# Tables and Figures of

# "Partisanship and local fiscal policy: evidence from Brazilian cities"

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Table 1: Descriptive Statistics

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| Size of government: overall revenues and expenses | | | | | |
| Expenditure per capita | 781.50 | 783.86 | 784.30 | 779.11 | 778.17 |
| | ( 38.71) | ( 39.72) | ( 39.58) | ( 38.22) | ( 42.83) |
| Expenditure, % GDP | 19.31 | 19.94 | 16.82 | 18.48 | 19.16 |
| | ( 13.12) | ( 17.02) | ( 13.77) | ( 10.88) | ( 10.16) |
| Revenue per capita | 791.85 | 794.16 | 794.35 | 789.22 | 787.04 |
| | ( 40.09) | ( 41.19) | ( 40.67) | ( 39.88) | ( 42.42) |
| Revenue, % GDP | 21.36 | 22.07 | 18.57 | 20.43 | 20.98 |
| | ( 13.89) | ( 18.08) | ( 14.68) | ( 12.03) | ( 11.24) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | |
| Current Expenditure | 88.20 | 87.44 | 88.01 | 88.40 | 88.56 |
| | ( 4.89) | ( 5.17) | ( 5.00) | ( 4.79) | ( 5.47) |
| Personnel | 48.12 | 47.54 | 48.10 | 48.57 | 48.25 |
| | ( 7.16) | ( 7.15) | ( 6.96) | ( 7.07) | ( 7.19) |
| Public Investments | 10.20 | 10.94 | 10.38 | 9.97 | 9.58 |
| | ( 4.85) | ( 5.14) | ( 4.95) | ( 4.68) | ( 5.56) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | |
| Social Expenditures | 59.56 | 59.24 | 59.25 | 59.88 | 59.66 |
| | ( 8.49) | ( 8.57) | ( 7.99) | ( 8.67) | ( 8.06) |
| Health & sanitation | 24.14 | 23.91 | 24.36 | 24.26 | 22.54 |
| | ( 5.32) | ( 5.17) | ( 5.58) | ( 5.62) | ( 5.03) |
| Education & culture | 31.64 | 31.52 | 31.20 | 31.88 | 33.57 |
| | ( 8.32) | ( 8.31) | ( 8.07) | ( 8.39) | ( 7.58) |
| Social welfare | 3.79 | 3.81 | 3.69 | 3.74 | 3.55 |
| | ( 1.69) | ( 1.73) | ( 1.63) | ( 1.67) | ( 1.75) |
| Housing | 8.98 | 9.43 | 9.55 | 8.86 | 10.87 |
| | ( 4.79) | ( 4.94) | ( 5.06) | ( 4.84) | ( 5.11) |
| Transportation | 3.55 | 3.44 | 3.20 | 3.28 | 1.44 |
| | ( 4.33) | ( 4.26) | ( 3.92) | ( 4.19) | ( 2.23) |
| Other | 27.90 | 27.90 | 28.01 | 27.98 | 28.03 |
| | ( 7.51) | ( 7.77) | ( 7.34) | ( 7.86) | ( 8.01) |
| Left candidate margin | -10.05 | -11.57 | -9.43 | -7.06 | -12.13 |
| | ( 27.67) | ( 31.13) | ( 28.57) | ( 24.29) | ( 31.82) |
| Observations | 8943 | 2395 | 4158 | 3105 | 919 |

Notes: This table reports mean and standard deviation (in parenthesis) for the outcome variables and the left candidate margin of victory. Outcome variables are from FINBRA-STN and the margin of victory computed from the TSE electoral results. See Section **??** for the specific definition and motivation of each subsample. Summary statistics for covariates are in Appendix Table B.1.

Table 2: Difference in municipality characteristics between left and non-left mayors, by left margin of victory

| | All | +/- 40 | +/- 10 | +/- 5 | baseline RD |
|---|---|---|---|---|---|
| Labor market and demographic covariates | | | | | |
| log(Median earnings) ×100 | 2.06 | -0.41 | 0.44 | -0.08 | 0.53 |
| | ( 0.64) | ( 0.74) | ( 1.06) | ( 1.43) | ( 0.54) |
| Labor force participation | -0.16 | -0.03 | 0.15 | 0.12 | 0.25 |
| | ( 0.18) | ( 0.21) | ( 0.31) | ( 0.42) | ( 0.18) |
| log(Population) ×100 | 27.90 | 3.57 | 3.45 | -0.36 | -0.04 |
| | ( 2.60) | ( 2.72) | ( 3.69) | ( 4.90) | ( 0.47) |
| % Urban | 1.38 | -0.30 | -0.30 | -0.83 | -0.31 |
| | ( 0.51) | ( 0.57) | ( 0.79) | ( 1.07) | ( 0.23) |
| % White | -2.75 | -1.78 | -1.28 | -1.62 | -0.42 |
| | ( 0.52) | ( 0.60) | ( 0.88) | ( 1.20) | ( 0.23) |
| % Higher education | 0.33 | 0.02 | -0.01 | -0.03 | -0.02 |
| | ( 0.07) | ( 0.07) | ( 0.10) | ( 0.14) | ( 0.05) |
| % Illiterate | -0.00 | 0.33 | 0.01 | 0.17 | -0.02 |
| | ( 0.23) | ( 0.26) | ( 0.38) | ( 0.53) | ( 0.11) |
| Geographic indicators | | | | | |
| North | -0.00 | -0.01 | -0.01 | 0.01 | 0.02 |
| | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.02) |
| Northeast | 0.04 | 0.02 | 0.01 | 0.01 | -0.03 |
| | ( 0.01) | ( 0.01) | ( 0.02) | ( 0.02) | ( 0.04) |
| South | -0.01 | -0.01 | -0.00 | 0.01 | 0.02 |
| | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.02) | ( 0.03) |
| Southeast | -0.00 | 0.01 | -0.00 | -0.03 | -0.03 |
| | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.02) | ( 0.03) |
| Midwest | -0.03 | -0.01 | 0.00 | 0.01 | 0.01 |
| | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.01) | ( 0.02) |
| Other covariates | | | | | |
| log(Bolsa Familia households) ×100 | 9.56 | 7.83 | 1.26 | 2.07 | -0.35 |
| | ( 1.81) | ( 2.21) | ( 3.25) | ( 4.44) | ( 1.90) |
| log(Bolsa Familia receipts) ×100 | 10.82 | 8.32 | 1.77 | 2.76 | -0.59 |
| | ( 1.96) | ( 2.36) | ( 3.46) | ( 4.72) | ( 1.97) |
| Authorized amendments | 0.17 | -0.11 | -0.21 | -0.04 | -0.15 |
| | ( 0.12) | ( 0.16) | ( 0.16) | ( 0.17) | ( 0.24) |
| Executed amendments | 0.04 | -0.14 | -0.15 | -0.03 | -0.01 |
| | ( 0.07) | ( 0.13) | ( 0.10) | ( 0.07) | ( 0.15) |
| Observations (all) | 16427 | 7849 | 3400 | 1809 | 8943 |
| Observations (effective) | 16427 | 7849 | 3400 | 1809 | 4608 |

Notes: Standard errors clustered by municipality. Both the number of households receiving Bolsa Familia and Bolsa Familia receipts are normalized by population to take into account city size. Transfers received through amendments are expressed as a share of city revenues. Column 6 employs our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city-year fixed effects.

Table 3: RD estimates of the effect of a left-wing mayor

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| **Size of city government** | | | | | |
| Expenditure per capita | -0.01 | 0.52 | -1.24 | 0.23 | 2.26 |
| | ( 0.56) | ( 1.27) | ( 0.85) | ( 0.82) | ( 2.06) |
| Expenditure, % of GDP | 0.01 | -1.05 | -0.36 | -0.02 | -0.13 |
| | ( 0.24) | ( 1.18) | ( 0.43) | ( 0.25) | ( 0.47) |
| Revenue per capita | 0.39 | 0.59 | -0.77 | 1.02 | 2.19 |
| | ( 0.52) | ( 1.21) | ( 0.77) | ( 0.88) | ( 2.01) |
| Revenue, % of GDP | 0.12 | -1.14 | -0.20 | 0.24 | -0.21 |
| | ( 0.25) | ( 1.20) | ( 0.42) | ( 0.27) | ( 0.49) |
| **Allocation of resources: budget categories (% of total expenditure)** | | | | | |
| Current Expenditure | -0.05 | -0.39 | -0.15 | 0.18 | 1.01 |
| | ( 0.17) | ( 0.38) | ( 0.25) | ( 0.31) | ( 0.65) |
| Public Investment | 0.09 | 0.40 | 0.23 | -0.08 | -0.96 |
| | ( 0.16) | ( 0.37) | ( 0.26) | ( 0.31) | ( 0.63) |
| Personnel | -0.05 | -0.81 | -0.04 | -0.08 | -0.34 |
| | ( 0.22) | ( 0.48) | ( 0.30) | ( 0.41) | ( 0.85) |
| **Allocation of resources: functional categories (% of total expenditure)** | | | | | |
| Social Expenditures | 0.64 | 1.27 | 0.71 | 0.91 | 2.19 |
| | ( 0.21) | ( 0.40) | ( 0.30) | ( 0.39) | ( 0.87) |
| of which: | | | | | |
| Health & sanitation | 0.18 | 0.69 | 0.38 | -0.11 | 0.45 |
| | ( 0.15) | ( 0.30) | ( 0.22) | ( 0.27) | ( 0.42) |
| Education & culture | 0.24 | 0.31 | 0.12 | 1.00 | 0.83 |
| | ( 0.16) | ( 0.30) | ( 0.19) | ( 0.30) | ( 0.50) |
| Social welfare | 0.16 | 0.32 | 0.27 | 0.12 | 0.36 |
| | ( 0.06) | ( 0.11) | ( 0.09) | ( 0.10) | ( 0.20) |
| Other Expenditures: | | | | | |
| Housing | -0.16 | -0.36 | 0.05 | -0.15 | 0.41 |
| | ( 0.13) | ( 0.29) | ( 0.21) | ( 0.24) | ( 0.65) |
| Transportation | -0.18 | -0.07 | -0.24 | -0.52 | -0.73 |
| | ( 0.09) | ( 0.20) | ( 0.13) | ( 0.19) | ( 0.29) |
| Other | -0.21 | -0.86 | -0.59 | -0.22 | -1.90 |
| | ( 0.23) | ( 0.42) | ( 0.34) | ( 0.40) | ( 1.10) |
| Social Expenditures per capita | 1.16 | 3.34 | 0.25 | 1.92 | 6.48 |
| | ( 0.61) | ( 1.36) | ( 0.86) | ( 0.93) | ( 2.40) |
| Observations (all) | 8943 | 2395 | 4158 | 3105 | 919 |
| Observations (effective) | 4408 | 1227 | 2367 | 1660 | 451 |

Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

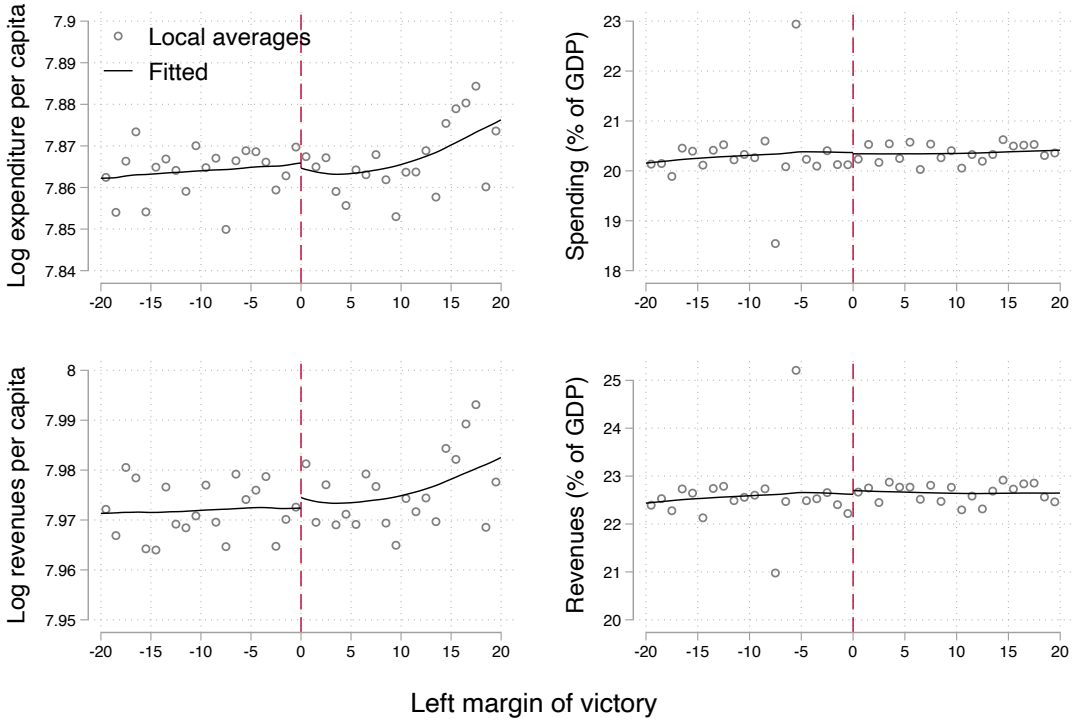
Table 4: Differential effect on social expenditures in subsamples, relative to the rest of the sample

| Outcome | Subsample | | | | | |
|---|---|---|---|---|---|---|
| | Lame duck | Oil Windfall | Tiebout competition | | Ideology distance | |
| | | | < median | < 25th pct | > median | > 75th pct |
| Social expenditures share | 0.91 | 1.74 | 0.41 | -0.42 | 0.56 | 0.38 |
| | ( 0.48) | ( 1.01) | ( 0.42) | ( 0.47) | ( 0.50) | ( 0.59) |
| Social expenditures per capita | 3.09 | 5.74 | -1.40 | -2.24 | 0.75 | -1.02 |
| | ( 1.72) | ( 2.74) | ( 1.39) | ( 1.57) | ( 1.52) | ( 1.75) |

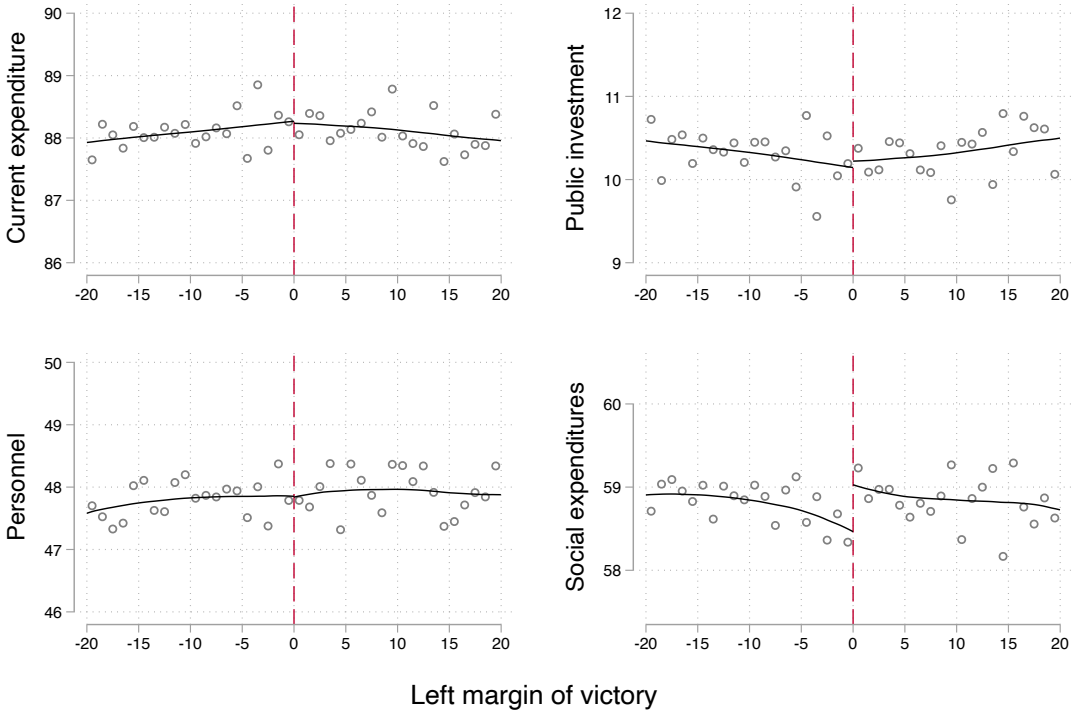
Notes: For each subsample, this table reports the difference between the estimated effect in the subsample and in the rest of the sample. In each subsample, estimates are obtained from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city and year fixed effects. Standard errors clustered by municipality are obtained from 500 bootstrap replications. See Section **??** for more details on the procedure

Figure 1: Local fiscal policy indicators - baseline (whole sample)

*(a) Size of city government*

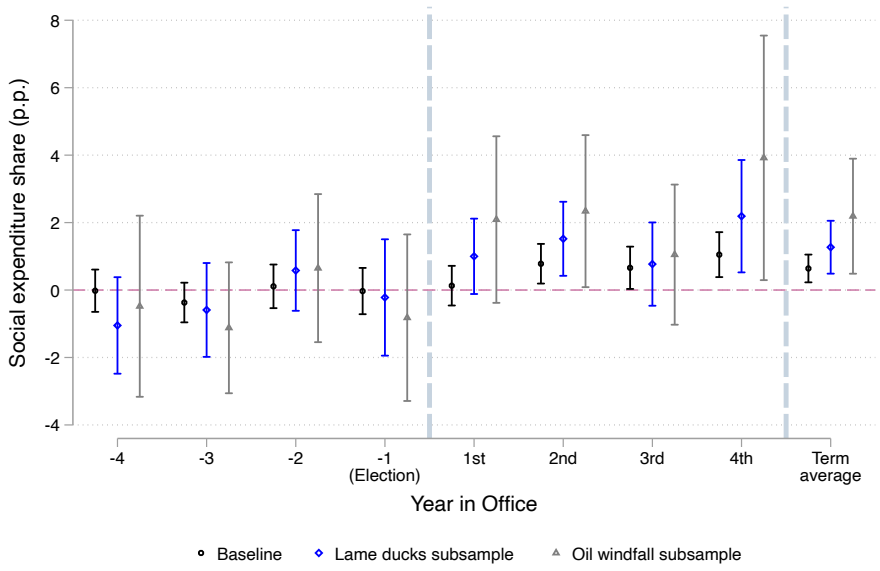



*(b) Expenditures composition (shares)*



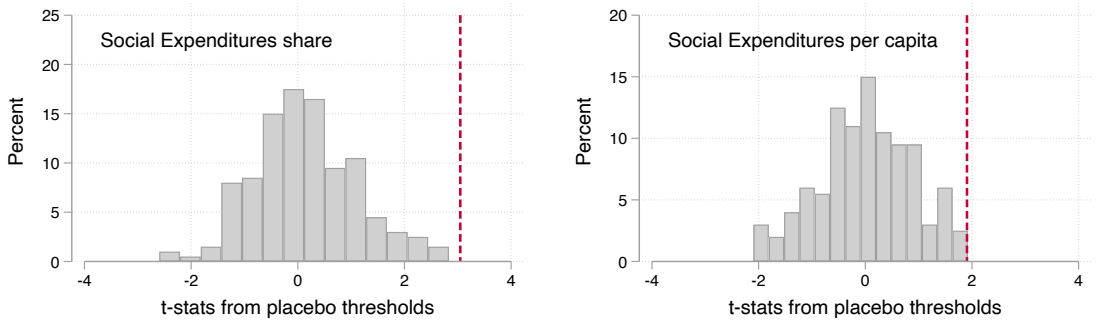

Notes: Visual presentation of our RD estimates of the effect of a left-wing mayor, reported in column 1 of table 3 and based on the specification in equation **??**. All outcomes are 4-year term averages, residualized on city and year fixed-effects. Per-capita variables are taken in logarithms. Fitted lines are estimated semi-parametrically through kernel-weighted local linear regression (triangular kernel), with MSE-optimal bandwidth.

Figure 2: Effect of a left-wing mayor on the share of social spending, by year in office




Notes: Effect of a left-wing mayor on the share of social spending from our RD specification (equation **??**), using the robust and bias-corrected procedure of **?** and controlling for city and year fixed effects. Bars represent 95% confidence intervals from robust bias-corrected standard errors clustered by municipality.

Figure 3: Falsification test using placebo thresholds for the effect of a left-wing mayor on social expenditures




Notes: Empirical distribution of t-statistics from our RD estimates (equation **??**) of the effect of a left-wing mayor on the share of social spending and social expenditure per capita, based on 200 randomly-drawn placebo thresholds, drawn separately on the left and on the right side of the true threshold (100 on each side), using only observations belonging to that side and with at least 25 observations on each side of the bandwidth. Vertical line = t-statistics obtained using the true threshold. The t-statistics are from the robust bias-corrected procedure of **?**.

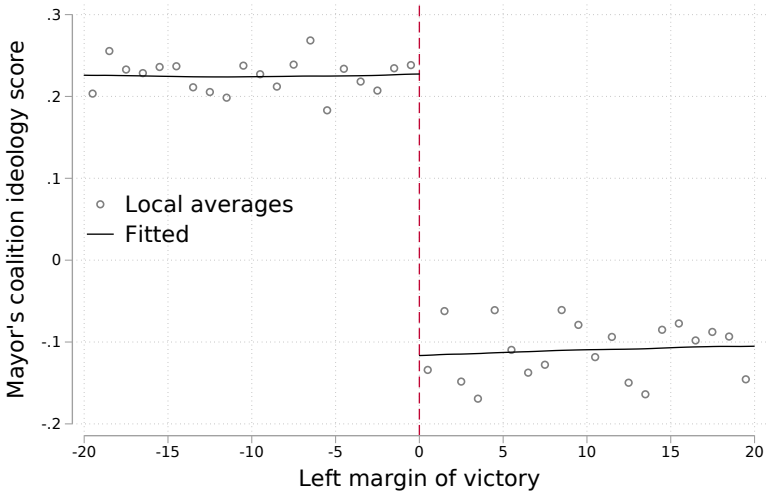
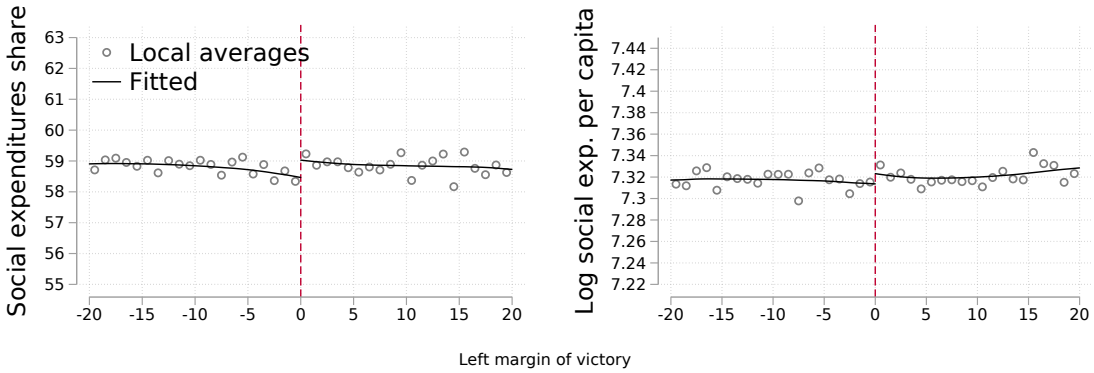



Figure 4: Ideology score for the coalition of the elected mayor

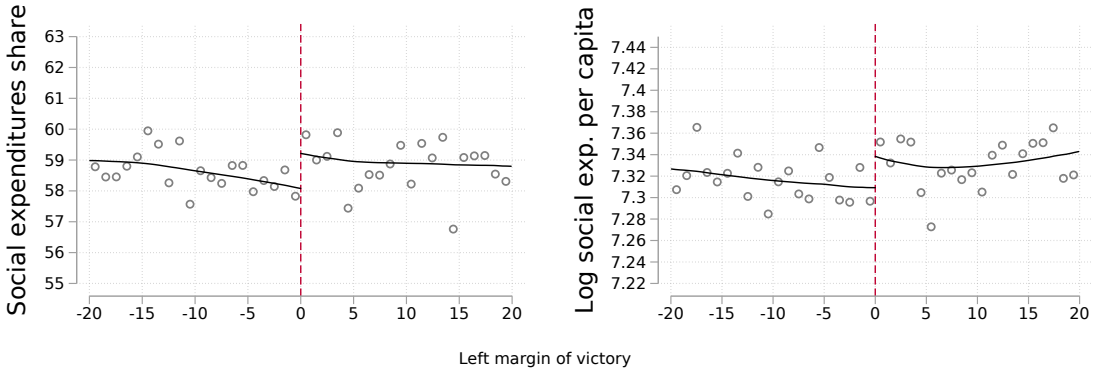
Notes: Left-right ideology score for the coalition supporting the elected mayor on the vertical axis (higher values indicate more right-wing coalitions). Margin of the left-wing candidate on the horizontal axis. See main text for the definition and construction of these two variables. Fitted lines are estimated semi-parametrically through kernel-weighted local linear regression (triangular kernel) with MSE-optimal bandwidth.

Figure 5: Effect of a left-wing mayor on social spending

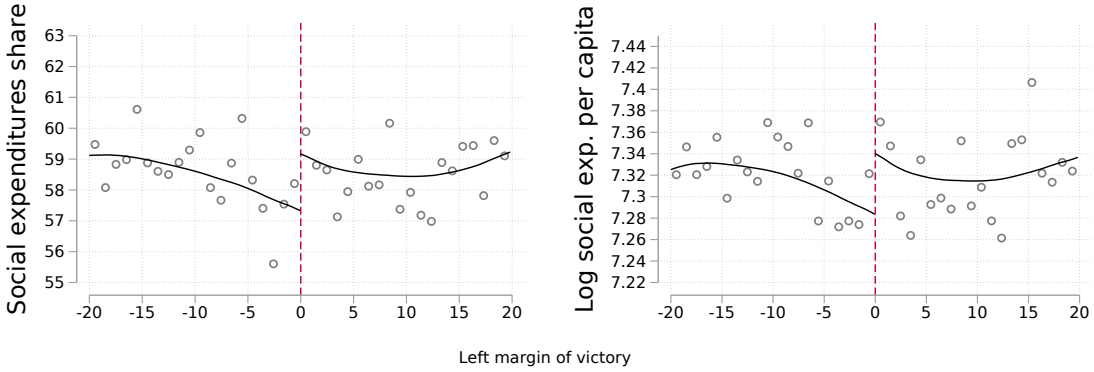
*(a) Whole sample*




*(b) Cities with lame duck mayor*




*(c) Cities experiencing oil windfalls*




Notes: Visual presentation of our RD estimates of the effect of a left-wing mayor on social expenditures per capita (left) and as share of total expenditures (right) for each subsample, as reported in columns 1, 2 and 5 of table 3 and based on the specification in equation **??**. All outcomes are 4-year term averages, residualized on city and year fixed-effects. Per-capita variables are taken in logarithms. Fitted lines are estimated semi-parametrically through kernel-weighted local linear regression (triangular kernel), with MSE-optimal bandwidth. See main text for definition and interpretation of the subsamples.

# Appendix A Partisanship classification

Table A.1: Party classification

| **Leftist parties** | | **Non-leftist parties** | |
|---|---|---|---|
| Party | Source | Party | Source |
| PV | Zucco and Power (2018) | DEM/PFL | Zucco and Power (2018) |
| PT | Zucco and Power (2018) | MDB/PMDB | Zucco and Power (2018) |
| PSOL | Zucco and Power (2018) | PP | Zucco and Power (2018) |
| PSB | Zucco and Power (2018) | PR | Zucco and Power (2018) |
| PPS/CID | Zucco and Power (2018) | PRB | Zucco and Power (2018) |
| PDT | Zucco and Power (2018) | PSDB | Zucco and Power (2018) |
| PCdoB | Zucco and Power (2018) | PSL | Zucco and Power (2018) |
| PPL | Foro de São Paulo | PTB | Zucco and Power (2018) |
| PSTU | Baker and Greene (2011) | PRONA | Baker and Greene (2011) |
| PMN | Baker and Greene (2011) | PRP | Baker and Greene (2011) |
| PCO | Baker and Greene (2011) | PRTB | Baker and Greene (2011) |
| PCB | Baker and Greene (2011) | PSC | Baker and Greene (2011) |
| | | DC/PSDC | Baker and Greene (2011) |
| | | PODE/PTN | Baker and Greene (2011) |
| | | PTdoB | |
| | | PAN | |
| | | PHS | |
| | | PL | |
| | | PSD | |
| | | PTC | |
| | | PEN | |

Leftist parties: Partido Verde (PV), Partido dos Trabalhadores (PT), Partido Socialismo e Liberdade (PSOL), Partido Socialista Brasileiro (PSB), Partido Popular Socialista/Cidadania (PPS/CID), Partido Democrático Trabalhista (PDT), Partido Comunista do Brasil (PCdoB), Partido Pátria Livre (PPL), Partido Socialista dos Trabalhadores Unificado (PSTU), Partido da Mobilização Nacional (PMN), Partido da Causa Operária (PCO), Partido Comunista Brasileiro (PCB).
Non-leftist parties: Democratas/Partido da Frente Liberal (DEM/PFL), Movimento Democrático Brasileiro/Partido do Movimento Democrático Brasileiro (MDB/PMDB), Partido Progressista (PP), Partido da República (PR), Partido Republicano Brasileiro (PRB), Partido da Social Democracia Brasileira (PSDB), Partido Social Liberal (PSL), Partido Trabalhista Brasileiro (PTB), Partido da Reedificação da Ordem Nacional (PRONA), Partido Republicano Progressista (PRP), Partido Renovador Trabalhista Brasileiro (PRTB), Partido Social Cristão (PSC), Democracia Cristã/Partido Social Democrata Cristão (DC/PSDC), Podemos/Partido Trabalhista Nacional (PODE/PTN), Partido Trabalhista do Brasil (PTdoB), Partido dos Aposentados da Nação (PAN), Partido Humanista da Solidariedade (PHS), Partido Liberal (PL), Partido Social Democrático (PSD), Partido Trabalhista Cristão (PTC), Partido Ecológico Nacional (PEN).

## Appendix B Covariates descriptive statistics

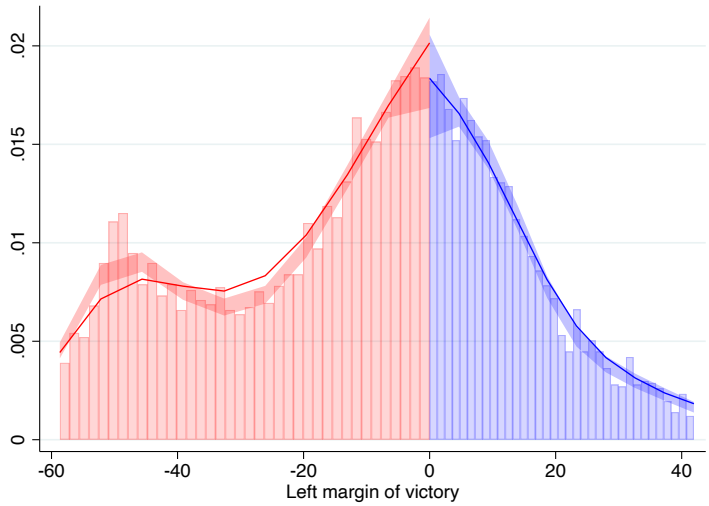
Table B.1: Covariates descriptive statistics

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| Labor market and demographic covariates | | | | | |
| Median earnings | 806.89 | 809.02 | 873.48 | 822.26 | 786.95 |
| | ( 269.84) | ( 286.18) | ( 294.44) | ( 280.56) | ( 305.44) |
| Labor force participation | 54.87 | 54.78 | 55.37 | 55.02 | 54.07 |
| | ( 8.43) | ( 8.79) | ( 7.59) | ( 8.45) | ( 6.93) |
| Population (in thousands) | 43.24 | 46.50 | 65.47 | 58.98 | 67.47 |
| | ( 253.47) | ( 217.32) | ( 342.65) | ( 373.28) | ( 247.91) |
| % Urban | 62.55 | 62.73 | 67.39 | 63.85 | 65.72 |
| | ( 23.82) | ( 24.25) | ( 23.67) | ( 24.08) | ( 24.84) |
| % White | 50.93 | 51.62 | 52.07 | 50.42 | 42.31 |
| | ( 25.03) | ( 25.05) | ( 24.37) | ( 25.34) | ( 21.87) |
| % Higher education | 3.69 | 3.61 | 4.22 | 3.89 | 3.42 |
| | ( 3.19) | ( 3.15) | ( 3.55) | ( 3.32) | ( 3.67) |
| % Illiterate | 17.59 | 18.09 | 15.38 | 17.26 | 19.34 |
| | ( 10.98) | ( 11.53) | ( 10.45) | ( 10.97) | ( 11.31) |
| Geographic covariates | | | | | |
| North | 0.08 | 0.07 | 0.11 | 0.08 | 0.03 |
| | ( 0.27) | ( 0.26) | ( 0.32) | ( 0.27) | ( 0.16) |
| Northeast | 0.33 | 0.34 | 0.24 | 0.35 | 0.51 |
| | ( 0.47) | ( 0.48) | ( 0.43) | ( 0.48) | ( 0.50) |
| South | 0.21 | 0.22 | 0.19 | 0.23 | 0.06 |
| | ( 0.41) | ( 0.41) | ( 0.39) | ( 0.42) | ( 0.24) |
| Southeast | 0.32 | 0.31 | 0.40 | 0.28 | 0.41 |
| | ( 0.47) | ( 0.46) | ( 0.49) | ( 0.45) | ( 0.49) |
| Midwest | 0.07 | 0.06 | 0.06 | 0.05 | 0.00 |
| | ( 0.25) | ( 0.23) | ( 0.24) | ( 0.22) | ( 0.00) |
| Other covariates | | | | | |
| Bolsa Familia (households) | 2.16 | 2.37 | 2.89 | 2.69 | 2.98 |
| | ( 7.00) | ( 7.38) | ( 9.66) | ( 8.98) | ( 7.45) |
| Bolsa Familia (receipts) | 142.23 | 145.52 | 123.94 | 148.70 | 133.97 |
| | ( 113.04) | ( 112.82) | ( 102.01) | ( 114.60) | ( 91.66) |
| Authorized amendments | 1.56 | 1.60 | 1.82 | 1.75 | 1.26 |
| | ( 6.65) | ( 6.08) | ( 7.68) | ( 7.85) | ( 2.33) |
| Executed amendments | 0.64 | 0.80 | 0.76 | 0.74 | 0.66 |
| | ( 4.90) | ( 4.66) | ( 5.88) | ( 6.34) | ( 1.76) |
| Number of obs. | 8943 | 2395 | 4158 | 3105 | 919 |

Notes: This table reports mean and standard deviation (in parenthesis) for the covariate variables. Demographic and geographic covariates obtained from IBGE. Data on the conditional cash-transfer program Bolsa Família are from *Ministério da Cidadania*. Both the number of households receiving Bolsa Familia and Bolsa Familia receipts are normalized by population to take into account city size. Transfers received through amendments are expressed as a share of city revenues and obtained from *SIGA-Brasil*. See Section **??** for the specific definition and motivation of each subsample.

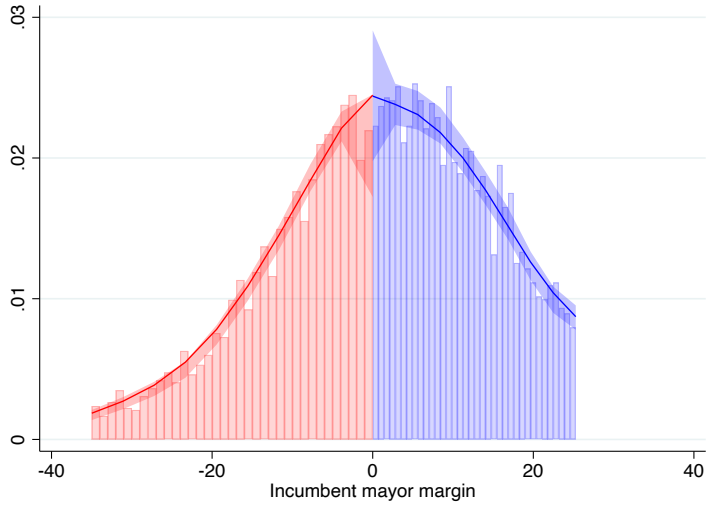
# Appendix C Additional design assessment tests

Figure C.1: Test for manipulation of the running variable



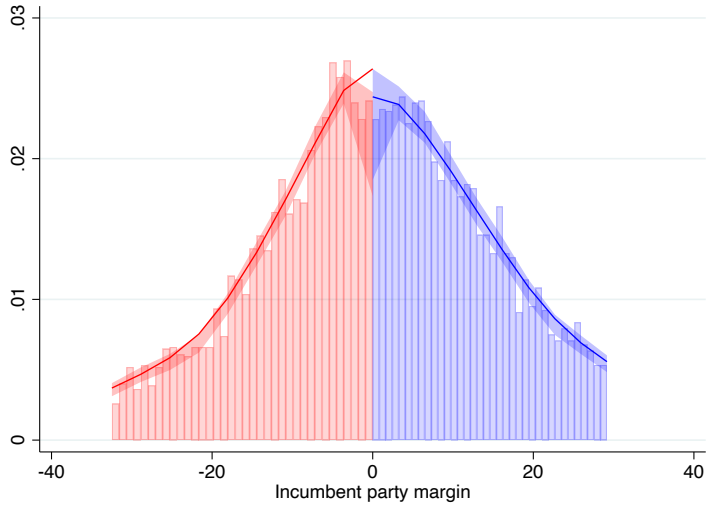

Notes: The figure presents visual evidence for the **?** manipulation test. The null hypothesis is that there is no discontinuity in the distribution of the running variable at the cutoff. T-stat = -0.65; P-value = 0.51.

Figure C.2: Test for manipulation by incumbent mayors




Notes: The figure presents visual evidence for the **?** manipulation test. The null hypothesis is that there is no discontinuity in the distribution of the incumbent margin at the cutoff. This test focuses on elections in which one of the candidates is the incumbent mayor. T-stat = 1.16; P-value = 0.25.

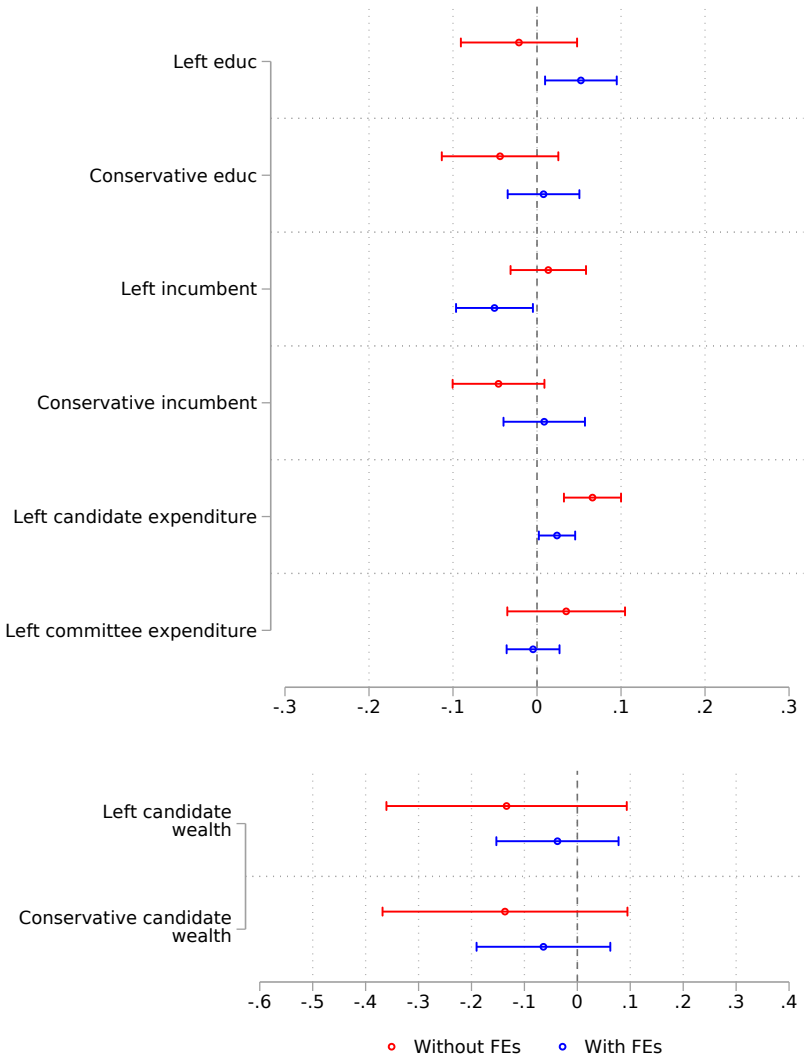
Figure C.3: Test for manipulation by incumbent parties




Notes: The figure presents visual evidence for the **?** manipulation test. The null hypothesis is that there is no discontinuity in the distribution of the incumbent margin at the cutoff. This test focuses on elections in which one of the candidates is affiliated with the party of the incumbent mayor (either the incumbent herself or a different candidate from the same party). T-stat = 0.50; P-value = 0.62.

# Appendix D Tests for balance in candidate characteristics

Figure D.1: Discontinuities in candidate characteristics around the threshold




Notes: The figure presents estimates from our RD specification (equation **??**), with candidates' characteristics as outcome variables. 'Left educ' is a dummy for whether the left candidate has completed high school. 'Left incumbent' is a dummy for whether the left candidate is the incumbent mayor. Candidate and committee expenditures are measured as a share of the total expenditures of the two relevant candidates. Wealth is the log of self-reported wealth.

# Appendix E Composition of revenues

Table E.1: RD estimates of the effect of a left-wing mayor on the composition of revenues

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| Revenues, % GDP | | | | | |
| Total revenue | 0.12 | -1.14 | -0.20 | 0.24 | -0.21 |
| | ( 0.25) | ( 1.20) | ( 0.42) | ( 0.27) | ( 0.49) |
| Municipal taxes | -0.02 | -0.07 | -0.10 | 0.05 | -0.02 |
| | ( 0.03) | ( 0.13) | ( 0.05) | ( 0.05) | ( 0.06) |
| Federal transfers | 0.15 | -0.44 | 0.05 | 0.09 | -0.12 |
| | ( 0.13) | ( 0.56) | ( 0.22) | ( 0.14) | ( 0.32) |
| State transfers | 0.02 | -0.18 | -0.07 | 0.05 | -0.01 |
| | ( 0.06) | ( 0.23) | ( 0.11) | ( 0.08) | ( 0.15) |
| Composition of revenues: revenue categories (% of total revenues) | | | | | |
| Municipal taxes | -0.17 | 0.13 | -0.21 | 0.01 | 0.20 |
| | ( 0.09) | ( 0.22) | ( 0.15) | ( 0.15) | ( 0.26) |
| Federal transfers | 0.30 | 0.37 | 0.66 | -0.22 | 0.36 |
| | ( 0.19) | ( 0.44) | ( 0.28) | ( 0.33) | ( 0.78) |
| State transfers | -0.03 | -0.04 | 0.03 | 0.28 | 0.13 |
| | ( 0.14) | ( 0.29) | ( 0.23) | ( 0.27) | ( 0.52) |
| Observations (all) | 8943 | 2395 | 4158 | 3105 | 919 |
| Observations (effective) | 5168 | 1786 | 3177 | 1679 | 366 |

Notes: Estimates from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city and year fixed effects. Outcomes measured as 4-year averages over a mayoral term. Per-capita variables are taken in logarithms and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

# Appendix F Dynamic effects and pre-trends

Table F.1: Dynamic effects and pre-trends in the baseline sample

| Outcome | Previous Mandate | Overall Mandate | Dynamics | | | |
|---|---|---|---|---|---|---|
| | Average | Average | 1st year | 2nd year | 3rd year | 4th year |
| Size of government: overall revenues and expenses | | | | | | |
| Expenditure per capita | -0.20 | -0.01 | 1.05 | 0.07 | 0.15 | -0.41 |
| | ( 0.52) | ( 0.56) | ( 0.89) | ( 0.80) | ( 0.65) | ( 0.79) |
| Expenditure, % of GDP | 0.40 | 0.01 | 0.35 | 0.14 | -0.51 | 0.00 |
| | ( 0.26) | ( 0.24) | ( 0.17) | ( 0.19) | ( 0.81) | ( 0.18) |
| Revenue per capita | -0.58 | 0.39 | -0.01 | 1.38 | -0.17 | 0.50 |
| | ( 0.55) | ( 0.52) | ( 0.64) | ( 0.90) | ( 0.68) | ( 0.89) |
| Revenue, % of GDP | 0.20 | 0.12 | 0.34 | 0.29 | -0.33 | 0.35 |
| | ( 0.25) | ( 0.25) | ( 0.19) | ( 0.20) | ( 0.75) | ( 0.22) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | | |
| Current Expenditure | -0.01 | -0.05 | 0.10 | 0.20 | -0.27 | -0.33 |
| | ( 0.24) | ( 0.17) | ( 0.26) | ( 0.30) | ( 0.27) | ( 0.30) |
| Public Investment | -0.01 | 0.09 | -0.08 | -0.17 | 0.37 | 0.27 |
| | ( 0.24) | ( 0.16) | ( 0.26) | ( 0.30) | ( 0.27) | ( 0.29) |
| Personnel | -0.19 | -0.05 | -0.28 | 0.30 | -0.02 | -0.23 |
| | ( 0.25) | ( 0.22) | ( 0.34) | ( 0.27) | ( 0.27) | ( 0.29) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | | |
| Social Expenditures | -0.13 | 0.64 | 0.13 | 0.78 | 0.66 | 1.05 |
| | ( 0.21) | ( 0.21) | ( 0.30) | ( 0.30) | ( 0.32) | ( 0.34) |
| of which: | | | | | | |
| Health & sanitation | -0.16 | 0.18 | -0.23 | 0.12 | 0.25 | 0.58 |
| | ( 0.16) | ( 0.15) | ( 0.20) | ( 0.21) | ( 0.22) | ( 0.21) |
| Education & culture | 0.08 | 0.24 | 0.32 | 0.47 | 0.09 | 0.35 |
| | ( 0.16) | ( 0.16) | ( 0.22) | ( 0.23) | ( 0.22) | ( 0.24) |
| Social welfare | -0.07 | 0.16 | 0.09 | 0.19 | 0.18 | 0.13 |
| | ( 0.06) | ( 0.06) | ( 0.08) | ( 0.08) | ( 0.08) | ( 0.07) |
| Other expenditures: | | | | | | |
| Housing | -0.00 | -0.16 | -0.18 | -0.18 | -0.12 | -0.17 |
| | ( 0.15) | ( 0.13) | ( 0.21) | ( 0.20) | ( 0.18) | ( 0.20) |
| Transportation | -0.24 | -0.18 | -0.16 | -0.30 | -0.25 | -0.15 |
| | ( 0.13) | ( 0.09) | ( 0.13) | ( 0.15) | ( 0.13) | ( 0.14) |
| Other | 0.36 | -0.21 | 0.16 | -0.32 | -0.11 | -0.81 |
| | ( 0.24) | ( 0.23) | ( 0.30) | ( 0.32) | ( 0.33) | ( 0.40) |
| Social Expenditures per capita | -0.23 | 1.16 | 1.23 | 2.42 | 0.96 | 1.01 |
| | ( 0.65) | ( 0.61) | ( 0.98) | ( 1.10) | ( 0.81) | ( 0.92) |
| Observations (all) | 8144 | 8943 | 8943 | 8943 | 8943 | 8943 |
| Observations (effective) | 5070 | 4408 | 3160 | 4565 | 5385 | 4166 |

Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term or the outcome of an individual year of the mandate. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table F.2: Dynamic effects and pre-trends in the lameduck subsample

| Outcome | Previous Mandate | Overall Mandate | Dynamics | | | |
|---|---|---|---|---|---|---|
| | Average | Average | 1st year | 2nd year | 3rd year | 4th year |
| Size of government: overall revenues and expenses | | | | | | |
| Expenditure per capita | -1.58 | 0.52 | 3.59 | 1.40 | -0.43 | -0.50 |
| | ( 1.09) | ( 1.27) | ( 1.97) | ( 1.81) | ( 1.57) | ( 1.64) |
| Expenditure, % of GDP | 0.45 | -1.05 | 0.63 | 0.15 | -4.45 | 0.37 |
| | ( 0.65) | ( 1.18) | ( 0.36) | ( 0.35) | ( 4.58) | ( 0.39) |
| Revenue per capita | -0.55 | 0.59 | 0.54 | 2.28 | 0.13 | 0.09 |
| | ( 1.04) | ( 1.21) | ( 1.63) | ( 1.83) | ( 1.42) | ( 1.51) |
| Revenue, % of GDP | 0.59 | -1.14 | 0.11 | 0.23 | -4.59 | 0.31 |
| | ( 0.67) | ( 1.20) | ( 0.39) | ( 0.38) | ( 4.68) | ( 0.40) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | | |
| Current Expenditure | 0.38 | -0.39 | -0.35 | -0.32 | -0.61 | -0.32 |
| | ( 0.42) | ( 0.38) | ( 0.56) | ( 0.59) | ( 0.55) | ( 0.55) |
| Public Investment | -0.28 | 0.40 | 0.49 | 0.16 | 0.51 | 0.27 |
| | ( 0.43) | ( 0.37) | ( 0.56) | ( 0.66) | ( 0.54) | ( 0.59) |
| Personnel | 0.49 | -0.81 | -1.14 | -0.20 | -0.93 | -1.23 |
| | ( 0.52) | ( 0.48) | ( 0.66) | ( 0.67) | ( 0.62) | ( 0.61) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | | |
| Social Expenditures | -0.25 | 1.27 | 1.00 | 1.52 | 0.77 | 2.19 |
| | ( 0.39) | ( 0.40) | ( 0.57) | ( 0.56) | ( 0.63) | ( 0.85) |
| of which: | | | | | | |
| Health & sanitation | -0.13 | 0.69 | 0.28 | 0.69 | 0.55 | 1.12 |
| | ( 0.29) | ( 0.30) | ( 0.39) | ( 0.45) | ( 0.48) | ( 0.45) |
| Education & culture | -0.06 | 0.31 | 0.27 | 0.57 | 0.18 | 0.97 |
| | ( 0.30) | ( 0.30) | ( 0.48) | ( 0.42) | ( 0.43) | ( 0.63) |
| Social welfare | -0.07 | 0.32 | 0.43 | 0.38 | 0.19 | 0.21 |
| | ( 0.13) | ( 0.11) | ( 0.15) | ( 0.17) | ( 0.14) | ( 0.12) |
| Other expenditures: | | | | | | |
| Housing | -0.03 | -0.36 | -0.30 | -0.52 | -0.61 | -0.05 |
| | ( 0.35) | ( 0.29) | ( 0.46) | ( 0.42) | ( 0.42) | ( 0.43) |
| Transportation | -0.69 | -0.07 | 0.07 | 0.25 | 0.06 | -0.30 |
| | ( 0.25) | ( 0.20) | ( 0.28) | ( 0.31) | ( 0.28) | ( 0.34) |
| Other | 0.84 | -0.86 | -0.70 | -1.26 | -0.16 | -2.00 |
| | ( 0.44) | ( 0.42) | ( 0.57) | ( 0.56) | ( 0.70) | ( 0.87) |
| Social Expenditures per capita | -1.89 | 3.34 | 4.45 | 1.94 | 0.76 | -0.66 |
| | ( 1.36) | ( 1.36) | ( 2.04) | ( 2.67) | ( 2.52) | ( 3.16) |
| Observations (all) | 2227 | 2395 | 2395 | 2395 | 2395 | 2395 |
| Observations (effective) | 1185 | 1227 | 857 | 1150 | 1266 | 1146 |

Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term or the outcome of an individual year of the mandate. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table F.3: Dynamic effects and pre-trends in the oil windfall subsample

| Outcome | Previous Mandate | Overall Mandate | Dynamics | | | |
|---|---|---|---|---|---|---|
| | Average | Average | 1st year | 2nd year | 3rd year | 4th year |
| Size of government: overall revenues and expenses | | | | | | |
| Expenditure per capita | 0.20 | 2.26 | 2.45 | 0.68 | 3.86 | 2.06 |
| | ( 2.20) | ( 2.06) | ( 2.46) | ( 2.44) | ( 2.76) | ( 2.82) |
| Expenditure, % of GDP | -0.02 | -0.13 | 0.85 | -0.30 | -0.37 | -0.60 |
| | ( 0.40) | ( 0.47) | ( 0.58) | ( 0.62) | ( 0.62) | ( 0.75) |
| Revenue per capita | 1.52 | 2.19 | 2.79 | -0.04 | 4.11 | -0.76 |
| | ( 2.64) | ( 2.01) | ( 2.63) | ( 2.75) | ( 2.24) | ( 2.60) |
| Revenue, % of GDP | 0.05 | -0.21 | 0.83 | -0.57 | -0.31 | -0.87 |
| | ( 0.47) | ( 0.49) | ( 0.61) | ( 0.58) | ( 0.65) | ( 0.83) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | | |
| Current Expenditure | 0.49 | 1.01 | 0.79 | 1.36 | -0.27 | 2.67 |
| | ( 0.81) | ( 0.65) | ( 0.83) | ( 1.07) | ( 0.93) | ( 1.02) |
| Public Investment | -0.13 | -0.96 | -0.57 | -1.19 | 0.05 | -2.67 |
| | ( 0.80) | ( 0.63) | ( 0.84) | ( 1.06) | ( 0.92) | ( 1.03) |
| Personnel | -0.35 | -0.34 | -0.29 | 0.37 | -1.10 | 0.39 |
| | ( 0.72) | ( 0.85) | ( 1.09) | ( 1.15) | ( 1.08) | ( 1.09) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | | |
| Social Expenditures | -0.34 | 2.19 | 2.09 | 2.34 | 1.05 | 3.92 |
| | ( 0.73) | ( 0.87) | ( 1.26) | ( 1.15) | ( 1.06) | ( 1.85) |
| of which: | | | | | | |
| Health & sanitation | -0.92 | 0.45 | 0.95 | 1.00 | 0.42 | 1.16 |
| | ( 0.55) | ( 0.42) | ( 0.97) | ( 0.68) | ( 0.64) | ( 0.75) |
| Education & culture | 0.58 | 0.83 | 0.75 | 0.74 | 0.29 | 2.34 |
| | ( 0.59) | ( 0.50) | ( 0.81) | ( 0.73) | ( 0.71) | ( 1.17) |
| Social welfare | 0.08 | 0.36 | 0.39 | 0.33 | 0.36 | 0.33 |
| | ( 0.24) | ( 0.20) | ( 0.24) | ( 0.30) | ( 0.27) | ( 0.28) |
| Other expenditures: | | | | | | |
| Housing | 0.45 | 0.41 | 0.45 | 0.46 | 0.03 | 0.45 |
| | ( 0.64) | ( 0.65) | ( 0.80) | ( 0.97) | ( 0.78) | ( 0.92) |
| Transportation | -0.26 | -0.73 | -0.49 | -0.59 | -0.63 | -0.87 |
| | ( 0.28) | ( 0.29) | ( 0.34) | ( 0.37) | ( 0.35) | ( 0.38) |
| Other | 0.15 | -1.90 | -1.79 | -2.09 | -0.29 | -3.53 |
| | ( 0.80) | ( 1.10) | ( 1.60) | ( 1.39) | ( 1.22) | ( 2.19) |
| Social Expenditures per capita | 0.08 | 6.48 | 7.60 | 3.70 | 4.56 | 3.89 |
| | ( 2.42) | ( 2.40) | ( 3.43) | ( 2.73) | ( 2.80) | ( 2.74) |
| Observations (all) | 813 | 919 | 919 | 919 | 919 | 919 |
| Observations (effective) | 487 | 451 | 386 | 515 | 482 | 417 |

Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term or the outcome of an individual year of the mandate. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

# Appendix G Results by mayoral term and extended sample period

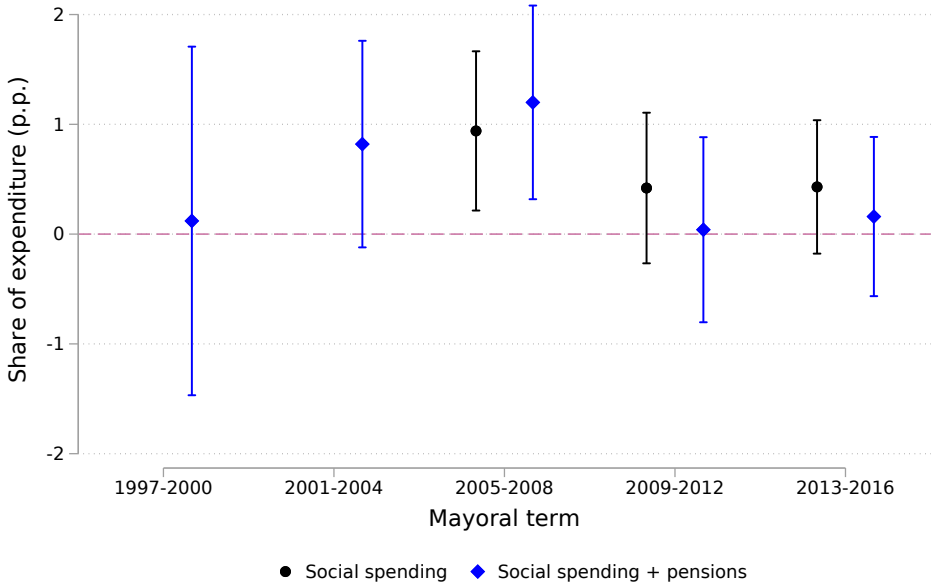



Figure G.1: Effect on the share of social expenditures, by mayoral term

Notes: Effect of a left-wing mayor on the share of social spending from our RD specification (equation **??**), using the robust and bias-corrected procedure of **?** and controlling for city and year fixed effects. The effect is estimated separately for each mayoral term, using our baseline definition of social spending (black) and an alternative definition that includes pensions paid to former municipal employees (blue). Bars represent 95% confidence intervals from robust bias-corrected standard errors clustered by municipality.

## Appendix H Robustness tests

Table H.1: RD estimates of the effect of a left-wing mayor, using differenced outcomes

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| Size of government: overall revenues and expenses | | | | | |
| Expenditure per capita | 0.22 | 0.61 | 2.30 | -3.02 | 0.86 |
| | ( 1.45) | ( 2.62) | ( 2.23) | ( 2.18) | ( 4.13) |
| Expenditure, % of GDP | -0.03 | 0.50 | -0.11 | -0.97 | -0.88 |
| | ( 0.36) | ( 0.64) | ( 0.50) | ( 0.58) | ( 1.10) |
| Revenue per capita | 1.40 | 0.36 | 0.13 | 0.79 | -5.20 |
| | ( 1.32) | ( 2.04) | ( 1.96) | ( 2.00) | ( 4.90) |
| Revenue, % of GDP | 0.29 | 0.25 | -0.35 | -0.27 | -1.88 |
| | ( 0.35) | ( 0.68) | ( 0.52) | ( 0.57) | ( 1.29) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | |
| Current Expenditure | -0.30 | -0.87 | 0.13 | 0.00 | 4.10 |
| | ( 0.58) | ( 0.94) | ( 0.80) | ( 0.88) | ( 2.02) |
| Public Investment | 0.53 | 0.93 | 0.32 | 0.54 | -3.69 |
| | ( 0.60) | ( 0.99) | ( 0.81) | ( 0.87) | ( 2.04) |
| Personnel | 0.39 | -1.02 | -0.00 | 0.64 | 3.59 |
| | ( 0.54) | ( 0.96) | ( 0.77) | ( 0.90) | ( 1.88) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | |
| Social Expenditures | 1.31 | 2.44 | 2.54 | 2.76 | 3.14 |
| | ( 0.61) | ( 1.48) | ( 0.84) | ( 1.07) | ( 2.64) |
| of which: | | | | | |
| Health & sanitation | 1.28 | 0.98 | 1.77 | 1.53 | 2.61 |
| | ( 0.41) | ( 0.80) | ( 0.54) | ( 0.67) | ( 1.35) |
| Education & culture | -0.07 | 1.96 | 0.43 | 1.03 | 0.81 |
| | ( 0.39) | ( 1.09) | ( 0.59) | ( 0.66) | ( 1.79) |
| Social welfare | 0.24 | -0.05 | 0.38 | 0.27 | -0.22 |
| | ( 0.13) | ( 0.25) | ( 0.18) | ( 0.22) | ( 0.71) |
| Other expenditures: | | | | | |
| Housing | 0.08 | 0.72 | 0.78 | 1.19 | -0.67 |
| | ( 0.40) | ( 0.86) | ( 0.62) | ( 0.67) | ( 1.65) |
| Transportation | 0.09 | 0.13 | -0.56 | -0.48 | 0.09 |
| | ( 0.28) | ( 0.69) | ( 0.38) | ( 0.44) | ( 0.57) |
| Other | -1.57 | -3.28 | -2.83 | -3.59 | -2.88 |
| | ( 0.72) | ( 1.56) | ( 1.04) | ( 1.27) | ( 3.05) |
| Social Expenditures per capita | 1.56 | -1.42 | 4.70 | -1.45 | 0.98 |
| | ( 1.87) | ( 5.11) | ( 2.22) | ( 2.79) | ( 4.91) |
| Observations (all) | 8502 | 2320 | 3969 | 2963 | 859 |
| Observations (effective) | 3881 | 1150 | 1919 | 1585 | 460 |

Notes: Estimates from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for year fixed effects. All outcomes taken as percentage points differences between the fourth year of the term and the election year. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table H.2: RD estimates of the effect of a left-wing mayor - excluding first year of mayor term

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| Size of government: overall revenues and expenses | | | | | |
| Expenditure per capita | -0.24 | 0.22 | -0.60 | -0.89 | 2.22 |
| | ( 0.56) | ( 1.31) | ( 0.82) | ( 1.33) | ( 2.22) |
| Expenditure, % of GDP | -0.11 | -1.40 | -0.47 | -1.37 | -0.42 |
| | ( 0.31) | ( 1.55) | ( 0.58) | ( 1.18) | ( 0.54) |
| Revenue per capita | 0.36 | 0.42 | -0.44 | -0.12 | 1.88 |
| | ( 0.55) | ( 1.25) | ( 0.82) | ( 1.30) | ( 2.13) |
| Revenue, % of GDP | 0.06 | -1.45 | -0.32 | -1.21 | -0.49 |
| | ( 0.32) | ( 1.58) | ( 0.58) | ( 1.18) | ( 0.55) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | |
| Current Expenditure | -0.13 | -0.37 | -0.24 | 0.31 | 1.06 |
| | ( 0.18) | ( 0.41) | ( 0.29) | ( 0.48) | ( 0.73) |
| Public Investment | 0.20 | 0.34 | 0.31 | -0.07 | -1.04 |
| | ( 0.19) | ( 0.41) | ( 0.29) | ( 0.42) | ( 0.72) |
| Personnel | 0.00 | -0.67 | 0.05 | 0.28 | -0.27 |
| | ( 0.22) | ( 0.51) | ( 0.33) | ( 0.46) | ( 0.91) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | |
| Social Expenditures | 0.78 | 1.35 | 0.89 | 0.29 | 2.29 |
| | ( 0.24) | ( 0.44) | ( 0.33) | ( 0.46) | ( 1.00) |
| of which: | | | | | |
| Health & sanitation | 0.30 | 0.86 | 0.53 | 0.15 | 0.85 |
| | ( 0.17) | ( 0.33) | ( 0.24) | ( 0.35) | ( 0.53) |
| Education & culture | 0.22 | 0.46 | 0.12 | -0.04 | 0.98 |
| | ( 0.17) | ( 0.31) | ( 0.20) | ( 0.34) | ( 0.63) |
| Social welfare | 0.16 | 0.27 | 0.28 | 0.13 | 0.36 |
| | ( 0.06) | ( 0.11) | ( 0.10) | ( 0.12) | ( 0.25) |
| Other expenditures: | | | | | |
| Housing | -0.12 | -0.39 | 0.06 | 0.25 | 0.44 |
| | ( 0.14) | ( 0.33) | ( 0.25) | ( 0.36) | ( 0.75) |
| Transportation | -0.19 | -0.02 | -0.32 | -0.15 | -0.75 |
| | ( 0.11) | ( 0.23) | ( 0.15) | ( 0.22) | ( 0.33) |
| Other | -0.39 | -1.07 | -0.67 | -0.37 | -1.90 |
| | ( 0.27) | ( 0.53) | ( 0.39) | ( 0.52) | ( 1.24) |
| Social Expenditures per capita | 0.77 | 2.83 | 0.94 | -0.27 | 7.34 |
| | ( 0.58) | ( 1.41) | ( 0.97) | ( 1.54) | ( 2.85) |
| Observations (all) | 8943 | 2395 | 4158 | 2081 | 919 |
| Observations (effective) | 4972 | 1319 | 2682 | 1353 | 460 |

Notes: Estimates from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city and year fixed effects. Outcomes measured as 3-year averages over a mayoral term (excluding the first year of the term). Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table H.3: RD estimates of the effect of a left-wing mayor - by city size

| | Baseline | Subsamples: Population higher than ... | | | |
|---|---|---|---|---|---|
| | | 25th pct | median | 75th pct | 90th pct |
| | | 6,594 | 14,196 | 31,209 | 76,530 |
| Size of government: overall revenues and expenses | | | | | |
| Expenditure per capita | -0.01 | -0.19 | 0.12 | 0.95 | 1.15 |
| | ( 0.56) | ( 0.62) | ( 0.77) | ( 1.18) | ( 1.88) |
| Expenditure, % of GDP | 0.01 | -0.16 | -0.05 | 0.11 | 0.02 |
| | ( 0.24) | ( 0.27) | ( 0.16) | ( 0.19) | ( 0.21) |
| Revenue per capita | 0.39 | 0.32 | -0.12 | 0.21 | 0.18 |
| | ( 0.52) | ( 0.60) | ( 0.70) | ( 1.14) | ( 1.67) |
| Revenue, % of GDP | 0.12 | -0.03 | -0.06 | 0.01 | -0.02 |
| | ( 0.25) | ( 0.29) | ( 0.15) | ( 0.19) | ( 0.21) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | |
| Current Expenditure | -0.05 | 0.13 | 0.04 | -0.18 | -0.32 |
| | ( 0.17) | ( 0.21) | ( 0.25) | ( 0.34) | ( 0.56) |
| Public Investment | 0.09 | -0.04 | 0.14 | 0.34 | 0.17 |
| | ( 0.16) | ( 0.21) | ( 0.25) | ( 0.32) | ( 0.63) |
| Personnel | -0.05 | 0.10 | 0.31 | 0.34 | 1.19 |
| | ( 0.22) | ( 0.23) | ( 0.29) | ( 0.44) | ( 0.74) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | |
| Social Expenditures | 0.64 | 0.75 | 0.51 | 0.34 | 0.68 |
| | ( 0.21) | ( 0.25) | ( 0.29) | ( 0.40) | ( 0.91) |
| of which: | | | | | |
| Health & sanitation | 0.18 | 0.17 | 0.05 | 0.17 | -0.43 |
| | ( 0.15) | ( 0.16) | ( 0.22) | ( 0.33) | ( 0.62) |
| Education & culture | 0.24 | 0.36 | 0.41 | 0.16 | 0.94 |
| | ( 0.16) | ( 0.19) | ( 0.22) | ( 0.27) | ( 0.51) |
| Social welfare | 0.16 | 0.18 | 0.06 | 0.08 | -0.03 |
| | ( 0.06) | ( 0.06) | ( 0.06) | ( 0.09) | ( 0.14) |
| Other expenditures: | | | | | |
| Housing | -0.16 | -0.28 | -0.30 | -0.01 | 0.46 |
| | ( 0.13) | ( 0.16) | ( 0.20) | ( 0.28) | ( 0.54) |
| Transportation | -0.18 | -0.25 | -0.23 | -0.35 | -0.21 |
| | ( 0.09) | ( 0.10) | ( 0.12) | ( 0.18) | ( 0.25) |
| Other | -0.21 | -0.15 | 0.05 | -0.08 | -0.88 |
| | ( 0.23) | ( 0.28) | ( 0.31) | ( 0.47) | ( 1.00) |
| Social Expenditures per capita | 1.16 | 1.30 | 1.36 | 2.26 | 1.91 |
| | ( 0.61) | ( 0.71) | ( 0.86) | ( 1.33) | ( 2.10) |
| Observations (all) | 8943 | 6707 | 4471 | 2235 | 894 |
| Observations (effective) | 4408 | 3714 | 2393 | 1137 | 420 |

Notes: Estimates from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city and year fixed effects. Outcomes measured as 4-year averages over a mayoral term. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. In the heading, numbers below the percentiles are the corresponding population thresholds. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table H.4: RD estimates of the effect of a left-wing mayor: robustness to alternative bandwith selection

| | Baseline | | Subsamples | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lame Duck | | Tiebout < median | | Ideology distance > median | | Oil windfall | |
| Outcome | MSE | CER | MSE | CER | MSE | CER | MSE | CER | MSE | CER |
| Size of government: overall revenues and expenses | | | | | | | | | | |
| Expenditure per capita | -0.01 | 0.05 | 0.52 | 0.99 | -1.24 | -1.07 | 0.23 | -0.07 | 2.26 | 3.35 |
| | ( 0.56) | ( 0.61) | ( 1.27) | ( 1.25) | ( 0.85) | ( 0.91) | ( 0.82) | ( 0.91) | ( 2.06) | ( 2.22) |
| Expenditure, % of GDP | 0.01 | 0.08 | -1.05 | -1.01 | -0.36 | -0.38 | -0.02 | -0.19 | -0.13 | 0.04 |
| | ( 0.24) | ( 0.21) | ( 1.18) | ( 1.21) | ( 0.43) | ( 0.47) | ( 0.25) | ( 0.39) | ( 0.47) | ( 0.48) |
| Revenue per capita | 0.39 | 0.62 | 0.59 | 1.10 | -0.77 | -0.68 | 1.02 | 1.03 | 2.19 | 3.12 |
| | ( 0.52) | ( 0.58) | ( 1.21) | ( 1.21) | ( 0.77) | ( 0.83) | ( 0.88) | ( 1.02) | ( 2.01) | ( 2.15) |
| Revenue, % of GDP | 0.12 | 0.22 | -1.14 | -1.09 | -0.20 | -0.27 | 0.24 | 0.13 | -0.21 | 0.09 |
| | ( 0.25) | ( 0.23) | ( 1.20) | ( 1.23) | ( 0.42) | ( 0.48) | ( 0.27) | ( 0.42) | ( 0.49) | ( 0.50) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | | | | | | |
| Current Expenditure | -0.05 | -0.12 | -0.39 | -0.47 | -0.15 | -0.17 | 0.18 | 0.10 | 1.01 | 1.18 |
| | ( 0.17) | ( 0.18) | ( 0.38) | ( 0.41) | ( 0.25) | ( 0.27) | ( 0.31) | ( 0.34) | ( 0.65) | ( 0.68) |
| Public Investment | 0.09 | 0.17 | 0.40 | 0.45 | 0.23 | 0.29 | -0.08 | -0.05 | -0.96 | -1.11 |
| | ( 0.16) | ( 0.18) | ( 0.37) | ( 0.40) | ( 0.26) | ( 0.29) | ( 0.31) | ( 0.34) | ( 0.63) | ( 0.66) |
| Personnel | -0.05 | -0.12 | -0.81 | -0.85 | -0.04 | -0.15 | -0.08 | -0.19 | -0.34 | -0.46 |
| | ( 0.22) | ( 0.24) | ( 0.48) | ( 0.52) | ( 0.30) | ( 0.33) | ( 0.41) | ( 0.45) | ( 0.85) | ( 0.91) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | | | | | | |
| Social Expenditures | 0.64 | 0.75 | 1.27 | 1.39 | 0.71 | 0.71 | 0.91 | 1.00 | 2.19 | 2.21 |
| | ( 0.21) | ( 0.24) | ( 0.40) | ( 0.44) | ( 0.30) | ( 0.33) | ( 0.39) | ( 0.43) | ( 0.87) | ( 0.92) |
| of which: | | | | | | | | | | |
| Health & sanitation | 0.18 | 0.15 | 0.69 | 0.83 | 0.38 | 0.22 | -0.11 | -0.14 | 0.45 | 0.75 |
| | ( 0.15) | ( 0.17) | ( 0.30) | ( 0.32) | ( 0.22) | ( 0.25) | ( 0.27) | ( 0.30) | ( 0.42) | ( 0.47) |
| Education & culture | 0.24 | 0.37 | 0.31 | 0.32 | 0.12 | 0.11 | 1.00 | 0.97 | 0.83 | 0.88 |
| | ( 0.16) | ( 0.18) | ( 0.30) | ( 0.32) | ( 0.19) | ( 0.21) | ( 0.30) | ( 0.35) | ( 0.50) | ( 0.54) |
| Social welfare | 0.16 | 0.11 | 0.32 | 0.30 | 0.27 | 0.27 | 0.12 | 0.09 | 0.36 | 0.35 |
| | ( 0.06) | ( 0.07) | ( 0.11) | ( 0.12) | ( 0.09) | ( 0.10) | ( 0.10) | ( 0.11) | ( 0.20) | ( 0.21) |
| Other Expenditures: | | | | | | | | | | |
| Housing | -0.16 | -0.19 | -0.36 | -0.40 | 0.05 | 0.12 | -0.15 | -0.07 | 0.41 | 0.43 |
| | ( 0.13) | ( 0.14) | ( 0.29) | ( 0.32) | ( 0.21) | ( 0.23) | ( 0.24) | ( 0.26) | ( 0.65) | ( 0.70) |
| Transportation | -0.18 | -0.18 | -0.07 | -0.01 | -0.24 | -0.21 | -0.52 | -0.58 | -0.73 | -0.75 |
| | ( 0.09) | ( 0.10) | ( 0.20) | ( 0.21) | ( 0.13) | ( 0.15) | ( 0.19) | ( 0.21) | ( 0.29) | ( 0.31) |
| Other | 1.16 | 1.51 | 3.34 | 4.19 | 0.25 | 0.43 | 1.92 | 1.83 | 6.48 | 7.10 |
| | ( 0.61) | ( 0.67) | ( 1.36) | ( 1.39) | ( 0.86) | ( 0.93) | ( 0.93) | ( 1.04) | ( 2.40) | ( 2.64) |
| Social Expenditures per capita | 1.16 | 1.51 | 3.34 | 4.19 | 0.25 | 0.43 | 1.92 | 1.83 | 6.48 | 7.10 |
| | ( 0.61) | ( 0.67) | ( 1.36) | ( 1.39) | ( 0.86) | ( 0.93) | ( 0.93) | ( 1.04) | ( 2.40) | ( 2.64) |
| Observations (all) | 8943 | 8943 | 2395 | 2395 | 4158 | 4158 | 3105 | 3105 | 919 | 919 |
| Observations (effective) | 4408 | 3136 | 1227 | 929 | 2367 | 1810 | 1660 | 1209 | 451 | 360 |

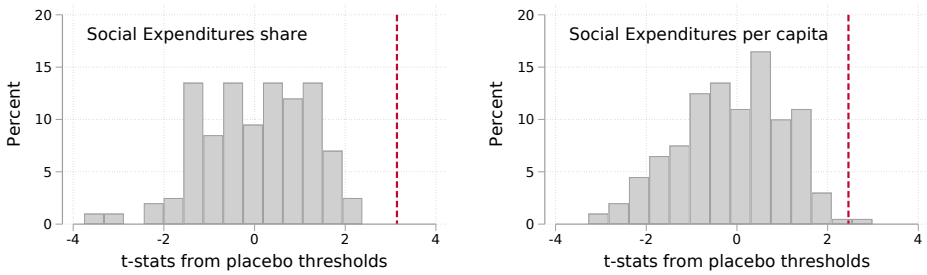
Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

Table H.5: RD estimates of the effect of a left-wing mayor in the Tiebout and ideology distance subsample

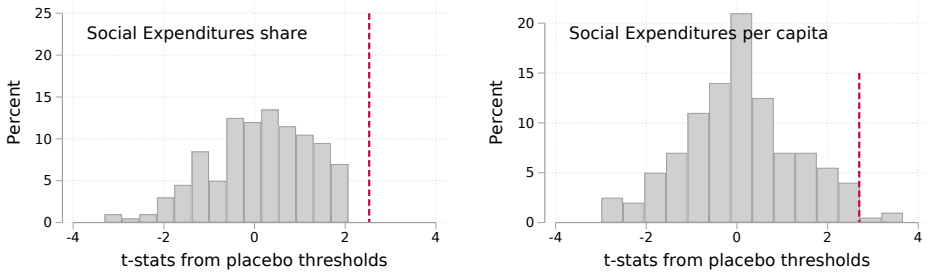
| | Baseline | Tiebout competition | | Ideology distance | |
|---|---|---|---|---|---|
| | | < median | < 25th pct | > median | > 75th pct |
| Size of city government | | | | | |
| Expenditure per capita | -0.01 | -1.24 | -1.21 | 0.23 | -0.90 |
| | ( 0.56) | ( 0.85) | ( 1.22) | ( 0.82) | ( 1.13) |
| Expenditure, % of GDP | 0.01 | -0.36 | -1.10 | -0.02 | 0.43 |
| | ( 0.24) | ( 0.43) | ( 0.89) | ( 0.25) | ( 0.40) |
| Revenue per capita | 0.39 | -0.77 | -0.44 | 1.02 | 0.70 |
| | ( 0.52) | ( 0.77) | ( 1.20) | ( 0.88) | ( 1.73) |
| Revenue, % of GDP | 0.12 | -0.20 | -0.94 | 0.24 | 0.64 |
| | ( 0.25) | ( 0.42) | ( 0.88) | ( 0.27) | ( 0.58) |
| Allocation of resources: budget categories (% of total expenditure) | | | | | |
| Current Expenditure | -0.05 | -0.15 | 0.40 | 0.18 | 0.16 |
| | ( 0.17) | ( 0.25) | ( 0.39) | ( 0.31) | ( 0.45) |
| Public Investment | 0.09 | 0.23 | -0.36 | -0.08 | 0.05 |
| | ( 0.16) | ( 0.26) | ( 0.43) | ( 0.31) | ( 0.43) |
| Personnel | -0.05 | -0.04 | 0.32 | -0.08 | 0.13 |
| | ( 0.22) | ( 0.30) | ( 0.43) | ( 0.41) | ( 0.63) |
| Allocation of resources: functional categories (% of total expenditure) | | | | | |
| Social Expenditures | 0.64 | 0.71 | 0.20 | 0.91 | 0.78 |
| | ( 0.21) | ( 0.30) | ( 0.41) | ( 0.39) | ( 0.49) |
| of which: | | | | | |
| Health & sanitation | 0.18 | 0.38 | -0.02 | -0.11 | -0.36 |
| | ( 0.15) | ( 0.22) | ( 0.31) | ( 0.27) | ( 0.38) |
| Education & culture | 0.24 | 0.12 | -0.00 | 1.00 | 1.22 |
| | ( 0.16) | ( 0.19) | ( 0.31) | ( 0.30) | ( 0.43) |
| Social welfare | 0.16 | 0.27 | 0.15 | 0.12 | 0.14 |
| | ( 0.06) | ( 0.09) | ( 0.11) | ( 0.10) | ( 0.14) |
| Other Expenditures: | | | | | |
| Housing | -0.16 | 0.05 | 0.07 | -0.15 | 0.06 |
| | ( 0.13) | ( 0.21) | ( 0.31) | ( 0.24) | ( 0.37) |
| Transportation | -0.18 | -0.24 | -0.15 | -0.52 | -0.13 |
| | ( 0.09) | ( 0.13) | ( 0.18) | ( 0.19) | ( 0.24) |
| Other | -0.21 | -0.59 | -0.08 | -0.22 | -0.59 |
| | ( 0.23) | ( 0.34) | ( 0.47) | ( 0.40) | ( 0.53) |
| Social Exp. per capita | 1.16 | 0.25 | -0.74 | 1.92 | 0.77 |
| | ( 0.61) | ( 0.86) | ( 1.37) | ( 0.93) | ( 1.36) |
| Observations (all) | 8943 | 4158 | 2081 | 3105 | 1545 |
| Observations (effective) | 4408 | 2367 | 1347 | 1660 | 814 |

Notes: Estimation of equation **??**, using the **?** procedure and controlling for city and year fixed effects. Outcomes are 4-year averages over a mayoral term. Per-capita variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.

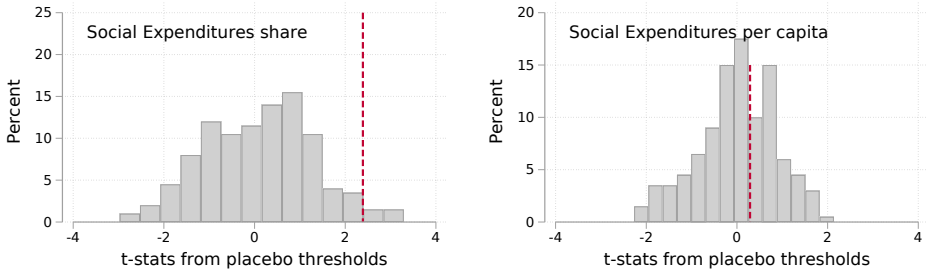
Figure H.1: Falsification test using placebo thresholds - effect on social expenditures, subsamples



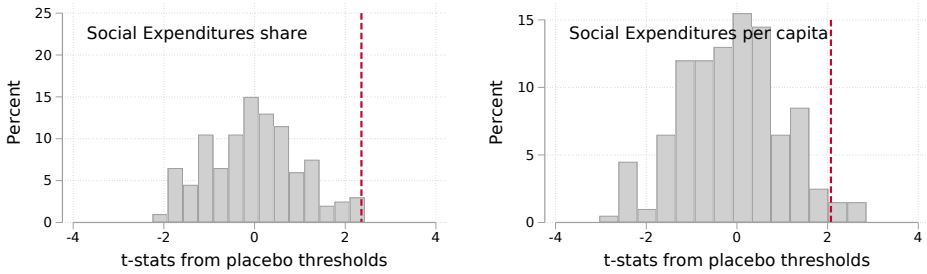

(a) Cities with a lame-duck mayor




(b) Cities experiencing oil windfalls




(c) Cities facing below-median Tiebout competition




(d) Cities with above-median coalition ideology distance

Notes: Empirical distribution of t-statistics from our RD estimates (equation **??**) of the effect of a left-wing mayor on the share of social spending and social expenditure per capita, based on 200 randomly-drawn placebo thresholds, drawn separately on the left and on the right side of the true threshold (100 on each side), using only observations belonging to that side and with at least 25 observations on each side of the bandwidth. Vertical line = t-statistics obtained using the true threshold. The t-statistics are from the robust bias-corrected procedure of **?**.

# Appendix I RD estimates on welfare-related outcomes

Table I.1: Welfare-related outcomes – descriptive statistics

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| **Education outcomes** | | | | | |
| Student-teachers ratio | 22.75 | 22.60 | 23.23 | 22.91 | 26.07 |
| | ( 13.05) | ( 9.87) | ( 9.85) | ( 10.83) | ( 13.51) |
| Average classroom size | 23.40 | 23.27 | 23.84 | 23.52 | 26.01 |
| | ( 12.19) | ( 8.47) | ( 8.38) | ( 9.86) | ( 12.70) |
| Teachers, per 100K res. | 352.98 | 351.00 | 342.17 | 341.68 | 353.47 |
| | ( 158.59) | ( 163.78) | ( 152.74) | ( 156.78) | ( 139.77) |
| Schools, per 100K res. | 92.40 | 92.74 | 79.93 | 89.05 | 105.78 |
| | ( 90.70) | ( 92.23) | ( 87.54) | ( 86.78) | ( 86.72) |
| Child Care, per 100K res. | 25.50 | 26.60 | 23.41 | 24.25 | 27.66 |
| | ( 34.51) | ( 35.97) | ( 30.88) | ( 32.59) | ( 35.51) |
| Prepresch, per 100K res. | 71.83 | 72.67 | 60.98 | 68.94 | 82.13 |
| | ( 71.52) | ( 70.67) | ( 64.16) | ( 66.99) | ( 71.12) |
| IDEB test scores | 5.18 | 5.18 | 5.28 | 5.17 | 4.92 |
| | ( 0.88) | ( 0.87) | ( 0.88) | ( 0.87) | ( 0.83) |
| IDEB progression rate | 0.89 | 0.89 | 0.90 | 0.89 | 0.84 |
| | ( 0.09) | ( 0.08) | ( 0.08) | ( 0.08) | ( 0.10) |
| IDEB index | 4.65 | 4.66 | 4.77 | 4.65 | 4.20 |
| | ( 1.10) | ( 1.08) | ( 1.09) | ( 1.09) | ( 1.08) |
| **Health outcomes** | | | | | |
| Clinics (basic), per 100K res. | 74.14 | 73.60 | 72.35 | 73.74 | 65.64 |
| | ( 44.72) | ( 45.43) | ( 46.36) | ( 46.52) | ( 38.39) |
| Clinics (total), per 100K res. | 118.07 | 118.02 | 121.79 | 120.57 | 98.95 |
| | ( 81.71) | ( 79.82) | ( 85.11) | ( 85.71) | ( 64.33) |
| ESF team, per 100K res. | 7.18 | 6.64 | 7.33 | 7.02 | 7.21 |
| | ( 8.90) | ( 8.72) | ( 8.92) | ( 8.52) | ( 8.37) |
| Doctors, per 100K res. | 44.90 | 46.07 | 54.94 | 47.06 | 53.78 |
| | ( 53.31) | ( 53.80) | ( 63.60) | ( 55.34) | ( 66.94) |
| Infant mortality rate | 15.38 | 15.21 | 15.05 | 15.16 | 15.90 |
| | ( 6.94) | ( 6.76) | ( 6.47) | ( 6.52) | ( 6.15) |
| **Law enforcement outcomes** | | | | | |
| Homicide rate | 20.18 | 20.05 | 22.03 | 21.07 | 24.53 |
| | ( 16.41) | ( 16.27) | ( 17.27) | ( 16.75) | ( 18.71) |

Notes: This table reports mean and standard deviation (in parenthesis) for welfare-related outcomes. Data on education outcomes are from INEP. Data on health outcomes are from DATASUS. Homicides rate are from IPEA. The number of observations available for each welfare-related outcome is presented in Appendix Table I.2. See Section **??** for the specific definition and motivation of each subsample.

Table I.2: RD estimates of the effect of a left-wing mayor on welfare-related outcomes

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| **Education outcomes** | | | | | |
| Student-teachers ratio | -1.51 | 0.35 | -1.08 | -1.67 | -2.72 |
| | ( 1.05) | ( 2.13) | ( 1.49) | ( 1.70) | ( 3.34) |
| Average classroom size | -2.26 | -2.91 | -2.93 | -3.95 | -3.75 |
| | ( 1.31) | ( 2.21) | ( 1.71) | ( 2.06) | ( 3.61) |
| Teachers, per 100K res. | 0.32 | -2.21 | 0.70 | 2.29 | 3.46 |
| | ( 1.16) | ( 2.24) | ( 1.67) | ( 2.24) | ( 3.81) |
| Schools, per 100K res. | -3.43 | 1.90 | -3.01 | -4.41 | 0.90 |
| | ( 1.27) | ( 2.70) | ( 1.76) | ( 2.15) | ( 3.68) |
| Child Care, per 100K res. | -1.49 | 7.80 | 0.87 | -3.71 | -6.80 |
| | ( 2.66) | ( 5.40) | ( 3.52) | ( 4.26) | ( 8.14) |
| Pre Schools, per 100K res. | -1.45 | -0.74 | -6.70 | 0.07 | -4.13 |
| | ( 1.87) | ( 3.79) | ( 3.08) | ( 3.12) | ( 5.78) |
| Observations (all) | 8872 | 2370 | 4125 | 3086 | 918 |
| Observations (effective) | 5298 | 1280 | 2306 | 1620 | 489 |
| IDEB progression rate | 0.33 | 0.39 | 0.78 | 0.61 | 2.01 |
| | ( 0.38) | ( 0.70) | ( 0.50) | ( 0.51) | ( 1.20) |
| Observations (all) | 8292 | 2221 | 3926 | 2905 | 901 |
| Observations (effective) | 3841 | 1070 | 1710 | 1894 | 390 |
| IDEB test scores | -0.35 | -0.01 | -0.49 | 0.34 | 1.70 |
| | ( 0.40) | ( 0.83) | ( 0.67) | ( 0.71) | ( 1.16) |
| IDEB overall index | -0.02 | 0.30 | 0.01 | 1.21 | 3.18 |
| | ( 0.57) | ( 1.02) | ( 0.71) | ( 0.92) | ( 1.69) |
| Observations (all) | 8211 | 2196 | 3894 | 2875 | 900 |
| Observations (effective) | 4385 | 1206 | 2531 | 1632 | 444 |

Table I.2: RD estimates of the effect of a left-wing mayor on welfare-related outcomes

| | Baseline | Subsamples | | | |
|---|---|---|---|---|---|
| | | Lame Duck | Tiebout < median | Ideology distance > median | Oil windfall |
| **Health outcomes** | | | | | |
| Clinics (basic), per 100K res. | 0.80 | -1.21 | 3.73 | -0.20 | -2.23 |
| | ( 1.54) | ( 2.88) | ( 2.15) | ( 2.20) | ( 3.13) |
| Clinics (total), per 100K res. | 0.34 | -2.54 | 2.15 | -0.05 | -4.64 |
| | ( 1.60) | ( 3.35) | ( 2.23) | ( 2.56) | ( 4.04) |
| Observations (all) | 8937 | 2395 | 4155 | 3104 | 919 |
| Observations (effective) | 3998 | 985 | 1874 | 1765 | 455 |
| ESF team, per 100K res. | -2.62 | 0.36 | -0.70 | -6.50 | -2.79 |
| | ( 2.88) | ( 6.52) | ( 4.52) | ( 5.58) | ( 8.96) |
| Observations (all) | 4120 | 1069 | 2151 | 1522 | 517 |
| Observations (effective) | 2579 | 532 | 1275 | 843 | 282 |
| Doctors, per 100K res. | -0.60 | 3.67 | -13.39 | 4.06 | -9.61 |
| | ( 3.37) | ( 6.81) | ( 5.57) | ( 5.55) | ( 10.27) |
| Observations (all) | 8033 | 2132 | 3860 | 2850 | 860 |
| Observations (effective) | 4379 | 1132 | 1617 | 1726 | 357 |
| Infant mortality | -2.75 | -1.95 | 0.60 | 2.87 | -6.14 |
| | ( 2.26) | ( 3.86) | ( 2.92) | ( 3.42) | ( 5.68) |
| Observations (all) | 8656 | 2313 | 4065 | 3012 | 914 |
| Observations (effective) | 4525 | 1357 | 2114 | 1565 | 472 |
| **Law enforcement outcomes** | | | | | |
| Homicide rate | -4.76 | 2.06 | 5.56 | 5.27 | -6.00 |
| | ( 2.93) | ( 5.53) | ( 3.90) | ( 3.95) | ( 8.18) |
| Observations (all) | 8187 | 2181 | 3895 | 2884 | 895 |
| Observations (effective) | 3849 | 1003 | 2004 | 1764 | 471 |

Notes: Estimates from our baseline RD specification (equation **??**), using the bias-corrected procedure of **?** and controlling for city and year fixed effects. Education outcomes measured in the 3rd year in office. Homicide rates and health outcomes, except for number of ESF teams, measured as 4-year averages over a mayoral term. ESF teams measured in the 4th year in office. All welfare-related outcome variables are taken in logs and multiplied by 100, so coefficients represent percentage-points differences. Robust and bias-corrected standard errors clustered by municipality in parenthesis.