ONLINE APPENDIX

Summary Statistics

TABLE A.1. Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Recruitment Rate	3,445	3.044	5.361	0.000	77.566
Gender Gap in Recruitment	3,445	0.788	2.458	−20.112	29.232
Attrition Rate (All Members)	3,445	0.137	0.210	0.000	1.000
Attrition Rate (Female Members)	3,445	0.098	0.200	0.000	1.000
Attrition Rate (Male Members)	3,445	0.146	0.229	0.000	1.000
Renominated	2,286	0.441	0.497	0.000	1.000
Advanced	1,355	0.095	0.294	0.000	1.000
Women's Recruitment in Previous Terms	3,445	75.650	52.269	2.120	385.965

Notes on missing data:

- Data on party membership is not available for several minor parties. Most of these parties were short-lived and ceased to exist by the early 2010s.
- The variable "Renominated" is coded as missing for term-limited mayors who were ineligible for reelection
- Individual-level membership data was not available for the Brazilian Socialist Party (PSB). We retain observations from this party in our datasets, but the membership variables are coded to missing for the PSB observations.

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Details on the Regression Discontinuity Comparisons

Regression discontinuity (RD) analyses of gender effects typically analyze gender as the treatment by comparing woman candidates who narrowly won their election with male candidates who narrowly won their election. Our research design departs from this approach in that our treatment is incumbency, and we analyze the contribution of gender as a heterogenous effect of the incumbency treatment. Our treatment groups are mayoral candidates of a given gender who narrowly won their election, and our control groups are mayoral candidates of that same gender who narrowly lost their election. We then estimate all of our models separately for female and male candidates sub-samples.

The primary reason why we do not use the typical candidate characteristic RD design is because our outcomes of interested are measured at the *party* level rather than the municipal level, and this poses additional complications for our analysis. Because Brazil's electoral rules allow parties to run at most one mayoral candidate per municipality, the female and male candidates necessarily come from different parties. Thus, if we were to use the typical candidate characteristic design, crossing the 0% treatment threshold would change not only the gender of the next mayor, but also the identity of the next governing party. This abrupt change in the identity of the governing party at the threshold violates the spirit of the regression discontinuity design, which is based on the premise that the baseline characteristics of the units under study are continuous at the threshold.

Studies that focus on the effect of candidate characteristics on *municipal*-level variables address this problem either by (1) showing that there is no relationship between a candidate's gender and their party at the treatment threshold, or (2) arguing that the identity or nature of the governing party is unlikely to affect the outcome of interest directly. This second solution is completely implausible in the case of our party-centered analysis because there is no reason to believe that different Brazilian parties would have similar baseline patterns of membership recruitment; on the contrary, previous work on the politics of gender in Brazil has convincingly demonstrated that there are systematic differences between different parties in terms of their willingness and interest in involving women in politics (Wylie 2018). The first solution might be more justifiable, and we show in Appendix I that our samples of female and

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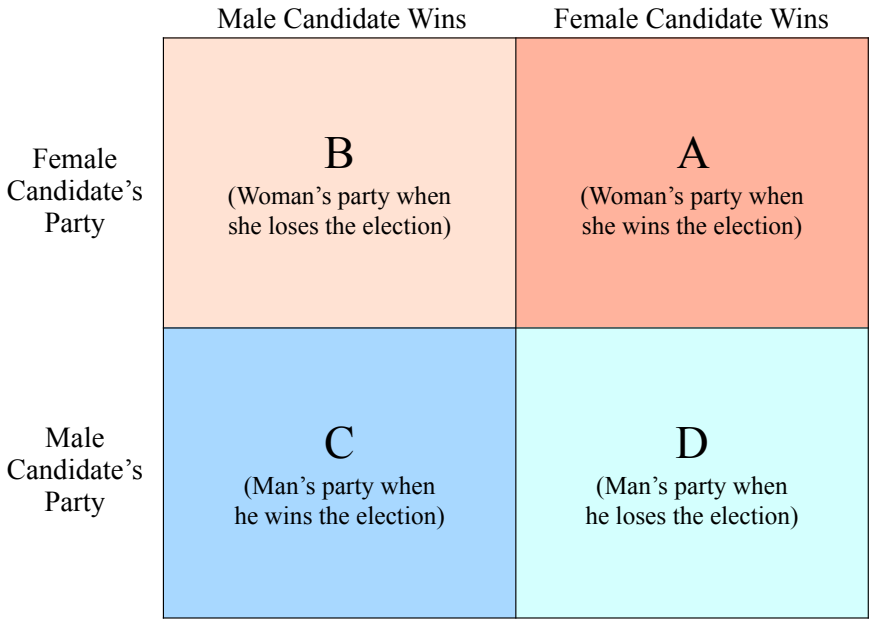
FIGURE B.1. Comparison Groups



male candidates happen to be fairly balanced on party. However, there is neither any theoretical reason nor any methodological reason to expect this to be the case in general. On its own, the regression discontinuity design does not ensure that the identity of the governing party will be balanced at the treatment threshold.

For these reasons, the research design adopted in this article focuses on incumbency effects rather than candidate characteristics effects, and we analyze gender-based differences as *heterogeneous effects* of incumbency. Figure B.1 illustrates the four types of cases that are observable. Our analysis involves comparing outcomes in cell A with cell B, and then comparing outcomes in cell C with cell D. The difference $(Y_A - Y_B)$ represents the incumbency effect (or the effect of winning the mayoral election) for the woman's party, while $(Y_C - Y_D)$ represents the incumbency effect for the man's party. If we are correct that female and male incumbents have different recruitment priorities, then we would expect to observe evidence that $(Y_A - Y_B)$ is different from $(Y_C - Y_D)$. By contrast, the conventional candidate characteristic RD design would involve comparing outcomes in cell A with outcomes in cell C, and ignoring cells B and D altogether.

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Although our focus on incumbency effects leads us to depart from previous research on the effect of gender based on RD designs, we believe that this departure is warranted for several reasons. First, we are confident that the comparisons $A \leftrightarrow B$ and $C \leftrightarrow D$ are identified by the RD design, while the $A \leftrightarrow C$ comparison would require additional assumptions that are harder to justify. Although it represents an incumbency effect rather than a candidate characteristic effect, the $A \leftrightarrow B$ comparison is directly relevant to the question of how female politicians influence their party's local recruitment priorities. While most local party leadership positions in Brazil are held by men, the institutional resources that accompany mayoral office offer female incumbent mayors opportunities to take charge of the local party organization and reshape its membership base according to their preferences.

Second, aside from our focus on party-level outcomes, there are additional reasons to be skeptical of candidate characteristic regression discontinuity designs. Marshall (2022) shows that the candidate characteristic RD estimate is biased if the characteristic (in this case, gender) affects the running variable (the candidates' voteshares).[9] Moreover, candidate characteristic designs suffer from the well-known bundled treatment problem: to the extent that gender is correlated with other candidate characteristics that exert their own effect on the outcome, we cannot be confident that the RD estimates represent the effect of gender and not one or more of the other candidate characteristics.

Third, while our analysis of gender-based heterogeneous incumbency effects does not overcome all of the issues in the candidate characteristics RD design, we feel that treating gender as a heterogeneous effect (of the incumbency treatment) rather than as a treatment in its own right does a better job of signalling to the reader the appropriate level of skepticism with which to approach our results. Although a researcher *might* make the case that the gender of the mayor is as-if randomly assigned to municipalities, we do not believe that we can plausibly claim that the mayor's gender is as-if random with respect to parties. Instead, we consider it more useful and more accurate to think of the candidate's gender as a non-random variable along which the well-identified incumbency effect might vary.

[9]See, Marshall, J. (2022). Can close election regression discontinuity designs identify effects of winning political characteristics? *American Journal of Political Science*.

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Main results in tabular form

TABLE C.1. The Effect of Female Mayors on Membership Recruitment (Figures 3 and 4)

Model	Estimate	95% CI	p	h	n
Recruitment Rate, Female Mayors	-0.362	[-1.74, 1.02]	0.607	0.11	1737
Recruitment Rate, Male Mayors	-0.280	[-1.39, 0.83]	0.621	0.15	2122
Gender Gap, Female Mayors	-0.790	[-1.31, -0.27]	0.003	0.18	2361
Gender Gap, Male Mayors	-0.133	[-0.71, 0.45]	0.655	0.13	1928

TABLE C.2. The Effect of Mayors on Membership Attrition (Figure 5)

Model	Estimate	95% CI	p	h	n
All Members, Female Mayors	-0.059	[-0.11, -0.01]	0.013	0.12	1826
All Members, Male Mayors	0.010	[-0.03, 0.05]	0.604	0.18	2340
Female Members, Female Mayors	-0.010	[-0.04, 0.02]	0.539	0.19	2468
Female Members, Male Mayors	0.004	[-0.03, 0.04]	0.827	0.21	2550
Male Members, Female Mayors	-0.053	[-0.1, -0.01]	0.028	0.14	2010
Male Members, Male Mayors	0.016	[-0.03, 0.06]	0.469	0.18	2357

TABLE C.3. The Effect of the Election Outcome on the Candidate's Career Trajectory (Figure 6)

Model	Estimate	95% CI	p	h	n
Renominated, Female Mayors	-0.043	[-0.2, 0.12]	0.602	0.10	854
Renominated, Male Mayors	0.065	[-0.07, 0.2]	0.329	0.13	1150
Nominated to Higher, Female Mayors	0.092	[0.01, 0.17]	0.028	0.17	922
Nominated to Higher, Male Mayors	-0.057	[-0.14, 0.03]	0.180	0.14	952

TABLE C.4. The Effect of the Election Outcome on Nomination for Higher Office, by Women's Party Membership in Previous Terms (Figure 7, Panel A)

Model	Estimate	95% CI	p	h	n
Female Mayors, High Female Membership	0.009	[-0.08, 0.1]	0.855	0.17	442
Female Mayors, Low Female Membership	0.164	[0.02, 0.3]	0.023	0.18	452
Male Mayors, High Female Membership	0.017	[-0.08, 0.11]	0.725	0.16	484
Male Mayors, Low Female Membership	-0.146	[-0.33, 0.03]	0.112	0.13	441

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TABLE C.5. The Effect of the Election Outcome on the Gender Gap in Membership Recruitment, by Women's Party Membership in Previous Terms (Figure 7, Panel B)

Model	Estimate	95% CI	p	h	n
Female Mayors, High Female Membership	-0.634	[-1.49, 0.22]	0.147	0.14	1031
Female Mayors, Low Female Membership	-1.342	[-2.18, -0.5]	0.002	0.13	943
Male Mayors, High Female Membership	-0.482	[-1.41, 0.44]	0.307	0.14	966
Male Mayors, Low Female Membership	-0.044	[-0.59, 0.5]	0.875	0.14	928

Balance on Pre-Treatment Variables

The primary identification assumption behind the regression discontinuity (RD) design is that potential outcomes are continuous at the treatment threshold. If this assumption holds, then the treatment and control samples should be balanced on variables whose values were assigned prior to treatment. We test for covariate balance by performing placebo RD analyses on a variety of pre-treatment variables, including lagged versions of the dependent variables used in this paper, variables related to the candidate's background, and variables related to the local characteristics of the candidate's municipality. These RD analyses employ a specification and bandwidth-selection method identical to the one used for this paper's other analyses. Figure D.1 and Table D.1 report the p-values and results for these placebo tests. All of the p-values were greater than 0.05, which suggests that there are no significant imbalances on these pre-treatment variables.

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FIGURE D.1. P-values for Placebo RD Tests on Pre-Treatment Variables

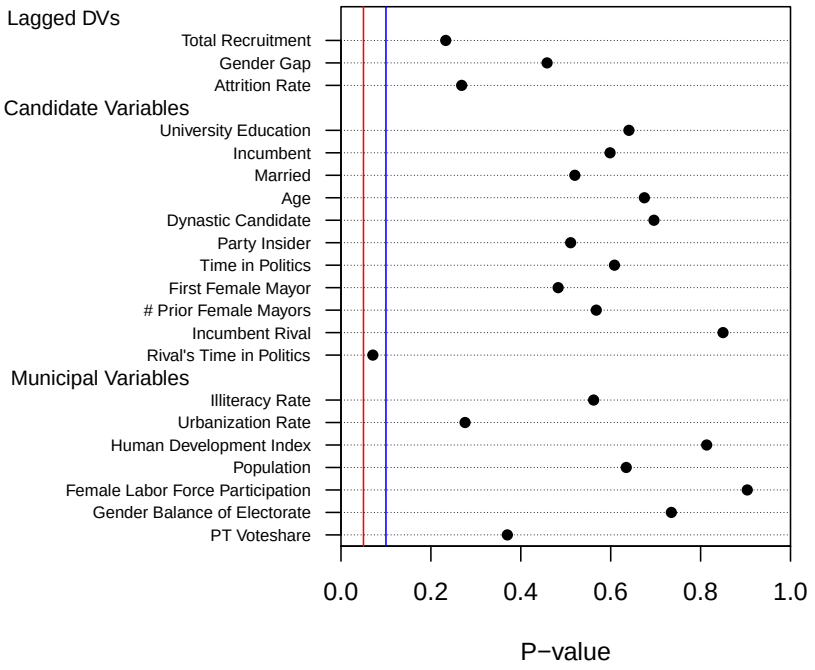

TABLE D.1. Placebo RD Tests

	Estimate	Confidence	p	h	n
Total Recruitment	1.198	[-0.77, 3.17]	0.233	0.170	2,309
Gender Gap	-0.342	[-1.25, 0.56]	0.458	0.130	1,946
Attrition Rate	-0.023	[-0.06, 0.02]	0.268	0.190	2,487
University Education	-0.024	[-0.12, 0.08]	0.641	0.140	2,133
Incumbent	-0.021	[-0.1, 0.06]	0.598	0.160	2,387
Married	0.029	[-0.06, 0.12]	0.520	0.160	2,379
Age	0.418	[-1.54, 2.37]	0.675	0.150	2,258
Dynastic Candidate	-0.018	[-0.11, 0.07]	0.696	0.190	2,404
Party Insider	-0.043	[-0.17, 0.08]	0.511	0.180	1,402
Time in Politics	-0.358	[-1.73, 1.01]	0.608	0.230	1,623
First Female Mayor	-0.021	[-0.08, 0.04]	0.483	0.110	1,731
# Prior Female Mayors	0.018	[-0.04, 0.08]	0.568	0.100	1,698
Incumbent Rival	-0.008	[-0.09, 0.07]	0.850	0.160	2,415
Rival's Time in Politics	1.343	[-0.11, 2.8]	0.071	0.130	1,906
Illiteracy Rate	0.841	[-2, 3.68]	0.562	0.130	1,933
Urbanization Rate	0.025	[-0.02, 0.07]	0.276	0.140	2,025
Human Development Index	0.003	[-0.02, 0.03]	0.814	0.150	2,093
Population	-1,242.804	[-6367.53, 3881.92]	0.635	0.120	1,808
Female Labor Force Participation	0.002	[-0.03, 0.03]	0.904	0.180	2,362
Gender Balance of Electorate	0.003	[-0.01, 0.02]	0.735	0.130	1,946
PT Voteshare	0.011	[-0.01, 0.04]	0.370	0.130	1,951

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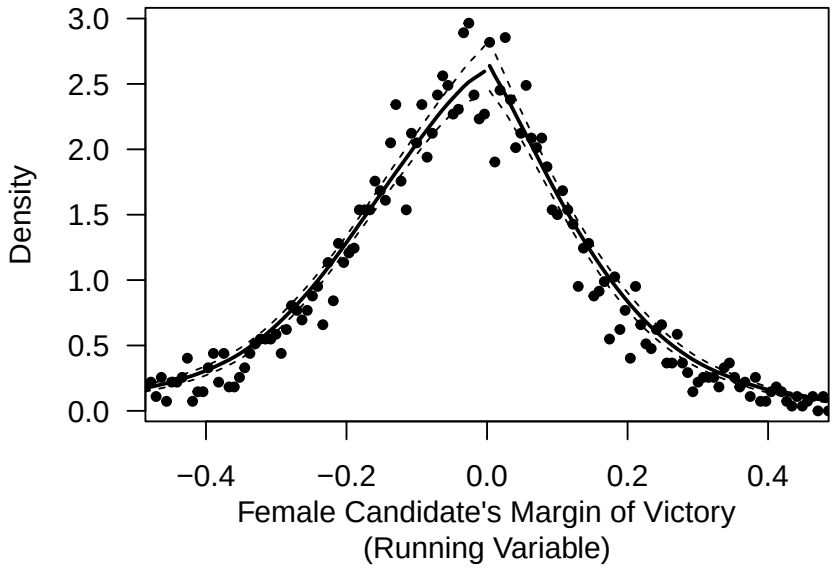
Sorting Around the Treatment Threshold

The RD design's continuity assumption would be violated if observations were able to perfectly sort into or out of treatment. In the context of regression discontinuity in close elections, sorting could occur through electoral fraud, though this is extremely uncommon in contemporary Brazil. One common way to assess whether sorting occurred is by examining the distribution of the running variable for "lumping" on either side of the treatment threshold. The density plot in Figure E.1 does not show any evidence of lumping. The p-value for the corresponding McCrary sorting tests was 0.64. The failure to reject the null hypothesis provides further evidence against sorting in this case.

FIGURE E.1. Density Plot of the Running Variable (Margin of Victory)



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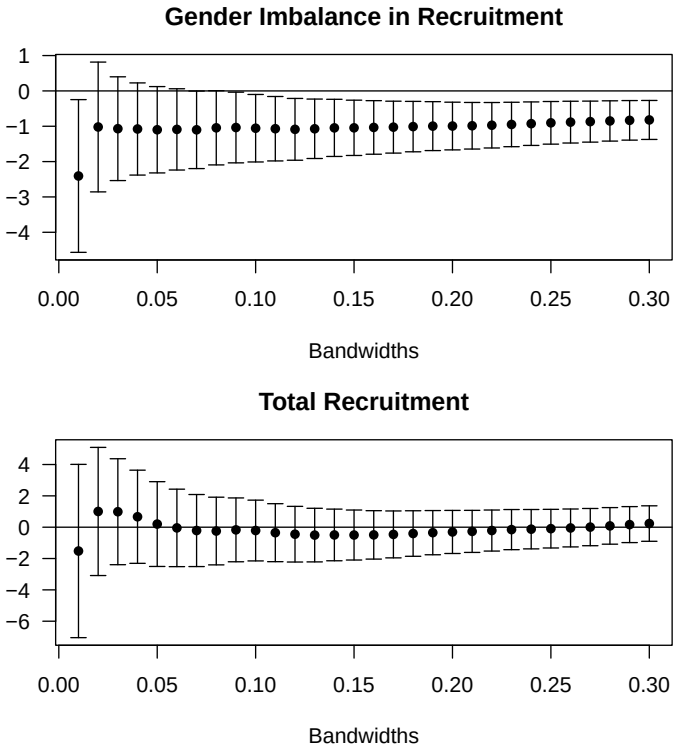
Robustness to Alternative Bandwidths

In all of the regression discontinuity analyses in this paper, the estimation bandwidth was selected using the data-driven bandwidth-selection procedure developed by Calonico, Cattaneo and Titiunik (2014). This method weighs efficiency against bias to identify the optimal bandwidth for a particular dataset, and it also uses higher-ordered polynomials to correct for the bias that comes from using larger bandwidths. Figure F.1 assesses whether our main results are sensitive to this choice of bandwidth by replicating the analyses on a range of other bandwidths. The results appear to be quite robust to alternative bandwidths. Although the effect on the gender gap is no longer statistically significant for most of the bandwidths smaller than 0.7, the loss of significance is not surprising given that the sample size drops with the size of the bandwidth. Importantly, the point estimate of the effect on gender gap is generally stable across bandwidths. The effect on total recruitment is not statistically significant for any bandwidth.

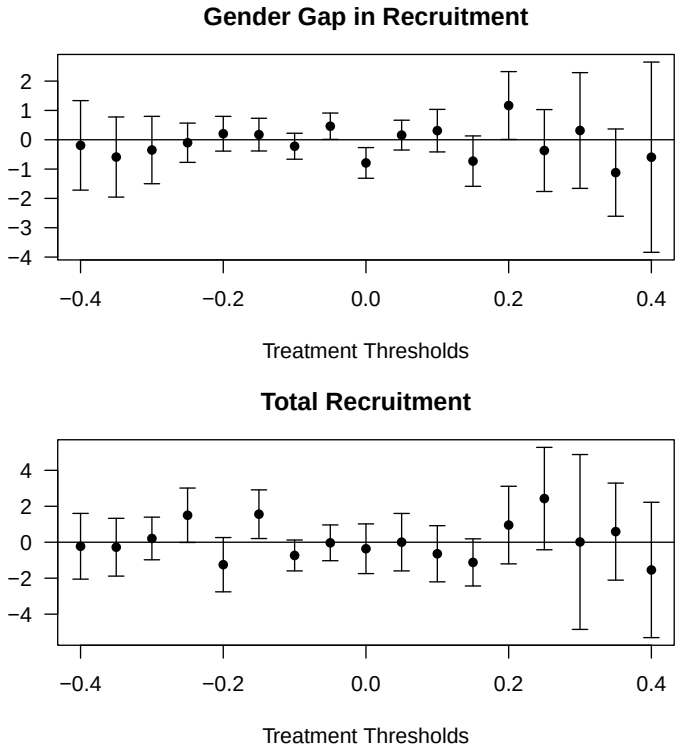
FIGURE F.1. RD Estimates For Alternative Bandwidths



Placebo Treatment Thresholds

In each of this paper's regression discontinuity analyses, treatment status changes at the 0% margin of victory threshold. If the regression discontinuity design is valid, we should not expect to observe significant jumps in outcomes at any other threshold. Figure G.1 shows RD estimates at several placebo treatment thresholds. For the analysis of the effect on the gender gap, none of the placebo effects were statistically significant.

FIGURE G.1. RD Estimates At Different Placebo Thresholds



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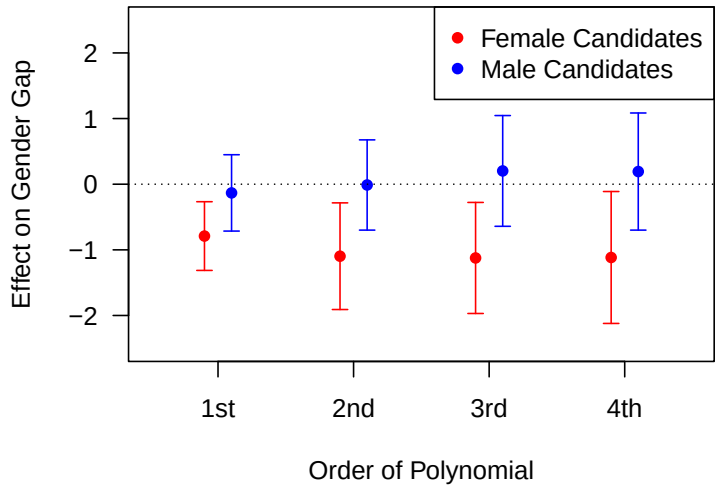
Robustness to Higher-Order Polynomial Specifications

This paper used a local linear regression specification of the RD model for all analyses. Figure H.1 examines whether the gender gap results would continue to hold for estimates based on local-polynomials greater than one (for example, quadratic or cubic polynomials). There is no indication from this figure that the gender gap results are sensitive to the order of the polynomial used. The effects for female candidates were statistically significant across all models, while the effects for male candidates were insignificant for all models.

FIGURE H.1. RD Estimates for Higher-Order Polynomial Specifications



Note: Additional details on the model specification and results can be found in Table S1 of the Supplementary Appendix in this article's Dataverse files.

Characteristics of Female and Male Mayors

The RD estimates in this paper represent incumbency effects rather than politician characteristic effects. We estimate the RD model separately for each sub-sample (female candidates and male candidates), and we make inferences about the contribution of the mayor's gender by analyzing the differences between female and male mayors as heterogeneous effects. However, like conventional candidate characteristic regression discontinuity designs, our research design is still vulnerable to the bundled treatment problem. The heterogeneous effects that we attribute to gender may actually be capturing some other characteristic that is correlated with gender, such as the candidates' educational attainment, party, or ideology.

In this subsection, we examine balance on the candidate characteristics of female and male winners in the full sample and in competitive elections. Table I.1 shows the average characteristics of mayors in our sample, including candidates in non-competitive races. Consistent with the findings of other research on the politics of gender in Brazil, female mayors tended to be better-educated than male mayors, and female mayors were also less likely to be married, more likely to belong to the same family as one of their municipality's previous mayors, and less likely to be incumbents.

TABLE I.1. Full Sample

	Male Mayors	Female Mayors	DM p-value
Incumbent	0.309	0.225	0.000
University Education	0.449	0.649	0.000
Married	0.784	0.672	0.000
Dynastic Candidate	0.265	0.347	0.000
Age	49.134	47.253	0.049
Years in Party	6.576	5.982	0.035
Years in Politics	10.113	9.367	0.001
PT	0.079	0.075	0.668
PSDB	0.140	0.139	0.914
MDB	0.191	0.199	0.527
DEM	0.081	0.080	0.874
PP	0.078	0.087	0.333
PL	0.064	0.087	0.010

Table I.2 shows the characteristics of mayors in competitive races that were decided by a margin of

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victory of 5 percentage points or less. We report p-values for the difference-in-means estimate, and for RD estimates.[10] Even in these close races, female mayors are significantly better educated, less likely to be married, and slightly younger than male mayors. However, there are no systematic differences between female and male mayors in terms of tenure in office, and the only significant difference in party affiliation is that women mayors are more likely to be affiliated with the Liberal Party (PL).

TABLE I.2. Close Races

	Male Mayors	Female Mayors	DM p-value	RD p-value
Incumbent	0.259	0.191	0.015	0.109
University Education	0.455	0.642	0.000	0.000
Married	0.798	0.688	0.000	0.044
Dynastic Candidate	0.259	0.351	0.005	0.117
Age	49.233	47.695	0.023	0.027
Years in Party	6.265	5.885	0.508	0.417
Years in Politics	9.807	9.339	0.305	0.376
PT	0.079	0.080	0.973	0.552
PSDB	0.136	0.134	0.935	0.969
MDB	0.187	0.171	0.534	0.803
DEM	0.097	0.089	0.686	0.349
PP	0.077	0.105	0.148	0.084
PL	0.053	0.096	0.015	0.025

[10]These RD estimates are of candidate characteristics effects, and they compare the characteristics of female candidates who narrowly won with male candidates who narrowly won. The purpose of Table I.2 is to diagnose the bundled treatment problem, rather than balance on pre-treatment characteristics. See Figure D.1 and Table D.1 for an assessment of balance on pre-treatment characteristics. Although Figure D.1 and Table I.2 are based on some of the same variables, they differ in their comparison group: the comparison group for Table I.2 is winning candidates (elected mayors) of the opposite gender, while the comparison group for Figure D.1 and all of this article's other RD analyses is losing candidates of the same gender as the winner.

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Difference-in-Differences Estimates

This section examines whether our main results hold for a two-way fixed effects regression specification. Although this alternative specification has weaker internal validity compared to the RD estimates reported in the main text of this paper, one advantage of the fixed-effects model is that it does not require us to discard non-competitive municipalities.

For each of our main dependent variables, we estimate the regression model

$$Y_{it} = FemaleMayor_{it} + MaleMayor_{it} + \eta_i + \phi_t + \epsilon_{it}$$

where $FemaleMayor$ and $MaleMayor$ are binary variables, the excluded category is the party being in the opposition during that municipality-term, and η_i and ϕ_t are municipality and term fixed effects, respectively. Because Brazil has many *de facto* regional parties that do not run candidates or even maintain party organizations in most municipalities, we restrict our sample to the subset of parties that won the mayorship at least once between 2000 and 2020. Estimating these models on the full sample (including parties that were not competing or organizing in a particular municipality) yields similar conclusions and much larger point estimates compared to the results that we report here.

Figure J.1 reports the $FemaleMayor$ and $MaleMayor$ coefficients and the difference between those coefficients, while Table J.1 summarizes the regression models. Consistent with our RD results, having a female mayor in office reduced the gender gap in recruitment by around 1 member per 1,000 voters relative to having a male mayor in office, while the mayor's gender had no effect on aggregate membership recruitment. Panels (C) and (D) report the effects of mayors of either gender on the recruitment rate of women and the recruitment rate of men, respectively. Compared to parties that had a male mayor in office, parties that had a female mayor recruited 0.5 more members per 1,000 female voters on average. Considering that fewer than 1 in 1,000 women join a party during an average term, this boost in women's membership recruitment is quite large relative to the baseline.

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FIGURE J.1. Regression Estimates of the Effect of Female and Male Mayors

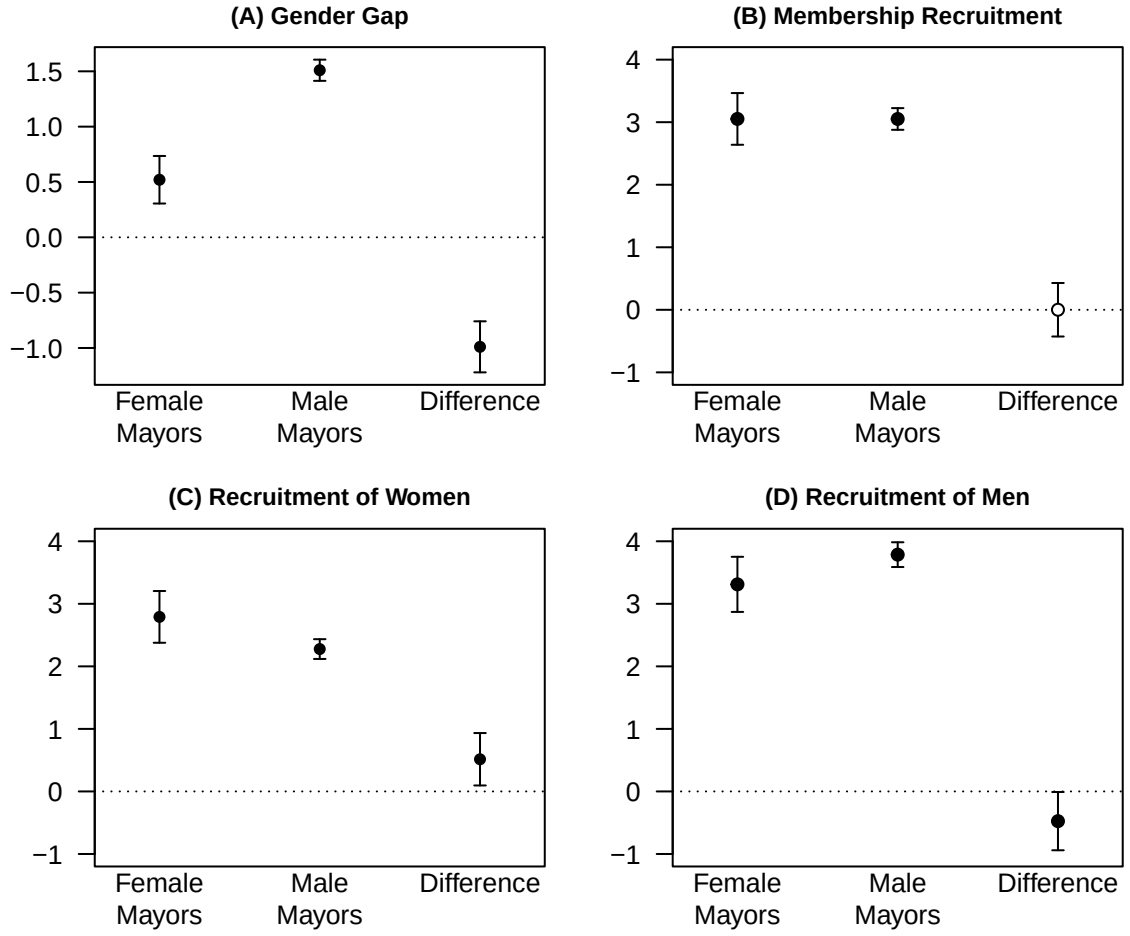


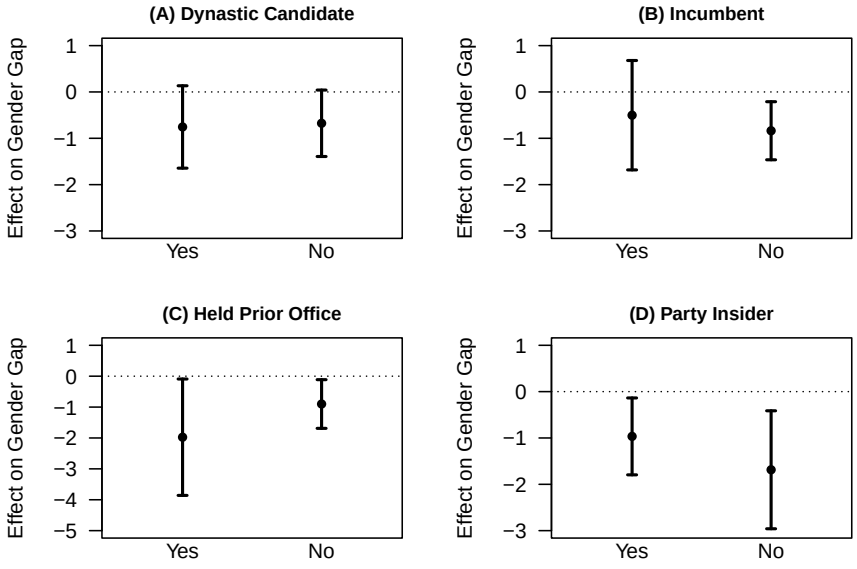
TABLE J.1. Effect of Female and Male Mayors on Membership Recruitment

	Dependent variable:			
	Gender Gap	Membership Recruitment	Recruitment of Women	Recruitment of Men
	(1)	(2)	(3)	(4)
Female Mayor	0.520***	3.052***	2.791***	3.311***
	(0.110)	(0.211)	(0.211)	(0.225)
Male Mayor	1.510***	3.051***	2.276***	3.786***
	(0.049)	(0.088)	(0.081)	(0.101)
Municipality Fixed Effects	Yes	Yes	Yes	Yes
Term Fixed Effects	Yes	Yes	Yes	Yes
Observations	55,416	55,416	55,416	55,416
R^2	0.230	0.319	0.286	0.330
Note:				*p<0.1; **p<0.05; ***p<0.01

Heterogeneous Effects

Figure K.1 shows how the effect of female mayors on the gender gap varies with the background of the female candidate. The RD models were estimated separately for each sub-sample. A candidate is coded as dynastic if they had the same surname as any of the previous mayors of their municipality. A candidate is coded as an incumbent if they held mayoral office at the time of the election; because Brazilian mayors are limited to two terms, incumbents who won the analysis election are not eligible to run again at the end of the analysis term. A candidate is coded as having held prior office if they held any elected office at any level of government at any point prior to the election. A candidate is coded as a party insider if they were affiliated with their party for at least one full term prior to the election.

FIGURE K.1. The Effect of Incumbency on the Gender Gap, by Candidate Type



Note: Additional details on the model specification and results can be found in Table S2 of the Supplementary Appendix in this article's Dataverse files.

Figure K.2 shows how the effect of female mayors on the gender gap varies with the characteristics of the candidate's municipality. The RD models were estimated separately for each sub-sample, and the samples were partitioned at the median value for each variable.

Figure K.3 shows of the effect varies with the characteristics of the female candidate's party. The classifications of parties' ideology and policy-seeking orientation come from Bolognesi, Ribeiro, and

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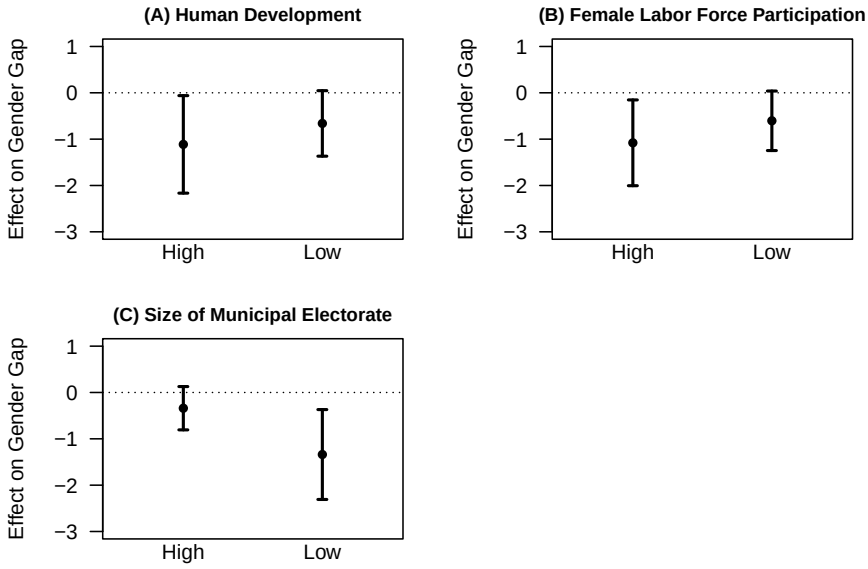
FIGURE K.2. The Effect of Incumbency on the Gender Gap, by Municipality Type



Note: Additional details on the model specification and results can be found in Table S3 of the Supplementary Appendix in this article's Dataverse files.

Codato (2023). The classifications of party structure is based on Sells (2020), and the sample is partitioned at its median value. The data on the share of women in party leadership come from Wiley (2018), who uses this variable as an indication of Brazilian parties' willingness to promote women's participation in party politics. There is little variation in the effect on the gender gap across party ideology and policy-seeking orientation. Women mayors have a larger effect on the gender gap in the more centralized parties, and in parties in which women occupy fewer than 20% of the positions in the party's national leadership, though neither of these differences are statistically significant.

Party switching by origin of party

Figure L.1 shows RD estimates of the effect of incumbency on the likelihood that the members recruited during the mayor's term switch to a different party during some subsequent term, grouped by the political party of origin.

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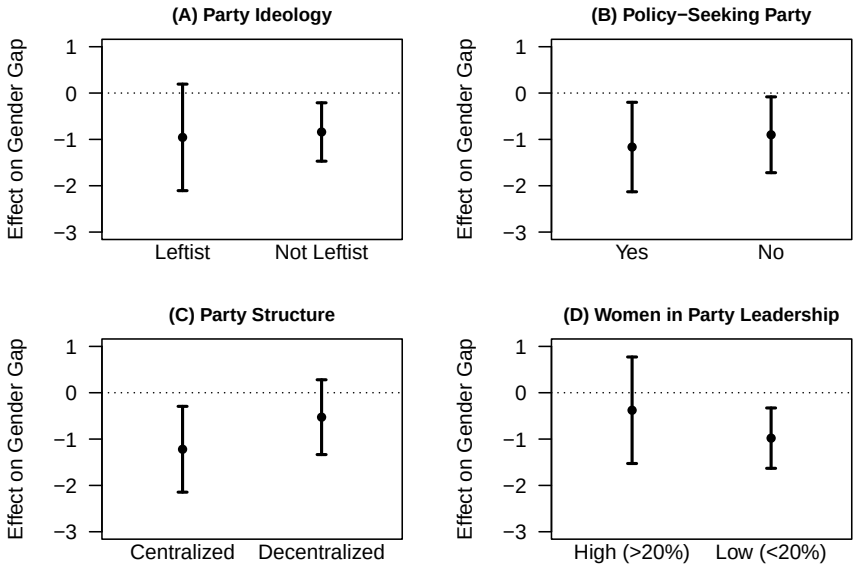
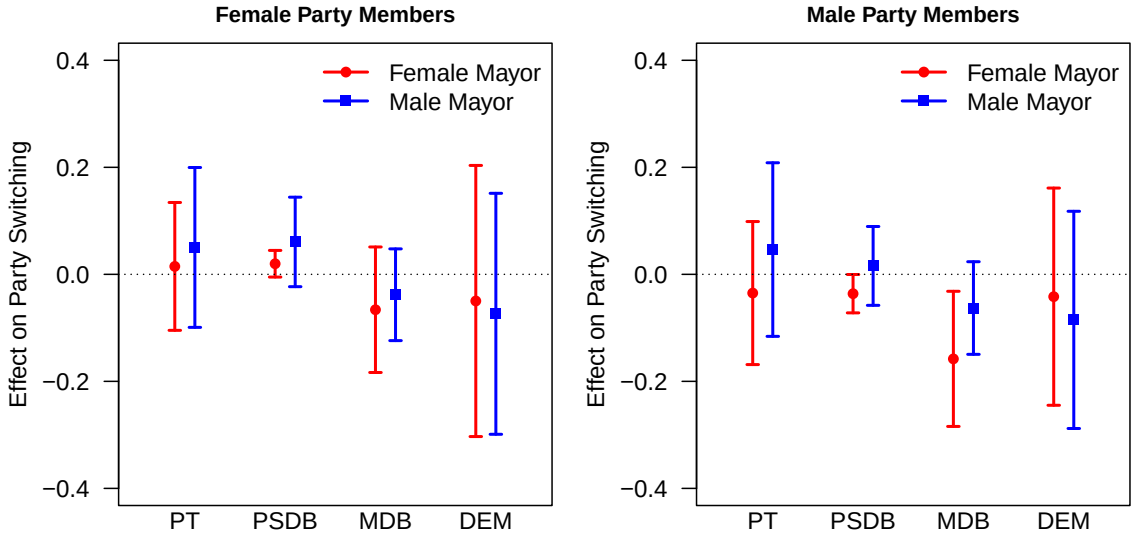
FIGURE K.3. The Effect of Incumbency on the Gender Gap, by Party Type



Note: Additional details on the model specification and results can be found in Table S4 of the Supplementary Appendix in this article's Dataverse files.

FIGURE L.1. The Effect of Incumbency on Party-Switching, by Party of Origin



Note: Additional details on the model specification and results can be found in Tables S5 and S6 of the Supplementary Appendix in this article's Dataverse files.

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Career Path and Success Rates in Federal Congressional Elections

Table M.1 shows the percentage of first-time candidates for Brazil's Federal-level Chamber of Deputies who win their congressional election, grouped by the candidate's background in local politics prior to the election, and the candidate's gender. The category "Any local office" includes congressional candidates who previously served as mayor, vice-mayor, or city councilor.

Holding local office is associated with a greater chance of winning congressional office for both male and female candidates. However, male candidates who have never held local office are more than three times more likely to win their congressional election compared to female candidates who have never held local office: 5.2% of men who had no record in local government won election to the Federal Chamber of Deputies, compared to only 1.7% of women. This suggests that among the vast majority of congressional candidates who did not previously hold local office, women face greater barriers to entry into congress compared to men. On the other hand, holding local office almost completely eliminates the gender gap in electoral success rates among first-time congressional candidates: 10.5% of men who held any local office won a seat in the Federal congress, compared to 10.2% of women.

TABLE M.1. Percent of first-time congressional candidates who win their election, by career path and gender

Background	Women	Men	Odds Ratio
No prior local office	1.7	5.2	3.1
Any local office	10.2	10.5	1.0
Mayoral office	31.4	31.6	1.0

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Career Path and Campaign Donations in Federal Congressional Elections

Table N.1 shows the average campaign donations reported by first-time candidates for Brazil's Federal-level Chamber of Deputies, grouped by the candidate's background in local politics prior to the election, and the candidate's gender. Campaign donations are measured in thousands of Brazilian *reais*, and they exclude candidates' donations to their own campaigns. Consistent with previous research on the gender gap in campaign resources, female candidates who have never served in local office receive only around two-thirds the amount of campaign donations as male candidates who have never served in local office. Nevertheless, women who previously held local office receive a similar amount of campaign resources as their male counterparts, which suggests that holding local office may help reduce the gender gap in campaign resources.

TABLE N.1. Campaign donations, by career path and gender of the candidate

Background	Women	Men
No prior local office	49.5	78.0
Any local office	239.6	208.3
Mayoral office	446.4	459.7

Note: Campaign donations are measured in thousands of Brazilian *reais*

Table N.2 shows the subset of candidates' campaign donations that come from either the party's electoral committee or from other candidates. These data indicate that female mayors who run for congress receive greater financial support from their parties compared to both male mayors and female congressional candidates who did not previously hold mayoral office.

TABLE N.2. Campaign funds transfers from party electoral committees and other candidates, by career path and gender of the recipient

Background	Women	Men
No prior local office	4.1	8.7
Any local office	26.1	25.2
Mayoral office	108.7	47.8

Note: Campaign funds are measured in thousands of Brazilian *reais*

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Next Contested Office for Federal Deputies, by Gender

Because mayors in Brazil are limited to two consecutive terms, it is not uncommon for term-limited mayors to seek election to the Federal Congress for the purpose of keeping their political network alive until they are eligible to run for mayor again. Elected officials in Brazil at all levels of government serve four year terms, though municipal elections take place two years apart from state and federal elections. Consequently, if a politician serves two full consecutive terms as mayor and then wins a seat in congress in the next federal election, the next mayoral election in which they are eligible to run occurs roughly two years into their congressional term. A congressional politician's decision to launch a mid-term run for mayor is a strong indication that they are more interested in holding local executive office than in building a long-term career in the Federal Congress.

Table O.1 shows the percentage of members of the Federal-level Chamber of Deputies who ran for mayoral office in the middle of their congressional term, and the percentage of deputies who were renominated to the Chamber of Deputies in the next election, grouped by the gender of the member of congress. Mid-term mayoral runs were slightly more common among women than men: 15% of congresswomen chose to run for mayor before their current congressional term was complete, compared to 11% for congressmen. Congresswomen were also less likely to get renominated to the Chamber of Deputies in the next Federal election, winning renomination at a rate of only 48% compared to 61% for men. Nevertheless, a plurality of male and female Deputies alike chose to seek another term in congress, while relatively few members of congress of either gender chose to run for mayor before completing their congressional term.

TABLE O.1. Post-Election Career Path for Federal Deputies

	Mid-Term Mayoral Run	Renomination to Federal Deputies	Other	Total
Women	15.4	48.2	36.4	100.0
Men	11.4	61.2	27.4	100.0

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Effect of Women Mayors on the Next City Council Elections

To what extent can mayoral election victories by women candidates help other female party members win local office in subsequent elections? Table P.1 shows RD estimates of the effect of a woman mayor on the candidate pool and election outcomes in the next city council election, which occurs four years after the woman mayor was elected. Having a woman mayor in office increases the share of women on the party's city council list by only 1.3 percentage points. However, these results do indicate that having a woman mayor increases the share of elected city councilors who are women by 2.5 percentage points. Given that women accounted for only 13.2% of city councilors in Brazil between 2001 and 2021, this 2.5 percentage point effect represents a substantively large boost in women's representation in local government relative to the baseline. Moreover, women council candidates received a higher share of campaign contributions relative to male candidates in municipalities that had a woman mayor. Together, these results indicate that while woman mayors have only a limited effect on their parties' subsequent nomination decisions (which are already constrained by gender quotas in the case of city council elections), having a woman in mayoral office can help other women in that municipality win election to local office in future elections.

TABLE P.1. Effect of Women Mayors on the Next City Council Elections

Dependent Variable	Estimate	95% CI	p	h	n
Women as share of council candidates	0.013	[0.00, 0.03]	0.029	0.15	2156
Female / Male campaign donations ratio	0.334	[0.07, 0.60]	0.015	0.09	1414
Women as share of elected city councilors	0.025	[0.00, 0.05]	0.046	0.15	2075

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Additional Result: Electoral cycle of party building

The rate at which new members join Brazilian parties varies widely over the course of the four-year election cycle. Traditionally, the vast majority of members joined their party during the third year of the mayoral term. This influx of members during the third year was the product of two features of Brazil's electoral calendar. First, prior to 2016, prospective candidates who wanted to run for office in the next municipal election were required to be affiliated with their party for a full year prior to the election, and this meant that they had to join the party by October of the third year of the outgoing term.[11] Second, one of the main drivers of membership recruitment is the local conventions that select candidates for the next municipal election, which are traditionally held in June during the fourth year of the outgoing term. Because several parties require members to be affiliated with the party for either six months or a year in order to vote at the convention, prospective participants at these conventions needed to join by the third year of the term. Thus, the set of members who joined during the third year tended to consist of two broad types of people: prospective candidates who wanted to run for municipal office under the party label, and the rank-and-file members that those candidates or other politicians recruited into the party in order to influence the local conventions or signal their party building efforts to party leaders (Speck 2013; Mainwaring 1999).

Figure Q.1 shows the number of new members per one million voters who were recruited into the local incumbent party under female mayors and male mayors, grouped by the month in the mayoral term. In both cases, new members joined the party at similar moments in the election cycle. However, this figure also shows that the gender gap in recruitment during the third year was smaller under female mayors compared to male mayors.

Figure Q.2 shows RD estimates of the effect of female and male mayors on the gender gap in recruitment, split by the year in the term. This figure suggests that the reduction in the gender gap under female mayors is concentrated during the third year in the term, when new members are joining

[11] Beginning in 2016, candidates were required to be affiliated with their party for only six months prior to the election.

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FIGURE Q.1. Women's Recruitment and the Gender Gap in Recruitment by Month in the Mayoral Term

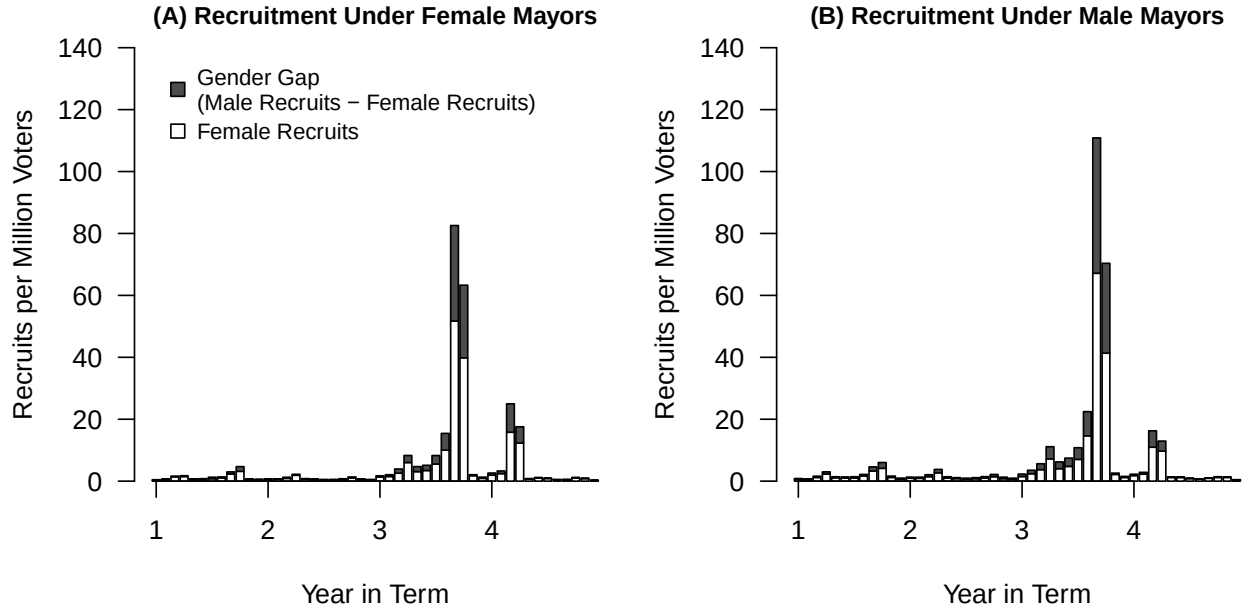
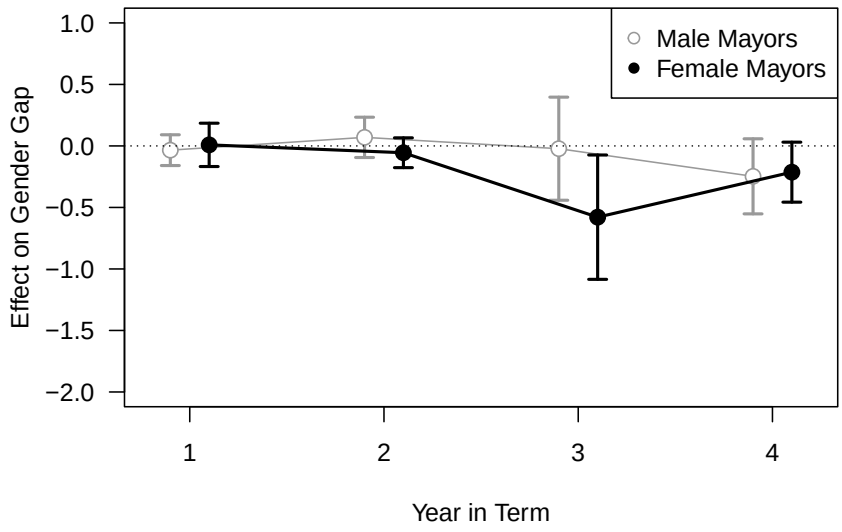


FIGURE Q.2. Effect of Incumbency on the Gender Gap, by Year in the Term



Note: Additional details on the model specification and results can be found in Table S7 of the Supplementary Appendix in this article's Dataverse files.

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the party at the fastest rate for the purpose of contesting office under the party label or voting in the next municipal party convention. While the effect of female mayors on the gender gap was close to zero and statistically insignificant during years 1,2, and 4, the effect was negative, substantively large, and statistically significant during the third year. Although this pattern does not entirely preclude supply-side explanations for party membership recruitment such as the role model effects of seeing a woman in office (Wolbrecht and Campbell 2007), the fact that the effect is concentrated during the third year of the term is consistent with our expectation that internal competition within Brazilian parties is a major driver of membership recruitment. By recruiting more women into the party during the run-up to the next nominating convention, a female incumbent may increase her chances of attaining renomination or influencing the nominations of her successor or down-ballot candidates.

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