49	54.89	46.54	52.84	50.49	50.49
Std. error†	28.72	24.74	18.40	20.75	18.47	15.46	19.96	17.82	20.71
p-value‡	0.01	0.15	0.09	0.00	0.00	0.00	0.00	0.00	0.01
Mean dep. var.	77.29	94.94	84.16	94.70	96.71	92.92	95.60	93.31	93.31
Std. dev. dep. var.	39.77	141.95	150.53	132.62	140.28	135.03	140.81	132.37	132.37
non zero	39	87	164	240	311	384	903	1,094	1,094
n	55	117	226	326	415	512	1191	1,441	1,441
clusters	54	114	216	305	389	476	986	1,138	1,138

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (16% for NSP Transfers and 13% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 10% for NSP Transfers and 17% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates. Ministries coded as run by the Workers' Party are: Finance, Justice, Social Security, Foreign Affairs, Development, Industry and Commerce, Social Development, Environment, Education, Fishery, Health, Planning, Presidency, Tourism, and Agricultural Development.

Table S.C.12: RDD Estimates (ministries run by coalition parties), NSP and Mayoral Transfers *(reais per capita)*

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers (2003-2015)								
Estimates	-0.26	2.01	1.61	0.91	0.51	0.57	0.93	1.68	1.68
Std. error†	0.26	2.07	1.22	0.87	0.72	0.65	0.87	1.40	1.61
p-value‡	0.16	0.17	0.09	0.15	0.24	0.19	0.14	0.11	0.15
Mean dep. var.	0.19	1.91	1.33	1.20	1.07	1.15	1.44	1.11	1.11
Std. dev. dep. var.	1.52	5.03	3.70	4.95	5.67	5.65	11.42	5.45	5.45
non zero	4	13	22	35	40	53	175	58	58
n	92	194	358	534	680	828	2,340	901	901
clusters	88	183	324	470	583	699	1,499	753	753
	Mayoral Transfers (2009-2015)								
Estimates	32.13	9.11	-6.01	-4.24	-8.35	-4.90	6.52	-5.81	-5.81
Std. error†	51.89	38.16	26.02	20.32	18.62	16.47	24.15	17.82	20.39
p-value‡	0.27	0.41	0.41	0.42	0.33	0.38	0.39	0.37	0.39
Mean dep. var.	152.45	172.06	143.60	138.94	136.43	135.23	142.83	139.16	139.16
Std. dev. dep. var.	125.29	185.37	179.43	173.96	197.30	191.28	206.30	203.08	203.08
non zero	47	103	191	274	348	432	963	1,449	1,449
n	55	117	226	326	415	512	1,135	1,679	1,679
clusters	54	114	216	305	389	476	952	1,293	1,293

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (18% for NSP Transfers and 12% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 5% for NSP Transfers and 23% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates. Ministries coded as run by coalition parties are: Agriculture, Science and Technology, Culture, Defense, National Integration, Cities, Communications, Mining and Energy, Sports, and Labor.

3.2.1 RDD Results by Municipalities' HDI and Poverty Levels

Table S.C.13: RDD Estimates (below median poverty level), NSP and Mayoral Transfers, 2003-2015 (*reais per capita*)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-31.50	-10.19	-4.29	-4.11	-4.93	-10.98	-5.97	-7.96	-7.96
Std. error†	30.36	14.61	8.35	5.95	5.24	9.79	7.37	8.05	8.95
p-value‡	0.15	0.24	0.30	0.24	0.17	0.13	0.21	0.16	0.19
Mean dep. var.	23.74	18.81	15.90	13.99	13.77	18.40	16.52	17.06	17.06
Std. dev. dep. var.	136.98	93.43	70.16	59.41	59.61	134.63	77.47	84.46	84.46
non zero	21	46	78	115	140	180	617	512	512
n	49	101	183	261	325	404	1,401	1,173	1,173
clusters	48	100	171	234	281	344	819	734	734
	Mayoral Transfers								
Estimates	34.70	39.77	33.08	41.95	34.68	27.46	39.57	32.04	32.04
Std. error†	57.44	33.46	26.64	23.08	19.66	17.41	21.52	18.28	21.12
p-value‡	0.27	0.12	0.11	0.03	0.04	0.06	0.03	0.04	0.06
Mean dep. var.	110.78	108.16	114.08	114.43	109.77	114.13	114.14	112.58	112.58
Std. dev. dep. var.	104.57	113.39	159.56	151.76	145.73	153.83	164.54	164.14	164.14
non zero	43	92	164	230	289	362	984	1,202	1,202
n	49	101	183	261	325	404	1,097	1,336	1,336
clusters	48	100	171	234	281	344	701	791	791

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (28% for NSP Transfers and 17% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 19% for NSP Transfers and 25% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.14: RDD Estimates (above median poverty level), NSP and Mayoral Transfers, 2003-2015 (*reais per capita*)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	1.17	-2.58	-12.66	-9.05	-7.32	-8.76	-11.25	-9.82	-9.82
Std. error†	1.28	4.09	8.07	5.28	4.07	3.94	5.70	7.34	8.59
p-value‡	0.18	0.26	0.06	0.04	0.04	0.01	0.02	0.09	0.13
Mean dep. var.	0.91	3.48	8.17	6.22	5.40	5.86	5.23	4.85	4.85
Std. dev. dep. var.	0.88	25.84	65.33	52.94	46.59	51.71	42.90	46.42	46.42
non zero	4	12	19	36	49	59	134	69	69
n	42	91	172	269	351	420	931	537	537
clusters	39	81	150	232	298	351	661	436	436
	Mayoral Transfers								
Estimates	90.86	27.97	22.95	12.23	2.99	13.06	18.21	3.16	3.16
Std. error†	59.61	47.44	30.55	24.39	27.00	24.40	29.80	28.13	31.88
p-value‡	0.06	0.28	0.23	0.31	0.46	0.30	0.27	0.46	0.46
Mean dep. var.	147.69	147.00	131.54	134.77	147.63	144.24	150.20	150.33	150.33
Std. dev. dep. var.	95.96	227.29	185.39	182.18	269.06	256.72	261.62	248.28	248.28
non zero	36	78	149	233	306	364	829	1,019	1,019
n	42	91	172	269	351	420	953	1,164	1,164
clusters	39	81	150	232	298	351	672	758	758

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (12% for NSP Transfers and 12% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 6% for NSP Transfers and 15% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.15: RDD Estimates (below median IDH), NSP and Mayoral Transfers, 2003-2015 (*reais per capita*)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	1.18	0.22	-5.04	-4.35	-3.51	-5.59	-5.83	-3.72	-3.72
Std. error†	1.28	1.69	5.45	3.74	2.87	3.15	3.73	5.63	6.79
p-value‡	0.18	0.45	0.18	0.12	0.11	0.04	0.06	0.25	0.29
Mean dep. var.	0.89	2.04	6.09	4.92	4.42	5.04	4.60	4.98	4.98
Std. dev. dep. var.	0.86	8.19	49.81	41.46	36.36	44.47	35.82	43.73	43.73
non zero	4	11	20	35	47	56	147	79	79
n	43	95	182	277	359	427	1,136	603	603
clusters	40	85	160	239	307	358	750	479	479
	Mayoral Transfers								
Estimates	72.11	45.47	30.94	28.19	13.25	19.29	39.77	3.03	3.03
Std. error†	58.25	41.56	26.62	23.30	26.32	23.52	28.02	24.28	27.39
p-value‡	0.11	0.14	0.12	0.11	0.31	0.21	0.08	0.45	0.46
Mean dep. var.	143.63	135.96	125.37	134.03	147.07	144.72	143.16	147.89	147.89
Std. dev. dep. var.	99.79	184.83	162.43	169.56	263.41	252.10	267.87	244.95	244.95
non zero	37	82	157	238	308	366	755	1,146	1,146
n	43	95	182	277	359	427	873	1,316	1,316
clusters	43	94	175	259	327	381	680	886	886

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (16% for NSP Transfers and 11% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 7% for NSP Transfers and 21% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.16: RDD Estimates (above median IDH), NSP and Mayoral Transfers, 2003-2015 (*reais per capita*)

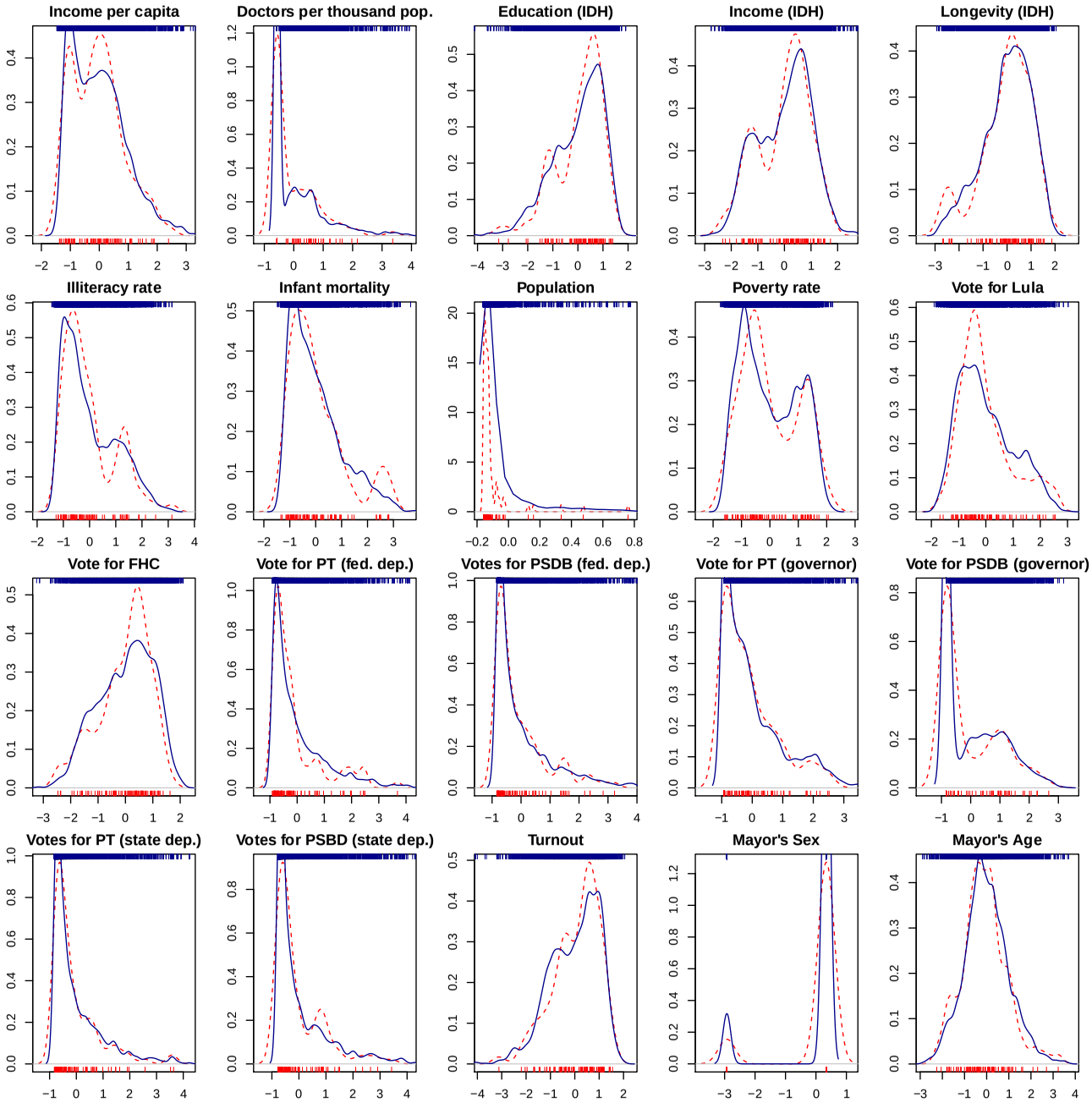
Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-33.58	-13.56	-12.04	-8.61	-9.14	-14.36	-11.16	-11.56	-11.56
Std. error†	31.76	15.58	10.49	7.10	6.12	10.20	8.32	8.39	9.22
p-value‡	0.15	0.19	0.13	0.11	0.07	0.08	0.09	0.08	0.11
Mean dep. var.	24.23	20.86	18.53	15.67	15.09	19.50	16.89	16.96	16.96
Std. dev. dep. var.	140.19	97.83	82.30	67.83	66.79	137.91	84.32	83.52	83.52
non zero	21	47	77	116	142	183	526	534	534
n	48	97	173	253	317	397	1,196	1,217	1,217
clusters	47	96	161	227	272	337	734	740	740
	Mayoral Transfers								
Estimates	51.64	21.96	24.97	24.57	23.90	20.87	25.10	25.37	25.37
Std. error†	57.97	40.14	29.78	22.81	19.07	17.26	20.09	21.34	25.46
p-value‡	0.19	0.29	0.20	0.14	0.11	0.11	0.11	0.12	0.16
Mean dep. var.	113.65	117.37	119.56	114.60	109.45	113.08	117.39	118.29	118.29
Std. dev. dep. var.	100.96	174.49	184.02	167.69	154.35	160.32	172.75	170.91	170.91
non zero	21	47	77	116	142	183	547	495	495
n	48	97	173	253	317	397	1,249	1,121	1,121
clusters	48	95	169	238	288	348	859	801	801

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (20% for NSP Transfers and 21% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 20% for NSP Transfers and 17% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

External Validity

Municipalities with close electoral mayoral races are not randomly selected from the population of municipalities. Thus, if the local average treatment effect refers to a subset of units irrelevant to or unrepresentative of the hypotheses being tested, the estimates, although unbiased, could be empirically uninformative. I compare the distribution of pre-treatment covariates for the subsets of municipalities with a president's party candidate as either winner or runner-up in close mayoral races (the study group) against the all municipalities in Brazil. Figure S.C.10 displays these comparisons across all variables used to test for balance of covariates and provides an overview of the municipalities used to estimate the RDD local average treatment effects.

Figure S.C.10: External validity (Federal Transfers)



Note: Solid lines represent the all municipalities and dashed lines represent the RD study group (0.5% of vote margin). Standardized variables with mean zero and standard deviation one.

3.2.2 Additional RDD Analysis

Table S.C.17: RDD estimates by election cycle, NSP transfers (*reais per capita*)

Estimator	Regression Local Linear (robust std. error) 2000	Regression Local Linear (robust std. error) 2004	Regression Local Linear (robust std. error) 2008	Regression Local Linear (robust std. error) 2012
Estimates	-49.17	-10.29	-24.11	2.15
Std. error	42.27	10.86	13.33	3.94
p-value	0.12	0.17	0.035	0.29
Mean dep. var.	11.54	10.66	10.42	10.80
Std. dev. dep. var.	92.61	70.97	68.54	66.02
n	999	1,962	2,123	2,284
non zero	277	556	590	643

Notes: Local linear regression uses an uniform kernel and optimal bandwidth selector proposed by Calonico, Cattaneo and Titiunik (2014); bias estimated with quadratic polynomial. I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.18: RDD estimates by election cycle, mayoral transfers (*reais per capita*)

Estimator	Regression Local Linear (robust std. error) 2000	Regression Local Linear (robust std. error) 2004	Regression Local Linear (robust std. error) 2008	Regression Local Linear (robust std. error) 2012
Estimates	7.24	70.95	10.95	18.27
Std. error	12.66	34.85	28.50	37.16
p-value	0.28	0.02	0.35	0.31
Mean dep. var.	128.81	128.87	133.41	131.15
Std. dev. dep. var.	228.21	225.85	223.94	208.12
n	1,449	1,495	1,891	2,784
non zero	1,283	1,327	1,675	2,463

Notes: Local linear regression uses a triangular kernel and optimal bandwidth selector proposed by Calonico, Cattaneo and Titiunik (2014); bias estimated with quadratic polynomial. I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.19: RDD Estimates, NSP and Mayoral Transfers, 2003-2015 *(reais per capita)*, without largest observation, without largest observation.

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-17.21	-5.64	-8.02	-6.39	-6.08	-9.72	-8.51	-9.85	-9.85
Std. error†	16.94	7.84	5.81	3.95	3.28	5.20	4.59	4.89	5.42
p-value‡	0.15	0.24	0.08	0.05	0.03	0.03	0.03	0.02	0.03
Mean dep. var.	13.06	11.78	12.24	10.10	9.47	12.03	10.41	10.53	10.53
Std. dev. dep. var.	102.86	69.52	67.65	56.06	53.28	101.30	67.46	69.18	69.18
non zero	25	59	98	152	190	240	610	583	583
n	92	194	358	534	680	828	2,188	2,079	2,079
clusters	88	183	324	470	583	699	1,437	1,388	1,388
	Mayoral Transfers								
Estimates	63.13	34.72	28.30	27.45	19.13	20.58	16.76	25.64	25.64
Std. error†	40.42	28.45	20.05	16.71	16.83	15.05	11.89	17.37	19.82
p-value‡	0.06	0.11	0.08	0.05	0.13	0.09	0.08	0.07	0.10
Mean dep. var.	129.19	127.63	122.84	124.74	129.39	129.44	126.37	133.75	133.75
Std. dev. dep. var.	99.47	178.87	172.60	168.30	219.06	212.85	211.84	215.56	215.56
non zero	80	172	316	467	599	730	3,025	1,928	1,928
n	92	194	358	534	680	828	3,417	2,174	2,174
clusters	88	183	324	470	583	699	1,958	1,430	1,430

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (16% for NSP Transfers and 59% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 14% for NSP Transfers and 15% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.20: RDD Estimates, NSP Transfers, 2003-2015 (*reais per capita*), without observations larger than three standard deviations

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-0.75	1.29	-4.36	-3.95	-4.21	-3.91	-4.68	-3.97	-3.97
Std. error†	4.20	3.65	4.55	3.14	2.70	2.54	3.30	3.04	3.50
p-value‡	0.43	0.36	0.17	0.10	0.06	0.06	0.08	0.10	0.13
Mean dep. var.	6.25	8.56	10.51	8.93	8.55	9.18	9.04	9.06	9.06
Std. dev. dep. var.	17.16	22.56	48.17	40.45	41.00	43.37	38.64	38.27	38.27
non zero	24	58	97	151	189	238	555	567	567
n	91	193	357	533	679	826	1,971	2,020	2,020
clusters	87	182	323	469	582	697	1,337	1,364	1,364
	Mayoral Transfers								
Estimates	20.55	31.29	28.39	18.97	18.58	17.95	27.45	26.30	26.30
Std. error †	27.14	20.26	14.70	12.85	11.16	10.08	13.87	11.61	13.06
p-value †	0.22	0.06	0.03	0.07	0.05	0.04	0.02	0.01	0.02
Mean dep. var.	104.01	107.31	106.74	109.66	109.84	110.09	110.22	109.94	109.94
Std. dev. dep. var.	99.47	130.74	123.65	137.43	133.67	136.78	142.20	138.99	138.99
non zero	78	168	310	459	588	716	1,599	2,005	2,005
n	90	190	352	526	669	814	1,810	2,267	2,267
clusters	86	179	319	463	573	690	1,269	1,465	1,465

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (14% for NSP Transfers and 12% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 15% for NSP Transfers and 17% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.21: RDD Estimates, NSP and Mayoral Transfers, 2003-2015 (*reais per capita*), logged outcomes (1+transfers)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-0.25	-0.01	-0.11	-0.17	-0.17	-0.19	-0.25	-0.27	-0.27
Std. error†	0.31	0.21	0.16	0.12	0.11	0.10	0.15	0.13	0.15
p-value‡	0.22	0.48	0.24	0.09	0.05	0.03	0.05	0.02	0.04
Mean dep. var.	0.73	0.83	0.77	0.76	0.73	0.77	0.78	0.78	0.78
Std. dev. dep. var.	1.64	1.51	1.55	1.50	1.46	1.51	1.43	1.42	1.42
non zero	25	59	98	152	190	240	469	515	515
n	92	194	358	534	680	828	1,649	1,797	1,797
clusters	88	183	324	470	583	699	1,190	1,263	1,263
	Mayoral Transfers								
Estimates	0.62	0.64	0.46	0.35	0.28	0.35	0.45	0.42	0.42
Std. error †	0.40	0.25	0.20	0.17	0.15	0.13	0.17	0.15	0.18
p-value‡	0.06	0.01	0.01	0.02	0.03	0.00	0.01	0.00	0.01
Mean dep. var.	3.73	3.78	3.67	3.66	3.67	3.67	3.71	3.72	3.72
Std. dev. dep. var.	2.05	1.91	1.94	1.93	1.93	1.96	1.97	1.97	1.97
non zero	80	172	316	467	599	730	1,740	1,992	1,992
n	92	194	358	534	680	828	1,965	2,248	2,248
clusters	88	183	324	470	583	699	1,337	1,461	1,461

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (11% for NSP Transfers and 14% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 12% for NSP Transfers and 17% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

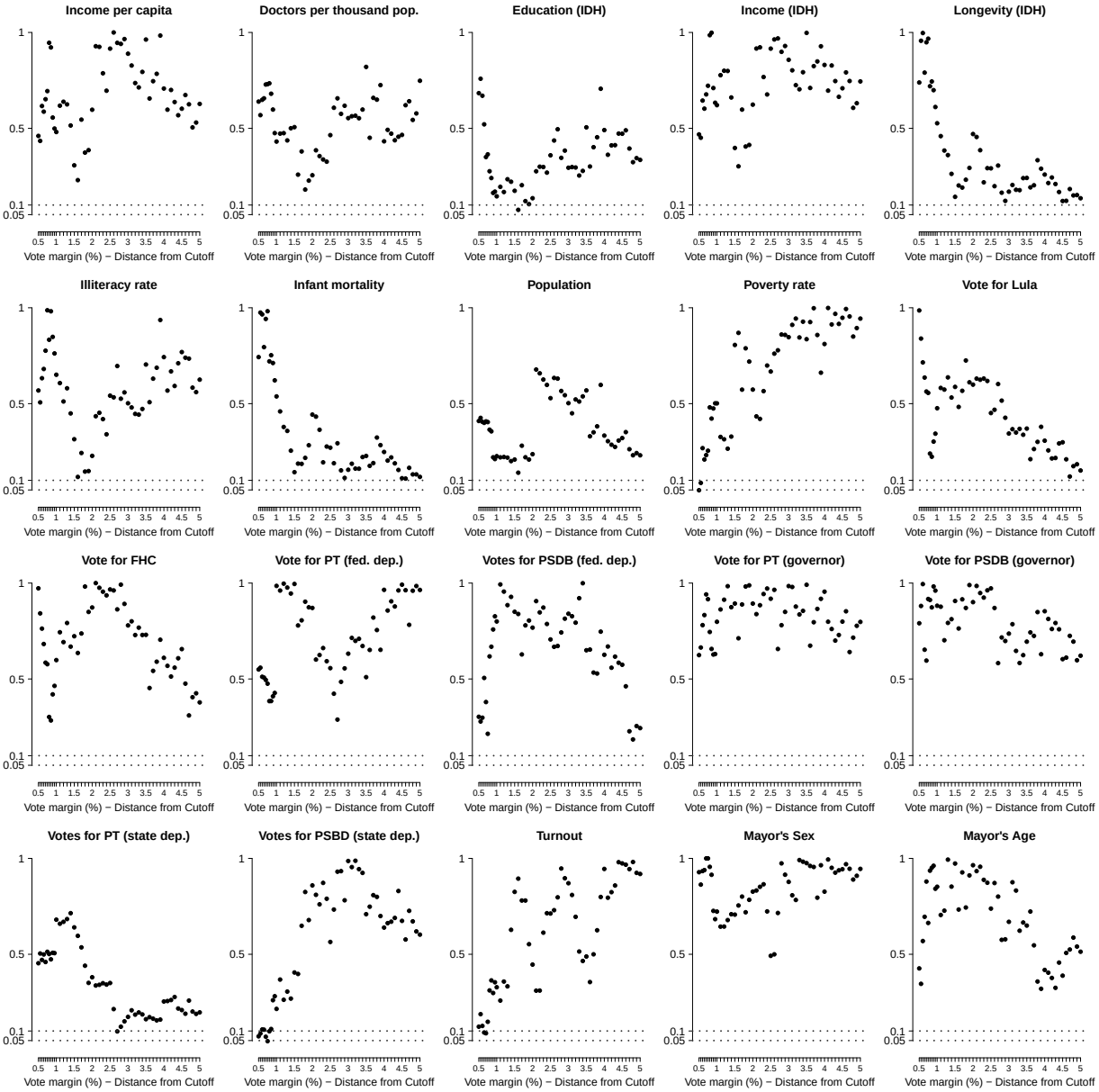
Table S.C.22: RDD Estimates, NSP and Mayoral Transfers, 2003-2015 (*reais per capita*), logged outcomes (inverse hyperbolic sine transformation)

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-0.27	-0.00	-0.12	-0.19	-0.20	-0.22	-0.29	-0.32	-0.32
Std. error†	0.37	0.25	0.19	0.15	0.13	0.12	0.17	0.16	0.18
p-value‡	0.23	0.49	0.25	0.09	0.06	0.03	0.05	0.02	0.04
Mean dep. var.	0.87	1.00	0.92	0.91	0.88	0.92	0.93	0.94	0.94
Std. dev. dep. var.	1.90	1.77	1.81	1.76	1.72	1.77	1.68	1.68	1.68
non zero	25	59	98	152	190	240	487	515	515
n	92	194	358	534	680	828	1,715	1,799	1,799
clusters	88	183	324	470	583	699	1,226	1,264	1,264
	Mayoral Transfers								
Estimates	0.71	0.70	0.51	0.39	0.31	0.39	0.49	0.46	0.46
Std. error†	0.45	0.28	0.22	0.18	0.16	0.14	0.19	0.17	0.19
p-value‡	0.06	0.01	0.01	0.02	0.03	0.00	0.01	0.00	0.01
Mean dep. var.	4.31	4.36	4.24	4.23	4.24	4.24	4.29	4.29	4.29
Std. dev. dep. var.	2.31	2.13	2.16	2.15	2.15	2.17	2.18	2.18	2.18
non zero	80	172	316	467	599	730	1,744	2,010	2,010
n	92	194	358	534	680	828	1,970	2,267	2,267
clusters	88	183	324	470	583	699	1,337	1,470	1,470

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (11% for NSP Transfers and 14% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 12% for NSP Transfers and 17% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

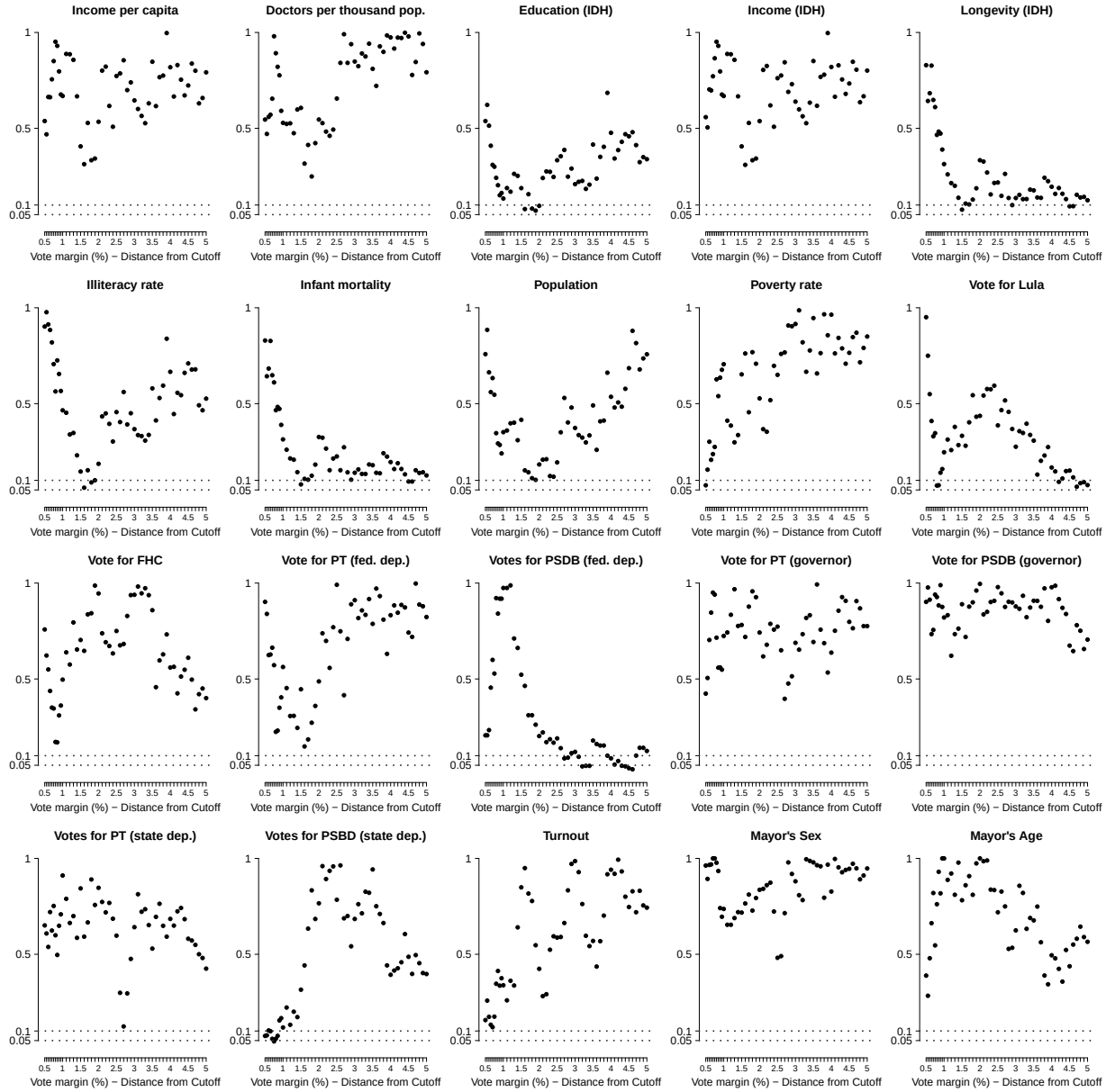
3.2.3 State Transfers to Mayors and NSPs

Figure S.C.11: P-value plot, difference of means (state transfers)



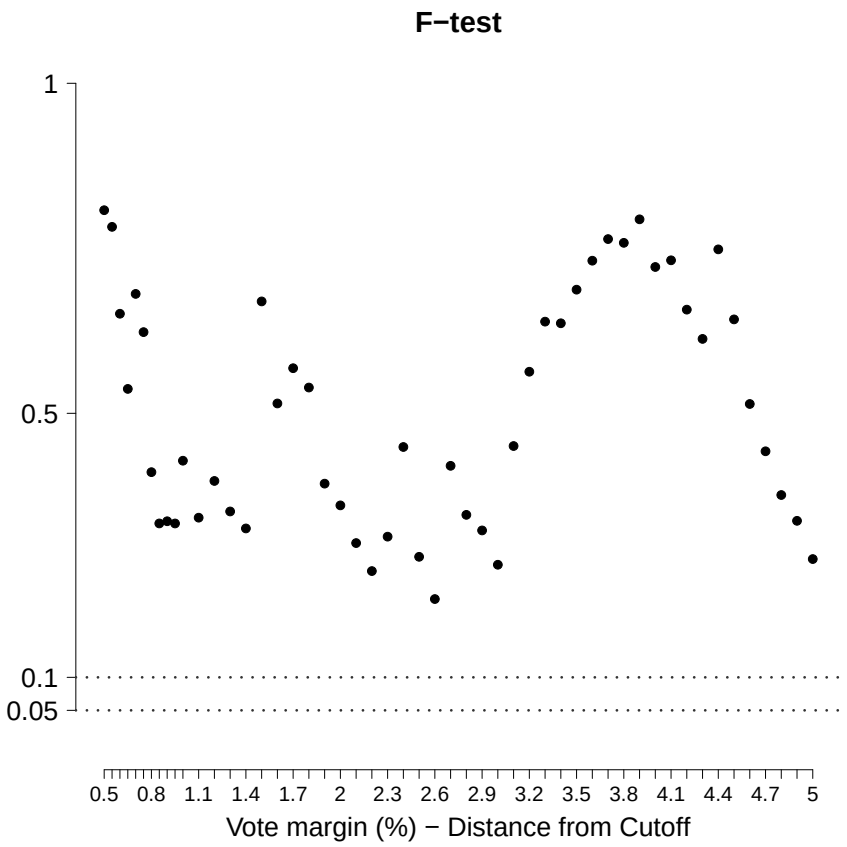
Note: All p-values are two-sided.

Figure S.C.12: P-value plot, rank sum tests (state transfers)



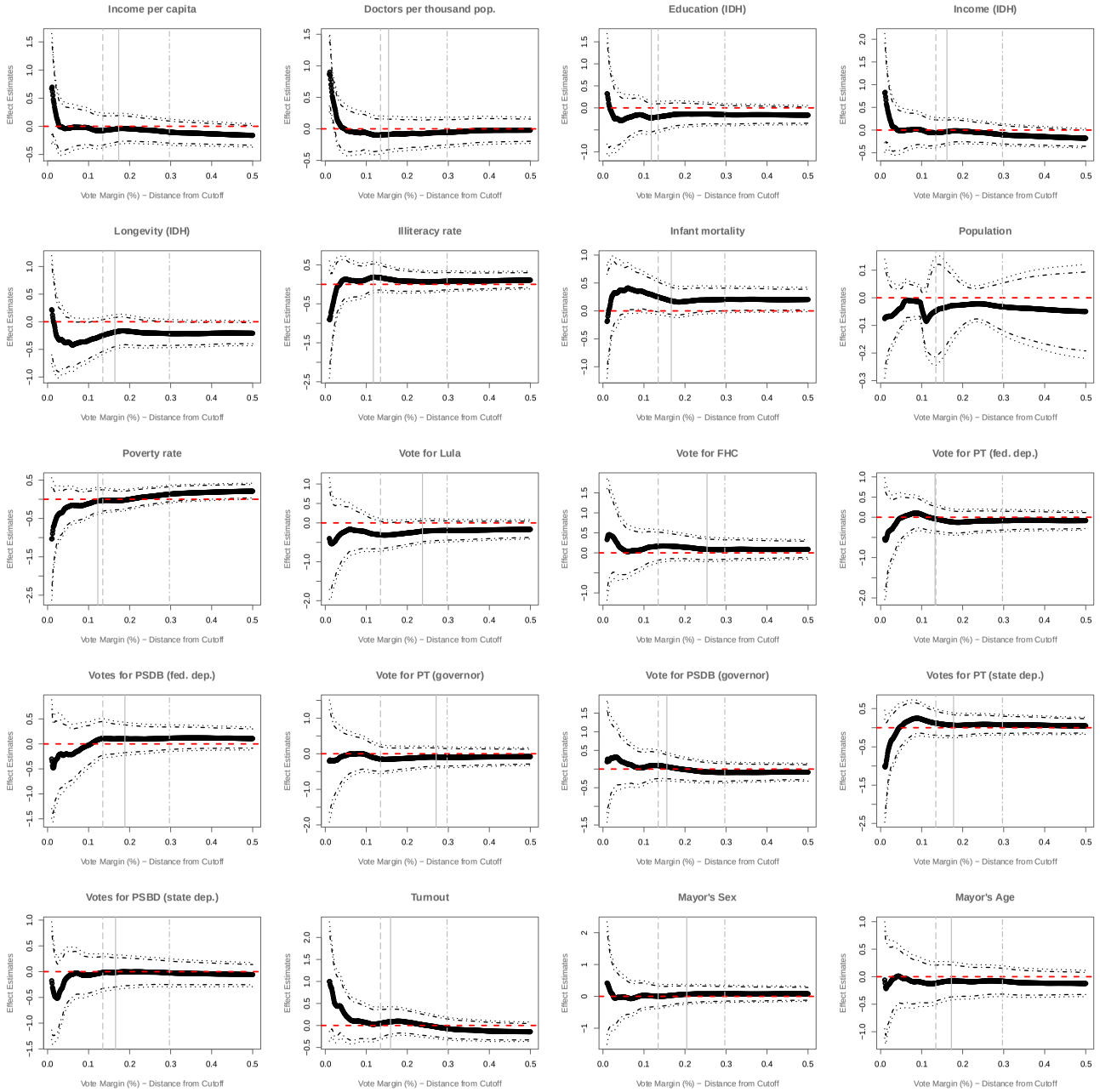
Note: All p-values are two-sided.

Figure S.C.13: P-value plot, F-test (state transfers)



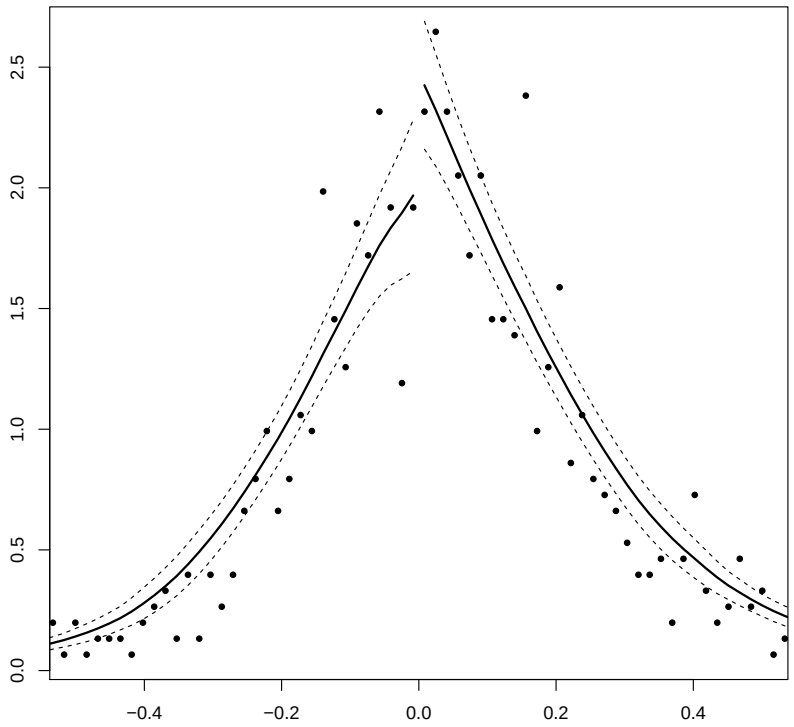
Note: Regression of treatment on all twenty pre-treatment covariates.

Figure S.C.14: Balance tests, local linear regression (state transfers)



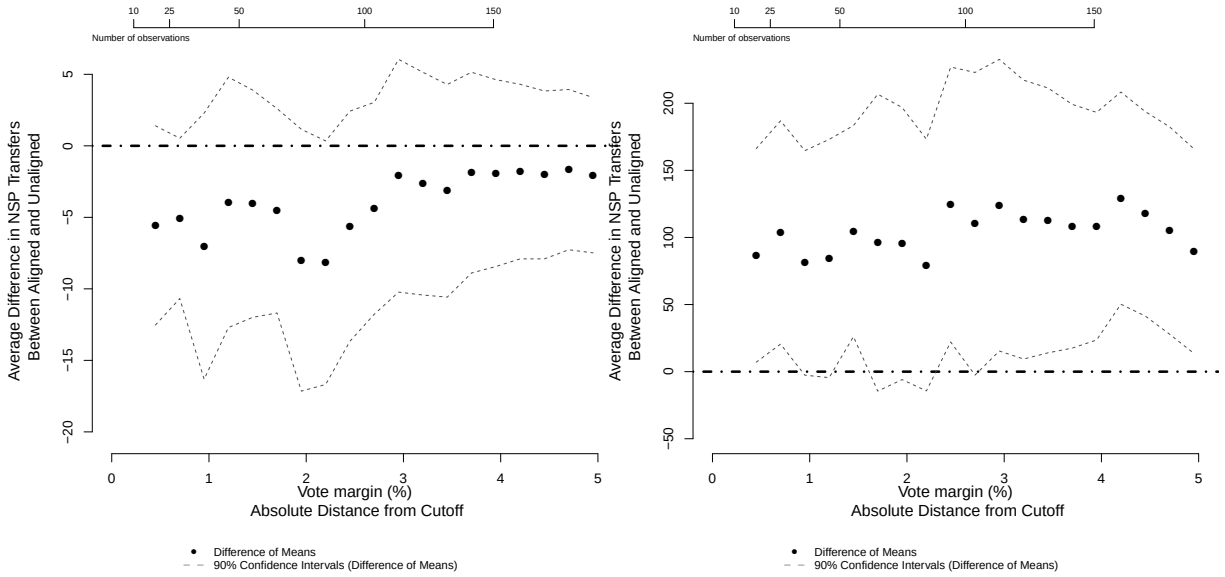
Note: The solid vertical gray line is the optimal bandwidth for that covariate. The other dashed vertical lines at approximately 13% and 30% of the vote margins represent the optimal bandwidths for NSP and mayoral transfers per capita, respectively (all estimated using Imbens and Kalyanaraman 2012). Local linear regression uses a triangular kernel.

Figure S.C.15: Density of running variable (state-level)



Using the McCrary test, I fail to reject the null hypothesis of no sorting at the 5% level (p-value: 0.0926). See Table S.C.26 for Additional manipulation tests proposed by Cattaneo, Jansson and Ma (2017). Using McCrary test, I also analyze if there is evidence for manipulation of the running variable in PSDB close races including all Brazilian states (p-value: 0.699), states in which PSDB has a strong electoral presence such as Minas Gerais (p-value: 0.839) and Goiás (p-values: 0.86), and in São Paulo for all elections from 2000 to 2012 (p-value: 0.333) – Figure S.C.15 uses data for the 2008 and 2012 elections. Similarly to other studies using close races in Brazil, I do not find evidence supporting manipulation of the running variable. The code and data for these additional tests are available at `https://github.com/nataliabueno/close_races`

Figure S.C.16: State NSP and Mayoral Transfers: RDD Estimates, 2007–2015



(a) NSP Transfers (reais per capita)

(b) Mayoral Transfers (reais per capita)

Note: The difference in means is the average in transfers for an aligned municipality minus the average for an unaligned municipality. Robust standard-errors, clustered at the municipality level.

Table S.C.23: Descriptive Statistics: Municipalities in which the aligned mayor was either a winner or runner-up, 2007-2015 (State Transfers)

	Number of observations	Min	Mean	Median	Std. dev.	Max	Missing
Vote Margin	921	-100.00	4.00	3.06	24.90	100.00	0
State NSP Transfers	921	0.00	12.22	2.30	31.23	561.96	0
State Mayoral Transfers	921	0.00	343.15	209.20	458.33	6772.13	0
Total Valid Votes Mun	921	782.00	39662.06	7714.00	288540.80	6096488.00	0
Income per capita	921	107.89	275.56	257.51	88.83	954.65	0
Doctors	921	0.00	0.51	0.00	0.74	4.68	0
IDH Education	921	0.76	0.86	0.85	0.03	0.95	0
IDH Income	921	0.55	0.70	0.70	0.05	0.92	0
IDH Longevity	921	0.60	0.78	0.78	0.04	0.87	0
Illiteracy rate	921	3.88	13.66	13.41	4.50	27.91	0
Infant mortality	921	6.28	15.72	15.08	5.06	42.35	0
Population	921	795	67,308.91	12,298	495,542.40	10,434,252.00	0
Poverty rate	921	5.25	21.32	19.66	9.75	67.23	0
Vote for Lula	921	0.07	0.22	0.20	0.08	0.57	0
Vote for FHC	921	0.31	0.65	0.67	0.09	0.85	0
Vote for PT (fed. dep.)	921	0.00	0.07	0.04	0.08	0.55	0
Votes for PSDB (fed. dep.)	921	0.02	0.23	0.19	0.14	0.78	0
Vote for PT (governor)	921	0.03	0.14	0.12	0.06	0.43	0
Vote for PSDB (governor)	921	0.08	0.25	0.23	0.10	0.67	0
Votes for PT (state dep.)	921	0.00	0.06	0.03	0.08	0.59	0
Votes for PSBD (state dep.)	921	0.01	0.23	0.18	0.16	0.85	0
Turnout	921	0.65	0.81	0.82	0.05	0.93	0
Mayor's sex	921	0	0.91	1	0.29	1	0
Mayor's age	921	34.08	59.33	59.35	9.96	90.26	0

Note: Electoral covariates are measured in 1998 and demographic are measured in 2000.

Table S.C.24: Balance Tests, Difference of Means (State Transfers)

	Vote Margin (%)					
Covariates	0.5	1	2	3	4	5
Income per capita	0.19	-0.17	-0.09	-0.02	-0.05	-0.06
Std. error	0.25	0.24	0.18	0.15	0.13	0.12
Doctors per thousand pop.	0.08	-0.19	-0.20	-0.09	-0.12	-0.04
Std. error	0.18	0.24	0.17	0.14	0.15	0.13
Education (IDH)	-0.17	-0.44	-0.30	-0.18	-0.10	-0.13
Std. error	0.42	0.30	0.20	0.17	0.14	0.13
Income (IDH)	0.24	-0.13	-0.10	-0.03	-0.03	-0.04
Std. error	0.32	0.26	0.20	0.16	0.14	0.12
Longevity (IDH)	0.12	-0.18	-0.15	-0.23	-0.17	-0.20
Std. error	0.36	0.28	0.20	0.17	0.15	0.13
Illiteracy rate	-0.22	0.13	0.27	0.13	0.05	0.07
Std. error	0.38	0.29	0.22	0.19	0.15	0.14
Infant mortality	-0.11	0.16	0.14	0.22	0.16	0.19
Std. error	0.34	0.26	0.19	0.16	0.13	0.12
Population	-0.05	-0.05	-0.03	-0.02	-0.02	-0.03
Std. error	0.06	0.04	0.02	0.03	0.03	0.02
Poverty rate	-0.69	-0.18	-0.11	-0.03	-0.03	0.01
Std. error	0.33	0.27	0.20	0.15	0.13	0.11
Vote for Lula	-0.01	-0.28	-0.13	-0.19	-0.16	-0.22
Std. error	0.61	0.39	0.24	0.20	0.15	0.15
Vote for FHC	0.02	0.21	0.04	0.06	0.08	0.14
Std. error	0.60	0.39	0.24	0.20	0.16	0.15
Vote for PT (fed. dep.)	-0.26	0.01	0.03	0.07	-0.01	-0.01
Std. error	0.43	0.33	0.20	0.15	0.17	0.16
Votes for PSDB (fed. dep.)	-0.47	-0.09	-0.07	-0.04	0.07	0.16
Std. error	0.44	0.35	0.24	0.19	0.15	0.14
Vote for PT (governor)	0.29	-0.09	0.03	0.00	-0.01	-0.04
Std. error	0.57	0.36	0.23	0.20	0.16	0.16
Vote for PSDB (governor)	-0.14	-0.05	-0.03	-0.07	-0.03	-0.07
Std. error	0.51	0.36	0.24	0.21	0.17	0.15
Votes for PT (state dep.)	-0.29	0.16	0.19	0.26	0.17	0.18
Std. error	0.38	0.39	0.22	0.19	0.15	0.14
Votes for PSBD (state dep.)	-0.71	-0.37	-0.04	-0.00	-0.08	-0.08
Std. error	0.38	0.30	0.22	0.18	0.17	0.15
Turnout	0.67	0.30	0.17	-0.03	-0.01	0.01
Std. error	0.42	0.31	0.22	0.18	0.15	0.14
Mayor's Sex	-0.05	-0.13	-0.04	0.03	0.03	-0.01
Std. error	0.57	0.35	0.20	0.18	0.16	0.14
Mayor's Age	-0.31	0.05	0.01	-0.09	-0.14	-0.10
Std. error	0.38	0.28	0.24	0.20	0.17	0.15

Notes: Socio-economic covariates and electoral covariates were measured in 2000 and 1998 respectively. All covariates were standardized to have mean 0 and standard deviation 1.

Table S.C.25: Balance tests, local linear regression (CCT), State Transfers

	Estimate Local Linear	Std. error Robust
Income per capita	-0.02	0.16
Doctors per thousand pop.	-0.10	0.16
Education (IDH)	-0.14	0.17
Income (IDH)	0.02	0.17
Longevity (IDH)	-0.15	0.17
Illiteracy rate	0.08	0.18
Infant mortality	0.16	0.16
Population	-0.09	0.09
Poverty rate	-0.09	0.18
Vote for Lula	-0.29	0.21
Vote for FHC	0.17	0.21
Vote for PT (fed. dep.)	-0.09	0.17
Votes for PSDB (fed. dep.)	0.09	0.22
Vote for PT (governor)	-0.13	0.21
Vote for PSDB (governor)	0.12	0.22
Votes for PT (state dep.)	0.08	0.18
Votes for PSBD (state dep.)	-0.01	0.20
Turnout	0.14	0.21
Mayor's Sex	0.03	0.21
Mayor's Age	-0.06	0.19

Note: Local linear regression with triangular kernel uses optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014), robust standard error, and bias estimated with quadratic polynomial.

Table S.C.26: Tests of Manipulation of the Running Variable

	Unrestricted, triangular kernel	Unrestricted, uniform kernel	Restricted, triangular kernel
p-value	0.5932	0.9414	0.0027

Notes: Two-tailed p-value, using approach suggested by Cattaneo, Jansson and Ma (2017).

Table S.C.27: Placebo Treatments, State Transfers to NSPs (2007-2015)

	Coeff	Std. Err.	z	p-value	CI Lower	CI Upper
Pos. half bandwidth	-2.84	6.21	-0.46	0.65	-15.00	9.32
Neg. half bandwidth	-1.21	4.55	-0.27	0.79	-10.13	7.71
Pos. double bandwidth	-2.73	6.67	-0.41	0.68	-15.80	10.34
Neg. double bandwidth	4.09	8.96	0.46	0.65	-13.48	21.66

Notes: Local linear regressions with an uniform kernel; robust standard errors (Calonico, Cattaneo and Titiunik, 2014).

Table S.C.28: Placebo Treatments, State Transfers to Mayors (2007-2015)

	Coeff	Std. Err.	z	p-value	CI Lower	CI Upper
Pos. half bandwidth	64.38	162.73	0.40	0.69	-254.56	383.32
Neg. half bandwidth	-257.14	92.79	-2.77	0.01	-439.01	-75.27
Pos. double bandwidth	17.76	68.04	0.26	0.79	-115.59	151.11
Neg. double bandwidth	9.78	110.38	0.09	0.93	-206.56	226.12

Notes: Local linear regressions with a triangular kernel; robust standard errors (Calonico, Cattaneo and Titiunik, 2014).

Table S.C.29: Sum of Estimates, State Transfers, 2007–2015 (*reais per capita*)

Vote Margin (%)	0.5	1	2	3	4	5
Estimates	76.03	74.30	81.25	123.20	120.56	87.93
Std. error	42.29	47.17	61.83	65.44	53.50	50.12
p-value	0.04	0.06	0.09	0.03	0.01	0.04
n	23	42	76	112	155	191

Notes: Bootstrapped standard errors (10,000 replicates); p-values were calculated using a normal approximation and a one-tailed test statistic.

Table S.C.30: RDD Estimates, State NSP and Mayoral Transfers, 2007-2015 (*reais per capita*), removing extreme observation.

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-5.84	-5.79	-7.70	-2.09	-1.74	-2.11	-5.01	-6.22	-6.22
Std. error†	4.21	5.78	5.58	4.96	3.89	3.28	4.24	4.37	5.06
p-value‡	0.08	0.16	0.08	0.34	0.33	0.26	0.12	0.08	0.11
Mean dep. var.	5.78	8.39	9.83	11.01	10.92	10.00	11.31	10.94	10.94
Std. dev. dep. var.	13.97	24.08	31.40	27.54	24.57	23.10	20.12	19.88	19.88
non zero	12	20	37	57	81	98	262	233	233
n	23	42	76	112	155	191	470	425	425
clusters	22	41	72	104	142	169	337	315	315
	Mayoral Transfers								
Estimates	81.50	80.61	88.94	124.05	121.75	89.66	125.18	157.26	157.26
Std. error†	45.79	49.78	61.71	66.26	53.64	45.92	51.64	60.34	69.78
p-value‡	0.04	0.05	0.07	0.03	0.01	0.03	0.01	0.00	0.01
Mean dep. var.	213.06	225.32	283.09	323.34	308.86	321.49	328.62	329.23	329.23
Std. dev. dep. var.	91.02	157.04	289.88	339.04	305.89	326.78	367.53	383.44	383.44
non zero	23	41	75	111	154	190	547	474	474
n	23	42	76	112	155	191	549	475	475
clusters	22	41	72	104	142	169	374	341	341

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (14% for NSP Transfers and 16% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 12% for NSP Transfers and 14% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.31: RDD Estimates, State NSP and Mayoral Transfers, 2007-2015 (*reais per capita*), removing observations larger than three standard deviations above the mean.

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-5.84	-5.79	-3.67	-1.58	-1.47	-1.73	-4.03	-3.46	-3.46
Std. error‡	4.21	5.78	3.97	3.23	2.82	2.41	3.36	3.04	3.54
p-value‡	0.08	0.16	0.18	0.31	0.30	0.24	0.12	0.13	0.16
Mean dep. var.	5.78	8.39	8.00	8.37	9.02	8.46	10.38	10.38	10.38
Std. dev. dep. var.	13.97	24.08	21.14	19.03	18.09	17.17	17.27	17.90	17.90
non zero	12	20	36	55	79	96	234	257	257
n	23	42	75	110	153	189	428	465	465
clusters	22	41	71	102	140	167	318	334	334
	Mayoral Transfers								
Estimates	81.50	80.61	88.94	132.53	109.48	67.85	107.84	125.51	125.51
Std. error†	45.79	49.78	61.71	53.75	42.80	41.37	44.82	47.65	55.95
p-value‡	0.04	0.05	0.07	0.01	0.01	0.05	0.01	0.00	0.01
Mean dep. var.	213.06	225.32	283.09	296.11	278.97	289.25	282.98	286.17	286.17
Std. dev. dep. var.	91.02	157.04	289.88	259.28	244.71	281.70	257.72	261.04	261.04
non zero	23	41	75	109	151	186	559	506	506
n	23	42	76	110	152	187	561	508	508
clusters	22	41	72	102	139	166	379	356	356

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (12% for NSP Transfers and 18% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 13% for NSP Transfers and 15% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.32: RDD Estimates, State NSP and Mayoral Transfers, 2007-2015 (*reais per capita*), logged outcomes (1+transfers))

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-0.34	-0.27	-0.27	-0.01	-0.06	-0.09	-0.25	-0.36	-0.36
Std. error†	0.53	0.44	0.34	0.29	0.25	0.22	0.29	0.27	0.31
p-value‡	0.26	0.27	0.21	0.48	0.40	0.34	0.19	0.09	0.13
Mean dep. var.	1.07	1.14	1.20	1.28	1.30	1.26	1.39	1.38	1.38
Std. dev. dep. var.	1.49	1.53	1.57	1.52	1.52	1.51	1.48	1.48	1.48
non zero	12	20	37	57	81	98	238	242	242
n	23	42	76	112	155	191	433	441	441
clusters	22	41	72	104	142	169	320	323	323
	Mayoral Transfers								
Estimates	0.54	0.32	0.51	0.54	0.54	0.45	0.57	0.59	0.59
Std. error†	0.32	0.35	0.26	0.23	0.20	0.18	0.20	0.19	0.22
p-value‡	0.04	0.18	0.03	0.01	< 0.00	0.01	< 0.00	< 0.00	< 0.00
Mean dep. var.	5.17	5.06	5.21	5.24	5.15	5.20	5.12	5.13	5.13
Std. dev. dep. var.	0.96	0.93	1.15	1.20	1.29	1.32	1.38	1.38	1.38
non zero	23	41	75	111	154	190	608	706	706
n	23	42	76	112	155	191	610	709	709
clusters	22	41	72	104	142	169	402	439	439

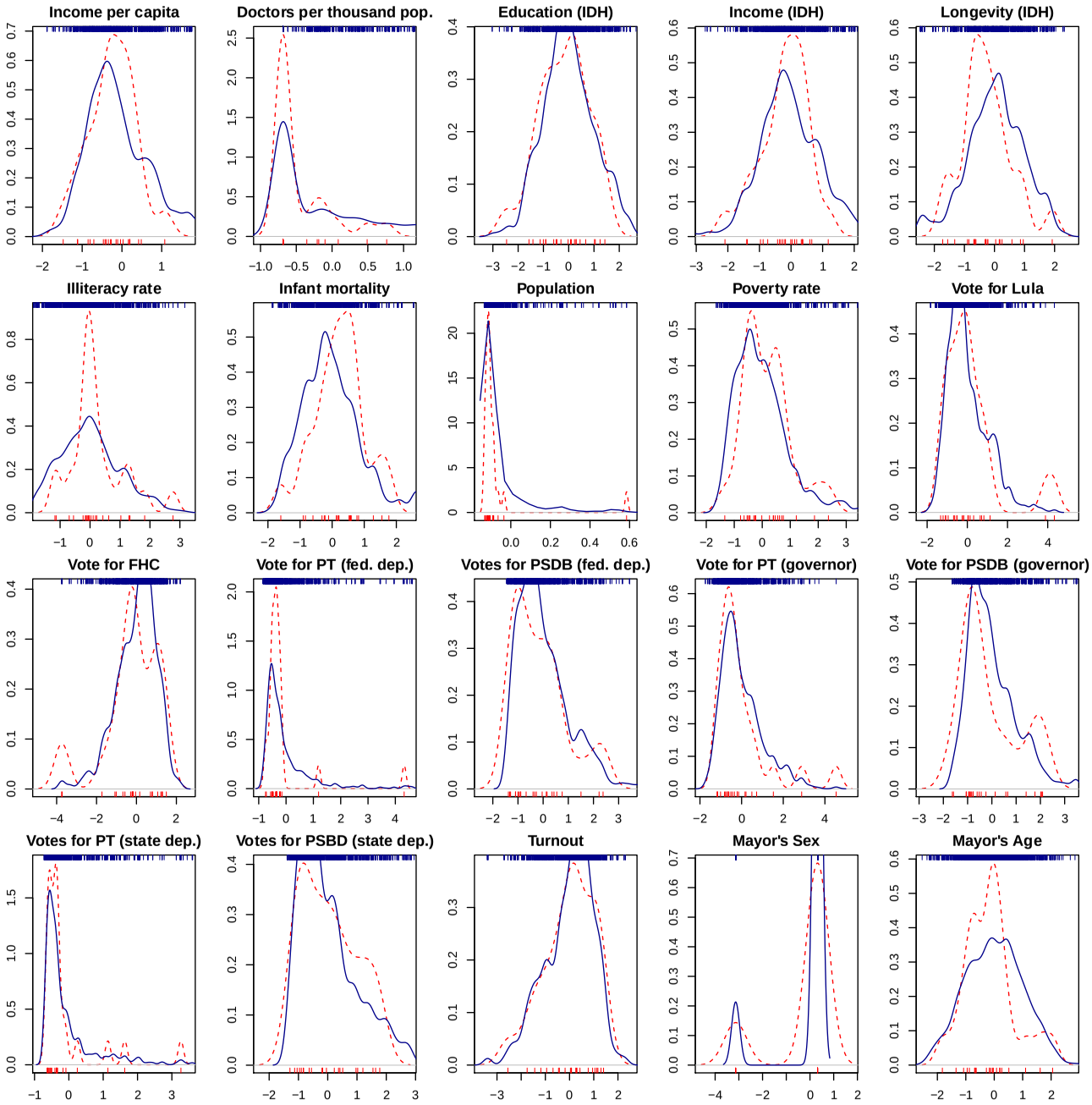
Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (13% for NSP Transfers and 19% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 13% for NSP Transfers and 25% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

Table S.C.33: RDD Estimates, State NSP and Mayoral Transfers, 2007-2015 (*reais per capita*), logged outcomes, inverse hyperbolic sine transformation.

Estimator	Diff. Means	Diff. Means	Diff. of Means	Diff. Means	Diff. Means	Diff. Means	Local Linear Regression	Local Linear Regression (bias-corr.)	Local Linear Regression (robust)
Vote Margin (%)	0.5	1	2	3	4	5	Opt. Bd.	Opt. Bd.	Opt. Bd.
	Nonstate Transfers								
Estimates	-0.36	-0.31	-0.31	-0.01	-0.07	-0.10	-0.29	-0.36	-0.36
Std. error†	0.64	0.53	0.40	0.34	0.29	0.26	0.35	0.32	0.38
p-value†	0.29	0.28	0.22	0.49	0.41	0.35	0.20	0.13	0.17
Mean dep. var.	1.33	1.40	1.47	1.56	1.59	1.55	1.69	1.68	1.68
Std. dep. var.	1.78	1.82	1.85	1.81	1.81	1.80	1.77	1.77	1.77
non zero	12	20	37	57	81	98	238	238	238
n	23	42	76	112	155	191	433	435	435
clusters	22	41	72	104	142	169	320	322	322
	Mayoral Transfers								
Estimates	0.55	0.30	0.50	0.54	0.55	0.46	0.55	0.60	0.60
Std. error†	0.32	0.38	0.27	0.24	0.21	0.19	0.20	0.20	0.23
p-value‡	0.05	0.22	0.03	0.01	< 0.00	0.01	< 0.00	< 0.00	< 0.00
Mean dep. var.	5.85	5.72	5.88	5.91	5.83	5.88	5.81	5.80	5.80
Std. dev. dep. var.	0.98	0.94	1.17	1.22	1.34	1.36	1.44	1.43	1.43
non zero	23	41	75	111	154	190	658	709	709
n	23	42	76	112	155	191	661	712	712
clusters	22	41	72	104	142	169	419	439	439

Notes: Units are total transfers at each municipality, during the mayors' term, pooled across election cycles. †Robust standard errors for difference of means and local linear regression, columns (8) and (9) use bias-corrected and robust standard errors for local linear regressions using approach by Calonico, Cattaneo and Titiunik (2014); all standard errors are clustered at the municipality level. ‡P-values were calculated using a normal approximation and a one-tailed test statistic. Local linear regression at column (7) uses a triangular kernel and Imbens and Kalyanaraman's (2012) method for estimating the optimal bandwidth (13% for NSP Transfers and 22% for Mayoral Transfers). Local linear regression at columns (8) and (9) use uniform kernel (NSP transfers) and triangular kernel (Mayoral Transfers), bias estimated with quadratic polynomial, and optimal bandwidth selector developed by Calonico, Cattaneo and Titiunik (2014) (main bandwidths of 13% for NSP Transfers and 25% for Mayoral Transfers). I report the standard deviation of the outcome variable in the control group as a reference to calculate standardized effect estimates.

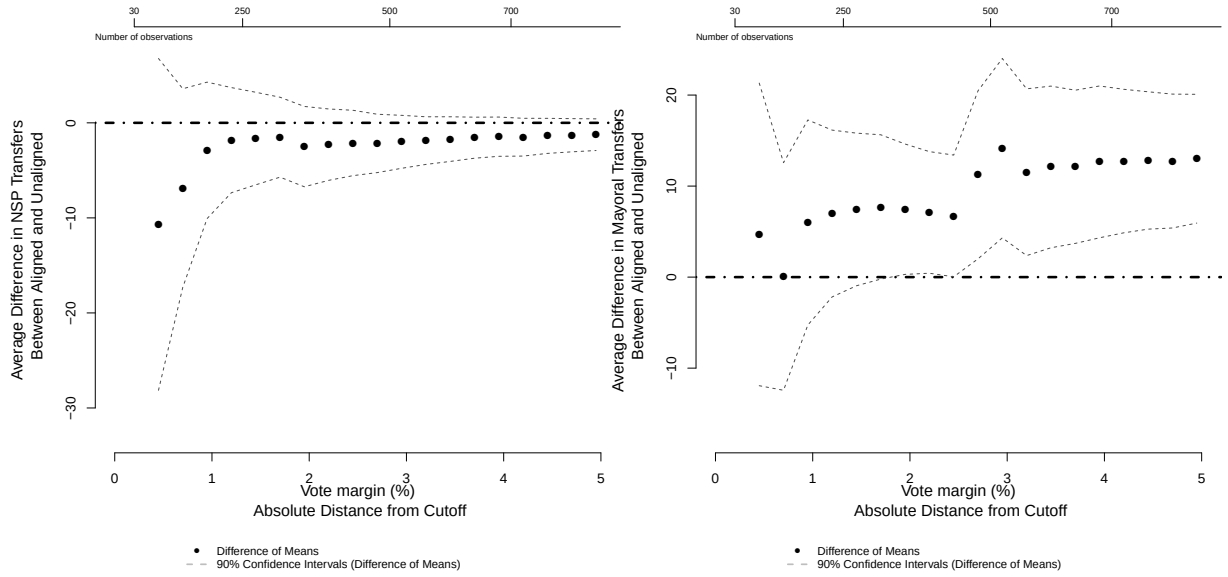
Figure S.C.17: External validity (State Transfers)



Note: Solid lines represent the all municipalities in the state of São Paulo and dashed lines represent the RD study group (0.5% of vote margin) for state-level transfers. Standardized variables with mean zero and standard deviation one.

3.2.4 Legislative Amemdments

Figure S.C.18: Legislative Amendments, Difference in Means, NSP and Mayoral Transfers, 2003–2011 (in July 2012 *reais*)



(a) NSP Transfers (per capita) (b) Mayoral Transfers (per capita)

Note: Robust standard errors.

4 Are Opposition Mayors Unable to Hijack Credit?

4.1 Survey Data

Members of the Qualtrics panel are recruited by partner survey companies,through websites, and social media. Completed interviews refer to survey respondents who successfully finished the survey. This excludes respondents who failed the attention test placed to screen out survey respondents and "straight-liners" (respondents who simply click on the same option in a list of questions). Survey subjects are compensated by Qualtrics and I did not make any direct payment to survey subjects. Each survey respondent receives an unique link to the survey over e-mail, which allows them to take the survey only once.

The planned sample quotas were designed to avoid stark discrepancies between the population and the survey sample in a few key demographics under the constraint of adding costs of implementing an Internet survey. I included quotas for age, sex, and schooling. Consistent with prior research that uses Internet samples in Brazil, my sample is more educated and younger than the population (Samuels and Zucco, 2013). Sample size was determined based on resources available for this research.[12] I included all outcomes collected in the survey in the replication mayerials and I analyzed the outcomes related to credit attribution in this paper. The designs and related outcomes with blame attribution are available in the replication materials but I have not analyzed them in this paper. I submitted a pre-analysis plan (`http://egap.org/registration/1248`) associated with this survey (note that the pre-analysis plan includes other parts of the survey not analyzed here).

Table S.D.1: Survey Sample Descriptive Information – Sex

Sex	Survey	Brazil (pop.)†
Female	52.49	52.37
Male	47.51	47.63
Total	1,103	274,156

Note: †PNAD, 2010.

[12]Prior to running the experiment, I conducted a pre-test of the survey questionnaire using an online surveys with undergraduate students majoring in Social Service, Political Science and International Relations at Universidade Federal de Pernambuco. I did not include any of the pre-test survey data in these analysis. I thank Dalson Figueiredo and students at UFPE for their help with the pre-test survey.

Table S.D.2: Survey Sample Descriptive Information – Schooling

Schooling	Survey	Brazil (pop.)†
College Degree	20.04	8.28
Incomplete College	72.89	63.22
Incomplete High School	7.07	28.50
Total	1,103	274,156

Note: †PNAD, 2010.

Table S.D.3: Survey Sample Descriptive Information – Age

Age groups	Survey	Brazil (pop.)†
18 to 24 years	35.60	18.71
25 to 34 years	31.24	24.02
35 to 44 years	16.53	20.53
45 to 54 years	10.08	16.18
55 to 64 years	6.37	11.72
65 years or older	0.18	10.01
Total	1,103	274,156

Note: †PNAD, 2010.

4.1.1 Conjoint Design: Voters' Assessment of Mayors

I implement the regression model expressed in equations (2) and (3). Let $choice_{ijk}$ be the outcome for forced choice between mayors and $rating_{ijk}$ be the outcome for rating mayors for each subject i, in pairing k, for each j alternative.

$$choice_{ijk} = \theta_0 + \theta_1[welfare_{ijk} = city + Fed] + \theta_2[welfare_{ijk} = NSP] + \theta_3[welfare_{ijk} = NSP + Fed] + \theta_4[joint_{ijk} = yes] + \epsilon_{ijk} \quad (4)$$

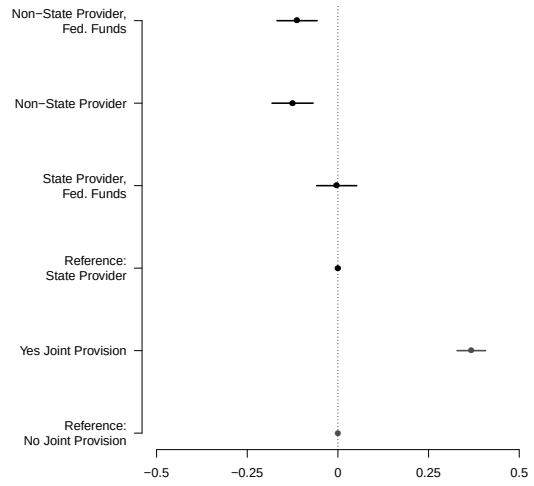
$$rating_{ijk} = \theta_0 + \theta_1[welfare_{ijk} = city + Fed] + \theta_2[welfare_{ijk} = NSP] + \theta_3[welfare_{ijk} = NSP + Fed] + \theta_4[joint_{ijk} = yes] + \epsilon_{ijk} \quad (5)$$

And $[welfare_{ijk} = city + Fed]$, $[welfare_{ijk} = NSP]$, and $[welfare_{ijk} = NSP + Fed]$ are dummy variables coded 1 if welfare provider is the city government receiving federal funds, a nonstate provider, a nonstate provider with federal funds, and 0 otherwise. The reference category is city government. The variable $[joint_{ijk} = yes]$ is a dummy variable coded 1 if there is joint provision of welfare and 0 otherwise (reference category). In the main analyses of the conjoint experiment, results are shown separately for mayors who are aligned with the central government and those who are unaligned, but they are very similar to the pooled analysis.

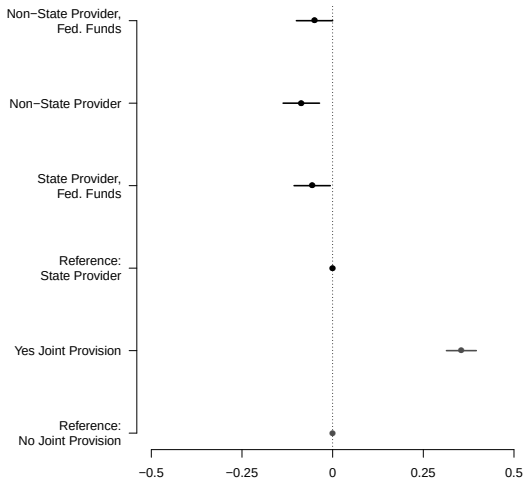
Table S.D.4: Balance Tests

Treatments	Sex	Income	Party
City Govt.	0	0	0
(baseline category)			
City Govt.	-0.02	-0.011	0.01
Fed. Funds	(0.016)	(0.023)	(0.014)
NSP	0.001	-0.03	-0.007
	(0.015)	(0.024)	(0.014)
NSP	0.012	-0.042	0.001
Fed Funds	(0.016)	(0.024)	(0.014)
No Joint Provision	0	0	0
(baseline category)			
Yes Joint Provision	0.007	-0.01	0.008
	(0.01)	(0.015)	(0.009)
Partisanship (PT)	0	0	0
(baseline category)			
Partisanship (PSDB)	-0.005	-0.015	0.007
	(0.01)	(0.016)	(0.01)
Number of observations	8,602	8,602	8,602
Number of respondents	1,103	1,103	1,103

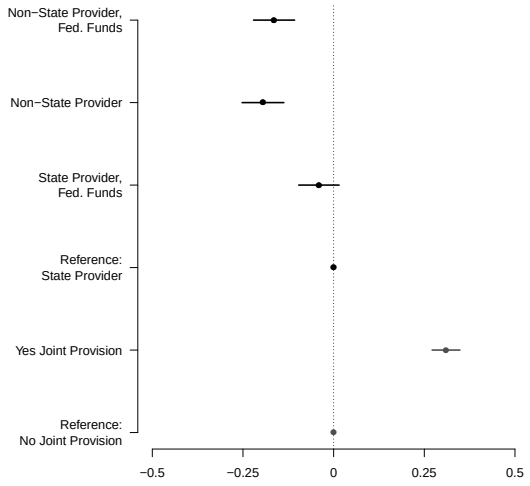
Figure S.D.1: Carryover Effects



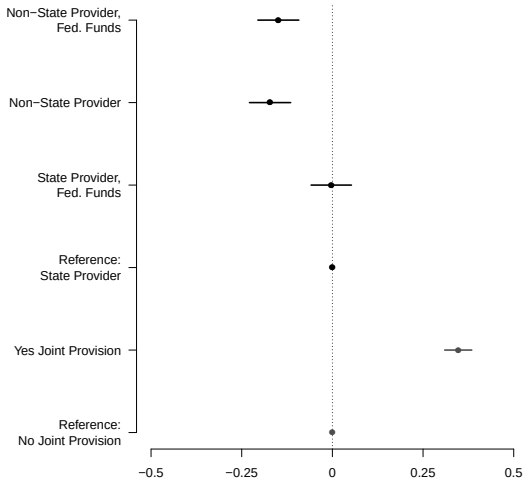
(a) Task 1



(b) Task 2



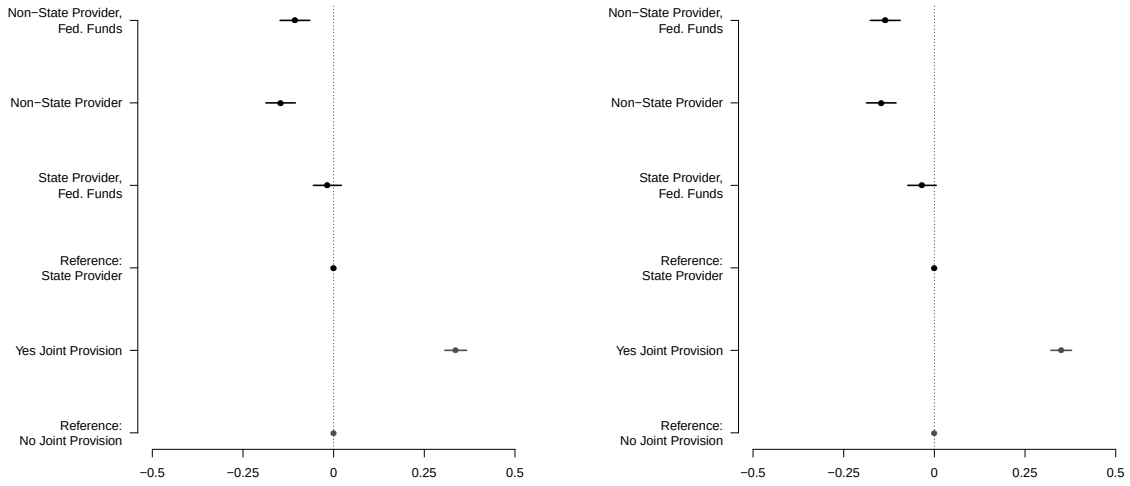
(c) Task 3



(d) Task 4

Note: Regression of choice on all treatments for each choice task. Results were very similar across all different tasks.

Figure S.D.2: Profile Order Effects



(a) Panel A

(b) Panel B

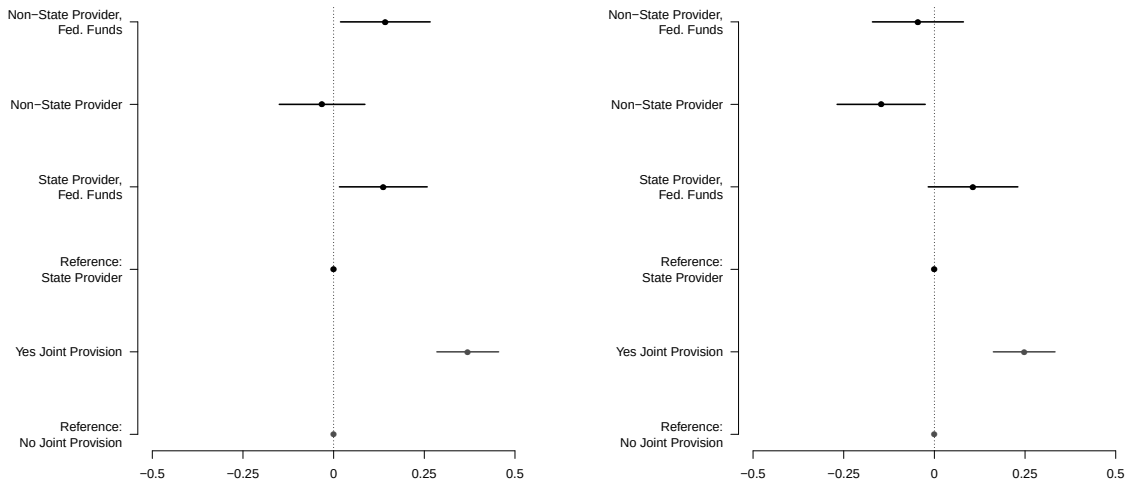
Note: Regression of choice on all treatments for each choice task. Results were very similar for both panels.

Table S.D.5: Effects of Welfare and Joint Provision on Probability of Mayor being Preferred and Change of Mayoral Ratings

Treatments	**Probability of Mayor Being Preferred**		**Change of Mayoral Ratings**	
	Unaligned (PSDB) Mayor	Aligned (PT) Mayor	Unaligned (PSDB) Mayor	Aligned (PT) Mayor
City Govt. (baseline category)	0	0	0	0
City Govt. Fed. Funds	-0.027 (0.02)	-0.024 (0.021)	-0.027 (0.055)	-0.010 (0.059)
Nonstate Provider	-0.148*** (0.021)	-0.114*** (0.022)	-0.442*** (0.057)	-0.477*** (0.062)
Nonstate Provider, Fed. Funds	-0.116*** (0.021)	-0.125*** (0.022)	-0.315*** (0.056)	-0.369*** (0.065)
No Joint Provision (baseline category)	0	0	0	0
Yes Joint Provision	0.36*** (0.014)	0.327*** (0.015)	1.047*** (0.044)	0.989*** (0.049)
Number of observations	4,293	4,309	4,293	4,309
Number of respondents	1,098	1,098	1,098	1,098

Notes: This table shows estimates of the effects of the randomly assigned welfare and joint provision treatments on the probability of a mayor being preferred and change in mayoral rating (7-point ordinal scale) conditional on a mayor's partisanship. Estimates are from an OLS regression model with clustered standard errors in parentheses. Treatment estimates are in reference to the baseline category for each treatment condition. This table represents the same estimates shown in Figure 5 in the main text.$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$

Figure S.D.3: Effects of Welfare and Joint Provision on Federal Government's Evaluation



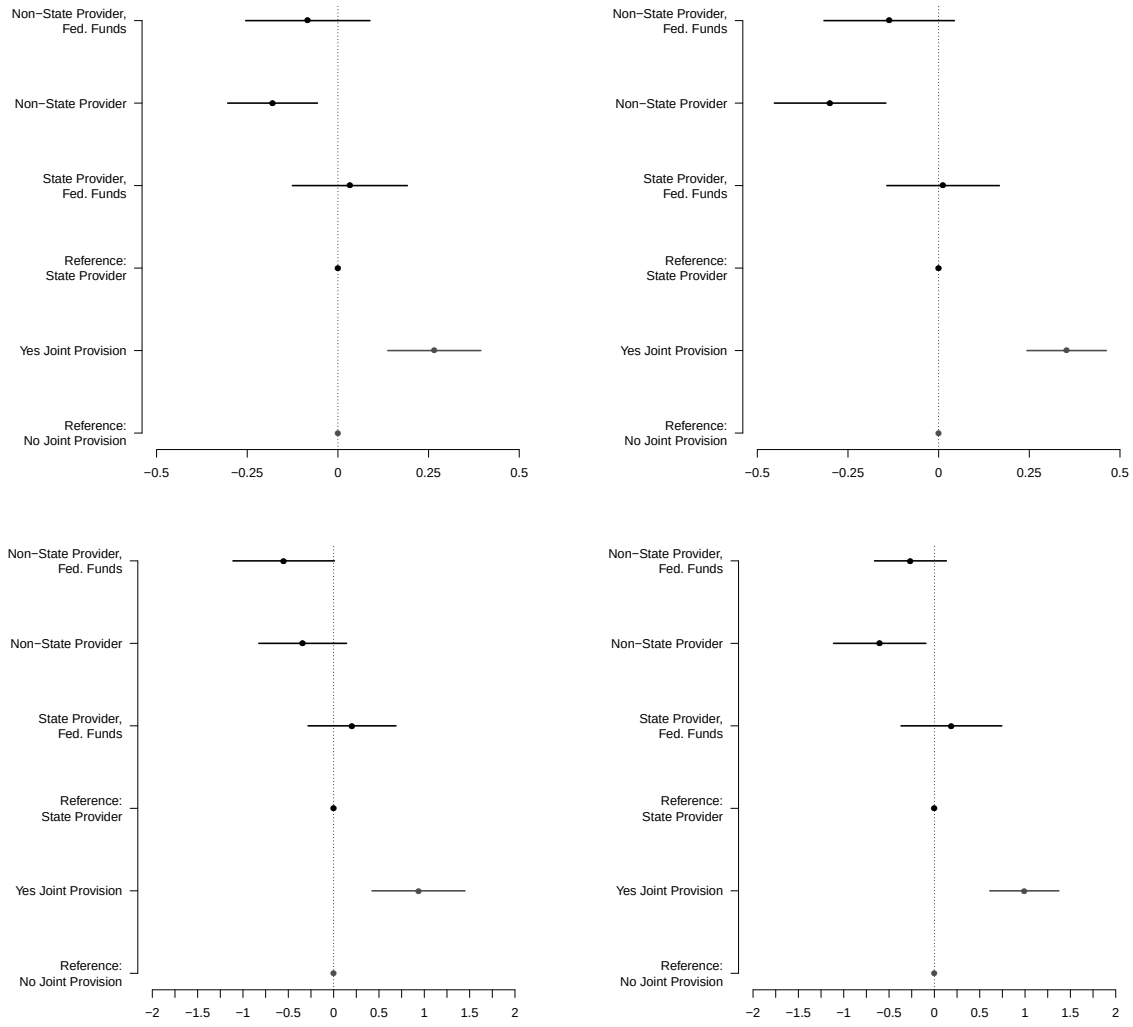
(a) Unaligned Mayors

(b) Aligned Mayors

Notes: This Figure shows estimates of the effects of the randomly assigned welfare and joint provision treatments on the federal government's evaluation conditional on a mayor's partisanship. Estimates are from an OLS regression model with clustered standard errors by respondent in parentheses.

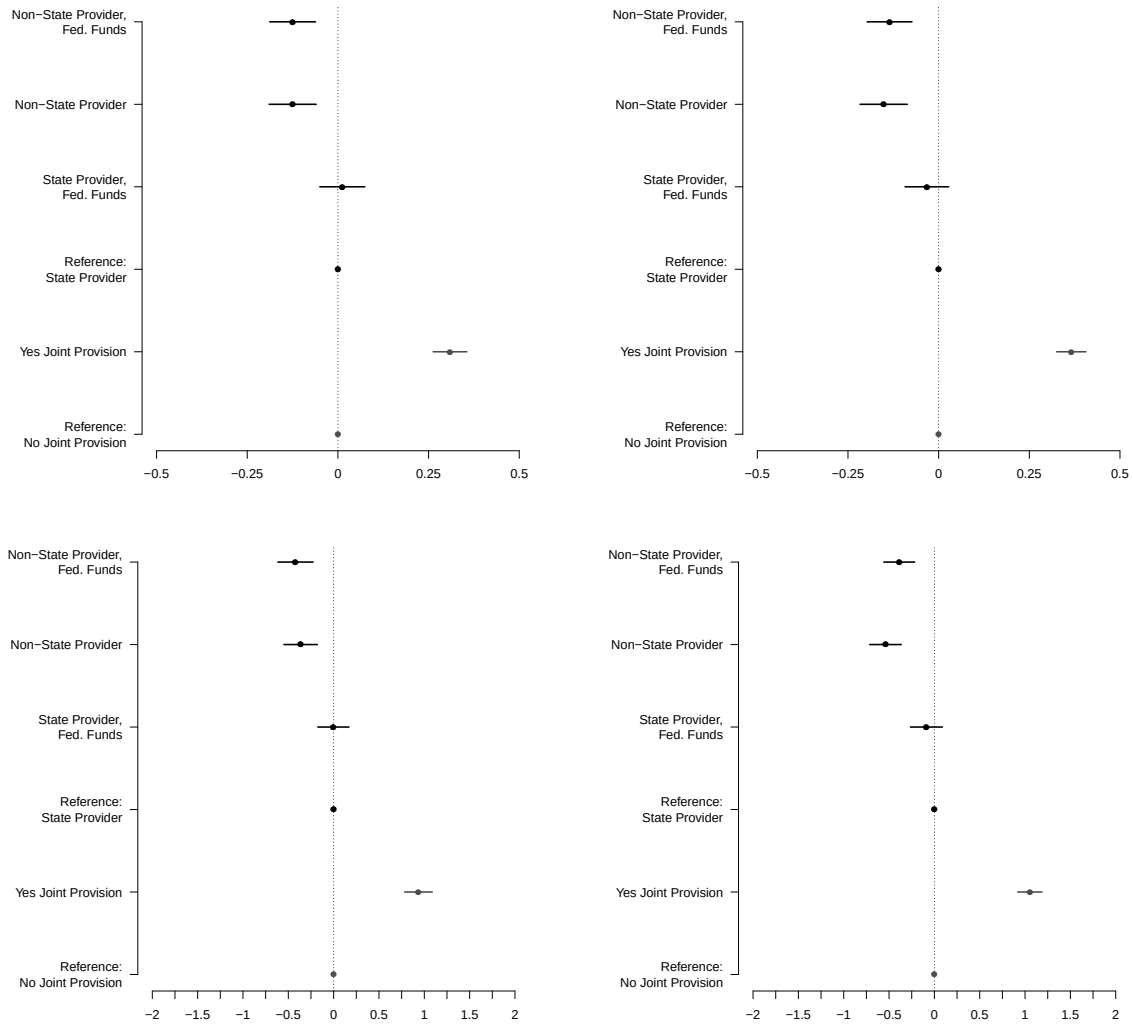
4.1.2 Additional Analyses – Conjoint Design

Figure S.D.4: Effects of Welfare and Joint Provision on Probability of Mayor being Preferred and Change of Mayoral Ratings (weigthed Survey Sample)



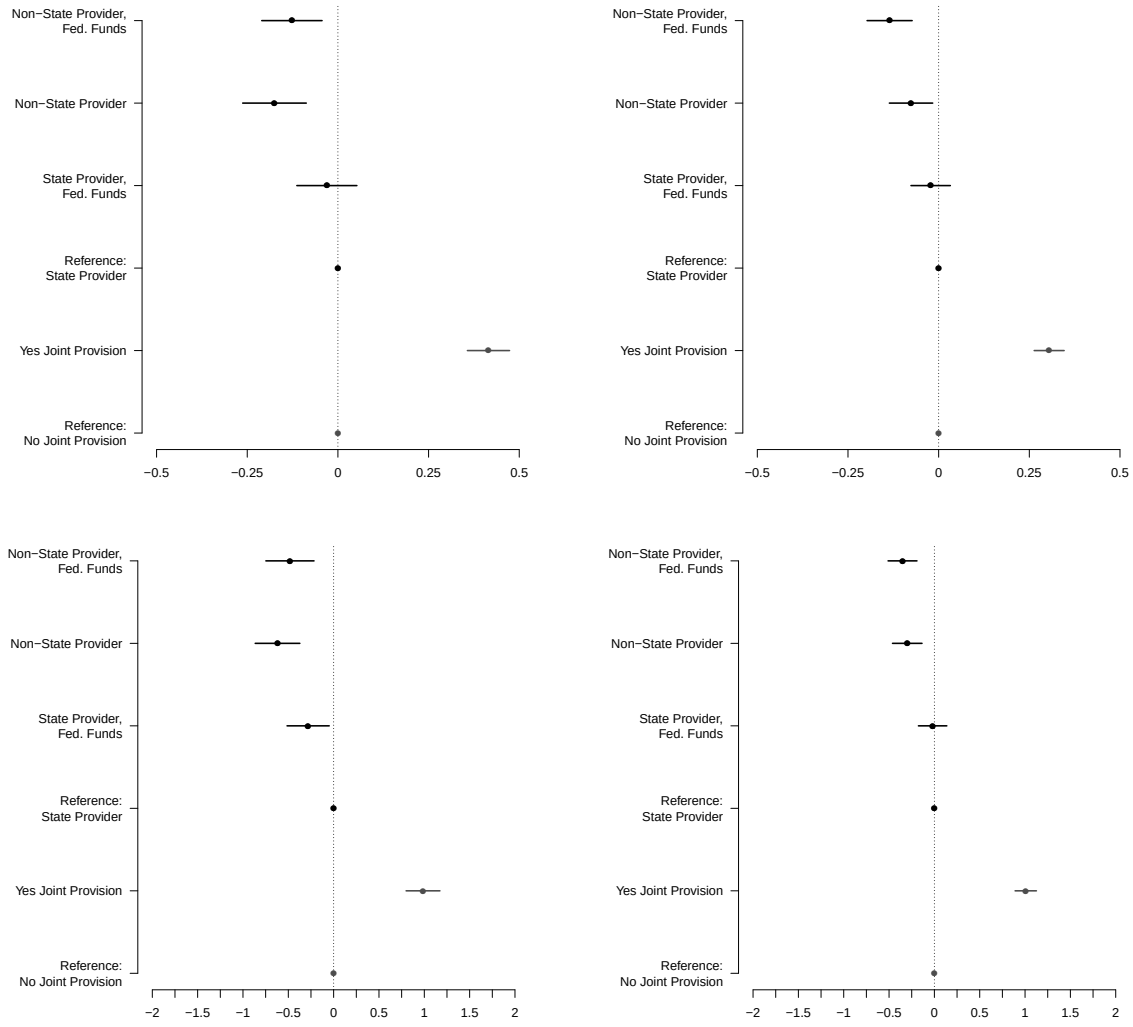
Notes: This Figure shows estimates of the effects of the randomly assigned welfare and joint provision treatments on the probability of a mayor being preferred and change in mayoral rating (7-point ordinal scale) conditional on a mayor's partisanship. Estimates are from an OLS regression model with clustered standard errors in parentheses. Treatment estimates are in reference to the baseline category for each treatment condition. Number of observations: 4,293 (unaligned), 4,309 (aligned). Number of respondents: 1,103. I used Entropy Balancing to weigh my sample so that the sample mean exactly matches the Brazilian population on region, sex, age, education, and income.

Figure S.D.5: Effects of Welfare and Joint Provision on Probability of Mayor being Preferred and Change of Mayoral Ratings (lower income)



Notes: This Figure shows estimates of the effects of the randomly assigned welfare and joint provision treatments on the probability of a mayor being preferred and change in mayoral rating (7-point ordinal scale) conditional on a mayor's partisanship. Estimates are from an OLS regression model with clustered standard errors in parentheses. Treatment estimates are in reference to the baseline category for each treatment condition. Number of observations: 1,912 (unaliged), 1,888 (aligned). Number of respondents: 489. Lower income defined as families that make less than two minimum wages (1,244.00 *reais*).

Figure S.D.6: Effects of Welfare and Joint Provision on Probability of Mayor being Preferred and Change of Mayoral Ratings (co-partisans)



Notes: This Figure shows estimates of the effects of the randomly assigned welfare and joint provision treatments on the probability of a mayor being preferred and change in mayoral rating (7-point ordinal scale) conditional on a mayor's partisanship. Estimates are from an OLS regression model with clustered standard errors in parentheses. Treatment estimates are in reference to the baseline category for each treatment condition. Number of observations: 1,960 (unaligned), 1,023 (aligned). Number of respondents: 762. I measure co-partisanship as those who declared vote for the party's candidate in the 2014 election (results are the same if we measure partisanship as preference for a party).

4.1.3 Descriptive Analyses

Table S.D.6: Responsible for Santa Casa

Responsibility	Pct. (%)
Church	9.34
President	9.25
Hospital's Director	46.24
Governor	21.12
Mayor	14.05
Total	1,103

The question reads: "In your opinion, who is usually responsible for the good or bad performance of religious hospitals, such Santas Casas, Casas de Misericórdia, among others?"

Table S.D.7: Responsible for APAE

Responsibility	Pct. (%)
President	9.16
APAE's Director	58.57
Governor	14.69
Mayor	17.59
Total	1,103

The question reads: "In your opinion, who is usually responsible for the good or bad performance of social welfare associations, such Associações de Pais e Amigos dos Excepcionais (APAEs)?"

Table S.D.8: Responsible for Municipal Hospital

Responsibility	Pct. (%)
President	7.89
Hospital's Director	21.03
Governor	15.41
Mayor	55.67
Total	1,103

The question reads: "In your opinion, who is usually responsible for the good or bad performance of municipal hospitals?"

Table S.D.9: Funds for Religious Hospitals

Source of funds	Pct. (%)
Church	9.88
State Government	22.39
Federal Government	25.29
Municipal Government	9.07
Charitable Contributions	21.12
Own funds (services)	12.24
Total	1,103

The question reads: "In your opinion, where do most of money that funds religious hospitals, such as Santas Casas and Casas de Misericórdia come from?"

Table S.D.10: Funds for Municipal Hospital

Source of funds	Pct. (%)
State Government	18.68
Federal Government	21.03
Municipal Government	57.57
Charitable Contributions	1.63
Own funds (services)	1.09
Total	1,103

The question reads: "In your opinion, where do most of money that funds municipal hospitals come from?"

Table S.D.11: Funds for Welfare Associations

Source of funds	Pct.
State Government	15.23
Federal Government	17.14
Municipal Government	16.41
Charitable Contributions	41.61
Own funds (services)	9.61
Total	1,103

The question reads: "In your opinion, where do most of money that funds social welfare associations, such as Associações de Pais e Amigos dos Excepcionais (APAEs) come from?"

4.1.4 Vignette Design

This experimental design is motivated by trying to gain an understanding of how voters attribute responsibility for welfare provision and how they evaluate mayors based of providers type and funding sources for welfare services. Each respondent is randomly assigned to read a short vignette about "good public welfare services" in a fictional municipality. In the different vignettes, the service provider is either the city government or a private charity. The source of funds for these services is either the federal government or the the vignette makes no mention of the source of funds. This adds up to four treatments that experimentally manipulate information about both the type of provider and source of funds: city government, city government with federal funds, nonstate welfare provider, and nonstate welfare provide with federal funds. After reading the vignette, respondents answer two questions: one designed to measure attribution of responsibility and the second intended to capture incumbent evaluation.

The findings in Table S.D.16 below support the claim that respondents attribute credit for welfare services differently when they are administered by a government-run or by a nonstate facility. The majority of respondents (58%) who read the vignette in which a charity provides the service considered the charity director to be responsible for the improvements whereas most respondents (77%) who read the vignette in which the city government offers the same service considered the mayor responsible. Moreover, even when respondents are told that the federal government is the source of funds for these services, respondents still give mayors little credit for services provided by a charity. The share of respondents who credit the mayor in the vignettes in which a government-run welfare facility is funded by the federal government (71%) is about three times larger than the share of respondents who do so in the vignettes in which nonstate provision is funded by the federal government (24%). These results corroborate my discussion of why private charities undermine mayors' ability to claim credit.

The data presented in Table S.D.17 suggests that nonstate welfare provision may hurt mayors: survey respondents prefer local incumbents by 1.5 points in places where the city government run welfare services compared to places where not-for-profit organizations run these services (pooling welfare provision with and without federal funds). Thus, it is not only that respondents do not credit mayors for nonstate welfare provision, but respondents prefer mayors who administer welfare services rather than mayors in places that rely on nonstate provision. This result buttresses my argument that bypassing opposition is a worthwhile strategy for central incumbents: not only do voters not attribute credit to mayors, but they also punish local incumbents for nonstate welfare provision, making this an attractive strategy to bypass opposition.

Table S.D.12: Vignette Design

Consider a municipality in which care for the elderly population is a big concern. Many elderly people have no support.

Treatment 1

However, in this municipality, the **city government** (*Prefeitura*) renovated and expanded a center for elderly care. This center, run by **city government**, will take care of over 100 elderly people.

Treatment 2

However, in this municipality, the **nonstate provider's name** (*Associação Social Santa Maria Clara*) renovated and expanded a center for elderly care. This center, run by **nonstate provider's name** (*Associação Social Santa Maria Clara*), will take care of over 100 elderly people.

Treatment 3

However, in this municipality, the **city government** (*Prefeitura*) **with funds from the federal government** renovated and expanded a center for elderly care. This center, run by **city government** (*Prefeitura*), will take care of over 100 elderly people.

Treatment 4

However, in this municipality, **nonstate provider's name** (*Associação Social Santa Maria Clara*) **with funds from the federal government** renovated and expanded a center for elderly care. This center, run by **nonstate provider's name** (*Associação Social Santa Maria Clara*), will take care of over 100 elderly people.

Outcomes

1. *"In your personal opinion, who is responsible for these improvements in the center for elderly people?"* Subjects are given five options (order is randomly determined):
The mayor
The governor
The president
The director of the NSP or government-run elderly center
2. *"Based on this information, how would you rate the mayor's work for the elderly?"* (ordinal seven-point scale).

Table S.D.13: Balance Test – Education

	College Degree	Graduate Degree	Incomplete College	Incomplete High School	Incomplete Primary
Nonstate provider	23.87	22.73	24.63	29.73	0.00
Nonstate provider (with federal funds)	25.16	21.21	25.50	20.27	0.00
City government	25.81	27.27	24.88	27.03	50.00
City government (with federal funds)	25.16	28.79	25.00	22.97	50.00
Total	155	66	804	74	4

Notes: $\chi^2 = 6.7036$, df $= 12$, p-value $= 0.8766$.

Table S.D.14: Balance Test – Vote in 2014 Elections

	Aécio Neves	Null	Dilma Rousseff	No turnout	NA
Nonstate provider	25.10	27.91	25.76	22.03	17.78
Nonstate provider (with federal funds)	23.51	30.23	23.48	27.12	24.44
City government	26.10	20.16	23.48	29.66	28.89
City government (with federal funds)	25.30	21.71	27.27	21.19	28.89
Total	502	129	264	118	90

Notes: $\chi^2 = 10.568$, df $= 12$, p-value $= 0.5662$.

Table S.D.15: Balance Test – Sex

	Female	Male
Nonstate provider	24.18	25.19
Nonstate provider (with federal funds)	25.22	24.24
City government	23.66	27.29
City government (with federal funds)	26.94	23.28
Total	579	524

Notes: $\chi^2 = 3.1097$, df $= 3$, p-value $= 0.375$.

Table S.D.16: Effects of Type of Provider and Source of Funds on Attribution of Responsibility

	President (%)	Director (%)	Mayor (%)	Governor (%)
Nonstate provider	2.21	58.46	34.56	4.78
Nonstate provider (with federal funds)	12.45	49.45	24.18	13.92
City government	3.57	12.50	77.14	6.79
City government (with federal funds)	6.83	10.79	71.22	11.15
Total	69	359	574	101

Notes: 1,103 respondents. χ^2 statistic= 307.98, df = 9, p-value < 0.000. Director refers to the NSP director under the NSP treatment or the director of the government city agency under the city treatment.

Table S.D.17: Effects of Type of Provider and Source of Funds on Mayoral Evaluation

	No mention of funds (C)	Federal Funds (D)	(C) - (D)
City government (A)	4.89	4.54	0.35^{***}
	(0.08)	(0.08)	(0.11)
Nonstate provider (B)	3.18	3.29	-0.11
	(0.09)	(0.09)	(0.13)
(A) - (B)	1.71^{***}	1.25^{***}	
	(0.12)	(0.12)	

Notes: Standard errors in parentheses. Outcome: "Based on this information, how would you rate the mayor's work for the elderly?" [ordinal seven-point scale]. I recoded for higher means to reflect better evaluations. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$

4.2 Local Incumbents' Attempts at Hijacking Credit

Interviews with Organizations' Managers

I conducted interviews in Belo Horizonte, São Paulo, and Governador Valadares during June and July 2013. I contacted and interviewed nonstate welfare providers in my RD study group as well as renowned NSPs that receive larger sums of resources. Interviews with NSPs ranged from thirty minutes to two and a half hours. The interviewed representative was told that this was part of an academic research study on nonstate welfare provision in Brazil and that his or her answers would be kept anonymous, and was given the researcher's and HSC contact information and explicitly asked for consent to record the conversation per HSC guidance. Interviewed organizations were chosen based on: i) areas/issues as to guarantee I would interview organizations that worked with health, social assistance, education, and arts/culture, and ii) amount of funding received as to guarantee that I would interview organizations that received large, average, and small grants.

This list of questions is not exhaustive nor were all these questions necessarily were asked in every interview. Even though these interviews are semi-structured, the interviewer was free to ask follow-up questions at their discretion:

1. *Brief Description of NSP's Main Activities.* What are the main sources of revenue? Do these sources vary over time? What are the shares of private versus public funding?

2. Regarding your private funding, what are your main strategies for building relationships with donors? [Follow-up questions about making contacts, types of funds received, failure to receive funds]

3. Regarding your public funding, what are the main venues for funding (*editais, convênios, emendas*)? [Follow-up questions on the details of contracts, timing of receiving the funds, failures to receive funds]

4. What are the main differences in your relationship with local, state and federal officials and government? Do you have issues coordinating or dealing with these levels of government? Is there interference, say, from local level officials for funding coming from federal agencies? [Follow-up questions to attempt to gather information on what the benefits are to public officials to fund NSPs]

5. Do public officials reach out to NSPs looking for projects to fund and partnerships?

6. How do public funds vary with election cycles? How does the organization deal with these issues?

7. What are the main challenges for funding with respect to public institutions? What about private donors?

8. *Case-specific question about the organization's internal structure*

Interviews with Federal Legislator
All interviews were conducted in Brasília in June 2013. I attempted to select federal legislators based on their funding activity, in particular targeting resources to NSPs in my RDD study group. Interviews with legislators were short for scheduling reasons (no more than 30 minutes). The interviewed representative was told that this was part of an academic research study on nonstate welfare provision in Brazil and that his or her answers would be kept anonymous, and was given the researcher's and HSC contact information, and explicitly asked for consent to record the conversation per HSC guidance. Interviewed politicians were chosen based on whether or not they had sponsored a grant funding a nonstate organization or had been closely involved with nonstate welfare regulation, such as debates around *Marco Regulatório das Organizações da Sociedade Civil*.

1. *Brief description of the legislator's relationship (*atuação*) with NSPs*. How did this relationship start? How are these organizations related to your political career?

2. Would you have an estimate of how many organizations look for your support? What are the common requests you receive? Do you usually know these organizations (previous relationship with them)?

3. How do you define your priorities when you propose budgetary bills?

4. After an amendment is approved, it is a long road to disbursement. What do you to ensure the funds specified in your amendment are disbursed?

5. Do you usually visit the NSPs you support? How do you keep track of the projects they carry out?

6. What about the other levels of government, such as mayors and governors? Do you engage with them as well regarding these bills? What about the NSPs?

Interview with Federal Bureaucrats
Selection of interviewees: First, Lopez and Abreu used an online system containing all the main contracts between NSPs and the federal government (*Portal da Transparência* and *Sistema de Convênios, SICONV*) to collect data on federal programs that were carried out with nonstate providers. They chose the programs with the largest number of contracts with NSPs in 2011. They found which federal bureaucrats were in charge of these programs, and they consulted with these bureaucrats to determine who was most qualified to answer questions about a particular program program. By this procedure, Lopez and Abreu chose thirty interviewees and the remaining twenty-three bureaucrats were referred by the other interviewees themselves.

This list of questions is not exhaustive nor was it necessary for all the questions to asked in every interview. Even though these interviews were semi-structured, interviewers were free to ask follow-up questions at their discretion.

1. Considering the programs you manage, which one has contracts with NSPs?
2. Since when is this program being implemented?
3. How long have you been working on it?
4. Who decides whether or not NSPs will be part of the program?
5. In which parts of the program do NSPs take part in?
6. How do you chose which NSPs are selected to take part in programs? What are the criteria for receiving funding?
7. Regarding Decree 7.568/11, was there public reaction after this decree was issued? What are the challenges in adopting this decree? In your opinion, are there reasons why we should not use it as a general rule?
8. Do public policy councils have a role in selecting NSPs?
9. Besides NSPs, is this program also carried out by public agencies (federal, state, municipal)?
10. If states or municipalities are part of the program, do they do so through their own agencies or through contracts with NSPs?
11. Is the selection process the same for public agencies as for NSPs?
12. If you couldn't have contracts with NSPs for this program, would it possible to carry it out in any other way? Would it affect the program's design?
13. What are the different roles of NSPs and public agencies for this program?
14. What are the internal oversight mechanisms for this program? Do you have different mechanisms for NSPs than for public agencies? In what ways could you make these mechanisms better?
15. What is your opinion on the external oversight agencies' performance for these programs carried out by NSPs? What are the main positive and negative aspects?
16. Do the accountability reports provided by the NSP give you enough information to assess the program's results?

17. Is there any assessment of these programs' effectiveness?

18. What are the main advantages and disadvantages of working with NSPs to carry out public policy?

19. What are the main differences between the types of NSPs in their relationship with public agencies?

20. What are the main issues in the relationship between NSPs and the government?

21. I would like to hear you talk a bit more about the interface between the ministry and political and partisan spheres. It is common for parts of the bureaucracy to receive pressure from political parties or political actors interested in advancing their interests. To what extent do you feel that there are political pressures in the relationship between NSPs and the government? Through what channels and in what ways do you feel this pressure?

22. Could you suggest ways in which you could improve the relationship between NSPs and the government?

4.3 Complementary Mechanism: Providers' Partisan Alignment

I matched board members' full name with the list of parties' affiliates in the municipality in which the NSP is located. I use exact match based on name, there exists some potential for error due to discrepant spelling and homographs.

5 Additional Interpretations

Investigation of Contract Irregularities Between Nonstate Providers and the Federal Government

Corruption is notably hard to measure and looking at irregular contracts is not ironclad evidence of corruption – I cannot be sure that the monitoring office would detect all money illegally used for personal or party's private benefit. Thus, I compared a detailed audit on transfers to NSPs involved in corruption scandal with the Ministry of Tourism in 2011 and to the organizations listed with irregular contracts. Out of nine organizations listed in the audit as suspected of malfeasance related to corruption in 2011, six were in dataset of irregular contracts[13]. Again, based on interviews with organization managers and bureaucrats, the list of irregular contracts casts a much wider net than organizations involved in corruption, but there appears to be, nevertheless, some association.[14]

CEPIM contains information about contract irregularities.[15] The federal government started collecting data on contract irregularities in 2011, using extensive sources of information, after a series of corruption scandals involving these organizations and the federal government. For more details and public documents related to the investigations, see the following links (a detailed analysis of the official public documents related to these investigations show that these organizations were not involved in election crimes or activities related to clientelist practices):

- The judicial review on the purchase of hospital materials: `http://www.fazenda.mg.gov.br/secretaria/conselho_contribuintes/acordaos/2011/2/19410112.pdf` (accessed in May, 2014).
- The defense statement for the organization under investigation for irregular contracts with the municipality: `http://www.tcm.ce.gov.br/servicos/uploads/geddocs/S/160/2005/2583208/SPO-2005-P19-1901-03513606-S-0002583208_.pdf` (accessed in May, 2014).
- News report on the aligned mayor corruption charges: `http://www.estadao.com.br/noticias/nacional,acusado-de-corrupcao-prefeito-de-senador-pompeu-ce-foge-em-onibus-junto-com-funcionarios-da-prefeitura,735864,0.htm` (accessed in May, 2014).

[13] Organizations listed in 2015.

[14] Even for organizations that were suspected of corruption, auditors found kickbacks in purchasing materials and fake bills from vendors that could benefit individuals connected to public officials, but no evidence of vote-buying.

[15] It can be found here (`http://www.portaltransparencia.gov.br/faleConosco/perguntas-tema-empresas-impedidas.asp`).

6 Conclusion

No supplementary analysis.

7 Data Sources and Data Guide

I use different original and secondary data sources in this paper. This section describes my sources.

1. Survey Experiment (2015): This online survey was conducted by Qualtrics. The complete dataset and questionnaire are included in the replication files.

2. Federal Transfers to Nonstate Providers: I collected information from 2003 to 2011 from the Senate's Budget website (SIGA): `https://www12.senado.leg.br/orcamento/sigabrasil`. In a partnership with IPEA, which allowed me to code the recipient organizations by their types (several products from this partnership can be found here: `https://mapaosc.ipea.gov.br/`). Data on transfers from SICONV and IPEA-SIGA record transfers to muncipalities and places in which no transfers took place are not shown in the dataset and these municipalities are assumed to have received zero *reais* in transfers. As an additional robustness check, I excluded all non-positive transfers and conducted the main analysis and results hold (although note that excluding this data is not recommended – see appendix R replication file for these extra analyses).

3. Federal Transfers to Mayors: I collected information from 2003 to 2011 from the the National Treasury (FINBRA) website (`http://www.tesouro.fazenda.gov.br/pt_PT/contas-anuais`). Later in this project, a national system of transfers (SICONV) became available and provided better quality data compared to FINBRA, which I used for data between 2012-2015 (`http://portal.convenios.gov.br/`). I was able to exclude all transfers granted by the legislative and judiciary branches in the SICONV (2012-2015) data, but unable to do so for the period covered by FINBRA data from 2003 to 2011. Data on transfers from SICONV record transfers to muncipalities and places in which no transfers took place are not shown in the dataset and these municipalities are assumed to have received zero *reais* in transfers. As an additional robustness check, I excluded all non-positive transfers and conducted the main analysis and results hold (although note that excluding this data is not recommended – see appendix R replication file for these extra analyses).

4. São Paulo State Transfers to Nonstate Providers: I web-scraped information investment transfers from the State of São Paulo's Transparency website (`http://www.transparencia.sp.gov.br/`). I excluded all transfers granted by the legislative and judiciary branches and I focus on investment transfers. Data on state transfers to muncipalities and places in which no transfers took place are not shown in the dataset and these municipalities are assumed to have received zero *reais* in transfers. As an additional robustness check, I excluded all non-positive transfers and conducted the main analysis and results hold (although note that excluding this data is not recommended – see appendix R replication file for these extra analyses).

5. São Paulo State Transfers to Mayors: I web-scraped information on discretionary transfers State of São Paulo's Transparency website (http://www.transparencia.sp.gov.br/). I excluded all transfers granted by the legislative and judiciary branches and I focus on investment transfers. Data on state transfers to muncipalities and places in which no transfers took place are not shown in the dataset and these municipalities are assumed to have received zero *reais* in transfers. As an additional robustness check, I excluded all non-positive transfers and conducted the main analysis and results hold (although note that excluding this data is not recommended – see appendix R replication file for these extra analyses).

6. Electoral Data (2000, 2004, 2008, 2012): Data for download can be found here: http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais. I excluded all races in which candidates ran unopposed and places where there were non-regular elections (*eleições suplementares*) that usually take place off-cycle. The code to download, clean, merge, and calculate vote margin between winners and runner-up candidates can be found here: https://github.com/nataliabueno/close_races.

7. Qualitative Data: I conducted in Brasília, Belo Horizonte, Governador Valadares, and São Paulo. The translated instruments are available in Section 4.2. I thank organizations' leaders, legislators, and beneficiaries who selflessly agreed to be interviewed, shared their thoughts, and answered my questions. I also used qualitative data from Felix Lopez and Rafael Abreu conducted and generously shared with the me transcribed interviews with federal bureaucrats (Lopez and Abreu, 2013).

8. NSP directors and board members: I web scraped information from the defunct (since January 2016) CNES-Ministério da Justiça website: http://justica.gov.br/seus-direitos/entidades-sociais/cnes-mj.

9. Irregularities in Contracts (CEPIM): I used from and it can be found here http://transparencia.gov.br/cepim/.

10. Party Membership: I used data from party affiliation made available by TSE. The code to download and bind data affiliation is available here: https://github.com/nataliabueno/filiados_TSE.

11. Demographic and Electoral Covariates: http://www.fflch.usp.br/centrodametropole/ and IPEA data http://www.ipeadata.gov.br/Default.aspx. I thank Lara Mesquita (CEM/CEBRAP) for helping me with these datasets.

12. Coalition Data: I used data on federal coalitions collected by CEBRAP/NECI. I thank Joyce Luz (CEBRAP/NECI) for sharing this data with me.

13. Inflation: Data on Inflation came from IBGE. The code to download and clean is available here: `https://github.com/nataliabueno/deflator`.

14. Parliamentary Amendments: I collected data from Parliamentary Amendments (2003 to 2011) from the Senate's Budget website (SIGA): `https://www12.senado.leg.br/orcamento/sigabrasil`.

15. I used the following `R` packages in this paper and its online appendix: `sandwich`, `xtable`, `tidyverse`, `ri`, `gtools`, `rdrobust`, `Hmisc`, `rdd`, `texreg`, `memis`, `rgenoud`, `stargazer`, `ebal`, `cjoint`, `gridExtra`, `plotrix`, `Cairo`.

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