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Stefania Fontana and Giorgio D'Agostino

Anti-mafia policies and public goods in Italy*

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Abstract

This paper aims to evaluate the impact of the anti-mafia dismissal policy in municipal councils for mafia infiltration on the share of public goods in Italy. The implementation of policies aimed at reducing the mafia's influence on local political bodies can improve the level of essential public goods that are relevant for social inclusion and regional development. The results suggest that during the years after a dismissal, municipalities devote more resources to public goods, with an estimated increase of approximately 5.3 pp. Notably, the effect seems to be driven by an increase in investment of approximately 5.4 pp, whereas the effect on consumption is uncertain. We therefore conclude that policies targeting the problem of criminal infiltration in local governments can improve socioeconomic conditions by enhancing the level of economically and socially relevant local public goods.

Keywords: anti-mafia policies, mafia infiltration, public goods, local governments.
JEL Classification: K420, H410, H750, D040

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1 Introduction

It is now widely accepted that the provision of illicit goods and services is only one of the profit-making centres of organized crime and gives only a partial picture of these organizations' business (Schelling, 1971). This statement is especially relevant in countries where organized crime has a centuries-old history and is intimately rooted in local communities, as in the case of mafia-type organizations in Southern Italy (Paoli, 2004). In such contexts, the "will to power" of organized crime finds its manifestation in the infiltration of local democratic structures, and the capture of local politicians is deemed to be one potential mechanism behind the economic slowdown of regions affected by organized crime (Pinotti, 2015).[1]

When mafia infiltration is widespread, anti-mafia policies play a crucial role in reducing the pervasiveness of mafia-related groups and their state capture activities. According to Galletta (2017), the dismissal policy for mafia infiltration in Italy reduces spending on investments in both the affected municipality and its neighbours if these are most likely to be affected by criminal activities. Fenizia and Saggio (2020) complement this view, arguing that the dismissal and the subsequent commissioning of mafia-infiltrated municipalities in Italy foster economic growth in the long run.

Based on this literature, the present paper is aimed at evaluating the effect of the anti-mafia policy of dismissal of local councils for mafia infiltration on the share of local public goods in Italy.[2] This research question is relevant since the Italian regions, historically characterized by a widespread presence of organized crime, have chronically low-level and scarce quality public goods (Cannari and Franco, 2011). Anecdotal evidence concerning this issue is cited in several reports of the Italian Ministry of the Interior (Ministero dell'Interno, 2017, 2018): municipalities dismissed for mafia reasons often suffer financial distress, with noticeable implications in terms of limited spending margins and with noticeable repercussions on the quality and quantity of services offered to citizens.

The empirical analysis considers all Italian municipalities for the period of 1998-2015. To construe a measure of local public goods, we use the definition proposed by the 2007-2013 Italian performance reserve system and included in the National Strategic Regional Framework. That is, local public goods include current and investment spending in social services, education, waste management, and water services. Our results indicate that after the dismissal of the municipality council infiltrated by mafia-type groups, there is a significant increase in the share of public goods provided by the municipality councils of approximately 5.3 percentage points (15.5%). This effect is driven by an increase in the investment share of public goods of approximately 5.4 percentage points (22%). This implies that if mafia influences are removed from the local council, there will be a more accurate use of public resources, which will be more oriented towards the provision of socially and economically relevant public goods. In fact, the new elected council is composed of more efficient politicians, and the anti-mafia policy helps to determine a switch-off of the pressure groups or a reduction in their state-capture activities. A series of robustness checks confirm the validity of the proposed identification structure and the solidity of the proposed estimates.

The outline of the paper is as follows. Section 2 offers a review of the previous contributions in the field. In Section 3, we study identification and estimation issues. In Section 4, we describe

[1] According to Pinotti (2015), the aggregate loss implied by the presence of organized crime in two Italian regions, Apulia and Basilicata, amounts to 16% of GDP per capita.

[2] The policy, introduced in 1991, establishes that, when there is concrete, unequivocal and relevant evidence of links between members of organized crime and local administrators, the municipal council will be dismissed and three external commissioners will take over the administration of the municipality for a period of up to 24 months. Afterwards, new elections will be held. A more detailed description of this procedure is presented in Appendix B. From 1991 to July 2021, 357 dismissal orders were issued, of which 344, 96%, were in southern Italy. The total number of local governments involved is 304.

the data. Section 5 reports the main findings of the analysis and the robustness checks. Finally, we conclude in Section 6.

2 Literature review

The economic literature on the effects of organized crime originally focused on how these organizations made the economic environment riskier and more uncertain by limiting foreign direct investments (Daniele and Marani, 2011), making access to credit more expensive (Bonaccorsi di Patti, 2012), slowing the accumulation of physical and human capital (Coniglio et al., 2010), crowding out market competition (Ferrante et al., 2021) and lowering the productivity of firms (Ganau and Rodríguez-Pose, 2018; Marinelli and Albanese, 2013)

A more recent strand of literature emphasizes the role of organized crime in influencing electoral outcomes through strategic pre-electoral violence, discouraging honest politicians from participating in electoral competition (Alesina et al., 2019), or intervening in the market for votes (De Feo and De Luca, 2017; Buonanno et al., 2016). Indeed, as shown by Alesina et al. (2019), pre-electoral violence against honest politicians favours the mafia-infiltrated party, and violent acts signal the strength of the criminal organization and its willingness to use violence. That is, when political activity is associated with the risk of being a target for organized crime intimidation, i.e., through a credible threat of punishment, the political class is negatively self-selected (Dal Bó et al., 2006). The former prediction has received some empirical support. Acemoglu et al. (2020), for instance, have used Colombian data to illustrate that political parties, when obtaining more votes in areas where paramilitaries are concentrated, see more of their politicians arrested for illegal activities. Furthermore, Pinotti (2014), employing Southern Italian data, has shown that increased activity of criminal organizations prior to elections is associated with lower human capital of elected politicians and an increased probability that these politicians would later be involved in scandals. Finally, Daniele and Geys (2015), exploiting the dismissal policy in municipal councils as an exogenous shock to the presence of mafia-type organizations, compare the difference in the education of politicians in dismissed and non-dismissed municipalities before ad after the policy intervention. The authors show that politicians, particularly mayors and aldermen, are on average more educated after the implementation of the dismissal policy.

Only a few contributions extend this analysis to investigate the economic consequences of such criminal involvement in politics on state capture and rent-seeking activities. Among these, Barone and Narciso (2015) show that the presence of mafia groups in Italian municipalities influences the allocation of public funds, as organized crime appropriates at least part of the public funds intended for the development of poorer and disadvantaged areas, i.e., Southern Italian regions, through the corruption of public offices. The evidence they provide indicates that the presence of the mafia groups significantly affects the probability of receiving funding (extensive margin) and the amount of public transfers (intensive margin). Di Cataldo and Mastrorocco (2021) complement this view, showing that mafia-infiltrated local governments spend more on sectors that are arguably strategic for mafia groups (i.e., construction and waste management sectors). In addition, infiltrated municipalities seem to be less effective at collecting fiscal revenues from the waste and rubbish tax. These findings are still consistent with the suggestions of the Italian Anti-Mafia Parliamentary Commission, which has said that, when the mafia enters the administrative and institutional structure of the country, there is a strong connection between the mafia's presence in institutions, public works investments, and corruption (Commissione parlamentare di inchiesta sul fenomeno delle mafie e sulle altre associazioni criminali anche straniere, 2018).[3]

[3]Through the conditioning of politics, criminal organizations gain opportunities for the management of local

The link between mafia infiltration, local government human capital and state capture and rent-seeking activities, which emerged from the aforementioned literature, can be explained by using the theoretical model proposed by Dal Bó et al. (2006). In this model, the authors first explain how the political class is negatively self-selected when the mafia group uses bribes and punishments to increase their profits from state-capture activities. In this way, differences in the wage structure of the public and private sectors and a credible threat of punishment affect the payoff of the public sector, making it appealing only to low-quality people who are willing to become politicians. They propose an extension of the model in which the pressure group faces a cost for punishing activities, which is determined by institutional factors such as the level of public goods in the previous period. Using the model, we can explain how mafia groups can make the public goods offered to citizens worse. In this context, the main channel involves the newly elected council, which is composed of less productive politicians who allocate public funds to sectors that are arguably strategic for mafia groups. This garners profits from state-capture activities and leads to multiple equilibria because municipal councils, which are controlled by mafia-type organizations, are stuck in a "bad equilibrium" with low-level and scarce quality public goods.

3 Empirical framework

A key concern in our analysis is the identification of the potential outcomes for the treated (i.e., municipality councils dismissed for mafia infiltration) and control groups (i.e., non-infiltrated councils). Indeed, it can be argued that non-infiltrated municipalities may have characteristics that are too different from those of territories that have a centuries-old history of the mafia. That is, a simple comparison between these two groups may produce misleading results, depending on the selection bias or rather on the differences in the characteristics of the compared groups. Furthermore, to identify the anti-mafia dismissal policy, we need to account for the time-varying behaviour of the treatment variable that is affected by time-dependent confounders. This issue is addressed by applying the theoretical model originally proposed by Dal Bó et al. (2006) to derive a sufficient statistic describing the dynamic behaviour of local public goods when the mafia organization is active or not. The idea of the sufficient statistics approach is that the effects of policy changes can be expressed in terms of estimable elasticities, allowing for policy evaluation without making parametric assumptions or estimating the structural primitives of a fully specified model (Kleven, 2021).[4] By using this approach, we find that to balance the treatment and control groups, we need to account for the threat of punishment from the mafia organization and for the initial level of public goods provided by the municipal council. Then, to address the second issue, in line with Robins et al. (2000), we apply a marginal structural model (MSM) and estimate it using an inverse probability weighting model (IPW).[5]

3.1 Identifying the sufficient statistic

To see how the effects of mafia-type organizations affect the level of public goods, and how the anti-mafia policy can be introduced into the model, let us first consider the conditions under which the pressure group is active or not. The online appendix A presents a detailed description

resources and carve out a privileged position in the public procurement process, obtaining contracts and building concessions (Caneppele et al., 2009).

[4]Chetty (2009) argues that this approach combines the best of reduced-form and structural approaches and provides a credible identification, using quasi-experimental research designs, of causal effects.

[5]For a detailed discussion of the use of the MSM to policy evaluation see, for example, d'Agostino et al. (2020).

of the theoretical model proposed by Dal Bó et al. (2006). The underpinning maximization problem for the pressure group reads:

$$max_p \prod[b(p), p] = \gamma[\pi - \beta\phi(c-p)] - (1-\gamma)\rho\psi(p). \tag{1}$$

where π is the amount of resources subject to political discretion, γ represents the probability that the official will accept the corruptive deal and c is the cost for the politician to accept that deal. Furthermore, $\beta\phi(b)$ is the cost of delivering a bribe (where b is the bribe), and $\rho\psi(p)$ is the cost of delivering a punishment (where p is the credible threat of punishment), with $\beta > 0$ and $\rho > 0$ being exogenous parameters representing the institutional factors affecting the cost of delivering bribes or punishment.[6]

Once the optimal values b^* and p^* have been identified,[7] there are two possible scenarios: i) $\prod(b^*, p^*) \geq 0$ and the group decides to use bribes and punishment because the expected profit is higher than the expected cost; ii) $\prod(b^*, p^*) < 0$ and the group decides not to use bribes or punishment because the expected profit does not cover the expected costs. Given the parameters γ, β, ρ, we denote as $\widetilde{\pi}(\gamma, \beta, \rho)$ the value of the expected profit for which $\prod(b*, p*) = 0$. Below this threshold, the group remains inactive. Hence, $\widetilde{\pi}$ is the inverse of the level of state capture, since it denotes the size of the set of possible values of π for which the group does not engage in influence activities. That is, the influence group becomes active if:

$$\pi \geq \widetilde{\pi} \equiv \frac{(1-\gamma)}{\gamma}\rho\psi(p^*) + \beta\phi(c-p^*). \tag{2}$$

From Equation 2 we start understanding how the anti-mafia policy may be introduced into the model or rather through the ρ parameter in Equation 1. Indeed, as will be clarified next, the anti-mafia policy acts by increasing the institutional constraints linked to the use of punishment.[8] That is, the policy change, increasing ρ, reduces the profit from the state capture and increases the probability that the pressure group becomes inactive (i.e., $\pi \leq \widetilde{\pi}$). Hence, the greater the stringency of the institutional constraint (ρ), the less the amount of punishment used by the pressure group ($\frac{dp^*}{d\rho} < 0$) and the higher the share of bribes ($\frac{db^*}{d\rho} > 0$).[9]

Therefore, lets assume that the level of public goods in each period is determined by the previous value of the public officer payoff (i.e., $g_{t+1} = V_t$)[10] and ρ is an increasing function of the level of public goods. Given that $\frac{dp^*}{d\rho} < 0$, we know $\frac{dp_t}{dg_t} < 0$. This means that the public sector payoff reacts positively when g_t increases, and since the payoff is defined as $V_t = w_t - p_t^*(\rho_t(g_t))$, by differentiating the payoff with respect to g_t, we obtain:

$$\frac{dV_t}{dg_t} = \frac{d\rho_t}{dg_t}\left(-\frac{dp_t^*}{d\rho_t}\right) = -\frac{dp_t^*}{dg_t} > 0. \tag{3}$$

This derivative describes how the payoff of the public officer, and thus the level of public goods, evolve. When the pressure group is not active, the payoff is only influenced by the share

[6] By assumption, $\phi(.)$ and $\psi(.)$ are both twice continuously differentiable, and the initial marginal cost of using bribes or punishment is 0. Moreover, $\phi(0) = 0$, $\phi'(0) = 0$, $\phi' > 0$, $\phi'' > 0$, $\psi(0) = 0$, $\psi'(0) = 0$, $\psi' > 0$, and $\psi'' > 0$.

[7] See the online Appendix A for an analytic solution of the maximization problem when an active group uses both bribes and punishment ($b* > 0; p* > 0$), and the total amount of pressure is such that ($b^* + p^* = c$).

[8] For simplicity, as in Dal Bó et al. (2006), we suppose that the policy does not affect β.

[9] To prove this statement, we start by defining equation 1 as $max_p \prod(b(p), p) = \gamma[\pi - \beta\phi(c-p)] - (1-\gamma)\rho\psi(p)$. Then, the first order condition is $\gamma\beta\phi'(c-p) - (1-\gamma)\rho\psi'(p) = 0$. Hence, by specifying p as a function of ρ and by differentiating it with respect to ρ, we obtain $\gamma\beta\phi'[c - p^*(\rho)] - (1-\gamma)\rho\psi'[p^*(\rho)] = 0$. Finally, applying the first derivative of punishment p with respect to ρ, after some calculations, we show that $\frac{dp^*}{d\rho} = -\frac{(1-\gamma)\psi'[p^*(\rho)]}{\gamma\beta\phi''[c-p^*(\rho)]+(1-\gamma)\rho\psi''[p^*(\rho)]} < 0$. Furthermore, since $b^* = c - p^*$, $\frac{dp^*}{d\rho} < 0$ implies $\frac{db^*}{d\rho} > 0$.

[10] Formally, following the model outline, when V_t increases, more productive officials will apply and be elected. In turn, these officials will provide more public goods in the next period.

of public goods provided by the public officer. In contrast, when the pressure group is active, we know that the threat of punishment influences the payoff of the public officer. In this second case, a positive increase in institutional quality (i.e., $\rho' > \rho$) reduces state capture and increases the share of public goods provided to citizens. Indeed, since $\frac{d\widetilde{\pi}}{d\rho} > 0$[11] when $\rho' > \rho$ we know that $\widetilde{\pi}(\rho') > \widetilde{\pi}(\rho)$. Now, depending on whether the increase in $\widetilde{\pi}$ is such that π is exceeded or not, two cases may occur: i) $\widetilde{\pi} > \pi$, in which the group switches to inactivity and the public sector payoff increases discretely from $w - p*$ to w[12] and ii) $\widetilde{\pi} < \pi$ in which case, and also if the pressure group remains active, the public sector payoff increases because $p^*(\rho') < p^*(\rho)$. This means that when the policy change is not able to determine a complete switch-off of the pressure group, the policy change still has a positive effect by increasing the share of public goods provided to the citizens. On the other hand, in this latter case, we do not know if the positive effect of the policy intervention is persistent or only temporary.

Following the theoretical model, since the level of public goods in the next period is determined by the current value of the public officer payoff (i.e., $g_{t+1} = V_t$)[13], by estimating $\frac{dp_t}{dg_t}$ for different values of g_t, we can measure the growth path of public goods in the next period and identify the two potential outcomes for the politicians when the pressure group is active or not. Hence, the first derivative, described in equation 3, can be used to derive a statistic that suffices to analyse the effect of pressure groups on the provision of public goods and to show how anti-mafia policies may change the growth behaviour of local public goods. That is, in line with Chetty (2009), this statistic can be used to obtain a structural derivation of the theoretical model and to identify the effect of pressure activities without determining the optimal parameters in the expected profit function described in equation 1.[14] To this aim, let us assume that $\frac{dp_t^*}{dg_t}$ is a function of the anti-mafia policy (AP_t) and that the effect of the policy is small enough ($d\ AP_t \approx 0$). By imposing quasi-linearity, the first derivative described in equation 3 can be approximated as:

$$\frac{dg_t}{dg_{t-1}} \approx -\frac{dp_{t-1}^*}{dg_{t-1}} + AP_t. \tag{4}$$

where to simplify the exposition, we have used a lag operator on the relevant variables and where $-\frac{dp_{t-1}^*}{dg_{t-1}}$ describes the evolution of the potential outcomes with or without mafia infiltration[15] and AP_t the change in the equilibrium after the policy change. Hence, by using this formulation, the

[11] To demonstrate this point consider that $\widetilde{\pi} = \frac{(1-\gamma)}{\gamma}\rho\psi(p^*) + \beta\phi(c-p^*)$ and take p^* as a function of β and ρ. In this case, $\frac{d\widetilde{\pi}}{d\beta} = \frac{dp^*}{d\beta}\frac{(1-\gamma)}{\gamma}\rho\psi'(p^*) - \frac{dp^*}{d\beta}\beta\phi'(c-p^*) + \phi(c-p^*) = \frac{dp^*}{d\beta}\underbrace{\left[\frac{(1-\gamma)}{\gamma}\rho\psi'(p^*) - \beta\phi'(c-p^*)\right]}_{=0 \text{ from f.o.c.}} + \phi(c-p^*) = \phi(c-p^*) > 0$ and $\Rightarrow \frac{d\widetilde{\pi}}{d\beta} > 0$. Furthermore, $\frac{d\widetilde{\pi}}{d\rho} = \frac{(1-\gamma)}{\gamma}\psi(p^*) + \frac{dp^*}{d\rho}\frac{(1-\gamma)}{\gamma}\rho\psi'(p^*) - \frac{dp^*}{d\rho}\beta\phi'(c-p^*) = \frac{(1-\gamma)}{\gamma}\psi(p^*) + \frac{dp^*}{d\rho}\underbrace{\left[\frac{(1-\gamma)}{\gamma}\rho\psi'(p^*) - \beta\phi'(c-p^*)\right]}_{=0 \text{ from f.o.c.}} = \frac{(1-\gamma)}{\gamma}\psi(p^*) > 0, \Rightarrow \frac{d\widetilde{\pi}}{d\rho} > 0$

[12] We define as w the fixed wage that the politician obtains in the public sector.

[13] Formally, following the model outline, when V_t increases, more productive officials will be elected. In turn, these officials will provide more public goods in the next period.

[14] To this aim, three main hypotheses are required (Kleven, 2021). The first assumption is that the policy change being analysed is small, which in principle means that it is close enough to the first-order approximations to be precise. The second assumption is that government policy is the only thing that stands between the actual equilibrium and the first-best equilibrium. That is, there are no nongovernment externalities or externalities that would be affected by behavioural responses to policy reforms. Finally, a third set of assumptions restricts the decision environment, including aspects such as dynamics, uncertainty, policy instruments, and preferences, including aspects such as separability or quasi-linearity.

[15] Indeed, the potential outcome when the pressure group is inactive depends only on the growth dynamic of the public goods, whereas the potential outcome when the pressure group is active will also be affected by the threat of punishment.

anti-mafia policy affects the potential outcome when the pressure group is active by reducing the possibility for the pressure group to participate in influence activities (i.e., increasing $\widetilde{\pi}$), and after the introduction of the policy, we expect the two potential outcomes to converge.

3.2 The Marginal Structural Model

To isolate the effect of the anti-mafia policy on our outcome of interest (the level of public goods), we need to account for the *treatment-confounder feedback*, that is, the indirect effect of p_{t-1} and g_{t-1} on AP_t. Indeed, the intensity of punishment activity affects the outcome variable g_t, and it may also encourage public security authorities to start investigations that may result in the introduction of a new anti-mafia policy. Similarly, irregularities in public budgets can also trigger investigative activities and thus influence anti-mafia interventions. In turn, the anti-mafia policy affects the level of punishment and the composition of municipal spending (and thus the level of public services). For this reason, the level of punishment p_{t-1} and the initial level of public goods g_{t-1} are confounders for the relationship between AP_t and g_t because they affect both AP_t and g_t and are also intermediate variables because they are in turn affected by the anti-mafia policy itself.[16]

Formally, this implies that the anti-mafia policy varies in timing and duration across municipalities and depends on time-varying variables that are simultaneously confounders and intermediate variables (Robins et al., 2000). Because of the double nature of g_{t-1} and p_{t-1}, standard regression approaches that adjust for confounding effects by including covariates are biased (Robins et al., 2000). Unbiased estimates of the causal effect of time-varying treatments affected by time-dependent confounders can be obtained by applying a Marginal Structural Model (MSM) (Robins et al., 2000), specified as:

$$E(g^{\overline{AP}}) = \beta_0 + \beta_{AP} cum(\overline{AP}), \tag{5}$$

where the parameters β_0 and β_{AP} measure the potential outcome mean (i.e., $-\frac{dp_t^*}{dg_t}$) and the average causal effect of the time-varying treatment, respectively. These parameters are estimated using the inverse probability weighting method (IPW) and are interpreted as causal under some identification assumptions. The main assumptions include sequential conditional exchangeability, i.e., treatment assignment at each time t depends only on measured covariate history and prior treatment history, consistency, i.e., the outcome observed for each individual is actually the potential outcome due to their observed treatment history, positivity, i.e., each individual has a positive probability of receiving each treatment level, and no misspecification of the model used to estimate the weights (Hernán and Robins, 2020).

Following Fewell et al. (2004), we use a stabilized version of the IPW to reduce the variance and increase the accuracy of the estimated parameters. The stabilized IPW reads:

$$w_{(i,t)} = \prod_{t=1}^{T} \frac{f(AP_{i,t}|\overline{AP}_{i,t-1})}{f(AP_{i,t}|\overline{AP}_{i,t-1}, \overline{g}_{i,t-1}, \overline{p}_{i,t-1})} \tag{6}$$

where the denominator of equation 6 can be interpreted as a municipality's conditional probability of being dismissed up to time t, given the history of the past dismissal policies and of

[16] Anecdotal evidence may clarify this statement, showing how the threat of punishment may increase the probability of having a new anti-mafia policy. For example, the prefect's report on the dismissal of the municipality of Monte Sant'Angelo explains how the need to start investigations was triggered by criminal episodes such as damage and forms of intimidation against municipal administrators (Prefettura di Foggia, 2015). In the municipality of Bagnara Calabra, dismissed in 2015, the report mentions that the municipality was characterized by a "recrudescence of criminal activities such as arson attacks against cars, robberies, damage by means of explosions and gunshots [...] that have aroused high social alarm in the small community" (Prefettura di Reggio Calabria, 2015).

the included covariates (g_{t-1} and p_{t-1}). In each period, this probability is the product of the conditional probabilities estimated in the previous periods. Furthermore, the numerator is interpreted as a municipality's conditional probability of being dismissed up to time t, given past policy history (from 1 up to $t-1$). In each period, this probability is given by the product of the conditional probability estimated in the previous periods.[17] Following Fewell et al. (2004), the probabilities of the denominator are estimated by fitting a logistic regression model for the probability of receiving an anti-mafia policy in t, with all confounders included as covariates, measured at time *t-1*.[18] Finally, we fit the MSM (5) via weighted least squares using the stabilized weights estimated in equation 6.

4 Data

The empirical analysis drawn from multiple data sources considers all Italian municipalities for the period 1998-2015. Summary statistics are presented in table A.1 of Appendix A.

We first define the variable to characterise the dismissal of the municipal council. A detailed description of the institutional background of the policy is presented in Appendix B. Data on the dismissal of municipal councils are obtained by the Italian Ministry of Interior. The dataset includes the municipalities involved in a dismissal and the year in which the policy was enforced. From 1998 to 2015, a total of 126 municipal councils were dismissed once, 119 of which were in southern Italy, and 19 municipalities were dismissed twice. To clarify the structure of the treatment variable, Figure 1 reports an example based on the municipality of Pompeii in Campania. In the time span covered by our panel, the municipality of Pompeii was dismissed once, in 2001. The local administration was then put under compulsory administration for the period 2001-2003. New elections were held on June 13, 2004, which resulted in the election of a new city council whose office lasted until the next election in 2009. Using this structure, we derive a dichotomous variable ($AP_{i,t}$) that takes a value of 1 after the policy intervention was introduced until the last year of office of the first municipal council elected after the dismissal of the municipal council and 0 otherwise. The resulting dichotomous variable $AP_{i,t}$ is time-varying, since the exposure to the anti-mafia policy varies in timing and because a municipal council could be exposed more than once to the anti-mafia policy.

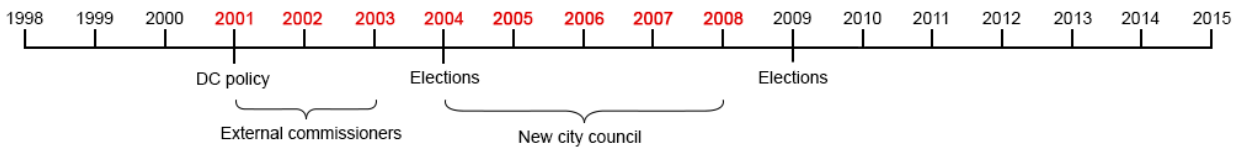
The main outcomes of interest, to proxy the share of the public goods at the municipal level, are extracted from the dataset provided by the Central Office for Local Public Finance of the Italian Ministry of the Interior. This dataset contains the final budgets (*Certificati Consuntivi*) of Italian municipalities from 1998 to 2015. Final budgets report spending decisions made by local government at the beginning of each year, netting variations occurred during that year. Therefore, these spending items relate to accrual accounting and should not be confused with paid expenditures (cash basis accounting), which may also cover expenditures by previous governments. This distinction is important because it allows us to study the spending decisions of local governments during their years in office.

To define municipal public goods, we use the definition proposed by the Department for Social Cohesion of the Italian Economic Ministry and included in the 2007-2013 National Strategic Regional Framework. By their definition, local public goods include social services, education, waste management and water services. More specifically, education includes expenditures for

[17] Standard inverse-probability-weights have 1 as their numerator and tend to be highly variable. The stabilized version is preferable due to its smaller variance.

[18] In municipalities: for years in which AP=0, we derive the probability of the *observed* treatment (i.e., the probability of *not* being treated) by subtracting the estimated probability of treatment from 1. We then derive the probability of each municipality-year's *observed sequence of treatment*s, up to time t, given their covariate history, by multiplying the estimated probabilities of their observed treatment during each year cumulatively over time. The probabilities of the numerator are computed similarly, conditional on previous treatment.

Figure 1: Timeline



Notes: In this example (municipality of Pompei), the treatment period ranges from 2001 to 2008. Policy intervention occurred in 2001. It was followed by two years of compulsory administration and five years in office of the newly elected city council (supposedly free from mafia influences).

school services and maintenance of school buildings, whereas social services expenditures cover the provision of social services, including expenditures for the maintenance or construction of appropriate facilities for this purpose, such as day-care centres, residences for the elderly or rehabilitation and prevention centres. Waste management expenditures are the expenses that local governments pay for waste collection services, including the maintenance of collection and disposal facilities. Finally, water services include expenditures devoted to the management of the local water service, pipelines and supply facilities. In the empirical analysis, we consider the overall share of public goods in the total expenditure budgeted by the municipality, along with the share of current public goods in total current expenditure and the share of capital public goods in total capital expenditure.

Table 1: Average share of expenditure for public services in Italian municipalities (1998-2015)

	Share of public goods					
	Total		Investment		Consumption	
	mean	sd	mean	sd	mean	sd
Social Services	0.10	0.08	0.07	0.14	0.11	0.09
Education	0.10	0.07	0.10	0.18	0.10	0.05
Waste Management	0.10	0.06	0.01	0.06	0.13	0.07
Water Services	0.04	0.07	0.06	0.14	0.04	0.05
Total	0.34	0.13	0.25	0.25	0.37	0.11
Observations	86,950		86,950		86,950	

As shown in table 1, expenditure for public services, i.e., our proxy to measure the local public goods, represent on average 34% of total expenditure, 25% of investments and 37% of consumption expenditure. Among the functions considered, the functions representing the highest share of expenditure are social services, education, and waste management (10%). The highest share of capital expenditure is represented by education, which accounts for 10%, followed by social services (7%), whereas the highest share of current expenditure is waste management (13%), followed by social services (11%).

To complete the dataset, we collect data on the number of mafia-related murders or attempted murders, extortions, usury, and arsons at the provincial level at the time they are reported from the police to the judicial authority. We use these data to obtain a "punishment" variable that expresses the level of violent and intimidating activities exerted by criminal organizations in Italy. Although these crimes are not directly linked to activities involving in-

timidation, retaliation or forms of violent pressure against local politicians, they contribute to generating a perception of danger associated with political activity in the area and can therefore be used as a variable demonstrating the level of violence exerted by organized crime.

5 Results

Table 2 reports the results of the OLS as a benchmark and of the stabilized IPW model. To increase the comparability of the estimated parameters, we report semi-elasticity measures ($d\ ln(g_t)/d\ AP_t$) at the bottom of the table. The table reports, first, estimation results when we consider, as an outcome variable, the total share of public goods, including current and capital spending for public services over total municipality spending. In this case, the OLS estimate (Column 1) shows an increase of 1.9 pp. in the share of total public goods of municipal councils elected after a dismissal for mafia infiltration. The magnitude of the coefficient increases when we estimate MSM through stabilized IPW (5.3 pp.).

Therefore, we account, separately, for the capital share of public goods (Columns 3 and 4) and for its consumption share (Columns 5 and 6).[19] With respect to the capital share, we find a positive but slightly significant effect of approximately 2 pp. (OLS) and a highly statistically significant effect of 5.4 pp. when the IPW model is applied. In contrast, in Columns 5 and 6, we find a positive and significant effect on the current share of approximately 0.2 pp. (OLS), whereas this effect is no longer significant when IPW is accounted for.

Table 2: Main estimates

	Share of public goods					
	Total		Investment		Consumption	
	OLS	IPW	OLS	IPW	OLS	IPW
	(1)	(2)	(3)	(4)	(5)	(6)
β_{AP}	0.019	0.053	0.019	0.054	0.002	0.018
	(0.004)	(0.014)	(0.011)	(0.020)	(0.001)	(0.017)
	[0.000]	[0.000]	[0.084]	[0.007]	[0.100]	[0.281]
β_0	0.139	0.345	0.192	0.248	0.023	0.375
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
$d\ ln(g_t)/d\ AP_t$	0.058	0.155	0.079	0.220	0.007	0.048
	(0.012)	(0.041)	(0.046)	(0.081)	(0.004)	(0.044)
	[0.000]	[0.000]	[0.084]	[0.007]	[0.100]	[0.281]
Number of observations	86,668	86,668	86,321	86,321	86,668	86,668

Notes: Standard errors are in round brackets. P-values are in square brackets.

A cross comparison of the estimated semi-elasticities (reported at the bottom of the table) reveals that there is a 15.5% increase in the share of public goods (Column 2) after the introduction of the anti-mafia policy and that this effect is driven by a strong increase in the investment share of public goods of approximately 22%.

[19] The share of capital expenditure is computed as capital expenditure for public services over total capital expenditure, whereas the consumption expenditure share is calculated as current expenditure on public services over total current expenditure.

We can explain these results through the theoretical model proposed by Dal Bó et al. (2006), which suggests that removing mafia influences from the local council leads to a more accurate use of public resources that is more oriented towards the provision of socially and economically relevant public goods. That outcome is achieved because the new elected council is composed of more efficient (productive) politicians and because the anti-mafia policy contributes to determining a switch-off of the pressure groups or a reduction in state capture by the mafia.

5.1 Robustness Checks

To demonstrate the robustness of the presented results, we propose three different checks. First, in Table 3, we replicate the main estimates, limiting the analysis only to Mezzogiorno regions.[20] Indeed, as reported in Table B.1, between 1998 and 2015, 138 of the 145 municipalities that ever experienced a dismissal for mafia infiltration were located in Mezzogiorno regions, and historically, these regions were more affected by mafia groups. The purpose of these estimates is to check whether our main results are biased due to the inclusion of the North and Central regions in the analysis. Indeed, it could be argued that the North and Centre regions may not be credible comparison groups when compared to Mezzogiorno regions and that introducing only g_{t-1} and p_{t-1} to balance the treated and control groups is not enough to remove the selection bias. As shown by a comparison of the two tables, the results are also confirmed when we restrict the analysis only to the Mezzogiorno regions and, in turn, this implies that our comparison groups are sufficiently closely related.

Table 3: Main estimates, Mezzogiorno regions

	Share of public goods					
	Total		Investment		Consumption	
	OLS	IPW	OLS	IPW	OLS	IPW
	(1)	(2)	(3)	(4)	(5)	(6)
β_{AP}	0.024	0.052	0.022	0.062	0.005	0.017
	(0.005)	(0.013)	(0.013)	(0.023)	(0.002)	(0.015)
	[0.000]	[0.000]	[0.095]	[0.006]	[0.023]	[0.257]
β_0	0.187	0.342	0.205	0.251	0.040	0.379
	(0.004)	(0.002)	(0.004)	(0.002)	(0.001)	(0.002)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
$d\ ln(g_t)/d\ AP_t$	0.073	0.153	0.090	0.247	0.013	0.044
	(0.017)	(0.038)	(0.054)	(0.090)	(0.006)	(0.039)
	[0.000]	[0.000]	[0.095]	[0.006]	[0.023]	[0.257]
Number of observations	26,994	26,994	26,856	26,856	26,994	26,994

Notes: Standard errors are in round brackets. P-values are in square brackets.

Second, a possible concern regarding the interpretation of the main estimates relates to the inclusion of the years of compulsory administration among the treated groups. In fact, it could be argued that the estimated effects on the level of public services are due to the decisions of external commissioners who temporarily rule the city and not to a more productive and efficient

[20]The subsample of Mezzogiorno regions includes municipalities in Abruzzo, Basilicata, Calabria, Campania, Molise, Apulia, Sardinia, and Sicily.

behaviour of the subsequently elected city council. Indeed, as documented in several ministerial reports (Ministero dell'Interno, 2017, 2018), checking and improving the state of public services is a priority for external commissioners, who are responsible for ensuring an adequate level of services to citizens. In some cases, commissioners can also obtain priority access to grants and funds to finance public services' provision (art. 145, paragraph 2, TUEL).[21] Nevertheless, commissioners may also revoke public work contracts and the entrusting of local public services if these are connected to the infiltration that is the cause of the initial dismissal (art. 145, paragraph 4, TUEL). The empirical literature addressing the work of commissarial management and local public spending shows that commissioners typically cut public investments, at least during their first year in office (Acconcia et al., 2014). Therefore, during the compulsory administration period, we could also expect a reduction in public investment when public work contracts or the entrusting of local public services are associated with mafia influence. For these reasons, we are not sure whether the compulsory administration does not bias the results of our main estimate or in which direction. To inspect this issue, we replicate the main analysis by removing the years of compulsory administration from the analysis. If the exclusion of compulsory administration years does not affect our results, we expect that these estimated results are very close to those reported in the previous section. These results are presented in Table 4. As shown by a comparison of these results with respect to the ones reported in Table 2, we do not find any significant difference in the estimated parameters or in the semi-elasticity measures reported at the bottom of the table.

Table 4: Estimates excluding compulsory administration years

	Share of public goods					
	Total		Investment		Consumption	
	OLS	IPW	OLS	IPW	OLS	IPW
	(1)	(2)	(3)	(4)	(5)	(6)
β_{AP}	0.020	0.060	0.022	0.071	0.005	0.023
	(0.005)	(0.015)	(0.012)	(0.025)	(0.002)	(0.017)
	[0.000]	[0.000]	[0.083]	[0.005]	[0.012]	[0.193]
β_0	0.139	0.345	0.192	0.248	0.023	0.375
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
$d\ ln(g_t)/d\ AP_t$	0.063	0.173	0.091	0.288	0.015	0.060
	(0.014)	(0.043)	(0.052)	(0.103)	(0.006)	(0.046)
	[0.000]	[0.000]	[0.083]	[0.005]	[0.012]	[0.193]
Number of observations	86,399	86,399	86,052	86,052	86,399	86,399

Notes: Standard errors are in round brackets. P-values are in square brackets.

The final robustness check is aimed at investigating the ability of the sufficient statistic, reported in equation 1, to isolate the causal impact of the anti-mafia policy and the provision of public goods at the municipal level. At this stage, our strategy is to show that considering other relevant aspects included in the theoretical model proposed by Dal Bó et al. (2006) or

[21] State-appointed commissioners often resort to using financial resources from various institutions (European, national or regional) to set up extraordinary measures to improve public services. Between 2010 and 2014, for example, such projects concerned the improvement of school buildings, social assistance, sports, and the rehabilitation of urban spaces (Ministero dell'Interno, 2015).

aimed at providing a better balancing between the treated and control groups does not change the main results of the analysis. To address this issue, we collect a larger dataset and include several adjoint covariates in the MSM (see equation 5). When the original balancing strategy is robust, we expect that the estimated coefficients will not be affected by the addition of these variables. First, we use the information provided by the Italian Ministry of Interior "Register of local administrators" (*Anagrafe degli Amministratori Locali*). This dataset contains year-by-year data on local administrators, including gender, occupation, and educational level. Using this dataset, it is possible to trace the characteristics of local administrators, such as the share of skilled officers,[22] their age and gender.

Table 5: Estimates using a large set of controls

	Share of public goods					
	Total		Investment		Consumption	
	OLS	IPW	OLS	IPW	OLS	IPW
	(1)	(2)	(3)	(4)	(5)	(6)
β_{AP}	0.015	0.092	0.012	0.097	0.003	0.009
	(0.004)	(0.025)	(0.013)	(0.034)	(0.002)	(0.028)
	[0.001]	[0.000]	[0.357]	[0.005]	[0.083]	[0.749]
β_0	0.130	0.344	0.156	0.248	0.022	0.374
	(0.002)	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
$d\ ln(g_t)/d\ AP_t$	0.045	0.268	0.049	0.393	0.010	0.024
	(0.014)	(0.072)	(0.053)	(0.139)	(0.006)	(0.076)
	[0.001]	[0.000]	[0.357]	[0.005]	[0.083]	[0.749]
Number of observations	85,160	85,160	84,817	84,817	85,160	85,160

Notes: Standard errors are in round brackets. P-values are in square brackets.

Furthermore, we include data on bribes using the dataset provided by the Ministry of the Interior (Public Safety Department) in a database called the "Italian Investigation System" (in Italian "Sistema d'indagine", SDI hereafter). The SDI contains details on the number of crimes committed by public officials against the public administration at the time these are reported to the judicial authority. For the scope of our analysis, we take into account the crimes of corruption due to public acts or those against public duties (art. 318 and 319 of the Italian penal code) and incitement to corruption (art. 322). The per capita variable is aggregated at the provincial level and covers the years 2004-2014. We then include useful insights into the activity of organized crime by collecting data on the number of people reported by the police forces to the judicial authority because of mafia-type association (art. 416-bis of the Italian penal code). Such data are available for 2004-2015 and are provided by the National Statistical Office of the Ministry of the Interior. Finally, to account for possible spill-over effects, we introduce into the MSM the average expenditure of the neighbouring municipalities. Indeed, the closer the municipalities are, the higher the interdependence between municipal public spending will be. The results of this final robustness check are presented in Table 5. Although the parameters of these estimates are stronger in magnitude than those of Table 2, we do not

[22]The skill of each administrator is measured according to the ISCO-08 classification, using the reported occupation. In cases where the occupation is not reported, we deduce the skill level from the highest educational qualification atteined.

find any statistically significant difference between the two, thus confirming the soundness of our main results.

6 Concluding remarks

The paper has contributed evidence showing that policies aimed at removing the mafia's influence from local administrations improve the level of public goods in Italy. These policies reduce the state capture and rent-seeking activities of the mafia-organizations and contribute to the economic development of disadvantaged regions, which have historically been characterized by a widespread presence of organized crime.

The empirical analysis, based on a sufficient statistic derived by the model proposed by Dal Bó et al. (2006), shows that after the dismissal of the municipal council infiltrated by the mafia, there is a significant increase in the share of public goods provided by the municipal councils of approximately 5.3 pp. (15.5%) and that this effect is driven by the increase in the investment share of public goods of approximately 5.4 pp. (22%). In line with the model predictions, this result suggests that increasing the presence of law enforcement, which arguably weakens the influence and capabilities of mafia conditioning on a territory, may lead to progressive improvements in the political class, reducing misconduct in the management of public resources and the level of public goods provided to citizens.

Our results support the idea that ensuring the lawfulness of local institutions and monitoring their permeability to mafia infiltrations are crucial to the adequacy of services and the well-being of local communities. The above is especially true because there is a high risk of vice-loops between illegality in local institutions and the lack of good public services. This lack of good services could lead to a widespread distrust of the State and further hurt the relationship between the State and the people. In these contexts, organized crime can flourish, recruiting social consensus and further strengthening its grip on the territory. A policy intervention designed to restore the rule of law in public administration could potentially reverse the course, limiting the room for organized crime and improving the quality and efficiency of administrators. This, in turn, could improve the level of public services provided to citizens.

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Appendices

Appendix A Descriptive statistics

Table A.1: Descriptive Statistics

	Never dismissed municipalities			Dismissed municipalities		
Variable	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
DC	86,373	0.000	0.000	1,595	0.251	0.434
Total Spending						
Overall expenditure for each item as a share of the total expenditure budgeted by the municipality						
Social Services	85,357	0.100	0.083	1,593	0.083	0.060
Education	85,357	0.099	0.073	1,593	0.073	0.053
Waste Management	85,357	0.098	0.063	1,593	0.151	0.086
Water Services	85,357	0.044	0.069	1,593	0.077	0.087
SEWW (sum of Social Services, Education, Waste Management and Water Services)	85,357	0.341	0.127	1,593	0.384	0.123
Culture	85,357	0.025	0.042	1,593	0.021	0.045
Sport	85,357	0.027	0.046	1,593	0.017	0.041
SEWW+ (sum of SEWW, Culture and Sport)	85,357	0.393	0.134	1,593	0.422	0.122
Capital Spending						
Capital expenditure for each item as a share of total capital expenditure						
Social Services	85,191	0.075	0.142	1,589	0.060	0.130
Education	85,191	0.102	0.176	1,589	0.118	0.187
Waste Management	85,191	0.014	0.063	1,589	0.025	0.091
Water Services	85,191	0.057	0.137	1,589	0.073	0.162
SEWW (sum of Social Services, Education, Waste Management and Water Services)	85,191	0.248	0.245	1,589	0.276	0.265
Culture	85,191	0.031	0.098	1,589	0.033	0.117
Sport	85,191	0.052	0.121	1,589	0.041	0.113
SEWW+ (sum of SEWW, Culture and Sport)	85,191	0.330	0.267	1,589	0.350	0.286
Current spending						
Current expenditure for each item as a share of total Current expenditure						
Social Services	85,357	0.109	0.087	1,593	0.088	0.058
Education	85,357	0.098	0.050	1,593	0.064	0.032
Waste Management	85,357	0.129	0.069	1,593	0.187	0.088
Water Services	85,357	0.036	0.046	1,593	0.074	0.069
SEWW (sum of Social Services, Education, Waste Management and Water Services)	85,357	0.372	0.107	1,593	0.414	0.102
Culture	85,357	0.022	0.023	1,593	0.014	0.016
Sport	85,357	0.016	0.016	1,593	0.008	0.017
SEWW+ (sum of SEWW, Culture and Sport)	85,357	0.409	0.113	1,593	0.435	0.101
Demographic characteristics of local politicians						
Share of female politicians	85,970	0.196	0.119	1,571	0.109	0.111
Average age of politicians	85,970	43.928	6.312	1,571	40.714	10.490
Average years of education	85,799	12.979	1.667	1,563	14.023	1.421
Share of skilled politicians	86,373	0.509	0.068	1,595	0.506	0.081
Organized crime activities						
Brube (corruption offences per 1000 inhabitants in the province)	86,373	0.004	0.005	1,595	0.008	0.007
Punishment (mafia-related crimes per 1000 inhabitants in the province: mafia murders and attempted murders, extorsions, usury, and arsons)	86,373	0.464	0.364	1,595	0.989	0.535
Punishment2 (Violence and intimidation acts against local administrators per 1000 inhabitants in the province)	39,069	0.004	0.010	725	0.019	0.021
mafia association crime (Dummy equal to 1 if in the province/year there were people reported by police forces for mafia-type association offences)	86,268	0.233	0.423	1,595	0.878	0.327

Appendix B Institutional Setting

The dismissal of municipal councils[23] due to mafia infiltration is part of the complex Italian legislative system against organized crime. Italian law provides for a series of circumstances that may lead to the dismissal of the municipal council before the expiry of the five-year term of office.[24] A particular hypothesis of dismissal is that of dismissal of municipal councils due to mafia infiltration, introduced in 1991 with Decree Law No 164/1991 "Urgent measures for the dismissal of municipal and provincial councils and bodies of other local authorities, of mafia type" and today organically regulated by articles 143-146 of the Consolidated Law on the organization of local governments (*Testo Unico degli Enti Locali*, TUEL). This dismissal policy was introduced as an emergency response to the increasingly serious problem of mafia conditioning of local governments and occurred in the aftermath of the so-called "feud of Taurianova", a bloody mafia war in the municipality of Taurianova in the province of Reggio Calabria (Occhiuzzi, 2019).

Municipal councils are dissolved when there is concrete, unequivocal and relevant evidence of links between members of organized crime and local administrators (art. 143, paragraph 1, TUEL). The purpose of this legislative instrument is to preserve public safety, the impartiality of public administrations and the proper functioning of public services under their jurisdiction.

The body in charge is the Prefect, a peripheral arm of the State that performs functions of government representation at the local level. A commission is appointed by the Prefect to verify the actual mafia infiltration in the local administration.[25] The Prefect then sends a report to the Minister of the Interior. Finally, the Minister of the Interior proposes the dismissal, indicating the anomalies found, the measures required to preserve public interest, and the administrators held responsible for the conduct that caused the dismissal. Following deliberation by the Council of Ministers, the proposal is finally acknowledged by the President of the Republic, who orders the dismissal with a decree.

With the decree of dismissal, the councillors, the mayor and the aldermen (i.e., the members of the executive body of the municipality) are removed from office. Then, three commissioners appointed by the state take over the compulsory administration of the municipality for a period ranging from 12 to 18 months, extendable up to 24 months. These commissioners may order the revocation of public works contracts and the entrusting of local public services if these are linked to the infiltration that caused the dismissal. For this reason, temporary contractions in government spending typically occur during the first year of compulsory administration (Acconcia et al., 2014). On the other hand, commissioners may obtain priority access to contributions and funding in the presence of serious disservices or an urgent need for public works.

Since the introduction of the policy in 1991, as of May 2020, there have been 344 dismissal orders (23 of which have since been cancelled). Throughout the paper, we refer to the period 1998-2015, during which 164 dismissal orders were issued (Figure B.1) for a total of 145 municipalities involved (126 municipalities were dismissed only once during the period considered, and 19 municipalities were dismissed twice). As shown in table B.1, almost 94% of dismissals

[23] In Italy, there are three different levels of subnational government. First, the 20 regions are divided into 107 provinces. The third and final level of government is represented by the municipalities, of which there, are approximately 7900. Of these, approximately 2,558 are located in southern Italy.

[24] Art. 141 of the Consolidated Law on the Organization of Local Authorities (*Testo Unico degli Enti Locali*, TUEL) distinguishes three cases leading to dismissal: a) when there are violations of the Constitution, persistent violation of the law, serious threats to public order; b) when the normal functioning of governmental decisions and services cannot be ensured due to: 1) permanent impediment, removal, withdrawal or death of the mayor; 2) resignation of the mayor; 3) concurrent resignation of more than half of the members assigned; 4) reduction of the assembly body due to the impossibility of substitution to half the members of the Board; or c) when the budget is not approved on time.

[25] Within three months, the commission completes its investigations and makes a report to the Prefect.

Figure B.1: City council dismissals due to mafia infiltration per year

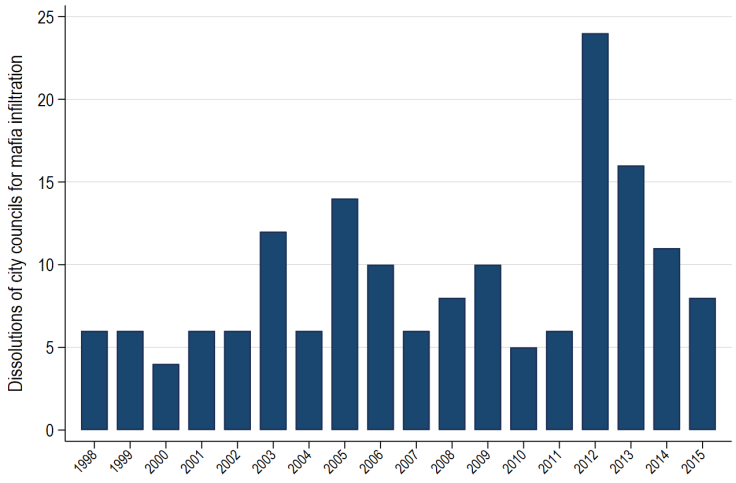

Table B.1: City councils dismissals due to mafia infiltration by region (1998 - 2015)

Region	Freq.	Percent	Cum.
Calabria	64	39.02	39.02
Campania	52	31.71	70.73
Sicily	39	23.78	94.51
Lazio	2	1.22	95.73
Liguria	2	1.22	96.95
Piedmont	2	1.22	98.17
Puglia	2	1.22	99.39
Lombardy	1	0.61	100.00
Total	164	100.00	

Notes: The table displays the number of dismissals occurred during the period 1998-2015 in Italian regions.

occurred in Calabria, Campania and Sicily.

Figure B.2: City council dismissals due to mafia infiltration by province (1998-2015)