Extended Abstract

Ballot Design, Mayor's Dilemma:
How Electoral Rules Shape Governance

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February 2025

Overview

Can a simple electoral rule change the way politicians behave? In Italian municipalities, an arbitrary threshold of 15,000 inhabitants determines whether a mayoral election follows a single-round or a run-off system. But does this institutional shift influence the strategic decisions of incumbent mayors seeking re-election? Existing literature shows that a *transmission circuit* exists between the impact of electoral rules on political competition (Osborne and Slivinski (1996)) and, in turn, on policy outcomes (Besley et al. (2010)). With this study, I examine how electoral rules shape policy choices at the local level, investigating whether incumbent mayors adjust their decisions in the years leading up to elections in response to different electoral dynamics. Does a different electoral environment push incumbent candidates to modify their strategies—reflected in terms of resource allocation—to gain greater consensus and increase their chances of re-election?

This work aims to bridge the gap in the literature on the impact of electoral systems on policy choices in municipalities. Recent contributions focus on differences in efficiency and investment driven by varying levels of political competition in the Italian context (De Benedetto et al. (2024) and Cipullo (2021), among others). However, a deeper analysis is required to examine how incumbent mayors tailor their policy choices and resource allocation strategies to maximize their chances of re-election. By leveraging municipalities' *impegni* (future planned expenditures) around the 15,000-inhabitant threshold—a discontinuity at which the electoral rule shifts from a single-ballot to a run-off system—and applying a regression discontinuity (RDD) approach, it is possible to assess whether electoral systems induce measurable differences in governance and resource allocation. This analysis aims to identify specific patterns that may enhance the probability of re-election for incumbent candidates. More specifically, the hypothesis to be tested is whether (i) mayors systematically target specific sectors of investment in the years leading up to elections and, consequently, (ii) whether these investment decisions depend on the electoral rule under which the mayor is elected. Focusing exclusively on incumbent candidates reduces the likelihood that politicians fail to fulfill their planned investments, ensuring that their decisions are more directly tied to the prospect of re-election. As suggested by Besley and Case (2003), term limits may undermine the credibility of electoral promises, as an incumbent mayor who cannot seek re-election has weaker incentives to honor them.

State of Art

A *transmission circuit* links electoral rules to political behavior and, ultimately, to economic outcomes. Osborne and Slivinski (1996) develop a theoretical model showing that multicandidate elections are less common under a single-round plurality rule than in a run-off system. Duverger's law (Duverger (1954)) posits that plurality rule favors a two-party system, while run-off systems allow more candidates. Palfrey (1988) attributes the lower number of candidates under plurality rule to strategic voters who eliminate weaker options, a view supported by Feddersen (1992). Regarding the link between political competition and policy outcomes, Besley et al. (2010) provide a seminal study on how political competition influences pro-growth policies. In the realm of public goods provision, Polo (1998) and Lizzeri and Persico (2005) offer key theoretical contributions, examining the impact of political competition on public investment decisions. Empirical analyses confirm theoretical results. Both Fujiwara et al. (2011) and Chamon et al. (2019) examine Brazilian mayoral elections. The former tests Duverger's hypothesis on strategic voting, while the latter argue that political competition improves fiscal policy decisions when the voting system changes at the 200,000-inhabitant threshold.

In Italy, Barone and De Blasio (2013) show that the dual-ballot system boosts political participation by attracting more skilled candidates and increasing voter turnout. Bordignon et al. (2016) highlight that the dual-ballot system not only increases the number of mayoral candidates but also encourages greater party moderation compared to the single-ballot system. On the side of policies, De Benedetto et al. (2024) show that the electoral system affects local government efficiency: in municipalities with a run-off, efficiency scores are generally lower than in single-round systems. Cipullo (2021) shows that municipal expenditures and revenues increase under the dual-ballot system.

Institutional background

Italy is administratively divided into five levels: state, regions (ordinary and special autonomy), provinces, municipalities, and metropolitan cities. The law recognizes municipalities as institutions for general purposes, legitimizing their participation in all matters not reserved for other entities (see Article 13 of TUEL, *Testo Unico degli Enti Locali*). The mayor plays a primary role: as the head of municipal administration, they chair the *Giunta*, the municipal executive body, and participate in the *Consiglio Comunale*, the body responsible for political and administrative direction and control. The mayor holds office for a period of five years, after which new elections are called.

Municipal elections in Italy are regulated by the national law of March 25, 1993, No. 81, which establishes two different electoral systems based on population size. In municipalities with more than 15,000 inhabitants, a candidate is elected mayor if they obtain an absolute majority of valid votes (50% + 1); otherwise, a second round is held between the two most voted candidates. Each candidate is supported by one or more lists presented for the elections. In smaller municipalities, those with fewer than 15,000 inhabitants, the law stipulates that each mayoral candidate is associated with a single list of candidates for the municipal council. The candidate who receives the highest number of votes is elected mayor.

Sample data

Variables used in the analysis are classified into response variables, covariates, and electoral data, all collected at the municipal level. The response variables are sourced from *Quadro 5*, a section of the *Certificati Consuntivi*, which consists of accounting documents that Italian municipalities must complete. These variables focus on planned investments in key functional sectors and services, serving as proxies for mayoral policy decisions. The main investment areas include education, mobility and transport, local police, and social services. Covariates, reflecting the socio-economic characteristics of Italian municipalities, are obtained from Istat, the Italian Institute of Statistics. Electoral data, collected from the Ministry of Interior's online portal *Eligendo*, identify municipalities where incumbent mayors are seeking re-election. Specifically, data are gathered for the election period of interest and the five years preceding it to capture variations in policy outcomes. Additional data include a conversion table of municipality codes and the legal population.

Data covers approximately the two decades from 2000 to 2010 and from 2010 to 2020; however, further analysis is needed to account for the structural changes in the accounting sheets implemented over the years. This analysis focuses specifically on regions with ordinary autonomy, excluding those with special status, such as Sicilia, Sardegna, Trentino-Alto Adige, Friuli-Venezia Giulia, and Valle d'Aosta, which are governed by different legislation and administrative frameworks.

The model

A sharp regression discontinuity design (RDD) is applied to a sample of Italian municipalities around the cut-off of 15,000 inhabitants, the point at which the electoral system shifts from a single ballot to a run-off. In this analysis, legal population serves as the assignment variable, while planned investments—acting as proxies for mayors' choices in the years leading up to potential re-election—function as the response variables. Specifically, future expenditure data are processed such that if the incumbent mayor runs again in the election year t, the difference between $t-1$ and $t-5$ is calculated for the outcome variable. This results in a positive or negative response variable (analytically, $\Delta_{i,t} = y_{i,t-1} - y_{i,t-5}$) that is tested at the 15,000-inhabitant threshold. For instance, if the incumbent candidate ran in 2010, the response variable represents the difference in the specific policy outcome between 2009 and 2005.

In order to capture the local average treatment effect, two categories of municipalities are established: the control group, consisting of municipalities subject to single-round elections (below 15,000 inhabitants), and the treated group, made up of those subject to run-off elections (above 15,000 inhabitants). The econometric intuition behind the model is the following:
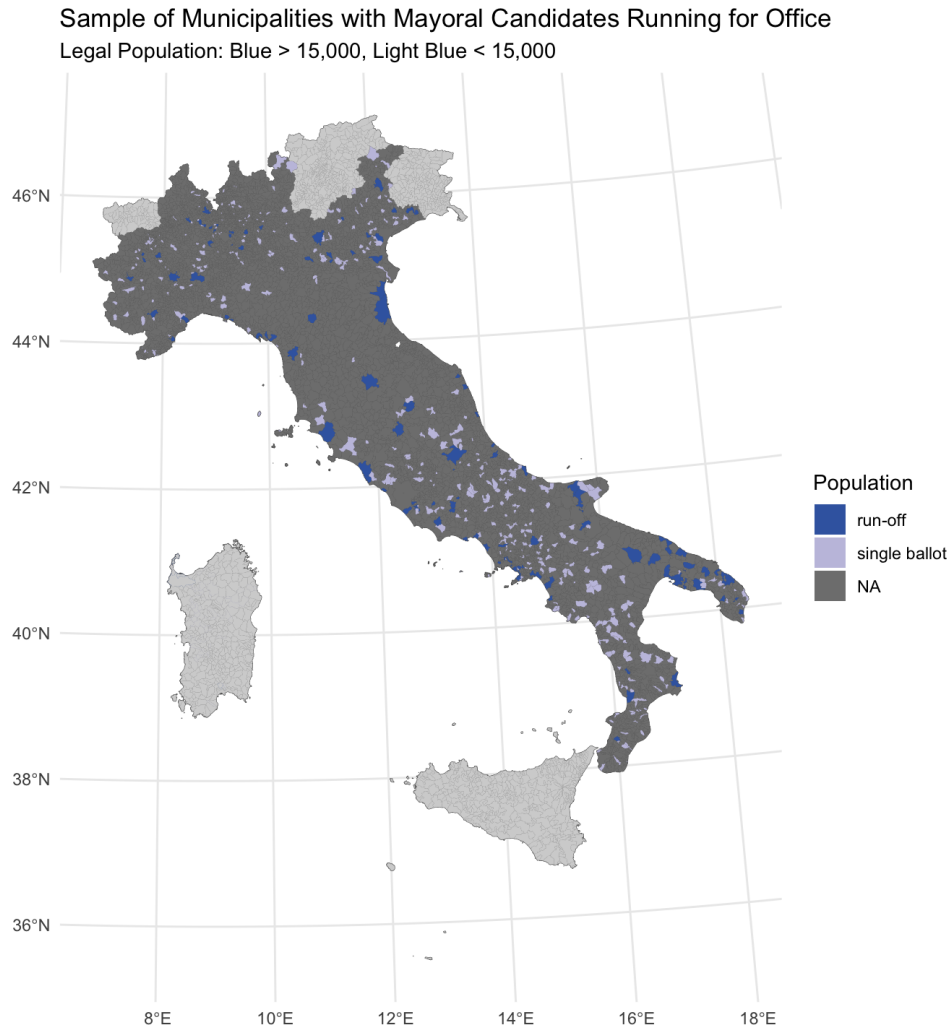
$$y = \beta_0 + \beta_1 P + \delta T + \gamma x + \epsilon$$

where P is the population (running variable), T is the treatment (in our case, municipalities above 15,000 inhabitants), and x contains covariates. From a technical point of view, robustness checks will be performed. Among others, tests on the kernel functional form, narrow population window, and bandwidth will be conducted. A balancing test to ensure the smoothness of other covariates at the discontinuity point is required to validate the methodology applied and the overall results.

Expected results

This type of study aims to enhance the existing literature by examining the effect of electoral rules on political choices, which directly impact municipal life. Overall, I expect the results to align with prior studies. While Barone and De Blasio (2013) provide evidence that a dual ballot system increases electoral participation—suggesting this is due to higher political representation, more skilled candidates, and better fiscal discipline—Cipullo (2021) show that a dual ballot leads to increased municipal expenditures and revenues, reflecting higher costs for the provision of services to citizens. Conversely, Ferraresi et al. (2015) identify that per capita total revenues and current expenditures are lower under the run-off system compared to a single-round system, although these results are not confirmed in cases of large coalitions.

In this study, I expect both electoral systems to shape the behavior of incumbent candidates seeking re-election, particularly in their approach to public service provision in the years leading up to elections. I anticipate that distinct patterns of behavior will emerge due to varying levels of political competition, yet I believe these patterns are consistent with previous findings on the impact of electoral systems on policy outcomes. By adopting an over-time perspective that, to the best of my knowledge, has not been previously utilized, I strongly believe that this study will confirm prior results while also providing deeper insights into mayors' investment behavior within this field of literature.

Sample of Municipalities with Mayoral Candidates Running for Office
Legal Population: Blue > 15,000, Light Blue < 15,000

The figure presents a sample of municipalities where mayoral candidates ran for a second term. The sample refers to the election years 2010–2012 and is well distributed across the national territory, allowing for a suitable candidate sample to estimate the local average treatment effect. Regions with special status have been excluded from the study due to electoral system differences.

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