Birkbeck
UNIVERSITY OF LONDON

Birkbeck Working Papers in Economics & Finance

Incumbency Advantage at Municipal Elections in Italy: A Quasi-Experimental Approach

Marco Alberto De Benedetto
Birkbeck, University of London

July 2014

Incumbency Advantage at Municipal Elections in Italy: A Quasi-Experimental Approach[1]

Marco Alberto De Benedetto

Department of Economics, Mathematics and Statistics, Birkbeck College

Abstract

We analyze the incumbency effect on a candidate's electoral prospects using a large data set on Italian municipal elections held from 1993 to 2011. We apply a non-parametric Sharp Regression Discontinuity Design that compares candidates who barely win an election to those who barely lose, exploiting the fact that incumbency status changes discontinuously at the threshold of margin of victory of zero. We find that incumbents are more likely to win the competition compared to their challengers at the Italian municipal elections. 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 North of Italy compared to southern municipalities.

JEL Classification: D72, D78; J45

Keywords: Incumbency Status; Political Participation; Sharp RDD.

1. Introduction

A growing body of literature emphasizes the crucial role played by political institutions in the process of economic development and in particular, how the distribution of political power[2] improves economic performance and determines the allocation of resources, even in a democracy (Acemoglu, 2002). According to the fiscal common theory (Tullock, 1959; Buchanan and Tullock, 1962), politicians once elected, in order to obtain a greater electoral support, try to use their influence to redirect resources to particular groups of constituents to the detriment of the general community. The fact that holding political power makes such a difference is the reason that democratic governments are founded on the principle that voters should ultimately decide which representatives are chosen to wield power[3] (Pande, 2003).

---

[2] The political power is defined as an authority held by a group within a society that allows for the administration of public resources and implements policies for the society. Distribution of power is in balance when each decision is made by the group of individuals (politicians and citizens) affected by the consequences of the decision per se. Acemoglu (2002) shows that inefficient institutions and policies are chosen because they serve the interests of politicians or social groups that hold political power at the expense of the rest. Related to this argument, Acemoglu and Robinson (2000b, 2002) explain why rulers who fear replacement may pursue the wrong policies for the society. In that paper, rulers who fear replacement are more likely to resist the introduction of superior technologies or institutions when these changes may erode their incumbency advantage and their potential future political power.

[3] Further, since long tenure in public office leads to abuse of power, legislators in many democracies are subject to a term limit.

The major risk in a democracy is that elected officials will become entrenched or that running for office may simply become too expensive for fresh-candidates. By the nature of the democratic system, being incumbent is intrinsically advantageous since he/she 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.

For this reason, a large literature has investigated 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, defined as the votes gained by a candidate once he/she becomes an incumbent from constituency service, name recognition, and the like, 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)[4], 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[5].

Furthermore, 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, 2012), highlighting again mixed results. In fact, Ferreira and Gyourko (2009) and Hainmueller and Kern (2008) find that the partisan incumbency status positively affects the probability of re-election and the likelihood of winning the competition in the US and in German districts at federal elections respectively. Conversely, Titiunik (2011), by using the same methodology

---

[4] 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).

[5] 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.

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.

In this paper we provide new evidence of the incumbency effect on a candidate's electoral prospects, using a large data set on Italian municipal elections held from 1993 to 2011. 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 arguing that local elections rarely make much difference in political life (Koryakov and Sisk, 2003) we study the *personal* 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.

As far as the methodology implemented to recover the causal incumbency effect is concerned, the main difficulty in empirically estimating incumbency advantage/disadvantage is omitted variable bias, since 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). In order to overcome the problem of selection bias and omitted variable bias, we implement a regression discontinuity design (RDD). We focus on very close elections which are decided by a narrow margin of victory. The bare winners and bare losers of these elections are assumed to be comparable in all their baseline characteristics (we discuss this assumption in Sub-Section 3.1). This implies that bare losers provide a valid counterfactual for bare winners with regard to subsequent electoral outcomes. By comparing these outcomes we identify the causal effect of the incumbency status.

We believe that the contribution of our paper is twofold. Firstly, the literature investigating the incumbency advantage/disadvantage for European countries is scant, and in particular, 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 he/she has already performed the same charge in the past. In particular, our Sharp Regression Discontinuity estimates show that the *personal*

incumbency effect, after controlling both for candidates and municipalities' characteristics as well as for partisan swing and partisan incumbency, is about 34.3 percentage points, implying that incumbents (bare winners) are more likely to win the competition compared to their challengers (bare losers). Similar results are found when we use as dependent variable the vote share at time t (the *personal* incumbency effect is roughly 17 percentage points)[6], after controlling for municipalities and candidates' characteristics. Moreover, our findings are in line with those found in the literature (see for instance Alford and Brady, 1988; Gelman and King, 1990), although the methodology used in the previous papers does not take into account potential omitted variable bias. However, the effect we find is larger in terms of magnitude, maybe because we focus our analysis on local elections where the incumbency status explains most of the variation in the probability of winning the electoral competition compared to federal or national elections. To the best of our knowledge, the only authors using the Regression Discontinuity Design to find the causal effect of the *personal* incumbency status on the probability of winning the electoral competition are Uppal (2009) who finds an incumbency disadvantage of 22 percentage points over the probability of winning at time t after 1991 at Indian state elections, and Trounstine (2011) who highlights an incumbency advantage of 32 percentage points at city council elections between 1915 and 1985 in four U.S. cities.[7]

Secondly, we study the personal 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 both the votes share as well as 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). On the other hand, in areas characterized by general discontent as the South of Italy, incumbents may have some difficulties in satisfying the majority of voters and as a consequence, the probability of winning the electoral competition for incumbent candidates is expected to be lower than that of incumbents holding power in the North. Our findings are in line with this second explanation since bare winners are 42.5 percentage points more likely to win the competition compared to bare losers in the North, whereas for southern municipalities we find an incumbent advantage of 26.7 percentage points.

Finally, our results are robust to different specifications of our main equation. In particular, our findings are similar when we consider only observations in narrow neighborhoods around the discontinuity point (5 and 2 percent above and below the threshold of margin of victory of zero

---

[6] Results not displayed, but available upon request.

[7] As recognised by the author, these four cities (Austin, Dallas, San Antonio and San Jose) are not a representative sample of U.S. cities. Therefore, the conclusion of this paper may be limited by the sample used. Moreover, she does not have enough observations to separately analyze mayoral elections.

respectively), and when we choose different polynomials of the forcing variable (Local Linear Regression) along with the interaction terms between polynomials of the electoral margin (until the third-order) and the treatment.

The paper is organized as follows. Section 2 is devoted to the methodology implemented. In Section 3 we describe the institutional framework, our data set and we check the validity of the RDD. In Section 4, we discuss our main results estimates, whereas in Section 5 we present some robustness checks. Section 6 concludes.

2. Previous Measures of Incumbency Advantage and Methodology

2.1 How to Measure the Personal Incumbency Advantage

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, we follow Uppal (2009) using a regression discontinuity design (RDD henceforth) that approximates a natural experiment and, under certain continuity conditions[8], 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 us 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.

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.

---

[8] 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.

However, given the randomness inherent in elections, such a scenario seems rather implausible (Matsusaka and Palda, 1999).

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.

2.2 Methodology

The ideal natural experiment for estimating the incumbency effect would require to observe both a candidate as an incumbent and a non-incumbent at the same point of time which, obviously, is not possible (Uppal, 2009). The minimum requirement to estimate the casual effect of the incumbency status on the probability of winning the electoral competition would be to have candidates randomly assigned as incumbents and non-incumbents. This is not likely to be true because incumbents usually win the competition thanks to some intrinsic characteristics that are not possessed by non-incumbents.

The main identification strategy in the RDD is that incumbency status changes discontinuously at the threshold of margin of victory of zero. Candidates who have a positive margin of victory become incumbents and those who have a negative margin of victory become non-incumbents. In particular, the RDD compares barely winners, i.e. candidates who are just above this threshold with barely losers, i.e. candidates just below the threshold. The intuition is that such candidates are, on average, similar in all observable and unobservable characteristics, and differ only in their incumbency status, implying that the assignment of incumbency status is approximately random in the neighborhood of a margin of victory of zero[9].

In particular, the baseline model we want to estimate is as follows:

[1] $\quad Prob(win_{i,t}) = \alpha + \beta\ Personal\ Incumbency_{i,t} + \varepsilon_{i,t}$,

where $win_{i,t}$ is a dummy variable taking the value of 1 if candidate i wins the election at time t and zero otherwise; $Personal\ Incumbency_{i,t}$ is an indicator variable for the incumbency status of a candidate such that $Personal\ Incumbency_{i,t}$ equals one if the margin of victory at time t-1 is larger than zero and zero if it is negative; $\varepsilon_{i,t}$ is the stochastic error term. In the ideal case when the assignment of incumbency status is random, β is the difference in the probability of winning between incumbents and non-incumbents, or the true incumbency effect:

[2] $\quad E[win_{i,t}|\ Personal\ Incumbency_{i,t} = 1] - E[win_{i,t}|\ Personal\ Incumbency_{i,t} = 0] = \beta$.

However, the assignment of incumbency status is likely to be non-random because incumbents and non-incumbents may have some idiosyncratic differences, such as charisma, charm, intelligence, party organization or campaign resources. In this case, equation [2] includes a bias due to differences in candidates' intrinsic characteristics, i.e. $Bias_{i,t}$:

---

[9] Further, some chance factors, such as the weather conditions on the election day, that might affect the outcome of the election do not vary systematically between incumbents and non-incumbents.

[3] $E[win_{i,t}|\,Personal\ Incumbency_{i,t} = 1] - E[win_{i,t}|\,Personal\ Incumbency_{i,t} = 0] = \beta + Bias_{i,t}$

Equations (3) can alternatively be written as follows:

[4] $E[win_{i,t}|Electoral\ Margin_{i,t-1} > 0] - E[win_{i,t}|Electoral\ Margin_{i,t-1} < 0] = \beta + Bias_{i,t,}$

where $Electoral\ Margin_{i,t-1}$ is the margin of victory of candidate *i* at time *t-1*. The RDD compares candidates at election *t-1* who are marginally above the threshold of margin of victory of zero with those who are marginally below the threshold:

[5] $E[win_{i,t}|0 < Electoral\ Margin_{i,t-1} \leq \mu] - E[win_{i,t}|-\mu < Electoral\ Margin_{i,t-1} < 0] = \beta + Bias^{*}_{i,t,}$

[6] $Bias^{*}_{i,t} = E[\varepsilon_{i,t}|0 < Electoral\ Margin_{i,t-1} \leq \mu] - E[\varepsilon_{i,t} - \mu < Electoral\ Margin_{i,t-1} < 0],$

where μ represents the closeness of the elections. As μ becomes smaller, $Bias^{*}_{i,t}$ goes to zero and β measures the casual incumbency effect:

[7] $\lim_{\mu \to 0^{+}} E[win_{i,t}|0 < Electoral\ Margin_{i,t-1} \leq \mu] - \lim_{\mu \to 0^{-}} E[win_{i,t}|-\mu < Electoral\ Margin_{i,t-1} < 0] = \beta.$

The validity of the RDD about a random assignment of the incumbency status depends on the assumption that candidates around the threshold are similar. This implies that the identification strategy is valid, and that only incumbency status changes discontinuously as a function of the margin of victory and all other characteristics vary smoothly[10]. The only assumption made here is that unobservable characteristics are continuous functions of the margin of victory at time *t-1*, which is a much weaker restriction on the stochastic error term and implies that $g(\varepsilon_{i,t}|\,Electoral\ Margin_{i,t-1})$, the conditional density function of $\varepsilon_{i,t}$, is continuous. The continuity of observable characteristics will be checked in the next section.

3. Institutional Framework and Data

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.

---

[10] The only assumption made is that unobservable characteristics are continuous functions of the forcing variable, i.e. the margin of victory.

Since 1993, mayors have been subject to a two-term limit, while members of the Executive Committee and of the Municipal Council, endowed with legislative power, can be re-elected indefinitely.

Municipal elections in Italy are held every 5 years[11] 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.

Our empirical analysis is based on a panel data set, provided by the Italian Ministry of the Internal Affairs. In order to focus on elections regulated by the same rules, we only consider municipalities with less than 15,000 inhabitants, in which elections are held with single ballot and plurality rule.[12] Moreover, we drop elections in which *Personal Incumbency* is zero for both candidates. This might be the case either when bare losers and bare winners are freshman candidates at time *t* (open seats) or when the election is characterized by a binding term limit for the mayor[13]. We end up with a sample composed by 9,948 candidate-level observations (we have a bare winner and a bare loser from each election) for 4,246 Italian municipalities over the period 1993-2011.

For each municipal election we have information 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).[14] Using this information, we build our dependent variable *Win* that equals 1 if the candidate *i* wins the election at time *t* and zero otherwise, *Personal Incumbency* taking the value of 1 when among the first two best candidates running for election at time *t* there is the exiting mayor and zero otherwise. In other words, *Personal Incumbency* is equal to one if the margin of victory at time *t-1* is positive and zero otherwise. We define the margin of victory of a candidate in multicandidate races as follows: the winner's margin of victory is the difference between his or her vote share and the vote share of the second-place candidate (divided by the number of valid ballots). Similarly, the margin of victory of a loser is the difference between his or her vote share and the vote share of the winner. This construct

---

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

[12] The results reported in this paper remain substantially unchanged if we include in our sample also municipalities voting under the dual ballot system (those with more than 15,000 inhabitants). Results are available upon request.

[13] According to the Italian law not all the incumbent mayors can run for election. Because of a term limit, mayors cannot spend more than two consecutive terms in office. Then, we define *Binding Term Limit* as a dummy variable equal to one if the term limit constraint is binding and equal to zero if the term limit is slack. In our analysis, since we are focusing on elections in which the mayor reruns in election *t*, the term limit is always slack.

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

allows the margin of victory to be positive for winning candidates and negative for losing candidates (on average it is equal to 0.0164). Moreover, we build a dummy *Partisan Swing* which is equal to 1 if candidates running for a mayor position do not belong to a national political party (*Lista Civica)* and zero otherwise, and *Partisan Incumbency* which is equal to 1 if one of the parties competing at the electoral race at time t is an incumbent party and zero otherwise. From Table 1, we can notice that 57.3% of candidates running for election at time t have already been mayor in the previous legislature, 60% of candidates belong to a *Lista Civica* and 36.85% of parties competing at time t are incumbent.

Table 1: Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max	Observations[15]
Win	0.5343	0.4988	0	1	9,948
Personal Incumbency	0.5730	0.4957	0	1	9,948
Partisan Incumbency	0.3685	0.4327	0	1	9,948
Partisan Swing	0.6052	0.4888	0	1	9,948
Electoral Margin (%)	0.0164	0.1265	-0.25	0.25	9,948
Female Candidate	0.0898	0.2859	0	1	9,948
Candidates' Age	49.5627	9.8957	18	86	9,948
Candidates' Education	14.4102	3.4934	5	18	9,948
No. Candidates	2.5176	0.8133	1	8	9,948
Turnout	0.7801	0.0917	0.2162	0.9644	9,948
Population Size/1,000	3.5545	3.2034	0.033	14.996	9,948
Education of Population	7.0734	0.8374	4.3494	12.5668	9,948
Employment	0.2421	0.1352	0.0262	0.8457	9,948
Elderly People (>=65)	0.1987	0.0637	0.0434	0.5655	9,948

Source: Local Administrators Data set (1985-2011), Italian Ministry of Internal Affairs; Italian Census of Population (1991 and 2001).

Using the 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 9% with a standard deviation of 0.28. Moreover, the average educational attainment of candidates (*Candidates' Education*) is quite high (14 years of education), highlighting how the majority of candidates has at least obtained a high-school diploma,[16] whereas the average age of the two best candidates running for a mayor position (*Candidates' Age*) is about 49.

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 78%, with a standard deviation of 0.0917.

---

[15] The number of observations refers to the regression in which we add all our control variables, we restrict our analysis to elections held in municipalities with a population lower than 15,000 inhabitants by choosing a bandwidth of 25 percent above and below the threshold of margin of victory of zero.

[16] 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.

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, the proportion of elderly people and the educational attainment of the population[17]. The average population size of Italian municipalities is 3,55. The population's number of years of education is, on average, 7.07, the ratio between the number of employed individuals and the total number of inhabitants is 24.21% and the proportion of people aged 65 or above is on average 19.87%.

3.1 Smoothness Conditions and Validity of the Sharp RDD

In this sub-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 other words, since information about unobserved characteristics of candidates and municipalities is not available, the focus is on observed characteristics, such as the educational attainment of candidates, the age of candidates running for a mayor position, the proportion of female candidates, the partisan swing, the voter turnout, the number of candidates competing for election, the population's level of education, the employment rate and the proportion of people aged 65 or above.

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 third or fourth order polynomial of the forcing variable interacted with dummies for the treatment status: 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 a bandwidth of 25, 5 and 2 percent above and below the

---

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

margin of victory threshold respectively, and by controlling for a third-order polynomial of the forcing variable interacted with our treatment variable *Personal Incumbency*[18], and for municipal-time fixed effects. Moreover, standard errors are robust to heteroskedasticity and are clustered at the municipal level.

Overall, Table 6 shows that the incumbency status predicts some of the predetermined characteristics when we choose a bandwidth of 25 percent (column 1). However, the coefficient on our variable of interest becomes smaller and statistically insignificant (see columns 2 and 3) as we examine closer elections (the margin of victory gets closer to zero).[19]Over 9 covariates, only the coefficient on *Candidates' Age* is statistically significant at 10 percent level. Since not all the predetermined characteristics are balanced we add them as control variables in the specifications of our model displayed in the next section.

Table 2: Incumbency Effect and Predetermined Characteristics

Variables	Coefficient on Incumbent		
	Bandwidth ±25 % (1)	Bandwidth ±5 % (2)	Bandwidth ±2 % (3)
Candidates' Education	0.174	0.321	0.537
	(0.191)	(0.467)	(0.798)
Candidates' Age	2.429***	2.881**	3.989*
	(0.513)	(1.212)	(2.165)
Female Candidates	-0.044 ***	-0.043	-0.078
	(0.016)	(0.034)	(0.051)
Partisan Swing	0.021	-0.038	-0.097
	(0.023)	(0.049)	(0.069)
No. Candidates	0.003	0.043	0.004
	(0.030)	(0.039)	(0.016)
Turnout	0.002*	0.001	0.001
	(0.001)	(0.001)	(0.001)
Population's Education	0.007	-0.012	-0.001
	(0.007)	(0.008)	(0.005)
Employment	-0.001	-0.001	-0.001
	(0.001)	(0.002)	(0.001)
Elderly People	-0.001*	-0.001	-0.001
	(0.000)	(0.000)	(0.000)

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 cubic polynomial of the assignment 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.

As a last specification test of our design, we plot, in Figure 1, 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 candidates 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

---

[18] Results are consistent also when we control for interaction terms between the treatment and the forcing variable until the third order.

[19] 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 (results are available upon request).

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). However, as Figure 1 depicts, the histogram does not show any big jump around the threshold.
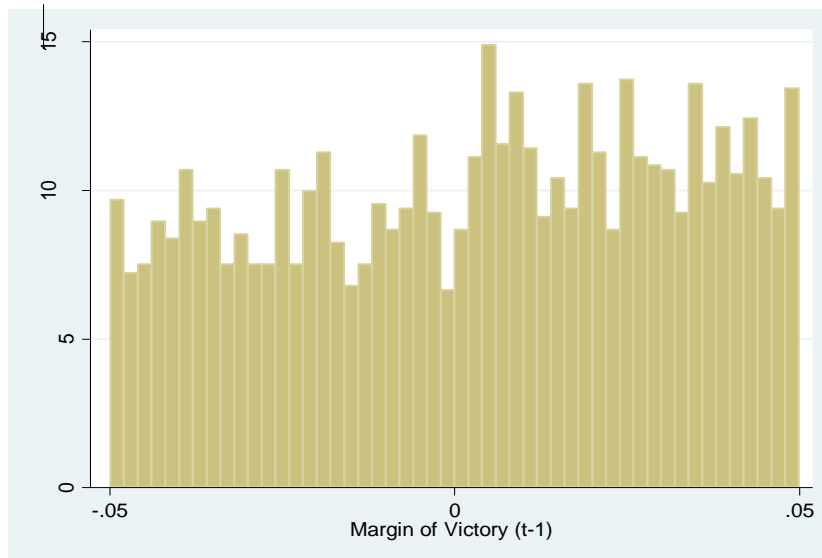

Figure 1: Histogram of the Margin of Victory (t-1)

These results are confirmed by Figure 2, 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), by considering observations in a bandwidth of 5 percent close to the zero margin of victory. As we can see from the figure, 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 0.222 with a standard deviation of 0.138).
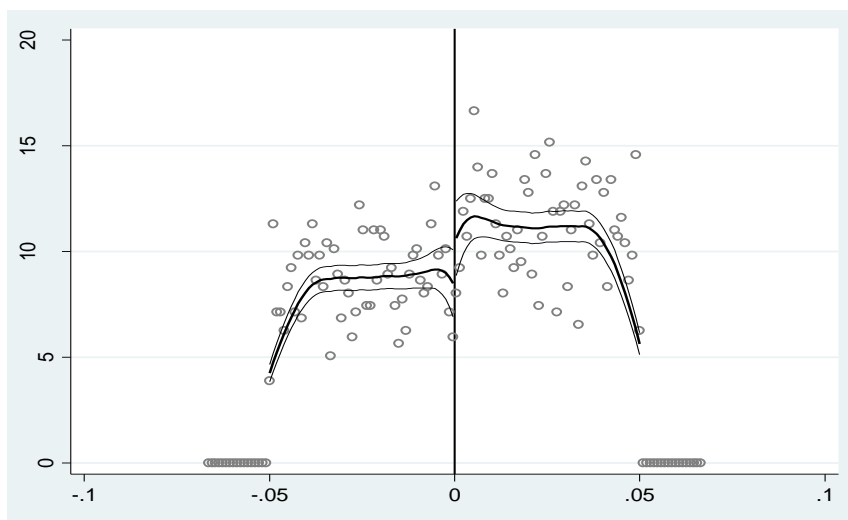

Figure 2: McCrary test – Manipulation Assignment Variable

4 Sharp RDD Estimates: Main Results

In this section, to understand whether an incumbent has a *personal* advantage compared to his/her challengers in terms of winning the electoral competition at time *t*, we implement a Sharp RDD and estimate a linear probability model with fixed effects at municipal level:

[1] $\quad Pr(win_{i,j,t}) = \beta_0 + \beta_1 Personal\ Incumbency_{i,t} + \beta_2 X_{j,t} + \beta_3 Z_{i,t} + f(Electoral\ Margin)_{i,t-1} + \varphi_j + \mu_t + \varepsilon_{i,j,t}$,

where $win_{i,j,t}$ is a dummy variable taking the value of 1 if the candidate *i* wins the electoral competition at time *t* in municipality *j* and zero otherwise; $Personal\ Incumbency_{i,t}$ is our main variable of interest measuring the incumbency status of candidates at the electoral race running for the mayor position in the municipality *j* at time *t*; $X_{j,t}$ is a vector including controls for municipal characteristics at the time of elections (population size, voter turnout, the average number of years of education of the inhabitants, the number of employed people over the number of inhabitants and the fraction of employed people in the population) and electoral competition's characteristics (i.e. the number of candidates at the electoral race); $Z_{i,t}$ is a vector including controls for candidates' characteristics (the age of candidates, a dummy variable $Female\ Candidate_{i,t}$ taking the value of 1 for female candidates and zero otherwise, the educational attainment of candidates at the electoral race, candidates' party affiliation and a dummy variable $Partisan\ Incumbency_{i,t}$ that measures the incumbency status of candidates' parties at the electoral race) 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.

Moreover, *f(.)* is a polynomial function for the forcing variable, i.e. the degree of electoral competition at time *t-1*, as measured by the difference in votes (%) between the winner and his/her closest challenger. 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.

In all regressions standard errors are robust to heteroskedasticity and are clustered at the municipal level to take into account the fact that candidates' behavior in the same municipality may be affected by common shocks. Further, in all the specifications we control for a third order polynomial of the electoral margin at time *t-1*[20], we choose a bandwidth of 25 percent above and below the threshold of margin of victory of zero and we focus on elections held with single ballot and plurality rule only.

---

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

Furthermore, in our analysis we focus on elections where there is an incumbent among candidates competing for a mayoral position. This might lead to a selection bias in our estimates since the rerunning decisions might differ systematically between incumbents and challengers, especially at local races. Some authors (see Uppal, 2009; Trounstine, 2011) have conditioned their incumbency estimates on candidates who rerun in election *t*. Also this solution could give rise to a sample selection bias issue in the estimated incumbency effect if bare losers who rerun are systematically different from losers who do not rerun. Unfortunately, we cannot condition our estimates on candidates who rerun in election *t* since at Italian municipal elections challengers are always different from election at time *t-1* to next election. Moreover, conditional incumbency advantage/disadvantage has been strongly criticized by De Magalhaes (2014) because if $E(R_{1i} - R_{0i}) \neq 0$[21], then conditioning the RDD sample on rerunning implies that the control and treatment groups are no longer likely to be balanced and in turn, RDD is not valid to estimate the causal effect of incumbency conditional on rerunning. All in all our empirical findings must be interpreted with reference to the selected sub-population which data were sampled, i.e. elections where an incumbent decides to run.

Table 3 presents the main results. In column (1) in which we control for year and municipal fixed effects as only, we find that the incumbent has an advantage in winning the electoral competition at time *t*: the *personal* incumbency effect is about 36.2 percentage points, implying that incumbents (bare winners) are more likely to win the competition compared to their challengers (bare losers).

In column (2) we add some candidates' characteristics as control variables. Again we find a positive and statistically significant incumbency effect on the probability of winning the electoral competition at time *t*. The same results hold true also when we control for municipalities' characteristics (column 3) and for the number of candidates running for a mayor position (column 4).

As far as our control variables (municipal and candidates' characteristics) are concerned, we find the expected results. Most of candidates' characteristics matter. In fact, having one female candidate running for the mayor position negatively affects the probability of winning the electoral competition, highlighting a sort of discrimination toward women since electors prefer male candidates compared to females. Further, having elderly candidates negatively affects our dependent variable, maybe because electors like more younger candidates. Conversely, having more educated candidates does not affect the probability of winning the electoral race.

Moreover, we do not find any *partisan* incumbency effect on the probability of winning the electoral competition: at Italian mayoral elections it does not matter if parties competing at the electoral race are incumbent or not. Finally, an increase in the political competition, as measured by the number of candidates running for a mayor position, leads to a decrease in the probability of

---

[21] Where R is a dichotomous variable taking the value 1 if the politician runs and zero otherwise.

winning the electoral race by 2.3 percentage points. On the other hand, most of the municipalities'
characteristics do not produce any statistically significant impact on our outcome variable.

Table 3: RDD Estimates – Personal Incumbency Advantage

	(1)	(2)	(3)	(4)
VARIABLES	Pr (win)	Pr (win)	Pr (win)	Pr (win)
Personal Incumbency	0.362***	0.344***	0.344***	0.343***
	(0.031)	(0.034)	(0.034)	(0.034)
Partisan Incumbency		0.029	0.029	0.030
		(0.022)	(0.022)	(0.022)
Partisan Swing		0.022	0.022	0.022
		(0.018)	(0.018)	(0.018)
Candidates' Age		-0.004***	-0.004***	-0.004***
		(0.001)	(0.001)	(0.001)
Candidates' Education		0.003	0.003	0.003
		(0.002)	(0.002)	(0.002)
Female Candidates		-0.115***	-0.115***	-0.115***
		(0.027)	(0.027)	(0.027)
Turnout			-0.488***	-0.430***
			(0.102)	(0.099)
Education Population			-0.025	-0.023
			(0.018)	(0.018)
Employment			-0.025	-0.032
			(0.096)	(0.095)
Elderly People			-0.362	-0.397
			(0.285)	(0.281)
Population Size/1,000			0.002	0.004
			(0.033)	(0.033)
Population Size^2			-0.001	-0.001
			(0.002)	(0.002)
No. Candidates				-0.023***
				(0.005)
Constant	0.336***	0.494***	1.127***	1.142***
	(0.023)	(0.061)	(0.231)	(0.228)
Bandwidth	±25%	±25%	±25%	±25%
Electoral Margin Polynomial	Third	Third	Third	Third
Observations	9,948	9,948	9,948	9,948
R-squared	0.258	0.264	0.264	0.265
Number of Municipalities	4,246	4,246	4,246	4,246

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. We focus on municipalities with a population size lower than 15,000
inhabitants and on elections characterized by a slack term limit for the mayor. Standard errors (corrected for heteroskedasticity and
clusterized 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.

All in all, the *personal* incumbency effect is always positive, statistically significant at 1 percent
level and stable across specifications displayed in Table 3. 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)[22].

---

[22] We also find a positive and statistically significant effect (at 1 percent level) of the incumbency status on the vote share
(results are available upon request).

In Table 4 we replicate estimations presented in the previous table for municipalities located in the Center-South and in the North of Italy in order to take into account the fact 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 run a regression for municipalities located in the South, whereas in columns (3) and (4) we focus on northern municipalities.

Table 4: RDD Estimates – Personal Incumbency Advantage South vs North

VARIABLES	(1) South Pr (win)	(2) South Pr (win)	(3) North Pr (win)	(4) North Pr (win)
Personal Incumbency	0.289***	0.267***	0.434***	0.425***
	(0.045)	(0.049)	(0.042)	(0.046)
Partisan Incumbency		0.036		0.013
		(0.033)		(0.029)
Partisan Swing		0.005		0.028
		(0.028)		(0.023)
Candidates' Age		-0.002*		-0.005***
		(0.001)		(0.001)
Candidates' Education		0.002		0.004
		(0.004)		(0.003)
Female Candidates		-0.121***		-0.113***
		(0.046)		(0.033)
Turnout		-0.293**		-0.556***
		(0.139)		(0.166)
Education Population		-0.019		-0.014
		(0.026)		(0.032)
Employment		-0.029		-0.044
		(0.176)		(0.121)
Elderly People		0.073		-0.583
		(0.413)		(0.413)
Population Size/1,000		0.011		0.001
		(0.048)		(0.045)
Population Size^2		-0.001		0.001
		(0.002)		(0.002)
No. Candidates		-0.032***		-0.015**
		(0.009)		(0.007)
Constant	0.354***	0.873***	0.313***	1.197***
	(0.031)	(0.335)	(0.036)	(0.361)
Bandwidth	±25%	±25%	±25%	±25%
Electoral Margin Polynomial	Third	Third	Third	Third
Observations	4,584	4,584	5,364	5,364
R-squared	0.206	0.210	0.311	0.320
Number of Municipalities	1,864	1,864	2,382	2,382

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 clusterized 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 highlighted in Table 4 in both areas the incumbent has a *personal* advantage in terms of winning the election at time *t*: the coefficient on our variable of interest is always statistically significant at 1 percent level and stable across the specifications, since it is not affected by the

inclusion of the control variables, such as municipalities, candidates and electoral competition' characteristics.

However, the *personal* incumbency effect on the outcome variable is larger in terms of magnitude for northern municipalities compared to those located in the South. In particular, bare winners are 42.5 percentage points more likely to win the competition compared to bare losers in the North. On the other hand, for southern municipalities the incumbent advantage seems to be 26.7 percentage points.

All in all our results suggest that the *personal* incumbency advantage is stronger in developed areas, such as the North, compared to the South of Italy. This might be the case when population plagued with high levels of poverty, deficient public services, and with its basic necessities unsatisfied lives in an area of "endemic discontent" (Molina, 2001). As a consequence, it is difficult for the incumbent in the southern municipalities to satisfy the majority of voters and in turn, it is quite normal to expect that candidates in power will suffer a loss in terms of winning the electoral competition compared to candidates holding power in the North. Similar results are found by Molina (2001) for many Latin American and Caribbean countries. Further, we cannot exclude other channels, such as the electors' desire to punish incumbent politicians, who may have poorly performed in less developed areas, and to vote in favor of a new candidate. In fact, in both cases we would expect a smaller incumbency advantage in areas endowed with lower social capital such as the South of Italy.

RDD results are also shown in Figure 3 (Panel a, b and c). 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 bandwidth of 25 percent above and below the cutoff. In Panel (a) we focus on elections in which an incumbent reruns for election in municipalities with a population size lower than 15,000, whereas in Panel (b) and (c) we show the incumbency advantage for southern and northern municipalities respectively again for elections held with single ballot and plurality rule.

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 incumbency dummy, a third-order polynomial in the margin of victory, and the provincial-time fixed effects. As shown in Panel (a), 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 Panel (b) and (c), although the effect of the incumbency on the probability of winning the electoral competition is larger in northern municipalities compared to southern municipalities. Overall, graphs confirm results displayed in Table 3 and 4.
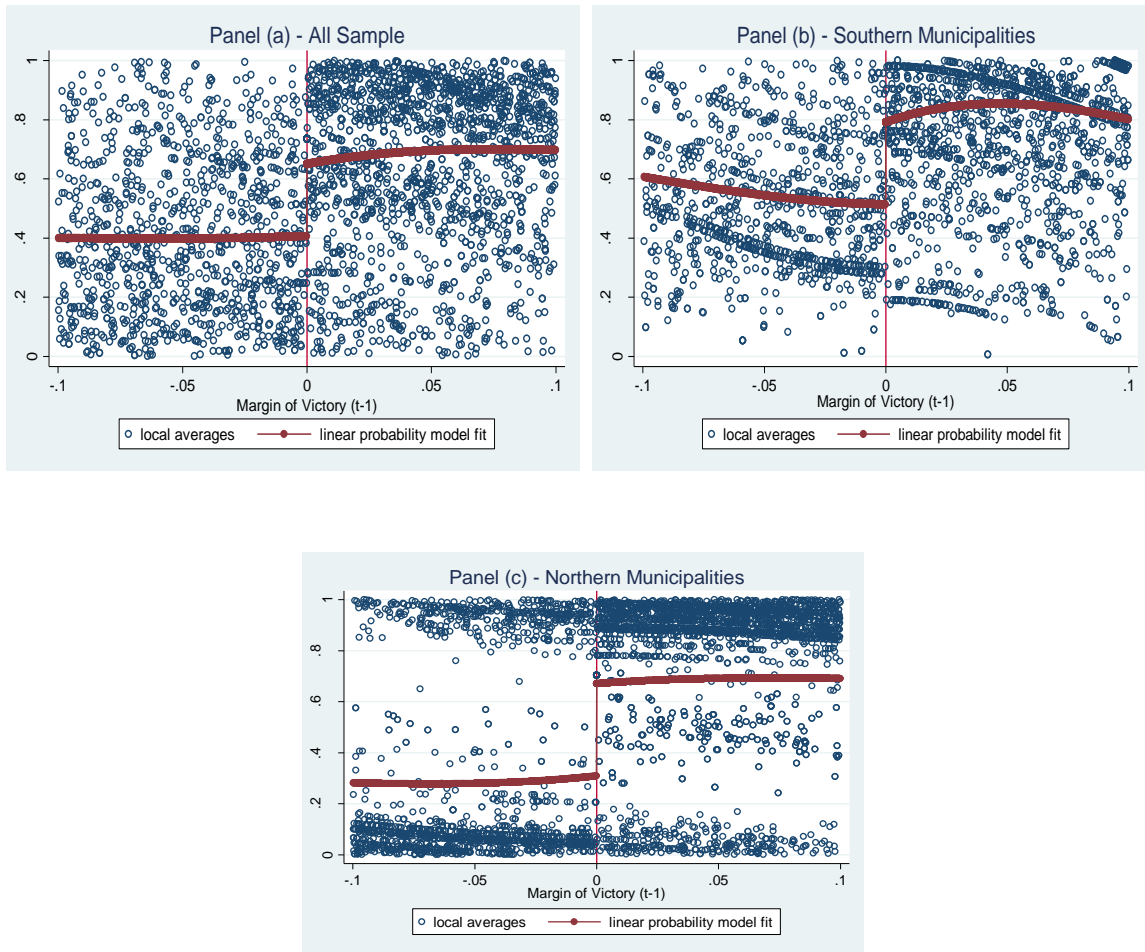
Figure 3: RDD Estimates – Incumbency Advantage

5 Robustness Checks

In this section we check the robustness of our results. Firstly, we consider only data in narrow neighborhoods around the discontinuity point (Local Linear Regression). Secondly, by choosing a large bandwidth around the zero margin of victory threshold, we include interaction terms between $Personal\ Incumbency_{i,t}$ and different polynomials of the margin of victory in our regression.

In particular, s a first robustness check, we re-estimate our original model by narrowing the sample close to the treatment threshold and choosing a bandwidth of 5 and 2 percent respectively above and below the cutoff of margin of victory of zero. Table 5 reports the Sharp RDD results for the discontinuity samples.

Table 5: RDD Estimates – Personal Incumbency Advantage – Discontinuity Samples

VARIABLES	(1) Pr (win)	(2) Pr (win)	(3) Pr (win)	(4) Pr (win)	(5) South Pr (win)	(6) North Pr (win)
Personal Incumbency	0.434***	0.394***	0.453***	0.338***	0.270**	0.533***
	(0.068)	(0.078)	(0.113)	(0.127)	(0.115)	(0.106)
Controls	No	All	No	All	All	All
Bandwidth	±5%	±5%	±2%	±2%	±5%	±5%
Electoral Margin Polynomial	Third	Third	Third	Third	Third	Third
Observations	2,677	2,677	1,116	1,116	1,300	1,377
R-squared	0.149	0.157	0.158	0.188	0.113	0.224
Number of Municipalities	1,360	1,360	589	589	637	723

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. We focus on municipalities with a population size lower than 15,000 inhabitants and on elections characterized by a slack term limit for the mayor. Standard errors (corrected for heteroskedasticity and clusterized 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 columns (1) and (2) of Table 5, in which we control for a third-order polynomial of the forcing variable, we focus on elections held with single ballot and plurality rule and we choose a bandwidth of 5 percent above and below the electoral margin threshold. We find that the *personal* incumbency effect on the probability of winning the electoral competition is positive and statistically significant at 1 percent level. Similar results are obtained in columns (3) and (4), where the window has been narrowed at 2 percent above and below the cutoff. All in all, the incumbency effect tends to be stable across the specifications. Moreover, in the last two columns we present results for southern municipalities (column 5) and northern municipalities (column 6). Again we find that in both areas bare winners have a *personal* advantage in winning the competition compared to bare losers, although the effect of our variable of interest is larger in the North.

As a second robustness check, we add interaction terms between our variable of interest and different polynomial functions of the assignment variable, i.e. the electoral margin, to check whether our model is well-specified, and whether the coefficient of $Personal\ Incumbency_{i,t}$ is stable in terms of sign and magnitude independently from the specification used. Further, we choose a bandwidth of 25 percent above and below the zero margin of victory threshold and we control for a third-order polynomial of the margin of victory and for municipal-time fixed effects in all the specifications. Table 6 shows the main results.

All in all, the coefficient on the *personal* incumbency status is always positive, statistically significant at 1 percent level and stable across the specifications[23]. Further, the magnitude of the effect is very similar to that found in Table 3 (column 4) and Table 4 (column 2 and 4) where we applied a Sharp RD design without interaction terms.

---

[23] The results are still similar when we interact the incumbency status with polynomials of the margin of victory of order higher than three.

Table 6: RDD Estimates – Personal Incumbency Advantage – Interaction Terms

VARIABLES	(1) Pr (win)	(2) Pr (win)	(3) South Pr (win)	(4) North Pr (win)
Personal Incumbency	0.353*** (0.045)	0.330*** (0.048)	0.214*** (0.072)	0.442*** (0.063)
Controls	No	All	All	All
Bandwidth	±25%	±25%	±25%	±25%
Electoral Margin Polynomial	Third	Third	Third	Third
Interaction Terms	Third	Third	Third	Third
Observations	9,948	9,948	4,584	5,364
R-squared	0.258	0.265	0.211	0.320
Number of Municipalities	4,246	4,246	1,864	2,382

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. We focus on municipalities with a population size lower than 15,000 inhabitants and on elections characterized by a slack term limit for the mayor. Standard errors (corrected for heteroskedasticity and clusterized 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.

6 Concluding Remarks

One of the greatest concerns in a democracy is that elected officials might 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 he/she 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).

The general results in the literature have shown, on the one hand, a *personal* incumbency advantage 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, since the incumbent candidate has a higher likelihood of winning the elections compared to his/her challengers, and on the other hand, an incumbency disadvantage for some developing countries, such as India (Linden, 2004; Uppal, 2009), Latin America and Caribbean countries (Molina, 2001).

In this paper we have investigated the *personal* incumbency effect on the probability of winning the electoral competition at municipal level in Italy over the period 1993-2011. We have implemented a regression discontinuity design (RDD) and focused on very close elections which are decided by a narrow margin of victory, where the bare winners and bare losers of these elections are assumed to be comparable in their unobservable characteristics. In this way, by following Lee (2008), we have identified the causal effect of the incumbency status on our outcome variable.

Our findings highlight a *personal* incumbency advantage since incumbents are 34.3 percentage points more likely to win the competition compared to their challengers. Moreover, results hold true

also when we control both for candidates and municipalities' characteristics as well as for partisan swing and *partisan* incumbency effect. Further, we also find similar results when we consider only data in narrow neighborhoods around the discontinuity point (Local Linear Regression) and when we include interaction terms between the treatment variable and different polynomials of the forcing variable, i.e. the margin of victory at time *t-1*.

Finally, we have analyzed the *personal* incumbency effect separately for municipalities located in the Center-South and in the North of Italy in order to take into account the fact that the incumbency advantage may be dissimilar in different parts of Italy, since the northern part is richer and endowed with higher social capital compared to the South. We have found that in both areas the incumbent has a *personal* advantage in terms of winning the election at time *t,* although the effect of interest is larger in magnitude for northern municipalities compared to southern municipalities. One potential explanation is that when population plagued with high levels of poverty, deficient public services, and with its basic necessities unsatisfied lives in an area of "endemic discontent" (Molina, 2001), it will be hard for the incumbent in the southern municipalities to satisfy the majority of voters and as a consequence, candidates in power will suffer a loss in terms of winning the electoral competition compared to candidates holding power in the North.

References

Acemoglu, D., 2002. Why not a political Coase theorem? Social conflict, commitment and politics. Unpublished paper. Department of Economics, Massachusetts Institute of Technology.

Acemoglu, D., Robinson, J.A., 2000b. Why did the West extend the franchise? Democracy, inequality and growth in historical perspective. Quarterly Journal of Economics 115, 1167–1199.

Acemoglu, D., Robinson, J.A., 2002. Economic backwardness in political perspective. NBER working paper No. 8831. Cambridge, MA.

Alford, J., Brady, D.W., 1988. Partisan and incumbency advantage in U.S. House elections, 1846-1986. Center for the Study of Institution and Values, Rice University.

Alford, J.R., Hibbing, J.R., 1981. Increased incumbency advantage in the House. Journal of Politics 43, 1042–1061.

Buchanan, J., Tullock, G., 1962. The calculus of consent: logical foundations of constitutional democracy. Ann Arbor: The University of Michigan Press.

Cover, A.D., Mayhew, D.R., 1977. Congressional Dynamics and the Decline of Competitive Congressional Elections. In: Lawrence C.D. and Oppenheimer B.I., Congress Reconsidered. New York: Praeger.

Cox, G.W., Morgenstern, S., 1993. The increasing advantage in the U.S. States. Legislative Studies Quarterly 18, 495-511.

De Magalhaes, L., 2014. Incumbency effects in a comparative perspective: evidence from Brazilian mayoral elections. Working Paper.

Erikson, R.S., 1971. The advantage of incumbency in congressional elections. Polity 3, 395-405.

Ferreira, F., Gyourko, J., 2009. Do political parties matter? Evidence from US cities. The Quarterly Journal of Economics 124, 399-422.

Fowler, A., Hall, A. H., 2012. Disentangling the personal and partisan incumbency advantages: evidence from a Structural Regression Discontinuity Design. SSRN working paper.

Garand, J.C., 1991. Electoral marginality in state legislative elections, 1968-86. Legislative Studies Quarterly 16, 7-28.

Garand, J.C., Gross, D.A., 1984. Changes in the vote margins for congressional candidates: a specification of historical trends. The American Political Science Review 78, 17-30.

Gelman, A., King, G., 1990. Estimating incumbency advantage without bias. American Journal of Political Science 34, 1142-1164.

Hainmueller, J., Kern, H.L., 2008. Incumbency as a source of spillover effects in mixed electoral systems: evidence from a regression-discontinuity design. Electoral Studies 27, 213-227.

Hahn, J., P. Todd, P., van der Klaauw, W., 2000. Identification and estimation of treatment effects with a regression-discontinuity design. Econometrica, 69, 201–20.

Imbens, G., Lemieux, T., 2008. Regression discontinuity designs: a guide to practice. Journal of Econometrics, 142, 2.

Jacobson, G.C., 1987. The marginals never vanished: incumbency and competition in elections to the U.S. House of representatives. American Journal of Political Science 31, 126-141.

King, G., 1986. How not to lie with statistics: avoiding common mistakes in quantitative political science. American Journal of Political Science 30, 666-687.

King, G., 1990. Representation through legislative redistricting: a stochastic model. American Journal of Political Science 33, 787-824.

Knack, S., 2002. Social capital and the quality of government: evidence from the States. American Journal of Political Science 46, 772-785.

Koryakov, I., Sisk, T., 2003. Democracy at the local level. International Institute for Democracy and Electoral Assistance.

Lee, D., 2008. Randomized experiments from non-random selection in U.S. House elections. Journal of Econometrics 142, 675–697.

Lee, D., Lemieux, T., 2010. Regression Discontinuity Designs in Economics. Journal of Economic Literature, 48, 281-355.

Levitt, S. D., 1994. Using repeat challengers to estimate the effect of campaign spending on election outcomes in the U.S. House. Journal of Political Economy 102, 777-798.

Linden, L.L., 2004. Are incumbents really advantaged? The preference for non-incumbents in Indian national elections. Unpublished paper. Departments of Economics, Massachusetts Institute of Technology.

Matsusaka, J.G., Palda, F., 1999. Voter turnout: how much can we explain?. Public Choice, 98 , 431-446.

McCrary, J., 2008. Manipulation of the running variable in the regression discontinuity design: a density test. Journal of Econometrics 142, 698–714.

Miguel, E., Zaidi, F., 2003. Do politicians reward their supporters? Public spending and incumbency advantage in Ghana. Unpublished paper. Department of Economics, UC Berkeley.

Molina, J., 2001. The electoral effect of underemployment: government turnover and its causes in Latin-American, Caribbean and Industrialised Countries, Electoral Studies 20, 427-446.

Pande, R., 2003. Can mandated political representation provide disadvantaged minorities' policy influence? Theory and evidence from India. American Economic Review 93, 1132-1151.

Payne, J.L., 1981. The personal electoral advantage of House incumbents. American Politics Quarterly 8, 375-398.

Rubin, D.B., 1974. Estimating causal effects of treatments in randomized and nonrandomized studies. Journal of Educational Psychology, 66, 688–70

Titiunik, R., 2011. Incumbency advantage in Brazil: evidence from municipal mayor elections. Unpublished paper. Department of Political Science, University of Michigan.

Trounstine, J., 2011. Evidence of a Local Incumbency Advantage. Legislative Studies Quarterly 36, 255-280.

Tullock, G., 1959. Problems of majority voting. Journal of Political Economy 67, 571-579.

Uppal, Y., 2009. The disadvantaged incumbents: estimating incumbency effects in Indian state legislatures. Public Choice 138, 9-27.