Birkbeck Working Papers in Economics & Finance

ISSN 1745-8587

Department of Economics, Mathematics and Statistics

BWPEF 1903

Personal or Partisan Incumbency Advantage? Evidence from an Electoral Reform in Italy.

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May 2019

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Abstract

We analyze the incumbency advantage using a large data set on Italian municipal elections held from 1993 to 2011. We first apply a non-parametric Sharp Regression Discontinuity Design comparing parties that barely win an election to those that barely lose, exploiting the fact that partisan incumbency status changes discontinuously at the threshold of margin of victory of zero. In order to disentangle the personal incumbency advantage from the partisan effect, we rely on a reform that introduced mayoral term limit, and exploit the exogenous change on the incumbency status of mayors keeping the partisan incumbency status constant. We find that the incumbency advantage is essentially driven by the personal effect. The results are robust to different specifications and estimation strategies with excellent balance in observable characteristics. Also, the effect of interest seems to be larger in magnitude for municipalities located in the South of Italy compared to northern municipalities.

JEL Classification: D72, D78; J45

Keywords: Incumbency Status; Political Participation; Sharp RDD; Term Limit.

1. Introduction

A growing body of literature emphasizes the crucial role played by incumbent politicians in the process of economic development and in particular, how their power affects economic performance and determines the allocation of resources.

One of the biggest risks in a democracy is that elected officials may become entrenched or that running for office simply becomes too expensive for fresh-candidates. By the nature of the democratic system, being incumbent is intrinsically advantageous since she/he is given access to resources and decision processes that non-incumbent challengers do not have. If elected officials are able to use their political influence to remain in power, voters will have a limited influence on their policy decisions (Linden, 2004), especially where incentives to engage in rent extraction usually run high (Titiunik, 2011). Moreover, stronger incumbents also raise the cost of entering politics and reduce the degree of political competition because new challengers might not have enough resources to overcome the advantage of incumbency and as a consequence, voters might be less inclined to participate at the polls.

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In this paper we provide new evidence on the advantage an incumbent has, compared to the best challenger, in winning the electoral competition, using a large data set on Italian municipal elections held from 1993 to 2011. First, we measure the incumbency advantage at party level using a quasi-experimental design, i.e. a Sharp Regression Discontinuity Design as in Lee (2008), where we exploit the exogenous source of variation in the incumbency status of parties close to the electoral margin at time *t-1*. However, as discussed in the literature (see Fowler and Hall, 2014; Erikson and Titiunik, 2015), the empirical design described by Lee (2008) does not allow to understand whether the higher chance in winning the electoral race by incumbent parties is due to a personal effect (the votes gained by a candidate once he/she becomes an incumbent from constituency service, name recognition, and the like) or a partisan incumbency advantage.

In our paper, we are able to disentangle the personal incumbency effect from the partisan effect, exploiting a second exogenous source of variation in the incumbency status of mayors (keeping the partisan incumbency status constant) deriving from the introduction of a two-term limit in 1993 for incumbent officeholders. As the schedule of elections at the local level in Italy is staggered across cities and over time, we observe elections held in the same municipality (we always control for municipal fixed effects) where the incumbent mayor faces a binding term limit (the incumbent mayor cannot rerun at election since he/she has already been served two consecutive mandates), and where the term limit is slack, allowing the incumbent officeholder to run for election in this latter case. As a final step of our design we solve a system of equations involving the personal and partisan incumbency advantage, in the spirit of Fowler and Hall (2014) and Lopes da Fonseca (2018), to get reliable estimates of these two quantities.

Although many papers have focused on state and federal elections, maybe because politicians and voters attach a greater degree of importance and weight to national than to local elections, we study the incumbency advantage at municipal elections since they have certain distinct characteristics as compared with national elections which give them considerable significance in political life. First, local elections are important for their role in a broader national democracy, since their results are indicative of broader political trends and provide important information about the preferences, concerns and attitudes of the electorate. Second, issues in local elections are those that directly affect the daily lives of citizens: the nature of the competition between candidates and the issues that arise can be important indicators of what voters care deeply about and want the local authorities to tackle.

In the literature many empirical methodologies have been implemented in order to recover the personal incumbency advantage, although most of them are plagued by issues related to omitted variable bias and selection bias, as some candidate's characteristics such as charisma, charm and intelligence are typically unobservable and unquantifiable (Levitt, 1994). If higher quality candidates attract more votes, electoral selection will lead to incumbents and challengers possessing different characteristics. Failure to control for these differences may lead to biased estimates of incumbency advantage (Gelman and King, 1990). To partially overcome these issues, some empirical works (see

Uppal, 2009) have implemented a regression discontinuity design (RDD) in the spirit of Lee (2008) on a candidate's prospect, focusing on very close elections which are decided by a narrow margin of victory. In this case the bare winners and bare losers of these elections are assumed to be comparable in all their baseline characteristics. Nonetheless, a simple RDD does not take into account that winning and - importantly - losing means that the candidates' individual probability to run in the next election is harmed. This introduces a (new) selection bias as the characteristics of candidates who will keep running if she won/lost the earlier round are unknown.

The contribution of our paper is twofold. Firstly, the literature investigating the incumbency advantage/disadvantage for European countries is scant. To the best of our knowledge the only work in Europe disentangling the personal and partisan incumbency effect belongs to Lopes da Fonseca (2018) for Portugal. In addition, no author so far has analysed whether incumbent mayors have or do not have an advantage in winning the competition compared to non-incumbent candidates for Italian municipal elections. In fact, decisions made at municipal level in Italy have a great impact on citizens' daily lives, since these decisions often concern relevant services, such as the management of public utilities, the provision of public housing etc. For this reason, citizens are usually interested in the composition of the municipal bodies and in the performance of the mayor, especially when she/he has already performed the same charge in the past.

Our results, in line with those found in the literature (Lopes da Fonseca, 2018; Fowler and Hall, 2014), show a large personal incumbency effect, also after controlling for candidates and municipalities' characteristics, and a negligible and negative partisan incumbency effect on the probability of winning the electoral competition.

Secondly, we study the incumbency effect by taking into account the differences in the economic and social conditions of the two main geographical areas (South and North) in Italy. On the one hand, as the southern part of the country is poorer and endowed with a low level of social capital, the positive impact of the incumbency status on the probability of winning the election may be related to the clientelistic relationships established by the incumbent candidates, which ensure political support in exchange of benefits (exchange votes). Areas endowed with low social capital are characterized by relationships that often involve requests for jobs and patronage, and citizens living in these areas may be more inclined to cast their vote in relation to exchange agreements (Knack, 2002). Our findings are in line with this conjecture, since bare winning parties are more likely to win the competition compared to bare losing parties in the Center-South. The main source of the advantage is related to the personal effect, as the partisan advantage is small and negative. Conversely, in northern municipalities the personal incumbency advantage is found to be small and not significant at any conventional levels.

Finally, our results are robust to different specifications of our main equation. In particular, our findings are similar when we consider both 1/2 Mean Square Error optimal bandwidth (MSE hereafter) proposed by Calonico *et al.* (2018), and the Coverage Error Rate bandwidth (CER hereafter) around the discontinuity point, and when we choose different polynomials of the forcing variable (Local Linear

Regression) along with the interaction terms between polynomials of the electoral margin (of order higher than one) and the treatment.

Our paper relates to the huge literature investigating the effect of the incumbency status on the probability that an incumbent candidate wins the electoral competition both at the state (Garand, 1991; King, 1990; Cox and Morgenstern, 1993) and federal level (Erikson, 1971; Alford and Hibbing, 1981; Alford and Brady, 1988; Gelman and King, 1990) in U.S. House elections. Results generally show a personal incumbency advantage in terms of winning the electoral competition.

Moreover, some authors have focused on the incumbency effect at national and state elections in developing democracies, since the likelihood to observe both entrenched politicians controlling the political process as well as rampant corruption is higher (Linden, 2004). However, the evidence from some developing countries, such as India (Linden, 2004; Uppal, 2009), Latin America and Caribbean countries (Molina, 2001)[2], suggests that there is a disadvantage to incumbents. The only exception is Miguel and Zaidi's (2003) investigation of national elections in Ghana in which they find no significant incumbency effect at the parliamentary seat level[3].

Related to this argument, a second strand of literature, following Lee (2008)'s work, has concentrated on the partisan incumbency effect, i.e. the electoral benefit a candidate receives purely because his/her party is the incumbent party, regardless of whether he/she previously served (Fowler and Hall, 2014), highlighting again mixed results. In fact, Ferreira and Gyourko (2009) find that the partisan incumbency status positively affects the probability of re-election and the likelihood of winning the competition in the US. The same results are highlighted by Hainmueller and Kern (2008) and Freier (2015) for local and federal elections in Germany. Conversely, Titiunik (2011), by using the same methodology as Lee (2008), analyses the incumbency effect for three different political parties at Brazilian municipal elections held in 2000 and finds a negative effect of the partisan incumbency both on the incumbent parties' votes share as well as on their probability of winning the competition.

The paper is organized as follows. Section 2 is devoted to literature explaining the previous methodology implemented to recover the personal incumbency advantage. In Section 3 we describe the institutional framework, our data set and the empirical design. In Section 4 we check the validity of the RDD. In Section 5 we discuss our main results, whereas in Section 6 we present some robustness checks. Section 7 concludes.

[2] Molina (2001) argues that incumbent turnover is much higher in Latin American and Caribbean countries than many industrialized countries owing to endemic popular discontent over persistent deprivation. Conversely, for Indian national elections the incumbency disadvantage, especially after 1991, is essentially due to a change in the political structure that leads to a system in which as politicians gained more experience and influence they become more likely to pursue activities that are not in the best interest of voters (Linden, 2004).

[3] Miguel and Zaidi (2003) justify their results saying that the lack of a meaningful incumbency advantage is consistent with a political system where the ruling party does not have adequate mechanisms at its disposal to accurately target funds down to the level of parliamentary seats. However, they acknowledge some important limitations of their data set, including the small sample size which leads to statistically imprecise estimates.

2. Literature Review on Personal Incumbency Advantage Measurement

Erikson (1971) is the first author who studies the incumbency advantage systematically. He compares the vote share of an individual politician running for the second time with the politician's vote share in the first successful election, by taking into account reciprocal causation, the partisan swing and other factors affecting the incumbency status. However, he uses a "regression on residuals" procedure that is quite biased in general (see King, 1986).

An alternative measure is proposed by Garand and Gross (1984) who use the difference in the vote margin between incumbent winners and non-incumbent winners. Nevertheless, as suggested by Jacobson (1987) and Alford and Brady (1988), the estimates are seriously affected by selection bias because of the complete exclusion of incumbent losers. In fact, they overestimate the incumbency advantage since their measure attributes party strength in a district to the incumbency (Gelman and King, 1990).

A second strand of literature uses the "sophomore surge" and "retirement slump" to estimate the incumbency effect. The sophomore surge is the average vote gain enjoyed by freshman candidates running as incumbents for the first time and the retirement slump is the average falloff in the party's vote when the incumbent retires (Cover and Mayhew, 1977). In addition, Alford and Brady (1988) introduce a measure of the incumbency advantage, called "slurge" that is the average between the sophomore surge and the retirement slump. The intuition behind this measure is that, since sophomore surge underestimates - retirement slump overestimates - the incumbency effect, the average of the two might be a better estimate than the two measures alone. However, the two effects cancel out only if the true incumbency advantage is zero, and it has been shown (Gelman and King, 1990) that "slurge" generally underestimates the incumbency advantage.

Finally, several variants of sophomore surge and retirement slump also exist. For instance, Payne (1981), calculating scores separately for the Democrats and Republicans and then averaging them, finds biased estimates if the incumbency advantage is the same for both parties. Alford and Hibbing (1981) compute sophomore surge and retirement slump for the second and third reelections instead of the first only, to provide useful information about electoral career paths. Nevertheless, this procedure is still biased for the same reasons as the standard sophomore surge and retirement slump measures are biased (Gelman and King, 1990).

All the previous research is plagued by problems of the identification of the incumbency causal effect. The main issue is that the incumbency effect, based on the differential outcomes of incumbents and non-incumbents, suffers from a selection bias problem, since only those candidates who are better in quality may win and become incumbents. As a result, incumbency status of a candidate is not randomly assigned and in turn, the effect that previous authors have attributed to incumbency might include the effect of intrinsic differences in candidate characteristics (Uppal, 2009).

In order to handle this kind of selection bias issue, Uppal (2009) used a regression discontinuity design (RDD henceforth) that approximates a natural experiment and, under certain continuity

conditions[4], achieves a random assignment of incumbency status (Lee, 2008). The peculiarity of the RDD comes from the fact that the treatment assignment mechanism is known (since the incumbency status is a deterministic function of the margin of victory at time *t-1*). Under weak smoothness assumptions (see Rubin, 1974; Hahn et al., 2000 for a rigorous discussion), the RDD allows to estimate the average treatment effect (ATE) at the discontinuity of the covariate (margin of victory) that determines treatment assignment. Even under non-random selection into treatment, the RD design yields an unbiased estimate of the treatment effect. This is the case because the margin of victory is a function of observed vote shares. Observed vote shares in turn consist of a latent systematic component that incumbents can influence, but also a random component over which incumbents cannot exert control (Hainmueller and Kern, 2008). It can be proven that as long as the covariate that determines assignment to treatment includes such a random component with a continuous density, treatment status is randomized at the threshold (Lee, 2008). Therefore, at the threshold, all observed and unobserved covariates will be independent of treatment assignment[5]. Finally, just as in a randomized experiment, treatment effects will not be confounded by omitted variables. This provides an important advantage over commonly used regression models which are by construction vulnerable to omitted variable bias.

However, a close election RDD is not enough to identify the personal incumbency advantage, and for this reason Lee (2008) only identifies a partisan incumbency effect. RDD remedies the omitted variable bias and selection bias issues only for partisan incumbency advantage. In fact, if the outcome variable is as measured by the probability that a party wins the next round, there is no issue, as almost all party will run a candidate in the next round. However, for the personal incumbency advantage this is different. Winning and - importantly - losing means that the candidates' individual probability to run in the next election is harmed. This introduces a (new) selection bias as we do not know what type of candidate will keep running if she won/lost the earlier round. Solving this issue is the key to get to the personal incumbency advantage, and in the Methodology section we fully describe the empirical design used to recover the causal effect of interest.

[4] As shown by Lee and Lemieux (2009), only if all observable and unobservable covariates, except treatment, are distributed continuously around the threshold, we can assume to have valid counterfactual observations on either side. If observations just right from the required cutoff are systematically different from the ones just to the left, then identification fails.

[5] It is important at least to briefly consider the conditions under which the assumption of local random assignment at the threshold could be wrong. Local random assignment critically hinges on the presence of the random component. This does not imply that each municipal race has to be decided by this random component; in most races the random component will not be decisive. The key idea is that as races become closer and closer, confounders cease to systematically affect treatment assignment. In the limit, i.e. at the threshold, treatment assignment should be independent of all confounding variables. The plausibility of this assumption is a function of the degree to which candidates are able to sort around the threshold. For example, if candidates had perfect control over their observed vote shares or were able to perfectly predict them, they would never run if they knew that they would lose. Alternatively, they would just invest enough effort to get exactly one more vote than the strongest district opponent. Such behavior would violate our identifying assumption. However, given the randomness inherent in elections, such a scenario seems rather implausible (Matsusaka and Palda, 1999).

3. Institutional Framework, Methodology and Data

3.1 Italian Institutional Setting

The system currently regulating municipal elections in Italy has been introduced in 1993 (DL 25 March 1993, no. 81). It has established the direct election of the mayor and the adoption of the plurality rule, with some differences according to the size of the city. For municipalities with a population of fewer than 15,000 inhabitants, elections are held with single ballot and plurality rule: the winning candidate is awarded a majority premium of at least two-thirds of the seats in the council. For cities with a population above 15,000, elections are held using a dual ballot system (where the second ballot is held only if none of the candidates obtains an absolute majority of votes in the first ballot). Only the two leading candidates at the first round compete in the second ballot and the winning candidate is awarded a majority premium of at least 60 percent of the seats in the council. Conversely, before the electoral reform mayors were appointed along with members of the Executive body by city councilors within the City Council.

The reform was a response to the political earthquake that started in 1991 from a judicial investigation (so called "Mani Pulite") on the corruption of national and local administrators. This investigation, resulting in the disappearance of many political parties, led also to the end of the so called "Prima Repubblica" (First Republic). Furthermore, since 1993, mayors have been subject to a two-term limit which only applies to the terms elected after the reform (i.e., past terms in office did not count), while members of the Executive Committee and of the City Council, endowed with legislative power, can be re-elected indefinitely.

Municipal elections in Italy are held every 5 years[6] and Municipal governments cannot choose the election schedule. In certain circumstances, the legislature may not survive until the end of its legislative term, e.g. because of a mayor's early resignation. In these cases, elections are held before the natural schedule, and, as a consequence, all subsequent elections will be held at different times from other municipalities that have completed the foreseen legislative term. Municipalities have a registry of eligible voters, which is revised whenever there is an election and all citizens aged 18 or above on the election date are automatically registered to vote. Voting takes place in polling stations organized by the local authorities. Elections are organized according to a traditional paper ballot system.

3.2 Methodology

In order to recover the personal and partisan incumbency effect, in a first step, we analyze whether an incumbent party has an advantage compared to its challengers in terms of winning the electoral competition at time *t*. In particular, we implement a Sharp RDD (Local Linear Regression) and estimate a linear probability model with fixed effects at municipal level as follows:

[6] With the exception of the years between 1993 and 1999, when the electoral mandate had a duration of 4 years.

[1] $Pr(win_{i,j,t}) = \beta_0 + \beta_1 Incumbency_{i,t} + Electoral\ Margin_{i,t-1} + \varphi_j + \mu_t + \varepsilon_{i,j,t}$,

where $win_{i,j,t}$ is a dummy variable taking the value of 1 if the party *i* wins the electoral competition at time *t* in municipality *j* and zero otherwise; $Incumbency_{i,t}$ is the main variable of interest measuring the incumbency status of parties at the electoral race in the municipality *j* at time *t*. Moreover, $Electoral\ Margin_{i,t-1}$ is a linear function of the forcing variable, i.e. the degree of electoral competition at time *t-1*, as measured by the difference in votes (%) between the party winner and its closest challenger. φ_j and μ_t are respectively a municipal and a year fixed effect. The municipal fixed effects φ_j accounts for time-invariant municipal characteristics, whereas μ_t is used to take into account any differences across time. $\varepsilon_{i,j,t}$ is the stochastic component in our model.

In all regressions standard errors are robust to heteroskedasticity and are clustered at the municipal level to take into account that parties' behavior in the same municipality may be affected by common shocks. Further, in all the specifications we control for a first order polynomial of the electoral margin at time *t-1*[7], and we choose a MSE optimal bandwidth (Calonico *et al.*, 2018) of 16.7 percent above and below the threshold of margin of victory of zero.

However, the focus on party-level variables does not provide an unbiased estimation of the partisan incumbency effect per se. In fact, according to Fowler and Hall (2014) and Erikson and Titiunik (2015), estimating the general RDD model as in equation [1] leads to the ATE that is a combination of the personal and partisan incumbency advantage, where the coefficient attached to $Incumbency_{i,t}$ double counts both sources of incumbency advantage (see equation [2]).

[2] $\beta_1 = 2 * Partisan\ Advantage + 2 * Prob(Incumbent\ Reruns) * Personal\ Advantage.$

In a second step, since partisan and personal incumbency are jointly assigned, and not in a random fashion, we exploit the introduction of a two-term limit for candidates running for a mayor position by Law 81/1993 as a reliable way to disentangle the two effects. In particular, given the staggered nature of local elections across time and regions in Italy, not all municipalities vote on the same year. In turn, we are able to separate the personal from the partisan incumbency effect, comparing the partisan probability of winning the electoral race at time *t* in close elections decided by a narrow margin of victory at time *t-1*, across elections held under a binding or a slack term limit for incumbent officeholders.

Empirically, we estimate the following model in a local linear regression setup:

[3] $\Pr(win_{i,j,t}) = \gamma_0 + \gamma_1 Electoral\ Margin_{i,t-1} + Incumbency_{i,t}(\delta_0 + \delta_1 Electoral\ Margin_{i,t-1}) + Term\ Limit_{i,t}\left[\lambda_0 + \lambda_1 Electoral\ Margin_{i,t-1} + Incumbency_{i,t}\left(\alpha_0 + \alpha_1 Electoral\ Margin_{i,t-1}\right)\right] + \varphi_j + \mu_t + \varepsilon_{i,j,t}$,

[7] The inclusion of polynomials of order higher than three does not affect our main results.

where we add the variable $Term\ Limit_{i,t}$ that takes the value of 1 if the term limit is binding (the incumbent officeholder has already been confirmed twice and cannot run for elections) and zero otherwise, and the interaction terms between $Term\ Limit_{i,t}$ and all the variables as displayed in equation [1].

As explained before, the parameter δ_0 embeds both the partisan and personal incumbency effect, while the parameter α_0 measures the difference in the partisan probability of winning the electoral race between elections in which the incumbent officeholders cannot re-run for a mayor position and elections where parties can present incumbent candidates again. In other words, the parameter α_0 can be written as (see Lopes da Fonseca, 2018):

[4] $\alpha_0 = -Prob(Incumbent\ Reruns) * Personal\ Advantage$

Moreover, solving the system of two equations and two unknowns given by equation [2] and [4] provides us with a proper expression for both personal and partisan incumbency advantage:

[5] $Personal\ Advantage = -\alpha_0/Prob(Incumbent\ Reruns)$;

[6] $Partisan\ Advantage = (\delta_0/2) + \alpha_0$.

As a final step we replace the estimated δ_0 and α_0 in equation [5] and [6] by means of bootstrapping procedure with 1,000 replications also allowing standard errors to be clustered at municipal level, in order to get reliable estimates and bias-corrected confidence intervals.

3.3 Data Description

Our empirical analysis is based on a panel data set, provided by the Italian Ministry of the Internal Affairs. We end up with a sample composed by 18,141 observations (we have a bare winner and a bare loser from each election) for 4,682 Italian municipalities over the period 1993-2011[8].

For each municipal election we have information on the number of parties competing at the electoral race, and on the number of candidates who run for a mayor position at each election, on their gender, age, educational attainment, previous job, vote shares and party affiliation (Anagrafe degli Amministratori Locali, Ministero dell'Interno).[9] Using this information, we build our dependent variable *Win* that equals 1 if the party *i* wins the election at time *t* and zero otherwise, and *Incumbency* that is a dummy variable equal to 1 if a party is an incumbent. In other words, *Incumbency* is equal to

[8] Data before 1993 are not used in our analysis for different reasons. First, they are not publicly available from the Ministry of Internal Affairs website. Second, many parties dissolved because of Tangentopoli and it was not possible to observe their vote share and the probability of winning the competition at elections held after 1993. Last but not least, the electoral system before the reform was completely different and mayors were not directly elected by citizens. This does not allow us to compute the probability of re-running of incumbent mayors in the period before the introduction of the electoral policy.

[9] It is possible to obtain detailed data at the following website: http://amministratori.interno.it

one if the margin of victory at time *t-1* is positive and zero otherwise. We define the margin of victory of a party in multicandidate races as follows: the winner's vote margin is the difference between votes received by the winner and second-place party, divided by the number of valid ballots. Similarly, the margin of victory of a loser is the difference between votes received by the losing party and the votes obtained by the winner, divided by the number of valid ballots. This construct allows the margin of victory to be positive for winning parties and negative for losing parties (on average it is equal to -0.0399).

Using information on candidates' gender we have built a dummy variable *Female Candidate* taking the value of 1 for female candidates running for a mayor position and zero otherwise. The proportion of women, among the first two candidates, participating at the electoral competition is about 20% with a standard deviation of 0.39. Moreover, the average educational attainment of candidates (*Education of Candidates*) is quite high (15 years of education), highlighting how the majority of candidates has at least obtained a high-school diploma,[10] whereas the average age of the two best candidates running for a mayor position (*Age of Candidates*) is about 49.

Table 1: Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max	Observations[11]
Win	0.4935	0.4999	0	1	18,141
Electoral Margin (%)	-0.0399	0.0791	-0.1669	0.1668	18,141
No. Parties	4.1221	4.2682	1	40	18,141
Female Candidate	0.1985	0.3988	0	1	16,703
Age of Candidates	48.7358	7.3612	22	81	16,403
Education of Candidates	14.8576	2.6341	5	18	16,065
No. Candidates	2.9356	1.3379	1	16	16,701
Turnout	0.7403	0.0914	0.2085	0.9583	15,341
Population Size/1,000	9.7658	53.9674	0.0310	2,775.25	16,687
Education of Population	7.0838	0.8915	4.6331	10.7014	16,687
Employment/Population	0.2365	0.1315	0.0315	0.8457	16,649
Center-South	0.6036	0.4892	0	1	16,703

Source: Local Administrators Data set (1993-2011), Italian Ministry of Internal Affairs; Italian Census of Population (1991 and 2001).

Furthermore, for each municipal election we have information on the number of voters and the number of people eligible to vote. We measure *Turnout* as the ratio between the number of voters and the number of eligible voters. As shown in Table 1, Italy is characterized by a quite high electoral turnout compared to many European countries and to US: the average turnout in the period 1993-2011 has been of 74%, with a standard deviation of 0.0914.

Finally, we use the 1991 and 2001 Italian Census of Population to obtain time varying information at municipal level regarding population size, the number of employed individuals and the educational

[10] In Italy, it takes 13 years to attain a High-School Degree while 17-18 years are necessary to attain a College Degree. Moreover, the educational attainment of people with a PhD or a Master degree is always 18 years in our sample.

[11] The number of observations refers to the main specification reported in Table 4, where we estimate the model with the MSE optimal bandwidth of 0.167 around the threshold of margin of victory of zero.

attainment of the population[12]. The average population size of Italian municipalities is 9.7658. The population's number of years of education is, on average, 7.08, and the ratio between the number of employed individuals and the total number of inhabitants is 23.65%. Roughly 60% of municipalities are located in the Center-South of Italy.

4. Internal Validity of the Sharp RDD

In this section we check the validity of the Regression Discontinuity Design as a local randomized experiment. The general concern with our identification strategy is that some characteristics other than incumbency status vary discontinuously with respect to the margin of victory.

As shown by Lee and Lemieux (2010) if variation in the treatment near the threshold is approximately randomized, then it follows that all "baseline characteristics" – all those variables determined prior to the realization of the assignment variable – should have the same distribution just above and just below the cutoff. If there is a discontinuity in these baseline covariates, then at a minimum, the underlying identifying assumption of individuals' inability to precisely manipulate the assignment variable is unwarranted.

It is standard in the RD design to demonstrate that treatment and control groups are similar in their observed baseline covariates. It is similarly impossible to test whether unobserved characteristics are balanced in the experimental context, so the most favorable statement that can be made about the experiment is that the data "failed to reject" the assumption of randomization (Lee and Lemieux, 2010). In particular, we test for balance of observed characteristics, such as the educational attainment of candidates, the age of candidates running for a mayor position, the proportion of female candidates, the lagged margin of victory (in t-2), the lagged incumbency status (incumbency in the period before the election in t-1), the voter turnout, the number of candidates competing for election, the population's level of education, the employment rate and the proportion of cities located in the Center-South.

To check whether the assumptions of the RD are satisfied, we present a test of the continuity of the distribution of the covariates at the cut-point. The idea behind this kind of test is to regress a covariate on a dummy for the treatment status, controlling for a linear polynomial of the forcing variable along with a first-order interaction term between the treatment and the assignment variable: a statistically insignificant coefficient for the treatment dummy is taken as evidence in favor of local random assignment (Caughey and Sekhon, 2011; Lee, 2008; Lee, Moretti and Butler, 2004).

In Table 2 we test whether the incumbency status is predictive of a larger set of municipal and candidates' characteristics, by choosing the MSE optimal bandwidth, a half MSE optimal bandwidth and the CER bandwidth as suggested by Calonico *et al.* (2018) in the neighborhood of the margin of victory threshold, and by controlling also for municipal-time fixed effects. Moreover, we allow the

[12] We use the 1991 census for elections taking place from 1993 to 1997 and the 2001 census for elections taking place since 1998.

bandwidth to vary nearby the cut-off point for each covariate. Standard errors are robust to heteroskedasticity and are clustered at the municipal level.

Overall, Table 2 shows that the incumbency status does predict only two of the predetermined characteristics when we choose the MSE optimal bandwidth (column 1). However, the significance of the coefficient on our variable of interest disappears when we choose half MSE and the CER optimal bandwidths respectively.[13]

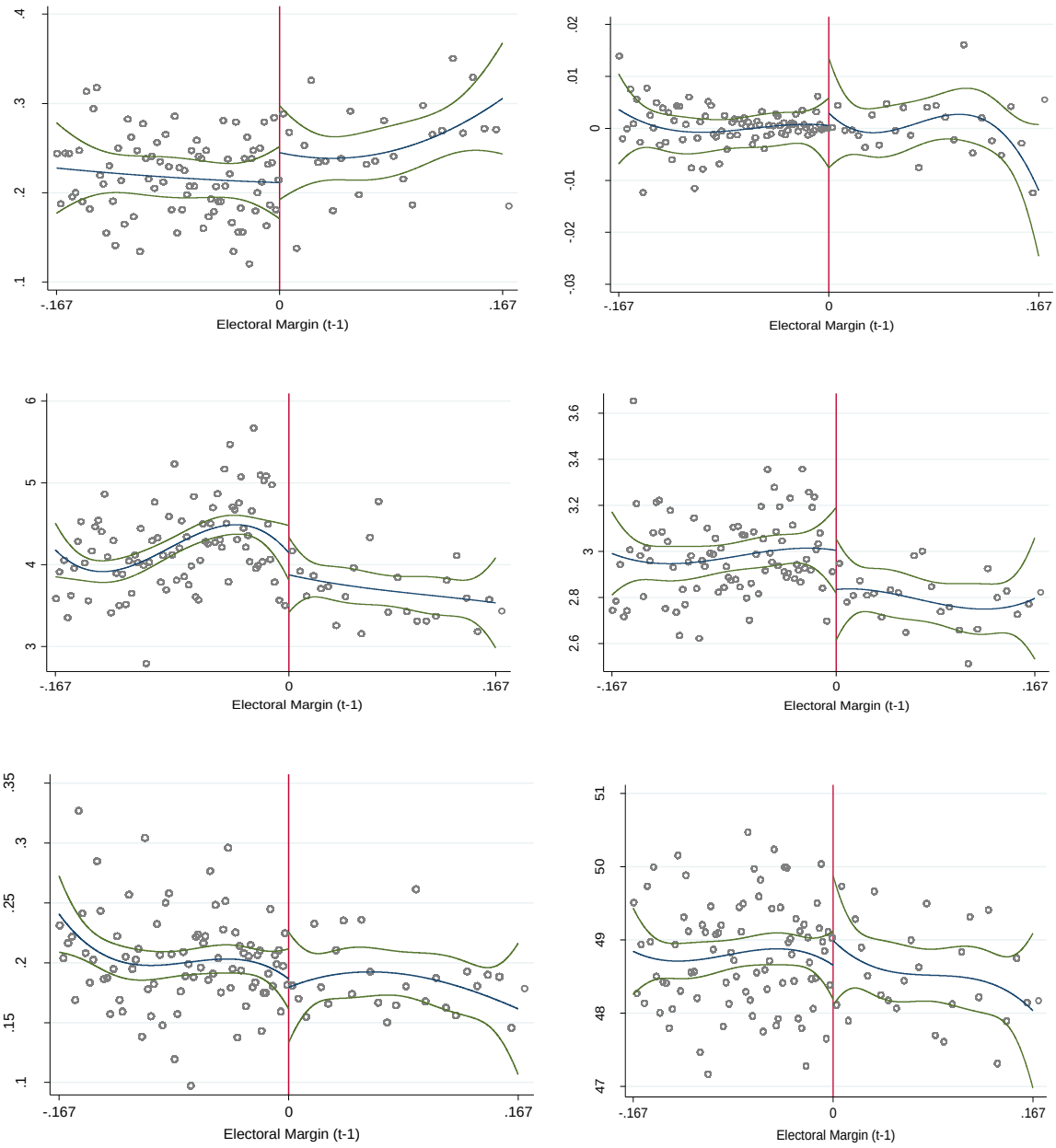
Table 2: Incumbency Effect and Predetermined Characteristics

Variables	Coefficient on Incumbency		
	MSE Optimal Bandwidth	Half MSE Optimal Bandwidth	CER Optimal Bandwidth
	(1)	(2)	(3)
Incumbency (t-1)	0.1094	0.2112	0.2492
	(0.0792)	(0.2134)	(0.1553)
Electoral Margin % (t-2)	-0.0083	0.0689	0.0084
	(0.0143)	(0.0606)	(0.0385)
No. Parties	-0.1276	2.8085	0.8836
	(0.6578)	(2.7040)	(1.8195)
Education of Candidates	0.3176	0.7661	0.8207
	(0.6810)	(2.0478)	(1.4572)
Age of Candidates	-2.6267	-4.7375	-1.2089
	(2.4954)	(8.0552)	(5.8519)
Female Candidates	-0.0709	-0.5699	0.1152
	(0.1155)	(0.3515)	(0.2689)
No. Candidates	-0.7765**	0.1878	-0.1917
	(0.3379)	(1.0499)	(0.7589)
Turnout	0.0385***	0.0311	0.0181
	(0.0100)	(0.0262)	(0.0198)
Education of Population	0.0406	0.0953	0.0481
	(0.0316)	(0.0805)	(0.0631)
Employment/Population	0.0082	0.0302	0.0263
	(0.0112)	(0.0343)	(0.0234)
Center-South	-0.0009	-0.0065	-0.0042
	(0.0009)	(0.0065)	(0.0042)

Notes: The dependent variable is specified in each row. The regression regresses the dependent variable on the incumbency status. In each regression we control for, annual and municipal fixed effects and for a linear polynomial of the assignment variable, along with a first-order interaction term between the treatment and the forcing variable. Robust standard errors are in brackets, clustered at municipal level. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

In Figure 1, we present the predetermined characteristics plotted against the margin of victory at time *t-1*. Each figure depicts the assignment variable cell means of the predetermined characteristics in the proximity of margin of victory threshold, along with the fitted values of a locally weighted regression which is calculated within each segment. In general, the figure only show small differences at the threshold point that are not statistically significant at conventional levels, based on the confidence intervals.

[13] The same findings hold true when we implement a difference-in-means test for the predetermined characteristics mentioned above between bare winners and bare losers, and when we run the same regression as that displayed in Table 2 by using as dependent variable the lagged values of the predetermined characteristics (results are available upon request).


.4
.3
.2
.1
-.167
0
.167
Electoral Margin (t-1)
.02
.01
0
-.01
-.02
-.03
-.167
0
.167
Electoral Margin (t-1)
6
5
4
3
-.167
0
.167
Electoral Margin (t-1)
3.6
3.4
3.2
3
2.8
2.6
-.167
0
.167
Electoral Margin (t-1)
.35
.3
.25
.2
.15
.1
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Electoral Margin (t-1)
51
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48
47
-.167
0
.167
Electoral Margin (t-1)

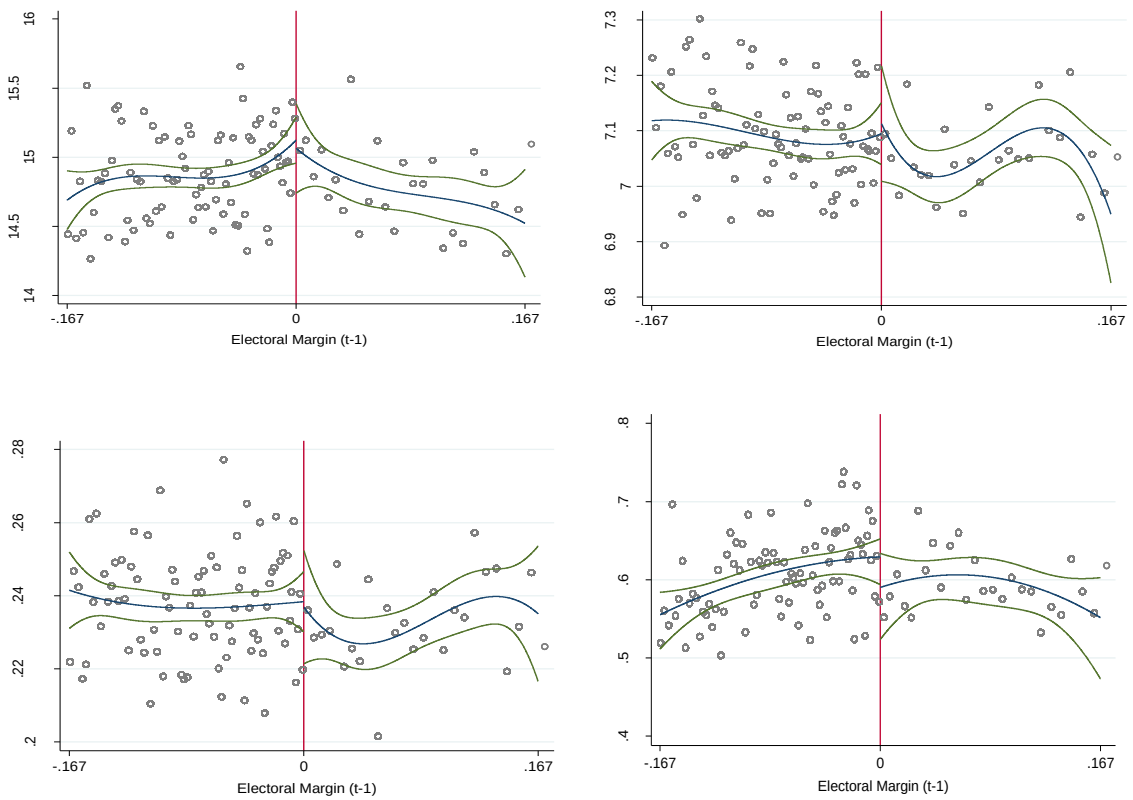

Figure 1: Discontinuity of the Predetermined Characteristics

As a further specification test of our design, we plot, in Figure 2, the histogram of the margin of victory around the zero cutoff, with a bin of 50. If there were any discontinuities in the histogram at the cutoff point, one might be concerned that incumbent parties are able to manipulate the margin of victory at time *t-1*, or in other words if individuals have a great deal of control over the assignment variable and if there is a perceived benefit to a treatment, one would certainly expect individuals on one side of the threshold (incumbents) to be systematically different from those on the other side (challengers).

One leading class of explanations for manipulation of vote share by incumbent parties focus on incumbent control over voter information and individual effort. Essentially, the perks of public office may allow incumbents to strategically manipulate voter information and individual effort in order to signal their desirability to voters (Besley, 2006; Ashworth, 2006; Serra and Moon, 1994). Moreover, in the pre-electoral stage, incumbents may have advantages in the mobilization of campaign funds and political endorsements through stronger political networks and the incentives of potential contributors to align themselves with the expected winner (see Gordon and Landa, 2009). In this setting, we expect incumbent parties to have a certain amount of influence on their vote share, but precise sorting would require extensive manipulation. For example, incumbents would not only need to know that the election will be close in advance, but that they are just short of winning and then be able to manipulate to vote into a win for them. In the left panel of Figure 2 we plot the histogram of the forcing variable, whereas in the right panel we zoom the histogram to observations closer to the cut-off within the MSE-optimal

bandwidth (*h* of 0.167 above and below the threshold of zero). However, as Figure 2 depicts, the histograms do not show any big jump around the threshold.

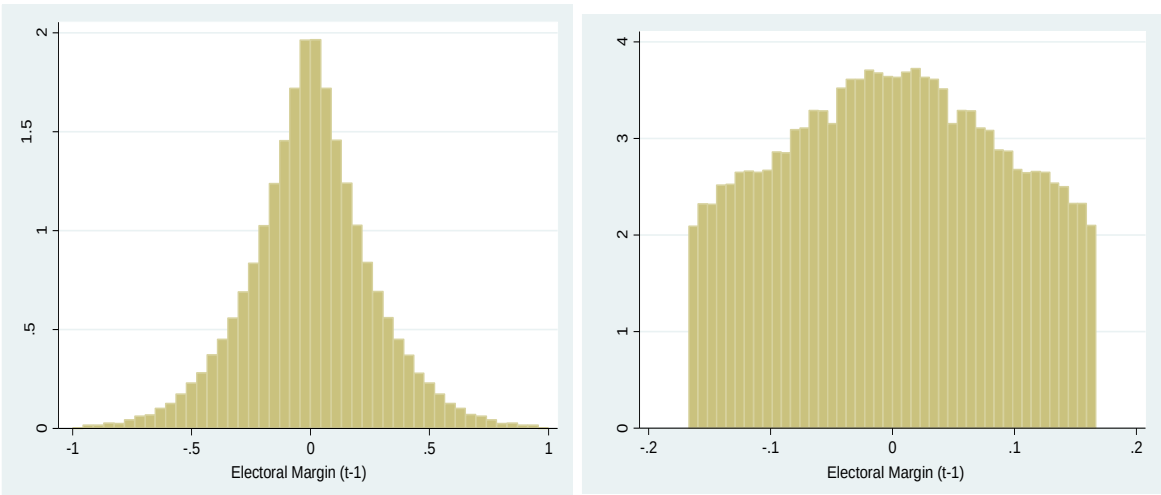

Figure 2: Histogram of the Margin of Victory (t-1)

These results are confirmed by Figure 3, in which a McCrary test is performed by running a kernel local linear regressions of the log of the density separately on both sides of the threshold (McCrary, 2008). As we can see from the left panel of Figure 3, the log-difference between the frequency to the right and to the left of the threshold is not statistically significant at conventional levels (it is equal to -0.0164 with a standard deviation of 0.0439). Moreover, in the right panel we focus on observations within a range of 0.167 above and below the cut-off of zero. Again, we do not find any statistically significant jump nearby the threshold (the log-difference in height is -0.0328 with a standard deviation of 0.0439).

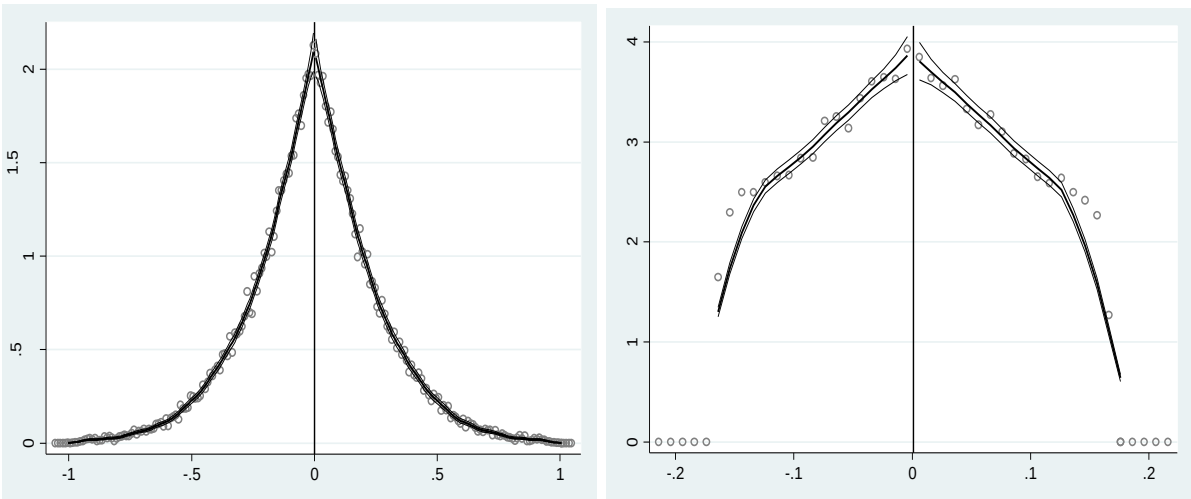

Figure 3: McCrary test – Manipulation Assignment Variable

As a final check we present in Table 3 two different manipulation tests, as proposed by Calonico *et al.* (2018): the conventional test statistic and the robust bias-corrected statistic. We always use a second-order polynomial for the construction of the density point estimator, and a triangular kernel function. Moreover, we adopt different bandwidths to show that results do not change based on the specification and bandwidth used. In column (1) we use the MSE-optimal bandwidth of each density separately, whereas in column (2) and (3) we use the MSE of the sum of densities, and a combination of the two previous alternatives. We report the value of the statistic and the p-value in brackets. All in all we can note that results confirm no manipulation of the assignment variable.

Table 3: Manipulation Test

	MSE Optimal Bandwidth	**Sum MSE Optimal Bandwidth**	**Median (MSE; Sum MSE) Optimal Bandwidth**
	(1)	**(2)**	**(3)**
Conventional	-0.0238	-0.0079	-0.0238
	(0.9810)	(0.9937)	(0.9810)
Bias-Corrected	-0.0309	-0.0617	-0.0309
	(0.9753)	(0.9508)	(0.9753)
Polynomial	Second	Second	Second
Order bias (q)	Third	Third	Third
Bandwidth (h)-Left	0.085	0.073	0.085
Bandwidth (h)-Right	0.084	0.073	0.084

Notes: The optimal bandwidth is specified in each row. P-values are in brackets. The symbols ***, **, * indicate that the log difference of the density to the left and to the right of the cut-off is statistically significant, respectively, at the 1, 5, and 10 percent level.

5. Main Results

Table 4 presents the main Local Linear Regression (LLR) results where a MSE-optimal bandwidth, as suggested by Calonico *et al.* (2018), is used. In all specifications we control for a first-order polynomial of the assignment variable along with a first-order interaction term between our treatment and the vote margin at time *t-1*. In column (1), in which we estimate equation [1] and control for year and municipal fixed effects only, we find that the incumbent party has an advantage in winning the electoral competition at time *t* of about 27.4 percentage points, implying that incumbent parties (bare winners) are more likely to win the competition compared to their challengers (bare losers).

In column (2) we add some characteristics of candidates (age, educational attainment and a dummy variable taking the value of 1 if there is a woman among candidates running for a mayor position), of municipalities (employment rate, voter turnout, education of population, and population size), and the number of parties competing at elections to account for a measure of political competition, as control variables. Again we find a positive and statistically significant incumbency effect on the probability of winning the electoral competition at time *t.*

All in all, the incumbency effect is always positive, statistically significant at 1 percent level and stable across specifications displayed in column (1) and (2) of Table 4. This reassures us that adding further control variables does not dramatically affect the impact of our variable of interest on the

probability of winning the competition at time *t*. In other words, results confirm the random assignment of the incumbency status around the threshold of margin of victory of zero (Imbens and Lemieux, 2008)[14].

Nonetheless, as shown by Fowler and Hall (2014) and Erikson and Titiunik (2015), the coefficient attached to our variable of interest incorporates both the partisan and personal incumbency effect, as the advantage in winning the electoral race might depend simultaneously on the strength of incumbent parties and on the intrinsic characteristics of incumbent candidates, for instance. This is the case when the incumbent candidate is allowed to re-run at next elections. In order to disentangle the above mentioned effects, in column (3) we take a different strategy and estimate equation [3] in the neighborhood of the threshold of zero, exploiting an exogenous variation in the incumbency status of candidates coming from the introduction of a term limit for incumbent officeholders.

In particular, we add a dummy variable taking the value of 1 if the incumbent officeholder faces a binding term limit (she/he has already served two consecutive mandates, and in turn she/he cannot run at elections) and 0 otherwise, and interact it with all the variables on the right-hand side of equation [1]. The coefficient of the interaction term between the treatment and the term limit measures the difference in the probability of winning the electoral race between incumbent parties across elections (held in the same municipality *j*) characterized by a binding/slack term limit: it is negative (the impact on the outcome variable is of -17.9 percentage points) and significant at 1 percent level. The same results hold true when in column (4) we add the control variables as in column (2).

Table 4: RDD Estimates (Binding vs Slack Term Limit)

	(1)	(2)	(3)	(4)
VARIABLES	Pr(win)	Pr(win)	Pr(win)	Pr(win)
Incumbency	0.274***	0.282***	0.426***	0.433***
	(0.022)	(0.024)	(0.047)	(0.051)
Incumbency*Term Limit			-0.179***	-0.181***
			(0.052)	(0.057)
Constant	0.476***	0.107	0.435***	0.060
	(0.006)	(0.088)	(0.013)	(0.091)
Bandwidth	MSE	MSE	MSE	MSE
Forcing Variable Polynomial	First	First	First	First
Interaction Term	First	First	First	First
Controls	No	Yes	No	Yes
Observations	18,141	14,697	18,141	14,697
R-squared	0.027	0.029	0.028	0.031
Number of Municipalities	4,682	4,184	4,682	4,184

Notes: The dependent variable is the probability of winning the election at time t. We control for municipalities fixed effects and for electoral year dummies (not reported) in all the regressions. Standard errors (corrected for heteroskedasticity and clustered at the municipality level) are reported in parenthesis. The symbols ***,**,* indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

[14] We also find a positive and statistically significant effect of the incumbency status on the vote share (results are available upon request).

RDD results are also shown in Figure 4. In particular, we plot the estimated probability of winning the electoral competition at time *t* against the margin of victory at time *t-1*, close to the zero threshold, with a MSE-optimal bandwidth of 16.7 percent above and below the cutoff, by using a nonparametric methods, and in turn estimating a model that does not assume a functional form between our dependent variable and the forcing variable (Hahn et al., 2000). In the left panel we focus on elections where the incumbent officeholder is allowed to re-run, whereas in the right panel we show the partisan incumbency advantage for elections characterized by a binding term limit for incumbent officeholders.

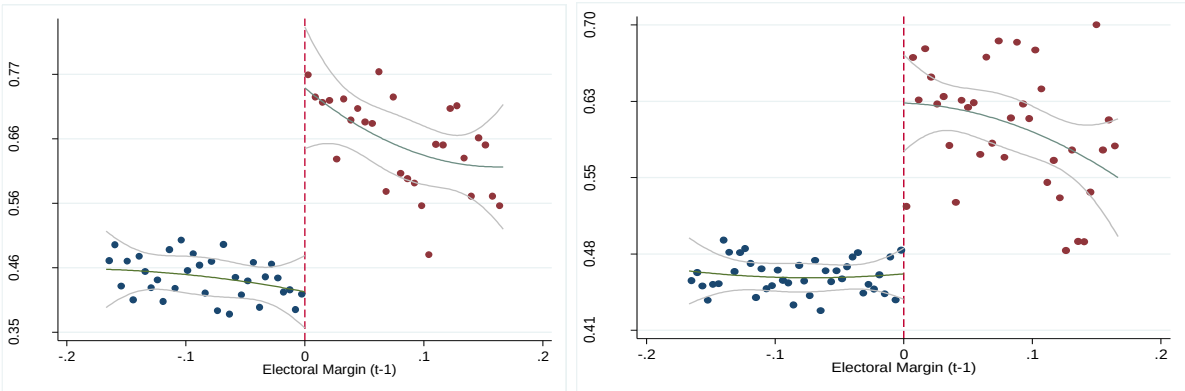

Figure 4: Incumbency Advantage (Slack and Binding Term Limit)

The circles represent the raw probability of winning, while the connected points are the predicted values from a linear probability model of an indicator variable for victory at time *t* on the margin of victory at time *t-1*. As shown in the first panel, there is a sharp discontinuous jump right at the zero cutoff. Barely winners are much more likely to succeed in the next election, compared to bare losers. The same findings are highlighted in the second panel, although the effect of the incumbency on the probability of winning the electoral competition is much smaller, as expected. Overall, the descriptive graphs confirm results displayed in Table 4.

As a final step, to recover the personal and partisan incumbency effect, we need not only the coefficient of *Incumbency* and of the interaction term between *Incumbency* and *Term Limit* but also the probability that the incumbent officeholder re-runs for elections. The latter is obtained by simply regressing a dummy variable taking the value of 1 if the incumbent candidate reruns and 0 otherwise on a first-order polynomial of the forcing variable, i.e. the vote margin at time *t-1*. Results are displayed in the top panel of Table 5.

Moreover, we replace the three inputs in equation [5] and [6] simultaneously by means of a non-parametric bootstrapping procedure with 1,000 replications. This way we are able to get both the personal and the partisan incumbency advantage along with 95% bias-corrected confidence intervals. All in all, from the bottom panel of Table 5 we can notice that the personal incumbency advantage is strong and significant at 1 percent level, whereas it seems that the partisan incumbency is negative, even if not statistically significant at conventional levels.

Table 5: Personal and Partisan Incumbency Advantage

	Winning Probability
Incumbency	0.274***
	[0.230; 0.318]
Incumbency*Term Limit[15]	-0.179***
	[-0.279; -0.074]
Probability of re-running	0.526***
	[0.401; 0.663]
Incumbency Advantage	
Personal	0.341***
	[0.130; 0.582]
Partisan	-0.042
	[-0.149; 0.067]

Bias-corrected intervals are in brackets. We control for municipal and year fixed effects. The symbols ***,**,* indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

Our results are in line with those found by Lopes da Fonseca (2017) for local elections in Portugal, and by Fowler and Hall (2014) for US state legislatures. Findings suggest how voters attach more value to the personal characteristics of incumbent officeholders rather than to the party labels at the local level in Italy. Moreover, the relevance in using term limits is stressed: when incumbent candidates are forced out by term limits, their parties do not receive any benefit, as the partisan advantage is small and negative. In addition, term limits lead to a higher level of political competition, reducing the likelihood of developing a persistent monopoly by parties (Fowler and Hall, 2014).

To better investigate whether the incumbency effect is heterogeneous among municipalities, in Table 6 we present the results for cities located in the Center-South and in the North of Italy. This way we take into account that the incumbency advantage may be dissimilar in different parts of Italy. In particular, Italy is very heterogeneous in terms of economic and social condition, with the northern part being richer and endowed with higher social capital compared to the South. In columns (1), and (2) we look at the overall incumbency effect for municipalities located in the Center-South and in the North of Italy respectively, whereas in column (3) and (4) we replicate estimations presented in column (3) of Table 4 again for southern and northern cities.

As highlighted in the first two columns of Table 6 in both areas there is an incumbency effect in terms of winning the election at time *t*: the coefficient on our variable of interest (*Incumbency*) is positive and statistically significant at 1 percent level.

However, the impact on the outcome variable seems to be larger in terms of magnitude for southern municipalities compared to those located in the North. In particular, bare winners are 29.4 percentage points more likely to win the competition compared to bare losers in the North. On the other hand, for

[15] The coefficients of *Incumbent* and *Incumbent*Term Limit* refer to the specifications reported in column (1) and (3) of Table 4, where we do not add any control variables.

northern municipalities the incumbency advantage is 25 percentage points roughly. We further test for the difference of the coefficients on *Incumbency* between southern and northern cities: it is significant at 10 percent level, suggesting that in the Center-South the advantage in winning the electoral race by incumbent parties is larger compared to that in the North of Italy (results are the same when control variables are included in the model)[16].

Table 6: RDD Estimates (LLR) –Incumbency Advantage South vs North

	(1)	(2)	(3)	(4)
VARIABLES	Pr(win) Center-South	Pr(win) North	Pr(win) Center-South	Pr(win) North
Incumbency	0.294***	0.247***	0.508***	0.304***
	(0.027)	(0.036)	(0.057)	(0.081)
Incumbency*Term Limit			-0.253***	-0.065
			(0.064)	(0.089)
Constant	0.479***	0.470***	0.435***	0.436***
	(0.007)	(0.012)	(0.015)	(0.027)
Bandwidth	MSE	MSE	MSE	MSE
Forcing Variable Polynomial	First	First	First	First
Interaction Terms	First	First	First	First
Controls	No	No	No	No
Observations	10,971	7,071	10,971	7,071
R-squared	0.029	0.025	0.031	0.025
Number of Municipalities	2,625	2,010	2,625	2,010

Notes: The dependent variable is the probability of winning the election at time t. We control for municipalities fixed effects and for electoral year dummies (not reported) in all the regressions. Standard errors (corrected for heteroskedasticity and clustered at the municipality level) are reported in parenthesis. The symbols ***,**,* indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

In the last two columns we add the variable *Term Limit* and we interact it with all the right-hand side variables as in equation [1]. In the Center-South, when incumbent officeholders face a binding term limit the winning probability of incumbent parties reduces by 25.3 percentage points, whereas in the northern municipalities the coefficient attached to the interaction term is negative but not statistically significant at any conventional levels. Also, the difference between the coefficients attached to *Incumbency* and between the coefficients attached to the interaction term by area groups are statistically significant at 1 (p-value: 0.0079) and 5 percent (p-value: 0.0328) level respectively. All in all, these results suggest that in the Center-South of Italy the main driver of the incumbency effect in winning the electoral competition is the personal incumbency advantage, compared to cities in the northern part of the country, where voters are more interested in the parties' activity rather than in the intrinsic characteristics of candidates.

This heterogeneous effect might be due to the different channels through which the incumbency status affects the outcome variable in municipalities located in the Center-South compared to those in

[16] In order to test for the difference between the coefficients of interest, we use the *suest* command in Stata with the price of not including municipal fixed effects. When we add province fixed effects results are unchanged. Moreover, results are still the same when rather than estimating regressions separately for Center-South and North, we use observations within the MSE-optimal bandwidth and interact all the variables by a dummy taking the value of 1 if cities are located in the Center-South and 0 otherwise.

the North of Italy. In fact, as highlighted by Stolfi et al. (2016)[17] in less economically developed regions there is a greater share of 'exchange' voters, i.e. electors who decide to go to the polls and cast votes exclusively because of personal benefits they receive once incumbents are re-elected (see for instance Bellucci, 1991). This point of view is supported by studies (see Chiaramonte and Di Virgilio, 2000; Fantozzi and De Luca, 2010) showing that higher prevalence of preference voting and greater voter mobility characterize poorer southern regions compared to richer regions located in the North of Italy. Conversely, in rich areas clientelistic relationships are less frequent, and in turn citizens are more likely to punish bad performing incumbents by increasing support for challengers, to reward well performing incumbents, and to attach a great relevance to party labels, leading in this case to an increase in the probability of winning the electoral race by parties.

Nonetheless, we are aware that the heterogeneous effect is very hard to be interpreted as causal, as many other factors might differ between Center-South and North, and in turn, we can never fully attribute the differences found to a specific dimension. While the effect we find is causal within each geographical area, we cannot state that it is the north-south dimension that causally leads to these differences. As a consequence, our South-North results must be only taken as suggestive about the potential different mechanisms driving incumbents to win the electoral competition in the two main geographical areas.

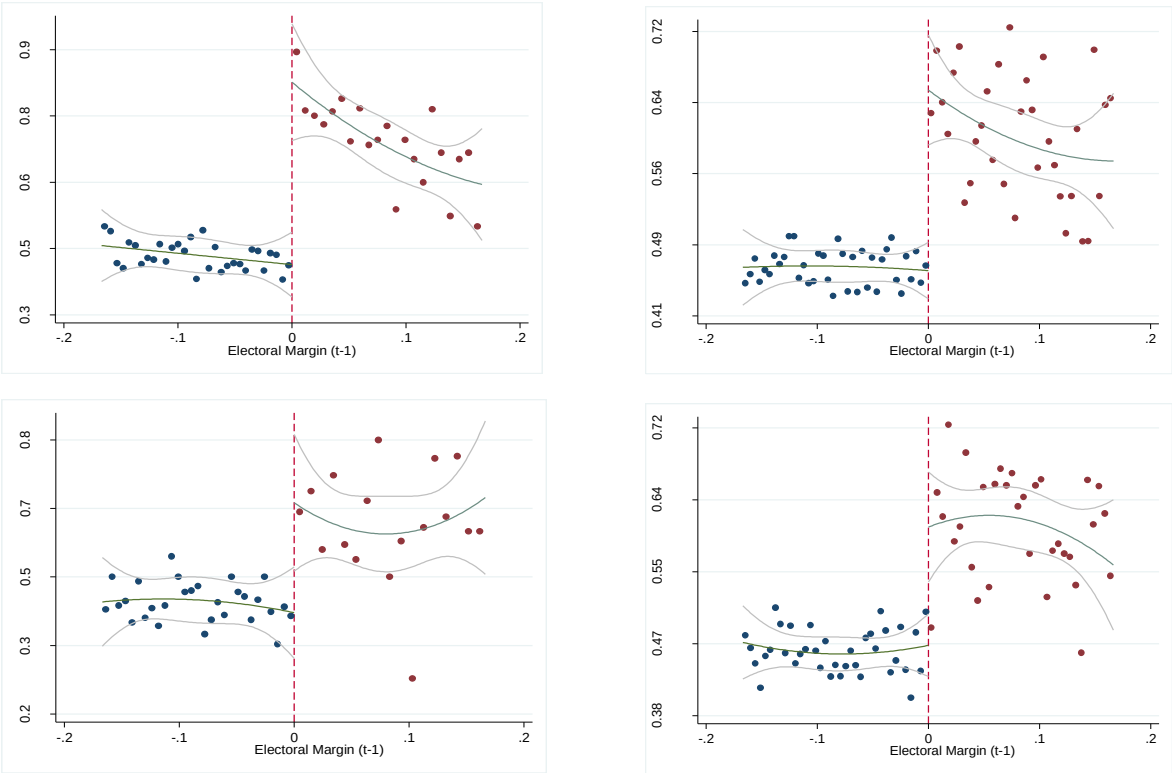

Figure 5: RDD Estimates – Incumbency Advantage (Center-South vs North)

[17] Stolfi et al. (2016) find that in less developed areas in Italy voters are dependent on the income provided by incumbents compared to voters in richer areas, and in turn incumbents are better able to use clientelistic government spending for short-term electoral advantage in the former than in the latter.

Our findings about Center-South and North are presented in Figure 5. In the top panels we show the partisan incumbency advantage for southern municipalities in elections with a slack (top-left) and a binding (top-right) term limit for incumbent officeholders. We can notice that the probability of winning the competition by incumbent parties is smaller when the incumbent candidates cannot rerun at elections, suggesting a personal incumbency advantage as a main driver of the discontinuity nearby the threshold of zero. Conversely, in the bottom panels the focus in on municipalities located in the North. In this case, the sharp change in the outcome variable is similar between elections held with a binding/slack term limit, highlighting a negligible personal effect. Again, the descriptive graphs are in line with findings presented in Table 6.

As before, we directly recover the personal and partisan incumbency advantage in the two main geographical areas. Results are displayed in Table 7 and show that in the Center-South the personal incumbency advantage is positive and strong, whereas in the North, it is negligible and not statistically significant at any conventional levels.

Table 7: Personal and Partisan Incumbency Advantage (Center-South vs North)

	Winning Probability Center-South	**Winning Probability North**
Incumbency	0.294***	0.247***
	[0.238; 0.347]	[0.170; 0.312]
Incumbency*Term Limit[18]	-0.253***	-0.065
	[-0.377; -0.115]	[-0.245; 0.122]
Probability of re-running	0.465***	0.612***
	[0.300; 0.639]	[0.399; 0.822]
Incumbency Advantage		
Personal	0.544***	0.107
	[0.251; 1.014]	[-0.194; 0.435]
Partisan	-0.106	0.058*
	[-0.238; 0.029]	[0.001; 0.249]

Bias-corrected intervals are in brackets. We control for municipal and year fixed effects. The symbols ***,**,* indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

6. Robustness Checks

In this section we check the robustness of our results. Firstly, we consider different bandwidths in the neighborhood of the discontinuity point (Local Linear Regression). Table 8 reports the findings for the discontinuity samples. In all specifications we control for a first-order polynomial of the forcing variable together with a linear interaction term between the assignment variable and the treatment, and for municipal-year fixed effects.

[18] The coefficients of *Incumbent* and *Incumbent*Term Limit* refer to the specifications reported in Table 6.

In Panel (a) of Table 8, we choose a CER-optimal bandwidth as proposed by Calonico *et al.* (2018) around the electoral margin threshold, whereas in Panel (b) we select half of the MSE-optimal bandwidth as used in Table 4. Moreover, in odd columns we highlight the overall advantage an incumbent party has in winning the election with respect to its best challenger in the whole sample, in the Center-South and in the North of Italy respectively. Conversely, in even specifications we estimate equation [3] in the neighborhood of the cut-off using the two different bandwidth selection procedures mentioned above. Findings are not affected by the choice of the bandwidths and are very similar to those highlighted in Table 4 and 6.

Table 8: RDD Estimates –Discontinuity Samples

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Pr(win) All Sample	Pr(win) All Sample	Pr(win) Center-South	Pr(win) Center-South	Pr(win) North	Pr(win) North
Panel (a): CER Optimal Bandwidth						
Incumbency	0.285***	0.514***	0.325***	0.588***	0.227***	0.417***
	(0.029)	(0.064)	(0.037)	(0.075)	(0.049)	(0.112)
Incumbency*Term Limit		-0.272***		-0.309***		-0.229*
		(0.071)		(0.086)		(0.123)
Constant	0.473***	0.421***	0.478***	0.437***	0.460***	0.386***
	(0.009)	(0.019)	(0.010)	(0.021)	(0.018)	(0.040)
Observations	12,091	12,091	7,429	7,429	4,599	4,599
R-squared	0.034	0.036	0.036	0.039	0.034	0.035
Number of Municipalities	3,788	3,788	2,193	2,193	1,565	1,565
Panel (b): Half MSE Optimal Bandwidth						
Incumbency	0.298***	0.507***	0.349***	0.599***	0.225***	0.391***
	(0.032)	(0.072)	(0.041)	(0.087)	(0.054)	(0.128)
Incumbency*Term Limit		-0.248***		-0.293***		-0.196
		(0.081)		(0.098)		(0.141)
Constant	0.469***	0.414***	0.466***	0.428***	0.469***	0.372***
	(0.0100)	(0.0219)	(0.0115)	(0.0245)	(0.0211)	(0.0484)
Observations	10,514	10,514	6,468	6,468	3,995	3,995
R-squared	0.035	0.037	0.037	0.041	0.034	0.035
Number of Municipalities	3,497	3,497	2,029	2,029	1,444	1,444
Forcing Variable Polynomial	First	First	First	First	First	First
Interaction Term	First	First	First	First	First	First
Controls	No	No	No	No	No	No

Notes: The dependent variable is the probability of winning the election at time t. We control for municipalities fixed effects and for electoral year dummies (not reported) in all the regressions. Standard errors (corrected for heteroskedasticity and clustered at the municipality level) are reported in parenthesis. The symbols ***, **, * indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

As a second robustness check, we re-estimate all the specifications reported in Table 4, but now we add a second-order polynomial of the assignment variable along with the interaction terms between our treatment and different polynomial functions of the assignment variable (until the second order), to check whether our model is well-specified, and whether the coefficient attached to *Incumbency* and to

the interaction between *Incumbency* and *Term Limit* are stable in terms of sign and magnitude independently from the specification used. In fact, as stated by Lee and Lemieux (2010), trying more flexible specification of our model by adding polynomials in the forcing variable as regressors is an important and useful way of assessing the robustness of the RD estimates of the treatment effect.

Table 9 shows the main results. Overall, findings are very similar to those displayed in Table 4. We also investigated whether results change when we add a third-order polynomial of the vote margin at time *t-1* (and the relative interaction term) or when we implement a third-order spline regression using all of information in our sample. We find similar outputs for the whole sample, and also when we run separate regressions for cities located in the Center-South and North of Italy (not reported, but available upon request).

Table 9: RDD Estimates – Interaction Terms

	(1)	(2)	(3)	(4)
VARIABLES	Pr(win)	Pr(win)	Pr(win)	Pr(win)
Incumbency	0.271***	0.285***	0.475***	0.515***
	(0.031)	(0.035)	(0.068)	(0.071)
Incumbency*Term Limit			-0.241***	-0.277***
			(0.077)	(0.082)
			(0.623)	(0.699)
Constant	0.476***	0.105	0.424***	0.041
	(0.008)	(0.088)	(0.019)	(0.092)
Bandwidth	MSE	MSE	MSE	MSE
Forcing Variable Polynomial	Second	Second	Second	Second
Interaction Term	Second	Second	Second	Second
Controls	No	Yes	No	Yes
Observations	18,141	14,697	18,141	14,697
R-squared	0.027	0.029	0.028	0.031
Number of Municipalities	4,682	4,184	4,682	4,184

Notes: The dependent variable is the probability of winning the election at time t. We control for municipalities fixed effects and for electoral year dummies (not reported) in all the regressions. Standard errors (corrected for heteroskedasticity and clustered at the municipality level) are reported in parenthesis. The symbols ***,**,* indicate that coefficients are statistically significant respectively at the 1, 5, and 10 percent level.

7. Concluding Remarks

In this paper we separately estimate the personal and the partisan incumbency advantage at the local level in Italy, using an empirical design that fully overcomes many drawbacks characterizing previous research. We exploit not only the exogenous variation in the partisan incumbency status looking at very close races, but also the exogenous change in the mayor incumbency status through a constitutional reform implemented in 1993 that keeps the partisan incumbency status invariable. The Italian law introduced a two-term limit for incumbent officeholders, and affected elections differently, given the staggered scheduling of local electoral races across cities and over time.

In particular, our findings show that incumbent parties have a higher probability of winning the electoral competition compared to their challengers, and this upward change is essentially due to a

personal incumbency advantage: the winning probability drastically reduces when incumbent officeholders cannot run at elections because of a binding term limit within the same municipality.

In addition, our results, in line with those found in the literature, have some policy implications. First, they highlight the relevance of using mayoral term limits as, on the one hand, they reduce the opportunity by incumbent officeholders to divert public resources and to use “red-tape procedures”, and on the other hand, they might limit the monopolistic power of incumbent parties, leading to more competitive elections.

Second, as the incumbency status might affect the probability of winning the electoral race in different parts of Italy through dissimilar channels (the northern part is richer and endowed with higher social capital compared to the South), we estimate the personal and partisan advantage in these two main geographical areas. In poor areas characterized by low levels of information, incumbent politicians might use their power and resources to obtain "exchange votes" enhancing the likelihood of winning the political competition. This type of relationship based on the log-rolling usually characterizes the poorest areas of a country, such as the southern part of Italy, and might be stronger in the presence of an incumbent running for re-election. In other words, time spent in office might have favored the occurrence of corrupt behaviors of incumbent officeholders.

Even though our findings for Center-South and North are only suggestive, as many other factors might differ between these two main areas, making hard to attribute the heterogeneous effect found to a specific dimension, we highlight how in the Center-South the personal advantage is very strong and positive, as expected, whereas it is negligible in the northern part of Italy.

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