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**Why Does Social Capital Increase Government  
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Municipalities**

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# Why does Social Capital Increase Government Performance? The Role of Local Elections across Italian Municipalities<sup>1</sup>

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**Abstract:** There is wide consensus that social capital increases government performance. However, the very mechanism underlying the relationship between social capital and well-performing governments remains unclear. In this paper we focus on the budgetary composition of local governments and find that the joint effect of larger social capital and higher quality in government's spending improves the re-election chances of incumbent policy makers. By looking at 8,000 Italian municipalities over the period 2003-2012, we show that incumbent mayors who carry out a forward-looking and transparent fiscal agenda are more likely to be reelected where the level of local social capital is larger. In contexts with larger social capital, we obtain a non-trivial average effect of a 54% larger probability to be reelected when a more forward-looking agenda is in place. Thus, the good conduct of incumbent mayors is rewarded, but only in contexts with more social capital. Twin estimates considering a more transparent fiscal agenda are not significant but show the predicted sign and the comparable size of a 31% larger probability. Our evidence is robust when controlling for the political budget cycle, and provides ground for further exploration of the electoral mechanism as an important channel to explain the connection between social capital and good government performance.

**Keywords:** local re-election; social capital; selection of politicians; government performance; fiscal federalism

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## 1 Introduction

Why do governments differ in their performance? Over the last decades an increasing body of empirical studies has stressed the crucial role of social capital.<sup>3</sup> However, the mechanism behind the relationship between social capital and well-performing governments remains unclear (Boix and Posner, 1998; Tavits, 2006). While most of the research has focused on social capital encouraging good policy, for example through active participation and monitoring of the citizens (Boix and Posner, 1998; Knack, 2002), less attention has been devoted to the electoral payoff from good policy making, arguably a crucial goal and aspired reward for politicians.<sup>4</sup>

This paper focuses on incumbent mayors of Italian municipalities and offers a new insight to this strand of research. We propose that more social capital improves incumbent politicians' re-election chances when first-term fiscal spending and revenues' composition has been more forward-looking and transparent. When citizens have the opportunity to raise their voice and take a public position (higher social capital), good public policies are more likely to be rewarded with the re-election of the incumbent mayor. In order to test our assumptions we build a unique and new dataset containing information about mayoral Italian candidates for the 2003-2012 period.

Following the previous literature in public administration, the concept of good public policy is here linked to a forward-looking and transparent fiscal policy agenda; this is, in fact, crucial to pursue better governance (Menahem et al., 2011).<sup>5</sup> In line with more recent studies, we use the composition rather than the amount of expenditure and revenues, (e.g. Dahlberg and Lindström, 1998; Vergne, 2009) to measure forward looking and transparent public local spending. More precisely, a forward-looking fiscal agenda privileges expenditures in fixed

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<sup>3</sup> In the classical definition offered by Putnam's seminal work about Italy, social capital refers to "*features of social organizations, such as trust, norms and network, that can improve the efficiency of society by facilitating coordinated actions*" (1993: p. 167).

<sup>4</sup> A recent exception is the paper by Nannicini et al. (2013) which studies social capital and political accountability at the national level; using a sample including the Italian members of Parliament in the postwar period (1948–2001), they show that the electoral punishment of political misbehaviour is considerably larger in electoral districts with high social capital.

<sup>5</sup> A forward looking agenda can be sacrificed for a short-term one that creates budget deficits for opportunistic reasons. This is an important point made by research on the electoral budget cycle (Bartolini and Santolini, 2009; Bordignon and Piazza, 2010; Drazen and Eslava, 2010; Vergne, 2009). For our research question this could be a problem if an increasing share of capital expenditures signals not spending quality but the research of consent based on other grounds. However this should not be a main concern for this paper. First of all political cycles are usually detected by an increase in current spending. Second, in the results section we provide an additional test, showing that our results are robust when controlling for political cycles.

investment vis-à-vis current expenditures, and a transparent one taxation on property tax vis-à-vis local surcharge on income tax.<sup>6</sup>

We test empirically this conceptual framework by using budgetary and electoral data for about 8,000 Italian municipalities over the period 2003-2012. Our central research hypothesis is that incumbent mayors who carry out a more forward-looking and transparent fiscal agenda are more likely to be rewarded (i.e. reelected) the higher the level of local social capital. Italy represents an appropriate context of analysis because it is marked by profound regional economic and social disparities, among the deepest within the European Union, (Ichino and Maggi, 1999; Nannicini et al., 2013). This has been noted since the seminal works of Banfield (1967) and Putnam (1993), who, not by chance, chose Italy as a quasi-experiment to explore the impact of social characteristics on economic development.

This research is thus motivated by at least three factors. First, we know that formal institutions, expressed in terms of electoral rules, affect selection into politics<sup>7</sup>. However, little research has dealt with the role of informal institutions as we do here.<sup>8</sup> Second, Italy reports an interregional economic gap that goes back to the North-South dualism that has been often attributed to differences in the quality of the local policy as well as in social norms and civic spirit (Bigoni et al., 2016; Guiso et al., 2004). Third, with the relatively recent dual introduction of direct elections by majority rule and of local fiscal autonomy, mayors have gained significant power and independence over the delivering of several relevant local public policies and local taxation.

This paper is structured in six sections: in the next two sections, we first put forward our conceptual framework and briefly discuss the contextual background of recent reforms in Italy; then we document our data collection process, and describe the main features of the dataset used. In the last two sections, we first outlay our empirical strategy, discussing the evidence and its implication; we finally conclude.

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<sup>6</sup> Reasons about why this is the case in the Italian legislative context ruling the independence of local public finance will be given in the contextual section.

<sup>7</sup> Research on the role of formal institutions, social capital and selection of politicians show that: *i.* there are several channels through which formal institutions, e.g. electoral rules, can affect selection into politics in the first place as well as the selection of incumbents (Braendle, 2014); *ii.* differences in formal institutions do not account entirely for variation of government performance (Keefer and Knack, 2005).

<sup>8</sup> Informal institutions are generally understood as unwritten codes of conduct and regularised behaviour used by individuals to solve social dilemmas (Dequech, 2013).

## 2 Conceptual Framework

### 2.1 Our conceptual model

As departure point, we consider the conceptual model of *rational voters and competitive elites* proposed in Boix and Posner (1998) which illustrates the effects of social capital on government performance.

In perfectly competitive democracies, they argue, incumbents are encouraged to make good policies in order to please their polity, since social capital makes citizens ‘sophisticated consumers of politics’. However, in this model, the electoral mechanism is not explicitly addressed. As far as incumbents need to govern effectively to please their voters to be reelected, elections are in fact the main mechanism through which citizens hold in check policy makers and reduce incumbents’ opportunistic behaviour. Yet this is not always the case: the presence of asymmetric information can harm the effectiveness of elections as means to keep in check incumbents, leaving scope for discretionary behaviour on their part (Besley, 2007; 2005). As a result, incumbents can manipulate their budget compositions to maximize the chances of being reelected. In brief, good policy does not assure reelection. Our claim is that it does so in contexts of higher social capital; *higher social capital is associated with incumbent mayors’ higher reward for good budgetary policy*, reward expressed in terms of electoral payoff. Thus, our paper uncovers an important neglected channel through which social capital leads to better policies.<sup>9</sup>

### 2.2 Measuring government performance through budgetary composition

We use the municipal budgetary composition to define good government performance as a forward-looking and transparent fiscal agenda. The first is measured as the share of capital expenditures to the sum of capital plus current expenditures; the second as the share of property tax revenues on the sum of property tax and income surcharge revenues.

While there is no widely accepted measure of government performance in the literature (Tavits, 2006), recent research looks at the opportunistic manipulation in the *composition* of expenditure and revenues to increase the chances of re-election (Drazen and Eslava, 2005).<sup>10</sup> The advantage of this approach is twofold. Firstly, it is more consistent with the fiscal constrain imposed to the local governments and public administrations as consequences of

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<sup>9</sup> We illustrate this argument furtherly in detail in the next subsections.

<sup>10</sup> In turn, this research builds on seminal studies on the political cycle and on fiscal policy and electoral outcomes (Besley and Case, 1995; Nordhaus, 1975; Rogoff, 1990)

policies of austerity. Secondly, it is in line with the continuous changes in the composition of the budget and in the procedural practice faced by the public administrations.<sup>11</sup> This has been so, especially in Italy and other countries with similar high debt burdens and worsened perspectives in terms of economic growth. Within this context, forward-looking agendas, those privileging expenditures in capital investment with respect to current expenditures, have been conceptualized as a proxy of good policies. Dahlberg and Lindstrom (1998) show that spending decisions on nondurable goods and services in Swedish municipalities are to a very high degree determined by rational, forward-looking decision makers. Katsimi and Sarantides (2012) use a sample of 19 high-income OECD democracies during the period 1972–1999 and find that close elections shift public spending towards current expenditures at the cost of public investment. Voters seem to be aware of the importance of investment spending for welfare; Drazen and Eslava (2010) find that voters reward incumbents who increase investment spending but only to the extent that they do so without running large deficits in election years. The “visibility” of the type of expenditure plays a key role in models of spending composition manipulation. According to Rogoff (1990), current expenditures are more immediately visible compared to investment expenditure, especially in pre-electoral periods. This depends on the fact that capital investments are usually long-term projects which are often incomplete at election time, and hard to coordinate with the election cycle. This has been confirmed for example by Vergne (2009) and Block (2002), who find that during election times government spending shifts away from investment towards more visible current expenditures.

By contrast, counterarguments have been raised claiming that capital investments, particularly infrastructures, are a more visible type of expenditure and therefore rising capital investment close to election years can be interpreted as a sign of opportunistic behaviour as well (e.g. Drazen and Eslava, 2010; Klein and Sakurai, 2015).

We argue that, in the Italian context, spending in investment reflects a good fiscal policy (i.e. a forward-looking agenda) for several reasons. Firstly, we do not limit our analysis to expenditure close to the election time, but we rather take the average spending over the entire period of office. Second, during the observed period capital investments in the Italian municipalities were limited by a number of strict criteria. Limits for municipalities to fund their investments by raising new debts have been raised, hence municipalities can fund

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<sup>11</sup> See for example Cepiku et al (2015) and Di Mascio et al (2013) for recent contributions in public administration on this topic.

investment only by relying on their budget surplus (or reduction of debts). As a result, investment spending required a good capacity of planning coupled with a prudent management of the budget (Chiades and Mengotto, 2013).<sup>12</sup>

On the revenue side, a composition in which property tax prevails on local income surcharge is a better policy for two reasons; it is more efficient and more transparent, as it increases accountability. The theory of fiscal federalism contends that recurring to property taxes is a more efficient method in terms of long-term economic growth, creates incentives to private investment and savings (Liberati and Sacchi, 2013; Oates, 2001). This is the case for Italy. While the decisions concerning property taxes could clearly and unambiguously be attributed to the municipal government, this is not so for local income taxes. The central government maintained its full powers on the latter, including the definition of tax rates, tax base, and tax brackets, while municipal governments only marginally raise a surcharge on their tax income base. So, policy makers who manipulate the composition of revenues substituting the more with the less salient taxes, cause detrimental effects on the transparency and accountability of fiscal policy (Cabral and Hoxby, 2012). Our claim is also supported by empirical studies on Italy confirming that the tax burden has been shifted from property to income taxes to hide the tax burden to citizens (Bordignon and Piazza, 2010) or when electoral competition is particularly sharp (Bracco et al., 2013).

### **2.3 Social capital and local re-election**

As mentioned in the previous sections, the term social capital broadly refers to the combined stocks of reciprocity, cooperation, and trust which facilitate the resolution of collective action problems among the members of a community. It increases efficiency by reducing transaction costs and limits opportunistic behaviour (Christoforou, 2012). Communities rich

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<sup>12</sup> Since 1999 the Italian municipalities with at least 5,000 inhabitants are subject to the so called Domestic Stability Pact (DSP) introduced by the Italian government under the law 448/1998 (Bartolini and Santolini, 2009). The DSP is an instrument of budget constrain that limits the budget deficit of the local administrations with the main goal of controlling local government budget balance (Grembi et al., 2012). Briefly some of the criteria of the DSP imply a series of restrictions on the amount of expenditures on specific items, the amount of debt that the local administration might use to finance some type of expenditures and the ability of the local administration to increase local revenue<sup>12</sup>. To avoid the possibility of transferring current expenditures into investments and, hence, to limit the possibility of eluding these criteria, the DSP requires a transparent definition of investment expenditures. In case these restrictions are violated, the local administration may incur in certain sanctions including a restriction in recruiting additional civic servants, a reduction on the annual transfer from the central government and possible cuts on some local civil servants' benefits (Grembi, Nannicini and Troiano, 2012). Empirical evidence shows that the DSP tends to reduce public spending in general. However, in line with the electoral budget cycle, during the pre-electoral period incumbent mayor might adopt an opportunistic behaviour by vastly increasing expenditures even above the established criteria (Bartolini and Santolini 2009).

in social capital are more likely to rely on shared norms of cooperation and reciprocity among their members leading to enhanced mutual trust, a more pronounced sense of communal spirit, and a more effective pursuit of shared objectives (Feld and Frey, 2007). Moreover, people living in such contexts tend to be more concerned about long-term outcomes rather than short-term personal interests (Keefer and Knack, 2005).

Uphoff (2000) proposes a distinction between the cognitive and the structural dimension of social capital. For this paper, we consider the latter because it typically refers to behaviour consisting on individual's involvement in associational activities, social network, and political participation.<sup>13</sup> The choice of these components lies on the idea that citizens more involved in the "community affair" are more likely to develop political awareness and a sense of public spiritedness (Putnam 1993).<sup>14</sup> In particular, citizens more civically engaged are also more aware of politicians' conducts within the community, making the rest of the members more knowledgeable about the community's needs (Scheufele et al., 2004).<sup>15</sup> According to Boix and Posner (1998), this has the implications that in contexts with larger social capital public servants' are more willing to act for the benefit of their voters and enhanced citizens' policy awareness increases their ability to monitor and assess the quality of political decision-making. We extend this view claiming that larger social capital reduces the asymmetric information between a polity's principals and agents. As a consequence, we call in play the electoral mechanism as a key mediating factor leading elected representatives to work more effectively to increase the probability of staying in power.<sup>16</sup>

Putnam's qualitative study has been empirically tested and confirmed in several papers (Doh, 2014; Guiso et al., 2016; Sabatini, 2012). However, most of the cited investigations have been conducted by comparing different countries or considering the national administration of a single country. Only recently scholars have been moving their research focus toward

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<sup>13</sup> Cognitive social capital refers to elements of trust, values and beliefs contributing to cooperation and promoting pro-social among the individuals of a community.

<sup>14</sup> After Putnam's seminal work, several studies associate the structural dimension of social capital to different socio-economic and institutional performance including but not limited to health services satisfaction (Dowding and John, 2009), demand for redistribution, crime rate, economic and human development (Beyerlein and Hipp, 2005; Christoforou, 2010; Guiso et al., 2004; Sabatini, 2008).

<sup>15</sup> While social capital is a necessary condition, it might not be a sufficient one. Lowndes et al (2006), V., Pratchett, L., & Stoker, G. (2006) propose an interesting case study, showing that the coexistence of specific 'rules of use' within a given stock of social capital are important factors conducive for political participation as well.

<sup>16</sup> Boix and Posner (1998) point out that this mechanism works as long as there is homogeneity of interests in the community. The presence of too fragmented interests this mechanism might lead to a gridlock and hence to inefficiencies in the institutional performance.

the local administration. Coffe' and Geys (2005) find that the density of associational activity, electoral turnout, and criminal rate, is positively and significantly associated with local governments' financial surplus in 305 Flemish municipalities. Similarly, in the case of 256 local authorities in Israel in 2000, Menahem et al (2011) find that associational activity is positively associated with good government performance.<sup>17</sup> Tavits (2006) uses a composite index based on associational activity, informal socialization (attending club meetings and dinner parties) and trust in local government to predict administrative efficiency and political activism in 35 cities in the US and in 85 cities in Germany.<sup>18</sup> Social capital has a positive impact on political activism, but not a statistically significant impact on the local administration's efficiency. On the basis of a public service performance classification scheme developed by the UK government to assess the performance of local authorities, Andrews (2007) finds that social capital facilitates the public service performance in 148 UK local authorities during the period 2002-2004. Still in the UK, Dowding and John (2012; 2011; 2009) focus on the public healthcare service system combining the literature on social capital with the insights from Albert Hirschman (1970) on voice, exit, and loyalty. They find that choice factors in terms of voice and exit with respect to public healthcare services are not relevantly affected by measures of social capital; being more trusting leads, in fact, to lower voice activity, and does not affect exit decision. Social capital is found to be positively related to citizens' attitudes toward government performance. By using public opinion data collected from citizens of 114 Iowa communities, Rice (2001) reports that in towns with a higher level of social capital, citizens see their local government as more effective and responsive. Similarly, Cusack (1999) finds that social capital, measured in terms of trust amongst the elites, is positively associated with citizens' satisfaction of government performance among 30 small and medium size German municipalities in 1995.

The above findings show the existence of a positive relationship between social capital and government performance, but, as we know, investigations about the role of elections in supporting this relationship remain at a purely speculative level. With this paper, we fill the

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<sup>17</sup> These include: the ratio of budget deficit (surplus) over total income; the gap between the municipal revenue forecast and the actual revenue; the government expenditures per capita.

<sup>18</sup> The administrative efficiency is calculated through a scale of management functions from the implementation of cost-benefit analysis to the decentralization of the resource responsibility. The political activism refers to the provision of the public good.

gap by providing an empirical test including electoral incentives. This is possible because, since 1993, mayors in Italian municipalities are directly elected by citizens.<sup>19</sup>

## 2.4 Our two hypotheses

Considering our previous analysis, we illustrate now our contribution by stating the two main research hypotheses. First, we look at whether higher social capital increases the re-election probability of an incumbent mayor adopting a forward-looking public spending agenda. A community rich in social capital prefers a social exchange based on longer-term strategies seeking a wider and more sustainable community benefit against short-run strategies (Christoforou, 2012) and is more likely to overcome problems of credible commitments (Keefer and Knack, 2005). Citizens' attitude and behaviour might depend on their perception about the institution's credible commitment in taking good care of the public resources and in acting efficiently and fairly (Feld and Frey, 2002). For instance, Barone and Mocetti (2009) detect better citizens' attitude towards tax compliance in Italian municipalities where resources are spent more efficiently.<sup>20</sup>

*H1: A more forward-looking spending agenda increases the likelihood of an incumbent mayor to be reelected in contexts of larger social capital*

On the revenue side, we claim that social capital rewards incumbent mayors who are more likely to increase the property tax's share relatively to the income tax's one. Raising a municipality's revenues through the property tax rather than to the income tax increases the autonomy of the local government together with its transparency and accountability. As explained above, in Italy citizens can clearly and unambiguously attribute the decisions concerning the property tax to the municipal government, while this is less the case for the

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<sup>19</sup> The local administration is composed of a mayor who leads an executive committee (*Giunta*) and a Council (*Consiglio Comunale*). Mayors are subject to a two-term limit. Those in municipalities of at least 15,000 inhabitants are directly elected through a dual ballot. Voters can vote for the individual candidate and for a list of political parties. Candidates obtaining an absolute majority consisting of 50% of the votes cast become mayor. Otherwise, those that in the first ballot ranked first and second will compete for the second round and can get the support of the political parties whose candidates have been eliminated in the first round. After the mayor is elected so does the Council. If the political parties supporting the mayor receive between 50% and 60% of the votes they receive 60% of the seats. Otherwise the criterion of proportionality applies (Barone and De Blasio, 2013).

<sup>20</sup>Where public spending efficiency is computed based on a stochastic frontier model.

income tax surcharge.<sup>21</sup> Social capital makes citizens less tolerant of the moral hazard of their political representatives (Nannicini et al., 2013). As a result, well informed and motivated citizens are less likely to be fooled by less transparent taxing activity. At the same time citizens are more eager to keep politicians in check. This is because citizens know the amount of the tax, as well as the fact that such revenues are going to be spent by the mayor to carry out local policies in the place they live (Presbitero et al., 2014). This leads to our second hypothesis:

*H2: More transparent taxing increases the likelihood of an incumbent mayor to be reelected in contexts of larger social capital*

## **2.5 Local fiscal policy and social capital across Italian municipalities**

Our indicator of social capital is the “voice” component of the indicator of the Institutional Quality Index (IQI).<sup>22</sup> Data for this variable are available from years 2004 to 2012 and consist on aggregate measures of social capital at the Italian provincial level. In particular, the “voice” variable is a synthetic composite factor including the following dimensions *i.* the participation rate in public elections; *ii.* the number of associations; *iii.* the number of social cooperatives and *iv.* cultural liveliness measured in terms of books published and purchased in bookshops.<sup>23</sup>

Figure 1 displays the distribution of social capital across Italy in 2005 and 2011. In line with previous findings, at a macro level, the North of Italy shows more social capital endowment than the South. Nevertheless, beyond the classical dichotomy North-South, the figure also captures cross-regional variations of social capital as well as variations in social capital within the regions.

Figure 2 shows the municipal level mapping of the capital to current expenditure ratio, and property to income tax ratio averaged over 2003-2012. We observe a considerable variability across Italy, suggesting the presence of what we have defined a good policy both in

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<sup>21</sup> More precisely, the main tax rates set by the Italian local administrations are a real estate tax rate on home property, which provides almost 50% of municipal tax revenues and a surcharge on the individual income tax corresponding to approximately 10% of municipal tax revenues (Grembi et al., 2012). The municipalities are responsible for the provision of several public services including water supply, waste management, municipal police, infrastructure, welfare and housing.

<sup>22</sup> See A. Nifo and G. Vecchione (2014) to have more information on how these indicators are constructed and on the source information collected to build them.

<sup>23</sup> The index is normalized in order to vary from 0 to 1; each variable is entered with a proper weight (in this case they are all very close to 0.2), for further details see: (Nifo and Vecchione, 2014).

Northern and Southern regions. This will allow studying to what extent differences in the levels of social capital explain the rewards from good fiscal policy.

[Figures 1 and 2 about here]

### 3 Data and empirical strategy

Data were collected and combined by using several sources. Data on demographic characteristics of candidates and elections were provided by the Italian Ministry of Internal Affairs (*Ministero dell' Interno*). This source provides information on municipal electoral results, electoral dates, votes, ballots, turnouts, the number of candidates, and their demographic characteristics (education, profession, age). From these data, we created the two dummies used throughout the paper. The first indicates if the candidate is running for a re-election to be mayor [*rerun*], the second if the candidate won the election [*elected*]. Our measure of structural social capital is the “voice” component of the indicator of institutional quality index illustrated above, available from the years 2004 to 2012.

Data on municipal public finance and indicators of fiscal performance span from the fiscal years 2003 to 2012 and additional information at the municipal level consists on overall population and its age structure at the municipal level.<sup>24</sup>

The resulting dataset contains candidate level information grouped within municipalities for each electoral date. In other terms, our data match individual characteristics of winners and losers' individual characteristics at the municipal level and can distinguish between incumbents and challengers as well. Fiscal data are logarithmic transformations of per capita values averaged for the time span starting the year after the previous election to the year of the current election included.

[Table 1 about here]

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<sup>24</sup> Data on fiscal policy have been kindly provided by OPEN POLIS (English version of the site: <http://www.openpolis.it/eng/>), an Italian independent association providing data on politicians and local public finances. Additional data at the municipal level are from the Italian Institute of Statistics ([www.istat.it](http://www.istat.it)).

Our baseline model is specified in equation 1:

$$\begin{aligned}
Pr(Elected_{ijt}) = & f[\beta_0 + \beta_1(R)erun_{ijt} + \beta_2(V)oice_{\gamma,av(t:t-k_\nu)} + \beta_3(F)iscal_{j,av(t:t-k_\nu)} + \\
& + \beta_4 R \times V + \beta_5 R \times F + \beta_6 V \times F + (\text{double interactions}) \\
& + \beta_7 R \times V \times F + (\text{triple interaction}) \\
& \mathbf{X}'\Phi + \tau_t + \alpha_j + \varepsilon_{ijt}](\text{controls, fixed effects, and error term})]
\end{aligned} \tag{1}$$

$Elected_{ijt}$  is a dummy variable measuring if candidate  $i$  in municipality  $j$  during the elections in year  $t$  has been elected (1) or not (0).  $Rerun_{ijt}$  is another dummy variable equal to one if the candidate is running for the second time for the mayoral office after being elected for her first mandate.<sup>25</sup>  $Voice_{\gamma t}$  is the average value of the social capital indicator measured for the time span covering from the year after the previous election  $\nu$  in the municipality,  $k_\nu$ , to the present electoral year  $t$ . Note that  $k_\nu$  is not constant and has to be indexed with the previous election year  $\nu$  because, while the usual time span is 5 years per the Italian Electoral Law, we observe that in several cases elections have been anticipated. This might occur for several reasons: starting from political ones to personal issues involving the governing mayor. A similar strategy has been adopted for the per capita fiscal variables ( $Fiscal_{j,av(t:t-k_\nu)}$ ), which are observed on a yearly basis. Moreover, in both cases we log transformed the variables. We finally include (i) a set of control variables  $\mathbf{X}$  measured at the candidate and municipal level, summarized by the vector  $\mathbf{X}'\Phi$ , and (ii) both elections ( $\tau_t$ ) and municipal ( $\alpha_j$ ) fixed effects.<sup>26</sup> The vector  $\mathbf{X}$  includes both candidate level characteristics (age, education, profession), and municipal level characteristics. There include transfers from the central government, total revenues, size of the municipality in terms of population, if the election is a close one, and if the election was resolved at the ballot stage. All the coefficients from  $\beta_1 - \beta_6$  control for the baselines effects deriving from the direct impact of each of the three variables, and all their double interactions.

Our main coefficient of interest is  $\beta_7$ , associated to the variable created by interacting budget composition (forward looking or transparency), the rerunning dummy, and the social capital

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<sup>25</sup> We built this variable in two different ways. (1) If the candidate is running right after the accomplishment of her first term as mayor, or (2) looking at the history and attributing the value one to this dummy also if the candidate is rerunning after skipping some elections. Estimates do not change relevantly so we report the results obtained by using definition (2). The reason is that the vast majority of incumbents in the sample decided to rerun in the electoral race right after the ending of their first mandate. Results are available under request.

<sup>26</sup> In all regressions, we follow Cameron, A. C., & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. *Journal of Human Resources*, 50(2), 317-372 and estimated robust standard errors clustered at the Italian regional level, the largest geographical level available in the multilevel data structure at hand.

index. The intuition behind the triple interaction term is that we want to measure the association between social capital and reelection chances conditioning both on the between-elections fiscal history in the municipality, and on the candidate, being a rerunning mayor in office. We use both logit (LOGIT) and conditional logit (CLOGIT) models. In particular, the CLOGIT model allows controlling for common municipal characteristics by avoiding at the same time the incidental parameter problem one would encounter were the municipal fixed effects explicitly estimated as in a linear model.<sup>27</sup> At the same time the use of the fixed effects allows us to rule out possible bias coming from omitting time invariant variables at the municipal level. For this reason, we report the CLOGIT estimates in the main text, because they show the most robust conditional association we found in our results. The LOGIT results are instead reported in the appendix section. Most of all, similar results in comparable models validate the robustness of the type of conditional association between social capital and probability of reelection that we are exploring. For ease of interpretation we report the odds-ratio, which means we expect the estimate of  $\beta_7$  to be larger than one. We finally recall that the two measures of budget composition are logarithmic transformation of the percentages of (i) capital on the sum of capital plus current expenditures and (ii) property on the sum of property plus income taxes. For ease of exposition, from here onward we will call the fiscal composition variables as ‘forward looking’ for expenditures, and ‘transparency’ when using revenues. Forwardness and transparency are then used to proxy budgetary performance.

## 4 Results and Discussion

### 4.1 Baseline results

This section reports the results of the estimations and comments them. Table 2 displays the CLOGIT baselines estimates. Columns 1 and 3 report estimates in which our explanatory variables of forward-looking and transparency here interact only with the reelection variable. Therefore, they account for the impact of fiscal performance on the likelihood of being re-elected, after having controlled for several other variables. By looking at these two models it arises that the expenditure variable increases the probability of re-election (column 1) while the property tax to income tax ratio is still positive but not significant. The variable

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<sup>27</sup>Controlling for common municipal characteristics is important for three main reasons: *i.* municipalities in some areas of the country can have already a large stock of capital investment, thus reducing the scope for new ones; *ii.* municipalities in the Southern regions can get additional investment funding from national and communitarian policies; *iii.* Some municipalities can require larger investments due to specific conditions, such as for instance the morphological characteristics.

re-rerun suggests a strong effect of that can be interpreted as an incumbent advantage. This is saying that mayors rerunning for elections enjoy a large and significant competitive advantage on an average candidate to be mayor. The large effect should not be surprising, and the fact that we find an incumbent 3 to 5 times more likely to win is plausible. Our dataset includes all candidates in an election and not only the most competitive one. So, this is the electoral advantage that an incumbent has with respect to the average challenger, and not to his most competitive one. This is likely to be very large especially in a local election where entry selection is low because campaigning is relatively cheap and some candidates often run to express their opposition to the current mayor more than for having real chances to win.

As for the control variables, the transfers from the central government and the total amount of per capita revenue are positively correlated (although not always statistically significant) with re-election, as expected in these types of studies. Mayors are more likely to get re-elected in municipalities with larger size; further, both the presence of a ballot at the previous election and a close win positively affect the probability of re-election. Finally, the individual characteristics of the mayors (not reported in the table), as expected and consistently with several previous research, show that higher levels of education help re-election.

These two sets of estimates provide quite standard results in terms of the most common factors that are found to be positively associated to the probability of getting re-elected in the empirical literature. In particular, the results about the capital on current plus capital percentages suggest that citizens tend to reward forward-looking expenditure fiscal agenda. This result detects also the presence of rewards for a more efficient and transparent revenue structure, although the lack of statistical significance (possibly due to a considerable drop in the number of observations) requires considering this finding with caution.

We now turn to commenting the estimates reported in columns 2 and 4, in which our explanatory variables are jointly entered in the model with the level of social capital. Here we want to know to what extent the results about how our measures of capital expenditures and property tax incidence are associated with the level of social capital; consistently with our logical framework we would expect the two triple-interaction coefficients to be positive.

By looking at column 2, the coefficient (odds ratio) about capital expenditures incidence, we find an odds ratio of 1.540, significant at the 1 percent level. This confirms that an incumbent mayor in municipalities characterized by larger investments in capital relatively to current

expenditures in the previous mandate is 54% more likely to be reelected in municipalities with higher levels of social capital with respect to non-incumbent candidates. In order to better quantify the overall result, we have calculated the average marginal effect (AME) of capital to current expenditure ratio on the linear prediction of re-election, along different percentiles of social capital (Figure 3). This chart suggests that the effect of increasing capital expenditure shares on the probability of re-election ( $rerun=1$ ) is close to zero for municipalities with a level of Social capital below the 10<sup>th</sup> percentile, while it raises significantly for higher levels of social capital. More importantly is the neat widening gap between the two AME lines presenting, respectively, the AME for first-time candidates ( $rerun = 0$ ) and incumbents ( $rerun = 1$ ). At a low level of social capital, a larger share of capital expenditures in the budget does not seem to give sensibly different predictions in terms of election outcomes between challengers and incumbents. However, as social capital increases, the electorate seems to be more aware of the attribution of the responsibility of spending, and link the merit of the previous forward-looking policy to the candidate who was previously in charge.

This is also evident by looking at the predictive margins reported in Figure 4. For mayors that are seeking re-election ( $rerun=1$ ), for any same level of capital to current expenditure ratio (whose percentiles are reported now on the x-axis), the higher the level of social capital, the higher the reward on the probability of being re-elected. By contrast, for first-time candidates ( $rerun=0$ ) for any level of social capital, there is no sensible effect of a change in the capital to current expenditure ratio.

[Figures 3 and 4 about here]

By looking at column 4, the coefficient associated to the joint effect of property to income tax ratio with  $rerun$  and Social capital is positive, as expected, but not statistically significant. This is also reflected in the AME and in the predictive margins (Figure 5 and Figure 6), where the confidence intervals do not make it possible to interpret the differences in a statistically significant way. However, the predictive margins reported in Figure 6 for the  $rerun$  variable equal to one, show that for low levels of property to income tax ratio makes it is harder to be re-elected in municipalities with a higher level of social capital, while for a high level of property to income ratio Social capital makes no difference. This suggests that

municipalities with high social capital tend to punish a less transparent fiscal policy compared to municipalities with low social capital. Instead, when fiscal policy is highly transparent social capital does not seem to make a difference. The difference slopes of the three lines at the 10<sup>th</sup>, 50<sup>th</sup> and 90<sup>th</sup> percentile also suggests that passing from a less transparent fiscal policy to a more transparent one increases the probability of being re-elected faster in the case of high levels of social capital, i.e. passing from D1 to D9 in a municipality with a level of social capital in the 90<sup>th</sup> percentile gives a boost in the probability of being re-elected equal to 25%; conversely, the same change in a municipality with a level of social capital higher in the 10<sup>th</sup> percentile gives a prize of 10%.

[Table 2 about here]

[Figures 5 and 6 about here]

## 4.2 Robustness: controlling for the electoral cycle

We have argued above about why we deem expenditures associated with capital investment to be a better proxy for measuring a forward-looking fiscal agenda when compared to current expenditures. Yet, we have already reported an opposite line of argument per which capital investment can also be employed in an opportunistic way, for example by starting new infrastructural projects close to the election year. First of all, we noted that current expenditures are the ones commonly used by incumbents to spin consent in a strategic way right before the elections. In this case our estimates would be biased *downwards*, i.e. we should expect a larger impact when controlling for the portion of current expenditures used for political cycle reasons. A point can be made, however, that despite rigorous controls and directives from the Italian central government and the European Union's Stability Pact, some mayors can avoid restrictions on deficit spending by classifying current expenditures as capital ones that are not accounted in the Pact. In this case, a spending composition favouring capital expenditures before elections might hide opportunistic behaviour more than good fiscal policy. To control for the potential bias that opportunistic behaviour close to the election might drive our results, we have performed the same estimates by dropping from our inter-election time spans averages of fiscal measures the year before the election and the year of the election. These results are reported in table 3 and are quite reassuring about the robustness of our results.

[Table 3 about here]

### 4.3 Discussion

Our hypotheses are confirmed, although the evidence is statistically significant only when focusing on expenditures. However, the sign and size of the coefficient estimated when using the revenue composition variable are quite reassuring, being positive and comparable in size to the one obtained for the expenditures. The loss of significance is thus likely to be imputed to the loss of power in our sample due to a large increase in missing data.

Our results show that a forward-looking fiscal agenda in the previous mandate increases the incumbent candidate's competitive edge at high levels of social capital. That is, a budget composition favouring capital account expenditures on current ones is rewarded in terms of votes as social capital increases. This suggests that citizens in municipalities with high level of social capital are more "reactive" to changes in spending policy: policies becoming more forward oriented and more transparent get a higher electoral. This confirms our main hypothesis: higher social capital makes citizens more active in community associations and public discussions and this translates in higher awareness of the behaviour of incumbents and a better appreciation of good fiscal spending. This is particularly true at the local level, where participating actively in local public life, as for instance through neighborhood associations or through public schools, makes it easy to know about the policies carried out by the local incumbents. Our results confirm this intuition and establish a crucial link with the electoral mechanism; hence, mayors who improve local fiscal policy in an environment where citizens are "sophisticated consumers of politics" get a higher prize in terms of re-election.

We discuss two channels related to the connection between social capital and elections to explain the long-term poor performance of governments in the Southern regions of Italy. First, a social environment that does not reward good policy with re-election breaks up the major mechanism identified by political theory to assure efficient political outcomes by aligning the incentives of policymakers to those of the citizens (Downs, 1957). A source of the relatively poor performance of local governments in the South could be the malfunctioning of political competition at the local level and the related vicious cycles this might set in. Clearly, this must be taken cautiously since the Downsian framework could instead hold if voters' in the South find optimal a budget composition that is distant from what we defined a good fiscal policy. However, though we cannot prove it, we feel to doubt this hypothesis. We control for municipal fixed effects, and, given that policy preferences of

the median voter of a municipality are quite sticky to constant through the short time frame we have, the fixed effects approach in the CLOGIT model might well be controlling for this omission. Clearly, further research analyzing both survey data on voters and social capital evolution can further shed light on this point. Another explanation consistent with our evidence is about selection into politics. The decision to enter politics has been modeled at the individual level depending on costs and benefits accruing to the political office (Besley and Coate, 1997; Osborne and Slivinski, 1996). If the virtuous behaviour is not adequately rewarded, self-selection attracts citizens of low quality (Caselli and Morelli, 2004). Moreover, a context in which citizens are not particularly reactive to improvements in the policy agenda is one in which the electoral costs of corruption and rent-seeking are lower, as recently shown in the case of developing countries (Keefer, 2007).

Finally, we discuss our evidence in terms of implications of the policy reforms in Italy enacted since the 1990s. The *leitmotiv* that has inspired this season of reforms is that shifting political responsibilities to the local political class, coupled with more autonomy and fiscal resources, would have resulted in better public policies, ones that are more in tune with the local needs. This is the so-called idea behind the *regionalism* view in Italy, which argues that the local autonomies are sources of local interests and can make the national democracy stronger by allowing the central government to address only policies of national scope. The bottom line is that self-government leads to better public policies when strong linkages between local policymakers and their constituencies are built. While these reforms, well grounded in the theory of fiscal federalism, had achieved good outcomes and improved local governance in several instances, it remains to be seen if this can be extended to the whole country. Our evidence suggests some caution here.<sup>28</sup> If the lack of social capital hampers the establishment of a virtuous circle between the policy makers and the local constituency or worse, if it promotes a vicious one, further regional divergence might be instead the result. However, our analysis is confined to a very short period of time, and future research should explore more in depth this lock-in hypothesis.

## 5 Conclusion

By explicitly including the role of electoral incentives of incumbent politicians, this paper extends the model of *rational voters and competitive elites* proposed by Boix and Posner (1998). If social capital leads to better government because it makes citizens abler and willing to keep incumbents in check, the presence of a direct local electoral mechanism becomes a

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<sup>28</sup> See also Kwon (2013) as a recent contribution on this topic offering a cross-country comparison.

crucial mediating factor of the relationship. In doing so, we contribute to shed light on the much-debated relationship between social capital and a local government's fiscal agenda and performance.

For the empirical section, we built a unique candidate-level dataset about Italy for the 2003-2012 period and find that social capital increases the probability of mayors of being reelected when the spending composition channel measures a more forward-looking fiscal agenda. Our evidence helps explaining why we observe good government associated with social capital and vice versa. Our results suggest also that the positive association between what we defined good fiscal policy and incumbent mayors' re-election chances, emerges as the result of increasing social capital in a community. Hence, on the basis of our empirical results, we can speculate that higher social capital encourages the adoption of good policies since this is more likely to be rewarded by re-election. By contrast, the poor performance of governments in areas with low social capital can be explained by a greater scope for opportunism for incumbents: since good policy does not lead necessarily to re-elections, incumbents can improve their probability of getting reelected by other (less efficient) means that can please their constituencies.

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## Table and figure for the text

Table 1 – sources, definitions, and descriptive statistics

### [A. Sources and definitions]

<i>Source: Local Public Finance Data from OPEN POLIS: <a href="http://www.openpolis.it/eng/">http://www.openpolis.it/eng/</a></i>	
Government Performance	LogCapToCurr: log of capital on the sum of capital plus current expenditures LogPropToInc: log of property on the sum of property plus income taxes
Transfers from central gov. (log per capita)	Log of per capita transfers from the central government
Revenues (log per capita)	Log of total per capita revenues net of transfers
<i>Source: IQI: <a href="https://sites.google.com/site/institutionalqualityindex/home">https://sites.google.com/site/institutionalqualityindex/home</a> See A. Nifo and G. Vecchione (2014), "Do Institutions play a role in skilled migration? The case of Italy", <i>Regional Studies</i>, Volume 48, Issue 10, 2014, pages 1628-1649., to have more information on how these indicators are constructed and on the source information collected to build them.</i>	
Social capital	Index from 0 to 1.
<i>Source: ISTAT: <a href="http://www.istat.it">www.istat.it</a></i>	
Size of the municipality	Number of residents
<i>Source: Italian Ministry of Interior (biographical plus electoral data)</i>	
Elected	Dummy = 1 if the candidate is elected mayor, 0 otherwise
Rerun	Dummy = 1 if the candidate is the incumbent mayor
Close election	Variable measuring closeness of election. It is the log of the percent difference in terms of votes between the winner and the losing candidate with the highest number of votes.
Ballot	Dummy = 1 if the election was resolved at the ballot stage
Education level	Categorical variable measuring the education level attained by the candidate
Types of occupation	Categorical variable measuring the job type of the candidate
Election Year	Categorical variable controlling for major election years (2004, 2009, 2014)

### [B. Summary Stats]

Variable	N	Mean	SD	Min	Max
Capital to current Exp. ratio (log)	48,803	-2.72	0.97	-14.47	-0.1
Property to income Tax ratio (log)	34,596	-0.07	0.14	-5.43	-0.01
Social capital	47,400	0.43	0.17	0.01	1
Transfers from central gov. (log per capita)	48,929	4.81	0.92	-0.17	8.69
Revenues (log per capita)	48,703	5.46	0.62	-1.16	8.33
Size of the municipality	48,988	4.4	1.94	1	9
Close election	50,099	2.63	1.2	-4.35	4.61
Ballot	50,101	0.04	0.19	0	1
Education level	39,443	2.3	0.69	1	3
Types of occupation	41,065	3.43	1.64	1	7
Election Year	50,101	1.74	1.18	0	3

Figure 1

IQI Index -Social capital

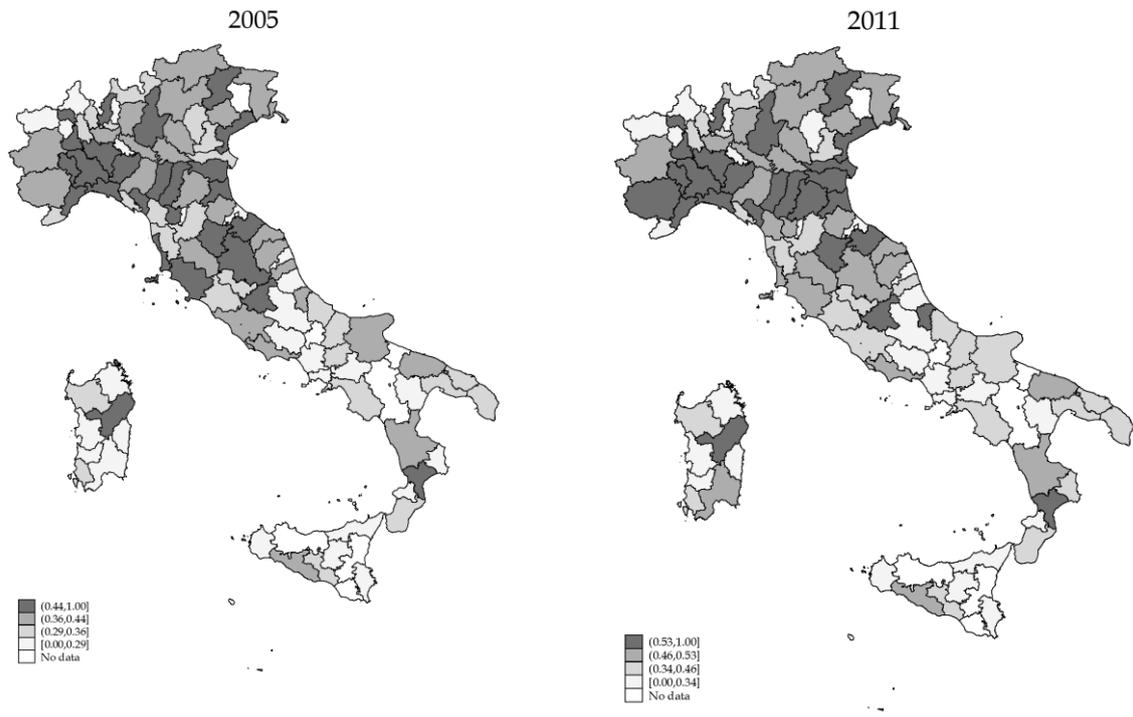


Figure 2

Ratio Capital to Current Expenditures (Logs)  
Average 2003-2012

Ratio Property to Income Tax Revenues (Logs)  
Average 2003-2012

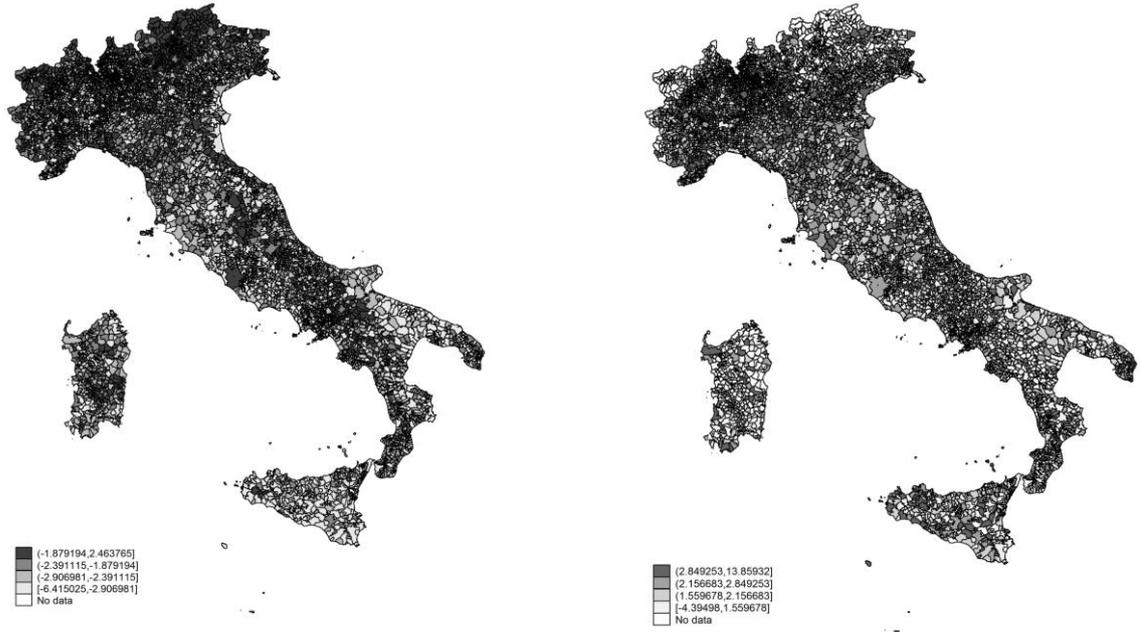


Table 2 – Fiscal performance and re-election, baseline model (Conditional Logit fixed-effects model with clustered standard errors)

CONDITIONAL LOGIT ESTIMATES

Dep. Var is Reelected [=1]

i-Job ii-Education and iii-Election Year Dummies Included

Odds Ratios Reported

VARIABLES	(1)	(2)	(3)	(4)
	Budget Composition/Fiscal Performance			
	Forward Looking.	Forward Looking	Transparency	Transparency
performance	0.995 (0.014)	1.025 (0.025)	1.209** (0.095)	1.101 (0.130)
rerun	5.041*** (0.689)	1.742*** (0.354)	3.138*** (0.293)	1.721*** (0.361)
performance x rerun	1.167*** (0.035)	0.970 (0.045)	1.163 (0.258)	0.918 (0.536)
Social capital		0.359*** (0.076)		0.489 (0.220)
performance x Social capital		0.929 (0.047)		1.565 (0.922)
rerun x Social capital		12.328*** (7.632)		4.264** (2.604)
performance x rerun x Social capital		1.540*** (0.188)		1.314 (2.398)
Transfers from central gov. (log per capita)	0.976 (0.018)	0.975 (0.016)	0.915* (0.041)	0.905*** (0.034)
Revenues (log per capita)	0.948* (0.030)	0.971 (0.031)	0.895 (0.063)	0.924 (0.059)
Size of the municipality	0.955** (0.021)	0.945** (0.023)	0.864*** (0.047)	0.845*** (0.047)
Close election	1.096*** (0.027)	1.096*** (0.028)	1.082*** (0.021)	1.084*** (0.021)
Ballot	2.189*** (0.090)	2.205*** (0.090)	2.318*** (0.192)	2.514*** (0.227)
Observations	37,420	36,442	25,855	24,991

Robust se in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 3 – average marginal effect of capital to current expenditure ratio

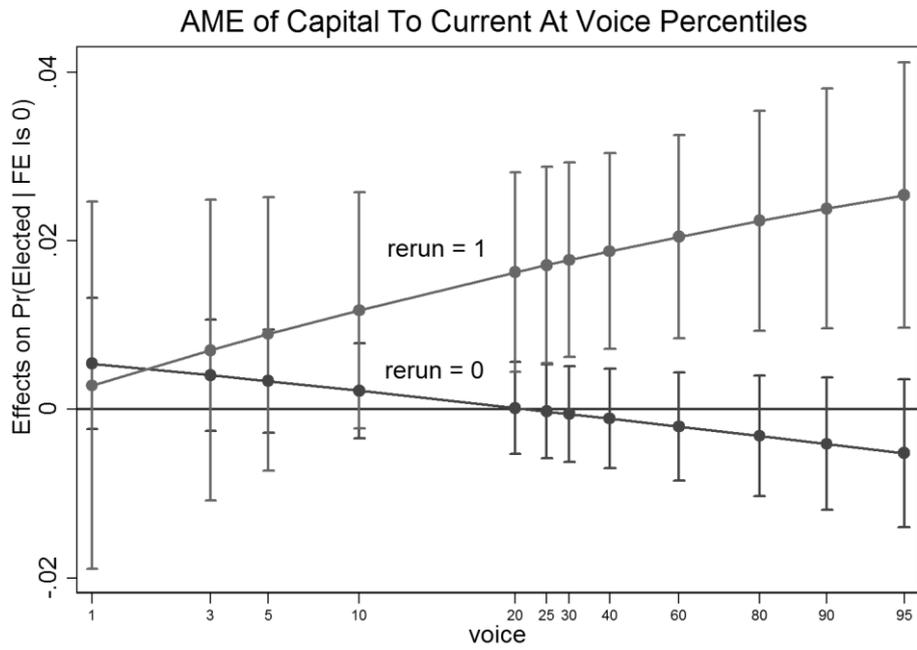


Figure 4 – predictive margins of capital to current expenditure ratio

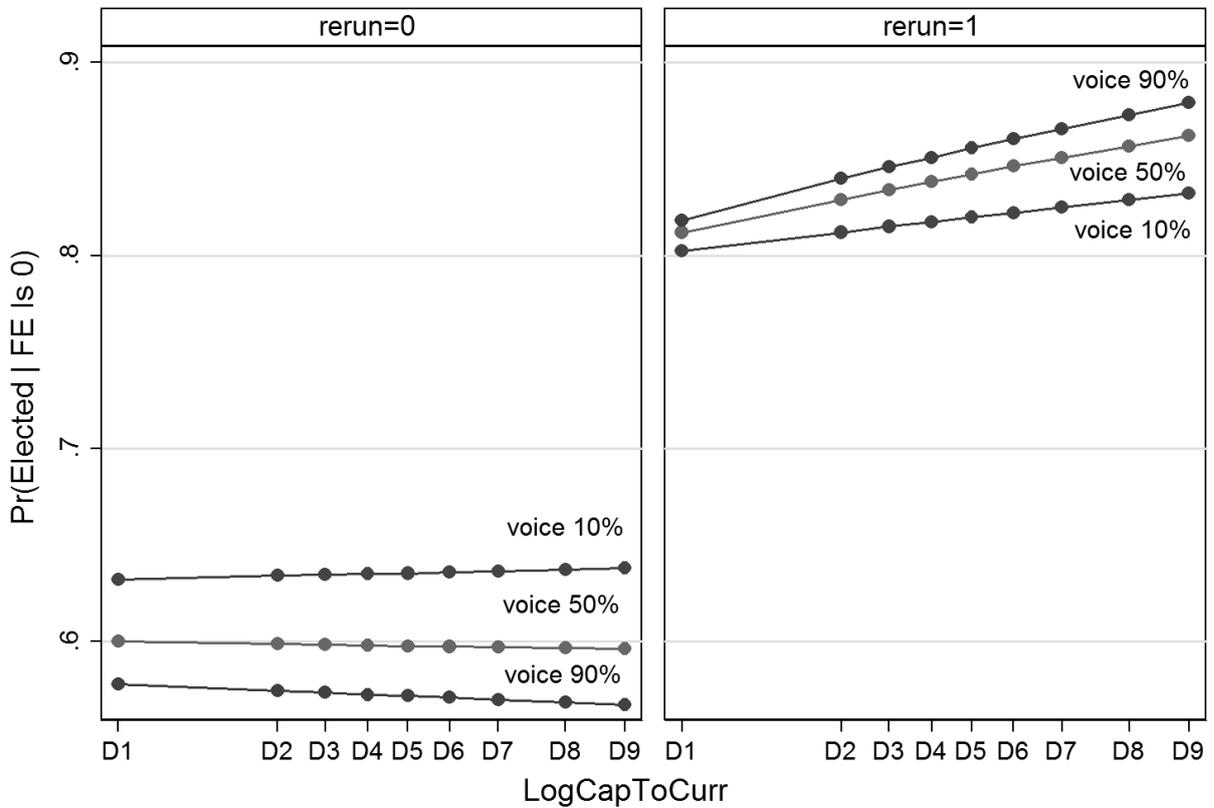


Fig 5 - average marginal effect of property tax to income tax ratio

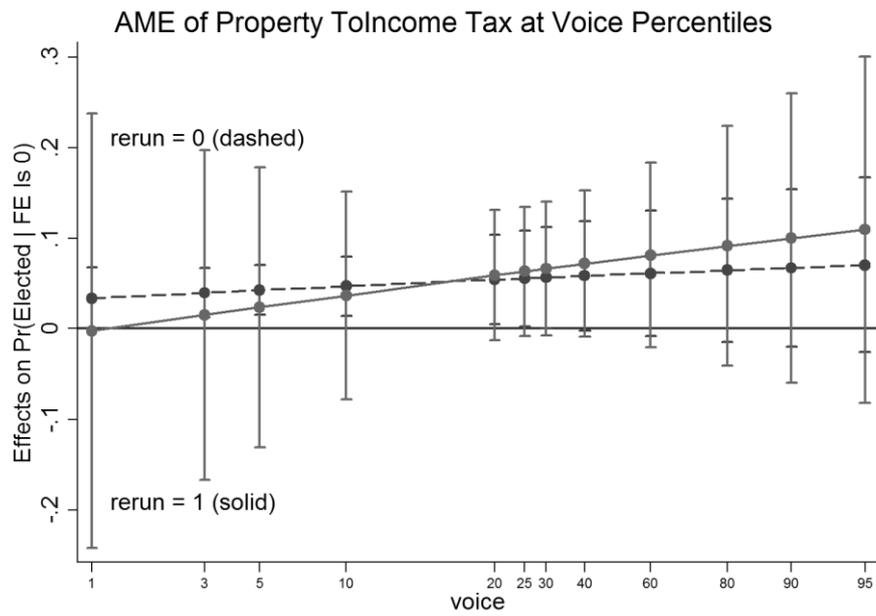


Figure 6 - predictive margins of property tax to income tax ratio

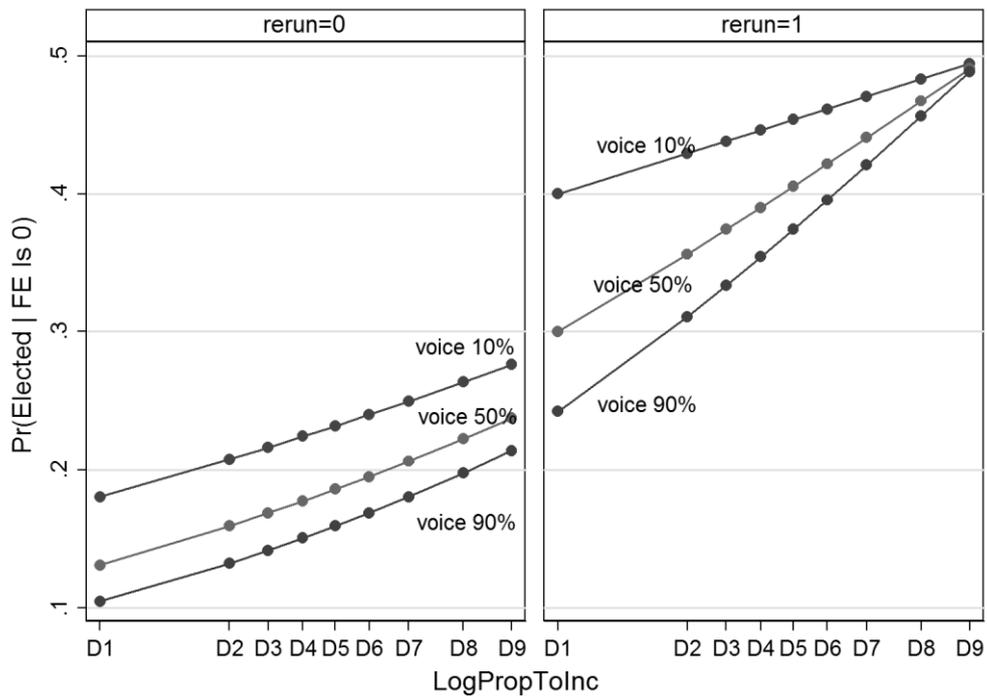


Table 3 - Robustness: fiscal performance and re-election, baseline model excluding (i) election and (ii) previous to election years to control for electoral cycle (Conditional Logit fixed-effects model with clustered standard errors)

CONDITIONAL LOGIT ESTIMATES

Dep. Var is Reelected [=1]

i-Job ii-Education Dummies Included

Odds Ratios Reported

VARIABLES	(1)	(2)	(3)	(4)
	Budget Composition			
	Forward Looking.	Forward Looking	Transparency	Transparency
performance	0.998 (0.016)	1.087*** (0.033)	1.802*** (0.347)	0.891 (0.341)
rerun	3.869*** (0.521)	1.458 (0.379)	2.958*** (0.284)	1.969*** (0.503)
performance x rerun	1.083** (0.039)	0.900*** (0.028)	1.466 (0.366)	1.041 (0.737)
Social capital		0.605 (0.300)		1.507 (2.416)
performance x Social capital		0.814*** (0.056)		5.353 (8.452)
rerun x Social capital		11.642*** (9.347)		3.136 (2.344)
performance x rerun x Social capital		1.578*** (0.220)		2.837 (6.297)
Transfers from central gov. (log per capita)	0.926*** (0.019)	0.947*** (0.014)	0.716*** (0.071)	0.765** (0.088)
Revenues (log per capita)	0.989 (0.059)	1.040 (0.050)	0.604*** (0.111)	0.763 (0.138)
Size of the municipality	1.054 (0.049)	1.038 (0.060)	0.763 (0.157)	0.603* (0.162)
Close election	1.080*** (0.024)	1.073*** (0.026)	1.012 (0.042)	0.990 (0.052)
Ballot	2.285*** (0.112)	2.194*** (0.104)	2.602*** (0.408)	2.265*** (0.303)
Observations	26,889	26,223	15,501	14,963

Robust se in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix

### Baselines

LOGIT ESTIMATES  
 Dep. Var is Reelected [=1]  
 i-Job ii-Education and iii-Election Year Dummies Included  
 Odds Ratios Reported

VARIABLES	(1)	(2)	(3)	(4)
	Budget Composition			
	Forward Looking.	Forward Looking	Transparency	Transparency
performance	0.982 (0.011)	1.010 (0.023)	1.050 (0.054)	1.119 (0.105)
rerun	6.311*** (0.873)	2.013*** (0.483)	3.908*** (0.388)	2.092*** (0.482)
performance x rerun	1.183*** (0.034)	0.961 (0.050)	0.929 (0.224)	0.758 (0.492)
Social capital		0.561*** (0.113)		0.680** (0.119)
performance x Social capital		0.942 (0.042)		0.953 (0.315)
rerun x Social capital		14.883*** (10.595)		4.511** (3.104)
performance x rerun x Social capital		1.625*** (0.216)		1.113 (2.346)
Transfers from central gov. (log per capita)	0.984 (0.012)	0.976* (0.013)	0.984 (0.015)	0.974* (0.015)
Revenues (log per capita)	0.949*** (0.013)	0.962*** (0.013)	0.951*** (0.014)	0.959*** (0.015)
Size of the municipality	0.859*** (0.009)	0.860*** (0.008)	0.864*** (0.009)	0.862*** (0.009)
Close election	1.114*** (0.028)	1.114*** (0.028)	1.102*** (0.023)	1.101*** (0.024)
Ballot	2.134*** (0.086)	2.129*** (0.087)	2.107*** (0.099)	2.118*** (0.110)
Observations	38,240	37,253	26,996	26,116

Robust se in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1