The Impact of Incumbency on Turnout. Evidence from Italian Municipalities

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Abstract: We analyze how having an incumbent among candidates affects electoral turnout. We use a rich data set providing information on the results of Italian municipal elections over the period 1993-2011. Endogeneity issues are handled through an instrumental variable approach using the mayor term-limit as an instrument for the presence of the incumbent mayor among candidates. We find that the impact of incumbency is heterogeneous across geographical areas: incumbency produces a zero effect on turnout in the South of Italy, whereas we find a negative and statistically significant effect in the North. These heterogeneous effects persist also when we try to control for political competition: we find a positive effect for the South and no effect for the North. We speculate that the north-south divergence is related to differences in social capital and in clientelistic relationships established by incumbent politicians. Our conjecture finds support when we look separately at municipalities in the lower and upper quartile of the social capital distribution and at municipalities characterized by high or low density of organized crime.

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1. Introduction

While a large literature has investigated the effect of the incumbency status on the probability that an incumbent candidate wins the electoral competition, little is known on how incumbency affects turnout. Understanding why people vote in large elections and which factors affect this decision is of great interest both for political scientists and economists. The literature typically distinguish between "instrumental voting", when people vote because they are interested in the consequences of the electoral process, and "expressive voting", when people obtain an intrinsic reward from casting a vote (see Brennan and Brooks, 2013; Hillman, 2010; Tóka, 2009). Having an incumbent among candidates at the electoral race could affect turnout through a number of channels relating to both instrumental and expressive motivations. Firstly, the incumbent candidate, due to the so-called incumbency advantage (disadvantage), can reduce (increase) the degree of political competition (the probability of being the decisive voter) and, as a consequence, voters might be less (more) inclined to participate to the polls (see for example, Hortala-Vallve and Esteve-Volart, 2011). This would be an indirect effect, since the electoral turnout is influenced through the change that the presence of an incumbent produces on electoral competition. Electoral turnout may also be influenced through more direct channels. First of all, maintaining constant the level of political competition, elections in which one or more incumbents run for re-election are typically characterized by a higher availability of information, since citizens had the opportunity to observe, even if imperfectly, past performance of incumbent candidates (Houser et al. 2011; Grofman et al., 1995; Keele, 2007; Sobbrio and Navarra, 2010). The increase in the availability of information might lead to an increase in turnout either because information directly increases the expected utility from voting (decision-theoretic models of turnout, Matsusaka, 1995) or because informed voters are less afraid of cancelling out with their vote an informed vote with similar preferences (game theoretic models, Feddersen and Pesendorfer, 1999). However, offering more information to voters might also translate in lower political participation. Oliveros (2013) proposes a theoretical model of information acquisition and voting and shows that voters with extreme ideology collect information and vote if the information reinforces their bias, but abstain if the information goes against their bias. The empirical evidence on the relationship between information availability and turnout also leads to ambiguous results (see Larcinese, 2009)[1] and even information on corruption does not increase in an obvious manner political participation; instead, a number of papers find an increase in abstentions, probably because voters become disenchanted with the political system (see for example, Costas-Pérez, 2014; Chong et al., 2013; Caillier, 2010).

It should also be considered that incumbency may affect the direct utility which comes from expressing political preferences since voters may obtain higher or lower utility from voting in an election characterized by a different degree of novelty in the pool of candidates. Finally, another direct channel through which incumbency can affect turnout is related to the fact that incumbent politicians are able to use their power and resources to obtain "exchange votes" leading, by this way, to an increase in political

[1] The author shows that while there is a positive impact of information on turnout for non-ideological and non-partisan voters, the effect becomes negligible or even negative for ideological voters (see also Lassen, 2005).

participation. This type of relationship based on the log-rolling usually characterizes the poorest areas of a country and could be stronger in the presence of an incumbent running for re-election. In fact, even if incumbent politicians are as likely as entrants to be corrupt, incumbents, having spent time in office, had the opportunity to divert public resources and to use "red-tape procedures" and private information in order to obtain exchange votes. In other words, even if incumbents and freshmen politicians have ex-ante the same characteristics, time spent in office might have favored the occurrence of corrupt behaviors. For instance, Coviello and Gagliarducci (2010), using Italian data, show that mayors' longevity in office produces a deterioration of the procurement system, with a reduction in participation and an increase in the cost of the public work. In a similar vein, Besley and Prat (2006) find a positive correlation between political longevity and some cross-country measures of corruption.

In this paper we try to shed some light on the relationship between incumbency and turnout. We use a rich data set providing information on the results of the Italian municipal elections over the period 1993-2011. To handle problems deriving from the fact that the incumbent's decision to run for election is endogenous and may be affected by unobservable and time variant variables that also affect turnout (for instance some unobservable skills of the incumbent may affect his\her decision to run for election and voters' decision to cast their vote), we implement an instrumental variable strategy. We use as an instrument for the presence of an incumbent among candidates the mayor term-limit imposed by the Italian law (according to this law -DL 25 March 1993, no. 81-, if the outgoing mayor has already been confirmed for two consecutive terms, he/she cannot run at the next election). Term limits create ideal conditions for instrumental variables because term limits are exogenous to all those factors that might affect both individual incumbents' decision to run for reelection and turnout. The mayor term limit we consider represents a valid instrument since it clearly affects the probability of having an incumbent among candidates, but it is unlikely to directly affect turnout. Two-Stage-Least-Square results show a negative and statistically significant effect of having an incumbent among candidates on turnout. However, when we consider separately municipalities located in the Center-South and in the northern part of Italy, the negative effect persists only for municipalities located in the North, while for the Center-South the effect is null. This heterogeneous behavior is confirmed, also when, in order to try to understand whether incumbency affects turnout through some other channels than political competition, we add a measure of political competition among our controls. Once we control for the degree of competition characterizing the electoral race, we find a negative, but not statistically significant effect for the North, whereas for elections held in the South the effect is positive and statistically significant.

We speculate that in areas endowed by low social capital (such as the South of Italy) there is both a higher probability of having corrupt incumbents, who establish clientelistic relationships[2] and a higher tendency of free riding among citizens who avoid to protest against government malfeasance (Knack,

[2] 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. This is more likely to happen in elections in which the incumbent runs for re-election since he\she had the opportunity to divert public resources to gain votes.

2002; Peiró-Palomino and Tortosa-Ausina, 2013). Both these channels are likely to lead to a positive relationship between incumbency and turnout. Instead, in areas characterized by a high level of social capital, clientelistic relationships are less frequent, which might weaken the efforts made by the incumbent to increase turnout (the expected returns of winning an election are lower as they do not include the personal gains deriving from corruption, see Escaleras et al. 2012), while citizens are more likely to punish bad performing incumbents by increasing support for challengers, leading to an increase in turnout. These two channels work in opposite directions. Depending on which one prevails, the effect of incumbency on turnout will be positive or negative (or null since the two effects can offset each other).

To better investigate this issue we analyze the effect of incumbency in relationship to social capital (as measured by blood donations). We split the sample and look separately at provinces below the 25^{th} and above the 75^{th} percentile. We find that the positive relationship between turnout and incumbency holds true only in municipalities characterized by low levels of social capital.

We have further scrutinized this question by looking separately at the subsample of Italian regions characterized by a high density of organized crime (above the 75^{th} percentile) and at the subsample of regions with very low density of organized crime (below the 25^{th} percentile). Again, we find a positive impact of incumbency on turnout for regions characterized by a high density of organized crime, while the relationship is either negative or zero, according on whether we control or not for political competition, for the other regions.

The effects we find are small (based on the largest estimates, it emerges a positive impact of about 0.49 percentage points in the South), but in line with those found in the literature on turnout. In a well-known paper, Matsusaka and Palda (1999) conclude that very little of the variation in voter turnout can be explained by most of the ‘‘standard’’ independent variables (such as age, education, electoral competition), leaving much of the observed variation to unobservable factors.

We believe that understanding whether incumbency affects electoral turnout is relevant since turnout is often considered a crucial indicator of democracy (Sartori, 1987; Pzeworski et al., 2000; Clark et al., 2009). From a theoretically point of view, having an incumbent among candidates might either increase or decrease turnout and then providing empirical evidence on this relationship is particularly important. To the best of our knowledge, this is the first work focusing of this issue and the heterogeneous effects we find suggest that the channels behind it might differ according to the social and institutional environment.

Our work is related to the literature investigating the determinants of turnout and more in particular to a strand of the literature analyzing the impact of candidates' characteristics on political participation. The idea at the basis of these works is that information on candidates' characteristics allows voters to make inference on candidates’ skills. For instance, McDermott (2005), by focusing on statewide elections held in California, studies the impact of the candidate occupational label on voters’ choice. She shows that candidate occupational clue helps voters to make a decision in low-information races, reducing abstention. On the same vein, Kahn (1993) shows that information on past political experience leads to an increase in

electoral participation, since voters by getting these information realize that candidates have already developed some specific abilities in the political sector.

Other similar papers have investigated how turnout is affected by the presence of female candidates on turnout (De Paola et al. 2013; Wolf 2011; McDermott, 1997) and by candidates' race (Sigelman et al., 1995, Washington, 2006). In fact, voters could obtain utility from voting for candidates of their own gender/race or they may consider gender/race as a proxy for candidates' quality and preferences. Similar channels may induce voters to change their behavior in relation to candidate sexual orientation (Golebiowska, 2001).

Our work is also related to the very large literature investigating the incumbency advantage/disadvantage. In particular, De Paola et al. (2010), using the same data we consider in this paper,[3] show that the percentage of votes obtained by each candidate and the probability of being elected as a mayor at Italian municipal elections is positively affected by incumbency. An incumbency advantage emerges also for US (Butler, 2009; Ansolabehere et al. 2000), and German federal elections (Hainmueller and Kern, 2008). Conversely, Titiunik (2009), analyzing the incumbency effect for Brazilian municipal elections, finds a negative impact. Similar results are found by Linden (2004) and Uppal (2009) for Indian elections and by Miguel and Zahidi (2004) for Ghana.

Some recent works have also considered how the incumbency advantage/disadvantage changes in relationship to exogenous changes in turnout, (see Hansford and Gomez, 2010; Trounstine, 2013), showing that higher turnout lowers the vote share for the candidate of the incumbent's party. In our paper we take a different perspective and look at the effect that an exogenous change in the probability of having an incumbent among candidates produces on turnout.

On this ground we also contribute to the literature analyzing the relationship between political accountability and social capital. Ferejohn (1986), Persson and Tabellini (2000), Alesina and Tabellini (2008), Besley (2005) show that social capital can affect political outcomes through two channels. First, higher social capital might induce individuals to bear the cost of gathering and processing information about the behavior of their political representative, putting them in the condition to punish misbehavior. Second, social capital may play a role in inducing voters to refrain from rewarding corrupt or lazy politicians despite receiving some targeted or clientelistic benefits and induce them to vote according to aggregate social welfare criteria. Some evidence on these effects is provided by Nannicini et al. (2013) that, using Italian data on the Italian members of Parliament, show how the electoral punishment of political misbehavior is considerably larger in electoral districts with high social capital. In line with this finding, we show that when social capital is low, voters are also less inclined to punish incumbent politician through abstention.

The paper is organized as follows. Section 2 is devoted to the description of the institutional framework and of our data set. In Section 3, we discuss municipal fixed effects estimates, whereas in Section 4 we present Two Stage Least Square results. Section 5 concludes.

[3] More precisely, they use data on Italian municipal elections for the period 1993-2006.

2. *Institutional Setting and Data*

In Italy, municipal administrations are involved in a number of important functions, such as the management of public utilities (local roads, water, sewage and garbage collection), the provision of public housing, transportation and nursery schools, and the assistance of elderly people. Since these services have a great impact on citizens' daily lives, voters are generally very interested in the composition and in the performance of Municipal Councils as well as in participating at elections.[4]

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.

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[5] 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.[6] We end up with a sample composed by 22,629 observations for 6,499 Italian municipalities over the period 1993-2011. For each municipal election we have information on the number of voters and the number of people eligible to vote. We measure *Voter Turnout* (%) as the ratio between the number of voters and the number

[4] Given that in small towns it is quite common that candidates are elected to a municipal council with a hundred, or even a few dozen, of votes, the probability of being the decisive-voter for the election of a favorite candidate might not be negligible.

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

[6] 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.

of eligible voters. As shown in Table 1, in which some descriptive statistics are reported, 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 79.24%, with a standard deviation of 9.2.

We also have information on the number of candidates who run for a mayor position at each election, on their gender, age, educational attainment and previous job (Anagrafe degli Amministratori Locali, Ministero dell'Interno).[7] Using this information, we build a dummy variable *Incumbent* taking the value of 1 when among the candidates running for election there is the exiting mayor and zero otherwise. From Table 1, we can notice that in 36% of elections there is, among candidates running for the mayor position, a candidate that has already performed this charge in the previous legislature.

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 19% of the elections, the term limit was binding and it was not possible to have the incumbent mayor among candidates.

Using 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 about 20% with a standard deviation of 0.40. We also have information on candidates' education, the average *Candidates' Education* of candidates is quite high (14 years of education), highlighting how the majority of candidates has at least obtained a high-school diploma.[8] Finally, candidates are on average 48 years old.

Table 1: Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max	Observations
Voter Turnout (%)	79.240	9.253	0.010	92.99	22,629
Incumbent	0.360	0.480	0	1	22,629
Binding Term Limit	0.190	0.392	0	1	22,629
Candidates' Education	14.097	2.879	5	18	22,629
Candidates' Age	47.778	7.976	19	84	22,629
Female Candidate	0.204	0.403	0	1	22,629
Electoral Margin	0.204	0.220	0	0.875	22,629
Education of Population	6.940	0.841	0.442	12.56	22,629
Population Size/1,000	3,379	3.213	0.033	14,966	22,629
Employment/Population	0.240	0.136	0.006	0.846	22,629
% Elderly People	0.203	0.067	0.043	0.643	22,629
Center-South	0.367	0.482	0	1	22,629

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

Our data set allows us also to use some proxies of the degree of competition characterizing each electoral race. We have information on the number of votes obtained by each candidate and we create a

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

[8] 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.

variable *Electoral Margin* as the absolute difference between the number of votes obtained by the two leading candidates (divided by the number of eligible voters). *Electoral Margin* represents an inverse measure of expected electoral closeness and is on average equal to 0.204, with a maximum of 0.875 and a minimum of 0.[9]

To control for municipalities' demographic characteristics, we use the 1991 and 2001 Italian Census of Population. Data from the 1991 census are used for elections held in the period 1993-1996, while data from the 2001 census are used for elections held after 1996. We have information on the size of resident population, the average level of employment, the educational attainment of the population and the percentage of people aged 65 or over. As shown in Table 1, the average population size is 3,379, the average educational attainment of population, by considering only people aged 6 or above, is about 7 years. Further, the fraction of employed people in the population is 24%, the proportion of elderly people in the population is on average 20%. Roughly 37% of municipalities are located in the Center-South.

3. Incumbency Status and Voter Turnout: Municipal Fixed Effects Estimates

In this Section, we analyze whether having an incumbent mayor among candidates affects electoral participation. Assuming that the voter's expected utility when voting is given by $U = pI + E - C$, where p is the probability of being the decisive voter, I are the benefits deriving from the election of the voter's favorite candidate, E represents the utility a voter obtains from expressing political preferences or solidarity and C is the costs of voting, the presence of an incumbent among candidates changes U through the following channels: 1) affecting p, due to the so-called incumbency advantage (disadvantage); 2) changing I through the higher availability of information on candidates' expected performance or through "exchange votes"; 3) changing E, since voters might experiment an increase or decrease in the direct utility they obtain from voting in an election in which candidates are freshmen or incumbents.

Since from a theoretical point of view these effects can lead either to a positive or to a negative impact of incumbency on turnout, it is important to investigate this issue empirically. At this aim, we estimate the following model by OLS with fixed effects at municipal level:

$$[1] \quad Voter\_Turnout_{it} = \beta_0 + \beta_1 Incumbent_{it} + \beta_2 X_{it} + \beta_3 Z_{it} + \varphi_i + \mu_t + \varepsilon_{it}$$

where $Voter\_Turnout_{it}$ is a variable measuring the (%) electoral turnout (number of voters on number of eligible electors) in municipality i in election year t; $\text{Incumbent}_{\text{it}}$ is the main variable of interest and it takes a value equal to 1 if the mayor in the previous legislature is among candidates and zero otherwise; X_{it} is a vector of municipal characteristics at the time of elections, such as the population size, the population size squared, the average number of years of education of the inhabitants, the fraction of

[9] The value of zero characterizes few elections in which the two candidates obtained exactly the same number of votes.

employed people in the population, the fraction of elderly people; Z_{it} is a vector of candidates' characteristics, such as the average age and education of candidates and a dummy variable taking the value of 1 when there is at least a woman among candidates; Z_{it} also includes $Electoral\ Margin_{it}$ that measures the degree of political competition as the difference in votes (%) between the winner and his/her closest challenger; φ_i and μ_t are respectively a municipal and an electoral year fixed effect, whereas ε_{it} is the stochastic error term of the model. The fixed effects φ_i accounts for time-invariant characteristics of the municipality, 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 the voters' behavior in the same municipality may be affected by common shocks.

In Table 2 we report estimates obtained when controlling for municipal fixed effects. In all specifications the dependent variable is voter turnout.

In column (1), we control only for demographic characteristics, and we find a negative and statistically significant, at 10 percent level, correlation between incumbency and turnout. In particular, having a candidate who performed the mayor charge in the previous legislature decreases the electoral participation by 0.11 percentage points. In column (2) we add candidates' characteristics as control variables. Again we find a negative and statistically significant correlation between incumbency and turnout. In order to understand what drives this negative relationship, in column (3), we include among controls our measure of electoral competition, i.e. the electoral margin. We are aware that political competition is a "bad" control since having an incumbent among candidates might affect the degree of political competition. However, including this variable can be useful to illuminate the mechanism through which incumbency affects turnout: incumbency influences both turnout and political competition, but we are interested in understanding whether incumbency has an effect on turnout through some other channels than political competition and then controlling for political competition provides some insight into whether this is true. We find the expected results: turnout is higher in closer elections.[10] Once we control for electoral competition, the effect of $\mathrm{Incumbent}_{it}$ changes sign and becomes positive and statistically significant at the 1 percent level, suggesting that, keeping constant the level of electoral competition, having an incumbent among candidates induces a higher number of electors to cast their vote.

As far as our control variables (municipal and candidates' characteristics) are concerned, we find the expected results (see column 3). Voter turnout increases with the educational attainment of the population, while it decreases with population size [11] and the employment rate. Candidates' characteristics also matter. Having more educated candidates running for the mayor position positively affects turnout, suggesting that electors decide to go to the polls and to cast their vote when candidates are considered

[10] These results are consistent with those found by Fauvelle-Aymar and Francois (2008) for French elections, by Simonovits (2012) for Hungarian elections and by De Paola and Scoppa (2011; 2013) for Italian municipal elections.
[11] This finding is in line with the idea that the single rational elector is not able to modify the electoral outcome alone and in turn, when population size increases, the expected utility deriving from casting the vote decreases, leading to voters' absenteeism (see for example Mueller, 2003).

qualified on the basis of their educational attainment. Further, having elderly candidates also positively affects turnout, maybe because older candidates are perceived as more experienced. On the other hand, having at least a female among candidates produces a negative but not statistically significant impact on turnout.

Table 2: Municipal fixed effects estimates. Incumbency and Voter Turnout

	(1) Voter Turnout	(2) Voter Turnout	(3) Voter Turnout
VARIABLES	Population Controls	Population and Candidates' Controls	Political Controls: Electoral Margin
Incumbent	-0.106*	-0.129**	0.187***
	(0.062)	(0.062)	(0.058)
Population Size/1,000	-1.626***	-1.657***	-1.841***
	(0.442)	(0.441)	(0.419)
Population Size^2	0.046**	0.047**	0.059***
	(0.023)	(0.023)	(0.022)
Education of Population	1.345***	1.355***	1.429***
	(0.303)	(0.302)	(0.299)
Employment/Population	-1.509	-1.479	-2.132*
	(1.274)	(1.275)	(1.233)
% Elderly People	-6.529*	-6.413*	-5.687
	(3.883)	(3.874)	(3.737)
Candidates Education		0.049***	0.030**
		(0.015)	(0.014)
Candidates' Age		0.014**	0.010**
		(0.005)	(0.005)
Female Candidates		0.097	-0.106
		(0.083)	(0.079)
Electoral Margin			-6.447***
			(0.209)
Constant	81.142***	79.790***	81.498***
	(2.407)	(2.437)	(2.433)
Observations	22,629	22,629	22,629
R-squared	0.439	0.440	0.494

Notes: The dependent variable is voter turnout (%), as measured by the number of voters on the number of individuals eligible to vote. 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.

OLS estimates presented in Table 2 might be biased due to endogeneity problems and then be the result of spurious correlation between incumbency and electoral participation: the incumbent's decision to run for election is endogenous and may be affected by unobservable and time variant variables that also affect turnout. In the next section we handle endogeneity problems by using an instrumental variable approach.

4. Instrumental Variable Estimates

To disentangle the causal effect of incumbency on electoral participation we use a Two-Stage-Least-Square (TSLS) approach, specifying the model presented in the previous section as follows:

[1] $$Voter\_Turnout_{it} = \beta_0 + \beta_1 Incumbent_{it} + \beta_2 X_{it} + \beta_3 Z_{it} + \mu_t + \varepsilon_{it}$$

[2] $$Incumbent_{it} = \alpha_0 + \alpha_1 Binding\_Term\_Limit_{it} + \alpha_2 X_{it} + \alpha_3 Z_{it} + \mu_t + v_{it}$$

The coefficient β_1 in equation [1] measures the effect of our variable of interest on electoral turnout. From equations [1] and [2] we can notice that $\text{Incumbent}_{\text{it}}$ might be positively or negatively correlated with the error term ε_{it}, leading to biased estimates in the municipal fixed effects model discussed in the previous section. For instance, some unobservable abilities of the incumbent embedded in the error term of equation [1], such as communicative skills or charisma, may affect both his/her decision to run for election and voters' decision to cast their vote.

To solve this endogeneity problem, we estimate a TSLS model using $Binding\_Term\_Limit_{\text{it}}$ (a dummy variable taking the value of 1 if the outgoing mayor has already been confirmed for two consecutive terms and zero otherwise) as an instrument for $Incumbent_{\text{it}}$. The Italian electoral law establishes a two mandate term limit and, as a consequence, while incumbent mayors at their first mandate can decide to run or not for re-election (about 36% of mayors at their first mandate decide to run for re-election), those at their second mandate are excluded from competition. Then, it is possible to have among candidates the outgoing mayor only if he/she has not already spent two consecutive terms in office; in this case the term limit constraint is not binding and our instrument takes the value of 0, otherwise the term limit is binding and the instrument takes the value of 1. This implies that $\text{Binding\_Term\_Limit}_{\text{it}}$ is strongly correlated to $Incumbent_{\text{it}}$. On the other hand, $\text{Binding\_Term\_Limit}_{\text{it}}$ is exogenous because we do not expect it to affect, through other channels, turnout (i.e. it is not included in equation [1]) and, as a consequence, it is not correlated to the error term ε_{it}.

TSLS estimates are shown in Table 3. Panel B highlights the results from the First Stage regressions. The instrumental variable strongly determines $\text{Incumbent}_{\text{it}}$.

Panel A of Table 3 reports the TSLS estimates for the same specifications reported in Table 2. In column (1) and (2), in which we control for municipal and candidates' characteristics respectively, we find that incumbency produces a negative and highly statistically significant effect on voter turnout. In particular, having a candidate who held a mayor position in the previous legislature decreases electoral participation by 0.31 percentage points (see column (1)). Similar results are found in column (2) where we add candidates' characteristics.

As in OLS estimates, once we control for political competition (see columns (3)), the effect of incumbency on turnout becomes positive. Nevertheless, in TSLS estimates the effect is no longer statistically significant suggesting that once we handle endogeneity issues and control for the indirect effect that incumbency produces on turnout through the change in electoral competition, no other additional effect is left.

Table 3: TSLS Estimates. Incumbency Effect on Voter Turnout

	(1) Voter Turnout	(2) Voter Turnout	(3) Voter Turnout
	Population Controls	Population and Candidates's Controls	Political Controls: Electoral Margin
VARIABLES		Panel A TSLS	
Incumbent	-0.309***	-0.331***	0.029
	(0.111)	(0.113)	(0.108)
Population Size/1,000	-1.641***	-1.671***	-1.853***
	(0.341)	(0.341)	(0.324)
Population Size^2	0.047**	0.048**	0.061***
	(0.019)	(0.019)	(0.018)
Education of Population	1.467***	1.477***	1.559***
	(0.166)	(0.166)	(0.157)
Employment/Population	-1.435	-1.405	-2.049**
	(0.894)	(0.893)	(0.849)
% Elderly People	-6.189***	-6.075***	-5.364**
	(2.296)	(2.295)	(2.181)
Candidates' Education		0.051***	0.031**
		(0.013)	(0.013)
Candidates' Age		0.016***	0.012***
		(0.005)	(0.004)
Female Candidates		0.087	-0.112
		(0.082)	(0.078)
Electoral Margin			-6.406***
			(0.156)
Observations	22,629	22,629	22,629
		Panel B First Stage	
VARIABLES	Incumbent	Incumbent	Incumbent
Binding Term Limit	-0.735***	-0.727***	-0.719***
	(0.007)	(0.007)	(0.007)
First Stage *F-Stat*	9,353.02	9,215.96	9,055.40
(p-value)	(0.0000)	(0.0000)	(0.0000)
Adj- R squared	0.54	0.55	0.55

Notes: The dependent variable is voter turnout (%), as measured by the number of voters on the number of individuals eligible to vote. 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.

It is worthwhile to notice that the estimated effect is a Local Average Treatment Effect (LATE) (we identify the average treatment effect for that part of the population that changes its participation behavior with the change in the instrument). Since our instrument only affects the subgroup of mayors that are elected in their second period, we measure a local average treatment effect among elections in which the term limit was binding. Our instrument affects about 20% of elections in our sample. Then, the local average treatment effect is computed within a not too small group of municipalities. This group is instead peculiar. However, it is not clear how this might affect the direction of the LATE compared to the ATE, since in the municipalities affected by the instrument, voters might be either more or less inclined to vote. In our data the turnout rate is slightly smaller (78%) in those municipalities where the instrument is binding - no incumbent because of a binding term limit- compared to those municipalities where the instrument is not binding (80%) – no incumbent but no binding term limit), which might point to a local average treatment effect that is smaller than the ATE.

The channels through which incumbency may affect turnout may work dissimilarly in different parts of Italy. We are indeed considering a country that is very heterogeneous in terms of economic and social conditions, with the northern part being richer and endowed with higher social capital compared to the South. To investigate whether the relationship between incumbency and turnout is heterogeneous in the two parts of the country we have run separate regressions[12] for municipalities located in the Center-South and in the North of Italy. Results are reported in Table 4. As shown in columns (1) and (2), in which we do not control for electoral competition, it emerges a negative and statistically significant effect, at the 1 percent level, for the North (column 2), while the effect is null for the Center-South (column 1). In column (3) to investigate whether the North-South differences are statistically significant, we have estimated our model using the whole sample and adding interaction terms between our explanatory variables and the dummy *South*. The interaction term *Incumbent*South* is positive and statistically significant: while in the North having an incumbent among politicians reduces turnout (by 0.462 percentage points) in the Center-South the effect is zero.[13]

In columns (4) and (5) we again run separate regressions for municipalities located in the Center-South and in the North of Italy, but we add among controls our measure of political competition (electoral closeness). Once we control for electoral competition, we find a positive effect of incumbency on turnout for southern municipalities (incumbency increases turnout by 0.424 percentage points) and a negative effect (even if statistically not significant) for northern municipalities. As shown in column (6) the difference between the estimated treatment effect is statistically significant.

A positive impact of incumbency on turnout could be related to the improvement in the information available to voters on candidates' expected performance. However, we would expect this channel to work also in the northern part of the country. Then, we speculate that the heterogenous effect of incumbency in the two geographical regions is related to difference in social capital and in clientelistic relationship established by incumbent politicians. In areas endowed by low social capital there is both a higher probability of having corrupt incumbents, who establish clientelistic relationships and a higher tendency of free riding among citizens who avoid to protest against government malfeasance.[14] Both these channels

[12] The regressions are the same as that reported in column (4) of Table 3, in which we consider the full set of controls.

[13] We are interacting the variable of main interest with a dummy taking the value of one for municipalities located in the South. Since people can move across municipalities living in the South is not exogenous and it might be affected by unobservable variables that also affect turnout. In other words, our moderating variable might not be exogenous. However we are including fixed effects at municipal level. Unless the decision to live in the South is affected by time variant variables that also affect turnout, our results should not particularly suffer from the potential endogeneity of our moderator term.

[14] Clientelistic relationships are more likely to emerge in the South. As argued by Putman (1993), the emergence of "exchange votes" is more likely in areas characterized by poor economic conditions and weak social capital. In these areas contracts with government officials tend to overwhelmingly involve requests for jobs and patronage. In addition, even if problems related to clientelism and corruption at local level are mitigated by the fact that citizens are able to monitor better than a distant central authority, when social capital is low, citizens tend to free ride avoiding to protest against government malfeasance and public officials can easily indulge in inefficient policies aimed at increasing electoral support (see Jimenez and Sawada, 1999; Mookherjee, 2001; Bardhan and Mookherjee, 2005). See also Del Monte, Papagni (2007) who, using data from Italian regions, show that social capital is negatively correlated to corruption.

are likely to lead to a positive relationship between incumbency and turnout. Instead, in areas characterized by a high level of social capital, clientelistic relationships are less frequent, which might weaken the efforts made by candidates to increase turnout (the expected returns of winning an election are lower as they do not include the personal gains deriving from corruption, see Escaleras et al. 2012), while citizens are more likely to punish bad performing incumbents by increasing support for challengers, leading to an increase in turnout. These two channels work in opposite directions. Depending on which one prevails, the effect of incumbency on turnout will be positive or negative (or null since the two effects can offset each other).

Table 4: TSLS Estimates. Incumbency Effect on Voter Turnout: North vs South

	(1)	(2)	(3)	(4)	(5)	(6)
	Voter Turnout	Voter Turnout	Voter Turnout	Voter Turnout	Voter Turnout	Voter Turnout
	Center-South	North	Full Sample	Center-South	North	Full Sample
VARIABLES			Panel A TSLS			
Incumbent	-0.009	-0.462***	-0.462***	0.354*	-0.073	-0.073
	(0.196)	(0.120)	(0.130)	(0.184)	(0.125)	(0.130)
Incumbent*Sud			0.454**			0.424**
			(0.217)			(0.215)
Population/1,000	1.105*	-1.575***	-1.607***	0.913	-1.888***	-1.969***
	(0.624)	(0.362)	(0.392)	(0.586)	(0.379)	(0.394)
Population Size^2	-0.065*	0.028	0.029	-0.052*	0.047**	0.051**
	(0.034)	(0.020)	(0.022)	(0.032)	(0.021)	(0.022)
Education of Population	-0.465*	0.076	0.158	-0.339	0.095	-0.056
	(0.269)	(0.194)	(0.207)	(0.255)	(0.221)	(0.204)
Employment/Population	6.152***	-1.153	-1.122	5.331***	-1.521*	-1.563
	(1.782)	(0.897)	(0.974)	(1.675)	(0.912)	(0.954)
% Elderly People	-46.348***	-5.598**	-5.707**	-47.816***	-2.879	-3.511
	(4.333)	(2.419)	(2.626)	(4.072)	(2.498)	(2.502)
Candidates' Education	0.096***	0.030**	0.031**	0.059**	0.020	0.019
	(0.025)	(0.014)	(0.015)	(0.024)	(0.014)	(0.015)
Candidates's Age	0.020**	0.008	0.008	0.009	0.009*	0.008*
	(0.008)	(0.005)	(0.005)	(0.008)	(0.005)	(0.005)
Female Candidates	0.019	0.204**	0.204**	-0.095	-0.043	-0.043
	(0.159)	(0.083)	(0.090)	(0.150)	(0.085)	(0.089)
Electoral Margin				-8.317***	-5.744***	-5.744***
				(0.297)	(0.170)	(0.178)
Observations						
	8,316	14,309	22,629	8,316	14,309	22,629
			Panel B First Stage			
VARIABLES	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent
Binding Term Limit	-0.703***	-0.739***	-0.739***	-0.700***	-0.730***	-0.730***
	(0.013)	(0.009)	(0.009)	(0.013)	(0.009)	(0.009)
Binding Terrm Limit*South			0.036**			0.029**
			(0.015)			(0.015)
First Stage *F-Stat*	3,070.27	6,115.24	4,230.70	3,037.11	5,981.47	4,183.54
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Adj- R squared	0.51	0.57	0.55	0.51	0.57	0.55

Notes: The dependent variable is voter turnout (%), as measured by the number of voters on the number of individuals eligible to vote. 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.

The main difference in social capital endowment in Italy is between North and South. However, there are also differences within each area. We consider as a measure of social capital blood donation[15] and split the sample considering separately municipalities belonging to the first quartile (below the 25th percentile), municipalities between the 25th percentile and the 75th percentile and municipalities above the third quartile (above the 75th percentile). Results are reported in Table 5 (we do not report control variables to save space). In odd columns we do not control for political competition, while in even columns we add among regressors the electoral margin. As shown in columns (1) and (2), we find a zero or a positive and statistically significant effect (according on whether we control or not for political competition) of incumbency on turnout for municipalities belonging to the provinces below the 25th percentile of the blood donation distribution. Instead, for the other municipalities the effect is negative and statistically significant when we do not control for political competition (see columns 3 and 4) and becomes not statistically significant when we add among controls the electoral margin (columns 5 and 6)[16].

Table 5: TSLS Estimates. Incumbency Effect on Voter Turnout According to the Social Capital Distribution (blood donations)

	(1) Voter Turnout < 25th	(2) Voter Turnout < 25th	(3) Voter Turnout > 25th & <75th	(4) Voter Turnout > 25th & <75th	(5) Voter Turnout >75th	(6) Voter Turnout >75th
VARIABLES			Panel A TSLS			
Incumbent	0.064	0.422*	-0.389**	-0.024	-0.477***	-0.108
	(0.228)	(0.219)	(0.172)	(0.163)	(0.179)	(0.174)
Political competition	NO	YES	NO	YES	NO	YES
Observations	5,772	5,772	10,954	10,954	5,903	5,903
			Panel B First Stage			
VARIABLES	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent
Binding Term Limit	-0.713***	-0.708***	-0.718***	-0.712***	-0.756***	-0.747***
	(0.015)	(0.015)	(0.011)	(0.011)	(0.014)	(0.014)
First Stage *F-Stat*	2,222.24	2,186.49	4,223.70	4,161.54	2,764.65	2,690.49
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Adj- R squared	0.53	0.53	0.54	0.56	0.56	0.56

Notes: The dependent variable is voter turnout (%), as measured by the number of voters on the number of individuals eligible to vote. We control for municipalities fixed effects, demographic characteristics, candidates' characteristics and 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.

We have further investigated this issue by looking separately at the subsample of Italian regions characterized by a high density of organized crime[17] (above the 75th percentile - Sicily, Calabria,

[15] The number of blood bags (each bag contains 16 ounces of blood) per million inhabitants in each province collected by AVIS.

[16] The same results are found when we measure social capital using the indicators based on trust (World Value Social Survey, at the regional level). Results not reported and available upon request).

[17] Data on crime, available in Italy, are often spoiled by underreporting issues. This is a serious concern for our purposes, since underreporting is typically negatively related to social capital. For this reason, we have decided to use data at regional level and to look at one extreme to regions that, according to many studies (see for example Pinotti, 2011, Daniele and Marani, 2011), are characterized by a high density of organized crime and to the other

Campania and Apulia -) and at the subsample of regions with very low density of organized crime (below the 25th percentile - Marche, Valle D'Aosta, Friuli Venezia Giulia, Veneto, Trentino Alto Adige, Molise -). Again we find a positive impact of incumbency on turnout for regions characterized by a high density of organized crime, while for the other regions the relationship is either negative, when we do not control for electoral competition, or vanishes when we add among controls a measure of electoral closeness.

Table 6: TSLS Estimates. Incumbency Effect on Voter Turnout According to the Level of Organized Crime

	(1) Voter Turnout High Density	(2) Voter Turnout High Density	(3) Voter Turnout Middle Density	(4) Voter Turnout Middle Density	(5) Voter Turnout Low Density	(6) Voter Turnout Low Density
VARIABLES			Panel A TSLS			
Incumbent	0.176	0.428**	-0.417***	-0.013	-0.519**	-0.156
	(0.216)	(0.206)	(0.148)	(0.142)	(0.206)	(0.204)
Political competition	NO	YES	NO	YES	NO	YES
Observations	5,311	5,311	14,516	14,516	2,801	2,801
			Panel B First Stage			
VARIABLES	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent	Incumbent
Binding Term Limit	-0.712***	-0.709***	-0.719***	-0.711***	-0.806***	-0.788***
	(0.016)	(0.016)	(0.009)	(0.009)	(0.021)	(0.021)
First Stage *F-Stat*	2,075.71	2,055.71	5,709.31	5,601.02	1,478.40	1,410.75
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Adj- R squared	0.52	0.53	0.55	0.55	0.62	0.63

Notes: The dependent variable is voter turnout (%), as measured by the number of voters on the number of individuals eligible to vote. We control for municipalities fixed effects, demographic characteristics, candidates' characteristics and 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.

We take these results as suggestive of the fact that in municipalities characterized by very low levels of social capital and by high density of organized crime, incumbent politicians use their power and resources to establish clienteles and to offer benefits of different kind in exchange of electoral support. We cannot exclude other channels, such as the electors' desire to punish incumbent politicians, who may have poorly performed in low social capital areas, and to vote in favor of a new candidate. However, in this case we would also expect a smaller incumbency advantage in areas endowed with lower social capital. To get some evidence on this issue we have used our data to analyze whether the incumbency advantage is related to social capital. At this aim we have regressed the percentage of votes obtained by each candidate on whether a candidate is an incumbent (controlling for gender, age and education differences among opponents, municipal fixed effects and municipal characteristics).[18] We find that the incumbency

extreme to regions where organized crime is very low. The data we use are from Centro Transcrime, Catholic University, Milan (reported in http://it.wikipedia.org/wiki/Indice_di_penetrazione_mafiosa).

[18] To make easier the interpretation of results, we restrict our analysis to only those elections in which two candidates compete.

advantage diminishes with social capital (results not reported and available upon request). This evidence, even if only suggestive (as we are not handling endogeneity problems arising in this type of estimates), supports the idea that the positive relationship between turnout and incumbency in municipalities characterized by low social capital is the result of patronage practices.

5. Concluding Remarks

Having an incumbent among candidates at the electoral race can affect turnout through both indirect and direct channels. The incumbent candidate, due to the incumbency advantage (disadvantage), can reduce (increase) the degree of political competition and, as a consequence, voters might be less (more) inclined to participate to the polls. In addition, since elections in which one or more incumbents run for re-election are typically characterized by a higher availability of information, electors may take advantage of this information and be inclined to express their vote (Grofman et al., 1995; Keele, 2007). Moreover, another direct channel through which incumbency can affect turnout is related to the fact that incumbent politicians are able to use their power and resources to obtain "exchange votes" leading, by this way, to an increase in political participation. This type of relationship based on the log-rolling usually characterizes the poorest areas of a country and could be stronger in the presence of an incumbent running for re-election.

In this paper, by using data on electoral results of Italian municipal elections over the period 1993-2011, we have tried to shed some light on these effects. We have firstly estimated an OLS model. Controlling for municipal fixed effect and a number of municipal and candidates' characteristics, we find that having a candidate who performed the mayor charge in the previous legislature produces a negative effect on turnout. However, once we control for the degree of political competition at the electoral race the effect of incumbency on turnout changes sign and becomes positive and statistically significant, suggesting that, keeping constant the level of electoral competition, having an incumbent among candidates induces a higher number of electors to cast their vote.

To handle endogeneity problems arising from the fact that the incumbent decision to run for re-election may be affected by unobservable and time variant variables that also affect turnout, we have used an instrumental variable approach, instrumenting the incumbency status with the mayor term-limit, imposed by the Italian law. This instrument is strongly correlated to the presence of the incumbent mayor among candidates and should not directly affect turnout.

TSLS estimation results confirm OLS estimates and show a negative and statistically significant effect of incumbency on electoral participation. This effect is again driven by the reduction that incumbency produces on electoral competition. When we control for the "closeness" of the electoral race, we find a positive but (in contrast to OLS estimates) not statistically significant effect. There is also evidence, however, that the impact of incumbency is heterogeneous across geographical areas. When we distinguish between municipalities located in the North and in the Center-South of Italy, by controlling for

the degree of political competition, we find that incumbency does not affect turnout in northern municipalities, but it produces a positive and statistically significant effect in the South. We argue that this heterogeneity is likely to be related to differences in social capital and in clientelistic relationships established by incumbent politicians. Our conjecture finds support when we look separately at municipalities in the lower and upper quartile of the social capital distribution and at municipalities characterized by high or low density of organized crime

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