Social Capital and Political Accountability

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Abstract

We 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 values and beliefs that foster cooperation are more likely to vote based on criteria of social welfare rather than narrow personal interest. We frame this intuition into a simple model of political agency and take it to the data using information on the criminal prosecutions and absenteeism rates of Italian members of Parliament. Empirical evidence shows that the electoral punishment of these misbehaviors is considerably larger in districts with higher social capital.

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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)

Building on the work of Banfield (1958) and Putnam (1993), several economists have argued that social capital is an important determinant of economic development and of the functioning of institutions.[1] But what is the mechanism through which this occurs? And what does social capital stand for? Despite a large literature, these questions remain largely unanswered. We 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 solidarity and respect for others are more likely to hold politicians accountable to high standards of behavior, and are less tolerant of moral hazard in 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." We introduce this notion 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 individual or group-specific welfare. We then show that 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 punish a corrupt or lazy politician even if they receive targeted or clientelistic benefits, whereas uncivic voters reward clientelistic benefits even if they come from a corrupt or lazy politician. This difference in behavior occurs because punishing a corrupt politician is not incentive compatible for uncivic voters in a Nash equilibrium where groups do not cooperate.

[1]For instance, 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 2010; Guiso, Sapienza, and Zingales 2008; Algan and Cahuc 2010), financial development (Guiso, Sapienza, and Zingales 2004), indicators of good government (Putnam 1993; La Porta et al. 1997; Tabellini 2008; Aghion et al. 2010), work effort (Ichino and Maggi 2000), fertility (Fernandez and Fogli 2009), and higher optimal provision of mandated benefits (Givati and Troiano 2012).

Social capital is therefore a tool to sustain implicit cooperation between voters. The larger the set of voters who cooperate, the smaller the equilibrium rents grabbed by the incumbent.[2]

To empirically test these implications, we exploit data on the behavior of Italian voters and political representatives in the postwar period. Italy is an ideal setting to study these questions, because within Italy there are large differences in social capital and other related cultural traits, which can be traced back to distant local political history (see Guiso, Sapienza and Zingales 2008). We compare the average behavior of voters and representatives in different electoral districts. Our main indicator of social capital is average per-capita blood donations in the Italian provinces, but the results are robust to alternative measures. We rely on two indicators of misbehavior of incumbents in national elections: the first is represented by prosecutors' requests to proceed with a criminal investigation against a member of Parliament (*Richiesta di Autorizzazione a Procedere*, called RAP from here on); the second is the absenteeism rate in electronic votes by members of Parliament over the legislative term.

According to both criminal prosecutions and absences in Parliament, 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. In the proportional system in place before 1994, receiving a RAP for any type of wrongdoing reduced individual preference votes by about 9% in districts with above-median social capital, while it had no impact in the others. Receiving a RAP for serious crimes reduced individual preference votes by about 21%. In the majoritarian (first-past-the post) system in place after 1994, an increase of a standard deviation in the absenteeism rate reduced the reelection probability by 11.8 percentage points (about 31%) in provinces with above-median social capital, while it had a slightly positive 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, urbanization rate, and newspapers diffusion), as well as province of election and politician fixed effects in most specifications.[3]

The theory also implies that social capital encourages the provision of public good rather than clientelistic benefits. To empirically investigate this implication, we rely on an indirect proxy for particularistic, as opposed to general-interest, legislative activities, namely the number of proposed bills (over the legislative term) targeted to a specific area or entity. Here the

[2]We 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 when individuals rely more on the family as a provider of services, civic engagement and political participation are lower. Casaburi and Troiano (2012) show that fighting tax evasion is electorally rewarded only in high social capital areas.

[3]On the link between education and social capital, see Goldin and Katz (1999) and Glaeser et al. (2007).

evidence is less robust, but the data shows a negative and significant correlation between social capital and the amount of particularistic activities initiated by elected officials.

A few empirical studies have asked whether voters punish political corruption or other misbehaviors by their elected representatives. Peters and Welch (1980) tackled this issue by evaluating the impact of corruption charges on the reelection prospects of US representatives in 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. 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. A contribution closely related to ours is Chang, Golden, and Hill (2010), who study Italy 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. All of these previous results are consistent with ours. These papers estimate the average effect of political misbehavior on election outcomes, however, and do not ask whether the election outcomes differ by electoral districts based on social capital, information, or other observable voters' features. Additionally, the findings of our paper are consistent with those of Djankov et al. (2010), who find results according to which financial and conflict disclosure might be a significant ingredient of a broader system of political accountability

The outline of the paper is as follows. Section II introduces a model of political accountability where voters are heterogeneous in civic attitudes. Section III describes the data. Section IV presents the empirical results on how social capital influences political misbehavior. Section V investigates how social capital influences election outcomes. Section VI concludes. The Online Appendix contains additional data details and robustness checks.

I Theory

A 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 regions of voters indexed by J, each with a population size of unity. Voters in region 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 residents of region 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. 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 region, 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 region-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 region—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 citizens 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, which 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 aggregate welfare.

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

criterion, namely to set $g = g^*$, where:

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

B Equilibrium under civic majority

Consider first the case in which civic voters are a majority ($\sigma \geq 1/2$). To be reelected the incumbent must please civic voters, who in turn only care about aggregate welfare. Given linear utility and lump sum taxes, aggregate welfare only depends on g and r, and we can neglect transfers $\left\{f^J\right\}$. Hence the equilibrium is the same as in the version of this model with rational and egoistic voters, studied by Persson and Tabellini (2000) under the constraint that $f^J = 0$ for all J. As shown by these authors, the optimal voting rule leaves the incumbent indifferent between two strategies: pleasing the voters 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:

$$r^C = Max\left[0, Ny - R\right], \tag{4}$$

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 provision are then set by the incumbent residually to please civic voters. This entails maximizing social welfare, subject to the constraint that rents must be r^C. Suppose that foregoing r^C leaves sufficient revenues for optimal public good provision, specifically

$$g^* \leq R, \tag{5}$$

where g^* is the Samuelson optimum defined by (3). Then the equilibrium policy is $g^C = g^*$ and $\tau^C = (g^C + r^C)/N$.

C 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. To see this, suppose that all voters, civic and uncivic, demand the same reservation utility ϖ^C corresponding to the equilibrium described in the previous subsection. 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 room to do this and strictly increase rents for himself. But this deviation cannot be an equilibrium either, because the uncivic voters in the regions 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 region 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 in each region. Thus, the reelection constraint can be written as

$$y - \tau + f^J + H(g) \geq \varpi^J, \qquad \text{for } J = 1, 2, ..., M, \tag{6}$$

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

$$M = N/2\sigma. \tag{7}$$

The incumbent thus maximizes rents, subject to the government budget constraint (1), to non-negativity constraints on $\left\{f^J\right\}$ and r, to $\tau \leq y$, and to (6)–(7). 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):[4]

$$\begin{aligned} \tau^U &= y \\ NH_g(g^U) &= 2\sigma \\ r^U &= Ny - g^U. \end{aligned} \tag{8}$$

Furthermore, since in equilibrium uncivic voters in all regions 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.

[4]Omitting 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 (6). Solving this optimization problem implies $\lambda^J = 1$ for $J = 1, 2..M$, and after some transformations the first order conditions imply (8).

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 (8) with the equilibrium described above, where civic voters are a majority, it is easy to see that here all voters are worse off, since $r^C < r^U$, $g^C > g^U$, $\tau^C < \tau^U$. Intuitively, the incumbent adopts a divide-and-rule strategy, and exploits the conflict of interest amongst uncivic voters to his own benefit. At the same time, the opponent cannot promise that he will not play the same disruptive game, which leaves all voters at the mercy of the incumbent. Moreover, as the fraction σ of civic voters increases (while remaining 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.*

This can be seen immediately by (8). The intuition is that a larger fraction σ of civic voters increases M—see (7). That is, to please a majority of uncivic voters, the incumbent must seek the support of a larger number of regions. 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 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.[5]

Finally, note that in this equilibrium civic voters are not pivotal. Hence 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 corresponding to the equilibrium in the previous subsection. 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 are civic attitudes, the higher is the electoral punishment for the larger rents under uncivic majority.

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 goods increase, and the vote share of 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

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

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. Finally, we also investigate whether a larger fraction of civic voters in the region decreases the frequency of legislative initiatives targeted towards local constituencies. Although in equilibrium $f^J = 0$ for all J, the incumbent exploits to his advantage the out-of-equilibrium threat of targeting transfers f^J to a subset of regions. The favored regions (out of equilibrium) are those with a smaller fraction of civic voters, since only the uncivic voters would reward targeted benefits. In the empirical analysis, we investigate this out-of-equilibrium prediction. Specifically, we ask whether incumbents elected in districts with a larger fraction of civic voters are less likely to be engaged in particularistic activities, and whether they are less likely to be rewarded by voters for such activities.

II Institutions and 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 and the main measures of political (mis)behavior we use.

A The First Republic sample

The first sample 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 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 5,755 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 the First Republic sample, we measure political outcomes by the difference in preference votes received by the incumbent between two consecutive elections (expressed in logs). Clearly,

[6]The XI 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 rule. Therefore, as we will focus on the change in the electoral outcome of incumbents rerunning for office (see Section IV), we need terms over which the electoral rule does not vary. In the part of the analysis not based on reelection (see Section III), results are not sensitive to the exclusion of the XI term.

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 controlling for district magnitude: the number of personal votes normalized by the 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.

Throughout this period, elected representatives enjoyed immunity from criminal prosecution. Immunity could be waived 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 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 cases of RAP 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 (which we call "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

[7]Parliamentary immunity and the RAP procedure were abrogated in 1993 by the XI legislature; this is an additional reason why we drop this legislature from our baseline sample for the First Republic.

[8]Many 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 received (available upon request).

[9]In the Online Appendix Section A, we give details on the exact criminal offenses included in both measures. In the Online Appendix Section B, we also provide robustness checks on a third measure: "minor RAP," made up of all the offenses included in RAP but not in serious RAP.

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

government coalition were more likely to be charged afterwards.[11] In our analysis, we always control for the partisan identity of politicians in examining the impact of a RAP.

Table 1 shows that 23% of the representatives in our sample received at least one RAP; more than half of them (14% of the sample) for serious crimes. In the Online Appendix Figure A1, 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. Clearly, representatives elected in Southern districts are more likely to receive both types of criminal prosecutions, and these regional differences are statistically significant. In Table 2, we report descriptive statistics for the other individual characteristics included in the dataset.

B The Second Republic sample

The second sample for the so-called "Second Republic"refers to legislatures XII and XIII, corresponding to the period 1994–2001. For this period, we observe both members of the House of Representatives and of the Senate, ending up with a total of 1,465 observations. Following the 1993 electoral reform, this sample has a mixed electoral system: about 75% of both the House and the Senate were elected in single-member districts under plurality rule (that is, a first-past-the-post system electing the winning candidate in each district); the remaining 25% were elected under proportional representation without individual preference votes. We exclude the XIV legislature (2001-2006), because in 2005 there was yet another electoral reform reintroducing proportional representation. Although this time there was no major shock to the party system, because of the electoral reform the main political outcome of interest cannot be calculated for members of Parliament elected in the XIV term.

In this second sample, we measure political outcomes as a dummy variable that equals one if the incumbent is reelected in the *same electoral district*, and zero otherwise. As explained below, we also keep track of the electoral system (majoritarian or proportional) under which each incumbent is reelected. 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 it is in the same or in another district. Table 3 shows that 50% of members of Parliament were reelected, 34% in the same district. There, we also report the reelection rates separately for majoritarian and proportional politicians. Although their overall reelection rate is similar, majoritarian politicians tend to move more geographically, as they are reelected less often in the same district than their proportional colleagues (also because proportional districts are considerably larger).

[11] Throughout 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.

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 collected by Gagliarducci, Nannicini, and Naticchioni (2010, 2011). Absenteeism is clearly a less 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 38%. In the Online Appendix Figure A2, 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 is 38% in the North, 36% in the Center, and 40% in the South.

Table 3 also shows that, on average, proportional politicians make significantly more absences than their majoritarian colleagues. Gagliarducci, Nannicini, and Naticchioni (2011) show that this result is confirmed in a close-election regression discontinuity setup, where being elected in the majoritarian tier, as opposed to the proportional tier, increases accountability and reduces the absenteeism rate.[12] As a result, when we use the Second Republic data, we devote particular attention to the electoral rule as an interaction channel of the main effects, in order to explore potential complementarities between institutions and social capital.

In the Second Republic, we can also construct a measure of the propensity of each legislator to engage in initiatives targeted to local (as opposed to general) constituencies. In particular, we observe the number and characteristics of the bills proposed by each member of Parliament as main sponsor. The characteristics are defined by the keywords assigned to each bill by the Congressional Library (*Biblioteca della Camera dei Deputati*) using its official classification system (called *TESEO*). Such keywords include 9,602 geographical places (such as regions, provinces, or towns) and specific entities (such as museums, public agencies, or private organizations). We use the number of bills targeted to the above places and entities as a proxy particularistic initiatives (the analogue of targeted transfers f^J in the model). With this variable we seek to capture (albeit imperfectly) the tradeoff that each legislator faces between addressing narrower versus broader interests. As shown in Table 3, the average number of particularistic bills amounts to 1.55, ranging from a minimum of zero to a maximum of 28. Proportional politicians present a significantly higher number of targeted bills than their majoritarian colleagues.

[12]Persson and Tabellini (2000) study a theoretical model based on career concerns, which exactly predicts accountability to be stronger under the majoritarian system than under proportional representation. Persson, Tabellini, and Trebbi (2003) show that this prediction is also confirmed by cross-country data.

For both samples (First and Second Republic), as said, 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, education and preelection income. 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 later 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. Some variables are available only in the second sample.

C Social capital and other characteristics of Italian provinces

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, for the majoritarian tier, 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. In the proportional tier, instead, there are 26 districts in the House and 21 in the Senate, each of them consisting of more than one province. The data on social capital and other district-specific covariates are measured 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.

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 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 the Online Appendix Figure A1 and A2 (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.[13]

To perform 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 also Guiso, Sapienza, and Zingales 2008), 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). As shown in the Online Appendix Section B (where we replicate all baseline estimations using the first principal component of these measures), all the results discussed below for blood donation are robust to this test.

As additional control variables at the district level, we also collected data on per-capita income in 2003, the percentage of the over-19 population with a high school degree in 2003, and the urbanization rate in 2001 (measured as the share of population living in cities above 15,000 inhabitants).[14] 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. Overall, we have non-missing data for 93 Italian provinces. Table 4 displays summary statistics and correlation coefficients for blood donation, per-capita income, education, newspapers diffusion, and urbanization rate 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 and urbanization at the province level.

III Social capital and political misbehavior

This section investigates the link between political misbehavior (r) and social capital (σ). By Proposition 1 in the theory, more social capital should discourage political abuse through voters' behavior. This is not the only way in which social capital might influence political abuse, however, since social capital might be "embedded" in the representatives themselves. 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. As an additional test, we also provide some evidence on the link between social capital and targeted benefits (f^J), as opposed to public good provision

[13]Note that the estimates discussed below exploit this within-region variation in social capital, as we always control for macro-area dummies in our specifications.

[14]All results are robust to the use of different cutoffs (e.g., 30,000 or 50,000) for the urbanization rate.

(g), although this is far from conclusive because of the data limitations discussed above, and because we are investigating an out-of-equilibrium implication of the theory.

In our baseline regression, the dependent variable is political (mis)behavior by political incumbents, and the regressor of interest is social capital:

$$Y_{ijt} = \delta_t + \tau SC_j + \mathbf{X}'_{ijt}\beta + \mathbf{Z}'_j\alpha + \epsilon_{ijt}, \tag{9}$$

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, the absenteeism rate, or the number of targeted bills, all referred to 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 $\mathbf{X}$), and of district-specific variables listed in Table 4 (the vector $\mathbf{Z}$). In addition, the vector $\mathbf{X}$ includes a set of job dummies (referring to the preelection occupation of the members of Parliament), and the vector $\mathbf{Z}$ includes macro-area dummies (North-West, North-East, Center, South, Islands). Estimation is by Probit when the dependent variable is binary, or by OLS when it is discrete.[15]

Equation (9) 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, by discouraging moral hazard by the incumbent or indirectly, by sorting incumbents who are more likely to misbehave into areas with low social capital. In our case, however, the self-selection of politicians is a component of the effect we want to identify. Nevertheless, in some specifications, to further control for politicians' social capital, we exploit the politicians' place of birth (and the associated social capital) by including place of birth dummies in the vector $\mathbf{X}$.[16]

A Criminal prosecutions

Table 5 reports the estimates when the dependent variable is the binary variable RAP (Probit marginal effects are reported). The first three columns measure RAP by the more comprehensive definition, while the last three columns refer to serious crimes.

Column (1) and (4) refer to the most parsimonious specification, which includes however income per capita, education, and urbanization in the district, as well as dummy variables for five macro-regions (North-West, North-East, Center, South, Islands). Hence, the estimated co-

[15] As for the RAP measures, results are robust to the estimation of a linear probability model (available upon request). As the absenteeism rate is bounded between 0 and 1, we also estimated equation (9) with the GLM estimator by Papke and Wooldridge (1996); results are almost identical (also available upon request).

[16] In principle we could also estimate (9) with individual fixed effects, drawing inference from *movers*, 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.

efficient of interest only reflects variation 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 column (1), an increase in social capital equal to its standard deviation would reduce the incidence of receiving a RAP by about 7.3%, while according to column (4) it would reduce 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 9.5%, 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 31.3%, and serious RAP by 30%.

Columns (2) and (5) add newspapers circulation in the district as regressor. Its estimated coefficient is always statistically significant in both columns. The estimated coefficient of social capital shrinks, and loses statistical significance. This might either suggest that a big part of the effect of social capital in the district of election reflects the channel of information, or that we are controlling for too many variables because newspapers diffusion could be interpreted as another proxy for social capital (e.g., see Cartocci 2007). Interestingly, when using the alternative measure of social capital discussed in Section II instead of blood donations, the negative correlation between social capital and criminal prosecutions is strongly robust to the inclusion of newspapers diffusion as regressor (see the Online Appendix Table A1).[17]

Columns (3) and (6) add to the baseline specification a dummy variable for the region of birth.[18] The estimated coefficient of social capital does not change (or even slightly increases), but it loses statistical significance for serious RAP. The accuracy of the estimates, however, might be reduced from the fact that most politicians are elected in the region where they are born, shrinking the variation in social capital once we control for the region of birth. Keeping this caveat in mind, the above estimates suggest that social capital where elected plays an important role, irrespective of the place of birth. And this result is again reinforced when using our alternative measure of social capital, see the Online Appendix Table A1. Both this result and the relevance of newspaper diffusion suggest that the effect of social capital 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 induced 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 pros-

[17] On the link between the quality of information and political accountability, see Banerjee et al. (2011).

[18] Unfortunately, the First Republic sample does not contain information on the province of birth.

ecution 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. Because of this concern, we now turn to absences, a misbehavior that hurts the voters but does not correspond to any criminal wrongdoing.

B Absenteeism rate and targeted bills

Table 6 has the same structure of Table 5, except that in the Second Republic we have both a (single) measure of political misbehavior (the absenteeism rate) and a proxy for clientelistic, as opposed to general-interest, goods (the number of targeted bills). 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). Moreover, to exploit the institutional variation in the electoral rule under which members of Parliament are elected in the Second Republic (75% majoritarian, 25% proportional), we implement an augmented version of equation (9) by including a dummy equal to one if the politician is elected in the *proportional* tier, as well as an interaction between such a dummy and social capital. The interaction term allows us to evaluate whether social capital is differentially correlated with political misbehavior under different electoral rules, therefore capturing possible complementarities between institutions and civic attitudes. Finally, social capital and the other district-specific variables vary over a larger number of areas, namely 93 provinces, in this sample.

The results for absences in the first three columns are qualitatively very similar to those obtained for RAP, although they are more precisely estimated, and social capital remains always statistically significant, even if we control for newspapers diffusion or province of birth dummies. The coefficient in the first row of the table captures the effect of social capital on the behavior of politicians elected in the majoritarian tier (i.e., when the proportional dummy is equal to zero). Absenteeism is always significantly lower in electoral 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 12.2%. Moving from the lowest to the average level of social capital would reduce absences by 15.6%, and moving form the lowest to the highest level of social capital by 58.13%. 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.

The second row of the table reports the estimated coefficient of the interaction between social capital and being elected in the proportional tier with closed lists. There, we see that the negative correlation between social capital and absences is substantially attenuated (or even reverted) under proportional representation with closed lists. As a matter of fact, in the

subsample of proportional politicians, there is no significant correlation between social capital and the absenteeism rate. 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, and not under institutions associated with a lower degree of political accountability.

Finally, Table 6 also reports the correlation between social capital in the electoral district and the amount of particularistic activities, that is, bills targeted to geographical locations or specific entities. Although this proxy ought to be interpreted with some caution, the evidence shows that politicians elected in majoritarian elections devote less effort to particularistic activities when social capital is higher. The same does not hold for proportional politicians, although the difference between the two types is borderline insignificant (as shown by the interaction coefficient in the second row). This is consistent with the central idea in the model, namely that a larger fraction of civic voters induces the incumbent to pay more attention to aggregate (as opposed to narrow) measures of social welfare.

All of these results are strongly robust to the use of the alternative (principal component) measures of social capital; see the Online Appendix Table A2. There, the complementarity between institutions and social capital is even more apparent, because the positive impact of social capital in reducing rents and increasing general interest activities is completely offset by the impact of the proportional system with closed lists—which reduces accountability—in the opposite (significant) direction.

IV 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 do not 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 the theory. This section tests this hypothesis, again looking in the first place at how voters react to both RAP and absences.

Starting with RAP, the basic specification we estimate is:

$$\Delta VOT_{ijt} = \delta_t + \gamma_j + \tau RAP_{ijt} \cdot SC_j + RAP_{ijt} \cdot \mathbf{Z}'_j\lambda + \theta RAP_{ijt} + \mathbf{X}'_{it}\beta + \epsilon_{ijt}, \qquad (10)$$

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 ($\mathbf{X}$) and the interaction of RAP with other district-specific variables $\mathbf{Z}$ (namely per-capita income, education, newspapers diffusion, and urbanization rate). Estimation is by OLS and robust standard errors are clustered by district.

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 (10) 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 (10) 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. This means that misbehavior by the incumbent is not random, but could be systematically correlated with the error term of equation (10).

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 the Online Appendix Section C, we should include a full set of interactions between individual and district fixed effects. This specification is too demanding for our data. As a robustness check, 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 (10) 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 median, respectively. 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 (10) estimates a *lower bound* of the true punishment τ (in absolute value), as the above endogeneity issue works against us. Specifically, as discussed in the Online Appendix Section C, 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.

An additional problem with equation (10) is non-random sample selection, as we only observe preference votes for incumbents who choose to run for reelection. But incumbents who obtained a very severe RAP 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 concern in our data.

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 in the same district (ELE_{ijt}). An incumbent who chooses not to run is coded as not reelected, so that sample selection is not an issue. We thus estimate:

$$ELE_{ijt} = \delta_t + \gamma_j + \tau Y_{ijt} \cdot SC_j + Y_{ijt} \cdot \mathbf{Z}_j' \lambda + \theta Y_{ijt} + \mathbf{X}_{ijt}' \beta + \tau_p P_{ijt} \cdot Y_{ijt} \cdot SC_j + \theta_p P_{ijt} \cdot Y_{ijt} + \gamma_p P_{ijt} \cdot SC_j + \epsilon_{ijt} \tag{11}$$

where Y_{ijt} refers either to absenteeism or targeted bills, and P_{ijt} is a dummy capturing whether the politician was elected in the proportional tier with closed lists. The interaction terms with P_{ijt} allow us to evaluate whether the impact of social capital on the electoral punishment of Y_{ijt} is affected by the electoral rule (i.e., whether τ_p is different from zero). We expect $\tau < 0$: for politicians elected under plurality rule ($P_{ijt} = 0$), the electoral punishment for misbehavior should be harsher where there is more social capital. Estimation is by Probit, with standard errors clustered by district. As with RAP in equation (10), the effect of social capital alone on the electoral outcome is absorbed by the district fixed effects γ_j. Th Second Republic sample has a drawback relative to the First Republic, however: since there are only two legislatures, we cannot implement specifications with individual fixed effects.

A Criminal prosecutions

Table 7 reports the estimates of equation (10). 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, and urbanization). In both panels, the effect of the interaction between RAP and social capital becomes even larger in absolute value.

According to the specification in column (2), receiving a RAP decreases the amount of preference votes by 31% in areas with average social capital and by 49% 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 21% on average and minus 58% 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 (even larger in absolute value) and statistically significant, while that of general RAP interacted with social capital becomes negligible and insignificant.

In the Online Appendix, we provide robustness checks that reinforce the validity of these findings. There, Table A3 estimates a similar specification in split sample, again for general and serious RAP. Columns (1) and (3) refer to districts with social capital above the median, columns (2) and (4) to districts below the median. 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 7. When individual fixed effects are omitted in 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 in 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 significantly different from zero 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 9% in areas with above-median social capital, while it has no impact in areas with below-median social capital. Similarly, being prosecuted for serious crimes reduces preference votes by 21% in areas with above-median social capital and has no impact in the others. In the Online Appendix Table A4, we instead repeat the baseline specifications of Table 7, but this time we use the principal component measure of social capital instead of blood donations. The results are qualitatively similar, especially for serious RAP.

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.

B Absenteeism rate and targeted bills

Table 8 reports the estimates of equation (11). The main coefficient of interest is that on the interaction between social capital and absenteeism rate (or targeted bills), $\hat{\tau}$, that is, the impact of social capital on the electoral effect of absences and targeted bills for majoritarian politicians. To shed light on the complementarity between the electoral rule and social capital, we are also interested to the coefficient of the triple interaction in the second row, i.e., $\hat{\tau_p}$.

In the specification of column (1), absenteeism is interacted with social capital but not with other district-specific variables. The estimated coefficient for majoritarian politicians in the first row 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 for politicians elected under plurality rule becomes even larger in absolute value. 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 increases the probability of being reelected in the same (single-member) district by 9.7 percentage points (about 28.6%) in areas with average social capital, and reduces it by 8.5 percentage points (about 25%) in areas with the highest level of social capital.[19]

The triple interaction coefficient reported in the second row of Table 8 shows that the electoral rule interacts with social capital, although only at a 10% significance level in the richer specification of column (2). As a matter of fact, the sum of the estimated coefficients $\hat{\tau}$ and $\hat{\tau_p}$ is not statistically different from zero, and politicians are not electorally punished in a context where voters' ability to choose their preferred candidate is severely hampered by the (closed) proportional lists. Again, this negative result supports the inference that social capital discourages misbehavior through political accountability, because the correlation between voting and social capital is only present where political institutions keep politicians accountable.

Table 8 also shows estimates of equation (11) with targeted bills as an outcome in columns (3) and (4). Here, the evidence is not particularly robust, but it goes in the expected direction. According to the richer specification in column (4), particularistic—as opposed to general interest—activities tend to be rewarded in districts with low social capital and, on the contrary, punished in districts with high social capital, although the effect of social capital is only significant at a 10% level. The reduced robustness of the findings on targeted bills might also arise from measurement error, as discussed above.

In the Online Appendix, as we have done for RAP, we provide robustness checks that

[19]Using reelection—instead of reelection in the same district—as the dependent variable in the estimation of equation (11) 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 (majoritarian) politicians by letting them run for reelection in a different electoral district.

reinforce the validity of the above empirical findings for the absenteeism rate, but not for targeted bills. Table A5 further looks at the association between the electoral punishment of shirking (or targeted bills) and social capital using a split-sample specification. As for RAP, columns (1) and (3) refer to districts with social capital above the median, columns (2) and (4) to districts below the median. As discussed above, we do not report the specifications with individual fixed effects because of degrees of freedom limitations with only two terms. The estimated coefficient of the absenteeism rate for politicians elected under plurality rule (first row) is different in the two samples at a 5% significance level, as reported by the p-value of the first Wald test (a). An increase in the absenteeism rate equal to its standard deviation reduces the probability of being reelected in the same (single-member) district by 11.8 percentage point (about 35%) in areas with above-median social capital, and it has a positive (and slightly significant) effect in areas with below-median social capital. Also the interaction between absenteeism and proportional representation is significant at a 5% level in areas with high versus low social capital, as reported by the p-value of the second Wald test (b), pointing again to a complementarity between social capital and the electoral rule. Finally, the Online Appendix Table A6 tests the robustness of the results to the use of the principal component measure of social capital instead of blood donations in the baseline specifications of equation (11). Results are strongly robust for the absenteeism rate, but not for targeted bills.

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 shrink without being punished in terms of reelection probability.

V 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 the politician was 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 misbehaviors.

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 pursue social welfare. Moreover, political representatives are less likely to be selected on criteria of honesty and general competence.[20]

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.

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[20]We are aware that our empirical results are also consistent with an alternative interpretation. Political accountability might fail 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 politicians.

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Tables

Table 1: The two samples at a glance

		First Republic sample	
Legislative term	RAP	Serious RAP	Obs.
I (1948–1953)	0.30	0.19	507
II (1953–1958)	0.32	0.17	549
III (1958–1963)	0.30	0.17	547
IV (1963–1968)	0.22	0.14	579
V (1968–1972)	0.17	0.09	594
VI (1972–1976)	0.25	0.16	598
VII (1976–1979)	0.14	0.10	587
VIII (1979–1983)	0.19	0.11	599
IX (1983–1987)	0.26	0.15	596
X (1987–1992)	0.20	0.10	599
Total	0.23	0.14	5,755
		Second Republic sample	
Legislative term	Absenteeism rate	Targeted bills	Obs.
XII (1994–1996)	0.38	0.90	749
XIII (1996–2001)	0.38	2.23	716
Total	0.38	1.55	1,465

Notes. Measures of political (mis)behavior and number of non-missing observations across legislative terms since 1948. *First Republic sample*: House of Representatives only. *Second Republic sample*: House of Representatives and Senate. 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 instead dropped because members of Parliament were (re)elected under a different electoral system in the XV term. *RAP* is equal to one if the member of Parliament receives a request for removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see the Online Appendix). *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Targeted bills* is the number of bills presented as main sponsor over the legislative term, related to a specific target, such as a geographical entity (e.g., region, town, etc.) or subject (e.g., agency, museum, etc.).

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

	Mean	Median	S.d.	Min	Max	Obs.
Male	0.94	1.00	0.25	0.00	1.00	5,755
Age	47.88	48.00	9.53	2.00	98.00	5,755
Years of schooling	15.23	18.00	5.39	0.00	21.00	5,755
Government appointment	0.16	0.00	0.37	0.00	1.00	5,755
Local experience	0.59	1.00	0.49	0.00	1.00	5,755
Freshman	0.43	0.00	0.49	0.00	1.00	5,755
Tenure	1.20	1.00	1.48	0.00	9.00	5,755
Majority coalition	0.51	1.00	0.50	0.00	1.00	5,755
RAP	0.23	0.00	0.42	0.00	1.00	5,755
Serious RAP	0.14	0.00	0.34	0.00	1.00	5,755
Rerun	0.79	1.00	0.41	0.00	1.00	5,755
Reelected	0.60	1.00	0.49	0.00	1.00	5,755

Notes. All variables are dummies, except *Age* (in years), *Years of schooling*, and *Tenure* (in legislative terms). *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. *RAP* is equal to one if the member of Parliament receives a request for removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes (see the Online Appendix). *Rerun* is equal to one if the member of Parliament stands for reelection. *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	Median	S.d.	Min	Max	Obs.
Male	0.92	1.00	0.28	0.00	1.00	1,465
Married	0.78	1.00	0.41	0.00	1.00	1,465
No. of children	1.56	2.00	1.22	0.00	9.00	1,465
Age	49.80	49.00	9.37	27.00	84.00	1,465
Years of schooling	16.12	17.00	2.41	5.00	20.00	1,465
National politician	0.26	0.00	0.44	0.00	1.00	1,465
Government appointment	0.06	0.00	0.24	0.00	1.00	1,465
Parliament appointment	0.14	0.00	0.34	0.00	1.00	1,465
Local experience	0.55	1.00	0.50	0.00	1.00	1,465
Freshman	0.54	1.00	0.50	0.00	1.00	1,465
Majority coalition	0.54	1.00	0.50	0.00	1.00	1,465
Preelection income	0.12	0.10	0.33	0.00	11.32	1,465
Absenteeism rate	0.38	0.34	0.24	0.00	0.98	1,465
Targeted bills	1.55	1.00	2.35	0.00	28.00	1,465
Reelected	0.50	1.00	0.50	0.00	1.00	1,465
Reelected same district	0.34	0.00	0.48	0.00	1.00	1,465
			Majoritarian politicians			
Absenteeism rate	0.36	0.33	0.24	0.00	0.98	1,214
Targeted bills	1.47	1.00	2.37	0.00	28.00	1,214
Reelected	0.50	1.00	0.50	0.00	1.00	1,214
Reelected same district	0.32	0.00	0.47	0.00	1.00	1,214
			Proportional politicians			
Absenteeism rate	0.47	0.46	0.26	0.02	0.98	251
Targeted bills	1.94	1.00	2.21	0.00	12.00	251
Reelected	0.52	1.00	0.50	0.00	1.00	251
Reelected same district	0.44	0.00	0.50	0.00	1.00	251

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. *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. *Targeted bills* is the number of bills presented as main sponsor (over the legislative term) related to a specific target, such as a geographical entity (e.g., region, town, etc.) or subject (e.g., agency, museum, etc.). *Reelected* and *Reelected same district* are dummies equal to one if the member of Parliament wins the bid for reelection (unconditional or conditional on rerunning in the same district, respectively).

Table 4: Social capital and other characteristics of Italian provinces – *Both samples*

	Mean	Median	S.d.	Social capital	Income	Educ.	Newsp.	Urb. rate
Social capital	2.83	2.39	2.22	1.00				
Income	15.36	16.10	3.21	0.52	1.00			
Education	31.68	31.31	3.40	-0.32	0.07	1.00		
Newspapers	7.93	8.13	3.89	0.33	0.68	0.10	1.00	
Urbanization rate	0.50	0.47	0.20	-0.12	-0.04	0.34	- 0.10	1.00

Notes. The left panel reports descriptive statistics of the variables; the right panel reports the correlation coefficients between them. *Social capital* is measured as blood donation, and it is equal to 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 the population 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). *Urbanization rate* is the share of the population living in cities above 15,000 inhabitants (source: Istat). Number of provinces: 93.

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

	Dependent variable: RAP			**Dependent variable: Serious RAP**		
	(1)	(2)	(3)	(4)	(5)	(6)
Social capital	-0.009**	-0.004	-0.012*	-0.005*	-0.001	-0.006
	[0.004]	[0.004]	[0.007]	[0.003]	[0.003]	[0.004]
Newspapers		-0.006**			-0.006***	
		[0.003]			[0.001]	
Years of schooling	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Government appointment	-0.056***	-0.056***	-0.055***	-0.022*	-0.023*	-0.022*
	[0.017]	[0.017]	[0.017]	[0.012]	[0.012]	[0.012]
Local experience	0.014	0.016	0.014	0.006	0.008	0.006
	[0.020]	[0.020]	[0.020]	[0.014]	[0.014]	[0.014]
Freshman	-0.039***	-0.040***	-0.040***	-0.014	-0.015	-0.015
	[0.013]	[0.013]	[0.013]	[0.012]	[0.012]	[0.012]
Tenure	0.007	0.006	0.006	0.005	0.004	0.004
	[0.008]	[0.008]	[0.008]	[0.006]	[0.006]	[0.006]
Majority coalition	-0.156***	-0.156***	-0.154***	-0.076***	-0.077***	-0.075***
	[0.017]	[0.017]	[0.017]	[0.014]	[0.013]	[0.013]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Place of birth dummies	No	No	Yes	No	No	Yes
Obs.	5,755	5,755	5,755	5,755	5,755	5,755

Notes. Probit estimations; marginal effects reported. Dependent variables: dummy equal to one if the member of Parliament received a request for removal of parliamentary immunity because suspected of any criminal wrongdoing in columns (1)-(3), or because suspected of serious crimes in columns (4)-(6). Social capital is measured as blood donation. *Other control variables* include: age, age squared, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands), district-specific income, education, and urbanization. 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 absences/targeted bills – *Second Republic*

	Dependent variable: Absenteeism rate			**Dependent variable: Targeted bills**		
	(1)	(2)	(3)	(4)	(5)	(6)
Social capital	-0.021***	-0.023***	-0.004***	-0.059*	-0.072**	-0.003
	[0.005]	[0.004]	[0.001]	[0.034]	[0.034]	[0.015]
Social capital × proportional	0.013	0.013	0.017***	0.077	0.080	0.038
	[0.009]	[0.009]	[0.004]	[0.057]	[0.053]	[0.036]
Proportional	0.033	0.032	0.268***	0.156	0.148	0.504**
	[0.029]	[0.030]	[0.023]	[0.197]	[0.197]	[0.195]
Newspapers		-0.007**			-0.053**	
		[0.003]			[0.026]	
Years of schooling	0.001	0.000	0.001	0.019	0.016	0.027
	[0.003]	[0.003]	[0.003]	[0.031]	[0.031]	[0.036]
National politician	0.046***	0.046***	0.049***	0.206	0.199	0.252*
	[0.014]	[0.015]	[0.015]	[0.133]	[0.132]	[0.148]
Government appointment	0.065***	0.065***	0.053**	-0.623**	-0.621**	-0.605**
	[0.024]	[0.024]	[0.026]	[0.267]	[0.267]	[0.286]
Parliament appointment	0.035*	0.037**	0.040**	0.523**	0.540**	0.460**
	[0.018]	[0.019]	[0.019]	[0.218]	[0.219]	[0.230]
Local experience	-0.023*	-0.023*	-0.028**	0.342***	0.342***	0.386***
	[0.013]	[0.013]	[0.013]	[0.111]	[0.111]	[0.116]
Freshman	-0.017	-0.017	-0.021	-0.529***	-0.536***	-0.569***
	[0.014]	[0.014]	[0.014]	[0.115]	[0.116]	[0.121]
Majority coalition	-0.165***	-0.166***	-0.173***	-0.293***	-0.297***	-0.357***
	[0.012]	[0.012]	[0.013]	[0.088]	[0.088]	[0.101]
Preelection income	0.080**	0.081**	0.079**	-0.190	-0.183	-0.169
	[0.031]	[0.032]	[0.031]	[0.126]	[0.121]	[0.127]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Place of birth dummies	No	No	Yes	No	No	Yes
Obs.	1,465	1,465	1,465	1,465	1,465	1,465

Notes. OLS estimations; coefficients reported. Dependent variable: absenteeism rate in columns (1)-(3) and number of targeted bills in columns (4)-(6). Social capital is measured as blood donation. *Proportional* is a dummy capturing whether the member of Parliament is elected in the proportional tier (as opposed to the majoritarian tier). *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), district-specific income, education, and urbanization. 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: Social capital and electoral effect of malfeasance – *First Republic*

	Dependent variable: Log difference of votes			
	(1)	(2)	(3)	(4)
RAP × social capital	-0.030**	-0.032*	-0.003	-0.009
	[0.012]	[0.016]	[0.019]	[0.029]
RAP	0.011	-0.218	-0.066	0.683
	[0.032]	[0.347]	[0.059]	[0.504]
Years of schooling	0.002*	0.003*		
	[0.001]	[0.001]		
Government appointment	0.146***	0.147***	0.071**	0.074**
	[0.022]	[0.022]	[0.034]	[0.034]
Local experience	-0.007	-0.007		
	[0.015]	[0.015]		
Freshman	0.055**	0.055**	0.107***	0.106***
	[0.027]	[0.027]	[0.031]	[0.031]
Tenure	-0.017	-0.018	-0.212***	-0.211***
	[0.011]	[0.011]	[0.056]	[0.056]
Majority coalition	0.062***	0.065***	-0.041	-0.041
	[0.022]	[0.022]	[0.061]	[0.061]
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.	4,353	4,353	4,353	4,353
Serious RAP × social capital	-0.054***	-0.066***	-0.075***	-0.085***
	[0.010]	[0.012]	[0.022]	[0.032]
Serious RAP	0.111***	-0.031	0.100	1.002*
	[0.039]	[0.398]	[0.067]	[0.557]
Years of schooling	0.003**	0.003**		
	[0.001]	[0.001]		
Government appointment	0.150***	0.150***	0.069**	0.073**
	[0.022]	[0.021]	[0.034]	[0.034]
Local experience	-0.009	-0.010		
	[0.014]	[0.015]		
Freshman	0.059**	0.059**	0.109***	0.108***
	[0.027]	[0.027]	[0.031]	[0.031]
Tenure	-0.017	-0.017	-0.211***	-0.212***
	[0.011]	[0.011]	[0.056]	[0.056]
Majority coalition	0.072***	0.073***	-0.041	-0.042
	[0.022]	[0.022]	[0.061]	[0.061]
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.	4,353	4,353	4,353	4,353

Notes. OLS estimations; coefficients reported. Dependent variable: log difference of number of votes (between past and future election); members of Parliament who run for reelection only. *RAP* is equal to one if the member of Parliament receives a request for removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes. Social capital is measured as blood donation. *Other control variables* include: age, age squared, legislative term dummies, job dummies. The district-specific characteristics Z_j include: income, education, newspapers, and urbanization. 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 8: Social capital and electoral effect of absences/targeted bills – *Second Republic*

	Dependent variable: Reelected same district			
	(1)	(2)	(3)	(4)
Absenteeism rate × social capital	-0.088**	-0.099*		
	[0.036]	[0.052]		
Absenteeism rate × social capital × proportional	0.149	0.144*		
	[0.101]	[0.075]		
Absenteeism rate × proportional	0.039	0.024		
	[0.269]	[0.246]		
Absenteeism rate	0.084	0.686		
	[0.102]	[0.562]		
Targeted bills × social capital			-0.001	-0.008*
			[0.004]	[0.005]
Targeted bills × social capital × proportional			-0.001	-0.003
			[0.010]	[0.010]
Targeted bills × proportional			-0.020	-0.023
			[0.040]	[0.039]
Targeted bills			0.005	0.137***
			[0.011]	[0.048]
Proportional × social capital	-0.072	-0.008	-0.045**	-0.053**
	[0.046]	[0.063]	[0.021]	[0.022]
Proportional	0.204	-0.174	0.395***	0.474***
	[0.129]	[0.244]	[0.107]	[0.105]
Years of schooling	0.009	0.009	0.008	0.008
	[0.006]	[0.007]	[0.006]	[0.006]
National politician	-0.000	-0.001	-0.001	0.005
	[0.033]	[0.033]	[0.033]	[0.033]
Government appointment	0.083	0.082	0.090	0.088
	[0.060]	[0.064]	[0.059]	[0.061]
Parliament appointment	0.060	0.061	0.052	0.051
	[0.043]	[0.043]	[0.042]	[0.043]
Local experience	0.092***	0.092***	0.089***	0.087***
	[0.033]	[0.028]	[0.033]	[0.033]
Freshman	-0.017	-0.015	-0.010	-0.011
	[0.033]	[0.031]	[0.034]	[0.034]
Majority coalition	-0.188***	-0.189***	-0.173***	-0.169***
	[0.039]	[0.031]	[0.034]	[0.035]
Preelection income	-0.033	-0.028	-0.027	-0.028
	[0.048]	[0.043]	[0.041]	[0.040]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Absenteeism rate × Z_j	No	Yes	No	No
Targeted bills × Z_j	No	No	No	Yes
Obs.	1,411	1,411	1,411	1,411

Notes. Probit estimations; marginal effects reported. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same district. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Targeted bills* is the number of bills presented as main sponsor (over the legislative term) related to a specific target, such as a geographical entity (e.g., region, town, etc.) or subject (e.g., agency, museum, etc.). *Proportional* is a dummy capturing whether the member of Parliament is elected in the proportional tier (as opposed to the majoritarian tier). Social capital is measured as blood donation. *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies. The district-specific characteristics Z_j include: income, education, newspapers, and urbanization. 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 ***.