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Approach with Italian Data

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# Female Mayors and Corruption Scandals: an RDD Approach with Italian Data 

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#### Abstract

This paper investigates the influence of mayors' gender on corruption scandals and investigations in Italy. Utilizing a novel dataset, I apply a regression discontinuity design to mixed-gender close elections, following the methodology outlined by Lee (2008). The results indicate that mayors' gender does not exhibit a statistically significant impact on the occurrence of corruption scandals or investigations at the local level. These findings are consistent across both the global/parametric and local/non-parametric approaches and remain robust to variations in polynomial orders and bandwidths. Tests for continuity and treatment-control balance support the validity of the identification strategy. Additionally, a series of robustness checks, including different bandwidths, corruption measures, and considerations of early mayoral termination, along with heterogeneity checks based on population and geographical location (North/South), further reinforce the reliability of the results.


JEL Codes: J16, P16, D72, D73
Keywords: corruption, crime, gender, politics, elections

[^0]
## 1 Introduction

In many countries, women are under-represented in political institutions, with women on average, representing only $26,4 \%$ of (national) parliaments in $2022 .{ }^{1}$ While female political participation has steadily increased in the last decades, there are still many differences at country level. According to the Inter-Parliamentary Union, female political participation is mostly concentrated in Americas and Europe, while the area with the lowest level of female political participation is the Middle East. The presence of female politicians not only legitimize political institutions but also affect their decisions and behaviours, especially in developing countries. For example, Chattopadhyay and Duflo (2004) evaluate the effects of leaders' gender in Village Councils in India on public goods spending. The authors show that, when there are women in leadership positions, there is an increase in spending towards public goods more connected with female necessities. Furthermore, politicians' gender seem to affect not only how public money is spent but also corruption levels. Brollo and Troiano (2016) find that female-led municipalities in Brazil have less corruption with respect to male-led municipalities. Similarly, Beaman et al. (2009), Swamy et al. (2001) and Dollar et al. (2001) indicate that female politicians have a negative effect on corruption. Moreover, previous works indicate that the impact of politics' gender varies significantly between developing and developed countries. For example, Ferreira and Gyourko (2014) study the US and suggest that mayors' gender has no effect on local government size, composition of municipal spending, employment and crime rates.

In this work, I explore the impact of mayors' gender on corruption in a developed country, Italy. In particular, I evaluate if female-led municipalities are more likely to be involved in corruption scandals and/or to be investigated. I first construct a novel dataset using information from three different sources: ANSA (Associated Press National Agency) ${ }^{2}$, one of the major Italian press agency, ISTAT (Italian National Institute of Statistics) ${ }^{3}$ and the Ministry of Interior (for a more detailed description, see Section 2). This dataset includes local elections between 1993 and 1996, information about the mayoral candidates, about the municipalities and about the number of investigations that took place during the mayors' tenure. Second, I implement a regression discontinuity design on mixed-gender close races, following the previous literature Lee (2008). My estimates indicate that the presence of female mayors have no (statistically) significant effects on the outcome variables. These findings are robust to different approaches (global/parametric and local/non parametric), different orders of polynomials and different bandwidths. I test the continuity of my running variable and the presence of possible imbalance between control and treatment groups. The results confirm the robustness of my identification strategy. Additionally, a series of robustness checks, including different bandwidths, corruption measures, and considerations of early mayoral termination, along with heterogeneity checks based on population and geographical location (North/South), further reinforce the reliability of the results.

This work relies on the previous works in many ways. First, it is connected to the research investigating the relationship between gender and crime. Dollar et al. (2001) show a negative link between women's participation in government and perceived corruption. Similarly, Swamy et al. (2001) indicate that countries with more women in national parliaments, more female ministers/high-level bureaucrats, and with higher female participation in the labour force have

[^1]lower levels of (perceived) corruption. Esarey and Chirillo (2013) find that the negative link between women and scandals is stronger if there is a higher risk of being detected and punished, as in democracies. However, some authors claim that these results can be misleading. According to Sung (2003), the relationship between gender and corruption is influenced by third factors such as liberal democracy, freedom of the press and the role of the judiciary system and it cannot be interpret as causal.

Second, I rely on the literature exploring the impact of female politicians. For example, Chattopadhyay and Duflo (2004) indicate that, in India, female leaders of Village Councils increase investments in infrastructures more relevant for women. Similarly, Baltrunaite et al. (2014) evaluates the effects of gender quotas in candidates' lists on the quality of elected politicians in Italy. The authors show that gender quotas increase the quality of elected politicians. Gagliarducci and Paserman (2011) study the impact of mayors' gender on early termination in local government and the authors find that female-led municipalities are more likely to an early termination of the legislature with respect to male-led municipalities. Finally, Ferreira and Gyourko (2014) suggest that in the US there is no effect of mayors' gender on the size of local governments, composition of municipal spending, employment or on crime rates. In line with Broockman (2014), the authors suggest that variations in institutional and cultural contexts can help explain why their findings are different from the previous literature

Third, this article is also related with the works evaluating the impact of politicians gender on corruption. Brollo and Troiano (2016) find that female-led municipalities in Brazil are characterized by lower levels of corruption with respect to male-led municipalities. Another example is Decarolis et al. (2022), where the authors investigate the relationship between gender and procurement officials. They show that female procurement officials in Italy are less likely than their male counterparts to be investigated for corruption.

My paper contributes to the existing literature and the on-going debate on the impact of female politicians. I explore the relationship between female politicians and corruption in a developed country and my identification strategy ensures the causal interpretation of my findings. Moreover, to implement my analysis, I construct a novel and unique dataset, with corruption and investigation data at local level.

The remainder of this paper is constructed as follows: in Section 2, I present the dataset; in Section 3 and Section 4 I present the empirical strategy and the results. In Sections 5 and 6 I implement a series of robustness and heterogeneity checks and in Section 7 I present my conclusions.

## 2 Data

### 2.1 Corruption scandals and investigations data

Italian data about corruption and investigations at local level are complicated to acquire, with no (freely) available dataset about corruption, like Brazilian audits (e.g., Brollo and Troiano (2016)). I overcome this problem by rely on the information provided by the press (e.g. Giommoni (2021) and Glaeser and Goldin (2004)). This approach might have some shortcomings, such as the potential presence of political, ideological and geographical biases in the media coverage (e.g. Puglisi and Snyder Jr (2011)). To mitigate this concern, I rely on ANSA, the main Italian press agency, whose national and global profile eliminates (or, at least, reduces) the possible presence of ideological and
geographical bias. ${ }^{4}$
I collect the data, following the technique proposed by Glaeser and Goldin (2004). First, I screen the articles/press releases and (automatically) search for the word "corruzione" (corruption) combined with municipalities' names. ${ }^{5}$ I define the results from this search as Corruption screen. I also (automatically) search for the words "indagato" (investigated), "sindaco" (mayor) combined with the municipalities' names. The results from this second search are called Mayor screen. In Figure 1, I plot my findings from Corruption screen and Mayor screen.

## [FIGURE 1 APPROXIMATELY HERE]

As expected, the data shows a peak of corruption articles between 1992 and 1994 during the Mani Pulite (Clean Hands) investigation, one of the biggest corruption investigations in Italian history with more than 400 city and town councils dissolved for corruption charges. ${ }^{6}$

From Corruption screen, I generate two variables: Corruption and Any Corruption. The first is a count variable based on the number of corruption articles in the municipality the mayoral term. ${ }^{7}$ The second is a dummy variable, equal to one if there is at least one article/press release in the Corruption Screen for the analysed municipality in the mayors' terms. ${ }^{8}$ From Mayor screen, I generate Any Investigation, a dummy equal to one if there is at least one article/press release in the Mayor Screen for the analysed municipality in the mayors' terms. ${ }^{9}$

### 2.2 Electoral Data and Additional data

As mentioned in Section 1, I use (local) election data from 1993 to 1996. ${ }^{10}$ From the Ministry of Interior's Electoral Archive I extract the share of votes, the number of voters and the names and surnames of all mayoral candidates. I matched the candidates' names and surnames with the Anagrafe degli Amministratori locali e Regionali (Census of Local and Regional Administrators) ${ }^{11}$ and obtain the following variables: gender, age, education, place of birth, party, employment status.

I also include a series of variables about municipalities characteristics from ISTAT: employment rate, old-age ratio (ratio between people above 65 and people below 14), population, ratio of college education (number of people with a college degree or more over the population) and firms per capita (number of firms in the municipality over the population). Population and old-age ratio are directly taken from ISTAT dataset while the variables for employment rate, the ratio of college education and firms per capita are extracted from the 1991 Italian Population Housing Census ${ }^{12}$ and from the 1991 Italian Industry Services Census. ${ }^{1314}$ I also generate four macro-regions

[^2]dummies: South (Abruzzi, Basilicata, Calabria, Campania, Molise, Puglia, Sardegna, Sicilia), Centre (Emilia-Romagna, Lazio, Marche, Umbria, Toscana), North-East (Friuli-Venezia Giulia, Veneto), North-West (Lombardia, Liguria, Piemonte). I exclude from sample municipalities from Trentino-Alto Adige and Valle d'Aosta, due to some peculiarity in the data collection.

### 2.3 Sample Selection and Descriptive Statistics

As mentioned in Section 1, my sample is composed by all municipalities that have a mixed-gender elections 1993 and 1996 (for more details, see Section 3). ${ }^{15}$ A possible shortcoming is that my mixed-gender process sample might be not representative. In Table 1, I compare the main characteristics of my sample to the general sample of elections between 1993 and 1996.

## [TABLE 1 APPROXIMATELY HERE]

Results in Table 1 show that there are no (statistically significant) differences in North-East, Centre, population and old-age ratio. On the contrary, municipalities in the sample tend to be in the North-West area of Italy (and not in the South), with higher employment rate and firms per capita, a higher average level of education and turnover. Furthermore, the mayors elected from mixed-gender races are more likely to be centre-left, more educated, younger, to be born outside the province more frequently and they are less likely that they were previously employed. Finally, mayors in the mixed-gender races tend to be investigated less frequently, while there seems to be no difference in corruption cases per municipalities between the sample and the entire sample municipalities.

The (detailed) summary statistics of my sample are presented in Table 2.
[TABLE 2 APPROXIMATELY HERE]

## 3 Identification Strategy

In this Section, I describe in more details my identification strategy. A very naive way to answer my research question is to use an OLS regression, as shown in Eq. 1.

$$
\begin{equation*}
y_{i}=\alpha+\beta_{1} \text { Female }_{i}+\epsilon_{i}, \tag{1}
\end{equation*}
$$

where $y_{i}$ are the outcomes variables in municipality $i, F_{\text {emale }}^{i}$ is a dummy for the mayors' gender in municipality $i$. However, the presence of female mayors is not randomly assigned across different municipalities. Elements, such as cultural cultural attitudes and preferences, could influence both the outcomes and the presence of a female mayor and/or female mayoral candidates, as suggested by Brollo and Troiano (2016). ${ }^{16}$ The (possible) existence of third factors not included in Eq 1 can create an endogeneity problem and $\beta_{1}$ cannot have a causal interpretation.

[^3]To overcome possible interpretation, I follow Lee (2008) and I implement a regression discontinuity design with mixed-gender elections. I define the running variable as the margin of victory defined as shown in Eq. 2. ${ }^{17}$

$$
\begin{equation*}
M V_{i}=\frac{\text { ShareVotesFemaleCandidates }- \text { ShareVotesMaleCandidates }}{\text { ShareVotesFirstTwoCandidates }} \tag{2}
\end{equation*}
$$

where $M V_{i}$ is the margin of victory, ShareVotesFemaleCandidates is the share of votes towards female candidates, ShareVotesMaleCandidates is the share of votes towards male candidates and ShareVotesFirstTwoCandidates is the share of votes towards the first two candidates. This measure is positive when a woman wins the election against a male candidate and it is negative when she loses against a male candidate. Given the Italian multi-party system, I divide the margin of victory by the shares of the first and the second candidate in the decisive ballot (e.g. Gagliarducci and Paserman (2011)). ${ }^{18}$ The main regression equation is as follows:

$$
\begin{equation*}
y_{i}=\alpha+\beta_{1} \text { Female }_{i}+\sum_{p=1}^{d} \gamma_{p} M V_{i}^{p}+\sum_{p=1}^{d} \omega_{p} M V_{i}^{p} \text { Female }_{i}+\epsilon_{i}, d=1,2,3 \tag{3}
\end{equation*}
$$

where $y_{i, t}$ are the outcomes of interests in municipality $i$, Female $_{i}$ is a dummy for the mayors' gender in municipality $i, M V_{i}$ is the margin of victory.

## 4 Results

In this Section, I explore the effect of the mayors' gender on corruption scandals and investigations in mixed-gender races. In Section 4.1, I implement a series of OLS regressions. In Section 4.2, I implement a regression discontinuity design around the threshold. In particular, I, first, graphically investigate the presence of a jump around the threshold (Section 4.2.1). Second, I estimate my effect with global/parametric approach and local/non parametric approach (Section 4.2.2). Third, in Sections 4.2.3 and 4.2.4, I control for the existence of some imbalance between treatment and control groups.

### 4.1 OLS regressions

## [TABLE 3 APPROXIMATELY HERE]

In Table 3 the findings for the OLS regressions are presented. ${ }^{19}$ In Columns (1)-(4) the coefficients for female mayors with respect to Corruption and Any Corruption are non-significant. These results hold both in the mixed-gender sample and in the mixed-gender sample with only two candidates, with and without controls. However, the findings for Any Investigated are slightly different. In the mixed-gender sample, the coefficients are negative and statistically significant (Columns (5)-(6)). The significance disappears when I evaluate this relationship in the two candidates sample. A possible issue with these coefficients is that using a linear probability model with a dummy as dependent variables is not always the best case.

[^4]To conclude, although these findings do not have a causal interpretation, they still give us some (preliminary) evidences about the relationship between mayors' gender and corruption/investigations. They, overall, indicate that there relationship is not (statistically) significant for the variables extracted from the Corruption Screen. On the other hand, they suggest some evidence of a negative relationship for Any investigated, although they do not seem to be particularly robust.

### 4.2 RDD analysis

### 4.2.1 Graphical investigation

As mentioned above, I first implement a visual investigation about the existence of discontinuity around my threshold. For this purpose, I plot the binned average (separated on either side of the sample) of the probability of outcomes variables: Corruption, Any Corruption and Any Investigated. Findings are plotted in Figure 2.

## [FIGURE 2 APPROXIMATELY HERE]

Figure 2 shows that, while there some small jumps present, they are not statistically significant. The results suggest that the relationship between the margin victory and corruption/investigated is non-statistically significant. These findings are coherent with the preliminary OLS results presented in Table 3.

### 4.2.2 Regressions discontinuity designs results

In this Section, I formally evaluate the results for regressions discontinuity design using different approaches, as suggested by Jacob et al. (2012). In the Global/parametric approach, I use a set of polynomials of different orders ( 1 to 2 ) with an interaction term between the running variable and the mayor gender. In the Local/non parametric approach, I implement local linear regressions using optimal bandwidths, computed with Calonico et al. (2017). I present the results for the Global/parametric approach in Panel A of Table 4 while those for the Local/non parametric approach are presented in Panel b of Table 4.

## [TABLE 4 APPROXIMATELY HERE]

The results presented in Table 4 are extremely interesting. Both in Panel A and B, I find that coefficients are non-statistically significant. In Panel A of Table 4, the coefficients remain nonstatistically significant for all outcome variables and for all different order polynomials and even after the inclusions of covariates (Columns (2) and (4)). There is only one (slightly) significant coefficient in Column (5) for Female mayor (1st order pol.) but it disappears when controls are included. Similarly, the findings in Panel B of Table 3 are all non-statistically significant, for both samples (mixed-gender and mixed-gender with two candidates) and with and without controls. ${ }^{20}$

Overall, my results in Figure 2, Tables 3 and 4 indicate no effect of mayors' gender on the probability of corruption and being investigated. As indicated in Section 1, there is some literature about the presence of a negative relationship between women in office and corruption, such as Brollo and Troiano (2016). However, the results are not totally unexpected, given the differences between developed and developing countries. For example, Ferreira and Gyourko (2014) have non-significant

[^5]findings for the impact of mayors' gender on local policies in the US, similar to the results shown above. The differences between developed and developing countries could play a role in my results as proposed by Broockman (2014).

A second possible explanation could rely on the complexity of bureaucracy in Italian municipalities. Since the reform in 1993, the mayor is directly elected but this does not ensure mayors' ability to control the municipality. It might be difficult for mayors to control the staff, officials and bureaucrats, who usually stay in office longer than mayors. Female mayors can be considered as a façade of the municipalities and they might not always have the power to control the entire institution and bring actual changes within the system.

### 4.2.3 Continuity

The underlying identification assumption in RDD models is the continuity of density function around the threshold. If there were some elements of discontinuity, it is possible to argue that the running variable is being manipulated. This can undermine the assumption of local randomization and, consequently, the validity of the results. Figure 3 shows the frequency of the margin of victory in the mixed-gender races. Although men are more likely to win when running against women, there does not seem to be a huge jump around the threshold, although some noise is present.

## [FIGURE 3 APPROXIMATELY HERE]

To further check the absence of statistically significant jumps in the running variable, and to ensure that the variation is just noise, I implement a formal density test based on McCrary (2008). The graphic representation is displayed in Figure 4. The result of the test further rejects the presence of a statistical jump at our threshold in the running variable (the estimated log-difference is -.2033 with a standard error of .1814 ). Figure 3 and 4 ensure the continuity of the running variable used in Tables 4.

## [FIGURE 4 APPROXIMATELY HERE]

### 4.2.4 Covariates

As suggested by Baskaran and Hessami (2018), one of the most important step to validate a regression discontinuity design is to analyse the possible presence of an imbalance between femaleled municipalities and male-led municipalities in the sample. I implement the checks in two different ways. First, I evaluate a series of formal balance tests and, second, I implement a visual inspection. In Table 5, I present the results for municipalities characteristics.

## [TABLE 5 APPROXIMATELY HERE]

The municipalities characteristics, such as population or employment rate, are well balanced between the control and the treatment groups. Furthermore, there are no general statistically significant differences between the different bandwidth specifications. There are only two (slightly) significant coefficients, College rate in Columns (1) and (3). The corresponding graphs are in Figure 5.
[FIGURE 5 APPROXIMATELY HERE]

Figure 5 shows that there is a convergence around the cut-off for municipality characteristics, also for College rate. This evidence supports my assumption of local randomization produced by tight elections. I replicate the same exercise of mayoral characteristics and the formal tests are presented in Table 6.

## [TABLE 6 APPROXIMATELY HERE]

In Table 6, I find some differences in the mayor's characteristics between men and women in line with Gagliarducci and Paserman, 2011. Women elected tend to be younger, are more likely to belong to a left-wing and right-wing within the two candidates sample and are less likely to be born in the provinces. The main implication is that these covariates might be a proxy of some unobservable characteristics that can influence the main results. I replicate the exercise above and I plot the graphic representation in Figure 6.

## [FIGURE 6 APPROXIMATELY HERE]

I test the previous results in Figure 6 and the women closer to the threshold are more similar to the men, with respect to those further away from the threshold. Moreover, as suggested Klaauw (2008), these discontinuities are relevant only if these covariates are related to the outcome of interests. As suggested by Table 4, when I adjust my results for the presence of covariates, including mayors' characteristics, there are no changes in significance in the coefficients. Finally, the results are similar to those already present in the literature about RDD in a mixed-gender sample in Italy Gagliarducci and Paserman (2011). To conclude, I consider these evidence as supportive to the robustness of my identification strategy and they confirm the reliability of my results of Table 4.

## 5 Robustness checks

### 5.1 Robustness checks: Different Optimal Bandwidth

In this Section, I present the robustness checks on the non-parametric estimations presented in Table 4. In particular, I evaluate the sensitivity of my estimated parameters to the choice of the bandwidths. In Table 7, I consider alternative bandwidths. First, I implement the analysis with twice the optimal bandwidths estimated by Calonico et al. (2017). Second, the previous method to select the optimal bandwidth is a "plug-in" method. Another type of methodology is called the "cross-validation" method. ${ }^{21}$ An example of this methodology is proposed by Ludwig and Miller (2007) and, in Table 7, I replicate my analysis using this methodology to compute the optimal bandwidth.

## [TABLE 7 APPROXIMATELY HERE]

Overall, the results in Table 7 are non statistically significant, in line with the findings of Table 4. There is one exception in Column (6), which is slightly significant but the result does not seem to be very robust.

[^6]
### 5.2 Different Corruption Measures

Corruption is challenging to measure, especially through newspaper articles, and there's a possibility that the measure may not precisely capture the timing of the scandal. This concern is partially alleviated by the dataset's connection with the "Clean Hands" scandals in Italy when attention towards corruption was exceptionally high. However, it cannot be ruled out that some "time spillover" exists. In the following section, I replicate my analysis using a modified corruption measure from Section 2. In this case, the corruption variable only encompasses the last two years of the mayoral term to minimize potential spillover from previous mayors. The replicated analysis is presented in Table 8.

## [TABLE 8 APPROXIMATELY HERE]

The results in Panel A of Table 7 are generally non-statistically significant, consistent with the findings in Table 4. However, in Panel B of Table 7, there are two exceptions in Columns (2) and (6) where statistical significance is observed, albeit marginally. These exceptions do not appear to be highly robust.

### 5.3 Early Termination

As suggested by Gagliarducci and Paserman (2011), there may be a connection between early termination and the gender of the mayor, and it is plausible that the impact of the mayor's gender on corruption is influenced by municipalities with early terminations. In Table 9, I reproduce the analysis within the subset of municipalities that have not undergone an early termination.

## [TABLE 9 APPROXIMATELY HERE]

In general, the coefficients in Table 9 align with the results presented in Table 4. However, there are two exceptions - one in Column (5) of Panel A and another in Column (2) of Panel B. It's noteworthy that both results are only marginally statistically significant. Interestingly, one exhibits a positive value, while the other demonstrates a negative value, further emphasizing the notion that these findings may not be highly robust.

## 6 Heterogeneity checks

### 6.1 Population

Italian municipalities exhibit considerable heterogeneity in terms of population. In my sample, there are municipalities with fewer than 100 inhabitants and municipalities with more than 100,000 . I replicate my analysis for municipalities with a population lower than 5,000 and higher than 5,000 in Tables 10 and 11, respectively.

## [TABLES 10 AND 11 APPROXIMATELY HERE]

These tables yield intriguing findings. In Table 10, there are only two negative and slightly significant results in Panel A, specifically in Columns (2) and Column (4). However, in Columns (5) and (6) of Panel A in Table 11, there are multiple results that are both positive and statistically significant. It's noteworthy that this significance is absent in the non-parametric approach (Panel B of Table 11), casting doubt on the robustness of the Panel A findings.

One potential explanation could be linked to the methodology used for my dependent variable, Any Investigates, and its scope. Another factor to consider is the relatively small size of the sample. Additionally, significant differences exist in the characteristics of mayoral candidates in small and large municipalities, which might influence the effect under investigation.

While a more in-depth exploration of this dimension is beyond the scope of this paper, it provides a promising foundation for further research.

### 6.2 North vs South

Italian municipalities exhibit significant differences between the North and South, as indicated by extensive literature (e.g., Musolino et al. (2018), Daniele and Marani (2011),Daniele and Malanima (2011), and Acemoglu et al. (2020)). In this section, I replicate my analysis divided between the North and South. Following Musolino et al. (2018), the administrative regions included in the "North" are Piedmont, Lombardy, Veneto, Friuli-Venezia Giulia, Emilia-Romagna, Liguria, Tuscany, Marche, Umbria, and Lazio. ${ }^{22}$ The "South" includes the administrative regions of Abruzzo, Molise, Campania, Apulia, Basilicata, Calabria, Sicily, and Sardinia. The analysis is presented in Tables 12 and 13.

## [TABLES 12 AND 13 APPROXIMATELY HERE]

In general, Tables 12 and 13 exhibit similarities with Table 4. However, there are some exceptions, particularly in Columns (5) and (6) of Panel A. This discrepancy could be linked, as suggested in Section 6.1, to the way in which Any Investigated is measured.

## 7 Final Remarks

In this paper, I analyse the impact of female mayors on whether there are any corruption scandals in the municipality and whether the mayor has been investigated. I implement this analysis on Italian data and I build a novel dataset from three main sources: the main Italian press agency, ANSA, the Italian Ministry of Interior (Electoral Archives) and the Italian National Institute of Statistics (ISTAT).

The precedent literature underlines that OLS estimate is not enough to evaluate a causal link in this framework. I adopt a regression discontinuity design and I use as running variable the margin of victory between women and men. The findings are non-significant, suggesting that female mayors have no impact over my dependant variables.

To validate my identification strategy, I test the continuity of the running variable and the presence of imbalanced in the covariates between the treatment and the control. The findings support the robustness of my identification strategy.

Moreover, I also implement a series of robustness checks based on different bandwidth and different corruption measures. In general, these coefficients are in line with the main results. I also implement a series of heterogeneity checks based on the duration of the mayoral term, population and geographical position. In this paper, I analyze the impact of female mayors on the occurrence of corruption scandals in municipalities and whether the mayor undergoes investigation. This analysis is conducted using Italian data, and I construct a novel dataset from three primary sources: the

[^7]main Italian press agency, ANSA, the Italian Ministry of Interior (Electoral Archives), and the Italian National Institute of Statistics (ISTAT).

Previous literature emphasizes that an OLS estimate is insufficient to evaluate a causal link in this context. Therefore, I employ a regression discontinuity design, using the margin of victory between women and men as the running variable. The findings indicate non-significance, suggesting that female mayors have no discernible impact on my dependent variables.

To validate my identification strategy, I examine the continuity of the running variable and assess covariate imbalances between the treatment and control groups. The results support the robustness of my identification strategy.

Furthermore, I conduct a series of robustness checks using different bandwidths and corruption measures. In general, these coefficients align with the main results. Additionally, I perform heterogeneity checks based on the duration of the mayoral term, population size, and geographical position.

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## Tables

Table 1: Municipality characteristics: Mixed-gender race vs. other races

|  | Other races <br> (1) | Obs <br> (2) | Mixed-gender race <br> (3) | Obs <br> (4) | Diff. <br> (5) | p-value <br> (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Municipality |  |  |  |  |  |  |
| Population | 5238.12 | 4672 | 6128.99 | 1301 | -890.87 | 0.004 |
| North-West | 0.38 | 4672 | 0.45 | 1301 | -0.07 | 0.000 |
| North-East | 0.12 | 4672 | 0.12 | 1301 | -0.01 | 0.490 |
| Centre | 0.20 | 4672 | 0.21 | 1301 | -0.00 | 0.716 |
| South | 0.31 | 4672 | 0.22 | 1301 | 0.09 | 0.000 |
| Employment rate | 84.32 | 4672 | 86.73 | 1301 | -2.41 | 0.000 |
| Old-age ratio | 1.66 | 4672 | 1.60 | 1301 | 0.06 | 0.135 |
| Firms per capita | 6.39 | 4672 | 6.79 | 1301 | -0.40 | 0.000 |
| College rate | 1.72 | 4672 | 1.80 | 1301 | -0.08 | 0.018 |
| Turnover | 0.83 | 4672 | 0.85 | 1301 | -0.02 | 0.000 |
|  |  |  |  |  |  |  |
| Female | 0.01 | 4672 | 0.28 | 1301 | -0.28 | 0.000 |
| Age | 45.85 | 4672 | 44.91 | 1301 | 0.94 | 0.001 |
| Local born | 0.83 | 4672 | 0.78 | 1301 | 0.04 | 0.000 |
| Centre Left | 0.38 | 4672 | 0.41 | 1301 | -0.03 | 0.024 |
| Centre Right | 0.08 | 4672 | 0.09 | 1301 | -0.00 | 0.793 |
| Civic Party | 0.60 | 4672 | 0.59 | 1301 | 0.01 | 0.635 |
| Primary | 0.03 | 4672 | 0.02 | 1301 | 0.01 | 0.015 |
| Lower Secondary | 0.13 | 4672 | 0.12 | 1301 | 0.02 | 0.122 |
| Upper Secondary | 0.43 | 4672 | 0.46 | 1301 | -0.03 | 0.051 |
| College | 0.43 | 4672 | 0.41 | 1301 | 0.01 | 0.477 |
| Previously non-employed | 0.20 | 4672 | 0.23 | 1301 | -0.04 | 0.005 |
| Blue Collar | 0.07 | 4672 | 0.05 | 1301 | 0.02 | 0.006 |
| White Collar | 0.73 | 4672 | 0.72 | 1301 | 0.01 | 0.365 |
| O-utcomes |  |  |  |  |  |  |
| Corruption | 0.73 | 4672 | 0.64 | 1301 | 0.09 | 0.358 |
| Any Corruption | 0.18 | 4672 | 0.17 | 1301 | 0.01 | 0.601 |
| Any Investigated | 0.07 | 4672 | 0.06 | 1301 | 0.01 | 0.180 |

Notes: Mixed-gender race: there is at least a female and a male among the candidates. Other races is the sample of all other elections not included in Mixed-gender race. The averages for the different variables in the specific samples are reported in Column (1) and (3) while the number of observation in Column (2) and (4). The differences between the means are reported in Column (5) and the p-values are reported in Column (6). Population is the number of inhabitants in the municipality in election year. North-East, North-West, South, Centre are dummies about macro-regions as defined in Section 2.2. Employment rate is the employment rate at municipal level; Old-age ratio is the ratio between people above 65 years old and people below 14 years old in the municipality; Firms per capita is the number of firms per capita in the municipality; College rate is the number of people with a college degree or more, divided by the inhabitants of the municipality; Female is a dummy for mayors' gender; Age measures the age of the mayor when elected; Local born indicates if the mayor is born in the same province where he/she is elected; Primary indicates if the mayor holds a primary education degree when elected; Lower secondary indicates if the mayor holds a lower secondary education degree when elected; Upper secondary indicates if the mayor holds a upper secondary education degree when elected; College indicates if the mayor holds a college degree or more when elected; Prev. not empl indicates if mayor was unemployed before the election; Blue Collar indicates if mayor has a blue collar work before the election; White Collar indicates if mayor has a white collar work before the election; Centre Left, Centre Right and Civic Party indicate mayors' political alignment; Corruption is the count variable representing the number of articles speaking of corruption scandals within the municipality during the legislative term; Any Corruption and Any Investigated are equal to 1 if there is at least one article speaking of corruption scandals within the municipality/about investigations of mayors during the legislative term.

Table 2: Summary Statistics

|  | mean | sd | min | max |
| :---: | :---: | :---: | :---: | :---: |
| Dependant Variables: |  |  |  |  |
| Corruption | 0.64 | 2.87 | 0.00 | 35.00 |
| Any Corruption | 0.17 | 0.38 | 0.00 | 1.00 |
| Any Investigated | 0.06 | 0.23 | 0.00 | 1.00 |
|  |  |  |  |  |
| Female mayor | 0.28 | 0.45 | 0.00 | 1.00 |
| Age | 44.91 | 9.37 | 25.00 | 77.00 |
| Local born | 0.78 | 0.41 | 0.00 | 1.00 |
| Centre Right | 0.09 | 0.28 | 0.00 | 1.00 |
| Centre Left | 0.41 | 0.49 | 0.00 | 1.00 |
| Civic Party | 0.59 | 0.49 | 0.00 | 1.00 |
| Primary | 0.02 | 0.13 | 0.00 | 1.00 |
| Lower Secondary | 0.12 | 0.32 | 0.00 | 1.00 |
| Upper Secondary | 0.46 | 0.50 | 0.00 | 1.00 |
| College | 0.41 | 0.49 | 0.00 | 1.00 |
| Prev. not empl. | 0.23 | 0.42 | 0.00 | 1.00 |
| Blue collar(mayor) | 0.05 | 0.22 | 0.00 | 1.00 |
| White collar(mayor) | 0.72 | 0.45 | 0.00 | 1.00 |
|  |  |  |  |  |
| Population | 6129 | 11325 | 53 | 164965 |
| Old-age ratio | 1.60 | 1.23 | 0.18 | 21.71 |
| Employment rate | 86.73 | 10.31 | 41.41 | 98.54 |
| Firms per capita | 6.79 | 2.27 | 1.57 | 23.04 |
| College rate | 1.80 | 1.13 | 0.00 | 14.68 |
| Turnover | 0.85 | 0.07 | 0.42 | 1.00 |
| North-West | 0.45 | 0.50 | 0.00 | 1.00 |
| North-East | 0.12 | 0.33 | 0.00 | 1.00 |
| Centre | 0.21 | 0.40 | 0.00 | 1.00 |
| South | 0.22 | 0.42 | 0.00 | 1.00 |
| Year (Election) | 1993-1996 |  |  |  |
| Observations | 1301 |  |  |  |

Notes: Population is the number of inhabitants in the municipality in election year. North-East, North-West, South, Centre are dummies about macroregions as defined in Section 2.2. Employment rate is the employment rate at municipal level; Old-age ratio is the ratio between people above 65 years old and people below 14 years old in the municipality; Firms per capita is the number of firms per capita in the municipality; College rate is the number of people with a college degree or more, divided by the inhabitants of the municipality; Female is a dummy for mayors' gender; Age measures the age of the mayor when elected; Local born indicates if the mayor is born in the same province where he/she is elected; Primary indicates if the mayor holds a primary education degree when elected; Lower secondary indicates if the mayor holds a lower secondary education degree when elected; Upper secondary indicates if the mayor holds a upper secondary education degree when elected; College indicates if the mayor holds a college degree or more when elected; Prev. not empl indicates if mayor was unemployed before the election; Blue Collar indicates if mayor has a blue collar work before the election; White Collar indicates if mayor has a white collar work before the election; Centre Left, Centre Right and Civic Party indicate mayors' political alignment; Corruption is the count variable representing the number of articles speaking of corruption scandals within the munl6ipality during the legislative term; Any Corruption and Any Investigated are equal to 1 if there is at least one article speaking of corruption scandals within the municipality/about investigations of mayors during the legislative term.

Table 3: OLS Regressions: Mixed-gender races

| dep. var.: | Corruption |  | Any Corruption Any Investigated |  |  |  | Obs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |  |
| Female mayor | -0.089 | -0.077 | 0.000 | -0.004 | -0.031** | -0.030** | 1301 |
|  | (0.16) | (0.17) | (0.02) | (0.02) | (0.01) | (0.01) |  |
|  | [-0.54] | [-0.46] | [0.02] | [-0.18] | [-2.45] | [-2.35] |  |
| Female mayor (Two Cand.) | 0.190 | -0.059 | 0.035 | -0.004 | -0.005 | -0.017 | 504 |
|  | (0.30) | (0.29) | (0.03) | (0.03) | (0.02) | (0.02) |  |
|  | [0.62] | [-0.20] | [1.01] | [-0.12] | [-0.25] | [-0.84] |  |
| Macro-region dummies | No | Yes | No | Yes | No | Yes |  |
| Election dummies | No | Yes | No | Yes | No | Yes |  |
| Mayor controls | No | Yes | No | Yes | No | Yes |  |
| Municipality controls | No | Yes | No | Yes | No | Yes |  |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1$, ${ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. OLS regressions implemented on the mixed-gender races sub-sample. Two Cand. indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 4: RDD results: Mixed-Gender races

| Panel A: dep. var. : |  |  | GLOBAL/PARAMETRIC APPROACH |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Corruption |  |  |  |  | Any Corruption |  |  |  |  | Any Investigated |  |  |  |
|  |  |  | (1) |  | (2) |  | Obs. | (3) |  | 4) | Obs. |  | (5) |  | (6) | Obs. |
| Female mayor (1st order pol.) |  |  | 0.164 |  | 0.047 | 1301 |  | -0.001 |  | 009 | 1301 |  | 0.080** |  | 0.050 | 1301 |
|  |  |  | (0.31) |  | (0.32) |  |  | (0.02) |  | .02) |  |  | (0.04) |  | (0.04) |  |
|  |  |  | [0.54] |  | [0.15] |  |  | [-0.06] |  | [ 39$]$ |  |  | [2.02] |  | [1.35] |  |
| Female mayor, Two candidates (1st order pol.) |  |  | 0.503 |  | 0.350 | 504 |  | -0.027 |  | 031 | 504 |  | 0.048 |  | 0.011 | 504 |
|  |  |  | (0.56) |  | (0.48) |  |  | (0.04) |  | (03) |  |  | (0.05) |  | (0.05) |  |
|  |  |  | [0.90] |  | [0.72] |  |  | [-0.75] |  | .96] |  |  | [0.87] |  | [0.22] |  |
| Female mayor (2nd order pol.) |  |  | 0.140 |  | 0.096 | 1301 |  | -0.016 |  | 024 | 1301 |  | 0.069 |  | 0.040 | 1301 |
|  |  |  | (0.44) |  | (0.44) |  |  | (0.03) |  | .03) |  |  | (0.05) |  | (0.05) |  |
|  |  |  | [0.32] |  | [0.22] | 504 |  | [-0.47] |  | .70] | 504 |  | [1.29] |  | [0.80] |  |
| Female mayor, Two candidates (2nd order pol.) |  |  | $\begin{aligned} & 0.234 \\ & (0.75) \end{aligned}$ | $\begin{aligned} & 0.555 \\ & (0.70) \end{aligned}$ |  |  |  | $\begin{gathered} -0.074 \\ (0.05) \end{gathered}$ |  | 0.057 |  |  | $\begin{gathered} -0.022 \\ (0.07) \end{gathered}$ |  | -0.033 |  |
|  |  |  | .04) |  |  |  | (0.06) |  |  |  |  |  |  |
|  |  |  | [0.31] |  | [0.79] |  |  |  |  | [-1.50] |  | .30] |  |  | [-0.32] |  | [-0.51] | 504 |
| Panel B dep. var. | LOCAL/NON-PARAMETRIC APPROACH |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Corruption |  |  |  | Any Corruption |  |  |  |  |  | Any Investigated |  |  |  |  |  |
|  | (1) | (2) |  | $h$ | Obs. |  | (3) |  | (4) | $h$ | Ob |  | (5) |  | (6) | $h$ | Obs. |
| Female mayor | -0.299 | -1.069* | 14.25 | 362 |  | -0.028 |  | 0.037 | 18.98 |  |  | 0.029 |  | 0.033 | 14.73 | 375 |
|  | (0.69) | (0.64) |  |  |  | (0.05) |  | (0.05) |  |  |  | (0.09) |  | (0.07) |  |  |
|  | [-0.43] | [-1.67] |  |  |  | -0.57] |  | -0.78] |  |  |  | [0.34] |  | 0.46] |  |  |
| Female mayor, Two Candidates | -0.097 | -0.748 | 11.66 | 160 |  | -0.085 |  | -0.103 | 12.10 | 16 |  | -0.049 |  | 0.107 | 10.72 | 145 |
|  | (0.75) | (0.85) |  |  |  | (0.07) |  | (0.06) |  |  |  | (0.10) |  | (0.08) |  |  |
|  | [-0.13] | [-0.88] |  |  |  | -1.21] |  | -1.60] |  |  |  | [-0.47] |  | 1.27] |  |  |
| Macro-region dummies | NO | YES |  |  |  | NO |  | YES |  |  |  | NO |  | YES |  |  |
| Election dummies | NO | YES |  |  |  | NO |  | YES |  |  |  | NO |  | YES |  |  |
| Mayor controls | NO | YES |  |  |  | NO |  | YES |  |  |  | NO |  | YES |  |  |
| Municipality controls | NO | YES |  |  |  | NO |  | YES |  |  |  | NO |  | YES |  |  |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 5: Balancing tests: municipality characteristics

|  | Mixed-Gender |  |  | Mixed-Gender, Two Candidates |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent Variables: |  |  |  |  |  |  |
| Population | -315.624 | -2665.067 | -938.053 | 103.912 | -2906.125 | -583.488 |
|  | (1902.82) | (2177.96) | (1866.88) | (3613.10) | (3845.44) | (3555.68) |
|  | [-0.17] | [-1.22] | [-0.50] | [0.03] | [-0.76] | [-0.16] |
| South | 0.041 | 0.036 | 0.023 | 0.211 | 0.170 | 0.172 |
|  | (0.11) | (0.10) | (0.10) | (0.15) | (0.13) | (0.14) |
|  | [0.37] | [0.37] | [0.23] | [1.45] | [1.35] | [1.26] |
| Centre | -0.126 | -0.119 | -0.127 | -0.192 | -0.182 | -0.180 |
|  | (0.10) | (0.09) | (0.09) | (0.13) | (0.12) | (0.12) |
|  | [-1.32] | [-1.38] | [-1.40] | [-1.48] | [-1.57] | [-1.44] |
| North-East | 0.046 | 0.066 | 0.049 | 0.049 | 0.035 | 0.039 |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.08) | (0.07) |
|  | [0.65] | [1.00] | [0.74] | [0.68] | [0.44] | [0.58] |
| North-West | 0.039 | 0.013 | 0.055 | -0.068 | -0.023 | -0.032 |
|  | (0.12) | (0.10) | (0.11) | (0.16) | (0.14) | (0.15) |
|  | [0.34] | [0.13] | [0.51] | [-0.43] | [-0.17] | [-0.21] |
| Employment rate | 0.205 | 1.458 | 1.044 | -1.609 | 0.401 | -0.724 |
|  | (2.81) | (2.37) | (2.64) | (3.68) | (3.00) | (3.38) |
|  | [0.07] | [0.61] | [0.40] | [-0.44] | [0.13] | [-0.21] |
| Old-age ratio | 0.104 | 0.137 | 0.120 | 0.411 | 0.254 | 0.400 |
|  | (0.37) | (0.29) | (0.34) | (0.69) | (0.54) | (0.64) |
|  | [0.28] | [0.48] | [0.36] | [0.60] | [0.47] | [0.63] |
| Firms per capita | 0.170 | 0.250 | 0.306 | -0.147 | -0.124 | -0.043 |
|  | (0.52) | (0.47) | (0.50) | (0.73) | (0.66) | (0.69) |
|  | [0.32] | [0.53] | [0.61] | [-0.20] | [-0.19] | [-0.06] |
| College rate | 0.578* | 0.339 | 0.583* | 0.393 | 0.164 | 0.516 |
|  | (0.33) | (0.29) | (0.31) | (0.44) | (0.41) | (0.42) |
|  | [1.73] | [1.16] | [1.86] | [0.88] | [0.40] | [1.22] |
| Turnover | -0.022 | -0.014 | -0.018 | -0.040 | -0.030 | -0.037 |
|  | (0.02) | (0.02) | (0.02) | (0.03) | (0.02) | (0.02) |
|  | [-1.20] | [-0.85] | [-1.06] | [-1.49] | [-1.26] | [-1.51] |
| $h$ | 14.25 | 18.98 | 14.73 | 11.66 | 12.10 | 10.72 |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<$ 0.01. Linear regression on both side of the threshold for municipality characteristics. Optimal bandwidth are computed in the different samples based on Calonico et al. (2017) (CCT).Population is the number of inhabitants in the municipality in election year. North-East, North-West, South, Centre are dummies about macro-regions as defined in Section 2.2. Employment rate is the employment rate at municipal level; Old-age ratio is the ratio between people above 65 years old and people below 14 years old in the municipality; Firms per capita is the number of firms per capita in the municipality; College rate is the number of people with a college degree or more, divided by the inhabitants of the municipality; Female is variable measuring the turnover of the elections.

Table 6: Balancing tests: mayors' characteristics

|  | Mixed-Gender |  |  | Mixed-Gender, Two Candidates |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent Variables: |  |  |  |  |  |  |
| Age | $-6.060^{* * *}$ | $-6.247^{* * *}$ | $-5.847^{* * *}$ | -5.872** | -5.527** | -5.708** |
|  | (2.32) | (2.06) | (2.21) | (2.96) | (2.73) | (2.81) |
|  | [-2.61] | [-3.03] | [-2.65] | [-1.98] | [-2.02] | [-2.03] |
| Local born | -0.177* | -0.103 | -0.184* | -0.117 | -0.116 | -0.139 |
|  | (0.10) | (0.09) | (0.10) | (0.14) | (0.13) | (0.13) |
|  | [-1.70] | [-1.11] | [-1.85] | [-0.85] | [-0.92] | [-1.05] |
| Centre Left | $0.248^{* *}$ | $0.266^{* * *}$ | $0.262^{* *}$ | 0.023 | 0.036 | 0.075 |
|  | (0.11) | (0.10) | (0.10) | (0.17) | (0.15) | (0.16) |
|  | [2.22] | [2.69] | [2.50] | [0.13] | [0.24] | [0.47] |
| Centre Right | 0.099 | 0.090 | 0.106 | $0.225^{* *}$ | $0.220^{* *}$ | $0.229^{* *}$ |
|  | (0.07) | (0.06) | (0.07) | (0.11) | (0.09) | (0.10) |
|  | [1.33] | [1.42] | [1.52] | [2.01] | [2.32] | [2.19] |
| Civic Party | 0.012 | 0.077 | 0.033 | -0.144 | -0.014 | -0.101 |
|  | (0.12) | (0.10) | (0.11) | (0.16) | (0.15) | (0.16) |
|  | [0.10] | [0.75] | [0.30] | [-0.87] | [-0.09] | [-0.64] |
| Primary | $-0.021$ | -0.020 | -0.025 | 0.003 | -0.016 | -0.010 |
|  | $(0.03)$ | (0.03) | (0.02) | (0.04) | (0.04) | (0.04) |
|  | [-0.82] | [-0.73] | [-1.01] | [0.07] | [-0.36] | [-0.27] |
| Lower Secondary | -0.009 | -0.038 | -0.015 | -0.075 | -0.123 | -0.093 |
|  | (0.07) | (0.06) | (0.06) | (0.10) | (0.09) | (0.09) |
|  | [-0.13] | [-0.60] | [-0.24] | [-0.77] | [-1.35] | [-1.01] |
| Upper Secondary | -0.149 | -0.083 | -0.131 | 0.003 | 0.035 | 0.007 |
|  | (0.12) | (0.10) | (0.11) | (0.17) | (0.15) | (0.16) |
|  | [-1.26] | [-0.79] | [-1.18] | [0.01] | [0.23] | [0.04] |
| College |  | 0.141 | $0.163$ | $0.086$ | $0.103$ | 0.099 |
|  | (0.12) | (0.11) | (0.12) | (0.17) | (0.15) | (0.16) |
|  | [1.42] | [1.29] | [1.41] | [0.50] | [0.68] | [0.61] |
| Prev. not empl. | 0.050 | 0.049 | 0.046 | -0.048 | 0.013 | -0.050 |
|  | (0.12) | (0.10) | (0.11) | (0.13) | (0.12) | (0.13) |
|  | [0.44] | [0.49] | [0.43] | [-0.36] | [0.10] | [-0.40] |
| Blue collar(mayor) | -0.017 | -0.018 | -0.033 | -0.088* | -0.054 | -0.105** |
|  | (0.03) | (0.03) | (0.03) | (0.05) | (0.05) | (0.05) |
|  | [-0.50] | [-0.57] | [-0.96] | [-1.78] | [-1.11] | [-2.00] |
| White collar(mayor) | -0.024 | -0.015 | -0.004 | 0.141 | 0.057 | 0.159 |
|  | (0.12) | (0.10) | (0.11) | (0.14) | (0.13) | (0.13) |
|  | [-0.21] | [-0.14] | [-0.03] | [1.03] | [0.45] | [1.22] |
| $h$ | 14.25 | 18.98 | 14.73 | 11.66 | 12.10 | 10.72 |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<$ 0.01. Linear regression on both side of the threshold for municipality characteristics. Optimal bandwidth are computed in the different samples based on Calonico et al. (2017) (CCT). Age measures the age of the mayor when elected; Local born indicates if the mayor is born in the same province where he/she is elected; Primary indicates if the mayor holds a primary education degree when elected; Lower secondary indicates if the mayor holds a lower secondary education degree when elected; Upper secondary indicates if the mayor holds a upper secondary education degree when elected; College indicates if the mayor holds a college degree or more when elected; Prev. not empl indicates if mayor was unemployed before the election; Blue Collar indicates if mayor has a blue collar work before the election; White Collar indicates if mayor has a white collar work before the election; Centre Left, Centre Right and Civic Party indicate mayors' political alignment.

Table 7: RDD results: Robustness checks, bandwidth variation

| dep. var. : | Corruption |  |  |  | Any Corruption |  |  |  | Any Investigated |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | $h$ | Obs. | (3) | (4) | $h$ | Obs. | (5) | (6) | $h$ | Obs. |
| Female mayor (twice $h$ ) | -0.376 | -0.732 | 28.49 | 703 | -0.020 | -0.028 | 37.95 | 912 | 0.016 | -0.000 | 29.47 | 726 |
|  | (0.73) | (0.70) |  |  | (0.05) | (0.05) |  |  | (0.08) | (0.07) |  |  |
|  | [-0.51] | [-1.04] |  |  | [-0.37] | [-0.54] |  |  | [0.20] | [-0.00] |  |  |
| Female mayor, Two Candidates (twice $h$ ) | 0.179 | -0.680 | 23.31 | 297 | -0.105 | -0.105 | 24.21 | 308 | -0.080 | -0.173* | 21.44 | 278 |
|  | (0.69) | (0.76) |  |  | (0.07) | (0.06) |  |  | (0.11) | (0.10) |  |  |
|  | [0.26] | [-0.89] |  |  | [-1.53] | [-1.63] |  |  | [-0.72] | [-1.81] |  |  |
| Female mayor (LM) | 0.062 | 0.004 | 67.09 | 1285 | -0.026 | -0.033 | 24.41 | 609 | 0.053 | 0.029 | 57.24 | 1213 |
|  | (0.47) | (0.43) |  |  | (0.06) | (0.05) |  |  | (0.06) | (0.05) |  |  |
|  | [0.13] | [0.01] |  |  | [-0.46] | [-0.61] |  |  | [0.90] | [0.54] |  |  |
| Female mayor, Two Candidates (LM) | 0.072 | 0.293 | 64.83 | 497 | -0.094 | -0.068 | 33.37 | 400 | -0.086 | -0.096 | 39.66 | 444 |
|  | (0.79) | (0.66) |  |  | (0.06) | (0.06) |  |  | (0.08) | (0.07) |  |  |
|  | [0.09] | [0.45] |  |  | [-1.48] | [-1.20] |  |  | [-1.03] | [-1.40] |  |  |
| Macro-region dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Election dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Mayor controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Municipality controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. OLS regressions implemented on the mixed-gender races sub-sample. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation
dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita). $h$ indicates the bandwidth selected using Calonico et al. (2017). LM indicates the bandwidth selected using Ludwig and Miller (2007).

Table 8: RDD results with different corruption measure: Mixed-Gender races


Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 9: RDD results by removing early termination municipalities: Mixed-Gender races

| Panel A: dep. var. | GLOBAL/PARAMETRIC APPROACH |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Corruption |  |  | Any Corruption |  |  | Any Investigated |  |  |
|  | (1) | (2) | Obs. | (3) | (4) | Obs. | (5) | (6) | Obs. |
| Female mayor (1st order pol.) | 0.175 | 0.025 | 1270 | -0.001 | -0.011 | 1270 | 0.078* | 0.043 | 1270 |
|  | (0.32) | (0.33) |  | (0.02) | (0.02) |  | (0.04) | (0.04) |  |
|  | [0.55] | [0.08] |  | [-0.03] | [-0.46] |  | [1.92] | [1.16] |  |
| Female mayor, Two candidates (1st order pol.) | 0.549 | 0.272 | 488 | -0.026 | -0.037 | 488 | 0.041 | -0.011 | 488 |
|  | (0.59) | (0.47) |  | (0.04) | (0.03) |  | (0.06) | (0.05) |  |
|  | [0.93] | [0.57] |  | [-0.67] | [-1.10] |  | [0.73] | [-0.22] |  |
| Female mayor (2nd order pol.) | 0.146 | 0.057 | 1270 | -0.015 | -0.026 | 1270 | 0.061 | 0.027 | 1270 |
|  | (0.46) | (0.45) |  | (0.04) | (0.03) |  | (0.06) | (0.05) |  |
|  | [0.32] | [0.13] |  | [-0.41] | [-0.75] |  | [1.10] | [0.54] |  |
| Female mayor, Two candidates (2nd order pol.) | 0.275 | 0.405 | 488 | -0.074 | -0.069 | 488 | -0.044 | -0.076 | 488 |
|  | (0.81) | (0.68) |  | (0.05) | (0.05) |  | (0.07) | (0.06) |  |
|  | [0.34] | [0.59] |  | [-1.41] | [-1.51] |  | [-0.64] | [-1.25] |  |


|  | LOCAL/NON-PARAMETRIC APPROACH |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel B : dep. var. |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (1) | (2) | $h$ | Obs. | (3) | (4) | $h$ | Obs. | (5) | (6) | $h$ | Obs. |
| Female mayor | -0.306 | -1.262* | 14.25 | 350 | -0.027 | -0.044 | 18.98 | 461 | 0.016 | -0.062 | 14.73 | 363 |
|  | (0.73) | (0.66) |  |  | (0.05) | (0.05) |  |  | (0.09) | (0.08) |  |  |
|  | [-0.42] | [-1.90] |  |  | [-0.53] | [-0.89] |  |  | [0.17] | [-0.80] |  |  |
| Female mayor, Two Candidates | -0.261 | -0.748 | 10.02 | 160 | -0.060 | -0.103 | 11.12 | 163 | -0.109 | -0.107 | 9.834 | 145 |
|  | (0.69) | (0.85) |  |  | (0.08) | (0.06) |  |  | (0.11) | (0.08) |  |  |
|  | [-0.38] | [-0.88] |  |  | [-0.74] | [-1.60] |  |  | [-0.95] | [-1.27] |  |  |
| Macro-region dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Election dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Mayor controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Municipality controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |

Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1$, ${ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 10: RDD results in municipalities with less than 5000 inhabitants: Mixed-Gender races


[^8] are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within he municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandal or about investigations of mayors during the legislative term. Femate Mayor is a dummy about mayors gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 11: RDD results in municipalities with more than 5000 inhabitants: Mixed-Gender races


Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 12: RDD results in Northern municipalities: Mixed-Gender races


Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

Table 13: RDD results in Southern municipalities: Mixed-Gender races


Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions are implemented in the two candidates with mixed-gender races sub sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. Controls include macro-region dummies and election dummies (year of election, turnover), mayor controls (age, political party, education dummies, locally born, previous occupation dummies), municipalities controls (log of population, employment rate, old-age ratio, college ratio firms per capita).

## Figures



Figure 1: Corruption data
(a) Corruption by margin of victory, the sample is only mixed-gender races.


Notes: The figure plots the binned averages of Corruption against the Margin of Victory, together with the quadratic polynomial fit on both sides side of the threshold and the $95 \%$ confidence intervals. Margin of Victory $>0$ when the winner in municipality $i$ is a woman; Margin of Victory<0 when the winner in municipality $i$ is a man.
(b) Investigated by margin of victory, the sample is only mixed-gender races.


Notes: The figure plots the binned averages of Investigated against the Margin of Victory, together with the quadratic polynomial fit on both sides side of the threshold and the $95 \%$ confidence intervals. Margin of Victory $>0$ when the winner in municipality $i$ is a woman; Margin of Victory $<0$ when the winner in municipality $i$ is a man.
(c) Any Corruption by margin of victory, the sample is only mixed-gender races.


Notes: The figure plots the binned averages of Any Corruption against the Margin of Victory, together with the quadratic polynomial fit on both sides side of the threshold and the $95 \%$ confidence intervals. Margin of Victory $>0$ when the winner in municipality $i$ is a woman; Margin of Victory $<0$ when the winner in municipality $i$ is a man.
Figure 2: Graphs by margin of victory, the sample is only mixed-gender races.

Figure 3: Frequency of margin of victory in mixed-gender races


Notes: Frequency of mixed-gender races. $M V$ is the margin of victory; $M V>0$ when the winner in municipality $i$ is a woman; $M V<0$ when the winner in municipality $i$ is a man.

Figure 4: McCrary test in mixed-gender races


Notes: Density of the margin of victory. Discontinuity estimate: point estimate -0.116 and standard error (0.1499). Optimal size and bandiwidth as in McCrary (2008).

Figure 5: Balance tests in mixed gender races: municipalities' characteristics










| $\bullet$ | Frequency $95 \% \mathrm{Cl}$ | - | Frequency Fitted values |
| :---: | :---: | :---: | :---: |
|  | Fitted values |  |  |

Notes: The figure plots the binned averages, separated at each side of the threshold. MV is the margin of victory; $M V>0$ when the winner in municipality $i$ is a woman; $M V<0$ when the winner in municipality $i$ is a man. Population is the the number of inhabitants at the election year. South-East, South-West, South, Centre are Italian macro-regions. Employment rate is the ratio of the employed to the working age population; Old-age ratio is the ratio between people above 65 years old and people below 14 years old; Firms per capita is the number of firms per capita; College rate is the number of people with a college degree or more divided by the inhabitants.

Figure 6: Balance tests in mixed gender races: mayors' characteristics







| $\bullet$ | Frequency | $\bullet$ | Frequency |
| :---: | :---: | :---: | :---: |
|  | Fitted values |  |  |

Notes: The figure plots the binned averages, separated at each side of the threshold. $M V$ is the margin of victory; $M V>0$ when the winner in municipality $i$ is a woman; $M V<0$ when the winner in municipality $i$ is a man. Age measure the age of the mayor when elected; Local born indicates if the mayor is born in the same province where he/she was elected; Upper Secondary indicates if the mayor holds at least a secondary degree; Prev. not empl indicates if mayor has a job before; Centre Left, Centre Right and Civic Party indicate mayors' political affiliations.

## Appendices

## A1 OLS regressions: Additional Results

Table A1: Mixed Gender races with controls

| dep. var.: | Corruption |  | Any Corruption |  | Any Investigated |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Female mayor | -0.089 | -0.077 | 0.000 | -0.004 | -0.031** | -0.030** |
|  | (0.16) | (0.17) | (0.02) | (0.02) | (0.01) | (0.01) |
|  | [-0.54] | [-0.46] | [0.02] | [-0.18] | [-2.45] | [-2.35] |
| $\ln$ (Population) |  | $0.762^{* *}$ |  | $0.093^{* * *}$ |  | $0.060^{* * *}$ |
|  |  | (0.16) |  | (0.01) |  | (0.01) |
|  |  | [4.67] |  | [7.72] |  | [6.01] |
| Age |  | -0.000 |  | -0.002 |  | -0.001 |
|  |  | (0.01) |  | (0.00) |  | (0.00) |
|  |  | [-0.00] |  | [-1.53] |  | [-0.86] |
| Centre Right |  | -0.390 |  | -0.044 |  | -0.023 |
|  |  | (0.31) |  | (0.04) |  | (0.03) |
|  |  | [-1.27] |  | [-1.19] |  | [-0.89] |
| Centre Left |  | -0.066 |  | 0.051** |  | -0.008 |
|  |  | (0.16) |  | (0.02) |  | (0.01) |
|  |  | [-0.41] |  | [2.33] |  | [-0.58] |
| Local born |  | -0.222 |  | -0.015 |  | -0.026 |
|  |  | (0.20) |  | (0.02) |  | (0.02) |
|  |  | [-1.12] |  | [-0.63] |  | [-1.51] |
| Primary |  | $0.422^{* *}$ |  | 0.044 |  | 0.051 |
|  |  | (0.21) |  | (0.07) |  | (0.04) |
|  |  | [2.03] |  | [0.68] |  | [1.14] |
| Lower Secondary |  | -0.043 |  | -0.025 |  | 0.019 |
|  |  | (0.29) |  | (0.11) |  | (0.03) |
|  |  | [-0.15] |  | [-0.23] |  | [0.69] |
| Upper Secondary |  | 0.116 |  | 0.003 |  | 0.032 |
|  |  | (0.31) |  | (0.11) |  | (0.03) |
|  |  | [0.38] |  | [0.03] |  | [1.18] |
| College |  | 0.220 |  | 0.010 |  | 0.031 |
|  |  | (0.28) |  | (0.11) |  | (0.03) |
|  |  | [0.78] |  | [0.09] |  | [1.14] |
| White collar(mayor) |  | 0.096 |  | -0.028 |  | 0.021 |
|  |  | (0.16) |  | (0.04) |  | (0.02) |
|  |  | [0.62] |  | [-0.63] |  | [1.14] |
| Prev. not empl. |  | -0.030 |  | -0.016 |  | 0.023 |
|  |  | (0.20) |  | (0.05) |  | (0.02) |
|  |  | [-0.16] |  | [-0.33] |  | [1.07] |
| Old-age ratio |  | $0.220^{* *}$ |  | $0.029^{* * *}$ |  | 0.012*** |
|  |  | (0.08) |  | (0.01) |  | (0.00) |
|  |  | [2.77] |  | [3.81] |  | [2.89] |
| Employment rate |  | -0.029* |  | -0.007*** |  | -0.003*** |
|  |  | (0.02) |  | (0.00) |  | (0.00) |
|  |  | [-1.77] |  | [-3.61] |  | [-2.61] |
| Firms per capita |  | -0.034 |  | $0.011^{*}$ |  | -0.003 |
|  |  | (0.03) |  | (0.01) |  | (0.00) |
|  |  | [-1.09] |  | [1.91] |  | [-0.91] |
| Centre |  | 0.347 |  | 0.055 |  | $0.060^{*}$ |
|  |  | (0.56) |  | (0.05) |  | (0.03) |
|  |  | [0.62] |  | [1.13] |  | [1.84] |
| North-East |  | 0.542 |  | $0.109^{* *}$ |  | 0.046 |
|  |  | (0.54) |  | (0.05) |  | (0.03) |
|  |  | [1.01] |  | [2.01] |  | [1.43] |
| North-West |  | 0.450 |  | 0.096** |  | 0.055* |
|  |  | (0.52) |  | (0.05) |  | (0.03) |
|  |  | [0.86] |  | [1.99] |  | [1.80] |
| Turnover |  | -0.140 |  | $0.247^{*}$ |  | -0.057 |
|  |  | (0.97) |  | (0.14) |  | (0.08) |
|  |  | [-0.14] |  | [1.71] |  | [-0.72] |
| College rate |  | $0.367^{* *}$ |  | $0.045^{* * *}$ |  | 0.017** |
|  |  | (0.15) |  | (0.01) |  | (0.01) |
|  |  | [2.52] |  | [3.91] |  | [2.00] |
| Constant | 0.669*** | $-4.110^{* *}$ | $0.171^{* * *}$ | -0.329 | $0.066^{* * *}$ | -0.121 |
|  | (0.10) | (1.90) | (0.01) | (0.23) | (0.01) | (0.12) |
|  | [6.80] | [-2.17] | [13.88] | [-1.46] | [8.14] | [-1.01] |
| Observations | 1,301 | 1,301 | 1,301 | 1,301 | 1,301 | 1,301 |
| Year FE | No | Yes | No | Yes | No | Yes |
| Notes: robust standard errors in parenthesis and t-statistics in brackets. $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. OLS regressions implemented on the mixed-gender races sub-sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of mayors during the legislative term. Female Mayor is a dummy about mayors' gender. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Table A2: Mixed Gender races and only two candidates with controls

| dep. var.: | Corruption |  | Any Corruption <br> (3) <br> (4) |  | Any Investigated |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) |  |  | (5) | (6) |
| Female mayor | 0.190 | -0.059 | 0.035 | -0.004 | -0.005 | -0.017 |
|  | (0.30) | (0.29) | (0.03) | (0.03) | (0.02) | (0.02) |
|  | [0.62] | [-0.20] | [1.01] | [-0.12] | [-0.25] | [-0.84] |
| $\ln$ (Population) |  | $1.000^{* *}$ |  | $0.093^{* * *}$ |  | $0.058^{* * *}$ |
|  |  | (0.29) |  | (0.02) |  | (0.02) |
|  |  | [3.48] |  | [5.34] |  | [3.83] |
| Age |  | -0.004 |  | -0.002 |  | -0.000 |
|  |  | (0.02) |  | (0.00) |  | (0.00) |
|  |  | [-0.25] |  | [-0.88] |  | [-0.03] |
| Centre Right |  | 0.661 |  | 0.095 |  | 0.024 |
|  |  | (0.88) |  | (0.07) |  | (0.06) |
|  |  | [0.75] |  | [1.28] |  | [0.41] |
| Centre Left |  | -0.028 |  | 0.087*** |  | -0.010 |
|  |  | (0.30) |  | (0.03) |  | (0.02) |
|  |  | [-0.09] |  | [2.70] |  | [-0.47] |
| Local born |  | 0.000 |  | -0.005 |  | -0.030 |
|  |  | (0.32) |  | (0.04) |  | (0.03) |
|  |  | [0.00] |  | [-0.14] |  | [-1.14] |
| Primary |  | 0.219 |  | -0.021 |  | 0.071 |
|  |  | (0.34) |  | (0.07) |  | (0.07) |
|  |  | [0.64] |  | [-0.29] |  | [1.06] |
| Lower Secondary |  | 0.182 |  | 0.072 |  | 0.016 |
|  |  | (0.40) |  | (0.06) |  | (0.03) |
|  |  | [0.46] |  | [1.29] |  | [0.48] |
| Upper Secondary |  | -0.203 |  | 0.063 |  | 0.015 |
|  |  | (0.40) |  | (0.05) |  | (0.03) |
|  |  | [-0.50] |  | [1.20] |  | [0.48] |
| College |  | 0.203 |  | 0.082 |  | 0.023 |
|  |  | (0.39) |  | (0.06) |  | (0.03) |
|  |  | [0.52] |  | [1.44] |  | [0.71] |
| White collar(mayor) |  | 0.101 |  | -0.002 |  | 0.027* |
|  |  | (0.22) |  | (0.05) |  | (0.02) |
|  |  | [0.45] |  | [-0.04] |  | [1.73] |
| Prev. not empl. |  | -0.231 |  | 0.044 |  | 0.015 |
|  |  | (0.38) |  | (0.07) |  | (0.03) |
|  |  | [-0.61] |  | [0.67] |  | [0.59] |
| Old-age ratio |  | 0.212** |  | 0.014** |  | 0.006 |
|  |  | (0.09) |  | (0.01) |  | (0.00) |
|  |  | [2.26] |  | [2.43] |  | [1.41] |
| Employment rate |  | -0.045* |  | -0.003 |  | -0.003* |
|  |  | (0.03) |  | (0.00) |  | (0.00) |
|  |  | [-1.72] |  | [-1.19] |  | [-1.93] |
| Firms per capita |  | -0.094* |  | -0.004 |  | -0.005 |
|  |  | (0.06) |  | (0.01) |  | (0.00) |
|  |  | [-1.69] |  | [-0.53] |  | [-0.99] |
| Centre |  | 1.664 |  | 0.059 |  | 0.100 |
|  |  | (1.25) |  | (0.08) |  | (0.06) |
|  |  | [1.33] |  | [0.75] |  | [1.64] |
| North-East |  | 1.769 |  | 0.091 |  | 0.060 |
|  |  | (1.09) |  | (0.09) |  | (0.05) |
|  |  | [1.63] |  | [1.05] |  | [1.19] |
| North-West |  | $1.986^{*}$ |  | 0.106 |  | 0.078 |
|  |  | (1.09) |  | (0.07) |  | (0.05) |
|  |  | [1.82] |  | [1.47] |  | [1.50] |
| Turnover |  | -3.334 |  | -0.057 |  | -0.077 |
|  |  | (2.03) |  | (0.19) |  | (0.10) |
|  |  | [-1.64] |  | [-0.29] |  | [-0.75] |
| College rate |  | 0.525* |  | 0.039** |  | 0.012 |
|  |  | (0.31) |  | (0.02) |  | (0.02) |
|  |  | [1.67] |  | [2.49] |  | [0.75] |
| Constant | $0.603^{* * *}$ | -1.284 | $0.138^{* * *}$ | -0.168 | $0.055^{* * *}$ | 0.115 |
|  | (0.17) | (2.74) | (0.02) | (0.30) | (0.01) | (0.18) |
|  | [3.54] | [-0.47] | [7.21] | [-0.55] | [4.36] | [0.63] |
| Observations | 504 | 504 | 504 | 504 | 504 | 504 |
| Year FE | No | Yes | No | Yes | No | Yes |

Notes: robust standard errors in parenthesis and t-statistics in brackets. * $\mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. OLS regressions implemented on the mixed-gender two candidates races sub-sample. Corruption represents the articles speaking of corruption scandals within the municipality during the legislative term. Any Corruption/Investigated are equal to 1 if there is at least one article speaking of corruption scandals or about investigations of
mayors during the legislative term. Female Mayor is a dummy about mayors' gender.

## A2 Regressions Discontinuity Designs Results: Additional Results

Table A3: RDD results: LOCAL/NON-PARAMETRIC APPROACH with optimal bandwidth generated by the regressions without controls

| dep. var. : | Corruption |  |  |  | Investigated |  |  |  | Any Corruption/ Investigated |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | $h$ | Obs. | (3) | (4) | $h$ | Obs. | (5) | (6) | $h$ | Obs. |
| Female mayor | -0.370 | -0.662 | 19.36 | 486 | -0.029 | -0.050 | 14.77 | 376 | 0.020 | -0.027 | 17.31 | 430 |
|  | (0.71) | (0.66) |  |  | (0.06) | (0.05) |  |  | (0.08) | (0.07) |  |  |
|  | [-0.52] | [-1.01] |  |  | [-0.51] | [-0.93] |  |  | [0.25] | [-0.39] |  |  |
| Female mayor, Two Candidates | -0.347 | -0.346 | 21.79 | 281 | -0.128* | -0.093 | 20.40 | 264 | -0.052 | -0.109 | 13.97 | 184 |
|  | (0.97) | (0.82) |  |  | (0.07) | (0.06) |  |  | (0.11) | (0.09) |  |  |
|  | [-0.36] | [-0.42] |  |  | [-1.86] | [-1.53] |  |  | [-0.48] | [-1.23] |  |  |
| Macro-region dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Election dummies | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Mayor controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |
| Municipality controls | NO | YES |  |  | NO | YES |  |  | NO | YES |  |  |

Notes: Robust standard errors in parenthesis and t statistics in square brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Macro-region dummies indicate a series of dummies based on different macro-regions dummies. Election dummies include: year of election and turnover. Mayor controls include: age, old-age ratio, college ratio firms per capita. $h$ indicates the bandwidth selected using Calonico et al. (2017)


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    $\dagger$ Thanks go to ANSA, Giovanni Mastrobuoni, Stefano Gagliarducci, Andrew Pickering, Cheti Nicoletti and Emma Tominey for the many useful suggestions.

[^1]:    ${ }^{1}$ Source: Link Inter-Parliamentary Union.
    ${ }^{2}$ ANSA link.
    ${ }^{3}$ ISTAT link.

[^2]:    ${ }^{4}$ Moreover, I have access to the original information collected by ANSA, rather than using database such as FACTIVA, that provides only a selection of articles from the archive. FACTIVA is a famous database that aggregates newspapers, journals, magazines, television and radio transcripts, photos, etc. from different countries. Link to FACTIVA
    ${ }^{5}$ This way to extract information and to construct the variables is particularly sensible to municipalities with ambiguous name such as Terzo (Third) and Paese (Country). I exclude these municipalities from the sample.
    ${ }^{6}$ For a more detailed description, see Foresta (2020) and Daniele et al. (2020).
    ${ }^{7}$ Given how my variable is constructed and distributed, I remove the municipalities with more than 70 articles (4 Obs).
    ${ }^{8} \mathrm{I}$ adjust these measures for early terminations.
    ${ }^{9}$ Given the low variability within the Mayor screen, it is not possible to generate a count variable for the Mayor screen.
    ${ }^{10}$ There are few municipalities in the sample that vote more than once. Due to the limited number of these municipalities, I remove them. Only 80 municipalities in the dropped observations have mixed-gender races.
    ${ }^{11}$ Source: Link Census.
    ${ }^{12}$ Source: Link 1991 Housing Census.
    ${ }^{13}$ Source: Link 1991 Industry Services Census.
    ${ }^{14}$ I use 1991 Census instead of 2001 Census in line with the methodology adopted by the Ministry of Interior in

[^3]:    compiling data on local politicians. The Ministry suggests that the 1991 Census data can be used up to 1997. My dataset spans from 1993 and 1998, with only a small fraction of elections taking place in 1998. As an ulterior check, I implement the analysis with data from 2001 Census. Results do not change (available upon request).
    ${ }^{15}$ Given the low presence in the sample, I exclude the municipalities above 100,000 inhabitants, considering them as outliers with respect to the sample. Furthermore, in order to avoid possible misleading effects due to under-coverage by the media of very small municipalities, I exclude municipalities with less than 100 inhabitants (9 Obs).
    ${ }^{16}$ Other examples are: Ferreira and Gyourko (2014), Gagliarducci and Paserman (2011), Baskaran and Hessami (2018) and Baltrunaite et al. (2017).

[^4]:    ${ }^{17}$ In case of a run-off, I consider the results from the run-off elections.
    ${ }^{18}$ I also run the model regression with a more conventional definition of margin of victory (margin of victory of top female candidate divided by the total amount of voters). Results are similar to those I present here (available upon request).
    ${ }^{19}$ In Tables A1 and A2 in the Section A1 Appendix, I present also the coefficients for the control variables.

[^5]:    ${ }^{20}$ In this case, I consider the optimal bandwidth measured in the models with controls. However, in Section A2 of the Appendix, I replicate the analysis, with similar findings, using the optimal bandwidths without controls.

[^6]:    ${ }^{21}$ For a more detailed description, see Jacob et al. (2012).

[^7]:    ${ }^{22}$ As mentioned in Section 2, due to linguistic issues, the regions of Trentino-Alto Adige and Aosta Valley are not present in my sample.

[^8]:    Notes: robust standard errors in parenthesis and t-statistics in brackets. ${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Two Candidates indicates that the regressions

