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Summary

In this paper, we empirically investigate a channel through which social capital may improve economic wellbeing and the functioning of institutions: political accountability. The main idea is that voters who share norms of generalized morality demand higher standards of behavior on their elected representatives, are more willing to bear the cost of acquiring information, and are more likely to base their vote on criteria of social welfare rather than (narrow) personal interest. We take this conjecture to the data using information on the Italian members of Parliament in the postwar period (1948–2001). The empirical evidence shows that the electoral punishment of political misbehavior is considerably larger in electoral districts with high social capital, where social capital is measured by blood donation, and political misbehavior refers to receiving a request of criminal prosecution or shirking in parliamentary activity. Accordingly, episodes of political misbehavior are less frequent in electoral districts with high social capital.

Keywords: Social Capital, Culture, Political Agency

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Abstract

In this paper, we investigate a channel through which social (or civic) capital may improve economic wellbeing and the functioning of institutions: political accountability. The main idea is that voters who share values and beliefs that foster cooperation are more likely to base their vote on criteria of social welfare rather than narrow personal interest. We frame this intuition into a simple model of political accountability with retrospective voting and heterogeneous endowments of civic attitudes. We then take this conjecture to the data using information on the Italian members of Parliament in the postwar period (1948–2001). The empirical evidence shows that the electoral punishment of political misbehavior is considerably larger in electoral districts with high social capital, where political misbehavior refers to receiving a request of criminal prosecution or shirking in parliamentary activity, and social capital is measured by blood donation (or by non-profit organizations and electoral turnout). Accordingly, political misbehaviors are less frequent in electoral districts where civic attitudes are widespread.

JEL codes: D72, D73, Z10.

Keywords: social capital, culture, political agency.

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Despotism (...) sees in the separation among men the guarantee of its continuance, and it usually makes every effort to keep them separate. (...) A despot easily forgives his subjects for not loving him, provided they do not love one another.
Tocqueville (1840)

In a society of amoral familists there will be few checks on officials, for checking on officials will be the business of other officials only.
Banfield (1958)

1 Introduction

Several political scientists and economists have argued that social capital is an important determinant of economic development and of the functioning of institutions (Banfield 1958; Putnam 1993, 2000; Fukuyama 1995; Guiso, Sapienza, and Zingales 2008a; Tabellini 2008, 2009; Algan and Cahuc 2010; Aghion et al. 2010).¹ But what is the mechanism through which this happens? And what exactly does social capital stand for? Despite a large literature on these topics, these questions remain largely unanswered.

The goal of this paper is to explore one particular channel through which social capital can induce efficient economic and political outcomes. The basic idea is that voters who share cultural traits based on respect and solidarity for others are more likely to hold politicians accountable to high standards of behavior, and are less tolerant of moral hazard by their elected representatives.

As in Guiso, Sapienza, and Zingales (2010), we define social capital as *civic* capital, that is, “those persistent and shared beliefs and values that help a group overcome the free rider problem in the pursuit of socially valuable activities.”² We introduce this notion of civic capital in a model of political accountability studied by Barro (1973), Ferejhon (1986) and Persson and Tabellini (2000), where we add two types of voters, civic and uncivic. Both types vote retrospectively, but while civic citizens condition their vote on aggregate welfare, uncivic citizens cast their vote based on group-specific welfare. We then show that

¹In particular, social capital—measured in a number of ways, from survey responses on the level of trust to blood donation—has been shown to be positively associated with economic development (Knack and Keefer 1997, Tabellini 2009), financial development (Guiso, Sapienza, and Zingales 2004), indicators of good government (Putnam 1993, La Porta et al. 1997), female labor participation (Fernandez and Fogli 2009), and work effort (Ichino and Maggi 2000).

²Similarly, Algan and Cahuc (2009) define “civic virtue” as a set of values and beliefs that help solving the moral hazard issues which hinder the efficiency of unemployment insurance.

the amount of endogenous rents grabbed by the incumbent politician decreases with the share of civic voters. The reason is that uncivic voters allow the incumbent politician to adopt a divide-and-rule strategy, and in equilibrium this reduces the electoral punishment for rents (or misbehavior). Intuitively, civic voters refrain from rewarding a corrupt or lazy politician despite receiving some targeted or clientelistic benefits from him, but this is not incentive compatible for the uncivic voters in a Nash equilibrium where different groups do not cooperate. Social (or civic) capital is therefore a tool to sustain implicit cooperation between voters. The larger is the set of voters who cooperate, the smaller is the equilibrium amount of rents grabbed by the incumbent.³

To empirically test these implications, we exploit data on the behavior of Italian voters and political representatives in the postwar period. Italy is ideally suited to ask these questions, because within Italy there are large differences in social capital and other related cultural traits. We compare the average behavior of voters and members of Parliament in different electoral districts. Our main indicator of social capital is average per-capita blood donations in Italian provinces, although the results are robust to alternative measures. We rely on two indicators of misbehavior of political incumbents in national elections: the first is represented by prosecutors' requests to proceed with criminal investigation against a member of Parliament (*Richiesta di Autorizzazione a Procedere*, called RAP from here on); the second is the rate of absenteeism in electronic votes by members of Parliament over the legislative term.

According to both indicators, misbehavior by the incumbent is more frequent in electoral districts with less social capital. More importantly, the electoral punishment of the incumbent's misbehavior is stronger in districts with more social capital. Receiving a RAP for serious crimes reduces individual preference votes in the (open-list) proportional system before 1994 by 25% in districts with above-average social capital, while it has no impact in the others. An increase in the absenteeism rate equal to its standard deviation reduces the probability of being reelected in the same majoritarian (single-member) district after

³We conjecture that similar results would hold in the adverse selection model studied by Alesina and Tabellini (2008). Also note that the political agency literature (e.g., see Besley 2006) suggests an additional channel—besides *cooperation*—through which social capital might affect equilibrium political outcomes, that is, *information*. In these models, more informed voters are better able to discipline the incumbent or to select more competent representatives. Higher social capital might increase the willingness of any atomistic individual to bear the cost of gathering and processing information about the behavior of political representatives. Indeed, Alesina and Giuliano (2011) show that the more individuals rely on the family as a provider of services, insurance, and transfer of resources, the lower civic engagement and political participation are.

1994 by 24 percentage points (about 42%) in provinces with above-average social capital, while it has a positive (although insignificant) impact in the others. Our estimates are robust to the use of a number of politician-specific and district-specific control variables (including income, education, and newspapers diffusion in the electoral district), as well as province of election and politician fixed effects in most specifications. In particular, to control for voters' information, we use the district-specific readership of non-sport newspapers, and the impact of civic attitudes on the diffusion of political misbehavior and its electoral punishment remains significant both in statistical and economic terms.

A few empirical studies have asked whether voters punish political corruption or other misbehaviors by their elected representatives. Peters and Welch (1980) first tackled this issue by evaluating the impact of corruption charges on the reelection prospects of the US Representatives in the elections from 1968 to 1978. Their study finds that voters do indeed punish corrupt politicians, although corruption charges represent only one of the many factors concerning voters when casting their vote. Welch and Hibbing (1997) reach a similar conclusion, finding that corruption charges rarely cause incumbent US Representatives to resign, retire, or lose in primaries, although they often make politicians lose votes and occasionally elections. For Brazil, Ferraz and Finan (2008) exploit (random) audit reports on municipal governments and show that corruption disclosure is punished by voters in terms of decreased reelection probability. They also show that this punishment is more pronounced in municipalities with radio stations.

A contribution closely related to ours is represented by Chang, Golden, and Hill (2010), who study the first eleven legislative terms of the Italian Republic from 1948 to 1994. They assess the impact of receiving a RAP on the probability of being reelected in the subsequent term, and find that being investigated for a potentially serious crime slightly decreases the probability of reelection, approximately by the same degree found by Peters and Welch (1980) for the US. Looking at the legislative terms separately, however, they find that corruption charges affect the reelection prospects of Italian Representatives only in the last term, that is, in the XI legislature (1992–94), characterized by major judicial scandals that involved one third of the members of Parliament and a breakdown of the party system that made the major political parties of the postwar period disappear. According to their interpretation, the reaction of voters was particularly strong in the 1990s because of the exceptional dissemination of relevant information by the mass media in this period.

Gagliarducci, Nannicini, and Naticchioni (2011) also closely relate to our study. They

show that political rent-seeking, measured as the absenteeism rate of members of Parliament, which is in turn correlated with their outside income, is more pronounced for politicians elected in the majoritarian system as opposed to politicians elected under (closed-list) proportional representation. These previous results are consistent with ours. These papers estimate the average effect of political misbehavior on election outcomes, however, and did not ask whether the election outcomes differ by electoral districts based on social capital, information, or other observable voters' features.

The outline of the paper is as follows. Section 2 introduces a model of political accountability where voters are heterogeneous in civic attitudes. Section 3 describes the data. Section 4 presents the empirical results on how social capital influences political misbehavior. Section 5 discusses how social capital influences election outcomes. Section 6 presents some robustness checks. Section 7 concludes.

2 Theory

2.1 A model of political accountability

The model is adapted from Persson and Tabellini (2000), who in turn extend the framework of political agency originally formulated by Barro (1973) and Ferejhon (1986).

There are N groups of voters indexed by J , and the size of each group is normalized to unity. Although we speak of groups, we could interpret groups as regions. Voters in group J have preferences:

$$w^J = c^J + H(g) = y - \tau + f^J + H(g),$$

where $c^J = y - \tau + f^J$ denotes private consumption, y is income, τ is a lump sum tax, f^J is a non-negative lump sum transfer to members of group J , and g is a general public good benefiting all voters. Besides financing public consumption and targeted transfers, tax revenues can be appropriated by the government in office; these political rents, denoted r , only benefit the government and provide no utility to voters. Thus, the government budget constraint is:

$$g = N\tau - r - f, \tag{1}$$

with $f = \sum_J f^J$.

For simplicity we model the government as a single decision maker, called the incumbent. The incumbent sets policy for the current period and then elections are held. If

reappointed, the incumbent enjoys exogenous rents from office, R . Thus, R can be interpreted as the expected present value of holding office from the next period and onwards. Indeed, although this is a one-period model, the results would apply identically to an infinite horizon setting without government debt (see Persson and Tabellini 2000). With this notation, the incumbent maximizes:

$$E(v_I) = r + pR, \tag{2}$$

where p denotes the probability of reappointment, to be derived endogenously.

The timing of events is as follows. (i) All voters simultaneously choose a retrospective voting rule. (ii) The incumbent chooses policy: $\{f^J\}$, g , τ , and r , which is fully observed by voters. (iii) Elections are held. At the electoral stage, the voters perceive no difference between the incumbent and the opponent in terms of ideology or competence: the two candidates are identical in the eyes of the voters, except for their past histories.

Within each group, there are two kinds of voters: “civic” voters, who behave altruistically and condition their retrospective vote on aggregate welfare, w . And “uncivic” voters, who condition their vote on their own welfare (which here coincides with group specific welfare), w^J . Let $1 \geq \sigma \geq 0$ denote the fraction of civic voters, for simplicity assumed to be the same in each group—we relax this assumption below. Both kinds of voters set their voting rule optimally, within the class of retrospective voting rules, taking into account the equilibrium behavior of all other voters. But whereas uncivic voters care exclusively about their own individual utility, civic citizens vote altruistically so as to maximize aggregate welfare. As we shall see below, this is equivalent to say that civic individuals cooperate when they vote, whereas uncivic voters play their best response to the strategy of others. Both kinds of political behavior are plausible. Our goal is to see what are the implications of changes in σ , the fraction of civic voters. This fraction is our theoretical counterpart of social capital. In other words, we interpret social capital in a political agency context as the fraction of citizens who refrain from voting based on a narrow definition of welfare, and who instead hold politicians accountable for an aggregate measure of social welfare.

Clearly, the socially optimal policy, if we could abstract from informational or agency problems, would be to always set $r = 0$, and to have public good provision fulfill the Samuelson criterion, namely to set $g = g^*$, where:

$$NH_g(g^*) = 1. \tag{3}$$

2.2 Equilibrium under civic majority

Consider first the case in which civic voters are a majority ($\sigma \geq 1/2$). Thus, to be reelected the incumbent must please civic voters. Let ϖ be the reservation level of aggregate welfare demanded by them. This means that the probability of reelection is:

$$p = \begin{cases} 1 & \text{iff } W \equiv y - \tau + H(g) \geq \varpi \\ 0 & \text{otherwise} \end{cases} \quad (4)$$

where W is aggregate welfare (given linear utility and lump sum taxes, targeted transfers cancel out). As shown by Persson and Tabellini (2000), the optimal voting rule in this class leaves the incumbent indifferent between two strategies: pleasing the voters with a policy satisfying the top row in (4) and being rewarded with reelection and a total payoff of $v = r + R$, or foregoing reelection, myopically maximizing rents as a Leviathan policymaker, setting $\tau = y$ and $g = 0$, and thus collecting the maximal rent, Ny . The indifference condition can then be stated as:

$$r^C = \text{Max} [0, Ny - R], \quad (5)$$

where the C superscript stands for civic majority. This expression is the minimum level of rents that civic voters must tolerate in the equilibrium of this game. Equilibrium taxes and public good provisions are then set by the incumbent so as to please civic voters. This entails maximizing social welfare, subject to the constraint that rents must be r^C . For concreteness, suppose that foregoing r^C leaves sufficient revenues for optimal public good provision, specifically

$$g^* \leq R, \quad (6)$$

where g^* is the Samuelson optimum defined by (3). Then the equilibrium policy is $g^C = g^*$ and $\tau^C = (g^C + r^C)/N$. The equilibrium reservation utility demanded by civic voters is then:⁴

$$\varpi^C = y - r^C - \frac{g^C}{N} + H(g^C). \quad (7)$$

Targeted transfers are either not used, or they are indeterminate (by linear utility and non-distorting taxation, the tax rate would be correspondingly higher if $f^J > 0$). This is the same equilibrium amount of public goods and rents discussed by Persson and Tabellini

⁴If instead taxes are insufficient to pay for equilibrium rents and for the socially optimal public good, i.e., if $H_g(Ny - r^C) > 1/N$, then equilibrium taxes are $\tau = y$ and g is residually determined from the budget constraint.

(2000) under the constraint $f^J = 0$. In other words, if a majority of voters is civic (or altruistic) and holds the incumbent accountable based on an aggregate measure of welfare, then the equilibrium amount of public goods and rents is the same as if targeted transfers were not available as a policy tool.

2.3 Equilibrium under uncivic majority

Next, consider the case in which civic voters are a minority ($\sigma < 1/2$). Here the incumbent must seek the support of at least some uncivic voters, and the previous outcome can no longer be supported as an equilibrium. The logic is the same as discussed by Persson and Tabellini (2000) for the special case $\sigma = 0$. Suppose that all voters, civic and uncivic, demand the same reservation utility ϖ^C defined by (7). The incumbent can increase rents for himself by reducing g and raising τ , offsetting the induced loss of welfare by means of positive transfers f^J to enough uncivic voters to keep a majority satisfied. Since taxes are raised from everyone while transfers are only given to some voters, and since by (3) the marginal utility of the public good is relatively small, the incumbent has the room to do this and strictly increase rents for himself. But this deviation cannot be an equilibrium either, because the uncivic voters in the groups that do not receive any transfers, anticipating this outcome, would bid down their reservation utility just below ϖ^C so as to be included in the minimum winning coalition.

In equilibrium, the reservation utilities chosen by uncivic voters in group J , ϖ^J , must be a best response to ϖ^I for all $I \neq J$, taking into account the induced effects on the incumbent's behavior. The incumbent in turn maximizes rents, subject to the reelection constraint.

As we shall see below, in equilibrium uncivic voters are less demanding than civic voters. Hence the incumbent will only seek the support of uncivic voters within each group. Thus, the reelection constraint can be written as

$$y - \tau + f^J + H(g) \geq \varpi^J, \quad \text{for } J = 1, 2, \dots, M, \quad (8)$$

where M is the minimum number of groups that guarantees a bare majority to the incumbent. Given that each group has σ uncivic voters, and neglecting integer constraints, we have:

$$M = N/2\sigma. \quad (9)$$

The incumbent thus maximizes rents, subject to the government budget constraint (1), to non-negativity constraints on $\{f^J\}$ and r , to $\tau \leq y$, and to (8)–(9). Assuming that the non-negativity constraint on rents does not bind, the solution to this optimization problem implies (where the U superscript stands for uncivic majority):⁵

$$\begin{aligned}\tau^U &= y \\ NH_g(g^U) &= 2\sigma \\ r^U &= Ny - g^U.\end{aligned}\tag{10}$$

Furthermore, since in equilibrium uncivic voters in all groups must demand the same reservation utility, in equilibrium $f^J = 0$ for all J and the incumbent is reelected. To verify that this is the only equilibrium policy outcome, note that no group of uncivic voters can unilaterally increase its reservation utility, because it would simply be left out of the minimum winning coalition. And even if civic voters are more demanding and vote for the opponent, their vote is not pivotal and can be safely neglected by the incumbent.

Contrasting (10) with the equilibrium described above, where civic voters are a majority, it is easy to see that here all voters are worse off, since $r^C < r^U$, $g^C > g^U$, $\tau^C < \tau^U$. The intuition is the same as in Persson and Tabellini (2000) and Ferejhon (1986). Since uncivic voters are a majority, the incumbent can exploit their conflict of interest to his own benefit by adopting a divide-and-rule strategy. At the same time, the opponent cannot promise that he will not play the same disruptive game, which leaves the voters at the mercy of the incumbent.

The main novel result here is that, as the fraction σ of civic voters increases (although they remain a strict minority), the equilibrium entails a better policy outcome for all voters. Specifically:

Proposition 1 *In the equilibrium where uncivic voters are a majority, as the fraction σ of civic voters increases, equilibrium rents decrease and public good provision increases.*

⁵Omitting the non-negativity constraints on f^J and the upper bound on τ , the Lagrangian for the incumbent optimization problem is:

$$r + \sum_J^M \lambda^J [y - \tau + f^J + H(N\tau - \sum_I^N f^I - r) - \varpi^J]$$

where λ^J is the Lagrange multiplier for (8). Solving this optimization problem implies $\lambda^J = 1$ for $J = 1, 2, \dots, M$, and after some transformations the first order conditions imply (10).

This can be seen immediately by (10). The intuition is that a larger fraction σ of civic voters increases M ; see equation (9). That is, to please a majority of uncivic voters, the incumbent must seek the support of a larger number of groups. This in turn makes it more costly to compensate the losers from a reduction in public goods, and thus it forces the incumbent to maintain the equilibrium closer to the cooperative outcome obtained when civic voters are a majority. To put it differently, M captures the effective size of the minimum winning coalition of groups supporting the incumbent. As σ increases, so does M . And a larger minimum winning coalition entails a policy closer to the equilibrium with civic majority.

Note also that the result in Proposition 1 extends to a situation where different groups have different fractions of civic voters, say σ^J . Here too, $f^J = 0$ for all groups J . The reason is that Bertrand competition to be included in the minimum winning coalition continues to impose that all groups are treated equally. But as long as civic voters are not a majority in the population, it remains true that an increase in any σ^J entails a better aggregate policy outcome.

Finally, note that in this equilibrium civic voters are not pivotal. Hence in equilibrium they can demand any reservation utility equal to or above the equilibrium reservation utility ϖ^J of uncivic voters. It is reasonable to assume that in equilibrium civic voters will continue to set their reservation utility at the level ϖ^C in (7) above. If so, and since $\varpi^C > \varpi^J$, we get the additional implication that, as long as uncivic voters are a majority, a higher value of σ is associated with a larger fraction of votes against the incumbent. In other words, the more widespread civic attitudes, the higher the electoral punishment for the larger rents under uncivic majority (i.e., $r^U > r^C$).

Summarizing, the theory yields the following predictions with regard to the equilibrium where uncivic voters are a majority ($\sigma < 1/2$): As the fraction of civic voters increases, rents decrease, public good provision increases, and the fraction of votes supporting the incumbent decreases.

We now turn to the empirical investigation. Exploiting the Italian data and institutions described below, we test whether political rents (or misbehavior) are lower as the share of civic voters increases (both because $r^C < r^U$ when $\sigma > 1/2$, and because r^U decreases with σ when $\sigma < 1/2$). We will also test whether this is due to the fact that the electoral punishment for political misbehavior (and therefore political accountability) is higher as the share of civic voters increases.

3 The data

Because Italian political institutions have changed in the postwar period, we use two samples and different measures of electoral outcomes and misbehavior in the two samples. In both samples, we have an unbalanced panel where the units of analysis are members of Parliament, and the period refers to legislative terms. As explained below, however, some variables refer to the electoral district where the incumbent stands for reelection.

Table 1 summarizes the two samples. The first one refers to the legislatures elected between 1948 (the first parliamentary election of the Italian Republic) and 1987, thus legislatures I–X included.⁶ During this period, also known as *First Republic*, the electoral system for the Parliament was proportional representation with open party lists (i.e., with the possibility of casting preference votes on individual candidates). After dropping observations with missing values, we end up with a sample of 5,849 representatives in the First Republic. The source is Chang, Golden, and Hill (2010). The data only refer to the House of Representatives (therefore excluding the Senate). In this sample, we measure political outcomes by the difference in preference votes received by the incumbent between two consecutive elections (expressed in logs). Clearly, this variable is only available for incumbents who stood for reelection. In the First Republic, preference votes were important not only because they ordered candidates within each party list and thus determined election outcomes, but also because they measured each candidate’s political influence and were used to allocate party resources and appointments. On average, politicians in the South collected more preference votes, even after controlling for district magnitude. Indeed, the number of personal votes normalized by the total number of representatives elected in the district was about 1,227 in the North, 1,605 in the Center, and 2,211 in the South (all differences significant at the 1% level).

Throughout this period, elected representatives enjoyed immunity from criminal prosecution. Immunity could be waved by a vote of Parliament, at the request of the prosecutor. The prosecutor’s request to continue with its criminal investigation (RAP) was public knowledge, it typically received a lot of attention from the media, and it was always

⁶The XI legislative term (1992–1994) marks the transition to the so-called *Second Republic*, following judicial scandals that destroyed major political parties and led to the adoption of a mixed electoral system in 1993. This term is excluded from the analysis, because members of Parliament elected in 1992 (eventually) stood for reelection under a different electoral system, and also because it clearly represents an outlier in the history of the Italian First Republic.

brought to Parliament for a final vote on the issue.⁷ Our measure of misbehavior in this sample (i.e., the empirical counterpart of r in the theoretical model) consists of a dummy variable equal to one if the incumbent representative received a RAP in the outgoing legislative term, and zero otherwise.⁸ The source for this variable is again the dataset by Chang, Golden, and Hill (2010). Not all alleged criminal offenses brought against elected representatives were actually very serious, though. For instance, some RAP's refer to crimes such as the promotion of meetings in public places without prior notice, the publication or spreading of false news, or road-traffic offenses. For this reason, we also coded a dummy variable that refers only to the more serious crimes (*serious* RAP), namely corruption, private interest in official duties, racketeering organization, fraud, and violence (including murder).⁹

By definition, a RAP is an allegation of malfeasance, rather than a conviction, and as such it could also capture judicial zeal and prejudice. As noted by Chang, Golden, and Hill (2010), however, at the province level there exists a strong correlation between charged corruption (as measured by the fraction of representatives receiving a RAP) and a more objective measure of corruption based on the extent of missing infrastructures in public works in the 1990s.¹⁰ Furthermore, it should be noted that members of Parliament could receive a RAP from any Italian tribunal and the political or cultural attitudes of local judges are not necessarily correlated with the probability of being charged. In the whole sample, we observe that politicians belonging to the opposition parties were more likely to be charged until the 1970s, while politicians in the government coalition were more likely to be charged afterwards.¹¹ In our empirical analysis, we always control for the partisan identity of politicians in examining the political impact of malfeasance charges.

Table 2 shows that 24% of the representatives in our sample received at least one RAP, half of them (12% of the sample) for serious crimes. In Figure 1, the bottom maps show the geographical distribution of the two measures across the 32 electoral districts of the First Republic; darker districts correspond to a higher incidence of malfeasance.

⁷Parliamentary immunity and the RAP procedure were abrogated in 1993 by the XI legislature.

⁸Many representatives actually received more than one RAP, but the results reported below are robust to replacing the dummy variable with the actual number of RAP's received.

⁹In Appendix I, we give details on the criminal offenses included in both measures.

¹⁰See Golden and Picci (2005) on how this measure of corruption is built.

¹¹Throughout the sample period of the First Republic, the government coalition was formed by the Christian Democrats (DC, the biggest Italian party), its minor centrist allies, and, eventually, the Italian Socialist Party (PSI). The opposition parties were the Italian Communist Party (PCI, the second biggest Italian party) on the left and the post-fascist party (MSI) on the right.

In particular, representatives elected in Southern districts are more likely to receive both types of criminal prosecutions, and these regional differences are statistically significant.¹²

The second sample refers to legislatures XII and XIII in the Second Republic, corresponding to the period 1994–2001. Following the 1993 electoral reform, this second sample has a mixed electoral system: about 75% of both the House of Representative and the Senate were elected in single-member districts under plurality rule. The remaining 25% was elected under proportional representation with closed party lists (i.e., without preference votes) for the House, and under proportional representation selecting the best losers in the single-member districts for the Senate. Since we expect accountability to be stronger under plurality rule, in the baseline estimations, we restrict our attention to incumbents that stand for reelection in single-member districts.¹³ We also exclude the XIV legislature (2001-2006), because in 2005 there was yet another electoral reform reintroducing proportional representation. As a robustness check, however, we also look at the members of Parliament elected in the proportional tier of the mixed-member electoral system: 595 observations over the terms XII, XIII, and XIV (because proportional politicians could be reelected in the same system/district also in the XV term).

We thus measure political outcomes in this second sample as a dummy variable that equals one if the incumbent is reelected in the *same electoral district*, and zero otherwise. We comment below on the robustness of the results if the dummy variable is redefined as equal to one if the incumbent is reelected, irrespective of whether in the same or in another district. Table 3 shows that 50% of members of Parliament were reelected, 32% in the same (majoritarian) district. There are no significant differences in reelection patterns across the different areas of Italy (North, Center, and South).

Since parliamentary immunity was dropped in 1993, in the Second Republic we measure political misbehavior (r) by absenteeism, defined as the percentage of votes missed in the outgoing legislature without a legitimate reason. The source for this variable is the dataset used by Gagliarducci, Nannicini, and Naticchioni (2011). Absenteeism is clearly a less

¹²The regional differences in the probability of receiving a RAP are always statistically significant at the 1% level. The difference in the probability of receiving a serious RAP between the North and the South is also significant at the 1% level, while the differences between the Center and the other two areas are significant at the 5% level.

¹³Persson and Tabellini (2000) study a theoretical model based on career concerns, which predicts accountability to be stronger under plurality rule than under closed-list proportional representation. Persson, Tabellini, and Trebbi (2003) in cross-country data and Gagliarducci, Nannicini, and Naticchioni (2011) in the data set of Italian politicians we also use show that this is confirmed by the empirical evidence.

important form of misbehavior, compared to being accused of criminal offenses. It is also less widely publicized. Nevertheless, it is still a breach of the implicit contract between the representative and his voters, and it corresponds closely to the theoretical constructs of the political agency literature on moral hazard. Gagliarducci, Nannicini, and Naticchioni (2010) show that absenteeism is positively associated with the amount of outside income by members of Parliament, therefore capturing shirking or rent-seeking. As shown in Table 3, the average absenteeism rate is about 34%. In Figure 2, the bottom map shows the geographical distribution of parliamentary absences across Italian provinces; darker provinces correspond to a higher absenteeism rate by the members of Parliament elected there. The average absenteeism rate in the North (36%) is different from the average rate in the Center (32%) and in the South (39%) only at the 10% significance level, while the difference between the Center and the South is statistically significant at the 1% level.

For both samples, we also observe several features of political incumbents. We report them in Table 2 and Table 3 for the earlier and later sample, respectively. These observed characteristics can be grouped in two broad categories. First, we observe some individual features, such as gender, age, marital status, and education and pre-election occupation. Over 90% of incumbents are male, their average age is about 50 (a bit younger in the earlier sample, and a bit older in the latter sample), and most of them have college education (63% in the earlier sample, 70% in the later one). Second, we know the recent political history of each incumbent, and in particular whether they belonged to the majority coalition, whether they had a role in national or local government, or in a parliamentary committee, or in their party, and whether they were freshmen or not. More such variables are available in the second sample than in the first one. Their sources are the datasets mentioned above for the First Republic and Second Republic.

Finally, we also collected data on the district in which the incumbent stands for reelection, relying on data collected at the level of the province. In the first sample, there are 32 districts, in some cases consisting of a single province, in others of several provinces. In the second sample there are 475 single-member districts in the House and 230 in the Senate, and often an electoral district is a subset of a province. The data on social capital and other district-specific covariates are aggregated at the province level.

Following Guiso, Sapienza and Zingales (2004), social capital is measured by blood donations per capita in 1995; specifically, by the number of blood bags (about 16oz) every 100 inhabitants. For the First Republic, we measure social capital in the electoral district

by taking the weighted average of per-capita blood donations in the provinces included in that district. For the Second Republic, we impute to each single-member district the level of per-capita blood donations in the province containing that district. We can also construct social capital in the province or region of birth of each incumbent, since we know where he/she is born.

According to the theory, social capital refers to the diffusion of civic attitudes, and in particular to the fraction of voters who care about aggregate (as opposed to individual) welfare - the parameter σ in the theoretical model. The level of blood donations is a good proxy for this unobserved social feature. In Italy there are neither legal nor economic incentives to donate blood, which is therefore an altruistic decision only driven by social pressure or internalized norms. The anonymous collection procedures are set nationally and administered by a single national organization (AVIS), and therefore the data do not reflect differences in the quality or diffusion of medical infrastructures. The source for these data is Guiso, Sapienza, and Zingales (2004). As shown in the top map of both Figure 1 and Figure 2 (where the darker areas are associated with more social capital), the distribution of blood donations in Northern and Southern Italy is starkly different. Civic attitudes are more widespread in the North, although there is a lot of variation also within macro-regions, that is, across provinces in the North, Center, and South.

To perform some robustness checks, we also collected alternative indicators of social capital, such as the number of non-profit organizations per capita (from the 2001 Census; see Guiso, Sapienza, and Zingales 2008b), the number of employees in non-profit organizations per capita (from the 2001 Census), the average turnout in national elections, European elections, and referenda during the 1990s (see Cartocci 2007). Most of the results are robust to the use of these alternative indicators of social capital. In Section 6, we replicate the baseline specifications of our empirical strategy using the first principal component of these indicators as an alternative measure of social capital.

As additional control variables at the district level, we also collected data on per-capita income in 2003, and the percentage of the over-19 population with a high school degree in 2003. Their source is the National Statistical Office (ISTAT). As a proxy for voters' information about politics, we retrieved data on the diffusion of non-sport newspapers in 2001–2002. The source is again the dataset collected by Cartocci (2007). All of these data also refer to the province and are aggregated to the district as described above. We have non-missing data for 92 Italian provinces. Table 4 displays summary statistics and

correlation coefficients for blood donations, per-capita income, education, and newspapers diffusion at the province level. Clearly, social capital is positively correlated with economic development and voters’ information, although it displays a negative correlation with the level of education attained in the province.

4 Social capital and political misbehavior

This section investigates the link between political misbehavior (r) and social capital (σ). By Proposition 1 in the theoretical framework, more social capital should discourage political misbehavior though voters’ behavior. This is not the only way in which social capital might influence political misbehavior, however, since social capital might be “embedded” in the representatives themselves. The behavior of political representatives also reflects their values and preferences. An environment with low social capital might breed political representatives who are more opportunistic and less likely to internalize true social welfare. The two alternative channels are hard to disentangle empirically, also because voters’ behavior affects the intrinsic qualities of politicians through selection effects.

In our baseline regression, the dependent variable is political misbehavior by political incumbents, and the regressor of interest is social capital:

$$Y_{ijt} = \delta_t + \tau SC_j + \underline{X}'_{ijt}\beta + \underline{Z}'_j\alpha + \epsilon_{ijt}, \quad (11)$$

where subscript i refers to the politician, j to the area of election, t to the legislature; the dependent variable Y measures either having received a RAP, or absenteeism, both in the current legislature. The variable of interest is social capital in the area of election, SC_j . Throughout we also control for a set of observable individual features listed in Tables 2 and 3 (the vector X), and of district-specific variables listed in Table 4 (the vector Z). Estimation is by Probit, when the dependent variable is the binary variable RAP, or OLS, when the dependent variable is the rate of absenteeism.¹⁴

Equation (11) is a reduced form, in the sense that, as already noted, the coefficient of interest τ reflects the social capital of both politicians and voters. Moreover, the effect of voters’ social capital might operate both directly (it discourages moral hazard by the incumbent) or indirectly, through sorting (incumbents who are more likely to misbehave

¹⁴As the absenteeism rate is bounded between 0 and 1, we also estimated equation (11) with the GLM estimator proposed by Papke and Wooldridge (1996), and all of the results were quantitatively the same (available upon request).

choose to stand for election in areas with low social capital). In our case, however, self-selection is a component of the effect we want to identify.

To shed more light on the interplay between voters' and politicians' social capital, we exploit the politicians' place of birth (k) and the associated social capital (SC_k). Thus, we estimate alternatively

$$Y_{ijkt} = \gamma_k + \delta_t + \tau SC_j + \underline{X}'_{ijkt} \beta + \underline{Z}'_j \alpha + \epsilon_{ijkt}, \quad (12)$$

to control for the time-invariant characteristics of politicians' place of birth γ_k (including social capital, which is usually assumed to be persistent in time), and

$$Y_{ijkt} = \delta_t + \tau SC_j + \gamma SC_k + \underline{X}'_{ijkt} \beta + \underline{Z}'_j \alpha_1 + \underline{Z}'_k \alpha_2 + \epsilon_{ijkt} \quad (13)$$

in the subsample of *migrants*, namely politicians who stand for election in an area (j) different from that of birth (k), for whom $SC_j \neq SC_k$.¹⁵ This last regression, however, should be interpreted with caution, because migrants are a (very) self-selected subsample, meaning that they are not a random draw from the original population in the province of birth and SC_k could thus be uninformative about their true social capital.

In principle we could also estimate (11) with individual fixed effects, drawing inference from *movers* (as opposed to migrants), that is, individual incumbents running for reelection in different districts at different points in time. In both samples there are too few such individuals, however, and such specification leads to inconclusive results.

4.1 Criminal prosecutions

Table 5 reports the estimates when the dependent variable is the binary variable RAP (marginal effects are reported). The upper panel measures RAP by the more comprehensive definition, while the lower panel refers to serious crimes.

The first two columns include social capital in the district of election. Column 1 is the most parsimonious specification, that includes however per capita income and education in the district, as well as dummy variables for five macro-regions (North-West, North-East, Center, South, Islands). Hence the estimated coefficient of interest only reflects variation

¹⁵As a reference, we also look at the social capital of birth in isolation:

$$Y_{ijkt} = \gamma_j + \delta_t + \gamma SC_k + \underline{X}'_{ijkt} \beta + \underline{Z}'_k \alpha_2 + \epsilon_{ijkt},$$

controlling for the (time-invariant) characteristics of the district of election γ_j .

across districts and within each macro-region. Given the high correlation between social capital and the other district specific variables, and considering that there are only 32 districts, this is already a demanding specification. The estimates reveal that the incidence of both general and serious RAP are significantly lower in districts with more social capital. In particular, according to the baseline specification in column 1, an increase in social capital equal to its standard deviation would reduce the incidence of receiving a RAP by about 16%, and the incidence of a RAP for serious crimes by about 7%. Moving from the lowest level of social capital (recorded in the Southern province of *Caltanissetta*) to the average level would reduce RAP by 20%, and serious RAP by 9%. Moving from the lowest to the highest level of social capital (recorder in the Northern province of *Cremona*) would reduce RAP by 75%, and serious RAP by 35%.

Column 2 adds newspapers circulation in the district as a regressor. Its estimated coefficient is always statistically significant in both panels. The estimated coefficient of social capital shrinks, and remains statistically significant when RAP refers to the general definition (upper panel), but not with regard to serious crimes (lower panel). This suggests that at least part of the effect of social capital in the district of election reflects the channel of information diffusion.

The remaining columns attempt to disentangle the effect of social capital in the district of election versus the region of birth. Column 3 starts by adding to the basic specification a dummy variable for the region of birth.¹⁶ The estimated coefficient in the district of election does not change at all (in the upper panel) or it shrinks a little (in the lower panel), and it remains statistically significant only with regard to general RAP. Overall, this suggests that social capital where elected plays an important role, irrespective of the region of birth. This inference is reinforced by the remaining three columns. When social capital in the district of election is replaced by social capital in the region of birth, the latter is statistically significant in both panels if fixed effects for the district of election are omitted (column 4), but not if they are included (column 5). Moreover, when both social capital where elected and at birth are included (column 6), restricting the sample to migrants only, the estimated coefficient of social capital remains negative and very large in absolute value, although imprecisely estimated, and it is significant with regard to general RAP; the estimated coefficient of social capital at birth, instead, is never significant.

¹⁶Unfortunately, the First Republic sample does not contain information on the province of birth.

The effect of social capital on criminal prosecutions thus seems a feature of where the incumbent is elected, and not of where he comes from. Both this and the relevance of newspapers diffusion suggest that the effect captures the behavior of voters, rather than inherited norms of the candidates. Nevertheless, we cannot be sure because we lack information on where the candidate grew up. Moreover, intrinsic features of the candidate might still play a role if more demanding voters' behavior induce sorting by the candidates across districts with different social capital. This is indeed part of the effect of social capital on political misbehavior that we are identifying.

A final concern with the above estimations is that social capital discourages criminal prosecution through the behavior of the judiciary, rather than of voters. A priori this does not seem very likely, because the effect might go in the opposite direction: more zealous judges in districts with higher social capital might increase the likelihood of RAP's, not necessarily reduce it. Anyway, because of this concern, we now turn to absences, a misbehavior that hurts the voters but does not correspond to any criminal wrongdoing.

4.2 Absenteeism rate

Table 6 has the same structure of Table 5, except that there is only one measure of misbehavior in this sample of majoritarian politicians in the Second Republic. Moreover, the specification here includes more individual-specific variables, since this more recent dataset has more information on the candidates, including the province of birth (instead of simply the region). Finally, social capital and the other district-specific variables vary over a larger number of areas, namely 92 provinces.

The results are qualitatively very similar to those obtained for RAP, although they are more precisely estimated and social capital where elected remains always statistically significant. In particular, columns 1 and 2 refer to social capital in the province of election. Absenteeism is always significantly lower in districts with more social capital. In particular, according to the baseline specification in column 1, an increase in social capital equal to its standard deviation would reduce absences in parliamentary votes by about 14%. Moving from the lowest to the average level of social capital would reduce absences by 17%, and moving from the lowest to the highest level of social capital by 64%. A large newspapers circulation also discourages absenteeism, but here unlike for RAP the estimated coefficient of social capital increase marginally when this additional regressor is included.

Columns 3-6 try to disentangle the effect of social capital in the province of election versus the province of birth. As for RAP, the effect of social capital where elected remains large in absolute value and statistically significant even with the inclusion of fixed effects for the province of birth (column 3), or if both kinds of social capital are included in the estimation with migrants only (column 6). The effect of social capital at birth, on the other hand, is not statistically significant as soon as the province of election is controlled for (column 5). Overall, therefore, these results support the inference that absenteeism is discouraged by the social capital of voters—both directly and indirectly, through the endogenous sorting of candidates in each district—rather than by inherited norms of the candidates as measured by the social capital at birth.

Finally, in Table 7, we run the same set of estimations of Table 6 on the (closed-list) proportional members of Parliament in the Second Republic legislative terms XII, XIII, and XIV, in order to assess whether the same correlation between social capital and political misbehavior is at work also under institutions associated with a lower degree of political accountability and higher rent-seeking (see Gagliarducci, Nannicini, and Naticchioni 2011). The results show no significant correlation between the absenteeism rate and both the social capital of election and birth of the members of Parliament. This finding does not seem to be driven by the lower accuracy induced by the reduced sample size, because point estimates, with the exclusion of column 6, are also much lower than those on majoritarian members of Parliament. This negative result is important, because it further reinforces the inference that social capital affects misbehavior through political accountability: the effect of social capital is only present where political institutions allow politicians to be held accountable.

5 Social capital and election outcomes

In line with our theoretical model, a plausible interpretation of the results in the previous section is that uncivic voters fail to coordinate and keep politicians accountable to criteria of aggregate welfare, so that political representatives face weaker incentives to pursue social welfare (or are poorly selected) in areas with less social capital. If this interpretation is correct, we should see that voters in districts with high social capital are more willing to punish incumbents who misbehaved, as indeed predicted by our model. This section tests this hypothesis, again looking at how voters react to both RAP and absences.

Starting with RAP, the basic specification we estimate is:

$$\Delta VOT_{ijt} = \delta_t + \gamma_j + \tau RAP_{ijt} \cdot SC_j + RAP_{ijt} \cdot \underline{Z}'_j \lambda + \theta RAP_{ijt} + \underline{X}'_{it} \beta + \epsilon_{ijt}, \quad (14)$$

where the dependent variable is the difference of log votes (ΔVOT_{ijt}) received by incumbent i in district j between the elections at the end and beginning of term t . The coefficient of interest is τ , namely the effect of social capital in the district of election interacted with the corresponding RAP. We expect $\tau < 0$: electoral punishment for misbehavior is harsher where there is more social capital. Throughout we control for legislative term (δ_t) and district (γ_j) fixed effects, individual features of the incumbent (X) and the interaction of RAP with other district-specific variables Z (namely per-capita income, education, and newspapers diffusion). Estimation is by OLS, and robust standard errors are clustered by district. As in the previous section, we estimate (14) with two different measures of RAP, referring to general and serious offenses, respectively.

Implicitly, with this specification we assume that voters' punishment is permanent, that is, the incumbent is permanently punished for additional RAP's received in the current legislature. The advantage of this specification is that, taking differences in preference votes between two consecutive elections, we take care of unobserved and time-invariant individual variables potentially correlated with RAP. Nevertheless, as an additional check, we also estimate equation (14) by adding individual (legislator-specific) fixed effects. Unlike in the reduced form regression of the previous section, here we are interested in the effect of the interaction $RAP_{ijt} \cdot SC_j$, a variable that varies over both i and j ; hence, even in a regression with both individual and district fixed effects, we draw inferences from all observations, and not just from the movers.

Precisely because we are interested in the interaction between *RAP* and social capital, however, district and individual fixed effects do not entirely remove the problem of unobserved variables that vary across both individuals and districts, and that might be correlated with *RAP*. In particular, the estimation of equation (14) may suffer from a possible self-selection problem into the treatment *RAP*. In the previous section, we have argued that the evidence suggests that voters are more effective in discouraging misbehavior in districts with higher social capital, either because incumbents are more self-restrained, or because politicians with a lower propensity to misbehave enter politics anticipating voters' behavior. Here, this means that misbehavior by the incumbent is not random, but could be systematically correlated with the error term of equation (14).

As we are interested in estimating τ , this self-selection would be a major problem only if the arising bias were different in areas characterized by different levels of social capital. To control for that, as discussed in Appendix II, we should include a full set of interactions between individual and district fixed effects. This specification is too demanding for our data. We therefore rely on an alternative specification that may be described as a good approximation, where we basically demote the degrees of freedom problem by reducing social capital to a binary variable. In particular, we estimate equation (14) with (and without) individual fixed effects and omitting the interaction variable (i.e., constraining $\tau = 0$), but in two different samples: the districts with social capital above and below the mean, respectively.¹⁷ We then test whether the estimated coefficient on *RAP* ($\hat{\theta}$) is the same in the two samples. Hence, in the specification with individual fixed effects, the identification comes from politicians who have been repeatedly elected in areas with the same social capital and have received a RAP in one term but not in another.

Furthermore, under plausible assumptions, the baseline specification of equation (14) estimates a *lower bound* of the true punishment τ (in absolute value), as the above source of possible endogeneity works against us. Specifically, as discussed in Appendix II, we need to assume that politicians who have improved their electoral prospects (and can therefore better afford to be punished) are more likely to misbehave in areas with high social capital than where social capital is low: in other words, where the expected punishment is higher, only those who can better afford the (electoral) price of receiving a RAP decide to misbehave. Under this assumption, the estimated difference in the electoral punishment between areas with high versus low social capital is smaller than the true difference, and we estimate a lower bound (in absolute value).

An additional problem with equation (14) is non-random sample selection, as we only observe preference votes for incumbents who choose to run for reelection. But incumbents who obtained very severe RAP's in districts where voters are very demanding might choose to opt out of the election. Nevertheless, in the data, the decision of whether or not to run for reelection is uncorrelated with RAP, social capital, and their interactions, suggesting that this is not a serious problem.

To avoid this problem, however, in the sample of the Second Republic, where misbehavior is measured by absenteeism, we redefine the dependent variable as being reelected

¹⁷Results are robust to the use of different cutoffs: the median, the 25th, and the 75th percentile.

in the same district ($REELE_{ijt}$). We thus estimate:

$$REELE_{ijt} = \delta_t + \gamma_j + \tau Y_{ijt} \cdot SC_j + \lambda Y_{ijt} \cdot Z_j + \theta Y_{ijt} + \underline{X}_{ijt}'\beta + \epsilon_{ijt} \quad (15)$$

where Y_{ijt} refers to absenteeism. Here, an incumbent who chooses not to run is coded as not reelected, so that sample selection is not an issue. Estimation is by Probit, with standard errors clustered by district. The specification is otherwise the same as with RAP in equation (14), except that in this sample we have a richer set of observable individual features. An important reason why in this sample we can look at election outcomes, rather than just preference votes, is that here the electoral rule is plurality rule in single-member districts. Therefore, the link between votes and election outcomes is more powerful than in the proportional electoral system with open lists of the First Republic, where the order in the list is often the main determinant of the final outcome.

This sample has a drawback relative to the First Republic, however: since there are only two legislatures, the degrees of freedom problem is more severe when individual fixed effects are included.

5.1 Criminal prosecutions

Table 8 reports the estimates of equation (14). Again, the upper panel refers to the general and broader definition of RAP, while the lower panel refers to serious RAP. The coefficient of interest is that on the interaction between RAP and social capital (i.e., $\hat{\tau}$). Column 1 estimates the basic specification, where RAP is interacted with social capital but not with other district-specific variables. The estimated coefficient of interest is negative and statistically significant, as expected, and the effect is stronger in the case of serious RAP, as one might also have expected. Column 2 adds the interactions between RAP and other district-specific variables (per-capita income, education, newspapers diffusion). The effect of the interaction between RAP and social capital becomes even larger in absolute value and gains significance, in both panels.

According to the specification in column 2, receiving a RAP is going to decrease the amount of preference votes by 21% in areas with average social capital and by 28% in areas with the highest level of social capital, while it has no significant impact where social capital is completely lacking. For serious RAP, the impact is minus 9% on average and minus 56% in areas with the highest social capital, while it is again insignificant in areas with the lowest social capital.

The remaining two columns (3 and 4) repeat the same exercise but add individual fixed effects. The estimated coefficient of serious RAP interacted with social capital remains stable and significant, while that of general RAP interacted with social capital becomes negligible and insignificant.

Table 9 estimates a similar specification in the split sample, again for general and serious RAP. Columns 1 and 3 refer to districts with social capital above the mean, columns 2 and 4 to districts below the mean. We are interested in whether the estimated coefficient of RAP is different in the two samples, as reported by the p-value of the Wald tests at the bottom of each panel. The estimates are consistent with those of Table 8. When individual fixed effects are omitted (columns 1 and 2), the difference between the two samples is highly significant, according to both definitions of RAP. When individual fixed effects are included (columns 3 and 4), the difference in the estimated coefficients of RAP is statistically significant only for serious RAP, although even in the general definition the estimated coefficient of RAP is only significant and larger in absolute value in the high social capital sample. Looking at our preferred specification with individual fixed effects, receiving a RAP approximately reduces preference votes by 12% in areas with above-average social capital, while it has no impact in areas with below-average social capital. Similarly, being prosecuted for serious crimes reduces preference votes by 25% in areas with above-average social capital and has no impact in the others.

Finally, in Figures 5 and 6, we visually inspect whether our results are driven by outlying electoral districts. Within each of the 32 districts we estimate the electoral punishment of RAP and serious RAP controlling for individual-specific variables. We then separately regress the electoral punishment on both social capital and the other district-specific variables (Z). The figures plot the scatter and linear correlation between the residuals of these last two regressions, that is, the correlation between the electoral punishment of political misbehavior and social capital partialling out the impact of other district-specific characteristics. The negative correlation is always highly significant and does not appear to be driven by outliers.

Overall, the above estimates are in line with the theoretical priors and suggest that indeed voters in districts with high social capital are more willing to punish political misbehavior, especially when it involves prosecution for serious crimes.

5.2 Absenteeism rate

Table 10 reports the estimates of equation (15). The coefficient of interest is that on the interaction between the absenteeism rate and social capital ($\hat{\tau}$). In the specification of column 1, absenteeism is interacted with social capital but not with other district-specific variables. The estimated coefficient of interest is again negative and statistically significant. As in the case of RAP, when we add the interactions between absenteeism and other district-specific variables in column 2, the effect of the interaction between absenteeism and social capital becomes even larger in absolute value. For the sake of completeness, we also report the estimates with individual fixed effects in columns 3 and 4, but they are inconclusive, perhaps because of the low amount of within variation as the panel consists of only two legislative terms in the Second Republic. According to the specification in column 2, the effect of shirking parliamentary duties on reelection is positive (although insignificant) where there is no social capital. An increase in the absenteeism rate equal to its standard deviation reduces the probability of being reelected in the same (single-member) district by 1 percentage point (about 2%) in areas with average social capital, and by 22 percentage points (about 70%) in areas with the highest level of social capital.¹⁸

Table 11 further looks at the association between the electoral punishment of shirking and social capital using the split-sample specification. As for RAP, columns 1 and 3 refer to districts with social capital above the mean, columns 2 and 4 to districts below the mean. We are interested in whether the estimated coefficient of the absenteeism rate is different in the two samples, as reported by the p-value of the Wald test. When individual fixed effects are omitted (columns 1 and 2), the difference between the two samples has the expected sign and is highly significant. In particular, an increase in the absenteeism rate equal to its standard deviation reduces the probability of being reelected in the same (single-member) district by 24 percentage point (about 42%) in areas with above-average social capital, and it has a positive (although insignificant) effect in areas with below-average social capital. When individual fixed effects are included (columns 3 and 4), the difference in the estimated coefficients of absenteeism has no longer the expected sign, but

¹⁸Using reelection—instead of reelection in the same district—as dependent variable in the estimation of equation (15) provides results that are similar in terms of statistical significance but lower in magnitude (available upon requests). This means that political parties may decide to “save” some misbehaving politicians by letting them run for reelection in a different electoral district.

it is statistically insignificant according to the Wald test.

In Figure 7, we visually inspect whether the above results are driven by outlying provinces of election. Looking at the 92 Italian provinces in our sample, we repeat the two-step estimation strategy implemented for RAP and serious RAP in Figures 5 and 6, respectively. The correlation between the electoral punishment of shirking and social capital—partialling out the impact of other district-specific characteristics—is negative (as expected), highly significant, and does not appear to be driven by outliers.

Overall, although the limited panel dimension of the Second Republic sample hampers the consistent implementation of the specifications with individual fixed effects, the available empirical evidence is again in line with the theoretical priors and suggests that members of Parliament elected in districts with high social capital cannot safely expect to shirk their duties without being punished in terms of reelection probability.

Finally, in Table 12 and Table 13, we look at the electoral punishment of the absenteeism rate of proportional politicians in the Second Republic. As expected, in a context where voters' degrees of freedom in choosing their preferred candidates are severely hampered by the closed party lists, the interaction between social capital and absences is never statistically significant. Indeed, politicians who are elected in the proportional tier and make more absences end up being rewarded with a higher reelection probability (see Table 13), but this effect is not statistically different in areas with high versus low social capital. Figure 8 further shows the lack of any significant correlation between social capital and the (partialled-out) punishment of political misbehavior for proportional politicians. Again, this negative result supports the inference that social capital discourages misbehavior through political accountability, because the correlation between voting patterns and social capital is only present where political institutions keep politicians accountable.

6 Further robustness checks

In this section we assess the robustness of the results to alternative indicators of social capital, replicating the baseline specifications using a composite measure of social capital instead of blood donations. In particular, we extract the first principal component from the following set of indicators used in the literature to measure social capital: the number of non-profit organizations per capita; the number of employees in non-profit organizations per capita; the average turnout in national elections, European elections, and referenda

during the 1990s (see Section 3 on the data sources).¹⁹ In Panel A of Table 14, we re-estimate equation (11) both without (first row) and with (second row) newspapers diffusion as an additional control variable. The estimated marginal effects capture the association of the composite index of social capital with RAP (first column), serious RAP (second column), and the absenteeism rate (third column). All of the estimates confirm a negative and statistically significant impact of social capital on political misbehavior.

In Panel B of Table 14, we re-estimate either equation (14) in the first and second column, or equation (15) in the third column, to assess whether the composite index of social capital has a positive impact on the electoral punishment of RAP, serious RAP, and absences. The reported coefficients are those of the interaction term between social capital and each political misbehavior ($\hat{\tau}$). In the first row, we do not control for the interaction between political misbehavior and newspapers diffusion (and the other district-specific covariates Z), while in the second row we do. Again, all of the estimates confirm the results we obtained for blood donations: The higher is social capital, the harsher is the electoral loss associated with our measures of political misbehavior.

7 Conclusions

In this paper, we have investigated the impact of civic attitudes on political accountability. In a simple theoretical model, a larger fraction of civic voters discourages moral hazard by political representatives. This result is consistent with the evidence. Using data on Italian members of Parliament in the postwar period, we have shown that political misbehavior—measured by both criminal prosecution and absenteeism in Parliament votes—is negatively correlated with the social capital of the district where politicians were elected. More importantly, the electoral punishment of political misbehavior is considerably more pronounced in districts with high social capital. We interpret this as evidence that civic attitudes on the part of voters are an important factor in keeping elected officials accountable for their actions.

Our findings can thus explain why political corruption and clientelism seem to be much more prevalent in countries and regions with low social capital. If voters fail to coordinate in punishing political misbehavior, their elected representatives face weaker incentives to

¹⁹The estimated first principal component ranges from -2.13 to 1.64, with an average value of -0.18 and a standard deviation of 0.91. Its correlation with blood donations is 0.62.

pursue social welfare. Moreover, political representatives are less likely to be selected on criteria of honesty and general competence. Our results also point to an interaction between social capital and institutions in keeping politicians accountable. Indeed, the negative correlation we detect between political misbehavior (or the electoral punishment of political misbehavior) and social capital is at work only for politicians elected either under open-list proportional representation or in majoritarian (single-member) districts, while it is not present under closed-list proportional representation, where the scope for holding politicians accountable is much more limited.

Finally, our empirical results are also consistent with an alternative interpretation: Political accountability fails where there is low social capital not because voters have the wrong value system, but because in such districts the political opponent is also corrupt (that is, voters have no alternative). This explanation cannot be entirely ruled out, but it is not very convincing because the pool of potential political candidates is large. Moreover, in such a situation, national political parties would have very strong incentives to place honest candidates precisely in the districts where they are most needed, and likewise individuals with a strong reputation for honesty would face sharp incentives to oppose corrupt or misbehaving politicians.

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Appendix I: Main offenses included in the measures of criminal prosecution (*RAP* and *serious RAP*)

List of serious offenses included in both the definition of *RAP* and *serious RAP*:

(1) corruption; (2) private interest in official acts or official duties; (3) tax evasion, tax dodging; (4) violation of the new laws on combating criminality, criminal conspiracy, confederation to commit a crime, racketeering organization; (5) trade fraud; (6) abuse, word of abuse; (7) forgery in public acts and public duties; (8) handling (receiving) stolen goods; (9) homicide, murder; (10) attempted domestic violence (brutality); violence or threat to public officer; (11) criminal damage; damage of public building; (12) defamation, insult, libel; false allegations; (13) bouncing a check; (14) embezzlement of public property or public funds.

List of other offenses included only in the definition of *RAP*:

(15) unlawful assembly; disturbance in an election meeting; (16) destruction or damage to bill-posting; unlawful bill-posting; (17) road-traffic offenses; (18) impediment, hindrance, or obstruction to free movement; (19) instigation to fascism; (20) bodily injury; (21) contempt (*oltraggio a pubblico ufficiale*); (22) publication or spreading false news; (23) (unlawful) interruption of public utility; (24) destruction of propaganda placards or notices; breach of the rules on electoral propaganda.

Appendix II: Nature and direction of self-selection bias

Using a potential-outcome framework, define $\Delta VOT_i(1)$ as the potential outcome of politician i in case he received a RAP, and $\Delta VOT_i(0)$ as the potential outcome in case he did not receive a RAP.²⁰ Conditional on the level of social capital of the district of election ($SC = k$, with $k = H, L$ and $H > L$), potential outcomes can be written as:

$$\Delta VOT_{ik}(1) = \mu_{1k} + U_{ik}(1)$$

$$\Delta VOT_{ik}(0) = \mu_{0k} + U_{ik}(0),$$

where $\mu_{1k} - \mu_{0k}$ captures the common electoral punishment for receiving a RAP in district k and $U_{ik}(1) - U_{ik}(0)$ is the idiosyncratic punishment of individual i in district k .

If we regress the observed outcome on the received RAP by OLS within every district (or we control for district fixed effects in a saturated model), the estimated coefficient provides a biased estimate of the average treatment effect on the treated in district k , which can be expressed as: $\tau_k = E[\Delta VOT_{ik}(1) - \Delta VOT_{ik}(0) | RAP = 1, SC = k]$. In particular, the mean selection bias is:

$$MSB_k = E[U_{ik}(0) | RAP = 1, SC = k] - E[U_{ik}(0) | RAP = 0, SC = k],$$

that is, the average idiosyncratic electoral outcome in the case of no treatment for politicians who end up receiving a RAP and politicians who do not receive it, respectively. A positive value of MSB_k means that, on average in district k , individuals with improved electoral prospects if they remained honest ($U_{ik}(0)$ high) are more likely to misbehave ($RAP = 1$) than individuals whose electoral prospects have worsened ($U_{ik}(0)$ low); in other words, misbehavior is more likely amongst those who can afford to lose votes because their electoral prospects are expected to improve. Conversely, $MSB_k < 0$ means that political misbehavior is more likely amongst those whose electoral prospects would have deteriorated even if they had remained honest. Note also that the idiosyncratic error term U_{ik} refers to *changes* in preference votes relative to the previous election, since we are taking first differences.

As we are interested in the comparison between τ_k in districts characterized by different levels of social capital, assuming that the idiosyncratic electoral outcomes of each politician are constant across time, we could remove the mean selection bias in each district by including politician fixed effects within every district (or by saturating the model with a full set of interactions between politician and district fixed effects).

If we cannot do that because of data restrictions, however, we can still predict the direction of the bias when comparing the estimated treated effects in districts with high

²⁰We summarize the main identification issues in the framework of the First Republic, i.e., with the log difference of preference votes as outcome variable and RAP as treatment of interest. The reasoning easily extends to the Second Republic framework, with reelection as outcome and absenteeism as treatment.

versus low social capital. In particular, the estimated difference between the electoral punishment/reward of RAP in areas with high versus low social capital is made up of both the true difference and the difference between the mean selection biases in the two areas:

$$\hat{\tau}_H - \hat{\tau}_L = (\tau_H - \tau_L) + (MSB_H - MSB_L)$$

Clearly, if MSB_k is the same in all districts k , or if it does not covary systematically with social capital, then our estimates are unbiased. Thus, we are only concerned by MSB that varies systematically with social capital. Given that we have taken first differences (i.e., as explained above, MSB refers to unobservable changes in electoral prospects between two consecutive elections), it is not obvious why there would be a specific correlation with time invariant features of the district.

If MSB covaries systematically with social capital, then we can estimate either a lower or an upper bound, depending on the patterns of correlations. Assume first that the true difference is negative, $(\tau_H - \tau_L) < 0$, meaning that the electoral punishment of RAP is higher (or the electoral reward is lower) in areas with more social capital. Then, as long as the mean selection bias is larger in districts with high social capital, $MSB_H > MSB_L$, the estimated difference in the electoral punishments is going to be a *lower bound* of the true difference in absolute value. In fact, we have either $(\tau_H - \tau_L) < 0 < (\hat{\tau}_H - \hat{\tau}_L)$ or $(\tau_H - \tau_L) < (\hat{\tau}_H - \hat{\tau}_L) < 0$. The latter is indeed our case, as $(\hat{\tau}_H - \hat{\tau}_L) < 0$ in the data.²¹

At the end of the day, to obtain a lower bound interpretation of our estimates, we need to assume that, where social capital is high, politicians with improved electoral prospects *without* RAP are more likely to self-select into RAP, compared to districts with low social capital: in other words, where the expected punishment is higher, only those who can afford the (electoral) price of receiving a RAP decide to misbehave. Of course, we would obtain an upper bound interpretation with the opposite assumption, namely that—where the expected punishment is higher—only those who are desperate and would end up not being reelected anyway decide to misbehave. We believe that the lower bound assumption is plausible in our context, where most incumbents effectively compete for reelection, although we cannot completely rule out the opposite hypothesis.

²¹Alternatively, if $(\tau_H - \tau_L) > 0$, the punishment of RAP would be higher (or the reward lower) in areas with less social capital. In this case, as long as $MSB_H > MSB_L$, the estimated difference would be an *upper bound* of the true difference: $(\hat{\tau}_H - \hat{\tau}_L) > (\tau_H - \tau_L) > 0$. This is not the case in our data, however.

Tables and Figures

Table 1: The two samples at a glance

Legislative term	Obs.
I (1948–1953)	549
II (1953–1958)	547
III (1958–1963)	579
IV (1963–1968)	594
V (1968–1972)	598
VI (1972–1976)	587
VII (1976–1979)	599
VIII (1979–1983)	596
IX (1983–1987)	599
X (1987–1992)	601
Total (“First Republic” sample)	5,849
XII (1994–1996)	618
XIII (1996–2001)	596
Total (“Second Republic” sample)	1,214

Notes. Non-missing observations across legislative terms since 1948. “*First Republic*” sample: House of Representatives only. “*Second Republic*” sample: House of Representatives and Senate; majoritarian members of Parliament only. The XI legislative term (1992–94) marks the transition from the First to the Second Republic, and it is dropped because members of Parliament were (re)elected under a different electoral system in the XII term. The XIV legislative term (2001–2006) is dropped because members of Parliament were (re)elected under a different electoral system in the XV term.

Table 2: Individual characteristics of members of Parliament – *First Republic*

	Mean	S.d.	Min	Max	Obs.
Male	0.93	0.25	0.00	1.00	5,849
Age	48.33	9.44	18.00	98.00	5,849
Years of schooling	15.24	5.30	0.00	21.00	5,849
Government appointment	0.16	0.36	0.00	1.00	5,849
Local experience	0.61	0.49	0.00	1.00	5,849
Freshman	0.38	0.49	0.00	1.00	5,849
Majority coalition	0.50	0.50	0.00	1.00	5,849
Migrant	0.21	0.41	0.00	1.00	5,849
Lawyer	0.16	0.37	0.00	1.00	5,849
Executive	0.04	0.20	0.00	1.00	5,849
Politician	0.17	0.37	0.00	1.00	5,849
Entrepreneur	0.03	0.16	0.00	1.00	5,849
Teacher	0.12	0.32	0.00	1.00	5,849
Physician	0.04	0.19	0.00	1.00	5,849
RAP	0.24	0.43	0.00	1.00	5,849
Serious RAP	0.12	0.32	0.00	1.00	5,849
Candidate	0.70	0.46	0.00	1.00	5,849
Reelected	0.54	0.50	0.00	1.00	5,849

Notes. All variables are dummies, except *Age* (in years) and *Years of schooling*. *Government appointment* includes ministers and vice-ministers. *Local experience* stands for previous government experience at the local level (e.g., mayor). *Freshman* means that the previous parliamentary tenure is zero. *Majority coalition* identifies the government coalition. *Migrant* identifies politicians elected in a province different from that of birth. Job dummies refer to the preelection occupation. *RAP* is equal to one if the politician receives a request for the removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see Appendix I). *Candidate* is equal to one if the member of Parliament stands for reelection in the next term. *Reelected* is equal to one if the member of Parliament wins the bid for reelection.

Table 3: Individual characteristics of members of Parliament – *Second Republic*

	Mean	S.d.	Min	Max	Obs.
Male	0.92	0.28	0.00	1.00	1,214
Married	0.77	0.42	0.00	1.00	1,214
No. of children	1.53	1.20	0.00	9.00	1,214
Age	49.50	9.44	27.00	84.00	1,214
Years of schooling	16.11	2.43	5.00	20.00	1,214
National politician	0.25	0.44	0.00	1.00	1,214
Government appointment	0.06	0.24	0.00	1.00	1,214
Parliament appointment	0.13	0.34	0.00	1.00	1,214
Local experience	0.54	0.50	0.00	1.00	1,214
Freshman	0.55	0.50	0.00	1.00	1,214
Majority coalition	0.58	0.49	0.00	1.00	1,214
Migrant	0.20	0.40	0.00	1.00	1,214
Lawyer	0.14	0.34	0.00	1.00	1,214
Executive	0.13	0.33	0.00	1.00	1,214
Politician	0.12	0.32	0.00	1.00	1,214
Entrepreneur	0.10	0.30	0.00	1.00	1,214
Teacher	0.10	0.30	0.00	1.00	1,214
Self-employed	0.10	0.30	0.00	1.00	1,214
Physician	0.10	0.29	0.00	1.00	1,214
Preelection income	0.12	0.35	0.00	11.32	1,214
Absenteeism rate	0.36	0.24	0.00	0.98	1,214
Reelected	0.50	0.50	0.00	1.00	1,214
Reelected same district	0.32	0.47	0.00	1.00	1,214

Notes. All variables are dummies, except *No. of children*, *Age* (in years), *Years of schooling*, and *Preelection income* (in million of Euros, 2004 prices). *National politician* stands for being a member of the party executive committee at the national level. *Government appointment* includes ministers and vice-ministers. *Parliament appointment* captures whether the politician is president or vice-president of the Parliament, or of a single committee. *Local experience* stands for previous government experience at the local level (e.g., mayor). *Freshman* means that the previous parliamentary tenure is zero. *Majority coalition* identifies the government coalition. *Migrant* identifies politicians elected in a province different from that of birth. Job dummies refer to the preelection occupation. *Preelection income* is the total gross income in the last year before being elected. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Reelected* and *Reelected same district* (with the latter referring to single-member districts in majoritarian elections) are dummies equal to one if the politician wins the bid for reelection. Majoritarian members of Parliament only.

Table 4: Social capital measure and other characteristics of Italian provinces

	Mean	S.d.	Min	Max	Blood	Income	Education	Newspapers
Blood donation	2.80	2.21	0.00	10.52	1.00			
Income	15.33	3.21	10.04	20.72	0.52	1.00		
Education	31.70	3.41	25.10	46.29	-0.32	0.06	1.00	
Newspapers	7.91	3.90	1.94	17.54	0.33	0.69	0.11	1.00

Notes. The left panel reports descriptive statistics of the variables; the right panel reports the correlation coefficients between them. *Blood donation* is the number of blood bags (about 16oz) every 100 inhabitants in 1995 (source: Guiso, Sapienza, and Zingales 2004). *Income* is per-capita income in 2003, measured in thousand of Euros (source: Istat). *Education* is the share of people over 19 with a high-school degree in 2003, expressed in percentage points (source: Istat). *Newspapers* is the diffusion of non-sport newspapers every 100 inhabitants in 2001–2002 (source: Cartocci 2007). Number of provinces: 92.

Table 5: The impact of social capital on malfeasance – *First Republic*

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: RAP						
Social capital of election	-0.017*** [0.004]	-0.010** [0.005]	-0.017** [0.007]			-0.027*** [0.008]
Social capital of birth				-0.013*** [0.005]	0.002 [0.010]	0.004 [0.011]
Newspapers		-0.008*** [0.003]				
Years of schooling	-0.001 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.004 [0.004]
Government appointment	-0.066*** [0.015]	-0.067*** [0.015]	-0.067*** [0.016]	-0.066*** [0.016]	-0.065*** [0.015]	-0.062* [0.034]
Local experience	0.019 [0.020]	0.020 [0.021]	0.019 [0.020]	0.017 [0.021]	0.021 [0.021]	-0.011 [0.029]
Freshman	-0.050*** [0.011]	-0.050*** [0.011]	-0.048*** [0.011]	-0.050*** [0.011]	-0.049*** [0.011]	-0.083*** [0.025]
Majority coalition	-0.099*** [0.016]	-0.100*** [0.016]	-0.097*** [0.016]	-0.096*** [0.016]	-0.099*** [0.017]	-0.126*** [0.032]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Region of birth dummies	No	No	Yes	No	No	No
District of election dummies	No	No	No	No	Yes	No
Obs.	5,849	5,849	5,849	5,849	5,849	1,217
Dependent variable: Serious RAP						
Social capital of election	-0.004*** [0.001]	-0.001 [0.001]	-0.003 [0.002]			-0.004 [0.003]
Social capital of birth				-0.003** [0.001]	-0.001 [0.003]	-0.001 [0.004]
Newspapers		-0.003*** [0.001]				
Years of schooling	0.000 [0.001]	-0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	-0.000 [0.001]	-0.001 [0.001]
Government appointment	-0.010* [0.006]	-0.010* [0.006]	-0.011* [0.005]	-0.010* [0.006]	-0.010* [0.006]	-0.001 [0.019]
Local experience	0.003 [0.007]	0.003 [0.007]	0.003 [0.007]	0.002 [0.007]	0.004 [0.007]	-0.006 [0.013]
Freshman	-0.007* [0.004]	-0.007* [0.004]	-0.007* [0.004]	-0.007* [0.004]	-0.007* [0.004]	-0.007 [0.011]
Majority coalition	-0.026*** [0.007]	-0.026*** [0.006]	-0.025*** [0.006]	-0.026*** [0.007]	-0.026*** [0.007]	-0.041** [0.017]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Region of birth dummies	No	No	Yes	No	No	No
District of election dummies	No	No	No	No	Yes	No
Obs.	5,849	5,849	5,849	5,849	5,849	1,217

Notes. Probit estimations; marginal effects reported. Estimation (6) is restricted to migrants (i.e., politicians elected in a region different from that of birth). Dependent variables: dummy equal to one if the politician received a request for the removal of parliamentary immunity because suspected of any criminal wrongdoing (*RAP*), or because suspected of a serious crime (*Serious RAP*). Social capital is measured as blood donation. *Other control variables* include: age, age squared, legislative term dummies, job dummies, district-specific income and education, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 6: The impact of social capital on the absenteeism rate of majoritarian members of Parliament – *Second Republic*

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Absenteeism rate					
Social capital of election	-0.022*** [0.005]	-0.024*** [0.004]	-0.029*** [0.006]			-0.019* [0.011]
Social capital of birth				-0.009* [0.005]	-0.000 [0.006]	0.008 [0.006]
Newspapers		-0.008** [0.003]				
Years of schooling	0.001 [0.003]	0.001 [0.003]	0.002 [0.003]	0.001 [0.004]	0.001 [0.003]	-0.026*** [0.007]
National politician	0.036** [0.015]	0.035** [0.015]	0.032** [0.014]	0.034** [0.014]	0.038*** [0.014]	0.101*** [0.032]
Government appointment	0.045* [0.023]	0.046** [0.023]	0.041 [0.025]	0.049* [0.026]	0.040 [0.028]	-0.039 [0.053]
Parliament appointment	0.046** [0.022]	0.049** [0.022]	0.047** [0.023]	0.049** [0.024]	0.055** [0.025]	0.014 [0.038]
Local experience	-0.012 [0.012]	-0.012 [0.012]	-0.015 [0.013]	-0.011 [0.014]	-0.019 [0.014]	-0.016 [0.028]
Freshman	-0.030* [0.015]	-0.031** [0.015]	-0.035** [0.015]	-0.028* [0.015]	-0.034** [0.014]	-0.017 [0.033]
Majority coalition	-0.161*** [0.014]	-0.162*** [0.014]	-0.167*** [0.015]	-0.160*** [0.014]	-0.169*** [0.014]	-0.193*** [0.032]
Preelection income	0.074*** [0.027]	0.075*** [0.028]	0.078*** [0.026]	0.076*** [0.020]	0.070*** [0.020]	0.064*** [0.012]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Province of birth dummies	No	No	Yes	No	No	No
Province of election dummies	No	No	No	No	Yes	No
Obs.	1,214	1,214	1,214	1,214	1,214	248

Notes. OLS estimations. Members of Parliament elected in the majoritarian tier of the mixed-member electoral system only. Estimation (6) is further restricted to migrants (i.e., politicians elected in a region different from that of birth). Dependent variable: absenteeism rate (i.e., percentage of votes missed without any legitimate reason during the term). Social capital is measured as blood donation. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, district-specific income and education, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 7: The impact of social capital on the absenteeism rate of proportional members of Parliament – *Second Republic*

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Absenteeism rate					
Social capital of election	-0.007 [0.006]	-0.010 [0.006]	-0.007 [0.008]			0.025 [0.021]
Social capital of birth				-0.006 [0.006]	-0.006 [0.006]	0.006 [0.012]
Newspapers		-0.003 [0.004]				
Years of schooling	-0.004 [0.005]	-0.004 [0.005]	-0.004 [0.006]	-0.004 [0.005]	-0.004 [0.005]	-0.003 [0.008]
National politician	0.011 [0.025]	0.011 [0.025]	0.014 [0.027]	0.010 [0.023]	0.010 [0.024]	0.001 [0.038]
Government appointment	0.061 [0.069]	0.061 [0.069]	0.059 [0.071]	0.063 [0.045]	0.064 [0.046]	0.023 [0.071]
Parliament appointment	0.027 [0.029]	0.027 [0.029]	0.019 [0.032]	0.026 [0.030]	0.028 [0.032]	-0.068 [0.058]
Local experience	-0.024 [0.018]	-0.024 [0.018]	-0.024 [0.018]	-0.021 [0.017]	-0.020 [0.019]	-0.013 [0.047]
Freshman	-0.029 [0.028]	-0.029 [0.028]	-0.034 [0.028]	-0.030 [0.029]	-0.029 [0.028]	-0.061 [0.044]
Majority coalition	-0.212*** [0.023]	-0.212*** [0.024]	-0.209*** [0.024]	-0.213*** [0.023]	-0.211*** [0.021]	-0.131*** [0.040]
Preelection income	0.084** [0.037]	0.084** [0.037]	0.083** [0.038]	0.086 [0.051]	0.084 [0.050]	0.042 [0.053]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Province of birth dummies	No	No	Yes	No	No	No
Province of election dummies	No	No	No	No	Yes	No
Obs.	595	595	595	595	595	163

Notes. OLS estimations. Members of Parliament elected in the proportional tier of the mixed-member electoral system only. Estimation (6) is further restricted to migrants (i.e., politicians elected in a region different from that of birth). Dependent variable: absenteeism rate (i.e., percentage of votes missed without any legitimate reason during the term). Social capital is measured as blood donation. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, district-specific income and education, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 8: Social capital and the electoral punishment of malfeasance (A) – *First Republic*

	(1)	(2)	(3)	(4)
Dependent variable: Log difference of votes				
RAP	-0.014 [0.033]	-0.148 [0.256]	-0.040 [0.059]	0.111 [0.517]
RAP × social capital	-0.015* [0.009]	-0.022** [0.011]	-0.009 [0.020]	0.005 [0.029]
Years of schooling	0.001 [0.002]	0.001 [0.002]	0.000 [0.000]	0.000 [0.000]
Government appointment	0.148*** [0.023]	0.149*** [0.023]	0.054 [0.034]	0.057* [0.034]
Local experience	0.006 [0.018]	0.005 [0.018]	0.000 [0.000]	0.000 [0.000]
Freshman	0.074*** [0.018]	0.075*** [0.018]	0.088*** [0.031]	0.087*** [0.031]
Majority coalition	0.028 [0.018]	0.030 [0.018]	-0.037 [0.064]	-0.040 [0.064]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
RAP × Z_j	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	3,913	3,913	3,913	3,913
Dependent variable: Log difference of votes				
Serious RAP	0.088** [0.039]	0.081 [0.397]	0.064 [0.069]	0.734 [0.579]
Serious RAP × social capital	-0.045*** [0.012]	-0.061*** [0.015]	-0.064*** [0.023]	-0.058* [0.033]
Years of schooling	0.001 [0.002]	0.002 [0.002]	0.000 [0.000]	0.000 [0.000]
Government appointment	0.152*** [0.023]	0.152*** [0.023]	0.052 [0.034]	0.056* [0.034]
Local experience	0.003 [0.017]	0.002 [0.017]	0.000 [0.000]	0.000 [0.000]
Freshman	0.076*** [0.018]	0.077*** [0.017]	0.089*** [0.030]	0.088*** [0.030]
Majority coalition	0.034* [0.019]	0.033* [0.019]	-0.036 [0.063]	-0.037 [0.063]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Serious RAP × Z_j	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	3,913	3,913	3,913	3,913

Notes. OLS estimations. Dependent variable: log difference of number of votes (between past and future elections); members of Parliament who run for reelection only. *RAP* is equal to one if the politician receives a request for the removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see Appendix I). *Other control variables* include: age, age squared, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). The district-specific characteristics Z_j include: income, education, and newspapers. Social capital is measured as blood donation. Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 9: Social capital and the electoral punishment of malfeasance (B) – *First Republic*

	(1)	(2)	(3)	(4)
	Above-mean social capital	Below-mean social capital	Above-mean social capital	Below-mean social capital
Dependent variable: Log difference of votes				
RAP	-0.108** [0.037]	-0.019 [0.025]	-0.116* [0.060]	-0.035 [0.044]
Years of schooling	0.002 [0.003]	-0.000 [0.002]	0.000 [0.000]	0.000 [0.000]
Government appointment	0.138*** [0.041]	0.151*** [0.030]	0.106* [0.058]	0.024 [0.042]
Local experience	-0.026 [0.026]	0.027 [0.024]	0.000 [0.000]	0.000 [0.000]
Freshman	0.083** [0.028]	0.064** [0.026]	0.087* [0.048]	0.072* [0.040]
Majority coalition	0.021 [0.037]	0.040 [0.024]	0.022 [0.089]	-0.148 [0.092]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	1,645	2,268	1,645	2,268
<i>Wald test p-value</i>	<i>0.025</i>		<i>0.226</i>	
Dependent variable: Log difference of votes				
Serious RAP	-0.139** [0.056]	0.042 [0.035]	-0.247*** [0.072]	-0.005 [0.052]
Years of schooling	0.002 [0.003]	-0.000 [0.002]	0.000 [0.000]	0.000 [0.000]
Government appointment	0.142*** [0.042]	0.154*** [0.029]	0.103* [0.057]	0.024 [0.042]
Local experience	-0.025 [0.027]	0.023 [0.023]	0.000 [0.000]	0.000 [0.000]
Freshman	0.085*** [0.027]	0.067** [0.026]	0.088* [0.048]	0.075* [0.040]
Majority coalition	0.028 [0.037]	0.045* [0.024]	0.018 [0.088]	-0.148 [0.092]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	1,645	2,268	1,645	2,268
<i>Wald test p-value</i>	<i>0.003</i>		<i>0.004</i>	

Notes. OLS estimations in different subsamples (districts with social capital above/below mean); social capital is measured as blood donation. Dependent variable: log difference of number of votes (between past and future elections); members of Parliament who run for reelection only. *RAP* is equal to one if the politician receives a request for the removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see Appendix I). *Other control variables* include: age, age squared, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). The *Wald test* evaluates whether the coefficient of the absenteeism rate is different in the two subsamples (above/below mean). Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 10: Social capital and the electoral punishment of the absenteeism rate of majoritarian members of Parliament (A) – *Second Republic*

	(1)	(2)	(3)	(4)
	Dependent variable: Reelected same district			
Absenteeism rate	0.066 [0.109]	0.297 [0.568]	-0.708* [0.382]	-3.037 [1.914]
Absenteeism rate \times social capital	-0.087** [0.035]	-0.117** [0.054]	0.107 [0.096]	0.086 [0.127]
Years of schooling	0.012 [0.008]	0.012 [0.008]	0.051 [0.057]	0.063 [0.058]
National politician	-0.013 [0.036]	-0.012 [0.036]	-0.267*** [0.095]	-0.262*** [0.096]
Government appointment	0.054 [0.067]	0.054 [0.067]	-0.020 [0.126]	-0.015 [0.128]
Parliament appointment	0.057 [0.047]	0.054 [0.047]	0.100 [0.089]	0.071 [0.092]
Local experience	0.098*** [0.031]	0.099*** [0.030]	0.184 [0.128]	0.197 [0.129]
Freshman	-0.032 [0.034]	-0.032 [0.034]	-0.089 [0.083]	-0.091 [0.084]
Majority coalition	-0.202*** [0.035]	-0.202*** [0.035]	-0.111** [0.055]	-0.098* [0.057]
Preelection income	-0.006 [0.032]	-0.006 [0.033]	-0.781 [0.571]	-0.751 [0.573]
Other control variables	Yes	Yes	Yes	Yes
Province of election dummies	Yes	Yes	Yes	Yes
Absenteeism rate $\times Z_j$	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	1,214	1,214	1,214	1,214

Notes. Probit estimations; marginal effects reported. Members of Parliament elected in the majoritarian tier of the mixed-member electoral system only. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same (majoritarian) district in the next term. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). The district-specific characteristics Z_j include: income, education, and newspapers. Social capital is measured as blood donation. Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 11: Social capital and the electoral punishment of the absenteeism rate of majoritarian members of Parliament (B) – *Second Republic*

	(1)	(2)	(3)	(4)
	Above-mean social capital	Below-mean social capital	Above-mean social capital	Below-mean social capital
Dependent variable: Reelected same district				
Absenteeism rate	-0.558*** [0.123]	0.131 [0.098]	-0.410 [0.588]	-0.669* [0.383]
Years of schooling	0.011 [0.012]	0.011 [0.010]	0.002 [0.138]	0.098 [0.068]
National politician	0.048 [0.043]	-0.101** [0.049]	-0.324* [0.164]	-0.258** [0.126]
Government appointment	0.106 [0.105]	0.053 [0.076]	0.053 [0.239]	-0.073 [0.155]
Parliament appointment	0.018 [0.071]	0.142* [0.075]	0.081 [0.140]	0.105 [0.124]
Local experience	0.049 [0.054]	0.129*** [0.048]	0.348 [0.226]	0.147 [0.165]
Freshman	0.005 [0.051]	-0.104** [0.052]	0.009 [0.152]	-0.116 [0.113]
Majority coalition	-0.387*** [0.058]	-0.045 [0.067]	-0.211* [0.120]	-0.094 [0.067]
Preelection income	0.415*** [0.118]	-0.108 [0.220]	1.145 [1.418]	-1.197* [0.636]
Other control variables	Yes	Yes	Yes	Yes
Province of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	616	598	616	598
<i>Wald test p-value</i>	<i>0.014</i>		<i>0.205</i>	

Notes. Probit estimations in different subsamples (provinces with social capital above/below mean); social capital is measured as blood donation; marginal effects reported. Members of Parliament elected in the majoritarian tier of the mixed-member electoral system only. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same (majoritarian) district in the next term. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the province of election level are in brackets. The *Wald test* evaluates whether the coefficient of the absenteeism rate is different in the two subsamples (above/below mean). Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 12: Social capital and the electoral punishment of the absenteeism rate of proportional members of Parliament (A) – *Second Republic*

	(1)	(2)	(3)	(4)
	Dependent variable: Reelected same district			
Absenteeism rate	0.411** [0.167]	-0.796 [1.506]	0.537 [0.369]	-2.061 [2.989]
Absenteeism rate \times social capital	-0.030 [0.045]	-0.045 [0.093]	-0.141 [0.107]	-0.299 [0.237]
Years of schooling	0.013 [0.011]	0.013 [0.011]	0.158 [0.113]	0.137 [0.124]
National politician	0.119** [0.049]	0.117** [0.049]	0.091 [0.142]	0.081 [0.154]
Government appointment	0.029 [0.105]	0.022 [0.105]	-0.138 [0.161]	-0.111 [0.173]
Parliament appointment	0.019 [0.068]	0.023 [0.068]	-0.270* [0.151]	-0.218 [0.170]
Local experience	0.023 [0.049]	0.026 [0.049]	-0.694 [0.460]	-0.717 [0.466]
Freshman	-0.066 [0.049]	-0.067 [0.049]	0.077 [0.148]	0.089 [0.153]
Majority coalition	0.080 [0.054]	0.080 [0.055]	0.056 [0.099]	0.062 [0.103]
Preelection income	0.325** [0.158]	0.328** [0.160]	-0.200 [0.246]	-0.225 [0.251]
Other control variables	Yes	Yes	Yes	Yes
Province of election dummies	Yes	Yes	Yes	Yes
Absenteeism rate $\times Z_j$	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	595	595	595	595

Notes. Probit estimations; marginal effects reported. Members of Parliament elected in the proportional tier of the mixed-member electoral system only. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same (majoritarian) district in the next term. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). The district-specific characteristics Z_j include: income, education, and newspapers. Social capital is measured as blood donation. Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 13: Social capital and the electoral punishment of the absenteeism rate of proportional members of Parliament (B) – *Second Republic*

	(1)	(2)	(3)	(4)
	Above-mean social capital	Below-mean social capital	Above-mean social capital	Below-mean social capital
Dependent variable: Reelected same district				
Absenteeism rate	0.314*** [0.102]	0.428*** [0.104]	0.339 [0.361]	0.016 [0.597]
Years of schooling	0.015** [0.007]	0.018 [0.015]	0.237 [0.171]	0.249 [0.268]
National politician	0.223*** [0.038]	-0.025 [0.067]	0.180 [0.186]	-0.109 [0.273]
Government appointment	0.255*** [0.077]	-0.206 [0.217]	-0.050 [0.200]	-0.033 [0.392]
Parliament appointment	0.033 [0.088]	0.000 [0.062]	-0.405* [0.208]	0.583 [0.434]
Local experience	0.038 [0.055]	0.015 [0.100]	0.000 [0.000]	-0.436 [0.751]
Freshman	-0.070 [0.049]	-0.067 [0.058]	-0.114 [0.206]	-0.293 [0.400]
Majority coalition	0.066 [0.058]	0.133 [0.133]	0.107 [0.122]	0.419 [0.279]
Preelection income	0.387** [0.157]	0.169 [0.232]	-3.836 [2.418]	-8.194** [3.437]
Other control variables	Yes	Yes	Yes	Yes
Province of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	310	285	310	285
<i>Wald test p-value</i>	<i>0.958</i>		<i>0.690</i>	

Notes. Probit estimations in different subsamples (provinces with social capital above/below mean); social capital is measured as blood donation; marginal effects reported. Members of Parliament elected in the proportional tier of the mixed-member electoral system only. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same (majoritarian) district in the next term. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the province of election level are in brackets. The *Wald test* evaluates whether the coefficient of the absenteeism rate is different in the two subsamples (above/below mean). Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table 14: Robustness check, alternative measures of social capital

	(1)	(2)	(3)
<u>Panel A: The impact of social capital on misbehavior</u>			
	Dependent variable: RAP	Dependent variable: Serious RAP	Dependent variable: Absenteeism rate
Baseline effect	-0.045*** [0.005]	-0.012*** [0.003]	-0.064*** [0.020]
Effect controlling for newspapers	-0.036*** [0.014]	-0.008** [0.004]	-0.060*** [0.020]
Obs.	5,849	5,849	1,214

Panel B: Social capital and the electoral punishment of misbehavior

	Dependent variable: Log difference of votes	Dependent variable: Log difference of votes	Dependent variable: Reelected same district
Baseline effect	-0.019 [0.016]	-0.072** [0.026]	-0.181** [0.080]
Effect controlling for newspapers	-0.053** [0.025]	-0.141*** [0.040]	-0.315** [0.135]
Obs.	3,913	3,913	1,214

Notes. Social capital is measured as the principal component of: non-profit organizations per capita in 2001 (source: Istat); non-profit employees per capita in 2001 (source: Istat); electoral participation in the 2000s (source: Cartocci 2007). Column (1) refers to the *First Republic* and uses RAP as a measure of political misbehavior; column (2) refers to the *First Republic* and uses serious RAP as a measure of political misbehavior; column (3) refers to the *Second Republic* and uses the absenteeism rate as a measure of political misbehavior. *RAP* is equal to one if the politician receives a request for the removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see Appendix I). *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. Panel A: marginal effects of the social capital index in estimations with political misbehavior as dependent variable. Columns (1) and (2): Probit estimations; column (3): OLS estimation. In addition to newspapers diffusion (second row only), control variables include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands). Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***. Panel B: coefficients of the interaction term *Social capital* \times *political misbehavior* in estimation with the log difference of preference votes—columns (1) and (2)—or reelection in the same district—column (3)—as dependent variables. In addition to the interaction between political misbehavior and newspapers diffusion (second row only), control variables include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands), and the interactions between political misbehavior and district-specific income and education. Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Figure 1: Geographical distribution of social capital and malfeasance – *First Republic*

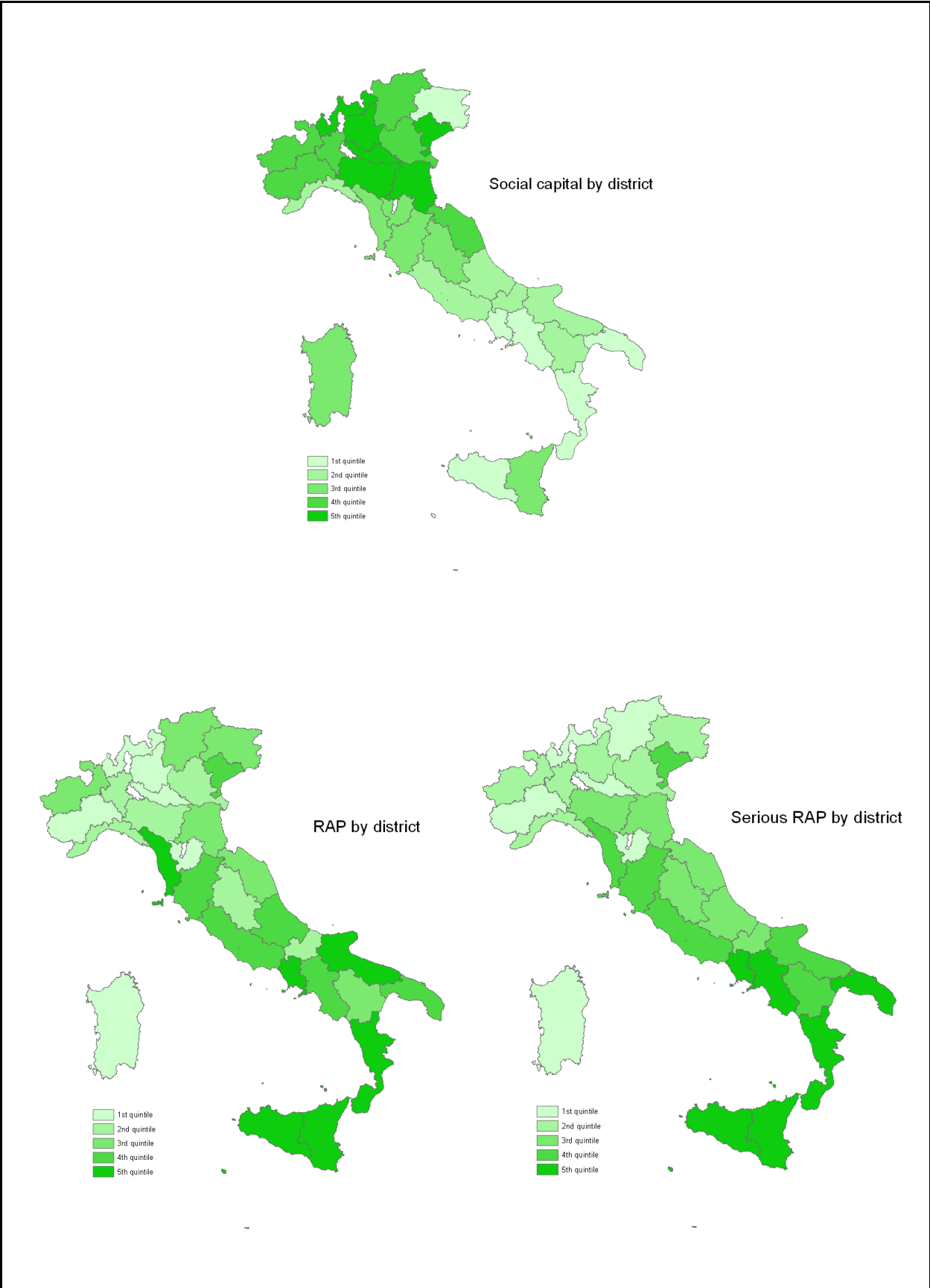


Figure 2: Geographical distribution of social capital and absences – *Second Republic*

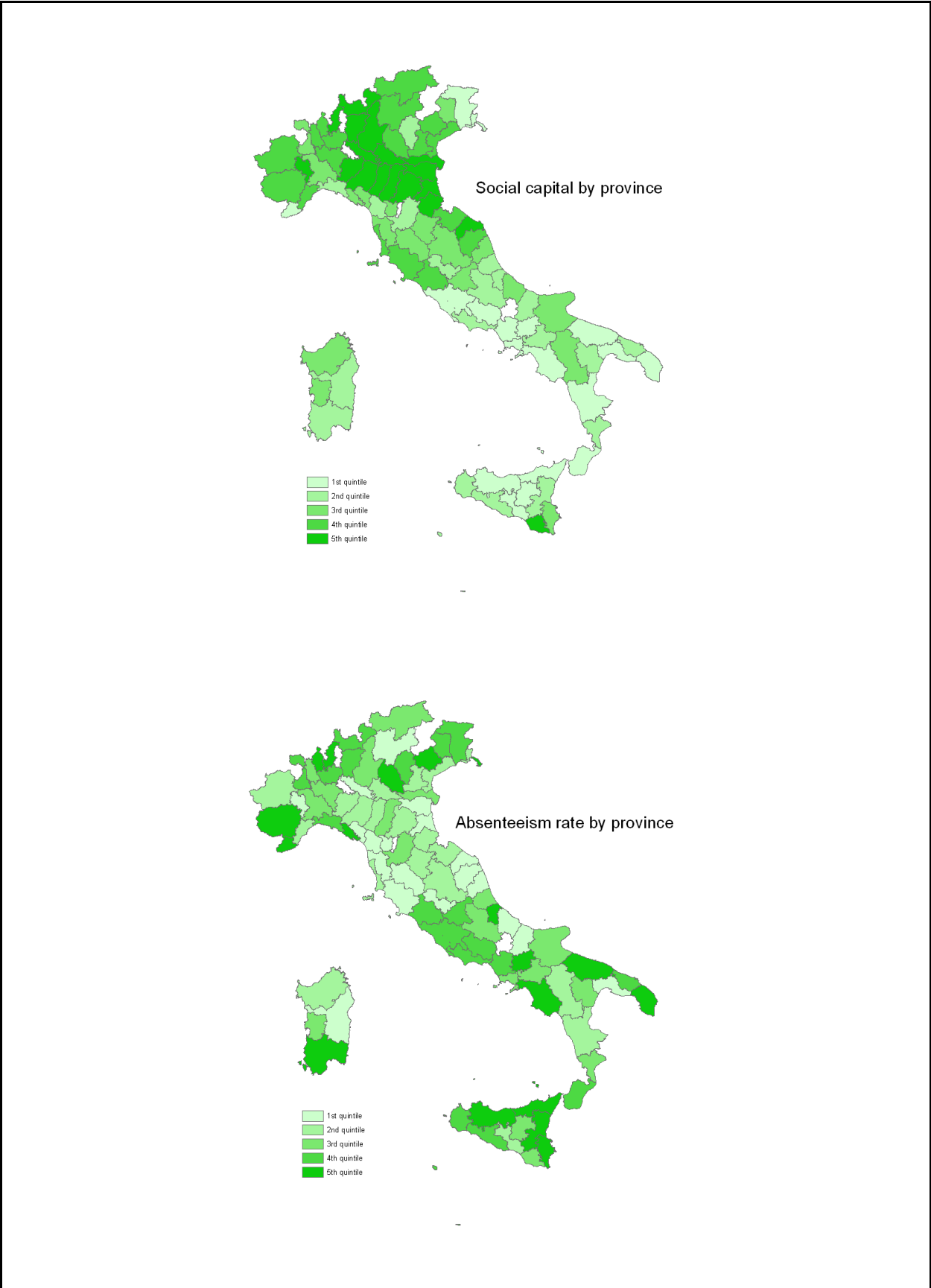
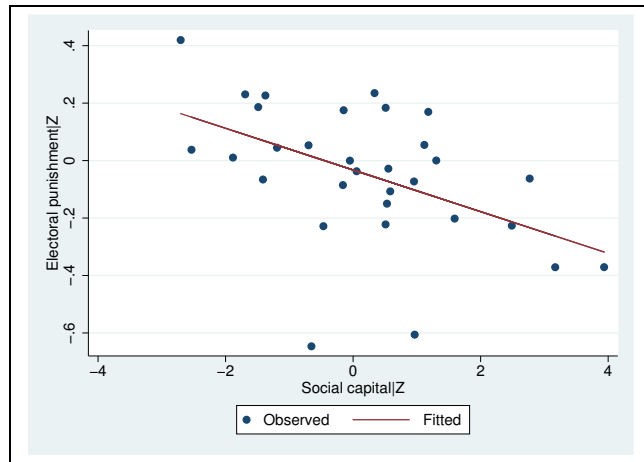
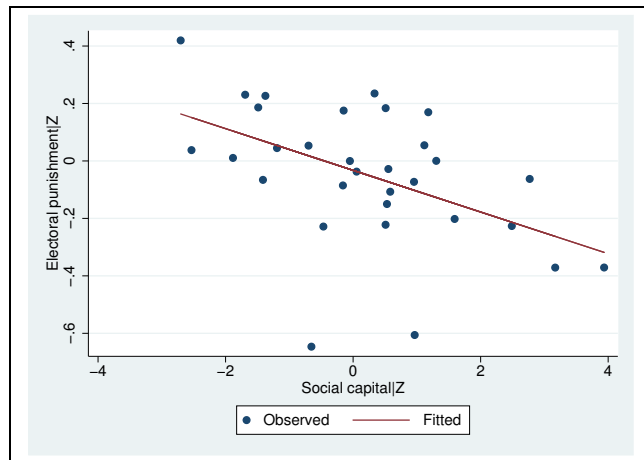


Figure 3: Social capital and the electoral punishment of serious RAP



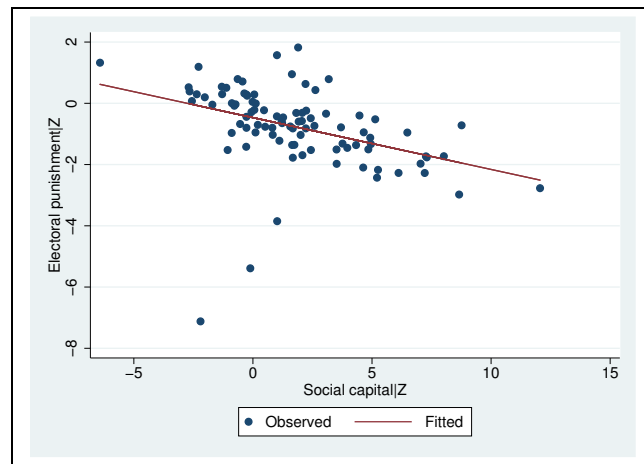
Notes. *Electoral punishment* is the district-specific effect of receiving a RAP for serious crimes on the log difference of future versus past votes. *Social capital* is measured as the number of blood bags every 100 inhabitants. The district-specific characteristics Z_j include: income, education, and newspapers. The slope coefficient is equal to -0.073 (p-value: 0.000).

Figure 4: Social capital and the electoral punishment of serious RAP



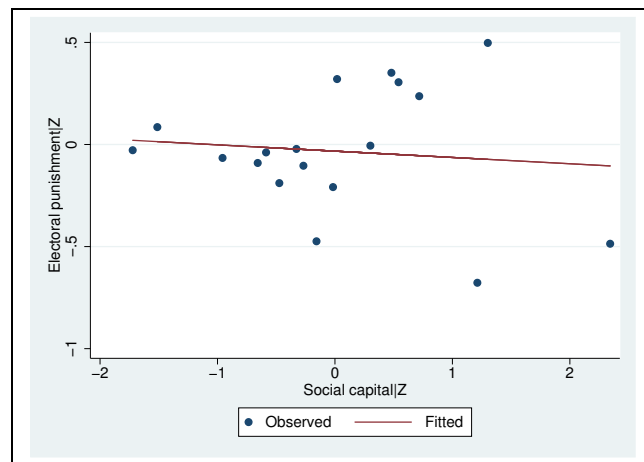
Notes. *Electoral punishment* is the district-specific effect of receiving a RAP for serious crimes on the log difference of future versus past votes. *Social capital* is measured as the number of blood bags every 100 inhabitants. The district-specific characteristics Z_j include: income, education, and newspapers. The slope coefficient is equal to -0.073 (p-value: 0.000).

Figure 5: Social capital and electoral punishment for majoritarian politicians



Notes. *Electoral punishment* is the province-specific effect of the absenteeism rate on reelection (majoritarian members of Parliament only). *Social capital* is measured as the number of blood bags every 100 inhabitants. The district-specific characteristics Z_j include: income, education, and newspapers. The slope coefficient is equal to -0.169 (p-value: 0.000).

Figure 6: Social capital and electoral punishment for proportional politicians



Notes. *Electoral punishment* is the region-specific effect of the absenteeism rate on reelection (proportional members of Parliament only). *Social capital* is measured as the number of blood bags every 100 inhabitants. The district-specific characteristics Z_j include: income, education, and newspapers. The slope coefficient is equal to -0.031 (p-value: 0.729).

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