

# Legislature Resizing with Rent-seeking Politicians: Evidence from Brazil

## **Abstract**

The size of a legislature significantly affects the quality of democracy. However, we know surprisingly little about how the office-seeking motivations of political incumbents influence its choice, despite the extensive research on how these very incentives shape the choice of political regime or electoral system. This article fills this gap by proposing and testing a new logic: rent-seeking politicians decide whether to expand legislatures following a trade-off between better reelection prospects and a dilution in the available rents of office. Evidence comes from a regression discontinuity design, and a wave of expansions in 2,000+ municipal legislatures in Brazil. In short, the likelihood that legislators approve an expansion decreases with the size of the mayoral coalition in the chamber, given that coalition councilors lose more from rent dilution than the opposition. This effect is higher for politicians from office-seeking parties, and in municipalities with more patronage.

Legislatures vary considerable in their size, both within and across countries. Why? An extensive literature has shown that legislature size influences public good provision (Chen and Malhotra, 2007; Mignozzetti, 2021), electoral outcomes (Frey, 2022; Shugart and Taagepera, 2017), and also the representation of marginalized groups (Aksoy, 2014; Boix, 1999). As such, the design of this essential democratic institution is likely to shape the incentives faced by both parties and politicians. In this context, it is puzzling that little attention has been paid to how the office-seeking motivations of political incumbents influence the choice of legislature size. This is even more surprising in light of the extensive research that studies how these very incentives shape changes in other institutions such as political regimes or electoral systems (Acemoglu and Robinson, 2000; Benoit, 2004, 2007; Boix, 1999). Perhaps this gap can be attributed to the difficulty in isolating the determinant factors without an experimental setting, or because the debate has been dominated by normative considerations on optimal representation and efficiency:<sup>1</sup> while proponents of larger chambers point to better representation,<sup>2</sup> others argue that smaller legislatures provide better governability.<sup>3</sup>

This brief article fills this gap in two significant ways. First, I present precisely identified empirical evidence of how incumbent politicians resize legislatures. I examine the redesign of local councils in Brazilian municipalities in 2009-2012, and show that legislators are more likely to approve a council expansion the higher the size of the mayoral coalition in the legislature. A 2009 constitutional amendment increased the legislature size caps for all municipalities with population above 15,000, also giving councils autonomy to decide whether or not to expand from the previous limits. As a result, 78% of the 2,136 eligible municipalities upsized their councils. In this context, I obtain quasi-random variation on the size of the mayoral coalition in the council using a regression discontinuity design (RDD) on close races for the last seat, in cases where it was contested between candidates from the coalition and the opposition. More precisely, the RDD shows that one additional coalition councilor in the chamber reduces the expansion probability by 46 p.p..

Second, I interpret these results with a logic where office-seeking parties and politicians face a trade-off

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<sup>1</sup>The debate between representation and efficiency is as old as legislatures themselves, as exemplified by following excerpt from the Federalist No. 55: “in all cases a certain number at least seems to be necessary to secure the benefits of free consultation and discussion... on the other hand, the number ought at most to be kept within a certain limit, in order to avoid the confusion and intemperance of a multitude.”

<sup>2</sup>See for example the NY Times op-ed piece from 2018 in <http://nyti.ms/39I9zi0>.

<sup>3</sup>For example, politicians in the UK (<http://bit.ly/3q1BYpc>), France (<http://bit.ly/2YUSg7x>), and Italy (<http://bbc.in/3rEzL3v>) have recently used governability to justify a push for smaller legislatures.

between eligibility and access to rents when resizing a legislature. The argument is simple: while larger chambers increase the probability of incumbents being reelected, they also dilute the patronage resources available to every party and individual represented in the legislature.

The first part of this argument follows directly from the fact that local councilors in Brazil are elected in an open-list, at-large system. In this context, larger legislatures result in lower electoral thresholds.<sup>4</sup> Not surprisingly, incumbent councilors – from both the coalition and the opposition – became 10% more likely to be reelected in 2012 in municipalities that approved an expansion.

However, the councilors' exposure to a potential shrinkage in office rents is not homogeneous. Brazilian mayors have ample control over the execution of the public budget, but depend on the council's support for the approval of legislation. Councilors, on the other hand, rely on the executive to obtain rents (Colonnelli, Prem, and Teso, 2020; Novaes, 2018; Toral, 2022a). This interdependence provides the foundation for the multiparty coalitions that typically run local administrations. These coalitions are often ideologically inconsistent, and primarily sustained by patronage. Thus, in order to reach the same level of proportional support in larger legislatures, mayoral coalitions have more individual members and, in the case of Brazil, most likely a higher number of different parties (Frey, 2022). For the same budget, this implies that coalition members face a dilution in rents, and are therefore more severely hurt by larger legislatures than opposition councilors. Not surprisingly, larger councils in Brazil were shown to weaken the patronage-based ties between the executive and the legislature, hurting both the local electoral power of the mayor's party and its ability to build stable alliances (Frey, 2022). Overall, while both coalition and opposition members equally benefit from the lower electoral threshold, the former have higher incentives to block an expansion of the council.

This argument has direct implications for the heterogeneity in the RDD results. Under this logic, the negative effects of higher coalition support in the council on its expansion should be stronger where these local coalitions are more reliant on patronage. I show that the results are consistent with this argument using two proxies for the level of rent-seeking in coalitions across municipalities. First, patronage in Brazil often takes the form of public sector jobs (Toral, 2022a,b). Following Colonnelli, Prem, and Teso (2020), I first create a measure of local patronage based on the level of public employment offered – in the post-election period – to donors to electoral campaigns of council candidates in the municipality. Not surprisingly, I find that the RDD effects are concentrated in municipalities where this type of political employment is highly

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<sup>4</sup>This part of the argument might not directly apply to legislatures that use single-member districts and the first-past-the-post system.

biased towards individuals that donated to candidates in the mayoral coalition. Second, the effects are also concentrated in municipalities where the marginal coalition councilor comes from one of the following large, center-right, rent-seeking parties in Brazil: PMDB, PP, PL, and PTB; which form a “weakly ideological, pragmatic, office-seeking” group whose survival depends on the “state largesse and the exchange of favors” (Power and Rodrigues-Silveira, 2018).

Brazil provides a suitable application to the logic presented here because politicians are primarily rent-seeking rather than policy-motivated (Boas, Hidalgo, and Richardson, 2014); trust in politicians is low (Weitz-Shapiro and Winters, 2017); many voters remain marginalized (Bueno and Dunning, 2017); and clientelism is pervasive (Gingerich, 2020, 2014; Hidalgo and Nichter, 2016). Nevertheless, many of these conditions are also observed in other developing democracies (Cruz and Schneider, 2017; Fergusson et al., 2021; Larreguy, Montiel Olea, and Querubin, 2017; Larreguy, Marshall, and Querubín, 2016), where the same incentives for legislature design are likely to hold. Finally, the logic here applies beyond the developing world to any environment where larger chambers might dilute the political power of incumbents, even when this power is not primarily employed in rent-seeking behavior but in other activities such as influencing policy, for example.

## LEGISLATURE RESIZING IN BRAZILIAN MUNICIPALITIES

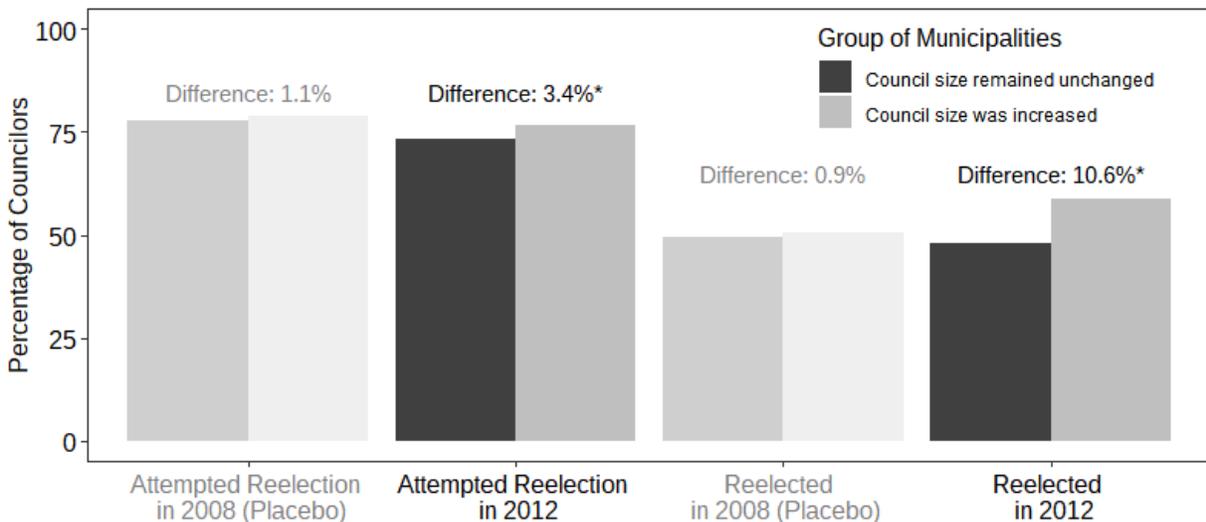
Brazilian municipalities hold simultaneous elections every four years for the executive position (mayor), and a council composed by 9 to 21 members (in 2008), elected in an open-list, at-large system. Brazil has a decentralized system where local administrations control most public spending in areas such as health, education, and infrastructure, financed by transfers from higher government levels. While mayors control both budget execution and hiring, they rely on the council support for the approval of legislation, to minimize the risk of prosecution (Poulsen and Varjao, 2019), and also as vote brokers in elections (Novaes, 2018).

The effectiveness of local administrations depends on the mayor’s ability to maintain a coalition in the council. However, in a country with nearly 30 parties and less than 3 mayoral candidates per municipality, these alliances are broad – the average mayor is supported by 6+ parties – ideologically inconsistent, and unstable (Frey, 2022). What is more, many of the large parties in Brazil are rent-seeking and pragmatic, surviving primarily on the “state largesse and exchange of favors” (Power and Rodrigues-Silveira, 2018). Not surprisingly, the executive’s coalition in the council is often supported by patronage, mainly in the form of public sector jobs (Colonnelli, Prem, and Teso, 2020; Mignozzetti, 2021; Toral, 2022a,b).

**The Consequences of Legislature Size Caps.** The constitutional amendment 58/2009 allowed municipalities with population above 15,000 to increase the size of their councils from the mandatory limits in place until 2008. The new caps are optional, and based on municipality size. For example, all locations with population between 15,000 and 30,000 could add up to 2 seats to their existing 9.<sup>5</sup> Any changes had to be approved by 2/3 of the local legislature, and became effective in the 2012 election.

An expansion would have at least two direct implications for the political dynamics in these municipalities. First, under the prevailing electoral rules, larger legislatures reduce the electoral threshold. Indeed, incumbent councilors were more likely to be reelected in 2012 in municipalities that approved the expansion.

**Figure 1: The Probability of Reelection is Higher when Councils are Larger**



†p<0.1, \*p<0.05. The y-axis shows the percentage of all incumbent councilors in the municipality. Those are the ones elected in 2008 for the main case, or in 2004 for the placebo columns.

Figure 1 shows that incumbent councilors were 3.4% more likely to attempt reelection in these locations; and those who did so were 10.6% more likely to be reelected. In Table A.5 (appendix) I show that the reelection probability is also similar for both coalition and opposition councilors.<sup>6</sup> As a placebo, the plot also shows that these patterns are absent for the same group of municipalities between 2004 and 2008, when the size of local legislatures remained constant. Accordingly, it is not surprising that council expansions were

<sup>5</sup>See Figure A.3 (appendix) for all caps. The minimum number of seats remained 9 for all municipalities.

<sup>6</sup>Table A.5 (appendix) also show that these patterns remain robust even when I use only within-municipality variation to estimate the reelection probability.

approved in 78% of the 2,136 eligible municipalities preceding the 2012 municipal election.

Second, larger councils were shown to weaken the patronage-based ties between the executive and the legislature. Frey (2022) shows that, post-2012, the mayor's party lost significant electoral power in municipal, state, and presidential elections in locations with larger councils, primarily due to a dilution in the resources available to its allies. What is more, local coalitions were more likely to collapse, and less likely to be formed based on patronage. The argument here is simple: when legislatures are larger, the mayor-council coalitions are also larger.<sup>7</sup> Thus, everything else equal, individual councilors and their parties extract less rents from the executive and, from their perspective, the relative value of supporting the incumbent mayor decreases.

**Who Benefits from Larger Legislatures?** I argue that the two forces described above jointly shape the council's decision to resize in this environment of pervasive rent-seeking. On the one hand, a larger chamber is likely to increase the probability of reelection for all incumbent legislators. On the other hand, it dilutes the available patronage to the individual councilors and parties represented in the legislature.

Now, this trade-off is not homogeneous within the council. The literature on patronage shows that parties that compose the mayor's support base receive the bulk of office rents in Brazil (Colonnelli, Prem, and Teso, 2020; Toral, 2022a). Thus, while the lower electoral threshold benefits all incumbents, the drop in patronage particularly hurts coalition councilors. It follows that these should be ones more likely to block a seat expansion on the legislature's floor.<sup>8</sup>

Under this logic, this article aims to precisely identify two patterns in the data. First, legislatures that elect a higher share of coalition councilors (mayor's allies) should also be **less** likely to approve an expansion. Second, this effect should be **stronger** in municipalities where these coalitions are more reliant on patronage.

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<sup>7</sup>Frey (2022) also shows that mayor-council coalitions contain more parties and more individual legislators under larger councils, even though they still reach the same level of proportional support.

<sup>8</sup>Notice that the council increases approved in 2009-12 only became effective in the subsequent tenure (2013-16). Thus, this argument is only accurate if the **coalition councilors** elected in 2008 are more likely than **opposition councilors** to believe that they will remain in the mayoral coalition after the 2012 election. In other words, if their current status is a good predictor of their near electoral future. That said, this assumption is highly consistent with the information available to these politicians in the period. Figure A.2 (appendix) shows that coalition councilors in 2004 were 63% more likely to run for reelection (in 2008) in the coalition of the mayoral candidate that eventually won in 2008.

## DATA AND EMPIRICAL DESIGN

This article first identifies the effect of the size of the mayor’s coalition in the council on the legislature’s decision to approve an expansion. To do so, I employ a regression discontinuity design (RDD) to obtain quasi-experimental variation in the share of coalition councilors. More precisely, the RDD here identifies the causal effect of electing one coalition candidate for the last council seat, in a very close race against an opposition candidate in 2008. Thus, the effective sample only includes elections in which the last council seat was contested for by coalition and opposition candidates – a total of 1,303 municipalities.

The data containing all election results and characteristics of candidates for the 2008 and 2012 races comes from the Brazilian Electoral Court (TSE). As the main outcome of interest, I code *Council Expansion* ( $ce$ ) as a binary variable that indicates whether or not the council approved an expansion in 2009-2012.

Until 2020, the competition for seats in council elections was between coalitions, which parties could formally join preceding each race. The races are open-list, at-large elections, where voters cast a vote for either a candidate or a party. In either case, the vote counts for the coalition. The total votes for each coalition determines its allotment of seats, and individual councilors are elected based on their vote ranking within the coalition. For the running variable in the RDD ( $rv$ ), I use the distance in the ratio of votes per seat between the coalitions that won and lost the last council seat in the municipality. The precise construction of this running variable is described in detail in Appendix A, along with a more detailed description of this seat allocation mechanism.<sup>9</sup> In this context, the RD treatment effect is estimated with the equation below:

$$ce_i = \beta_0 + \beta_1 t_i + \beta_2 rv_i + \beta_3 t_i rv_i + \delta_{seats08} + \delta_{sta} + \theta_i + \epsilon_i \quad (1)$$

where the binary variable  $t_i$ , for municipality  $i$ , indicates whether the last council seat was won by the mayoral coalition. The treatment effect of  $t_i$  on  $ce_i$  is given by  $\beta_1$ . I estimate this effect for municipalities with comparable council size, pre-treatment, using fixed-effects for the number of seats in 2008 ( $\delta_{seats08}$ ). I also include state fixed-effects ( $\delta_{sta}$ ), and a vector of pre-treatment covariates ( $\theta_i$ ).<sup>10</sup> As usual, regressions are weighted by the triangular kernel, and the sample is restricted to values of  $rv$  that fall within an optimal bandwidth calculated based on [Calonico, Cattaneo, and Titiunik \(2014\)](#). The appendix shows both covariate balance

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<sup>9</sup>[Poulsen and Varjao \(2019\)](#) use a similar empirical strategy.

<sup>10</sup>The list of covariates is shown in Table [A.1](#) (appendix). In RD designs covariates are used to improve the precision of the estimates, and they do not play a role in the identification.

(Table A.1) and the density of the observations at the discontinuity (Figure A.4).

## RESULTS

Table 1 shows the main results for different polynomials and optimal bandwidths.<sup>11</sup> Columns A1-A3 show the variable of interest, *Council Expansion*. The preferred specification (A1) shows that an additional coalition member in the council reduces the probability of an expansion by 46 percentage points (pp), from a baseline of 77% – an effect that is robust to polynomial and bandwidth changes.

The last three columns (B1-B3) confirm that, at the discontinuity, the election of a coalition councilor for the last seat implies that the mayor’s support in the legislature is significantly higher. Column B1 shows that the marginal election of an allied councilor increases the average share of the mayor’s coalition in the council by 20p.p., from a baseline of 48%. Figure A.1 (appendix) shows the graphical representation of these results.

**Table 1: Effects on Council Expansion and Support for the Mayor**

DV:	COUNCIL EXPANSION			MAYOR’S SUPPORT		
	(A1)	(A2)	(A3)	(B1)	(B2)	(B3)
RD Effect	-0.463*	-0.435*	-0.381*	0.204*	0.180*	0.169*
	(0.185)	(0.170)	(0.160)	(0.061)	(0.063)	(0.062)
Pre-Tre. Mean	0.774	0.779	0.777	0.483	0.483	0.493
Optimal Bandwidth	1.12	2.21	3.89	1.10	2.07	3.46
Observations	159	298	488	157	271	444
Polynomial	Linear	Quadratic	Cubic	Linear	Quadratic	Cubic

†p<0.1, \*p<0.05. Standard errors are heteroskedasticity robust (parenthesis). The dependent variables are explained in the text. The RD effect corresponds to  $\beta_1$  in equation 1. The Pre-Tre. Mean is the value of the outcome for the control group, at the discontinuity.

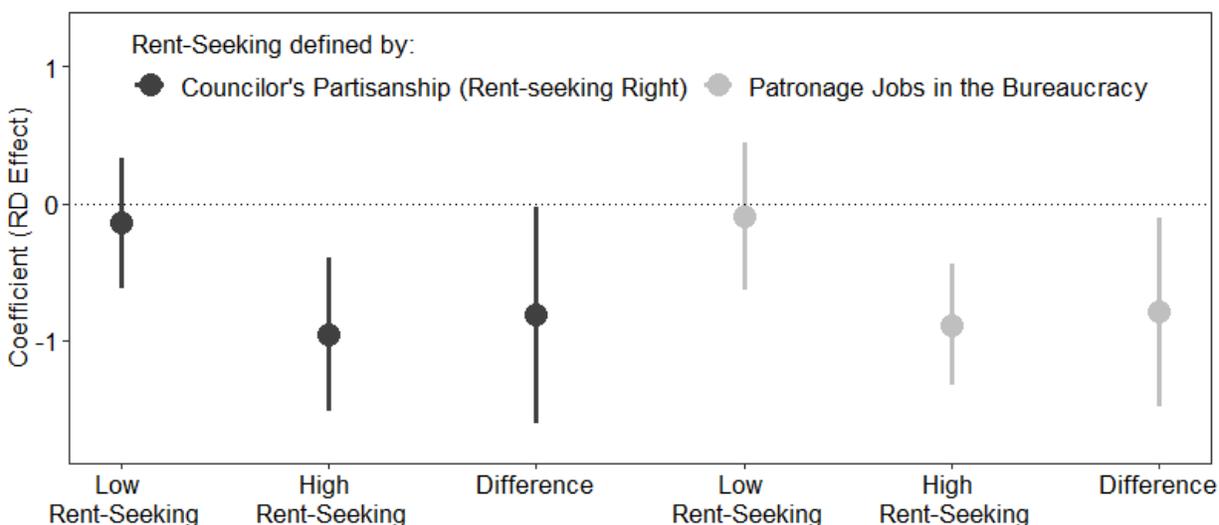
I further explore how this effect varies according to the level of patronage in local coalitions. I classify local incumbent coalitions by their level of rent-seeking (i.e. *low* or *high*) using two different proxies based on the recent empirical literature in Brazil. First, local patronage often takes the form of public sector jobs (Torralba, 2022a,b), and employment is typically extended to local campaign donors by the winning parties. Following Colonnelli, Prem, and Teso (2020), I combine data on campaign donors provided by TSE with data on the universe of bureaucrats employed by municipal administrations in Brazil, coming from the matched employer-

<sup>11</sup>Table A.2 (appendix) shows robustness to the exclusion of covariates, and different bandwidths.

employee RAIS dataset (*Relação Anual de Informações Sociais*). This allows me to observe all donors that had a job in the local bureaucracy in the post-election period (2009-2012). For each municipality, I then calculate the share of these donor-made-bureaucrats that donated to the campaigns of council candidates in the mayoral coalition, as opposed to opposition candidates, to build a measure of patronage. Finally, I classify a municipality into the *high rent-seeking* group when its patronage is above the median value.

Second, I explore the presence of the large, “rent-seeking” parties in these local coalitions: PMDB, PP, PL, and PTB (Power and Rodrigues-Silveira, 2018). In the context of the RDD analysis, I classify municipalities into the *high rent-seeking* group when the marginal elected councilor was a candidate from one of these parties – 35% of all observations – and into the *low rent-seeking* group otherwise. Figure 2 shows the heterogeneity in the RDD estimates, based on both proxies. In short, the negative effect of a marginal coalition councilor on the probability of expansion is highly concentrated in municipalities governed by *high rent-seeking* coalitions.<sup>12</sup>

**Figure 2: The Effect on Council Expansion Depends on the Patronage Level**



95% confidence intervals. The coefficients come from the following regression:

$$ce_i = \beta_0 + \beta_1 t_i + \beta_2 r v_i + \beta_3 t_i r v_i + \beta_4 hrs_i + \beta_5 t_i hrs_i + \beta_6 r v_i hrs_i + \beta_7 t_i r v_i hrs_i + \delta_{seats08} + \delta_{sta} + \theta_i + \epsilon_i,$$

where  $hrs_i$  indicates whether the municipality belongs to the high rent-seeking group. All other variables are the same as in equation 1. The effects in the plot correspond to  $\beta_1$  (LOW rent-seeking group);  $\beta_1 + \beta_4$  (HIGH rent-seeking group); and  $\beta_4$  (difference).

<sup>12</sup> Table A.4 (appendix) shows that the patronage variable used to create the groups is continuous at the discontinuity, in both cases. Table A.3 (appendix) shows the corresponding estimates that generated this plot.

## CONCLUSION

This article examines a recent wave of resizing in 2000+ local councils in Brazilian municipalities. It shows that municipalities where the mayor's support in the council was higher were also less likely to expand the council size. I interpret this finding as a consequence of a trade-off between eligibility and rents: while larger chambers might improve the reelection prospects for all legislators, they disproportionately dilute the rents for the ones with better access, i.e., the members of the coalition with the executive. In support of this argument, I show that this pattern is concentrated in municipalities where mayor-council coalitions include one of the large, pragmatic, office-seeking parties in Brazil; and in municipalities with more patronage in public jobs. Overall, these findings provide an useful framework for future research that aims to understand why, in many developing democracies where rent-seeking is pervasive, representation deficits alone might not be enough to motivate institutional changes that increase democratic inclusiveness.

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# Legislature Resizing with Rent-seeking Politicians: Evidence from Brazil

Appendix for Online Publication

## CONTENTS

<b>A Methodology for Allocation of Council Seats in Brazil</b>	<b>1</b>
<b>B Tables</b>	<b>3</b>
<b>C Figures</b>	<b>8</b>

## A METHODOLOGY FOR ALLOCATION OF COUNCIL SEATS IN BRAZIL

The electoral competition in local legislative elections is at the coalition level. Seats are allocated to each coalition through the following process:

1. every municipality has an electoral quotient ( $QE$ ), which is the number of valid votes divided by the seats. Only coalitions that obtain more votes than the  $QE$  gain seats in the council. Consider a municipality with 10,000 votes and 10 seats in contention ( $QE = 1,000$ ). If there are three coalitions (A, B and C) with 5,700, 3,500, and 800 votes; only A and B win seats.
2. The first batch of seats allocated to every winning coalition depends on the number of coalition votes divided by  $QE$ , rounded down to the lowest integer. For example, coalitions A and B above win 5 and 3 seats; respectively.
3. The remaining seats (2, in the example) are progressively allocated to the coalitions that have the highest marginal vote/(seat+1) – the residual ratio ( $RR$ ). For example, A wins the 9th seat, given that  $RR_A = 5,700/(5 + 1) = 950$ , and  $RR_B = 3,500/(3 + 1) = 875$ . The process is repeated for every seat until all are allocated among the winning coalitions. Individual seats are allocated to candidates according to their within-coalition vote ranking.

For the RD design, I define the running variable as  $rv = (RR_c - RR_o)/QE$ , where  $RR_c$  and  $RR_o$  are the residual ratios for the allocation of the last council seat between a candidate in a coalition that supports the mayor ( $RR_c$ ), and other in one that does not ( $RR_o$ ). This difference in ratios is normalized by the average votes/seat ratio in the municipality ( $QE$ ).



## B TABLES

**Table A.1: Balance of Covariates**

DV:	(1)	(2)	(3)	(4)
Votes per seat, 2008	-0.090 (0.114) [1.31]	-0.050 (0.122) [2.32]	-0.055 (0.121) [4.04]	0.006 (0.019) [1.31]
GDP 2008 (log)	-0.106 (0.248) [1.26]	-0.063 (0.254) [2.22]	-0.227 (0.238) [3.85]	-0.130 (0.135) [1.26]
Semi-arid region	0.038 (0.066) [1.13]	0.071 (0.077) [1.91]	0.068 (0.071) [3.31]	0.034 (0.068) [1.13]
Mayor is lameduck	-0.134 (0.176) [1.39]	-0.171 (0.188) [2.54]	-0.103 (0.177) [4.46]	-0.129 (0.170) [1.39]
Local Budget pc (2007-08)	0.110 (0.112) [1.30]	0.106 (0.115) [2.43]	0.064 (0.110) [4.17]	0.104 (0.074) [1.30]
PT's federal base	0.064 (0.178) [1.43]	0.072 (0.186) [2.55]	0.109 (0.176) [4.33]	0.023 (0.173) [1.43]
Poor families in 2006 (log)	-0.106 (0.140) [1.43]	-0.088 (0.142) [2.57]	-0.022 (0.133) [4.44]	-0.011 (0.088) [1.43]
Voters in 2008 (log)	-0.095 (0.118) [1.32]	-0.058 (0.125) [2.33]	-0.068 (0.124) [4.06]	-0.004 (0.018) [1.32]
<i>Polynomial</i>	<i>Linear</i>	<i>Quadratic</i>	<i>Cubic</i>	<i>Linear</i>

†p<0.1, \*p<0.05. The RD effect is shown for each variable. Heteroskedasticity robust standard errors in parenthesis, optimal bandwidths in brackets. The regressions include fixed-effects for state and 2008 council seats, as per equation 1. The estimation in column (4) also includes all covariates in this Table except the one used as the dependent variable.

The variables are defined as follows: **Votes per seat:** Valid votes for the council divided by the total council seats in 2008 (source: TSE); **GDP 2008:** Municipal GDP in 2008, in R\$ (source:IBGE); **Semi-arid:** Dummy that indicates whether the municipality is one of the 1,133 located in the semi-arid region (source:IBGE); **Lameduck mayor:** Dummy that indicates whether the mayor elected in 2008 is term limited (source: TSE); **Municipal Budget:** Per capita municipal budget in R\$, pre-treatment (2007-08) (source: FINBRA); **PT's federal base:** Marginal councilor DOES NOT belong to one of the following parties that opposed PT's federal administration: PSDB, PFL (DEM), PPS or PV (source: TSE); **Poor Households:** Number of households below the poverty line in 2006 (source: MDS); and **Voters:** Number of registered voters in 2008 (source: TSE).

**Table A.2: Robustness to the Exclusion of Covariates and Bandwidth Changes**

	(1)	(2)	(3)	(4)
<i>DV: COUNCIL EXPANSION</i>				
RD Effect	-0.319† (0.183)	-0.481* (0.177)	-0.759* (0.256)	-0.289* (0.143)
Bandwidth	1.12	1.12	0.56	1.68
Observations	159	159	95	227
<i>DV: MAYOR'S SUPPORT</i>				
RD Effect	0.116† (0.060)	0.204* (0.061)	0.263* (0.106)	0.112* (0.051)
Bandwidth	1.10	1.10	0.55	1.65
Observations	157	157	94	219
F.E. State	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
% of Optimal Bandwidth	100%	100%	50%	150%

†p<0.1, \*p<0.05. Standard errors are heteroskedasticity robust (parenthesis). The RD effect corresponds to  $\beta_1$  in equation 1 (linear polynomial). The covariates are described in Table A.1. The outcome variables are defined in the text.

**Table A.3: Effect on Council Expansion by the level of Patronage in the Municipality**

Patronage definition:	COUNCILOR'S PARTISANSHIP		POLITICIZED JOBS	
	(A1)	(A2)	(B1)	(B2)
RD Effect: All Municipalities	-0.463*		-0.438*	
	(0.185)		(0.187)	
RD Effect:Low Patronage (A)		-0.145		-0.094
		(0.241)		(0.274)
RD Effect: High Patronage (B)		-0.963*		-0.889*
		(0.286)		(0.227)
Difference (B-A)		-0.818*		-0.795*
		(0.401)		(0.350)
Bandwidth	1.12	1.12	1.12	1.12
Observations	159	159	158	158

†p<0.1, \*p<0.05. Standard errors are heteroskedasticity robust (parenthesis). The polynomial is linear. The coefficients in A1 and B1 correspond to  $\beta_1$  in equation 1. The coefficients in A2 and B2 come from the following equation:

$$ce_i = \beta_0 + \beta_1 t_i + \beta_2 rv_i + \beta_3 t_i rv_i + \beta_4 hp_i + \beta_5 t_i hp_i + \beta_6 rv_i hp_i + \beta_7 t_i rv_i hp_i + \delta_{seats08} + \delta_{sta} + \theta_i + \epsilon_i$$

where  $hp_i$  is a binary variable that indicates whether the observation is part of the high-patronage group. In this case, the effects for the low- and high-patronage groups are given by  $\beta_1$  and  $\beta_1 + \beta_5$ ; respectively. All other variables are analogous to the ones in equation 1. The covariates are described in Table A.1. The outcome variables are defined in the text.

**Table A.4: The Level of Patronage in Municipal Coalitions is Balanced at the Discontinuity**

	(1)	(2)	(3)	(4)	(5)
<i>DV: Binary Variable for High Patronage municipality, based on the marginal councilor's partisanship</i>					
RD Effect	0.230 (0.203)	0.109 (0.262)	0.086 (0.232)	0.103 (0.223)	0.109 (0.212)
Pre-Tre. mean	0.196	0.196	0.196	0.205	0.215
Bandwidth	0.98	0.98	0.98	1.90	3.15
Observations	144	144	144	249	402
<i>DV: Binary Variable for High Patronage municipality, based on the the level of politicization in the bureaucracy</i>					
RD Effect	-0.066 (0.190)	-0.080 (0.227)	-0.093 (0.213)	-0.086 (0.217)	-0.091 (0.202)
Pre-Tre. mean	0.456	0.456	0.456	0.447	0.458
Bandwidth	1.11	1.11	1.11	2.07	3.59
Observations	158	158	158	270	461
F.E. State	No	Yes	Yes	Yes	Yes
Covariates	No	No	Yes	Yes	Yes
Polynomial	Linear	Linear	Quadratic	Cubic	Linear

†p<0.1, \*p<0.05. Standard errors are heteroskedasticity robust (parenthesis). The RD effect corresponds to  $\beta_1$  in equation 1 (linear polynomial). The covariates are described in Table A.1. The outcome variables are defined in the text.

**Table A.5: Reelection of Incumbent Councilors: Changes from 2008 to 2012**

DV:	ATTEMPTS REELECTION			WINS REELECTION		
	(A1)	(A2)	(A3)	(B1)	(B2)	(B3)
Intercept	0.777*			0.496*		
	(0.006)			(0.009)		
Seat Expansion (A)	0.011			0.009		
	(0.007)			(0.010)		
2012 Election (B)	-0.044*	-0.044*	-0.039*	-0.014	-0.013	0.005
	(0.009)	(0.009)	(0.012)	(0.010)	(0.010)	(0.015)
A x B	0.024*	0.024*	0.019	0.097*	0.097*	0.096*
	(0.010)	(0.010)	(0.013)	(0.012)	(0.012)	(0.016)
Mayor Coalition (C)			0.003			0.027*
			(0.006)			(0.008)
A x B			-0.010			-0.035†
			(0.014)			(0.019)
A x B x C			0.010			0.002
			(0.015)			(0.019)
Observations	42894	42894	42894	33113	33113	33113
F.E. Municipality	No	Yes	Yes	No	Yes	Yes

†p<0.1, \*p<0.05. Standard errors are cluster-robust by municipality (parenthesis). The data includes two elections: 2008 and 2012, and all incumbent councilors in each municipality at the time of each election. Incumbent councilors in 2008 (2012) are those elected in 2004 (2008). The estimation in columns B1-B3 only includes councilors that actually attempted reelection.

The dependent variables are defined as follows: (i) ATTEMPTS REELECTION: a binary variable that assumes one when the incumbent councilor attempted reelection; (ii) WINS REELECTION: a binary variable that assumes one when the incumbent councilor that attempted reelection succeeds.

For councilor  $i$ , in municipality  $m$ , coalition  $c$ , and election  $t$ , the estimating equations are shown below:

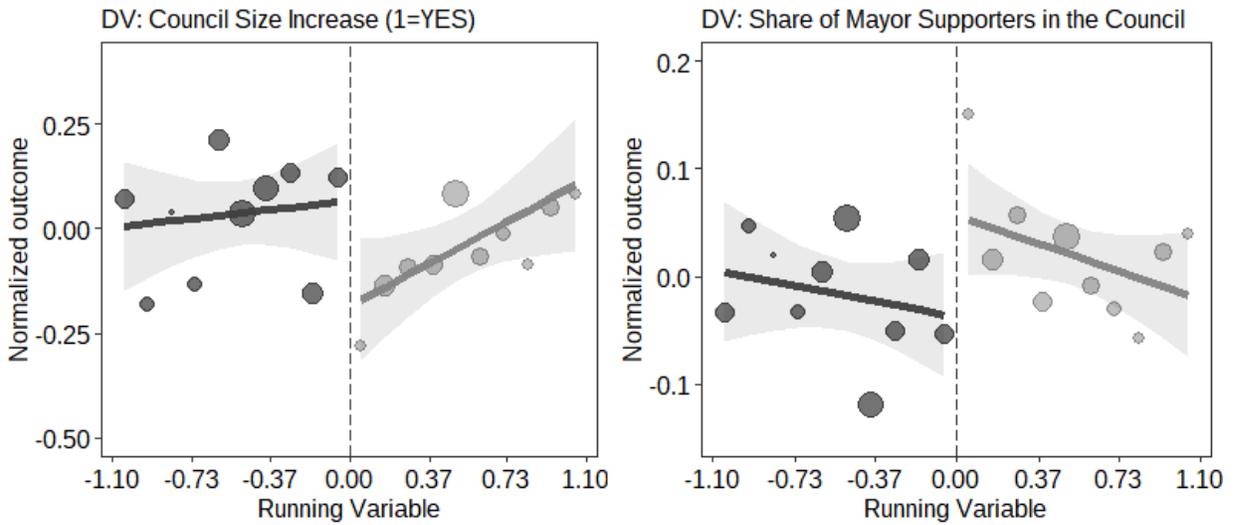
$$y_{cimt} = \beta_0 + \beta_1 \text{expand}_m + \beta_2 2012_t + \beta_3 \text{expand}_m 2012_t + \delta_m + \mu_{cimt}$$

$$y_{cimt} = \beta_0 + \beta_1 \text{expand}_m + \beta_2 2012_t + \beta_3 \text{expand}_m 2012_t + \beta_4 \text{mayor}_c + \beta_5 \text{expand}_m \text{mayor}_c + \beta_6 2012_t \text{mayor}_c + \beta_7 \text{expand}_m 2012_t \text{mayor}_c + \delta_m + \mu_{cimt}$$

where  $y_{cimt}$  is the dependent variable specified in the Table header. The dummy  $\text{expand}_m$  indicates whether the specific municipality  $m$  approved a council expansion in 2009-2012. The dummy  $2012_t$  assumes 1 if the election year is 2012 (and 0 if it is 2008). The dummy  $\text{mayor}_c$  indicates whether the councilor belongs to the coalition supporting the incumbent mayor in the period. The first equation corresponds to the specifications 1-2 (specification 1 does not include municipality fixed-effects); the second equation to specification 3.

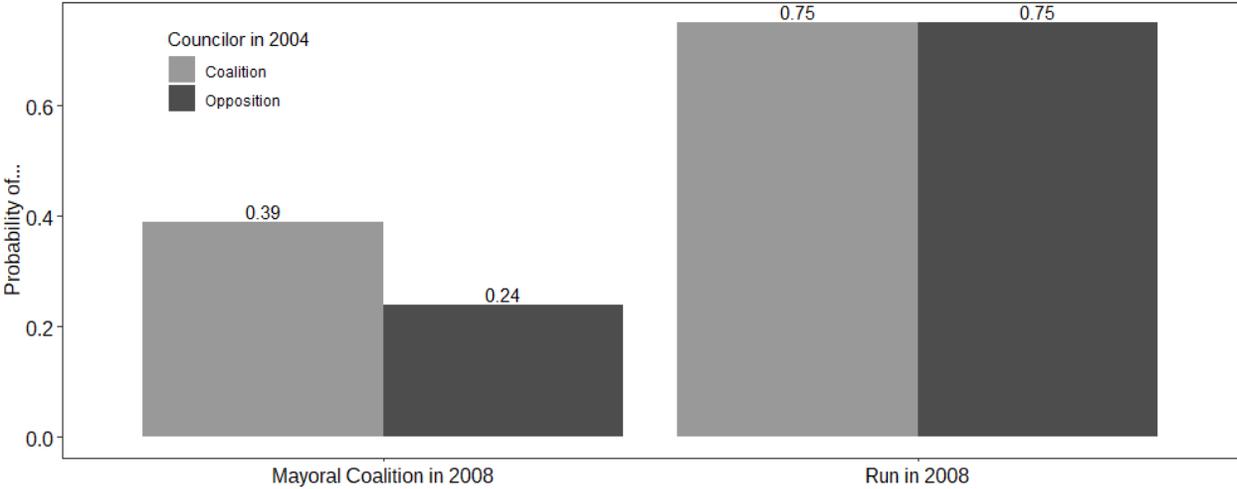
## C FIGURES

**Figure A.1: Graphical Representation of the RD Effects**



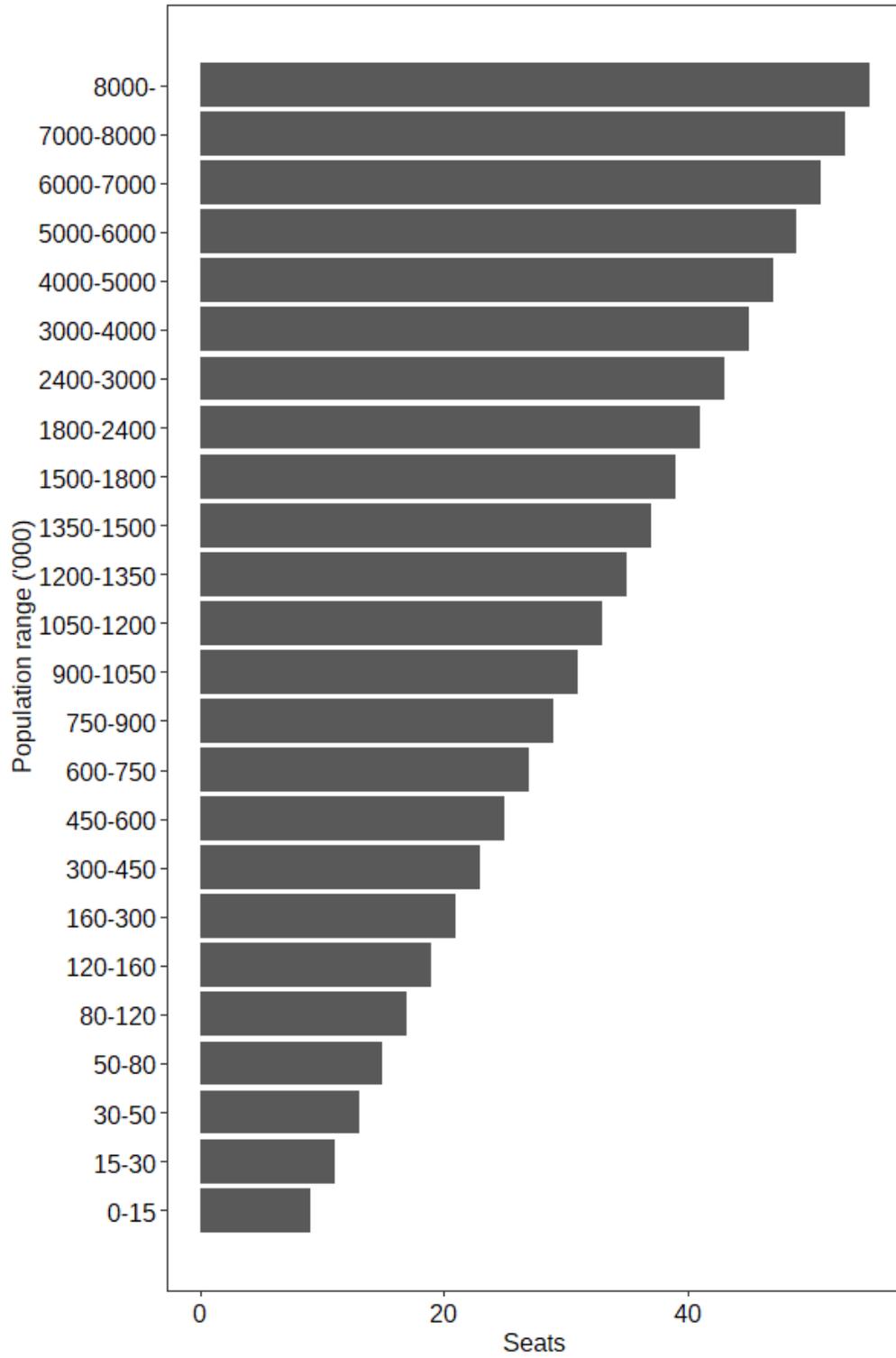
The right side of each plot shows the treatment observations. The left-side plot shows effects for the probability of a council increase (Panel A of Table 1). The right-side for the share of the council that supports the mayor (Panel B of Table 1). The outcome variables are normalized (demeaned) by the fixed-effects and pre-treatment covariates in equation 1. The lines show a linear fit.

**Figure A.2: Coalition Councilors in 2004 are More Likely to Support the Mayor in 2008**



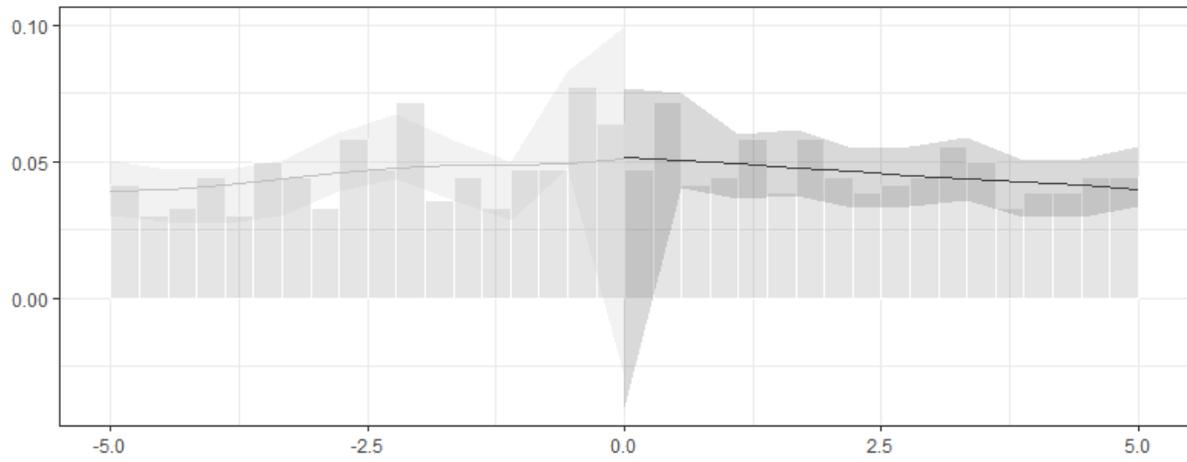
Each column represents the share of councilors in that status.

**Figure A.3: Seat Caps by Population for 2012**



Valid in 2012. The lowest level is 9 seats, the cap increases by 2 at every new range, up to 55.

**Figure A.4: Density of Observations Around the Discontinuity**



For each one of the four RD designs, according to the profile of the candidates competing for the marginal seat.