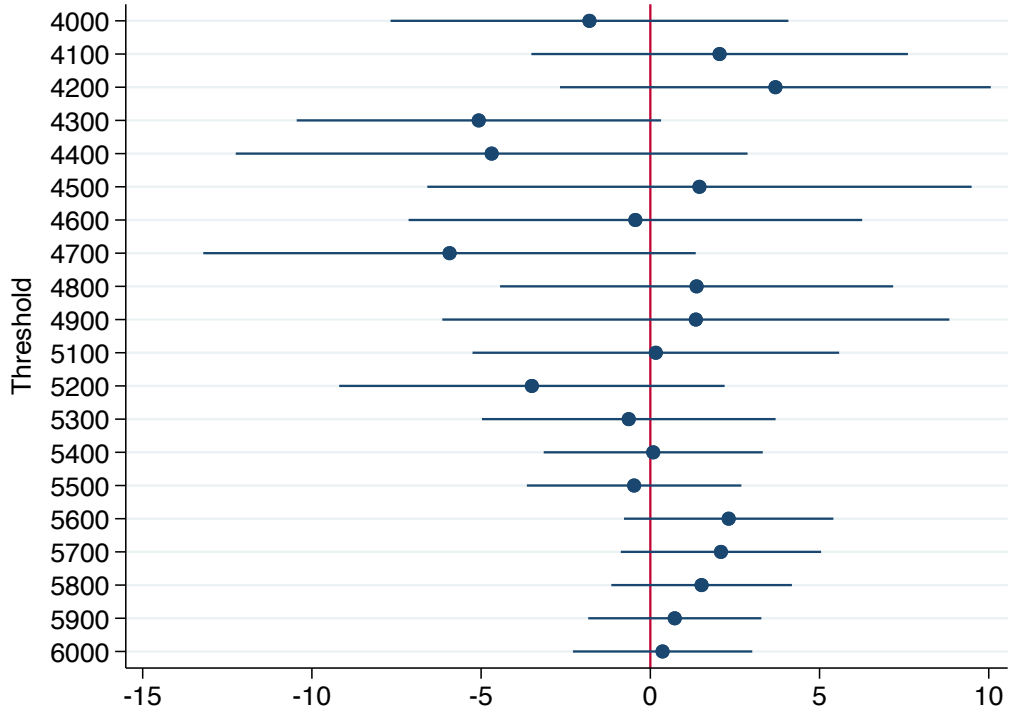
Appendix A: Placebo tests

In these tests we re-run the first stage of the analysis only with different thresholds. Following the advice in Cattaneo et al. (2019), we restrain the sample to localities with populations under 5,000 for thresholds under 5,000 and localities with populations over 5,000 for thresholds over 5,000. The point estimates together with 95% confidence bars are graphed in Figure A1.

Figure A1: First stage estimates for various thresholds



Appendix B: Sensitivity of Main Estimates to Bandwidth Choice

In this section we re-run the main two-stage model in the paper, but instead of using a data-driven bandwidth, we use multiple bandwidths between 1,000 and 3,000 in increments of 200.

Table A1: The effect of female candidacy rates on the gendered participation gap- local estimates with various bandwidths

Bandwidth	Coefficient	Confidence intervals (95%)		N
1000				
1st stage	7.374	4.460	10.289	2,011
2nd stage	-.025	-.037	-.013	2,011
1200				
1st stage	7.100	4.420	9.780	2,419
2nd stage	-.024	-.035	-.013	2,419
1400				
1st stage	5.906	3.448	8.365	2,851
2nd stage	-.024	-.034	-.014	2,851
1600				
1st stage	6.532	4.283	8.780	3,251
2nd stage	-.024	-.033	-.014	3,251
1800				
1st stage	6.972	4.839	9.104	3,727
2nd stage	-.020	-.029	-.011	3,727
2000				
1st stage	6.523	4.520	8.525	4,253
2nd stage	-.018	-.026	-.009	4,253
2200				
1st stage	6.254	4.376	8.133	4,760
2nd stage	-.018	-.026	-.009	4,760
2400				
1st stage	6.710	4.915	8.504	5,243
2nd stage	-.017	-.025	-.009	5,243
2600				
1st stage	6.607	4.890	8.324	5,817
2nd stage	-.019	-.026	-.011	5,817
2800				
1st stage	6.596	4.951	8.242	6,448
2nd stage	-.017	-.025	-.010	6,448
3000				
1st stage	6.368	4.791	7.943	7,099
2nd stage	-.019	-.026	-.011	7,099

Appendix C: Sensitivity of Main Estimates to Donut Hole Bandwidth

In this section we conduct analyses similar to those in Appendix B, only here we narrow the bandwidth by removing observations lying at designated radii from the cutoff (5,000). The main benefit of this approach is that it assesses how dependent the main results are to extrapolations near the threshold.

Table A2: The effect of female candidacy rates on the gendered participation gap- local estimates with donut hole bandwidths

Radius	Coefficient	Confidence intervals (95%)		N
0				
1st stage	6.430	4.613	8.263	4922
2nd stage	-.018	-.026	-.010	4922
100				
1st stage	7.04	3.940	10.146	2357
2nd stage	-.027	-.041	-.014	2357
200				
1st stage	6.163	2.156	9.811	2082
2nd stage	-.026	-.040	-.012	2082
300				
1st stage	4.308	-.027	8.644	1999
2nd stage	-.024	-.039	-.010	1999
400				
1st stage	2.622	-1.740	6.984	2210
2nd stage	-.024	-.038	-.010	2210
500				
1st stage	4.803	.984	8.623	2981
2nd stage	-.024	-.039	-.010	2981

Note: The bandwidth has been calculated separately for each analysis using the data-driven algorithm proposed in Calonico et al. (2014); the number of observations is a function of the bandwidths.

Appendix D: The Application of the Gender Quota in Practice

In the paper we described the Law 215 of 2012 and its potential consequences. If applied in each locality over 5,000, we should see no party list with males representing more than 2/3 of the candidates. In table A2 we report the percent of lists that do NOT satisfy this condition for localities above and below 5,000, before and after reform. The data reveal that after reform only 0.43% of the lists in the treatment category did not follow the new regulations. Interestingly, there seems to be a learning process, with fewer defections from the rule in later post-reform elections.

Thus, when we restrict our analysis to the first elections after the reform the non-compliance rate in treatment localities is 0.53 (out of 14,597 observations); in the second elections the non-compliance rate drops to 0.28% (8492 observations), while in the third elections all lists in localities above 5,000 fulfil the gender quota (430 observations). This "learning process" is likely driven by repercussions from the authorities.

Table A3: The percent of party lists that do not meet the 1/3 gender quota

	Before reform	**After reform**
<5,000	54.20%	30.98%
>5,000	59.79%	0.43%

Appendix E: Descriptive Statistics

Table A4: Descriptive statistics, localities under 15,000

	2008-2020				2008-2012				2013-2020			
Localities												
Full sample	6,898				6,756				6,732			
<5,000	4,849				4,826				4,683			
>5,000	2,049				1,930				2,049			
Localities/elections												
Full sample	19,129				6,993				12,136			
<5,000	13,513				4,963				8,550			
>5,000	5,616				2,030				3,586			
	Mean	**S.D.**	**Min.**	**Max.**	**Mean**	**S.D.**	**Min.**	**Max.**	**Mean**	**S.D.**	**Min.**	**Max.**
% women on ballot												
Full sample	31.47	11.07	0	100	26.13	9.78	0	81.82	34.55	10.58	0	100
<5,000	30.36	11.10	0	100	26.44	10.10	0	81.82	32.63	11.02	0	100
>5,000	35.30	10.06	0	66.66	25.02	8.49	0	66.66	41.11	4.90	27.27	66.66
Gender participation gap												
Full sample	1.63	3.30	-26.32	39.02	1.70	3.33	-15.95	39.02	1.58	3.28	-26.32	32.95
<5,000	1.72	3.61	-26.32	39.02	1.81	3.62	-15.95	39.02	1.67	3.60	-26.32	32.95
>5,000	1.29	1.83	-8.98	13.89	1.33	1.87	-8.46	13.89	1.27	1.80	-8.98	8.37
Elections per locality												
Full sample	2.66	.64	1	6	1.02	.15	1	2	2.68	.62	1	6
<5,000	2.66	.64	1	4	1.03	.17	1	2	2.68	.62	1	4
>5,000	2.66	.62	1	6	1.00	0	1	1	2.68	.61	1	6

Appendix F. Ancillary Analyses: The Role of Incumbency and the Effect over Time

In this section we provide two tests on the heterogeneity of the effects looking at whether the main effect is stronger (1) for incumbent lists; (2) later in the time series.

The expectation that the effect on gendered participation gap is higher in localities where the increase in women's candidacy rates comes primarily from party lists deemed capable of influencing the post-election policy agenda follows from the instrumental motivations for higher female participation rates. We take advantage of the fact that the electoral rules automatically allocate the mayorship and 2/3 of the local council seats to the party list that obtains a plurality of votes in localities under 15,000 population. Party lists expected to win a plurality of votes are also expected to influence policy, because they will control the mayorship and such a large proportion of council seats. To distinguish the lists expected to win elections from the other lists, we restrain our analysis to localities/election in which the party list of the incumbent mayor is running for re-election. We assume that voters in these localities see incumbent lists as the favourite to win another term, an assumption supported by evidence. In the presence of instrumental considerations, an increase in women candidates on incumbent party lists should have a stronger effect than an increase in women on non-incumbent party lists. To test this expectation, we run the two-stage linear model with two separate instrumental variables measuring the percent of female candidates on incumbent and non-incumbent party lists respectively. The results reported in table 5 suggest a difference between the two analyses as was hypothesised. However, given that the confidence intervals for the estimates with the two instrumental variables overlap significantly, one cannot derive any definitive conclusions about different effects.

Table A5. The effect of female candidates on the gendered participation gap for incumbent and non-incumbent lists

	First stage analysis					
	Incumbent lists			**Non-incumbent lists**		
The effect of electoral reform on the	Beta	p-value	N	Beta	p-value	N
percent of female candidates	8.409	.006	1,092	8.454	.001	1,092
	Second stage analysis					
	Incumbent lists			**Non-incumbent lists**		
The effect of instrumented percent of female candidates on participation gap	Beta	p-value	N	Beta	p-value	N
	-.012	.000	1,092	-.010	.000	1,092

Note: Samples only include localities/elections where there is an incumbent party list running.

Additionally, we want to know if the effect grows stronger in time. In appendix D we suggested that there is a learning process in the application of the new gender quota, whereby fewer party lists disobey the new rules as the time goes by. Thus, the non-compliance among treated localities decreases in the second and third elections after the reform. Here we test whether the main effect on gender gap participation follows a similar trajectory. We thus re-run the main analyses in the paper (Table 4) keeping the same specifications, but we reduce the post-reform observations to the first elections (first analysis) and second and third elections combined (second analysis).[1] The results in tables A6 and A7 suggest that both the effect of the quota on female candidacies (first stage) and the effect of female candidacies on the gender participation gap (second stage) grow stronger in the subsequent post-reform election. The results however should be taken with a grain of salt, as the confidence intervals in the two sets of analyses overlap.

[1] We decide to combine second and third elections as opposed to have separate analyses with each type because third post-reform elections are few and thus we would not be able to get reliable estimates if we limited the post-reform observations to these elections only (see Appendix D above).

Table A6: The effect of female candidates on gender gap participation- First post-reform elections

		First stage analysis		
The effect of electoral reform on the	Beta	St. error	p-value	N
percent of female candidates	5.810	1.390	.000	1,927
		Second stage analysis		
The effect of instrumented percent of	Beta	St. error	p-value	N
female candidates on participation gap	-.021	.006	.000	1,927

Table A7: The effect of female candidates on gender gap participation- Second and third post-reform elections

		First stage analysis		
The effect of electoral reform on the	Beta	St. error	p-value	N
percent of female candidates	7.581	1.486	.000	1,659
		Second stage analysis		
The effect of instrumented percent of	Beta	St. error	p-value	N[a]
female candidates on participation gap	-.028	.006	.000	1,660

Appendix G. The Relationship between Women Participation and the Election of Women to Local Councils

In the paper we provide evidence of a causal relationship between the presence of women on the ballot and the reduction of the gender gap in participation in Italy. Our analyses also suggest that this reduction is driven primarily by higher participation rates by women. The ultimate implication of these findings is that higher participation by women will lead to more women elected to the local councils. To test this implication we collected data on the gender distribution of councillors in all Italian localities between 2008 and 2020 and constructed a measurement of *women representation* as percentage of all councillors.

We then regress *women representation* on *women participation rates*. Our OLS analysis includes locality fixed effects. The analysis shows a strong correlation between higher participation rates by women and the election of women to local councils. A one percentage point increase in women participation correlates with a .1 increase in the percentage of women elected to the local council.

Table A8: The effect of Women Participation on the Election of Women to Italian Local Councils

	OLS Estimates			
	Beta	St. error	p-value	N
Women Participation	.104	.026	.000	19,116

Note: The analysis includes locality fixed effects.

Appendix H. Accounting for the Potential Effect of Gender Quotas in Local Committees

In the paper we tried hard to insulate the effect of the gender quota from any other additional rules that apply to localities above 5,000. Here we address the potential effect of a rule that sets additional gender quotas for local committees (*Giunta comunale)* that does applies to population over 3,000 rather than 5,000. The local committees are the executive arm of the Italian commune and consist of members (assessori) nominated by the mayor. Law 56 of 2014 requires that all local committees in localities above 3,000 contain 40% women. One may argue that having more women in an unelected committee may encourage female participation in local elections independent of the share of women on the ballot. The data driven optimal bandwidth we used in the main analysis does not include the 3,000 threshold, so the analyses should not be affected by this additional rule. To further eliminate doubt, we re-calculate the optimal bandwidth with a reduced sample of localities between 3,000 and 7,000. The new optimal bandwidth is 547, and the results of the two-stage analysis are reported below in table A9. The coefficients for both the first and second stage are very similar to those reported in our main analysis.

Table A9. The effect of female candidacy rates on the gendered participation gap- Localities between 3,000 and 7,000 inhabitants.

		First stage analysis		
The effect of electoral reform on the percent of female candidates	Beta 7.216	St. error 2.071	p-value .001	N[a] 1,099
		Second stage analysis		
The effect of instrumented percent of female candidates on participation gap	Beta -.026	St. error .010	p-value .008	N[a] 1,099

[a] The number of observations reflects the sample within the 547 bandwidth that has been selected using the algorithm proposed in Calonico et al. (2014).

References:

Cattaneo, Matias D., Nicolás Idrobo, and Rocío Titiunik. *A practical introduction to regression discontinuity designs: Foundations*. Cambridge University Press, 2019.