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TERM LIMIT EXTENSION AND ELECTORAL PARTICIPATION. EVIDENCE FROM A DIFF-IN-DISCONTINUITIES DESIGN AT THE LOCAL LEVEL IN ITALY

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Term Limit Extension and Electoral Participation. Evidence from a Diff-in-Discontinuities Design at the local level in Italy

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Abstract
We study the effect of term limits on voter turnout in local Italian elections. Since 2014 the Italian law allows mayors in municipalities with a population size lower than 3,000 inhabitants to re-run for a third term, whereas mayors in cities with a number of residents above the cutoff still face a two-term limit. The introduction of the reform permits us to implement a difference-in-discontinuities design exploiting the before/after with the discontinuous policy change. We find that voters negatively react to the introduction of the reform and in particular electoral participation decreases by about 5 percentage points in municipalities eligible to the treatment compared to municipalities in the control group. This negative effect is essentially driven by a decrease in the political competition. We also find that relaxing term limits does not improve the quality of politicians running for election.

JEL codes: *C21, D72; H70; J78.*

Keywords: *Diff-in-discontinuities; Voter Turnout; Political Competition.*

1. Introduction

In modern democracies, commonly characterized by universal suffrage, one way citizens actively use to participate in political life is to cast their vote. Participation at elections is then fundamental for a well-working political system, as through their representatives, citizens take part in public decision making process. As voting is costly (acquisition of information, cost of displacement, etc.), while for each single elector the probability of affecting the electoral outcome is close to zero (Dows, 1957), understanding why people decide to vote is a challenging question. In order to give an explanation of the so-called "paradox of voting", describing the fact that in spite of the theoretical prediction of a very low turnout many people go to the polls (Fiorina, 1976), several determinants of the electoral participation have been investigated in the literature, focusing both on population's characteristics and on candidates' features (see among others McDermott, 2005; Sigelman *et al.*,1995; De Benedetto and De Paola, 2016; De Benedetto and De Paola, 2017; De Paola *et al.*, 2014; Kousser and Mullin, 2007). The impact of different institutional features has also been investigated with works analyzing the impact of electoral systems, voting mechanisms and electoral closeness (Nickerson, 2007; Kousser and Mullin, 2007; Funk, 2010, Cox and Munger, 1989;

Denver and Hands, 1974; De Paola and Scoppa, 2013). On the other hand, little is known about the effect produced by term limits.

Studying the effect of term limits on voters' behavior is relevant in any representative democracy, especially at the local level, since many elected officials, who usually have a direct connection with electors, can obtain too much power or authority over time, making their representation of the citizens less effective. Moreover, politicians might have developed over time a reputation for being corrupt and unconcerned with their constituents. The common thread with most politicians that have become more corrupt seems to be the length of time they have served (see for instance, Gamboa-Cavazos *et al.*, 2008; Campante *et al.* 2009; Coviello and Gagliarducci, 2017). The absence (or relaxation) of term limits can contribute to this phenomenon as it prolongs the time a politician can be influenced by the power of the office s\he holds. Further, allowing local politicians to re-run for the same position could affect participation at the polls through other channels. For instance, extending term limits might decrease electoral competition, forcing freshmen candidates to not run for elections, and discourage voters to go to the polls and cast their votes (Nalder, 2007). On the other hand, allowing politicians to stay in office might increase institutional quality and through this channel increase electoral participation. In fact, the absence of term limits allows high quality and experienced representatives to hold their position. In addition, by increasing the benefits deriving from political careers, absent or relaxed term limits can induce new high quality entrants to run for election.

The aim of this paper is to provide new evidence of the effect of term limits focusing on Italian local elections. Our identification strategy relies on an exogenous institutional change introduced by a law (Law April 2014 no.56) allowing mayors to re-run for a third term in municipalities with a population size lower than 3,000 inhabitants. Before the reform all municipalities were subject to a term limit of two consecutive mandates. The change introduced by this law allows us to use a difference-in discontinuities design by combining the before/after with the discontinuous policy variation and to identify the impact of relaxing term limits both on turnout and institutional quality.

We contribute to the existing literature in different ways. First, the literature investigating the effect of term limits on electoral participation is scant, especially for European countries. To the best of our knowledge there are only a few papers stressing this kind of relationship, highlighting mixed results. Hajnal and Lewis (2003), using data obtained through a mail questionnaire proposed to city clerks in California find no effect of term limits on voter turnout. Nadler (2007), also using California data, considers state legislative races from 1976 to 2004 and finds that term limits decrease voter turnout. Instead, Veiga and Veiga (2018), analyzing data at the local level in Portugal and using a difference-in-differences approach, highlight a positive effect of term limit on electoral participation.

These mixed results might be due to the fact that in some of the contexts considered in these works, term limits were not exogenously imposed, leading to a reverse causality issue. Similarly to Veiga and Veiga (2018), we exploit a national reform that has affected all Italian municipalities with less than 3,000 inhabitants. Thanks to the richness of our data set, that also provides information on a number of candidates' characteristics, we are able to further contribute to this literature by investigating whether term limit

extensions lead to an increase in the institutional quality, allowing high quality representatives to remain in office. At this aim we investigate whether in response to term limit extensions high quality incumbents tend to re-run for election. As term limit extensions also increase the returns deriving from political career we also investigate the effects produced on the quality of new entrants.

Our results at the local level in Italy are in line with those found for Portugal and show that extending the term limit for mayors decreases voter turnout by about 5 percentage points. The channel through which the implementation of the policy negatively affects voters' behavior is a reduction in the political competition (larger electoral margin) characterizing those electoral races in which the exiting mayor who has already served for two consecutive mandates is allowed to re-run for the third time. We show that term limit extension has no effect on institutional quality as all candidates' observable characteristics remain substantially unchanged.

These results hold true when we choose different optimal bandwidths and when we use both a fractional model as well as a beta regression model to take into account that our outcome variable is measured by a proportion. Moreover, we do not find any statistically significant effect when focusing on a fake population thresholds and on fake years, reassuring us that the effects found when we correctly specify our model are causal and not driven by chance.

The paper is organized as follows. In Section 2 we describe the Italian institutional setting, whereas in Section 3 we illustrate our data set, the methodology used and some validity tests on the diff-in-discontinuities design. In Section 4 we discuss our main empirical results. Section 5 investigates the impact of relaxing term limits on institutional quality. Section 6 describes some robustness checks and Section 7 concludes.

2. Italian local institutional settings 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 lower 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.

Municipal elections in Italy are held every 5 years[1] 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

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

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.

Moreover, at local level, legislative population thresholds establish a number of institutional features (such as council size and executive committee size, electoral rules, etc.) and a vast array of national policies (for instance, those concerning public transfers). Among these policies there is one defining mayors' wage that sharply changes in proximity of 9 population thresholds, including the cutoff exploited in our design.

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. The system has then remained unchanged until April 2014 when a new law approved by the Italian Parliament (Law n.56) has allowed mayors in municipalities with a number of inhabitants lower than 3,000 to re-run for a third term (they are subject to a three-term limit). The change introduced by this legislative intervention has been motivated by the difficulty faced in finding high quality administrators available to run for a mayor position in small municipalities. The same law has also introduced an upward change in the number of councilors within the municipal apparatus: municipalities with a population size lower than 3,000 inhabitants must have 10 councilors, whereas for those cities with a number of residents between 3,001 and 10,000 the number of councilors is set at 12[2]. We will take this into account in our investigation.

Our empirical analysis is based on a panel data set, provided by the Italian Ministry of the Internal Affairs. Our sample (selected using the optimal bandwidth procedure suggested by Calonico *et al.*, 2014, CTT hereafter) is composed by 603 Italian municipalities in the neighborhood of the cutoff of 3,000 inhabitants over the period 2011-2017. We choose the pre-treatment period 2011-2013 in order to stay close to year 2014 where the policy came into force and to have a balanced sample before/after its implementation. For each municipal election we have information on the number of voters and the number of people eligible to vote. We measure *Electoral Participation* (%) as the ratio between the number of voters and the number of eligible voters. Italy is characterized by a quite high electoral turnout compared to many European countries and to US: the average turnout in the period 1993-2017 has been of 77.56%, with a standard deviation of 0.09, whereas in our sample, as reported in Table 1, it is still high and reaches 68.73%.

[2] Before 2011, municipal councils were composed by 12 members in municipalities below 3,000 inhabitants and by 16 members in cities with a population size between 3,001 and 10,000. In 2011 the law established a reduction in the number of councilors, passing from 12 to 9 for cities with a population below 3,000 and from 16 to 12 for cities with a population between 3,001 and 10,000. In 2012 council size again decreased by 3 members in small cities (below 3,000 inhabitants) and by 5 members in cities with a population size between 3,001 and 10,000.

Table 1: Descriptive Statistics (Discontinuity Sample)

Variables	Mean	Std. Dev.	Min	Max	Observations
Electoral Participation (%)	0.693	0.09	0.353	0.913	603
Incumbent	0.555	0.497	0	1	603
Candidates' Education	14.800	2.400	6.5	18	590
Incumbent Education	15.289	3.089	5	18	325
Entrants Education	14.690	2.394	6.5	18	257
Mayor Education	15.208	3.125	5	18	558
Candidates' Age	50.488	8.000	28	76	603
Female Candidate	0.315	0.465	0	1	603
Electoral Margin (t-1)	0.185	0.152	0	0.880	589
No. Candidates	2.511	0.819	1	7	603
Education of Population	8.801	0.578	6.805	10.919	603
Population Size/1,000	2,953	0.392	2,320	3,685	603
Employment/Population	0.406	0.057	0.249	0.529	603
Municipal Area (in Km2)	29.885	35.521	1.92	220.71	603
Council Size	10.027	1.957	6	12	603
% Elderly People	0.209	0.041	0.105	0.317	603
Center-South	0.378	0.485	0	1	603

Source: Local Administrators Data set (2011-2017), Italian Ministry of Internal Affairs; Italian Census of Population (2011).

Using the information available in our dataset, we build a dummy variable *Incumbent* taking the value of 1 when among candidates running for election there is the exiting mayor and zero otherwise. From Table 1, we can notice that in 55% of elections there is, among candidates running for the mayor position, a candidate that has already performed this charge in the previous legislature.

We also have information on the number of candidates who run for a mayor position at each election, on their gender, age and educational attainment (Anagrafe degli Amministratori Locali, Ministero dell'Interno)[3]. Thanks to the information on candidates' gender we have built a dummy variable *Female Candidate* taking the value of 1 when there is at least one female candidate running for a mayor position. The proportion of elections in which there is at least a woman participating at the electoral competition is of about 31.5% with a standard deviation of 0.465. The average educational attainment of candidates is about 15 years (*Candidates' Education)*, and this highlights how the majority of candidates has at least obtained a high-school diploma.[4] Moreover, we also observe the education of incumbents, new entrants and mayors that is on average about 15 years each respectively. Finally, candidates are on average 50 years old. The number of candidates running for a mayor position on average is equal to 2.51 with a standard deviation of 0.821.

Our data set also allows us also to build some proxies of the degree of competition characterizing each electoral race. We use the number of votes obtained by each candidate to create a variable *Electoral Margin* as the absolute difference between votes obtained by the two leading candidates (divided by the number of voters). *Electoral Margin* represents an inverse measure of expected electoral closeness, and since it is potentially endogenous, we take its lagged value (which is on average equal to 0.185, with a maximum of 0.88 and a minimum of 0).[5] To control for municipalities' demographic characteristics, we use the 2011 Italian Census of Population. As shown in Table 1, the average population size is 2,953, the average

[3] It is possible to obtain detailed data at an individual level at the following website: http://amministratori.interno.it.
[4] 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.
[5]The value of zero characterizes few elections in which the two candidates obtained exactly the same number of votes.

educational attainment of population, by considering only people aged 6 or above, is about 9 years. Further, the fraction of employed people in the population is 40%, the proportion of elderly people (over 65) in the population is on average 20%. Roughly 38% of municipalities in the sample are located in the Center-South.

3. Econometric model and Validity Test

3.1 Methodology

The standard RD design allows identification of the effect of term limit extension on electoral participation only if there are no other policies changing sharply at the threshold of 3,000 inhabitants. In the Italian local setting this is not the case, since the salary earned by mayors and local councilors changes in the neighborhood of the same cutoff. However, these differences existed before the Law n.56 was passed in 2014, since the salary policy came into force in the 1960s.

Then, to recover the casual effect of mayor term limit extension on electoral turnout, our empirical design combines the RD with a before-after comparison in the spirit of Grembi *et al.* (2016). Formally, we restrict the sample to municipalities in the interval $P_i \in [P_c - h, P_c + h]$, by choosing an optimal bandwidth as suggested by Calonico *et al.* (2014)[6] and we estimate the following model by means of OLS with fixed effects at province level (Local Linear Regression, LLR henceforth):

$$Electoral\ Participation_{it} = \beta_0 + \beta_1 Pop\_3{,}000_i + \beta_2 After_t + \beta_3 ExtTermLimit_{it} + \beta_4 Z_{it} + \beta_5 X_{it} + \beta_6 P_i + \varphi_p + \mu_t + \varepsilon_{it}, \quad [1]$$

where $Electoral\ Participation_{it}$ is a variable measuring the (%) electoral turnout (number of voters on number of eligible electors) in municipality i in election year t; $Pop\_3{,}000_i$ is a dummy for municipalities below 3,000, $After_t$ an indicator for the post-treatment period, and $P_i = P_i - P_c$ the normalized population size. The coefficient β_3 is the diff-in-disc estimator and identifies the treatment effect of extending mayor term limit, as the treatment is $ExtTermLimit_{it} = Pop\_3{,}000_i * After_t$. We also include interaction terms between P_i and $Pop\_3{,}000_i$, $After_t$ and $ExtTermLimit_{it}$ respectively.

Furthermore, Z_{it} is a vector of controls at political competition level. In particular, it includes $ElectoralMargin_{it-1}$, which measures the degree of political competition as the difference in votes (%) between the winner and his/her closest challenger during the previous election, and the number of candidates running for a mayor position; X_{it} is a vector which contains controls for municipal characteristics at the time of elections (population size, the average educational attainment of inhabitants, the proportion of employed people in the population, the proportion of elderly people, municipal area in squared kilometers and council size), φ_p and μ_t are respectively a province and an electoral year fixed effect, whereas ε_{it} is the stochastic

[6] As we show in Section 6, using as optimal bandwidths those proposed both by Imbens and Kalyanaraman (2016) as well as by Ludwig and Miller (2007) the sample size increases and results are still substantially the same.

error term of the model. The fixed effects φ_p accounts for time-invariant characteristics of the province, either observable or unobservable.

In all regressions standard errors are robust to heteroskedasticity and are clustered at the municipal level to take into account the fact that voters' behavior in the same municipality may be affected by common shocks.

In all regressions we also control for council size. In fact, as explained before, the law we exploit in our identification strategy has also led to a change in council size. Since there are two policies sharply changing at the same threshold, one might be concerned that the effect driven by the mayor term limit extension is confounded by the increase in the number of councilors within the municipal apparatus. Nonetheless, we do not think this is a major concern in our analysis as council size is unlikely to affect voters' behavior in our setting. In municipalities considered in our sample, voters directly elect the mayor and 2/3 of the seats are assigned to the councilors in the list. Voters can express only one preference for candidates running for a city councilor position. Consequently, council size should not affect directly voters' decision to go to the polls and cast their vote. Anyway, to take into account this potential problem, we always control for council size in our specifications and as a robustness check we directly test the effect of council size on electoral participation, by focusing on specific years where the only policy that has changed in proximity of 3,000 cutoff was the number of councilors, and finding no significant effects.

3.2 Validity of the Diff-in-Discontinuities Design

As a first specification test of our design, we check the continuity of the forcing variable, i.e. population size, nearby the cutoff of 3,000 inhabitants performing a McCrary test by running a kernel local linear regressions of the log of the density separately on both sides of the threshold (McCrary, 2008). If there were any discontinuities at the cutoff point, one might be concerned that mayors are able to manipulate the assignment variable and sort below the threshold in order to be able to re-run for a third time at next elections. In fact, if units of observation have a great deal of control over the assignment variable and if there is a perceived benefit to a treatment, one would certainly expect units of observation on one side of the threshold to be systematically different from those on the other side.

However, in principle, in Italy it is very hard to manipulate population size at municipal level for different reasons. First, Census is run independently by the National Statistical Office, so that false reporting should be ruled out; second, mayors willing to sort below 3,000 to stay in power for a longer period of time would pay the price of cutting their wage; third, the Law came into force in 2014, while the Census is run in 2011 when no mayors could predict the introduction of a policy allowing them to re-run for a third time. As we can see in Figure 1, the log-difference between the frequency of population size in 2011 to the right and to the left of the threshold is not statistically significant at conventional levels (it is equal to 0.0601 with a standard deviation of 0.0984).[7]

[7] Since the afore mentioned law assigns municipalities to the treatment and control groups based on the 2011 Census and since we focus on elections from 2011 onwards, we would not need to test the continuity of the difference in the

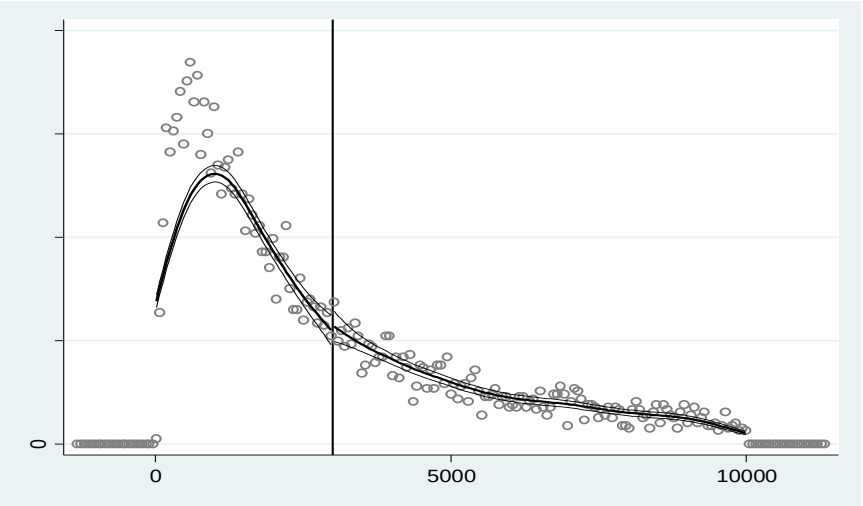

Figure 1: McCrary test- Manipulation of Population Size (2011)

As in any standard RD design we present a second specification test in which we check whether the introduction of the policy in 2014 is predictive of a set of control variables. In particular, we perform the balance test by implementing a diff-in-discontinuity regression, with a CCT optimal bandwidth and with a linear polynomial of the forcing variable along with a first order interaction term, in which we consider as outcome variable a number of municipal characteristics (municipal area, altimetry, average educational attainment of residents, employment rate , proportion of elderly people) and some electoral characteristics (margin of victory and number of candidates at the electoral race).

Results reported in Table 2 highlight how all of these variables are balanced around the 3,000 threshold before/after 2014, since the coefficients attached to the diff-in-disc estimators are not statistically significant at conventional levels.[8]

assignment variable between 2001 and 2011 Census. However, for the sake of completeness, in the Appendix of the paper, we also report the cross-sectional density tests for 2001 (Figure A1) and the test for the continuity in the density at 3,000 between the 2011 and 2001 Census (Figure A2). Also in these cases, there is no evidence of manipulation.

[8] As a final specification test, we report in the Appendix a further check on the absence of manipulation assessing whether a municipalities with certain fixed characteristics (Municipal Area, Center-South) moved from the right to the left of the threshold from 2001 to 2011. In particular, in the vein of Grembi et al (2016), we implement a difference-in-discontinuities estimations with time-invariant characteristics as outcome variable in which we use 2001 Census for the pre-treatment period (2011-2013) and 2011 Census after (2014-2017). Results reported in Table A1 do not show any statistically significant jump nearby the 3,000 cutoff for all the time-invariant characteristics.

Table 2: Balance Test on Control Variables

Variables	LLR Optimal Bandwidth	Obs.
Municipal Area (In Km2)	-7.5073	603
	(5.3851)	
Altimetry	-0.0092	603
	(0.2579)	
Center-South	0.0662	603
	(0.1156)	
Education of Population	0.0207	603
	(0.1168)	
Employment/Population	0.0079	603
	(0.0074)	
% Elderly People	-0.0045	603
	(0.0087)	
No. Candidates	0.0788	603
	(0.2660)	
Electoral Margin (t-1)	-0.0492	603
	(0.0573)	

Note: Municipalities between 2,326 and 3,674 inhabitants. Baseline Diff-in-discontinuities estimates. We control for province and year fixed effects and we focus on the period 2011-2017. Estimation method: LLR with a first order polynomial of the forcing variable and a linear interaction term. Standard Errors are robust to heteroscedasticity and are cluster at municipal level (reported inside the brackets). Significance at the 10% level is represented by *, at the 5% level by **, and at 1% level by ***.

4. Main Empirical Results

Table 4 shows the main diff-in-discontinuities estimates results. In each specification we control for a linear polynomial of the normalized forcing variable along with a population size interaction term of the first order, and for province and year fixed effects. In column (1) where results from our baseline specification are reported, we find that relaxing term limits reduces turnout by about 4.6 percentage points. In column (2) we add among controls council size and find qualitatively the same results. In columns (3) and (4) we add our control variables at municipal and political competition level respectively. The effect of our diff-in-discontinuity estimate is always negative, statistically significant at 5 percent level and stable across specifications.

In particular, our results highlight how the introduction of the mayor term limit extension negatively affects voter participation at the polls by about 5 percentage points in cities below the cutoff (those with a population size lower than 3,000 inhabitants) compared to municipalities in the control group (cities with a population above 3,000 cutoff).

Table 4: Diff-in-disc estimates on Electoral Participation (LLR)

VARIABLES	(1)	(2)	(3)	(4)
Term Limit Extension	-0.0460**	-0.0462**	-0.0473**	-0.0488**
	(0.0219)	(0.0220)	(0.0219)	(0.0221)
After	-0.0668***	-0.0730***	-0.0685***	-0.0517***
	(0.0198)	(0.0208)	(0.0207)	(0.0155)
Less than 3000 inhabitants	0.0529**	0.0855***	0.0755**	0.0762**
	(0.0230)	(0.0313)	(0.0303)	(0.0312)
Council Size		0.0159	0.0121	0.0121
		(0.0114)	(0.0110)	(0.0111)
Education Population			0.0120	0.0110
			(0.0097)	(0.0099)
Employment			0.0050	0.0125
			(0.2676)	(0.2685)
Municipal Area			0.0002	0.0002
			(0.0002)	(0.0002)
% Elderly People			-0.4486**	-0.4645**
			(0.1808)	(0.1835)
# Candidates				0.0093**
				(0.0039)
Electoral Margin (t-1)				-0.0330
				(0.0212)
Constant	0.6837***	0.4986***	0.5202***	0.5094***
	(0.0169)	(0.1326)	(0.1866)	(0.1933)
Province and year dummies	Yes	Yes	Yes	Yes
Interaction Term	First	First	First	First
Population Polynomial	First	First	First	First
Bandwidth	CTT	CTT	CTT	CTT
Observations	603	603	603	589
R-squared	0.443	0.445	0.473	0.478

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

Our estimation results are also consistent with the descriptive graph presented in Figure 2, where we plot the estimated difference between post-treatment (2014-2017) electoral participation and pre-treatment (2011-2013) values against population size close to the 3,000 threshold. This graph allow us to check whether the difference in the outcome variable shows a discontinuity in the neighborhood of the 3,000 cutoff. As we can notice, the difference in voter turnout sharply changes at 3,000.

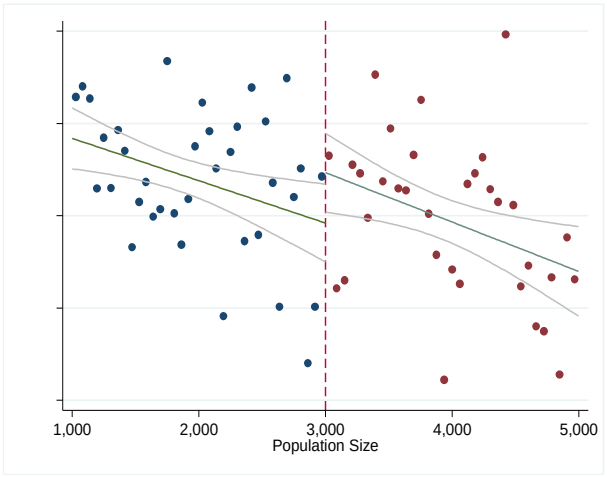

Figure 2: LLR estimates

As far as our control variables are concerned, we find the expected correlations (see column 3). Voter turnout increases with the educational attainment of the population, employment rate and municipal area (even if the coefficients attached to these control variables are not statistically significant at conventional levels), while it decreases with the proportion of elderly people. Furthermore, council size does not have any statistically significant impact on our outcome variable. Finally, the number of candidates running for a mayor position is positively correlated with turnout.

The negative effect of term limit extension on voter turnout can be explained through two main different channels. First, term limit relaxation might decrease electoral participation by making electoral races less competitive, since incumbents can re-run for elections discouraging new candidates to run (incumbents have some advantages over their challengers, i.e. greater name recognition and familiarity to voters, influence over redistricting to maintain friendly constituency groups, various organizational and informational advantages that come from having already run and won in the constituency). Second, relaxing term limit might negatively affect voters' mobilization because incumbents, having spent more time in office, can use their power to get bribes, or to waste public funds by means of red-tape procedures, and in turn it may inspire less citizen trust into political life.

In the following table we investigate the first channel. Given the staggered scheduling of local electoral races, not all Italian municipalities with a population below 3,000 inhabitants were affected by the reform in the same way. The law extending the term limit from two to three consecutive mandates has implied an immediate main change especially for those municipalities where the incumbent mayor has already been in charge for two mandates. In addition, it is likely that electors have perceived the change more intensively when the exiting mayor has decided to run for being re-elected. Then, to investigate whether the term limit extension has produced differentiated effects on treated municipalities according to the presence among candidates of the incumbent mayor, we have built an interaction term between the dummy variable *Incumbent* (taking the value of one when among candidates running for election there is the exiting mayor and zero otherwise) and *Term Limit Extension*.

In column (1) of Table 5 we replicate specification (2) of Table 4 adding among regressors the variables *Incumbent* and *Incumbent*Term Limit Extension*. We find that in the absence of the incumbent among candidates the term limit extension produces a negative but not statistically significant (at conventional levels) effect. Instead, in municipalities where the incumbent is running for election the effect is negative and statistically significant (0.0354+0.0209, *p-value*: 0.012). In column (2) we also consider the presence among candidates of a mayor who has already been in office for two consecutive mandates by including among regressors the dummy variable *Incumbent_Second_Term*, which takes the value of one when among candidates there is the exiting mayor who has already served for two mandates and zero otherwise[9]. It should be noticed that the variable *Incumbent_Second_Term* always takes the value of zero for municipalities with more than 3,000 inhabitants and for elections held before 2014. Again we find a negative effect of the extended term limit that is larger when an incumbent is among candidates (-5.02 percentage points, p-value:

[9] This variable always take the value of zero for the pre-treatment period.

0.021) and even larger when the incumbent has already served for two consecutive mandates (-7.22 percentage points, p-value*:* 0.005).

In column (3) to better stress these effects we take a different strategy and exclude from the sample of treated municipalities those in which there is no incumbent among candidates. We find that in treated municipalities, where the incumbent is running for election, relaxing the term limit has produced a reduction in turnout by about 4 percentage points compared to control municipalities. A much larger effect is found when we only consider as treated municipalities those in which among candidates there is the exiting mayor who has already served for two consecutive mandates (column 4). In these municipalities the term limit extension has reduced turnout by 9 percentage points roughly.

Table 5: Diff-in-disc estimates on Electoral Participation (LLR)

VARIABLES	(1)	(2)	(3)	(4)
Term Limit Extension	-0.0354	-0.0360	-0.0429*	-0.0942*
	(0.0234)	(0.0234)	(0.0258)	(0.0500)
Incumbent	0.0150**	0.0150*	0.0097	0.0089
	(0.0078)	(0.0078)	(0.0088)	(0.0091)
Incumbent* Term Limit	-0.0209*	-0.0159		
Extension	(0.0119)	(0.0123)		
Incumbent Second Term		-0.0203		
		(0.0147)		
Constant	0.5048***	0.5033**	0.5958***	0.5664*
	(0.1947)	(0.1960)	(0.2248)	(0.3156)
Province and year dummies	Yes	Yes	Yes	Yes
Full set of Controls	Yes	Yes	Yes	Yes
Interaction Term	Yes	Yes	Yes	Yes
Polynomial Population	First	First	First	First
Bandwidth	CTT	CTT	CTT	CTT
Observations	589	589	470	311
R-squared	0.479	0.482	0.491	0.513

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

The downward variation in the electoral participation level highlighted in column (4) of Table 5, could derive from the fact that the decision of the incumbent, who has already been confirmed twice, to re-run for a third time negatively affects political competition at the electoral race. The probability of having an incumbent running for re-election after the reform (2014-17) has increased from 51% (in years 2011-13) to 61% in municipalities with less than 3,000 inhabitants. As shown in the first column of Table 6, where we investigate the probability of having among candidates the incumbent, this increase is due to mayors who have already served for two consecutive mandates and thanks to the reform decide to re-run for election. Instead, the reform has not changed the incentives to run for election for mayor who were serving the first mandate. In fact in our regression the coefficient of *Term Limit Extension* is not statistically significant, while the interaction term between *Term Limit Extension* and a dummy variable taking the value of one when the exiting mayor has already served for two consecutive mandates and zero otherwise (*Mayor_Second_Term*) is positive and statistically significant at the 10 percent level.

In column (2) we have tested whether the reform has reduced political competition by implementing a diff-in-discontinuities design where the outcome variable is as measured by the difference in votes gained by the first two best candidates over the number of voters (*Margin*). If this channel is relevant to explain the negative change in the electoral participation, we would expect a positive coefficient of our diff-in-discontinuities estimate. We find a positive but not statistically significant effect. In column (3) to investigate differentiated effects on treated municipalities according on whether the exiting mayor has already served two consecutive mandates, we have included among regressors *Mayor_Second_Term* and *Term Limit Extension*Mayor_Second_Term.* The coefficient of the interaction term is positive and statistically significant, implying that in municipalities where the exiting mayor, who has already served two consecutive mandates, is allowed to re-run for election there is a reduction in political competition.

Similar results are found when we analyze differentiated effects on treated municipalities according to the presence among candidates of the incumbent mayor by including among regressors *Incumbent* and *Incumbent*Term Limit Extension* and *Incumbent_Second_Term.* As reported in column (4) having the incumbent among candidates reduces political competition (the difference in votes gained by the first two candidates increases). The effect is larger when the incumbent is allowed to run for a third mandate.

These results hold true when we measure *Margin* as the difference in votes gained by the first two best candidates over the number of electors (instead of voters) and when we select the optimal bandwidth using the IK or the ML procedures.

Table 6: Diff-in-disc estimates on the probability of having the Incumbent among candidates and on Political Competition (Margin) (LLR)

	(1)	(2)	(3)	(4)
VARIABLES	Incumbent	Margin	Margin	Margin
Term Limit Extension	-0.1129	0.0285	0.0041	0.0279
	(0.1458)	(0.0356)	(0.0356)	(0.0393)
Mayor Second Term	-0.5267***		-0.0399***	
	(0.0475)		(0.0116)	
Mayor Second Term*	0.1475*		0.0572***	
Term Limit Extension	(0.0911)		(0.0215)	
Incumbent				0.0245**
				(0.0118)
Incumbent* Term Limit				-0.0064
Extension				(0.0229)
Incumbent Second Term				0.0394*
				(0.0236)
Constant	-0.4262	0.2584	0.2471	0.2714
	(1.008)	(0.2380)	(0.2371)	(0.3156)
Province and year dummies	Yes	Yes	Yes	Yes
Full set of Controls	Yes	Yes	Yes	Yes
Interaction Term	Yes	Yes	Yes	Yes
Polynomial Population	First	First	First	First
Bandwidth	CTT	CTT	CTT	CTT
Observations	589	566	566	566
R-squared	0.208	0.084	0.103	0.098

Notes: In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

5. The impact of term limit extension on politicians' quality

In this Section we investigate whether term limit extension leads to an increase in the institutional quality, allowing high skilled representatives to remain in office.

As it is common in the literature, we consider politicians' education as a proxy for their quality (De Paola and Scoppa, 2010; Baltrunaite et *al.*, 2014; Galasso and Nannicini, 2011). Hence, we measure the quality of candidates at the electoral race as the average number of years of education of candidates running for the mayor position in municipality *i* at time t. We use this measure of quality as dependent variable in our diff-in-discontinuities models.

As shown in column 1 of Table 7, we find a negative but not statistically significant effect of term limit extension on politicians' quality. In column (2) we investigate whether in response to term limit extension high quality incumbents tend to re-run for election. At this aim we consider as outcome variable the number of years of education of the incumbent running for re-election. We find that relaxing term limit does not produce any increase in the quality of incumbents who decide to re-run for election: the effect is instead negative, but not statistically significant at conventional levels. In column (3) we add among control variables the dummy variable *Incumbent_Second_Term*, which takes the value of one when among candidates there is the exiting mayor who has already served for two consecutive mandates and zero otherwise. We find that the quality of mayors running for the third time is on average worst compared to the educational attainment of other incumbents: the variable *Incumbent_Second_Term* attracts a negative coefficient that is statistically significant at the 10 percent level. In column (5) we investigate the effects produced by term limit extension on the quality of new entrants and we do not find any statistically significant effect. Finally, in column (6) we consider as dependent variable the number of years of education of the elected mayor. Again, we find no effect.

Table 7: Diff-in-disc estimates on Electoral Participation (LLR). Candidates' Characteristics

	(1) Educ. Candidates	(2) Educ. Incumbent	(3) Educ. Incumbent	(4) Educ. Entrants	(5) Educ. Mayor
VARIABLES					
Term Limit	-0.4658	-1.6351	-1.3537	0.9096	-0.8892
Extension	(0.7705)	(1.4518)	(1.4471)	(1.5972)	(1.0823)
Incumbent Second Term			-1.5708**		
			(0.7771)		
Province and Year Dummies	Yes	Yes	Yes	Yes	Yes
Full set of controls	Yes	Yes	Yes	Yes	Yes
Interaction Term	First	First	First	First	First
Population Polynomial	First	First	First	First	First
Bandwidth	CTT	CTT	CTT	CTT	CTT
Observations	576	315	315	252	543
R-squared	0.099	0.031	0.047	0.124	0.062

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

These results hold true also when we select the optimal bandwidth using the procedure proposed by Imbens and Kalyanaraman (2014) (IK hereafter) and when we use the cross-validation algorithm as proposed by Ludwig and Miller (2007) (CV hereafter).

We have also analyzed whether relaxed term limits produce any impact on other candidates' characteristics. More precisely, we have looked at gender and age. We do not find any effect on the average age of candidates (neither entrants nor incumbents). Instead, we find that extended term limits reduce the probability of having female candidates running for election (significant at 10 percent level). However, this result only holds when choosing the optimal bandwidth using the CCT procedure (results not reported and available upon request).

All in all results presented in this section show that relaxing term limits does not contribute at increasing institutional quality.

6. Robustness Checks

As a first robustness check, we estimate specifications reported in Table 4 choosing as optimal bandwidth that proposed by IK. This alternative method leads to an optimal bandwidth of 2,480 inhabitants above and below the threshold of 3,000. Results using the same specifications of Table 4 are reported in Table 8. The impact of relaxed term limits is always negative and statistically significant at the 5 percent level, even if the magnitude is smaller (about 2 percentage points).

Results consistent with those reported in Table 5 are also found when we investigate the impact of the term limit extension in municipalities in which the incumbent mayor runs for re-election. We find that the extended term limit has reduced turnout by about 7 percentage points when we only consider as treated municipalities those in which the exiting mayor who has already been in office for two consecutive mandates runs for re-election (results are reported in Table A2 of the Appendix)[10].

Table 8: Diff-in-disc estimates on Electoral Participation (LLR)

VARIABLES	(1)	(2)	(3)	(4)
Term Limit Extension	-0.0228**	-0.0218**	-0.0235**	-0.0235**
	(0.0109)	(0.0110)	(0.0111)	(0.0111)
Province and year dummies	Yes	Yes	Yes	Yes
Council Size	No	Yes	Yes	Yes
Municipal Characteristics	No	No	Yes	No
Election Characteristics	No	No	No	Yes
Interaction Term	First	First	First	First
Population Polynomial	First	First	First	First
Bandwidth	IK	IK	IK	IK
Observations	2,720	2,720	2,577	2,577
R-squared	0.317	0.317	0.367	0.367

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

[10] The same results hold true when we choose the cross-validation algorithm (CV). In this case we end up with an optimal bandwidth of 1,915 inhabitants above and below the cutoff.

Since our dependent variable, i.e. electoral participation, is a proportion and in turn lies between zero and one, OLS may not be the most accurate method to estimate our model. For this reason, as an additional robustness check, we implement our empirical design by using two different methods accommodating the outcome variable to be greater than zero and lower than one: the fractional probit model and the beta regression estimator (Ferrari and Cribari-Neto, 2004). Results are reported in Table 9. We use alternatively the CCT (columns 1 and 4), the IK (columns 2 and 5) and CV optimal bandwidths (columns 3 and 6). Findings are very similar in terms of sign and magnitude to those presented in the previous section.[11] Electoral participation decreases by 2 to 5 percentage points (according to the specification) in treated municipalities compared to municipalities in the control group, exclusively due to the introduction of the policy reform in 2014.

Table 9: Diff-in-disc Estimates: Fractional Probit and Beta Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)
	Fractional Probit	Fractional Probit	Fractional Probit	Beta Regression	Beta Regression	Beta Regression
VARIABLES						
Term Limit Extension	-0.0511**	-0.0233*	-0.0288**	-0.0507**	-0.0241*	-0.0298**
	(0.0227)	(0.0129)	(0.0139)	(0.0206)	(0.0132)	(0.0138)
Province and year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Full set of Controls	Yes	Yes	Yes	Yes	Yes	Yes
InteractionTerm	First	First	First	First	First	First
PopulationPolynomial	First	First	First	First	First	First
Bandwidth	CTT	IK	CV	CTT	IK	CV
Log-likelihood	-352.36	-1,565.87	-1,132.92	824.10	3,062.92	2,365.48
Observations	582	2,577	1,868	582	2,577	1,868

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

As another robustness check, in Table 10 we carry out a falsification exercise in the spirit of Lee (2008). We firstly use a fake threshold where no policy is expected to sharply change, in order to evaluate the possibility that our results depend on random chance rather than causal relationship. In particular, we choose a fake population threshold of 1,500 inhabitants (results are still the same when we use different fake population cutoffs) and we replicate diff-in-disc estimations presented in the previous section with alternatively the CCT and the IK optimal bandwidths (municipalities with a population size between 954 and 2,046 and between 482 and 2,518 respectively), a linear polynomial of the forcing variable along with a first order interaction term. Results are presented in columns (1) and (2) of Table 10. We can notice that the diff-in-disc estimate is positive but far from being statistically significant.

In columns (3) and (4) (using respectively the CCT and the IK bandwidth) instead of considering a fake population threshold we exploit the introduction of the policy used in our design in different years as an experiment to test for the absence of any differential response around the population threshold of 3,000 inhabitants. In particular, we choose year 2008 (with 2006-2007 as pre-treatment period) because no policy

[11] Since the estimated coefficients of fractional probit and beta regression models are not easy to interpret, we directly report marginal effects.

has been introduced in Italy that year at the local level, and as a consequence we should observe no effect of our diff-in-disc estimates on the electoral participation. We do not find any statistically significant impact of the main variable of interest on the outcome variable.

Furthermore, a potential concern of our empirical design is that there is another institutional feature (introduced in 2014 by Law April n. 56) that sharply changes in proximity of the 3,000 threshold, i.e. council size. Hence, the effect found in the previous section might be confounded by the presence of this further policy. In order to check whether the negative and statistically significant diff-in-discontinuities estimates are due to the introduction of a mayor term limit extension or to a change in the council size, we use 2011 (with 2008-2010 as pre-treatment period) and 2012 (with 2009-2011 as pre-treatment period) as fake years, since in these years the Italian law established a reduction in the number of councilors, passing from 12 to 9 for cities with a population below 3,000 and from 16 to 12 for cities with a population between 3,001 and 10,000 in 2011, and passing from 9 to 6 for cities with a population below 3,000 and from 12 to 7 for cities with a population between 3,001 and 10,000 in 2012. In other words, in 2011 and 2012 the only institutional feature sharply changing around the 3,000 cutoff is the council size[12]. If council size affects electoral participation, we would expect a statistically significant effect of diff-in-disc estimates on voter turnout. By implementing the same methodology as before, results displayed in column (5) and (6) of Table 9 confirm our expectation: the diff-in-discontinuities estimate is not statistically significant at conventional levels, and in turn the negative effect produced by the policy reform in 2014 is likely to be exclusively related to the introduction of a third term for mayors in cities with a population size lower than 3,000 inhabitants[13].

Table 10: Diff-in-disc estimates on Electoral Participation (LLR). Fake population threshold and fake reform year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1,500 threshold	1,500 threshold	2008 fake year	2008 fake year	2011 year	2011 year	2012 year	2012 year
VARIABLES								
Term Limit Extension	0.0164	0.0043	0.0084	0.0050	0.0015	-0.0123	-0.0263	-0.0055
	(0.0194)	(0.0144)	(0.0222)	(0.0105)	(0.0267)	(0.0115)	(0.0260)	(0.0113)
Province and Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full set of controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interaction Term	First	First	First	First	First	First	First	First
Population Polynomial	First	First	First	First	First	First	First	First
Bandwidth	CTT	IK	CTT	IK	CTT	IK	CTT	IK
Observations	814	1,560	1,560	6,759	1,296	5,659	1,253	5,432
R-squared	0.404	0.509	0.509	0.439	0.551	0.466	0.555	0.465

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

[12]As explained before, mayors' wage also changes in proximity of the same cutoff, but this policy was introduced in the 1960s.

[13] Results displayed in Table 9 are replicated in Table A3 of the Appendix, in which the CV algorithm proposed by Ludwig and Muller (2007) is used.

7. Concluding Remarks

The debate about pros and cons in using legislative term limits is still open both among academics and policy makers. On the one hand, term limits seem to be beneficial to democracies because they might encourage more people to come out to vote allowing more freshman candidates to run for legislative positions presenting new ideas, and limit the potential of corruption and lobbying by forcing incumbents in power to leave their office. On the other hand, term limits could be detrimental for societies that decide to adopt them because good leaders are forced to leave the political arena even if they deserve to stay in office, they discourage professional networking benefits and create rogue politicians.

Only a few papers have focused on voters' behavior at the polls during elections characterized by binding and/or slack legislative term limits, finding however mixed results. In this paper we provide new evidence on the effect of term limits exploiting an exogenous source of variation introduced by an Italian law allowing mayors in small municipalities (below 3,000 cutoff) to re-run for a third time after being confirmed for two consecutive terms after 2014. This change in the institutional setting has permitted us to combine a before/after with the discontinuous policy variation, implementing a difference-in-discontinuities design.

Findings highlight how extending mayor term limit at the local level in Italy decreases voter turnout in cities affected by the reform by about 5 percentage points compared to municipalities in the control group. Voters negatively reacted to the introduction of the reform due to a decrease in the political competition at the electoral races, given that incumbent politicians can re-run for a third time at local elections. In other words, the reform did not give any fighting chance to opposition candidates, hence deteriorating both competition among candidates as well as instrumental value attached to voting process.

We also show the impact of relaxing term limits on the quality of candidates running for a mayor position, finding no significant effect. The same results hold true when we look separately at the average educational attainment of incumbents and new entrants. The effect of the term limit extension is negative and significant only for those incumbents who decide to re-run for the third time. Therefore, our findings highlight the inefficacy of the Italian law that was meant to attract high skilled politicians at the electoral races in small municipalities, usually characterized by high levels of financial constraints.

References

Baltrunaite, A, Bello, P, Casarico, A, and Profeta, P. 2014. Gender quotas and the quality of politicians. Journal of Public Economics 118, 62–74.

Calonico, S., Cattaneo, MD., Titiunik, R., 2014. Robust nonparametric confidence intervals for regression-discontinuity designs. Econometrica 82 (6): 2295–2326.

Campante, F., Chor, D., and Do, Q. 2009. Instability and the incentives for corruption. Economics & Politics, 21, 42-92.

Coviello, D., Gagliarducci, S. 2017. Tenure in office and public procurement. American Economic Journal: Economic Policy 9, 59-105.

Cox, G.W., Munger, M.C. 1989. Closeness, expenditures and turnout in the 1982 US house elections. American Political Science Review 83 (1), 217-230.

De Benedetto, M.A., De Paola, M. 2016. The impact of incumbency on turnout. Evidence from Italian municipalities. Electoral Studies 44, 98-108.

De Benedetto, M.A., De Paola, M. 2017. Candidates' education and turnout: evidence from Italian municipal elections. German Economic Review 18, 22-50.
De Paola, M., and Scoppa, V. 2010. Political competition and politician quality: Evidence from Italian municipalities. Public Choice, 148 (3-4), 547-559.
De Paola, M., Scoppa, V. 2013. The causal impact of closeness on electoral participation exploiting the Italian dual ballot system. Public Choice 160 (3-4), 467-479.
De Paola, M., Scoppa, V., De Benedetto, M.A. 2014. The impact of gender quotas on electoral participation: evidence from Italian municipalities. European Journal of Political Economy 35, 141-157.
Denver, D.T., Hands, G.H.T. 1974. Marginality and turnout in British general elections. British Journal of Political Science 4, 17-35.
Downs, A. 1957. An economic theory of democracy. New York: Harper and Row.
Ferrari, S.L.P., Cribari-Neto, F., 2004. Beta regression for modeling rates and proportions. Journal of Applied Statistics 31, 799–815.
Fiorina, M., P. 1976. The voting decision: instrumental and expressive aspects. Journal of Politics 38, pp. 390–413.
Funk, P. 2010. Social incentives and voter turnout: evidence from the Swiss mail ballot system. Journal of the European Economic Association, 8(5), 1077-1103.
Galasso, V., Nannicini, T. 2011. Competing on good politicians. American Political Science Review, 105 (1), 79–99.
Gamboa-Cavazos, M., Garza-Cantu, V., and Salinas, C.E. 2007. The organization of corruption: political horizons and special interests. Mimeo.
Grembi, V., Nannicini, T., Troiano, U. 2016. Do fiscal rules matter? American Economic Journal: Applied Economics 8, 1-30.
Hajnal, Z., Lewis, P., 2003. Municipal institutions and voter turnout in local elections. Urban Affairs Review 38 (5), 645–668.
Imbens, G., Kalyanaraman, K., 2012. Optimal bandwidth choice for the regression discontinuity estimator. Review of Economic Studies 79 (3), 933-959.
Kousser, T., Mullin, M. 2007. Does voting by mail increase participation? Using matching to analyze a natural experiment. Political Analysis 15, 428-445.
Lee, D.S. 2008. Randomized experiments from non-random selection in U.S. House elections. Journal of Econometrics, 142(2), 675-697.
Ludwig, J., Miller, D.L. 2007. Does head start improve children's life chances? Evidence from a regression discontinuity design. Quarterly Journal of Economics 122 (1), 159-208
McCrary, J., 2008. Manipulation of the running variable in the regression discontinuity design: a density test. Journal of Econometrics 142, 698–714.
McDermott, M.L. 2005. Candidate occupations and voter information shortcuts. The Journal of Politics 67 (1), 201-219.
Mooney, C. Z. 2009. Term limits as a boon to legislative scholarship: A review. State Politics and Policy Quarterly, 9 (2), 204-228.
Nalder, K., 2007. The effect of state legislative term limits on voter turnout. State Politics and Policy Quarterly 7 (2), 187–220.
Nickerson, D. 2007. Does email boost turnout?. Quarterly Journal of Political Science 2, 369–379.
Sigelman, C.K., Sigelman, L., Walkosz, B.J., Nitz, M. 1995. Black candidates, white voters: understanding racial bias in political perceptions. American Journal of Political Science 39 (1), 243-265.
Veiga, F.J., Veiga, L.G. 2018. Term limits and voter turnout. Electoral Studies 53, 20-28.

Appendix

Figure A1: McCrary test- Manipulation of Population Size (2001 Census)

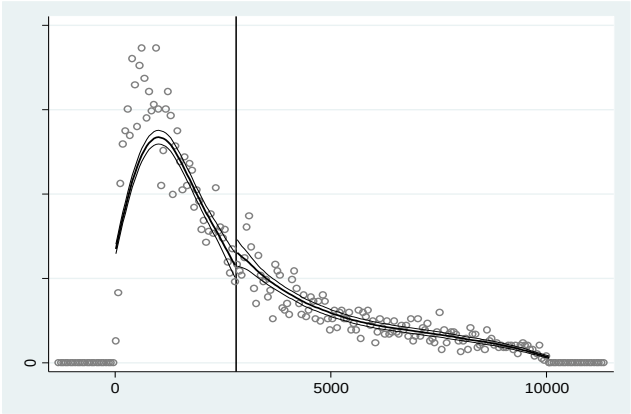

Figure A2: McCrary test- Manipulation of Population Size (Difference between 2001-2011 Census)

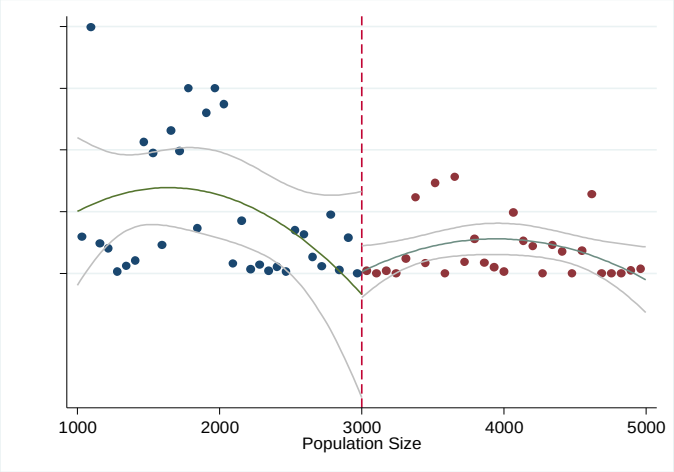

Table A1: Balance Test on Time-invariant Characteristics

VARIABLES Time-invariant characteristics	LLR Optimal Bandwidth (CCT)	Obs.
Municipal Area (in Km2)	3.1303 (6.6221)	602
Center-South	0.0647 (0.1156)	602

Note: Municipalities between 2,326 and 3,674 inhabitants. Baseline Diff-in-discontinuities estimates. We control for year dummies and we focus on the period 2011-2017. Estimation method: LLR with a first order polynomial of the forcing variable and a linear interaction term. Standard Errors are robust to heteroscedasticity and are cluster at municipal level (reported inside the brackets). Significance at the 10% level is represented by *, at the 5% level by **, and at 1% level by ***.

Table A2: Diff-in-disc estimates on Electoral Participation (LLR)

VARIABLES	(1)	(2)	(3)	(4)
Term Limit Extension	-0.0168	-0.0155	-0.0260*	-0.0745***
	(0.0118)	(0.0118)	(0.0137)	(0.0274)
Incumbent	0.0116***	0.0096**	0.0080*	0.0051
	(0.0041)	(0.0041)	(0.0045)	(0.0045)
Incumbent* Term Limit	-0.0128**	-0.0073		
Extension	(0.0063)	(0.0067)		
Incument Second Term		0.0265		
		(0.0107)		
Incumbent Second Term* Term		-0.0397***		
Limit Extension		(0.0130)		
Province and year dummies	Yes	Yes	Yes	Yes
Full set of Controls	Yes	Yes	Yes	Yes
Interaction Term	Yes	Yes	Yes	Yes
Polynomial Population	First	First	First	First
Bandwidth	IK	IK	IK	IK
Observations	2,577	2,577	1,831	994
R-squared	0.369	0.371	0.390	0.449

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Pre-treatment period is 2011-2013. Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.

Table A3: Diff-in-disc estimates on Electoral Participation (LLR)

VARIABLES	(1) 1,500 threshold	(3) 2008 fake year	(5) 2011 year	(7) 2012 year
Term Limit	-0.0111	0.0043	-0.0179	-0.0086
Extension	(0.0147)	(0.0118)	(0.0150)	(0.0085)
Province and Year Dummies	Yes	Yes	Yes	Yes
Full set of controls	Yes	Yes	Yes	Yes
Interaction Term	First	First	First	First
Population Polynomial	First	First	First	First
Bandwidth	CV	CV	CV	CV
Observations	1,532	4,979	4,177	4,009
R-squared	0.405	0.459	0.489	0.489

Notes: The dependent variable is the electoral turnout (number of total ballots on the number of electors). In all the regressions we control for electoral period and province dummies (not reported). Standard errors (corrected for heteroskedasticity and clusterized at the municipality level) are reported in parentheses. The symbols ***, **, * indicate that coefficients are statistically significant, respectively, at the 1, 5, and 10 percent level.