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DISTANCE AND INFORMATION BLURRING IN A
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The closer the better? Institutional distance and information blurring in a political agency model

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Abstract

Government accountability increases with voters' proximity to policy-makers. Decentralization reforms implemented in many countries in the last twenty years are based on this principle. We present a political agency model that challenges this view and shows that the effects of increasing proximity may depend on the institutional context. In particular, the presence of rent-seeking politicians and heterogeneity in voters' political awareness produce three distinct optimal levels of decentralization. Furthermore, optimal distance depends on the capacity of rent-seeking incumbents to blur information available to voters. When the incumbent reacts to increasing proximity with more blurring activity, the optimal distance increases. Accordingly, less decentralization is preferable.

Keywords: government accountability, information, institutional distance, rent-seeking, political awareness

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⁽⁺⁾ The opinions expressed in the present work do not reflect the position of the OECD or its member Countries.

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1. Introduction

The wave of decentralization reforms started in the 90s in many advanced economies (OECD/KIPF, 2016) is based on the idea that decentralized political systems, by lowering the “distance” between citizens and politicians, increase information about economic conditions available to voters and make it easier to hold politicians accountable for their choices. Decentralization or, more broadly, government’s proximity to its people (Ivanyna and Shah, 2014) is often associated with efficiency gains (Weingast, 2009), citizens’ trust in government related institutions (Ligthart and van Oudheusden, 2015), more responsible fiscal management (Oto-Peralías et al., 2013), better governance (de Mello and Barenstein, 2002; Fisman and Gatti 2002; Fiorino et al. 2013). As a result, the quantity and quality of public goods is expected to increase with voters’ proximity to politicians.

However, an oft-cited argument is that the advantages of increasing proximity between citizens and politicians depend on the institutional and political context (Rodden, 2006; Enikolopov and Zhuravskaya, 2007; Treisman, 2007; Fan et al., 2009; Goel et al., 2017). For instance, local policy-makers may be captured by local interest groups (Bardhan 2002; Bardhan and Mookherjee, 2000, 2006a, 2006b).¹ Besides capture, the benefits of proximity may be hindered by the competence of local politicians and bureaucracies to deal with new (and usually more complex) administrative tasks (Prud’homme, 1995).

A still open issue is why in decentralized political systems, where the government is close to voters, the electoral mechanism is often ineffective to replace corrupted politicians or induce them to “behave”. In fact, the quality of the information necessary to select benevolent politicians and discipline the rent-seeking ones does not depend only on proximity but also on the voters’ awareness of the political process and the incumbents’ ability to distort such information. People might not have the same ability and willingness to access and develop

¹ In the context of pre-colonial tribes in Sub-Saharan Africa, Gennaioli and Rainer (2007) confirm that decentralization can work only in the absence of local political capture by powerful local groups.

information about the political decision-making process, due to their education, social capital, and civic engagement level, as well as the possibility of acquiring information directly by media and newspapers (Lupia, 1994; Krause, 1997; Stromberg, 2004; Gentzkow, 2006; Ponzetto and Troiano, 2014). At the same time, the incumbent government may be interested in affecting the available information through media. For example, politicians can buy some space in newspapers or television channels in order to send distorted political messages (Bruns and Himmler, 2010; Snyder and Stromberg, 2010; Di Tella and Franceschelli, 2011).

To account for these elements and how they affect the optimal level of institutional distance, we develop a retrospective voting model (Barro, 1973; Ferejohn, 1986; Persson et al., 1997; Besley 2006), where politicians are either benevolent or rent-seeker, voters are heterogeneous in their capacity to process information, and such information is affected by politicians themselves. We abstract from selective rent diversion (Ashworth et al., 2017), assuming a single region model where the degree of centralization and government accountability are captured by the voter-politician distance. The incumbent has private information about the production costs of the public good. If benevolent, she supplies the highest amount of public good compatible with tax revenues and the cost of production. If rent-seeker, she may alternatively provide the minimum level of public good and pocket most of tax revenues – thus revealing herself as rent-seeker and losing elections –, or may disguise herself as a benevolent politician and grasp the maximum rent in the next period – the last period in office. Citizens decide to vote for the incumbent or the challenger according to their beliefs about the congruity of the amount of public good provided (observed) and the cost of production (unobserved). Beliefs on the cost of the public good are based on a private noisy signal, whose noise increases with the distance to politicians, the blurring of information generated by the incumbent, and an individual-specific bias representing the voter's level of

political (un)awareness – i.e. her ability to infer the actual cost of the public good from the signal.

Our model shows that decentralization does not always improve public goods provision and welfare. For given tax revenues, the amount of public good provided by a rent-seeking politician is above the minimum feasible level only if the (institutional) distance from voters is above a certain threshold, otherwise the incumbent prefers to provide the minimum level of public good, pocket the full rent, and forego any chance of being re-elected. The existence of such a threshold is due to the following mechanism. The greater accountability of governments engendered by their closeness to voters compel “bad” incumbent politicians to give up part of extractable rent and provide more public good in order to be re-elected (i.e. a discipline effect is at work). However, when distance is small enough to make the rent too low, bad incumbents prefer to be not re-elected, grab the maximum rent at citizens’ expense while in office, thus allowing voters to get rid of them in the next election (i.e. a selection effect prevails). We show that the distance threshold increases with the awareness of the median voter and the cost of blurring information.

Second, the blurring activity of the incumbent government makes the relationship between distance and public good provision not univocal even when the distance is above the threshold. If the relative quality of local institutions is sufficiently high such that the marginal effectiveness of blurring is lower (or not much stronger) at the local than at the central level, then the amount of public good provided by a rent-seeking incumbent increases when institutional distance decreases. However, if the quality of institutions is worse at the local than central level, so that the effectiveness of blurring is strongly decreasing with distance from voters (i.e., it is much lower at central level), then the provision of public goods monotonically increases with distance and it is maximum in fully centralized political systems.

The distance that maximizes citizens' welfare depends not only on the non-monotonic relationship with public good provision due to the presence of rent-seeking politicians, voters' heterogeneity, and blurring, but also on the likelihood of selecting a benevolent politician when voting for the entrant. The optimal distance increases with the share of rent-seeking politicians in the economy and the cost of blurring, while it decreases with the awareness of the median voter. In particular, two scenarios may occur. A first scenario is when most politicians are benevolent. In this case, the selection effect is more beneficial than the discipline effect and proximity to voters (e.g., more decentralization) makes it too costly for rent-seeking incumbents to be re-elected. A second, opposite scenario occurs when many politicians are rent seekers. In this case, the discipline effect of voters' proximity may prevail on the selection effect, the optimal distance be higher than in the previous case and depend on the reaction of politicians to distance, i.e. the cost-effectiveness of blurring.

As a corollary, decentralization reform may have asymmetric effects within a federation of states or even in a single country, as it may benefit some jurisdictions and harm others, depending on their institutional features. This is consistent with Boffa et al. (2016), who show that government centralization is more likely to be optimal, with respect to decentralization, when voters' information across regions is more heterogeneous and politicians' ability less variable.

Our paper contributes to the literature on political agency by studying how information is affected by voters' political awareness and the incumbents' action of blurring. The possibility that the incumbent politician affects the information received by citizens is a relatively unexplored issue.² A notable exception is Besley and Prat (2006), where the incumbent can capture media outlets in order to prevent the disclosure of unfavourable information about

² This idea has been analyzed in the context of agency contracts, when the agent can lie to the principal. (e.g., Lacker and Weinberg, 1989; Maggi and Rodriguez-Clare, 1995). In our setting, the role of the contract is played by the electoral system, which we assume as given.

rent-seeking practices.³ In our paper, the level of blurring is a continuous choice variable for rent-seeking politicians, which is affected by the institutional setting and citizens' political awareness. Similarly, not much attention has been paid to the ability of voters to process public information, as in most of the literature information is taken as given and assumed to be the same across voters (Besley, 2006).

Our analysis is also related to the literature on the effects of the electoral accountability on the delivery of public services. In particular, Seabright (1996) analyze the discipline effect of elections in an n -region political system with identical corrupt or incompetent politicians. He shows that centralized electoral contests (with one winner) can restrain politicians from rent-diversion more than decentralized ones (with n winners). Hindriks and Lockwood (2009) jointly analyze the discipline and selection effects of elections when politicians are not universally corrupted. Like in Seabright (1996), national elections allow for selective rent diversion, such that bad politicians have to mimic benevolent politicians only in a majority of regions to get re-elected. Therefore, with centralized elections the opportunity of selecting good politicians is higher or lower than with decentralization, depending on how likely is to extract high rents in each region and how politicians discount future rents. The trade-off between discipline and selection mechanisms is also analyzed in Ashworth et al. (2017), who show that if politicians' effort and competence are substitutes to public goods provision, increasing their effort reduces the capacity of voters to infer the exact quality of politicians in office, from observing the amount of public good actually delivered. As a result, greater accountability reduces the selecting power of elections, and may decrease citizens' welfare. Finally, Smart and Sturm (2013) focus on elections as the main instrument through which voters can hold politicians accountable in presence of term limits. They show that, despite the

³ Bruns and Himmler (2010) provide empirical evidence of "blurring", i.e. politician who direct more funds to areas close to media centres, based on US county-level data, while Snyder and Stromberg (2010) find that the press coverage of American local congressmen depends on the congruence between the newspaper's market and the congressional district.

disciplining effect of elections, term limits can be ex-ante welfare improving from the perspective of voters as they can induce politicians to implement policies that are closer to their private preferences, by reducing the value of holding office.

The rest of the paper is organized as follows. Section 2 presents some empirical facts motivating our model. Section 3 builds up the theoretical framework. Section 4 is devoted to study equilibrium, while Section 5 provides a welfare analysis. Section 6 discusses the results and their policy implications. Finally, Section 7 concludes.

2. Decentralization, public services and quality of institutions: cross-country evidence

The hypothesis that decentralized political systems can have a positive or negative impact on public good provisions according to the quality of local institutions is not new in the literature on federalism. However, this hypothesis has been scarcely investigated empirically, and it has been mostly referred to developing countries.

Two recent exceptions are Adam et al. (2014) and Beraldo et al. (2017). The former consider the efficiency of public sector in delivering education and health services in 21 OECD countries between 1970 and 2000 and show that it is associated with the degree of decentralization by an-inverted U-shaped relation. Most closely related to our analysis, Beraldo et al. (2017) provide evidence supporting the view that the quality of institutions does matter in determining the outcome of decentralization in Italian municipalities over years 2003-2011. Specifically, they show that municipal governments captured by criminal Camorra-type organizations are irresponsive, in terms of public services provision, to incentives stemming from decentralization.⁴

⁴ In a similar fashion, Daniele and Dipoppa (2017) study how and why criminal organizations use violence against Italian local politicians finding that the probability of being a target of such violence increases in areas where organized crime is very visible, which led to the appointment of a new local government.

To motivate our theoretical analysis, in this section we provide new correlations highlighting the heterogeneous relationship between voter-politician proximity and the amount of locally provided public services, contingent to the quality of institutions. The analysis is based on a panel of 31 countries, mostly advanced economies, over a long time period, 1980-2012.⁵ We estimate the following equation:

$$PUBSER_{it} = \beta_0 + \beta_1 CLOSE_{it} + \beta_2 QUALINST_{it} + \beta_3 (CLOSE_{it} \cdot QUALINST_{it}) + \sum_{j=1}^n \gamma_j CTRL_{jit} + \alpha_i + \tau_t + \varepsilon_{it} \quad (1)$$

where $PUBSER_{it}$ is the amount of a representative public service typically supplied at the sub-national level. In particular, we consider the number of hospital beds per 1,000 inhabitants (source: World Bank, 2015), inasmuch as health is one of the most important types of decentralized services (Letelier, 2005; Shelton, 2007; OECD, 2013; Sacchi and Salotti, 2016).⁶

$CLOSE$ captures the institutional proximity between citizens and politicians within the country, and it is measured by the number of sub-national governments (e.g., regions, provinces, communities, cantons, counties, departments, länders, states, etc.) over 100,000 inhabitants.⁷ Accordingly, higher (lower) values of this index account for a lower (higher) distance between governments and voters. The rationale for $CLOSE$ capturing decentralization follows the so-called “fragmentation hypothesis” (Brennan and Buchanan,

⁵ The list of countries is: Albania, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Lithuania, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

⁶ Even though sub-national governments are normally engaged in diverse public functions depending on the institutional arrangement, healthcare is consistently the most important for the local spending structure, especially in more decentralized countries. In that case, the most relevant tasks refer to basic healthcare and hospitals provision. Regardless of the financing system (e.g., based on either intergovernmental grants or own tax revenues), such programs are usually spent locally.

⁷ According to the seminal contribution by Riker (1975), we consider a sub-national government as the government of a coherent territorial entity of a certain size situated lower national levels with capacity for authoritative decision making. We take advantage of official countries’ reports and Administrative Divisions of Countries database to build our $CLOSE$ variable.

1980).⁸ More generally, when measuring decentralization, the literature argues that many level of governments should exist to guarantee that each policy would be matched to the right geographic unit (Treisman, 2007; Blume and Voigt, 2011; 2012). However, beside the number, the size of sub-national governments in terms of population and area served should be also considered since these two elements have a bearing on potential participation of citizens in the decision-making process (Nelson, 1986; Arikan, 2004; Goel and Nelson, 2011; Ivanyna and Shah, 2014).

The other key variable is *QUALINST*, accounting for the quality of institutions. It is measured by the diffusion of political corruption (for a similar approach see also Shi and Svensson, 2006), which is referred to many types of corruption covering different areas and levels of the political and administrative realm (e.g., bribery, theft, abuse of power, kickbacks, misappropriation of public funds and state resources).⁹ It runs from less corrupt to more corrupt as built by Coppedge et al. (2015). Hence, higher values of *QUALINST* are associated to lower quality of institutions. For robustness purposes, we also use a public sector corruption index (namely *QUALINST_2*), which captures the corruption in the public sector both at large and in particular aimed at influencing law making and implementation.

The interaction term between *CLOSE* and *QUALINST* allows for the effect of proximity between politicians and voters to be heterogeneous and depend on the quality of institutions (e.g., less or more corrupted, stronger or weaker). In order to gauge the overall effect of *CLOSE* on the supply of public services, we consider $\frac{\partial PUBSER_{it}}{\partial CLOSE_{it}} = \widehat{\beta}_1 + \widehat{\beta}_3 \cdot QUALINST_{it}$, calculated at different values of *QUALINST*.

⁸ Accordingly, a higher number of local governments corresponds to more decentralized political systems. The intuition of the fragmentation hypothesis is that potential fiscal exploitation due to the Leviathan central government varies inversely with the number of competing governmental units in the inclusive territory.

⁹ In detail, the index is based on how pervasive political corruption is.

As for the controls, we include a set of economic, demographic and geographic variables potentially affecting the amount of health services: real GDP; working age population (i.e. population aged 15-64 as a percentage of total population); population density (i.e. people per squared km of land area); urban population (as a share of total). Control variables are taken from the World Bank (2015) and Penn World Table 8.0 (Feenstra et al., 2015). Descriptive statistics and definition of variables are included in Table A.1 in the Appendix. Finally, we include both country (α_i) and time fixed-effects (τ_t) in order to control for country-specific unobserved factors (e.g., constitutional features) and common shocks (e.g., global crisis); ε_{it} is the error-term. We use the Within estimator in order to exploit the variability over time, with robust standard errors.

Estimation results from equations (1) are reported in Table 1. We start with the most parsimonious models where only the key variables are included (*CLOSE* and *QUALINST*), then we add controls and the interaction term. Looking at the coefficient on *CLOSE* across specifications, we note a positive and statistically significant correlation between institutional proximity and the amount of health services locally provided.¹⁰

[Table 1 here]

However, this positive relationship is contingent on high quality of institutions. Specifically, we observe negative and statistically significant coefficients on the interaction term *CLOSE*·*QUALINST*. Therefore, the marginal effect of *CLOSE* on *PUBSER*, i.e. $\widehat{\beta}_1 + \widehat{\beta}_3 \cdot \text{QUALINST}$, is positive when political corruption is low while it becomes negative in countries where the quality of institutions is poor. As reported at the bottom of Table 1, for

¹⁰ Similar findings of various forms of decentralization having positive effects on health services are provided by Habibi et al. (2003) for Argentina; Jimenez-Rubio (2011a,b) for Canada and OECD countries respectively; Cantarero and Lago-Penas (2012) for Spain; Porcelli (2014) for Italy.

countries at the median of *QUALINST* distribution, a stricter proximity between voters and politicians has beneficial effect on the provision of health services. By contrast, in countries at the 75th and 90th percentiles of *QUALINST* distribution, i.e. with higher values of political corruption, more decentralization of the government system is associated with lower levels of health services.¹¹ Same findings are obtained when considering the second indicator of institutions' quality (*QUALINST_2*) used in columns (5) and (6).

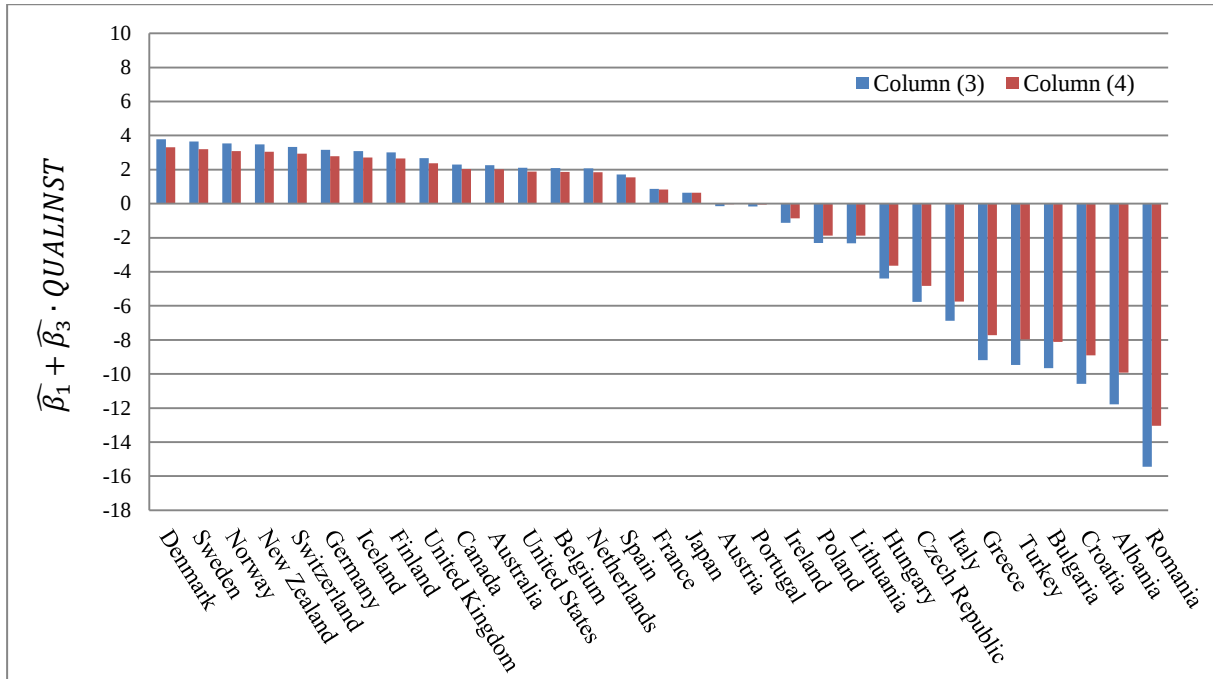
To further illustrate the overall effect of *CLOSE* on *PUBSER* depending on institutional quality across countries in our sample, we calculated such effect by using the mean value of *QUALINST* over the whole period (i.e. 1980-2012) for each country. Figure 1 depicts the results when the estimated coefficients $\widehat{\beta}_1$ and $\widehat{\beta}_3$ are those got in columns (3) and (4) of Table 1. Interestingly, we note that Northern European countries and other non-EU advanced economies show positive values of $\widehat{\beta}_1 + \widehat{\beta}_3 \cdot \text{QUALINST}$, while Southern and Central Eastern countries mostly have negative ones. Italy represents a relevant example suggesting that, regardless of its level of development which is higher than that in Romania and Albania, *the closer* might not be *the better* in the presence of weak and corrupted institutions.

Although what we show may be considered only as a controlled correlation among our key variables, and not a causal relationship, this evidence is consistent with the idea that the virtuous effect of voters' proximity to governments should not be taken for granted, as it varies with the average quality of institutions, public sector and politicians. Increasing proximity yields, indeed, positive results for public services provision only when it is combined with strong institutions, e.g., with lower degrees of political corruption. On the

¹¹ For the sake of completeness, we also calculated the marginal effect of *QUALINST* on *PUBSER* for different values of *CLOSE* for columns (3)-(6). Only for lower values of *CLOSE*, the overall effect of *QUALINST* on *PUBSER* is positive, when it is statistically significant. For increasing values of *CLOSE*, the overall effect of *QUALINST* on *PUBSER* turns out to be negative and statistically significant across specification. We do not report these calculations in Table 1 (they are available upon requests). Although the relationship between quality of institutions and public services provision is not the core of the paper, this result reveals that the diffusion of political corruption is welfare-decreasing especially when weak governments stand so close to citizens. This suggests more complex analyses on the advantages and drawbacks of the voter-politician proximity.

other hand, the negative outcome, i.e. a lower supply of public services, associated to higher proximity is basically driven by adverse political conditions that usually occur when the quality of the institutional environment is weak and/or when rent-seeking politicians are more prone, for instance, to distort information to citizens thanks to such higher proximity.

Figure 1 – The overall effect of *CLOSE* on *PUBSER* by country (mean, 1980-2012)



In a nutshell, the stylized facts we reported seem to confirm that the relationship between voter-politician proximity and local public goods provision is not univocal. More importantly, the shape of such relationship mostly depends on the quality of institutions, usually encompassing several aspects such as the nature of politicians, their possibly rent-seeking and information blurring behaviour, and the quality of voters who can be differently aware of the political system. In the following sections we build a theoretical model consistent with these empirical findings by taking into account all these issues.

3. The model

We consider a two-period economy, $t = 1, 2$, where an election takes place at the end of period 1. The electoral competition is between the incumbent government and a challenger. In order to be elected, candidates must get the majority of votes. In each period, the government in office collects tax revenues $T \geq 0$, which are exogenously determined and identical in the two periods, and provides an amount of public good $G_t \geq 0$ at the unit cost $\theta_t > 0$, randomly drawn by Nature, and identically and independently distributed in the two periods. The value of the public good is publicly observable. The institutional setting forbids the possibility to run public deficits, such that $\theta_t G_t \leq T$ must hold in both periods.

There is a continuum of citizens of measure 1. In each period, citizens gain utility from the public good, net of taxes they pay. Since the level of taxation is exogenously given, and the value of θ is determined by Nature, citizens' welfare can be more simply written in terms of the amount of public good available in the two periods, $W = G_1 + \delta G_2$, where $\delta \in [0,1]$ is the discount factor. Therefore, citizens' welfare in period t is maximized when the whole amount of tax revenue is used for the public good provision:

$$G_t = \frac{T}{\theta_t} = G_t^* . \quad (2)$$

While the tax revenue T is assumed to be the same in the two periods, the optimal amount of public good is not necessarily the same over time because it depends on the realization of the cost variable θ_t in each period.

The actual value of θ_t is observed only by the incumbent government, whence an information asymmetry between citizens and politicians arises: each voter i only receives a noisy signal s about the cost of public goods provision:

$$s_i = \theta_t \alpha_i z(x, d) \quad (3)$$

The noisiness of the signal $\alpha_i z(x, d)$ is determined by an idiosyncratic factor capturing the individual voter's political *unawareness* $\alpha_i \geq 0$, and an aggregate bias $z(x, d) \geq 1$, induced by a parameter $d \in (0, D)$ representing the institutional distance between voters and politicians, and the actions $x \geq 0$ that incumbent politicians may purposely carry out to blur information available to citizens, with $z_x > 0$, $z_{xx} \leq 0$, $z_d > 0$ and $z(0,0) = 1$.

Political unawareness, accounting for the heterogeneity of voters' information about public policies, is assumed to be randomly distributed across voters. The value of α_i is defined by the voter's sceptic or credulous attitude with respect to politicians and political life. Sceptical voters tend to systematically underestimate the true unit cost of the public good ($\alpha_i < 1$); while credulous voters are inclined to overestimate the value of θ ($\alpha_i > 1$).

The distance parameter d captures the degree of centralization in the decision-making process and the distance between policy-makers and voters. The more public decisions are centralized (i.e. the larger d), the harder is for citizens to acquire reliable information about the true value of θ_t . Blurring information by the incumbent government adds to the bias produced by distance and aims at affecting voters' beliefs by inducing them to overestimate the true cost of public good, so as to get a rent and still be re-elected. Equation (3) assumes that the overall effect of bias $z(x, d)$ on the signal depends on voters' unawareness α_i , which may amplify ($\alpha_i > 1$) or, to some extent, offset ($\alpha_i < 1$) the distortion to make s_i greater or even lower than θ_t .

Voters know that the signal they receive may be noisy but do not know the distribution of α_i or, what is broadly equivalent, they view themselves as aware citizens, neither

systematically sceptical nor gullible. As a consequence, the belief of voter i about the cost of public good is exactly equal to the received signal s_i .

Unlike citizens, politicians know the distribution of α_i across voters, and in particular the median value of α_i . The idea is that politicians are able to form an opinion fairly accurate as to what is the actual distribution of political awareness of the electorate, due to their continued political activity, recurrent opinion polls on political preferences and participation in electoral campaigns. Politicians may be of two types: benevolent (b) or rent-seekers (r). It is common knowledge that the share of benevolent politicians is $\beta \in [0,1]$, and the share of rent-seekers is $(1 - \beta)$. Benevolent politicians maximize citizens' welfare, and provide a level of public good consistent with the whole amount of tax resources collected and its cost. By contrast, rent seekers try to strategically pocket part of tax revenue by claiming higher costs of production, thus providing a level of public good lower than the optimal one. Their payoff is given by the amount of tax revenues that they can divert in each period.

The timeline of the political game is as follows:

$t = 1$: the value of θ_1 is observed by the incumbent politician; she decides the amount of blurring action to carry out x , and the level of public good to supply G_1 ; payoffs of period 1 are realized.

$t = 2$: each voter i observes G_1 and the signal s_i about the unit cost of production θ_1 , forms an expectation about the incumbent politician's type, and decides whether to re-elect the incumbent or vote for the challenger; the elected politician observes θ_2 and decides the amount of public good G_2 ; payoffs of period 2 are realized.

The set of strategies of the incumbent politician is the amount of public good for each period (G_1, G_2) , given the level of taxation T , the median voter's awareness α_m , the discount factor δ , and the unit cost of public good (θ_1, θ_2) . The set of strategies of the voter consists of voting for the incumbent or the challenger, given G_1 and the signal s_i .

4. Equilibrium

The equilibrium consists of strategies of players in period 1 and 2 that are best responses and consistent with voters' expectations about the cost of the public good θ_t . Proceeding by backward induction, we first consider strategies and payoffs in the last period.

In the second legislature, the dominant strategy of benevolent politicians is $G_2^b = G_2^* = T/\theta_2$. Rent-seeking politicians also have a dominant strategy. Indeed, if they are in office, they would pocket all the tax revenues without providing any public good, i.e. $G_2^r = 0$. Therefore, in the second period the amount of public good is either optimal or zero respectively if a benevolent or a rent-seeking politician is in office.

At the beginning of period 2, voters observe G_1 and the signal s_i , and express their electoral preferences. Given the amount of public good provided in the first period and the signal received, each voter decides whether to vote for the incumbent or the challenger. In this framework, voting is purely retrospective, as screening challengers is impossible for voters.

Let $\hat{G}_i = T/s_i$ be the amount of public good that the voter i expects to obtain based on the signal of the production cost of G she receives. Since voters do not know the distribution of α_i , the optimal voting rule is to confirm the incumbent politician if she provides not less than the amount of public good consistent with their expectations on θ_t , and vote for the challenger otherwise:

$$v_i = \begin{cases} \text{vote for the incumbent if } G_1 \geq \hat{G}_i \\ \text{vote for the challenger otherwise} \end{cases}$$

Under the majority rule, the incumbent politician is re-elected if $G_1 \geq \hat{G}_i$ for (more than) half of the population, that is she is re-elected if:

$$G_1 \geq \hat{G} = \frac{T}{s_m} = \frac{T}{\theta_1 \alpha_m z(x, d)} \quad (4)$$

where the subscript m identifies the median voter.

Condition (4) provides some interesting insights on the role of voters' heterogeneity. In general, s_m may be greater, equal or lower than θ_1 depending on whether the noise is greater or less than 1. Two broad scenarios may occur.

First, if $\alpha_m z(x, d) \leq 1$, the amount of public good necessary for politician to be re-elected is not lower than $G_1^* = T/\theta_1$ (i.e. the highest feasible amount), and given the tight budget constraint and the impossibility of running a deficit, any incumbent (either benevolent or rent seeker) supplying less than G_1^* will never be re-elected. In this case, elections work neither as a selection nor as a discipline mechanism, and the challenger is always selected over the incumbent.

Second, if $\alpha_m z(x, d) > 1$, the median voter overestimates the public goods' production costs. In this case, the amount of G_1 necessary to be re-elected is lower than the maximum feasible amount, leaving the possibility for rent-seeking politicians to extract some rent and be re-elected. Thus, elections represent a twofold mechanism to select politicians and discipline them.

As the latter is the most interesting case, in the rest of the paper we will focus on it, by assuming that $\alpha_m > 1$, which ensures $\alpha_m z(x, d) > 1$ regardless of distance and blurring. If $\alpha_m > 1$, a benevolent incumbent will always be re-elected as she would implement the maximum feasible level of public good $G_1^b = G^* > \hat{G}$.

On the other hand, a rent-seeking incumbent has two strictly un-dominated strategies at time $t = 1$:

(i) a “hit and run” strategy (henceforth H-strategy), consisting in grabbing the maximum rent in the first period and revealing to be a rent-seeker (as it implies the provision of a public good amount $G_1^{r,H} = 0$).¹² This implies a payoff for the incumbent equal to:

$$U^H = T \quad (5)$$

(ii) an “election” strategy (henceforth E-strategy), consisting in pooling with the benevolent type by providing the amount of public good necessary to be re-elected and then pocketing the rent in the second period. Thus, the E-strategy implies $G_1^{r,E} = \hat{G} = T/s_m$ and $G_2^r = 0$, and a payoff for the incumbent:

$$U^E = (T - \theta_1 \hat{G} - cx) + \delta T = (1 + \delta)T - \frac{T}{\alpha_m z(x,d)} - cx \quad (6)$$

where $c > 0$ is the unit cost of blurring information.

Equations (5) and (6) make it clear that a rent-seeking incumbent faces a trade-off between getting the whole rent today but giving it up tomorrow, and foregoing some rent today in order to get the full rent in the second period. Notably, the choice between E- and H-strategy is based on whether $U^E - U^H = \delta T - \theta_1 \hat{G} - cx \geq 0$, and driven by many factors: some taken as given (e.g., distance, political awareness, the cost of blurring, the discount rate) and others endogenous, such as the choice about how much to blur information.

Since the bias $z(x, d)$ is non-convex in blurring action x , optimal blurring is determined by maximizing the payoff under the E-strategy in Equation (6). The first order condition for an

¹² Since in real world some expenses cannot be reneged without breaking the law, the incumbent government can at most get away with the difference between tax revenue and what is strictly prescribed in the law. Our H-strategy represents the case in which the prescription of the law is normalized to zero.

interior solution equalling marginal benefit and marginal cost of blurring is implicitly given by the value x^* solving:

$$\frac{Tz_x}{\alpha_m[z(x,d)]^2} = c. \quad (7)$$

Given the second order condition $(T/\alpha_m)[(z_{xx}z(x,d) - 2z_x^2)/z(x,d)^3] < 0$, then x^* is a global maximum for U^E . Once plugged x^* into (7), the best strategy for rent-seeking politicians is derived by comparing the maximum extractable rents under H- and E-strategy. Summarizing:

Proposition 1. The equilibrium consists of the following strategies: (i) in any period t , benevolent politicians provide the maximum feasible amount of public good $G_t^b = T/\theta_t$; (ii) in $t = 1$, rent-seeking politicians provide $G_1^{r,E} = \hat{G} = T/\theta_1\alpha_m z(x^*, d)$, if $z(x^*, d)(\delta T - cx^*) \geq T/\alpha_m$, or $G_1^{r,H} = 0$ otherwise; in $t = 2$, they provide $G_2^r = 0$; (iii) at the beginning of the second period, voters re-elect the incumbent if $G_1 \geq \hat{G}$; otherwise the challenger is elected.

As shown by equation (7), optimal blurring depends on institutional distance, voters' political awareness and the unit cost of blurring. Applying the implicit function theorem on (7):

$$\frac{\partial x^*}{\partial d} = \frac{z_{xd}z(x,d) - 2z_x z_d}{2z_x^2 - z_{xx}z(x,d)} \gtrless 0 \quad (8)$$

$$\frac{\partial x^*}{\partial \alpha_m} = -\frac{z_x z(x,d)}{\alpha_m[2z_x^2 - z_{xx}z(x,d)]} < 0 \quad (9)$$

$$\frac{\partial x^*}{\partial c} = -\frac{\alpha_m z(x,d)^3}{T[2z_x^2 - z_{xx}z(x,d)]} < 0. \quad (10)$$

When voters are politically unaware, rent-seeking politicians have a lower need to blur information in order to extract a rent from taxes and be re-elected. Therefore, they spend fewer resources on information blurring activity. Similarly, when blurring activities are costly, the optimal information blurring is unambiguously lower. By contrast, the effect of voter-politician distance on the optimal blurring effort is uncertain. It depends on how x and d interact in affecting the noisiness of the signal received by voters: if $z_{xd} < 2z_x z_d / z(x,d)$, then $\partial x^* / \partial d < 0$; otherwise, $\partial x^* / \partial d > 0$. Intuitively, an increase in distance tends in itself to reduce the need to blur information; so, if the marginal effectiveness of blurring decreases with d (because, for example, local media are less effective in checking and balancing political power or because they are more easily manipulated by politicians) – or even if it weakly increases – rent-seeking politicians spend less in centralized political system to blur information. On the other hand, if the effectiveness of blurring strongly increases with the distance, greater centralization leads to a larger recourse to blurring activities.

From Proposition 1, the provision of public goods by rent-seeking incumbents depends on optimal blurring. Hence, the impact of changes in distance, political unawareness and blurring costs on $G_1^{r,E} = \hat{G}$ may be worked out by differentiating equation (4), and substituting from (8), (9) and (10):

$$\frac{\partial \hat{G}}{\partial d} = -\frac{T}{\theta_1} \cdot \frac{z_d + z_x \frac{\partial x^*}{\partial d}}{\alpha_m [z(x,d)]^2} = -\frac{T(z_{xd}z_x - z_{xx}z_d)}{\theta_1 \alpha_m z(x,d)[2z_x^2 - z(x,d)z_{xx}]} \begin{matrix} \geq \\ \leq \end{matrix} 0 \quad (11)$$

$$\frac{\partial \hat{G}}{\partial \alpha_m} = -\frac{T}{\theta_1} \cdot \frac{z(x,d) + z_x \frac{\partial x^*}{\partial \alpha_m}}{[\alpha_m z(x,d)]^2} = -\frac{T[(2\alpha_m - 1)z_x^2 - \alpha_m z(x,d)z_{xx}]}{\theta_1 \alpha_m^3 z(x,d)[2z_x^2 - z(x,d)z_{xx}]} < 0 \quad (12)$$

$$\frac{\partial \hat{G}}{\partial c} = -\frac{T}{\theta_1} \cdot \frac{z_x \frac{\partial x^*}{\partial c}}{\alpha_m [z(x,d)]^2} = \frac{z_x z(x,d)}{\theta_1 [2z_x^2 - z_{xx} z(x,d)]} > 0. \quad (13)$$

Thus, conditional on choosing the E-strategy, the amount of public good supplied by a rent-seeking incumbent $G_1^{r,E}$ is decreasing with the institutional distance only if $z_{xd} > z_{xx} z_d / z_x$, that is only if the marginal effectiveness of blurring is not strongly negatively correlated with d , i.e. local institutions and media are not too easily manipulated by politicians. In this case, the positive direct effect of voter-politician proximity on information availability is augmented (or not fully offset) by a lower (or a slightly higher) investment in information blurring. Otherwise, if $z_{xd} \leq z_{xx} z_d / z_x$, the quality of local institutions is much poorer than at the central level, so that in a decentralized political system bad politicians are in a good position to easily blur information to voters and neutralize the greater accountability produced by their proximity to voters. By contrast, an increase of voters' political unawareness and a decrease of blurring costs unambiguously increase the provision of public goods by rent-seeking incumbents aiming at being re-elected.

Once established the impact of d , α_m and c on x^* and $\hat{G}$, we can derive how the optimal strategy of bad incumbents is affected by distance, political unawareness and the cost of blurring.

Proposition 2. For any given values of α_m and c , a unique distance $d = \hat{d} : U^E = U^H$ exists, such that for $d < \hat{d}$, rent-seeking politicians prefer H-strategy, while for $d \geq \hat{d}$, E-strategy is preferred. The threshold distance $\hat{d}$ is decreasing with voters' political unawareness α_m , and increasing with the unit cost of blurring c .

Proof. Let $\Delta U = U^E - U^H = \delta T - \theta_1 \hat{G} - cx^*$ be the difference between the payoffs granted by E-strategy and H-strategy to rent-seeking politicians and $\hat{d}$ the value of distance such that

$\Delta U = 0$. Differentiating ΔU with respect to d , α_m and c , and then substituting for $\frac{\partial \hat{G}}{\partial d}$, $\frac{\partial \hat{G}}{\partial \alpha_m}$,

$\frac{\partial \hat{G}}{\partial c}$, $\frac{\partial x^*}{\partial d}$, $\frac{\partial x^*}{\partial \alpha_m}$ and $\frac{\partial x^*}{\partial c}$ from (8)-(13) and for c from (7), we have:

$$\frac{\partial \Delta U}{\partial d} = -\theta_1 \frac{\partial \hat{G}}{\partial d} - c \frac{\partial x^*}{\partial d} = \frac{Tz_d}{\alpha_m [z(x,d)]^2} > 0 \quad (14)$$

$$\frac{\partial \Delta U}{\partial \alpha_m} = -\theta_1 \frac{\partial \hat{G}}{\partial \alpha_m} - c \frac{\partial x^*}{\partial \alpha_m} = \frac{Tz(x,d)}{[\alpha_m z(x,d)]^2} > 0 \quad (15)$$

$$\frac{\partial \Delta U}{\partial c} = -\theta_1 \frac{\partial \hat{G}}{\partial c} - x^* - c \frac{\partial x^*}{\partial c} = -x^* < 0. \quad (16)$$

Then, from the implicit function theorem, proposition straightforwardly follows.

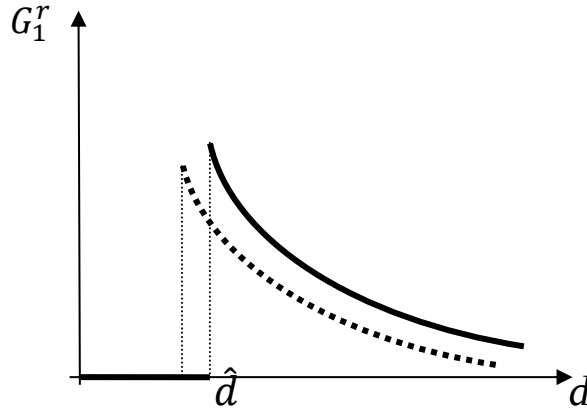
The intuition is simple. Rent-seeking incumbents can disguise themselves as benevolent politicians more easily the larger the institutional distance from voters and their political unawareness, and the less costly is the action to blur information about the true costs of public goods provision. The more difficult cheating, the higher the threshold $\hat{d}$ is. Below the critical threshold $\hat{d}$, re-election would imply to provide an amount of public goods so large and/or to blur information so much that bad politicians' utility would result being lower than the one obtainable by playing H-strategy.

Proposition 2 can be graphically illustrated by Figures 2 and 3, displaying the relationship between institutional distance, strategy choice and the amount of public good provided by a rent-seeking incumbent. In both figures, the thick solid line shows the amount of public good supplied by a rent-seeking incumbent G_1^r for given values of α_m and c .

In Figure 2 we assume $z_{xd} > z_{xx}z_d/z_x$ for any d . In this case, the amount of public good supplied by rent-seeking incumbents is zero for $d < \hat{d}$ (i.e. as long as $U^E - U^H < 0$ and H-

strategy is chosen) and then monotonically decreasing for $d \geq \hat{d}$ (i.e. when $U^E - U^H \geq 0$ and E-strategy is chosen). At $d = \hat{d}$, G_1^r reaches its maximum value $\tilde{G}^r$; further increases in institutional distance lead to reducing public goods provision because less and less information is available to voters so that for the rent seeker it is easier passing herself off as benevolent. This happens because the marginal effectiveness of blurring increases with distance or only slightly decreases with it.

Figure 2 - Distance, strategies and public good.

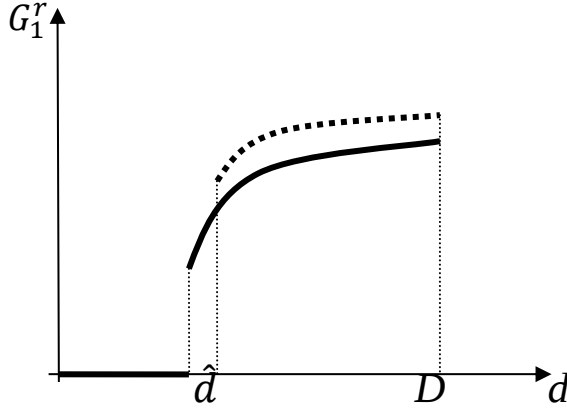


The dashed line is used to display some simple comparative statics. An increase in the median political unawareness of voters α_m or/and a decrease in blurring costs c bring about on the one hand a decrease in $\hat{G}$ (see equation 12), so that the sloped portion of the curve G_1^r downward shifts, and on the other hand an increase in ΔU (see equation 15), so that the threshold $\hat{d}$ is reduced. Notice that in Figure 2, in correspondence with the new threshold, $\tilde{G}^r$ is set at a lower level but it may well equal or higher than at initial $\hat{d}$. Opposite changes in α_m and c involve opposite symmetrical effects in Figure 2.

The interpretation is easy. More unaware voters allow rent-seeking incumbents to be re-elected with a lower provision of public good, and this makes E-strategy preferable even at

lower distances. By contrast, an increase in the unit cost of blurring c reduces the profitability of E-strategy and makes H-strategy preferable even at larger distances.

Figure 3 – Strongly decreasing effectiveness of blurring.



In Figure 3, we assume that the quality of institutions is much poorer at local than central level, so that the marginal effectiveness of information blurring strongly decreases as institutional distance increases, i.e. $z_{xd} \leq z_{xx}z_d/z_x$ holds. In this case, as long as $d < \hat{d}$, the rent-seeking incumbent prefers to play H-strategy because passing herself off as benevolent would involve a too high investment in blurring. For $d \geq \hat{d}$, E-strategy is preferred and x^* decreases with distance so much that, despite less closeness, the quality of information improves. This implies that outlays for blurring activities shrink, and the incumbent can afford to provide the larger amount of public good necessary to be re-elected. G_1^r reaches its maximum value $\tilde{G}^r$ at $d = D$. Comparative statics is similar to that shown in Figure 2. Now the dashed line illustrates the shift in the sloped portion of the curve G_1^r caused by a decrease in α_m or/and an increase in c : as a consequence, the threshold $\hat{d}$ moves rightward, as cheating is more difficult and needs larger distances. Also, for any distance, the amount of public good to supply is higher if E-strategy is chosen.

5. Welfare

Let us assume that to maximise citizens' expected welfare, an optimal institutional distance has to be set by a constitutional legislator. To this purpose, the latter takes into account that some degree of centralization of the political system is recommended to induce incumbent rent-seeking politicians to supply a positive amount of public good. Indeed, too much transparency would prevent rent seekers to disguise and prompt them to adopt H-strategy.

Assuming, without loss of generality, the same rate of time preference for voters and politicians (i.e. $\delta \in [0,1]$), citizens' expected welfare may be written as $W = E(G_1) + \delta E(G_2)$, i.e.:

$$W = \beta(1 + \delta)E\left(\frac{T}{\theta}\right) + (1 - \beta) \begin{cases} E(\hat{G}(d)) = E\left(\frac{T}{\theta \alpha_{mz}(x^*(d), d)}\right) & \text{if } d \geq \hat{d} \\ \beta \delta E\left(\frac{T}{\theta}\right) & \text{otherwise} \end{cases} \quad (17)$$

The first term on the right-hand-side of (17) refers to the payoff obtained when a benevolent incumbent is in office $(1 + \delta)E\left(\frac{T}{\theta}\right)$, which happens with probability β . The second term shows the possible payoffs if in period 1 a rent-seeking incumbent is in office, which happens with probability $(1 - \beta)$. In the latter case, if E-strategy is played (i.e. the distance is large enough, $d \geq \hat{d}$), the expected payoff of citizens is $E\left(\frac{T}{\theta \alpha_{mz}(x^*(d), d)}\right)$. If the distance is lower than $\hat{d}$, H-strategy is preferred and the expected payoff of citizens is $\beta \delta E\left(\frac{T}{\theta}\right)$, that is the probability of incurring in a benevolent government in period 2 times the discounted expected amount of public good supplied by a benevolent politician.

The second term of (17) clearly shows the existence of a trade-off between the effects of politicians' discipline and selection connected to the choice of institutional distance. In particular, the top line represents the welfare gain due to the discipline effect of elections, pushing the rent-seeking incumbent to provide a positive amount of public good; the bottom line accounts for the gain from the selection effect, that is the amount of public good expected for the second period thanks to the possible election of a benevolent politician.

Since the first addend of W does not depend on d , the optimal distance d^* is obtained by maximizing the top line of the second addend of (17) with respect to d , i.e. $\max E(\hat{G}(d)) = E(\tilde{G}^r)$ and then comparing it with $\beta\delta E\left(\frac{T}{\theta}\right)$. Hence, the optimal distance d^* can be determined as follows:

Proposition 3. (i) If the expected rewards from selection are greater than the expected rewards from discipline, i.e. $\beta\delta E\left(\frac{T}{\theta}\right) > E(\tilde{G}^r)$, then *decentralization* is optimal, i.e. $\hat{d} > d^* \geq 0$. (ii) If the expected rewards from selection are not greater than the expected rewards from discipline, i.e. $\beta\delta E\left(\frac{T}{\theta}\right) \leq E(\tilde{G}^r)$, then: (iia) *moderate centralization* is optimal, i.e. $d^* = \hat{d} > 0$, if $z_{xd} > z_{xx}z_d/z_x$; (iib) *maximum centralization* is optimal, i.e. $d^* = D$, if $z_{xd} \leq z_{xx}z_d/z_x$.

Figures 2 and 3 are helpful to illustrate Proposition 3. The case for decentralization occurs when the expected welfare from H-strategy, i.e. $\beta\delta E\left(\frac{T}{\theta}\right)$ is larger than the one from E-strategy. In this circumstance, the constitutional legislator sets institutional distance at a level lower than $\hat{d}$.¹³ decentralization is optimal as the reward granted by the selection effect of

¹³ In case (i), optimal distance is defined as an interval (rather than punctual) solution. This is basically due to the fact that, for the sake of simplicity, the model deliberately ignores that the cost of public goods θ may vary with

elections exceeds the benefits given by disciplining the government in office. On the other hand, when the welfare associated to H-strategy by rent seekers is not larger than the one given by E-strategy, the optimal institutional distance is $\hat{d}$ in Figure 2 and D in Figure 3. In both the latter cases, some degree of centralization is needed, as the reward granted by disciplining the incumbent government exceeds the benefits of selection.

Proposition 3 clearly shows that the quality of institutions is a key determinant of optimal distance, which turns out to depend on parameters z_{xd} , β , α_m and c . In particular, hinging on equations (11)-(16) and Propositions 2 and 3, we can state:

Proposition 4. (i) The larger the share of benevolent politicians β , the higher the rewards from selection, and more likely decentralization is the optimal institutional setting. (ii) The larger the voters' unawareness α_m , the smaller the optimal institutional distance, and the more likely decentralization is optimal. (iii) The larger the unit cost of blurring c , the larger optimal distance, and the less likely decentralization is optimal.

6. Discussion

In this section, we discuss empirical predictions and policy implications of the model presented in Sections 3-5.

First, our model suggests that the relationship between voter-politician distance and provision of public goods is not univocal. When the quality of local institutions is sufficiently good – in the model this is captured by the condition $z_{xd} > z_{xx}z_d/z_x$ –, i.e. the effectiveness of information blurring is increasing, or slightly decreasing with distance, the supply of public goods is negatively correlated with distance, unless the voter-politician proximity is

distance. If for example one assumes that local governments provide public goods more efficiently than the central government, optimal distance would be 0. On the other hand, admitting that decentralisation is somewhat costly (i.e. sustaining many layers of local governments involves higher overall costs than a more centralised framework), optimal distance would be just below $\hat{d}$.

“excessive” as to induce bad politicians to reveal themselves. Conversely, if institutional quality is much poorer at the local level than the central one, such that the effectiveness of information blurring is strongly decreasing with distance, $z_{xd} \leq z_{xx}z_d/z_x$, centralized political systems might be associated to a larger supply of public goods.

The effects of the quality of politicians, voters and local institutions on public goods provision are complex and depending on institutional distance. So far, we have implicitly taken the perspective of a single local administrative unit or we have assumed that β , α_m and c are the same throughout the whole country. Now, let us assume that these parameters are different in different administrative units, such that β_μ , $\alpha_{m,\mu}$ and c_μ are the average share of good politicians, the average political unawareness of median voters and the average cost of information blurring in the country.

The average share of good politicians in the country has in itself, for any given distance d , a positive effect on the level G because it implies a higher probability that a good government is in office. However, a high β_μ increases the reward from selection and pushes toward higher decentralization, so inducing bad politicians to supply the minimum feasible level of G (in our model, $G_1^{r,H} = 0$). In administrative units populated by a share of good politicians smaller than β_μ , political and administrative decentralization reforms may be harmful, involving forgoing gains from discipline without obtaining much from selection.

Unlike β_μ , the average unawareness of voters $\alpha_{m,\mu}$ has in itself a negative impact on the average provision of public goods. Precisely, an increase in $\alpha_{m,\mu}$ induces bad politicians choosing E-strategy to supply less public goods to worse informed voters. However, less aware voters make E-strategy more profitable even at small distances. This implies that a decentralization reforms might benefit (damage) administrative units populated by relatively low (high)-quality voters.

Compared to $\alpha_{m,\mu}$, changes in the average cost of blurring c_μ have opposite effects on G . Indeed, for given d , high costs of blurring involve a relatively higher average provision of public goods, since rent-seeking politicians playing E-strategy spend less resources in blurring. However, higher blurring costs make H-strategy preferable even at large distances, so that again a decentralization reform might help the administrative units with a relatively low c and penalize those with higher blurring costs.

Finally, suppose that differences in institutional quality amount to having so different values in the effectiveness of information blurring, such that z_{xd} is larger than $z_{xx}z_d/z_x$ in some administrative units (the one with good local institutions) and lower than this in others. In such a circumstance, provided that thresholds $\hat{d}$ are not too different from each other, and that the initial distance is $d > \hat{d}$, implementing a decentralization reform increases the supply of public good in regions with good local institutions and decreases it in regions with bad institutions.

To summarize, our analysis has shown that, despite its unfavourable impact on voters' information, an increase in institutional distance may be welfare improving to the extent that it can *i*) induce bad incumbents to disguise themselves and provide positive amount of public goods, or *ii*) reduce information blurring and increase the provision of public goods. Second, our analysis has made clear that a “one size fits for all” institutional distances does not exist, but that the degree of optimal centralization/decentralization depends on a number of external conditions related to the quality of politicians, voters and media. From a policy viewpoint, this result suggests that the optimal institutional design of local/central governance should be different, according to the mentioned features, for different countries and federations. In the presence of large inter-state or inter-regional institutional differences (regarding the values of β , α_m , c and z_{xd}), a unique level of institutional distance might be close to optimum for some regions but far for others. As a corollary, a decentralizing reform aiming at increasing

proximity between voters and their governments may have beneficial or detrimental welfare effects on different regions depending on local institutional conditions.

7. Conclusions

The theoretical literature usually considers decentralization as a device to increase politicians' accountability by either requiring to please voters in each district (Seabright, 1996; Besley and Coate, 2003) or by exploiting the possibility of comparisons between jurisdictions (Brennan and Buchanan, 1980; Besley and Case, 1995). This would increase, ultimately, social welfare. However, these theoretical arguments are not always supported by facts. Indeed, countries actually differ in many aspects that may also affect politicians' incentives and the transparency of the political process as well. In a nutshell, the beneficial effects of *the closer the better* rest on two pillars: the non-benevolent nature of politicians; the existence of information frictions (asymmetric distribution and/or un-verifiability).

In this paper, we have shown that improvements in the institutional setting (i.e. lowering the distance between voters and politicians) do not necessarily lead to higher social welfare, since rent-seeking incumbent governments, when closer to voters, might react by playing predatory hit-and-run strategies or increasing the bias on the information available to voters. Therefore, a not univocal relationship between institutional distance and the public goods provision does emerge, according to the values taken by a number of parameters, accounting for the share of bad politicians, the political awareness of voters, the cost and the effectiveness of blurring activities. As a consequence, in some cases a moderate or strong centralization of the political system should be recommended to induce rent-seeking politicians to supply a larger amount of public good.

At the end, our model suggests that a lower institutional distance between the government and its people would not represent a sufficient condition to reduce information frictions

between the two actors, to improve government accountability and, ultimately, increase social welfare. Thus, institutional reforms aimed at increasing decentralization – sometimes seen as a panacea against maladministration – may well be profitable for some regions, whereas detrimental for others. Choosing a smaller distance could mean moving toward a “too small distance” in some cases.

Further research might be devoted to investigate the nature of decentralization process, since relevant differences on how it effectively takes root across countries and territories within a single country would remain.

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Tables

Table 1 – Decentralization, public services and quality of institutions.

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>PUBSER (hospital beds per 1,000 inhabitants)</i>					
<i>CLOSE</i>	1.86*** (0.12)	1.51*** (0.14)	4.08*** (0.36)	3.57*** (0.33)	3.09*** (0.47)	2.85*** (0.50)
<i>QUALINST</i>	1.54 (0.94)	0.0046 (1.10)	13.6*** (2.32)	10.2*** (2.24)		
<i>CLOSE*QUALINST</i>			-31.0*** (5.31)	-26.4*** (4.77)		
<i>Real GDP</i>		0.19* (0.10)		0.20* (0.10)		0.19* (0.10)
<i>Population density</i>		0.023 (0.025)		0.015 (0.025)		0.018 (0.024)
<i>Urban population</i>		0.17** (0.065)		0.16** (0.064)		0.18*** (0.061)
<i>Working age population</i>		0.17 (0.100)		0.17* (0.096)		0.18* (0.10)
<i>QUALINST_2</i>					5.78* (3.10)	4.26 (2.86)
<i>CLOSE*QUALINST_2</i>					-17.5** (7.17)	-17.6** (6.60)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	696	682	696	682	696	682
R-squared	0.587	0.641	0.622	0.665	0.601	0.662
Number of countries	31	31	31	31	31	31

Marginal effects of *CLOSE* on *PUBSER* for different values of *QUALINST*

$\beta_1 + \beta_3 \cdot \text{QUALINST (median)}$	0.97*** (0.22)	0.92*** (0.21)	1.90*** (0.12)	1.64*** (0.14)
$\beta_1 + \beta_3 \cdot \text{QUALINST (75th)}$	-3.73*** (1.00)	-3.08*** (0.90)	-1.41 (1.39)	-1.68 (1.22)
$\beta_1 + \beta_3 \cdot \text{QUALINST (90th)}$	-9.67*** (2.01)	-8.13*** (1.81)	-5.44* (3.05)	-5.75** (2.74)

Notes: Constant included but not reported in the Table. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Appendix

Table A.1 – Variables: definitions and descriptive statistics.

<i>Variable</i>	<i>Definition</i>	<i>Source</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>PUBSER</i>	Number of hospital beds per 1,000 inhabitants	WDI (World Bank 2015)	6.57	2.91	2.10	19.90
<i>CLOSE</i>	Number of subnational governments over 100,000 inhabitants	Elaborations on official countries' reports and Administrative Divisions of Countries database	0.90	2.98	0.04	19.72
<i>QUALINST</i>	Index of diffusion of political corruption. The index is arrived at by taking the average of (a) public sector corruption index; (b) executive corruption index; (c) the indicator for legislative corruption; and (d) the indicator for judicial corruption. These four different government spheres are weighted equally.	Coppedge et al. (2015)	0.17	0.19	0.01	0.76
<i>QUALINST_2</i>	Index of corruption diffusion in the public sector at large.	Coppedge et al. (2015)	0.18	0.22	0.01	0.89
<i>Real GDP</i>	Real GDP at constant 2005 national prices (in mil. 2005US\$)	Feenstra et al. (2015)	836273	1835771	4527	13225900
<i>Population density</i>	People per squared km of land area	WDI (World Bank 2015)	112.89	105.86	1.91	496.89
<i>Urban population</i>	People living in urban areas as defined by national statistical offices, % of total population	WDI (World Bank 2015)	72.59	12.69	33.76	97.73
<i>Working age population</i>	Population ages 15-64, % of total population	WDI (World Bank 2015)	66.39	2.23	55.24	71.55