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POPULISTS AT WORK. ITALIAN MUNICIPAL FINANCE UNDER M5S GOVERNMENTS *

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Abstract

This paper empirically investigates the impact of populist governments on public policies and finances. We focus on Italian local governments (i.e. municipalities) over the 2010-2019 period, when a populists, i.e. the Five Stars Movement, became the most voted party in the country. We first document that the re-election probability of incumbent mayors drops by half when they are populist. While populist mayors are not less qualified than mainstream parties, they are significantly younger and less experienced. Estimates from a stacked diff-in-diff design comparing early to not-yet treated municipalities show that the populist government experience significantly worsen municipal finances. Populist mayors also fail to promote social and environmental policies that align with the political demands of their voters, possibly contributing to their difficulties in securing re-election.

JEL classification: H70, H72, P43 Keywords: Populism, Local Governments, Fiscal Policy, Inequality.

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1 Introduction

Following the sharp increase in the support for extreme and populist parties in most advanced economies in the last decade, a large literature has developed, trying to understand the origins of the phenomenon (Guriev and Papaioannou, 2022; Rodrik, 2021). Both economic and social factors have been singled out as potential causes, varying from the loss of trust in traditional democratic institutions due to the inability of traditional political parties to cope with a number of recent heavy shocks (e.g. globalisation, immigration, technological transformation), to a political backlash due to the resistance of a part of the population to what is perceived as an attack to fundamental social values (family, marriage, religion etc.) and the derived social identity. However, only little attention has been devoted to the question of what populists do once they reach power in the few cases in which they actually do (Funke *et al.*, 2023).

This is an important question for several reasons. First, populists' electoral promises are often extreme and run against the advice of mainstream economics. Second, populist leaders are often poorly qualified (Bellodi *et al.*, 2022) and they tend to distrust professional advice, as technicians (being them scientists or economists) are perceived and depicted as part of the hated corrupted elite. Poorly informed voters, with serious and unaddressed problems and little trust in traditional parties might decide to support populist candidates in the hope that this can improve their position. However, if populists' governments fail to solve citizens' problems one would expect some kind of backlash, with voters either going back to support more traditional parties or giving up political participation altogether (i.e. increasing abstention at the electoral turnout).

This paper aims at filling this gap by investigating the economic consequences of populist governments. We focus on the government in Italian municipalities experience of the the Five Star Movement (*Movimento 5 Stelle* or M5S) over the 2010-2019 period. Founded in 2009 by the comedian Beppe Grillo, the M5 resulted already the most voted party by Italians at the national elections in 2013. At the subsequent national elections in 2018, M5S managed to win more

than 33% of seats in the national parliament (339), becoming an essential partner in any ruling party coalition. M5S electoral success was not only limited to the national government; during the same period, and despite always running alone (to avoid "contamination" with traditional parties), M5S also managed to win several municipals elections, resulting particularly effective in winning second term ballots for mayor in large municipalities (Bordignon and Colussi, 2020).

The policy behaviour of the M5S at the municipal level has not instead studied so far, although municipalities are very important bodies in the Italian structure of government. Italian municipalities oversee several important services (from waste collection to social services, from local policy and road maintenance to the offer of local amenities) of direct interest to citizens and also control local taxes and tariffs. Moreover, the quasi-presidential nature of the election of the mayor - that, once elected, also brings with him the majority of the municipal council- gives her/him a very large power in enforcing a M5S policy agenda at the local level, much larger than the party ever enjoyed at the national level, as at the national government the M5S always had to rule in coalition with other parties. Municipal governments then offer an interesting testing ground to address our question about what populists do once they reach power.

We begin our analysis by investigating the reaction of citizens to M5S government by comparing the chance of re-election of a M5S mayor with respect to traditional parties' mayors. By using administrative data on all Italian local government officials over the 2010-2022 provided by the Italian Ministry of Interiors, we are able to follow all elected mayors over their mandate, finding two interesting results. First, the length of populist governments does not differ from one of the non-populist ones: the probability of concluding the legislature is close to one for both types. However, while the probability of the non-populist being re-elected is about 45%, the one for the M5S mayor is almost half.

While there might be several reasons for this figure, we focus our attention on the policies implemented by populist governments and their effect on municipal finances in the election

year and in the two years after. To establish causality, we exploit the variation in the timing of the election of a populist mayor across Italian municipalities. In particular, we employ a stacked-by-event design that only compares early treated municipalities to not-yet treated ones before and after the arrival of a populist mayor.

We collect data from several sources that allow us to estimate the effect of the populist government on a wide range of policy dimensions. We first investigate if the budget equilibrium policy and the taxing behaviour of M5S diverge from those put in place by traditional parties, both on the left and the right of the spectrum. Given the M5S's national agenda, we should expect to observe a more redistributive stance than the one of the traditional parties (at least, with respect to right-leaning municipalities). Instead, we do not have a clear prior on the budget equilibrium policy. We find that a populist mayor, when elected, deteriorates the financial rating of their municipalities, measured by the AIDA-PA Financial Rating Index, a score that provides a comprehensive evaluation of municipal financial health combining ten elementary financial ratios. At the same time, we find no evidence of policies that increase the the progressivity degree of the local income tax.¹

As a second empirical investigation, we study how expenditure policy and, in particular, expenditure composition of M5S diverge from those put in place by traditional parties. For the same reason discussed above, we should also expect more attention towards social and environmental issues, such as the provision of residential care for the elderly and differentiated waste collection or urban traffic control. To address these issues, we rely upon the rich data set offered by Open Civitas, a detailed data set built on the universe of the Italian municipalities (belonging to ordinary statute regions) to the aim of grounding the distribution of transfers to municipalities on efficiency and equity indicators. As a by-product of this analysis, Open Civitas provides detailed indexes of efficiency in the provision of services by the different municipalities, which go beyond the simple amount of spending (for a snapshot of

¹To measure the taxing behaviour we use the structure of the municipal income tax, identifying municipalities that adopt a more progressive tax schedule by counting the number of tax rates and interpreting the distance between the minimum and the maximum rate as a proxy of the progressivity degree.

the OpenCivitas data, see Agasisti and Porcelli (2023)).

Contrary to our prior expectations, we find that, when elected, the populist mayor decreases social spending, ultimately reducing the number of social services users. While increasing revenues per capita, total spending, and, in particular, expenditures for personnel increase more. This results in an overall increase in the fiscal burden per capita. This financial imbalance, coupled with a diminished focus on social services, may create a perception among voters that the populist mayor is reneging on their promises and prioritizing fiscal considerations over the well-being of their voters, significantly impacting their reelection prospects. The M5S's inability to deliver effective policies may be attributed to a lack of experience of their mayors,who are typically *homini novi*, with little or no previous experience in administrative matters and a general lack of trust in pre-existing administrators.

The structure of the remainder of this paper is as follows. Section 2 gives the institutional background, Section 3 describes the data that we use to investigate the impact of populst governmet, Sections 4 and finally 5 describe the empirical models we estimate and our main results. In Section 6 we summarise the main conclusions.

2 Structure of Italian Local governments

Italy is a unitary Republic with three layers of sub-national governments. As a first layers the territory is divided in 20 Regions (five of which with a special statute that gives them higher autonomy from the central government); the second layer of the institutional system is represented by 93 Provinces (17 of which within special regions) and 14 Metropolitan districts (4 of which within special regions). The third and most important layer of the institutional system is represented by municipalities (*Comuni*), which have a long and important historical tradition in Italy. Municipal governments are ruled by a city council and an executive committee appointed by the elected mayor (*Sindaco*). The council and the mayor are directly elected for

a five-year term and are subject to a two-term limit.²

As in many other European countries, also in Italy, there is a high level of fragmentation at the municipal level. There exist 7,978 municipalities (1,351 of which within special regions); 85% of all municipalities have less than 10,000 inhabitants, 75% less than 5,000, 24 less than 1,000 inhabitants, while only 6 cities have more than 500,000 inhabitants. At this level of government is allocated 6.8% of total current public expenditure (52.2 billion euros), by which a wide range of essential public services are provided: environment protection and waste management, social services to elderly and disabled persons, childcare and nursery schools, school-related services (such as school meals and transportation), local police, maintenance of municipal roads, management of civil registries, town planning, culture, recreation, and economic development.

In our analysis, we focus on municipalities within normal-statute regions, as they share the same set of fiscal rules and participated in the OpenCivitas network. In particular, current expenditures of these municipalities are fully financed by local taxes and fees in addition to horizontal equalization grants allocated with a system based on historical expenditure up to 2014; after that year a new equalization system based on the difference between standard expenditure needs and fiscal capacity has been gradually introduced in 2015 with the goal of completely replacing the previous method in 2030. Specific grants are exceptional and earmarked; they are a residual source of funding provided by the central or the regional government, in favor of municipalities with specific investment needs.

Municipalities' own fiscal revenues come from two main sources: (1) local taxes, among which the most relevant are the Property Tax (called "ICI" until 2011 and "IMU" afterward), the tax on waste disposal (called "TARSU" until 2011 and "TARI" afterward), and the local income tax surcharge; (2) local fees related to road and traffic, libraries, theaters and culture, burial services, and other services such as the occupation of public spaces, public bill-

²The electoral system is different according to the population: in small municipalities (below 15,000 inhabitants) there is single-round plurality system; instead, in larger municipalities (above 15,000 inhabitants) there is a run-off system.

boards, certificates. According to the Italian Constitution, all local governments are subject to a balanced-budget constraint and fiscal deficits are allowed only to finance capital expenditure.

3 Data and Descriptives

Different sources of data compose our dataset (Table 1 reports the descriptive statistics of the main variables).

To measure the financial heatth of italian municipalities we rely on a multidimensional measure. In the case of the Italian municipalities, AIDA-PA database provides a financial distress scoring system of single institutional bodies named Rating Finanziario which can prove to be useful in this perspective. In particular, a set of ten elementary financial indicators/ratios are derived from the budgetary modified-accrual accounting reports (rendiconti finanziari) of each municipality. These elementary financial ratios are able to capture the three most relevant dimensions of financial conditions at municipal level mentioned above: budget solvency, longrun solvency and cash solvency (service solvency in not measured since any minimum levels of municipal public service have not been introduced by law yet). A Financial Rating Index is then derived as a summary indicator of overall financial health by combining the elementary financial ratios (the Financial Rating Index is normalized in the range 0-10). Among the array of elementary indexes reckoned by AIDA-PA database we select, in addition to the overall Financial Rating Index, an elementary indicator that the Court of auditors considers particularly relevant to measure the different dimensions of financial health or, on the contrary, of financial distress at local level. The Structural Current Equilibrium Index – is determined as the ratio of current revenues (deducted of bad debt) to current expenditures plus loans repayment (R4 ratio by Corte dei conti, 2021), and represents a summary measure of budget solvency. This measure captures the capacity of a municipality to cover those expenditures having a repetitive feature, namely those for goods and services for current period activities including the

debt service, with similar revenues, i.e. taxes, fees and current grants.

From the Italian National Institute of Statistics (ISTAT) we collected other financial indicators such as total expenditure and revenues per capita and revenue efficiency in terms of tax collecting capacity.

From the Ministry of Finance we collected information regarding the tax rates of the municipal income tax (the legal and average tax rate, the number of income brackets and the effective tax rate)³. From the National Association of Municipalities (ANCI) we collected the tax rates of the property tax (ordinary tax rate and reduced tax rates imposed on main dwellings).

As part of this process, the Italian government decided to integrate the information provided by official sources (Budget Sheets, National Institute of Statistics, Ministry of Education, Land Registry Office, etc.) with new data by sending all authorities a specific questionnaire for each service. In this way a new database was built collecting, for the first time, detailed information on outputs, inputs, methods of management and organisational decisions made in the production process of local services by local governments. The survey questionnaire, in addition to representing valuable information in itself, represents an innovation in international techniques to evaluate Standard Expenditure Needs (SEN).

We also collected information from the data that the Ministry of Finance employs to compute Standard Expenditure Needs published since 2015 on a dedicated website named Open-Civitas, a detailed data set built on the universe of the Italian municipalities (belonging to ordinary statute regions) to the aim of grounding the distribution of transfers to municipalities on efficiency and equity indicators. As a by-product of this analysis, OpenCivitas provides detailed indexes of efficiency in the provision of services by the different municipalities, which go beyond the simple amount of spending (for a snapshot of the OpenCivitas data, see Agasisti and Porcelli (2023)). In particular, we have collected information on municipal spending and the output level in two key sectors: social care and waste management. In particular, regarding social care, we collected expenditure per capita, welfare users per capita and the incidence

³Data are available for the data repository of the Italian Ministry of Finance

of nursery users; regarding waste collection, we collected the percentage of recycled waste, tons of waste per capita, and the information on the presence of pay-as-you-throw schemes.

We collected electoral and political data from the Ministry of the Interior's official data repository of electoral outcomes.

Finally, from the Italian National Institute of Statistics, we collected the usual set of control variables, including income per capita, population structure and deprivation.

	(1) M5S=0		(2) M5S=1	
	mean	sd	mean	sd
Population	6802	26008	113736	412599
Rating 0-10	4.908	2.930	3.953	2.449
Budget solvency	0.977	0.193	0.947	0.138
Inequality	0.036	0.042	0.052	0.044
Income pc	16.554	3.536	18.067	3.590
Deprivation Index	-0.213	38.536	19.771	35.643
Sorted waste (%)	38.051	22.360	29.754	18.721

Table 1: Descriptive statistics of the main variables

Figures from 2 to 2e visualize the characteristics of *M5S* mayors forming our treatment group. We observe that *M5S* mayors won only a few councils, corresponding to 8% of total municipalities (see Figure 2); however, in the 2016 local elections, they won the elections in Rome and Turin, so governing upon 15% of the total national population (see Figure 1b). *M5S* mayors are, on average, younger and less experienced than mayors elected among centre-left or centre-right traditional parties (see Figures 2c and 2e); instead we do not observe differences in other characteristics that are statistically significant such as education (Fgiure 2a), gender (Fgiure 2b) and employment (Figure 2d).

4 Empirical Strategy

To estimate the effect of a populist government on local government outcomes, we adopt a staggered difference-in-differences design. Specifically, we follow the most recent empirical

literature and build a "rolling control group". We first create a separate dataset for each treatment wave, i.e. municipalities treated in the same election year. In each of these newly created datasets, treated municipalities are the ones that elect the populist mayor in that year, while control units are municipalities that will elect a populist mayor in later years. Thus, we compare early-treated municipalities to not-yet-treated. Further, in every dataset, we create eventtime indicators relative to the year of the populist election. Municipalities that experience treatment in the last year, 2019, serve only as comparison units.

Our main estimation equation is:

$$Y_{mt} = \alpha_m + \nu_{pt} + \beta Treated_{mc} + \delta Treated_{mc} \cdot Post_{mt} + \sum_{s \neq -1} \gamma_s \cdot D^s + \varepsilon_{mt}$$
(2)

where *Treated*_{mc} is a dummy that takes value 1 if the municipality *m* is a treated municipality in the cohort *c*. This variable is not collinear with α_m , the municipality fixed-effects since the same municipality can appear both as a treated and comparison unit. *Post*_{mt} is a dummy equal to 1 for the years in which a populist mayor is in charge. The D^s are a set of relative event-time indicators that take value 1 if year *t* is *s* periods before (if negative) or after (if positive) the election of a populist mayor. The inclusion of the relative event-time dummies allows to control for event-time trends that are not captured by the province-by-year fixed-effects v_{pt} . Standard errors are clustered at the municipality level. This level of clustering also accounts for the repeated appearance of municipalities as treated and controls. The parameter of interest in this static specification is δ , which measures the average treatment effect on treated municipalities, using municipalities that have not a populist mayor yet as controls.

To further investigate pre-trends and the dynamic evolution of the treatment effect, we also estimate a non parametric event-study specification:

$$Y_{mt} = \alpha_m + \nu_{pt} + \beta Treated_{mc} + \sum_{k \neq -1} \delta_k \cdot D^k \cdot Treated_{mc} + \sum_{s \neq -1} \gamma_s \cdot D^s + \varepsilon_{mt}$$
(3)

In this specification, the coefficients of interest are the δ_k , measuring the change in the outcomes of treated municipalities k years before/after populist election, relative to pre-treatment year, compared to the change in outcomes of comparison municipalities, that have yet-to-be treated. We estimate treatment effects up to three periods from the election. Our main identification assumption is that treatment timing is randomly assigned.

5 Results

We begin our analysis by investigating the reaction of citizens to M5S government by comparing the chance of re-election of a M5S mayor with respect to traditional parties' mayors. Our focus is on local elections that took place between 2015 and 2017 when 30 Five Star Movement candidates were elected as mayor. We first followed these and other mayors elected in the same elections (but in different municipalities) over their mandate, finding two interesting results. First, the length of populist governments does not differ from the one of non-populist ones: the probability of concluding the legislature is close to one for both types (Figure 3a). However, while the probability of the non-populist being re-elected is about 45%, the one for the Five Star Movement mayor is almost half (Figure 3b).

While there might be several reasons for this figure, we focus on the effect of populist governments on municipal finances in the election year and in the two years after.⁴ Specifically, in this paper we analyse the behaviour of municipalities ruled by M5S mayors under several dimensions.

We first ask if the budget equilibrium policy and the taxing behaviour of M5S diverge from those put in place by traditional parties, both on the left and the right of the spectrum. Given the M5S's national agenda, we should expect to observe a more redistributive stance than one of the traditional parties (at least, with respect to right-leaning municipalities), instead, we

⁴We focus on the first three years because of data constraints and to limit the observation period to prepandemic years.

do not have a clear prior on the budget equilibrium policy. To investigate this first issue we use two main sources of data. To measure the taxing behaviour we use the structure of the municipal income tax, identifying municipalities that adopt a more progressive tax schedule by counting the number of tax rates and interpreting the distance between the minimum and the maximum rate as a proxy of the progressivity degree. The attitude towards budget equilibrium policy is measured using the AIDA-PA Financial Rating Index, a score that provides a comprehensive evaluation of municipal financial health combining ten elementary financial ratios (we normalize the original rating in the range 0-10).

The empirical strategy is a staggered difference-in-differences, in which the comparison group is composed only by never-treated municipalities that had a local election in the same year. As before, we focus on election years 2015-2017, so that a municipality that elected the mayor in 2017 is observed from 2015 to 2019. To mitigate the potential bias generate by omitted variables, we also use a large set of control variables relying on a battery of data on Italian municipalities offered by the minister of interior, Istat and the revenue offices.

We find many preliminary interesting results combining financial data with information on local government administrations, providing information on the characteristics of the mayors, including their political party.

We find that Populist mayors, after they have been elected, deteriorate the financial rating of their municipalities (see Figure 4a) and the structural current equilibrium (see Fgiures 4b). There is also evidence of negative effects on efficiency indicators: spending increases more than revenues (see Figures 4c and 4d), and revenue collection capacity deteriorates (4e) despite the increase in the tax burden (see Figure 4f). There is also weak evidence in favour of an increase in personnel expenditure (see 5).

We find weak evidence of changes in policies to increase the progressivity of income tax at the local level. We estimate an increase in the year of the election, which is unlikely to be due to the new mayor (see Figures 6a and 6b). Regarding the property tax rates, we do not observe a statistically significant difference from the average tax rates adopted in municipalities ruled by traditional parties' mayors (see Figures 6d and 6e).

As a further empirical investigation, we study how expenditure policy and, in particular, expenditure composition of M5S diverge from those put in place by traditional parties. For the same reason discussed above, we should also expect more attention towards social and environmental issues, such as the provision of residential care for the elderly and differentiated waste collection or urban traffic control. To address these issues, we rely upon the rich data set offered by OpenCivitas.

Against our prior, we observe that a populist mayor, when elected, decreases social spending and the users of social services (see Figures 7b and 7b). Moreover, we do not observe any difference in waste management; both recycled and total waste per capita are similar to the average of other municipalities (see Figures 8a and 8b. We observe weak evidence favouring the adoption of pay-as-you-throw schemes (see Figure 8c).

As a final set of empirical analyses, we did not find any difference regarding population inflows and outflows (see Figures 9a and 9b) or any impact on the number of firms established in the municipal territory (see Figures 9d, 9c and 9e).

6 Conclusion

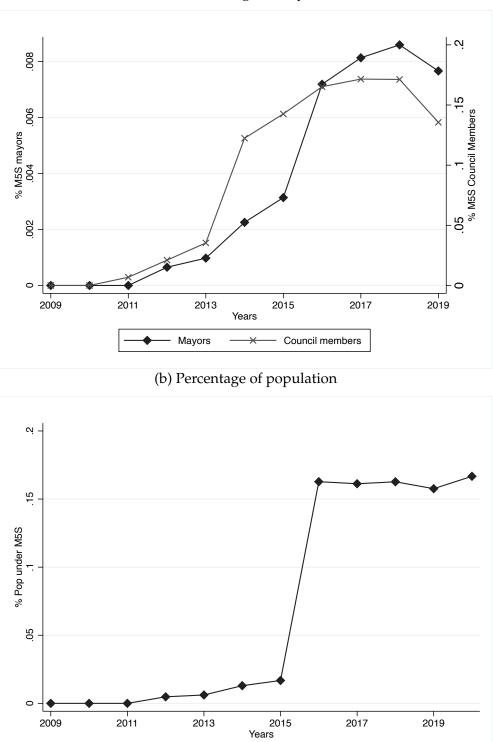
Our analysis shows that *M5S* mayors struggle to get re-elected, possibly due to the negative impact generated by their political activity. Overall, we find that the financial health of M5S municipalities deteriorates 2-3 years after the election, and M5S does not increase spending on welfare or the number of welfare users. Spending on personnel increases, although weakly significant. Lack of experience may be the main mechanism at work. A primary limitation of our empirical investigation is that we can only observe up to three years from the election. Do they show improvement in the last two years?

References

- AGASISTI, T. and PORCELLI, F. (2023). Local governments' efficiency and its heterogeneity empirical evidence from a stochastic frontier analysis of italian municipalities 2010-2018. *Applied Economics*, **55** (25), 2902–2927.
- BELLODI, L., MORELLI, M., VANONI, M. *et al.* (2022). A costly commitment: populism, economic performance, and the quality of bureaucracy. *American Journal of Political Science*.
- BORDIGNON, M. and COLUSSI, T. (2020). Dancing with the populist. new parties, electoral rules and italian municipal elections.
- FUNKE, M., SCHULARICK, M. and TREBESCH, C. (2023). Populist leaders and the economy. *American Economic Review*, **113** (12), 3249–88.
- GURIEV, S. and PAPAIOANNOU, E. (2022). The political economy of populism. *Journal of Economic Literature*, **60** (3), 753–832.
- RODRIK, D. (2021). Why does globalization fuel populism? economics, culture, and the rise of rightwing populism. *Annual Review of Economics*, **13**, 133–170.

Tables and Figures

Figure 1: Presence of *M*5*S* mayors as a percentage of total mayors and as percentage of municipal population



(a) Percentage of mayors

Notes. These figures use local administrators data for the 2009-2019 period.

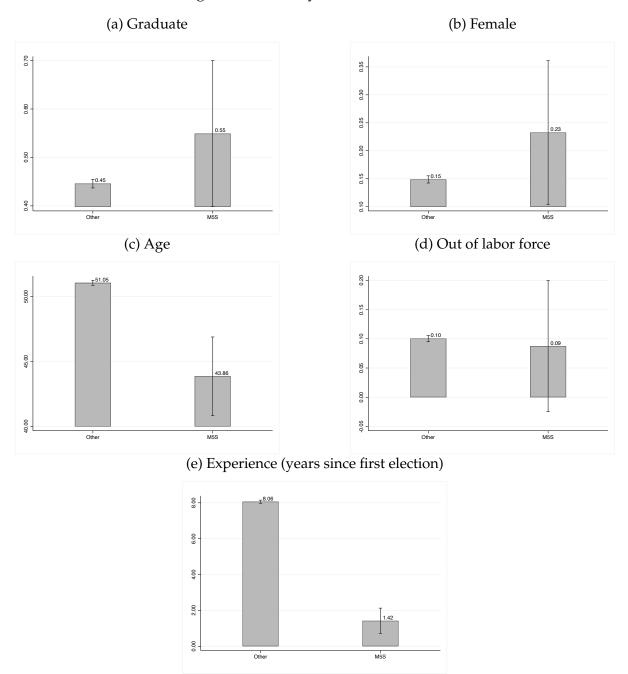


Figure 2: M5S Mayors' characteristics

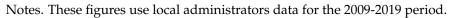
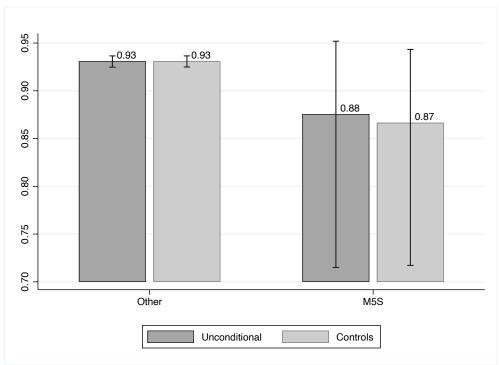
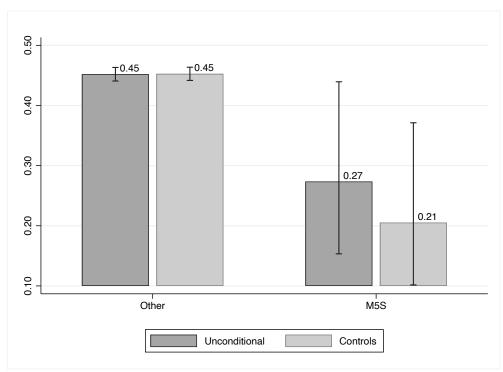


Figure 3: Probability of concluding the legislature and re-election



(a) Concluding the legislature

(b) Re-election



Notes. Regression results using election years over the period 2010-2022.

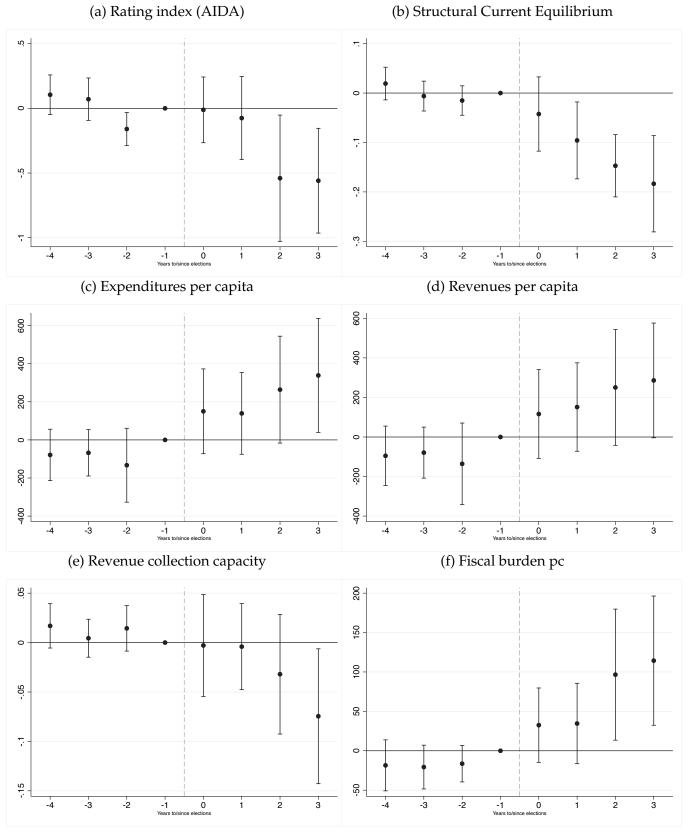
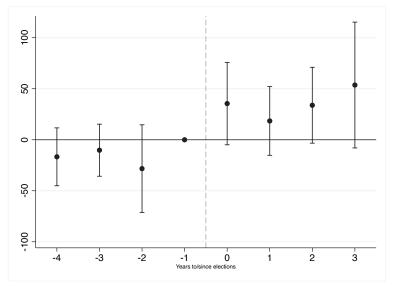


Figure 4: Effects on Municipal Finance

Notes. These figures report estimates of equation (2) their corresponding 95% confidence intervals

Figure 5: Effects on Municipal Finance - Expenditures on personnel per capita



Notes. These figures report estimates of equation (2) their corresponding 95% confidence intervals

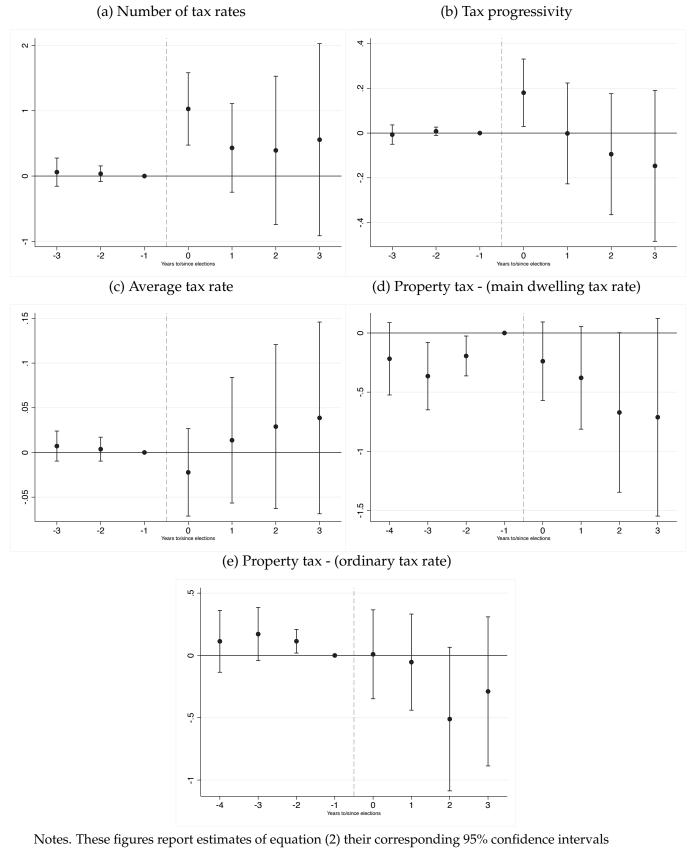
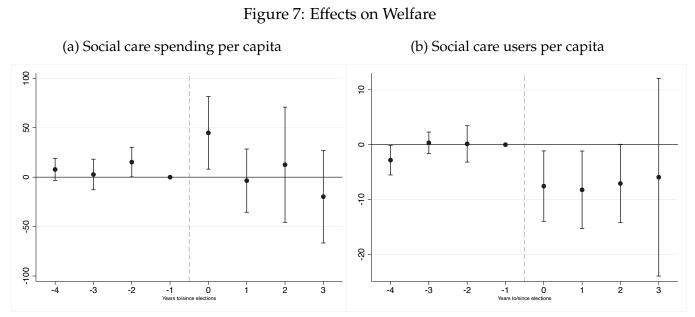


Figure 6: Effects on Municipal Income and Property Tax

20



Notes. These figures report estimates of equation (2) their corresponding 95% confidence intervals

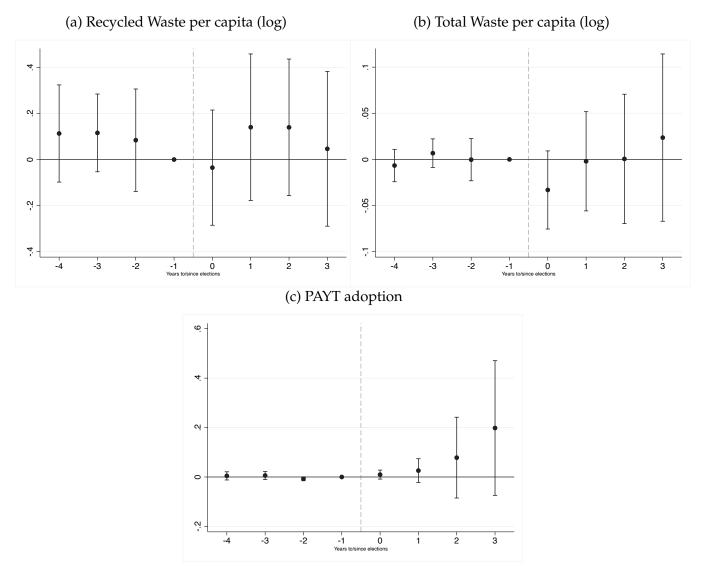


Figure 8: Effects on Waste Management

Notes. These figures report estimates of equation (2) their corresponding 95% confidence intervals

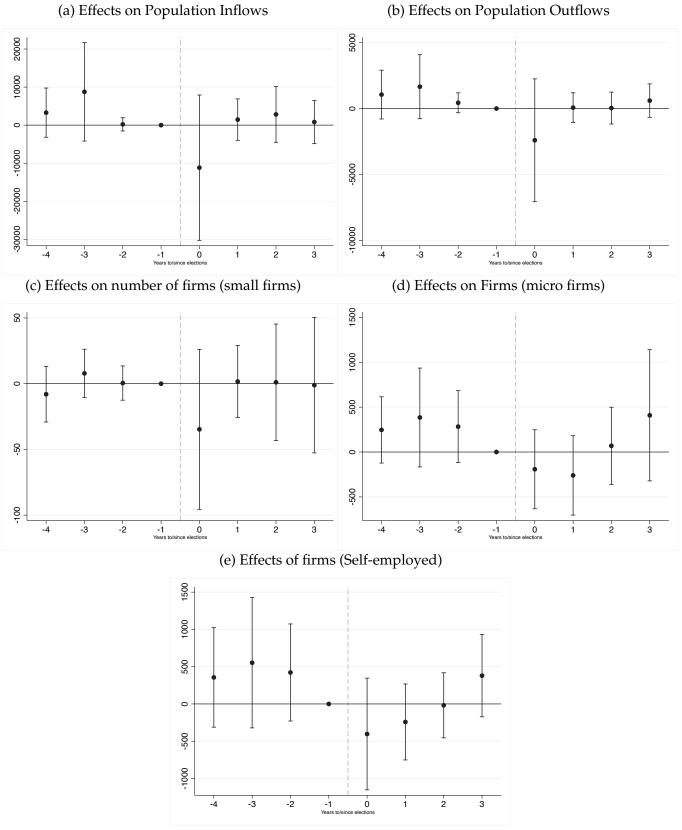


Figure 9: Effects on Population and Firms

Notes. These figures report estimates of equation (2) their corresponding 95% confidence intervals 23

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