

CAN GOOD POLITICIANS COMPENSATE
FOR BAD INSTITUTIONS?
EVIDENCE FROM AN ORIGINAL SURVEY OF ITALIAN MAYORS*

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Abstract

Can competent political leaders bring significant policy changes to communities otherwise doomed by “bad” informal institutions? This question has remained unanswered due to the lack of a convincing measure of politicians’ competence. I develop a novel survey technique to overcome this challenge and apply it in interviews to 306 Italian mayors. I study the impact of mayors’ competence on the policies they enact using a difference-in-differences approach. Results show that more competent mayors are associated with better policies but the association is only present in cases where the quality of informal institutions is low. In these municipalities, the election of more competent mayors translates into a more effective use of funds, an increase in long-term investments, and better service provision without an increase in taxes. Results hold across different measures of institutional quality.

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1 Introduction

It is widely thought that the quality of institutions is a key determinant of the success or failure of communities.¹ Should we think of communities with poor institutions as doomed to poor policy outcomes? Or can competent individual leaders compensate for these deficiencies? While the role of leaders has been studied in the corporate context, political leaders as drivers of change have been largely overlooked in recent political economy literature.² The ability of a government to achieve an efficient delivery of public goods might largely depend on the competence of its politicians. As is the case with firms' managers, politicians must set out clear objectives, monitor their implementation, and incentivize the bureaucracy to reach these objectives. Competent politicians who can achieve these goals might be able to move their communities away from a "bad" governance equilibrium to a "good" one.

In this paper I use newly collected survey data to investigate whether competent politicians can compensate for low-quality institutions. I do this in three steps. First, I develop an original survey instrument to measure a novel dimension of politicians' competence: their ability as managers of their administration. I carry out a survey to collect data on this measure for a sample of 306 Italian mayors. Secondly, I examine whether more competent mayors make a more effective use of public funds and provide better services. Thirdly, I study if the importance of politicians' competence varies as a function of the quality of municipal institutions. Investigating the interaction between politicians' competence and institutional quality is at the center of this paper. The sign of this interaction is not *ex-ante* clear: politicians and institutions might be complements, *i.e.* it could be that competent politicians can only make a difference if they work within a supportive institutional environment, or substitutes, *i.e.* it could be that competent politicians can make a difference exactly where institutions are deficient. These two scenarios have very different implications and I try to adjudicate between them. I find that more competent mayors enact better policies - use funds more efficiently thus increasing long-term investments and offering better services - where the quality of institutions at the local level is low.

One reason why the impact of politicians' competence on policies has remained largely unexplored is the difficulty in obtaining a convincing measure of competence. The existing literature in political science and economics has measured competence with human capital.³ As a growing body of research suggests however, human capital is an insufficient measure

¹See Acemoglu and Robinson (2012), Algan and Cahuc (2010), Greif (1994), Khwaja (2009), Knack and Keefer (1997), North and Thomas (1973), Tabellini (2010).

²See Bertrand and Schoar (2003) and Bloom and Van Reenen (2007) for the role of corporate leaders. A notable exception is Jones and Olken (2005)'s study of leaders' deaths and their effect on economic growth, and more recently Berry and Fowler (2017) and Easterly and Pennings (2017).

³See for instance Besley and Reynal-Querol (2011), and Galasso and Nannicini (2011).

of political competence. Human capital can be confounded by class (Dal Bó et al. 2017) and, more importantly, there is little empirical evidence on its correlation with performance: more educated leaders are not less corrupt, do not pass more bills or govern wealthier nations (Carnes and Lupu 2015), and do not enact better policies (Lahoti and Sahoo 2017). Moreover, education is only weakly correlated with politicians’ cognitive abilities and leadership skills (Dal Bó et al. 2017).

In order to address these shortcomings, I designed a survey instrument to measure the competence of politicians. The survey methodology is inspired by Bloom and Van Reenen’s (2007) study of managerial competence in firms and evaluates how well each mayor: *i*) defines the objectives of her government mandate, *ii*) monitors the process of reaching these objectives, *iii*) knows the government’s daily operations, and *iv*) motivates and incentivizes the bureaucracy. My measure specifically focuses on the managerial ability of executive politicians, i.e. their ability to perform the daily tasks involved in the planning and implementation of their government mandate. The survey tries to obtain unbiased responses by using a double-blind survey technique devised to minimize both interviewer and interviewee-induced bias.

With this measure, I explore the relationship between the competence of each mayor and the policies she enacts, and I study how this relationship varies depending on the quality of the informal institutions at the municipality level. I start by focusing on one of the main dimensions of an efficient use of public funds in Italy: the municipal surplus. Italian municipalities are expected to run a balanced budget and, while very few mayors run deficits due to sanctions, most mayors close the budget with a surplus. A large surplus, however, is undesirable because it entails leaving “on the table” unused revenues that often cannot be budgeted in the following fiscal years, representing a waste of resources accrued through citizens’ taxation. Therefore we expect more competent mayors to run smaller surpluses.

To get causal traction on the effect of competence on the municipal budget, I build a panel of the municipalities in my sample exploiting the fact that data on the municipal surplus is available both before and after the interviewed mayor was elected. The panel nature of the data allows me to estimate a difference-in-differences model and establish that municipalities that eventually elect a high vs. low-competence mayor exhibit similar *levels* and *trends* of surplus in the years preceding the election. Results show that mayoral competence is significantly and sizeably correlated to the size of the municipal surplus only in Southern municipalities: a one point increase in the mean competence score (ranging from 1 to 5) is associated with a decrease in the surplus corresponding to 20 to 34 percent of its standard deviation. Mayoral competence is not associated with different levels of surplus outside of the South. Therefore, results suggest that competence only matters in

municipalities characterized by poor informal institutions. A long body of literature has considered the Italian South as deficient in terms of informal institutions (Putnam 1993) due to higher levels of corruption (Golden and Chang 2001), a stronger presence of organized crime (Pinotti 2015) and clientelism (Alesina et al. 2016, Chubb 1982).

Moreover, I show that the result on surplus is driven by an increase in capital expenditures, i.e. more competent mayors make more long-term investments, and this translates into a better quality of service provision. Mayors in the right tail of the competence distribution in the South bridge the North-South gap (consisting of more than one standard deviation) in the quality of service provision.

Finally, I provide evidence that the differential impact of mayors' competence between the South and the rest of Italy is indeed driven by the difference in the quality of their informal institutions and not by any other South-specific characteristic. I show that results are robust to the use of three alternative measures of informal institutions at the local level: social capital, the presence of mafia organizations, and a behavioral measure of bureaucratic norms.

By studying if competent politicians can compensate for bad institutions, this paper brings two strands of literature closer together. On one hand, my paper builds on the literature on the role of individual political leaders for policy (Berry and Fowler 2017, Easterly and Pennings 2017, Jones and Olken 2005) and isolates the role played by politicians' competence. On the other hand, much literature studies organizational capacity in the public sector across developed (Bolton et al. 2016, Huber and McCarty 2004, Krause and Woods 2014) and developing (Bertrand et al. 2018, Grindle 1997, Pepinsky et al. 2017) countries. In my paper, I establish how the role of politicians' competence on policy can be moderated by organizational capacity.

My paper also builds on studies employing Bloom and Van Reenen's (2007) methodology to assess managerial practices in different settings: bureaucrats (Rasul and Rogger 2017, Rasul et al 2017), school principals (Bloom et al. 2015, Di Liberto et al. 2015) and hospital managers (McConnell et al. 2015).

Finally, by studying the ability of local politicians to affect policies, my paper can contribute to the larger debate on the role of local politicians, which suggests that local governments might be an ideal locus of policy change (Ferreira and Gyourko 2009, Gerber and Hopkins 2011, Kirkland 2017).

The remainder of the paper is organized as follows. In the next section I briefly describe the institutional setting. In section 3, I present the survey methodology and the data collected. In Section 4, I describe the empirical analysis and present my results. Section 5 concludes.

2 Institutional Framework

Each of the 8,003 Italian municipal governments is composed of an elected mayor (*Sindaco*), an executive body (*Giunta*) appointed by the mayor, and an elected city council (*Consiglio*).⁴ Municipal governments manage around 10 percent of Italian public expenditures and are responsible for a vast array of services, such as municipal roads and infrastructure, the creation and maintenance of school buildings, waste management, water supply, and social services. Here I describe the features of municipal governments that are represented in my sample, namely municipalities whose government was elected after the year 2000 and having between 3,500 and 6,500 inhabitants.⁵

The mayor, elected with a single-round system to serve a 5-year mandate with a 2-term limit for consecutive terms, holds executive power at the municipal level and is responsible for the administration of the local government.⁶ One of the main responsibilities of each mayor is to propose the annual budget to the municipal council that in turns approves it with majority rule.⁷ The mayor enjoys a substantial amount of executive power and discretion over budget allocations (Bracco et al 2013, and Fabbrini 2001). Municipal revenues include tax revenues (municipalities can levy taxes on income and real estate, and for services such as trash collection), transfer revenues (received from the national or regional governments or from the European Union) and a residual category encompassing revenues raised through the municipality's assets or services (fees collected for services at the city hall, public transportation, touristic services, fines by the police, the use of municipal sport infrastructure).

On the expenditures side, current expenditures cover the municipality's "operating costs", such as wages and utilities, while capital expenditures refer to investments on projects that typically span more than one budget year and are related to the building of infrastructure, such as roads and schools. Qualitative interviews carried out with a sub-sample of the interviewed mayors show that there is consensus among mayors regarding two aspects of capital expenditures.⁸ First, spending more on capital rather than current expenditures is

⁴The number refers to the number of municipalities as of January 1, 2016. The number can vary marginally year by year as new municipalities are formed by merging or separating existing ones.

⁵The sample is representative of 84.3 percent of Italian municipalities in 2016.

⁶Only mayors of municipalities with more than 100,000 inhabitants can appoint a separate managerial figure (*direttore generale*), similar to a city manager.

⁷The municipal council is responsible for overseeing the legislative activity of the mayor and approving the proposed policies, most notably the annual budget proposed by the mayor, with majority rule. Two thirds of the seats in the municipal council are assigned to councilors in the mayoral coalition, and the remaining seats are assigned to the losing coalitions proportionally based on vote shares using the D'Hondt method. The size of the municipal council varies between 7 and 16 members depending on the year of the election given several statutory changes mandating different municipal council sizes. The executive body is composed of a maximum of 4 members chosen by the mayor among the elected councilors.

⁸Qualitative interviews were carried out in the summer of 2017 with a sub-group of the interviewed

more challenging as it involves more planning on the side of the mayor: capital expenditures span several years and require a series of permits and the presentation of a detailed project. Second, an increase in capital expenditures, conditional on being able to finance the necessary services, is desirable: 66 percent of the interviewed mayors list an investment project as one of the top priorities of their government mandate. The evidence from qualitative interviews is in line with trends found for U.S. mayors, who overwhelmingly list infrastructure project as their mandate's top priority (Einstein and Glick 2016).

Each municipality is expected to run a balanced budget.⁹ While deviations from a balanced budget towards a deficit (negative surplus) are subject to sanctions under certain conditions¹⁰, mayors do not face any restriction related to the size of the municipal surplus. Figure 1 shows that only a limited number of mayors incur in a deficit, while 85 percent of mayors close the budget with a positive surplus (with 60 percent of mayors incurring a surplus exceeding 10 percent of the budget, and 25 percent of mayors incurring a surplus exceeding 20 percent of the budget). A large surplus however, is undesirable because it entails leaving “on the table” unused revenues that cannot be budgeted in the following fiscal years. Qualitative interviews confirm that *i)* a vast majority of mayors considers achieving a minimal surplus a primary objective and “the clearest indicator of a virtuous administration”¹¹, but *ii)* only some manage to deliver given the inherent challenges in obtaining a minimal surplus, which requires a careful planning of revenues and expenditures for each budget year and constant monitoring to ensure that expenditures are timely undertaken.¹²

mayors, drawing from both tails of the competence distribution across the South, North and Center.

⁹The balanced budget principle is imposed by the *Patto di Stabilità Interno* (Internal Stability Pact) regulating since 1999 the amount of debt that municipalities can reach through the yearly Financial Act. For instance, for the 2011-2013 period see Law 220/2010.

¹⁰See Law 220/2010 (1, 120).

¹¹Qualitative phone interview conducted by the author, July 2017.

¹²The mean surplus is higher in Southern Italy with respect to Northern Italy by 14 per cent of a standard deviation.

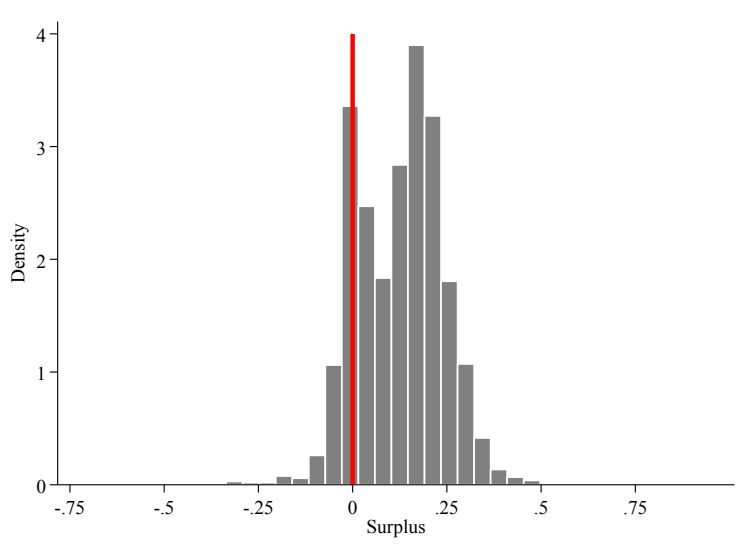


Figure 1: Distribution of the Municipal Surplus.

3 Measuring Competence

The competence of a politician is a complex concept encompassing a wide range of dimensions. The core of my survey is meant to measure the competence of executive politicians as managers of their government, i.e. their ability to perform the daily tasks involved in the planning and implementation of their government mandate. To the extent that acquiring skills requires effort, my measure captures both innate managerial skills and a politician’s effort to become a successful administrator by learning the tools necessary to manage her polity. I do not claim that the competence score that my survey produces is a sufficient statistic of *all* the relevant characteristics that a high competence politician must possess. For instance, I neglect important characteristics that differentiate high from low quality politicians when running for office like, for instance, their ability to campaign and persuade voters. Similarly, my survey does not measure other relevant dimensions of politician’s quality such as honesty (Besley 2005).

3.1 Survey Methodology

In order to obtain a reliable measure of politicians’ competence I carried out an original survey of Italian mayors, with a methodology inspired by Bloom and Van Reenen (2007)’s study of managerial competence in firms. Surveys that build on Bloom and Van Reenen (2007) have been used to evaluate the management practices of bureaucrats (Rasul and Rogger

2017, Rasul et al 2017)¹³, school principals (Bloom et al. 2015, Di Liberto et al 2015), and hospital managers (McConnell et al. 2015). This survey methodology has two fundamental merits. First, it is designed to address three critical issues in measuring individual competence through a survey instrument: accurately scoring the competence of the interviewed, obtaining unbiased responses, and securing interviews. Second, it is not designed to measure “outputs”, but rather the quality of the practices involved in producing said “outputs”. This is a crucial requirement to accurately measure politician’s competence, as the measure should be independent of any external factor that contributes to the final policy outcomes. Bloom and Van Reenen (2007)’s survey focuses on a set of four practices in the management of firms: *target setting*, *performance monitoring*, *operations* and *incentives*. This set of practices is also important for a politician’s ability to implement good policies: a good politician needs to clearly set her objectives, constantly monitor the performance of the government in attaining these objectives, be knowledgeable of the daily operations of the government, and successfully administer the bureaucracy. A contribution of this study is to formulate a set of survey questions that measure the competence of local politicians in these four areas. In the next sections, I describe the details of the survey questions and how interviewed mayors were scored on the basis of their answers, as well as how the methodology addresses the important challenge of obtaining unbiased responses.

3.1.1 Scoring Interviews

The main goal of the survey is to measure the competence of politicians as administrators of the local government. This is achieved by posing questions that do not focus on the “output” of the mayors but rather deal with the practices involved in producing said output. Using a scoring grid, answers to each of the seven questions are scored from one (worst answer) to five (best answer).

The seven practices are grouped in four categories, as in Bloom and Van Reenen (2007): *target setting*, *performance monitoring*, *operations* and *incentives*. The target setting section of the survey deals with the objectives that the mayor has set forth for her mandate. Respondents are evaluated on the basis of the clarity of their objectives (not the content of the objectives), whether their objectives translate into practical targets, the interconnection and time horizon of said targets, and the extent to which members of the administration and of the bureaucracy are given specific responsibilities in reaching the targets. The monitoring section deals with tracking the performance of the government in attaining its objectives. In particular it asks whether the monitoring is informed by data, how often this monitoring

¹³Rasul and Rogger (2017) study civil servants across 63 organizations of the Federal Civil Service in Nigeria and Rasul et al (2017) extend the study to Ghana’s civil service

takes place and down to which level of the government machinery are people involved in the monitoring process. The operations section investigates the mayor's knowledge and oversight over the procurement procedures of her municipality (one of the most important and time consuming operations for municipal governments) and the efficiency in their implementation. Finally, the incentives section deals with assessing how well the mayor incentivizes the municipal bureaucracy, specifically by rewarding best performers and addressing/fixing worst performers among the bureaucrats.¹⁴ Each answer is evaluated in real time by the interviewer who assigns a score ranging from one to five. The interviewer assigns the score based on a scoring grid containing the criteria that the mayor's answer has to satisfy in order to obtain each score. As a clarifying example, Table 1 shows the first question of the survey, that falls under the target setting practice, with its scoring grid and three anonymized examples of three answers that were given a score of one, three and five respectively.¹⁵ The full survey instrument, with all questions divided by practice and relative scoring grid, is in the appendix and reflects the order in which questions were asked during the survey. I use the unweighted average across all individual scores assigned to each mayor as my measure of the mayor's overall competence.

Finally, additional data is collected on the mayor's party identification and years of government experience. These characteristics are collected at the end of the survey in order to minimize the interviewer's bias, as described in the next section.

3.1.2 Collecting Unbiased Responses

The data collected on politicians' competence is potentially subject to both interviewee and interviewer induced bias. The interviewee could answer untruthfully, systematically gearing her answer toward what she believes is the best answer. The interviewer might systematically under or over score responses based on interviewees' characteristics and preconceptions he might have about the competence of the interviewee. In this section I describe how the use of a double-blind survey technique based on Bloom and Van Reenen (2007) minimizes these two biases.

Interviewee bias, or bias from self-reporting, is minimized in two ways: mayors are unaware of being scored and the questions they are posed are open (i.e. "What types of professional development opportunities are provided for top performers?") rather than being closed

¹⁴Mayors do not have the power to fire the bureaucrats working in the municipal government but they have a host of incentives at their disposal to address the performance of the bureaucrats, like a fund for monetary incentives to be distributed among the top performers, disciplinary procedures against worst performers, and coaching methods. Moreover mayors can change bureaucrats' assignment to specific offices with some appointments being more desirable than others.

¹⁵For the sake of clarity and comparability, Table 1 reports the anonymized answers of three mayors who listed a similar objective.

Table 1: Example of question, scoring grid and anonymized answers

(1) Target Inter-Connection			
	a) Could you describe the main objectives that you set for your term in office? b) Which practical targets are associated to each of these main objectives? c) How are these targets cascaded down to individual members of the government and of the bureaucracy?		
	Score 1	Score 3	Score 5
Scoring grid	Objectives and targets are very loosely defined. They do not cascade down throughout the administration.	Objectives are clearly defined and targets are defined for some of the objectives. They do cascade down but only to members of the administration.	Objectives have clearly defined associated targets. They cascade down to individual members of the administration and of the bureaucracy and increase in specificity as they cascade, defining individual expectations for each person.
Anonymized examples	Defines objective as "Tourism". Does not identify practical targets.	Defines the objective as "Increasing Tourism". Identifies two practical targets (redecorating the old town; establishing an info point for tourists). Assigns responsibilities to a member of the executive.	Defines the objective as "Reaching x tourists per year". Identifies three practical targets (redecorating the main square of the old town; establishing an annual festival; creating a bike path through the municipality's national park). Assigns responsibilities to a member of the executive and one bureaucratic office through a timetable.

(i.e. “Do you provide professional development opportunities for top performers[yes/no]?”) so as not to clearly indicate a “best” and a “worst” answer.

Interviewer bias is limited by the fact that the interviewer has no information on the performance of the municipality. Moreover, since the mayors interviewed represent small and medium Italian municipalities, the interviewer is unlikely to have any information and therefore preconceptions about the mayor or her municipality. Each interviewer reported, for each interviewed municipality, whether he i) had ever heard about it, ii) had visited it, and iii) had any knowledge regarding its administration. Interviewers reported having heard about 10 percent, having visited 1.4 percent and having prior knowledge about none of the municipalities whose mayors were interviewed. Finally, all interviewers went through a training workshop during which much emphasis was placed on scoring each answer separately, based on the scoring grid rather than on the overall impression of the interviewee. I further validated the reliability of the data collected by double scoring a random subset of the interviews. The correlation coefficient between the quality scores assigned by 2 different interviewers on this subset of interviews is 67 percent.¹⁶¹⁷

¹⁶As a comparison, Bloom and Van Reenen (2007), obtain a correlation coefficient of 73 percent.

¹⁷Moreover, each interviewer conducted an average of 40 interviews, allowing to account for interviewer fixed effects in the analysis. This controls for an interviewer’s general tendency to over- or under-score responses irrespective of the interviewees’ characteristics. Including interviewer fixed effects produces results that are qualitatively similar to the ones presented here. These results are available upon request.

3.1.3 Obtaining Interviews

Obtaining a high response rate was key given the size of the target population yet challenging given the characteristics of the survey, such as the fact that mayors are busier and harder to reach than the average survey respondent, the interviewer has to pass a series of screens (telephone switchboard and secretary of the mayor), and participation was not compensated. The achieved response rate was of 50.2 percent, which is comparable to the response rate of 54 percent obtained in a similar setting in Bloom and Van Reenen (2007). Several steps were taken to maximize the response rate. Firstly, in order to encourage mayor's responses we portrayed their participation as least controversial as possible by *i*) presenting the interview as a "conversation" and without mentioning the word "interview" or "survey", *ii*) never mentioning or asking about the performance or fiscal soundness of the municipality, and *iii*) by stressing throughout that the project we were inviting the mayors to take part to was an academic endeavor. Moreover, questions were presented to the mayor with the least controversial questions leading the interview (question on target setting: "Which objectives did you set for your mandate and which practical targets are these objectives associated to? How are these targets cascaded down to the individual members of the administration and the municipal bureaucracy?"). Finally, securing the institutional endorsement of *Anci* (Association of Italian Municipalities), an apolitical non-profit organization representing Italian Municipalities, was key in proving to the mayors that they were being invited to participate in a worthwhile project with official support.

Each interviewed mayor was contacted by phone an average of 5 times before the actual interview. At the beginning of the process, each mayor was contacted by phone and received a short description of the project and an invitation to participate, followed by an email presenting the project in details and sharing the letter of support by the Association of Italian Municipalities. The body of the email and the letter of support are shown in the appendix. All subsequent phone calls were necessary to set up a date and time for the interview and to conduct the interview. Each mayor was contacted and interviewed by one interviewer only.

3.2 Competence Score and other data

The data on the competence of politicians was collected between March and September of 2016 and it comprises phone interviews to 306 Italian mayors. I complement the survey data with administrative records from the Italian Ministry of Interior on the budget outcomes of each municipality and on the demographic characteristics of the interviewed mayors. I observe budget outcomes for each year during which the interviewed mayor is in power as

well as for the four years preceding her first term in office. In this section I first describe the sampling frame and discuss the representativeness of the sample, secondly I describe the distribution of the measure of politicians' competence, I then discuss the validity and reliability of my competence measure.

Table 2 presents summary statistics for all available characteristics of the interviewed mayors and of their municipalities and for budget outcomes of the municipalities. Tables A1-A3 present separate descriptive statistics for the same variables for the Italian North, South and Center separately. Mayors are classified as having had an high-skilled job as previous employment if they were professionals (such as doctors and lawyers, engineers or architects), had a skill-intensive or administrative white collar occupation (such as high school teachers) or were managers/self-employed. Jobs classified as having a low skill content are blue collar occupations and low skilled white collar occupation. I further distinguish mayors who were, before taking office, unemployed or outside of the labor force, such as pensioners or students. The variable *Mafia Presence* is an indicator recording if any business, building or good was confiscated in 2015 by the Italian police forces because of mafia involvement. The variable was obtained from *Agenzia Nazionale per l'Amministrazione e la Destinazione di Beni Sequestrati e Confiscati alla Criminalità Organizzata*, the national authority in charge of assets confiscated from organized crime. The variable *Low Social Capital* is an indicator taking value one for municipalities having a value of the social capital index below the 25th percentile of the social capital index distribution, a value corresponding to the 40th percentile in the Italian South. The social capital index is an inverse covariance weighted index (Anderson 2008) constructed using data from Nannicini et al (2013) on blood donations, number on non profit organizations, number of non-sport daily newspapers sold, answer to trust question in the World Value Survey, and turnout in the most recent referendum. The indicator *Sent Letter Back* is an original behavioral measure of the efficiency of the municipal postal office, as described in section 5.5.2. All budget variables are winsorized at the one percent level to reduce the influence of outliers but results shown in the paper are insensitive to this choice. The municipal surplus is expressed as a function of the total budget size. All budget variables are expressed in per capita euros. Table 2 shows that while being low on average, the municipal surplus shows a large variance.

Table 2: Summary statistics

	Mean	Std. Dev.	Min.	Max.	N
<i>Panel A: Cross-Sectional Variables</i>					
<i>Mayor characteristics</i>					
Mean Competence Score	3	0.84	1	5	306
Age	52.37	10.33	28	81	306
Female	0.13	0.34	0	1	306
Job - High Skill	0.68	0.47	0	1	303
Job - Low Skill	0.19	0.4	0	1	303
Job - Unemployed/Pension	0.12	0.33	0	1	303
Education - Less than Highschool	0.05	0.22	0	1	306
Education - Highschool	0.42	0.49	0	1	306
Education - University	0.53	0.5	0	1	306
Years of Government Experience	13.02	7.9	0	41	306
Year in Office	2.43	0.84	1	5	306
Party - Left	0.17	0.37	0	1	306
Party - Centre Left	0.39	0.49	0	1	306
Party - Centre/Independent	0.22	0.41	0	1	306
Party - Centre Right	0.21	0.41	0	1	306
Party - Right	0.01	0.11	0	1	306
<i>Municipality characteristics</i>					
Population	4946.29	770.03	3555	6468	306
Low Social Capital	0.21	0.41	0	1	306
No Letter	0.15	0.36	0	1	306
Mafia Presence (in south)	0.07	0.25	0	1	75
<i>Panel B: Panel Variables</i>					
Surplus	0.13	0.11	-0.13	0.36	2362
Total Expenditures (euros per capita)	1185.81	554.29	473.45	3863.21	2362
Total Revenues (euros per capita)	1183.96	556.25	463.43	3798.69	2362
Current Expenditures (euros per capita)	569.31	217.37	269.42	1562.92	2362
Capital Expenditures (euros per capita)	259.84	302.47	12.25	1990.57	2362
Other Expenditures (euros per capita)	208.05	212.83	46.47	1119.35	2362
Tax Revenues (euros per capita)	441.85	181.84	104.65	1165.12	2362
Transfer Revenues (euros per capita)	150.86	129.06	9.56	644.35	2362
Other Revenues (euros per capita)	578	442.45	130.28	2661.91	2362
Quality of Service Provision Index	6.17	2	1	10	190

3.2.1 Sampling Frame and External Validity

In the survey, I focus on small and medium-sized municipalities as they make up for roughly 90 percent of all Italian municipalities.¹⁸ From this population I extracted a random sample of 610 municipalities and invited the respective mayors to participate to the study. Of

¹⁸In 2016, municipalities having a resident population between 3,500 and 6,500 inhabitants made up 84.3 percent of all Italian municipalities.

these, 306 accepted to participate to the interview. While the sample of mayors who were contacted was randomly selected, the subsample of those who accepted to participate was not. This raises the concern that the mayors surveyed and their municipalities might systematically differ from those who declined to be interviewed, threatening the external validity of the results of this study. Table 3 shows t-tests for the difference in means between the mayors who declined and those who accepted to be interviewed, for all available mayor and municipality-specific characteristics as well as municipality-level outcomes. Table 3 shows that the interviewed mayors (and their municipalities) do not systematically differ from those mayors (and their municipalities) who declined the interview. Table ?? in the Appendix shows balance across the two groups within the Italian South, North and Centre separately.

Table 3: Balance between interviewed and non-interviewed mayors

	Declined Interview	Accepted Interview	Difference	s.e. of Difference
<i>Panel A: Mayor characteristics</i>				
Female	0.16	0.13	-0.02	(0.03)
Age	51.46	52.37	0.91	(0.83)
Job - High Skill	0.72	0.68	-0.04	(0.04)
Job - Low Skill	0.14	0.19	0.06	(0.03)*
Job - Unemployed/Pensioner	0.12	0.12	0.00	(0.03)
Education - Less than Highschool	0.06	0.05	-0.01	(0.02)
Education - Highschool	0.38	0.42	0.05	(0.04)
Education - University	0.57	0.53	-0.04	(0.04)
<i>Panel B: Municipality characteristics</i>				
Total Revenues (euros per capita)	1205.82	1192.59	-13.22	(41.76)
Total Expenditures (euros per capita)	1182.11	1172.74	-9.37	(40.57)
Surplus	0.19	0.19	-0.00	(0.00)
Observations	304	306	310	

Notes: The number of observations for the variables *Job - High-skill*, *Job - Low-skill*, and *Job - Unemployed* is 289 for the non-interviewed sample. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

3.2.2 The distribution of mayors' competence

Panel A of Figure 2 plots the distribution of the mean competence score for each mayor for the entire sample. There is a large spread in competence, with a considerable number of mayors being scored extremely poorly or extremely well. Overall, the variation is high, with a variance in the overall sample of .84 for the competence measure ranging from 1 to 5.

Panels B, C, and D show the distribution of the competence score across the three Italian geographic macro-regions: South, North and Center. The mean value of the competence score as well as the spread of the distribution are comparable across the three areas, suggesting that a large portion of the variation shown in the full sample is driven by variation within the three areas rather than across them. While the mean value of the competence score is higher in Central Italy, followed by Northern and Southern Italy (corresponding to values of 3.14, 2.99, and 2.92 respectively), most of the overall variation shown in Panel A (standard deviation of .84) is coming from within-area variance (.83) rather than between-area variance (.11).

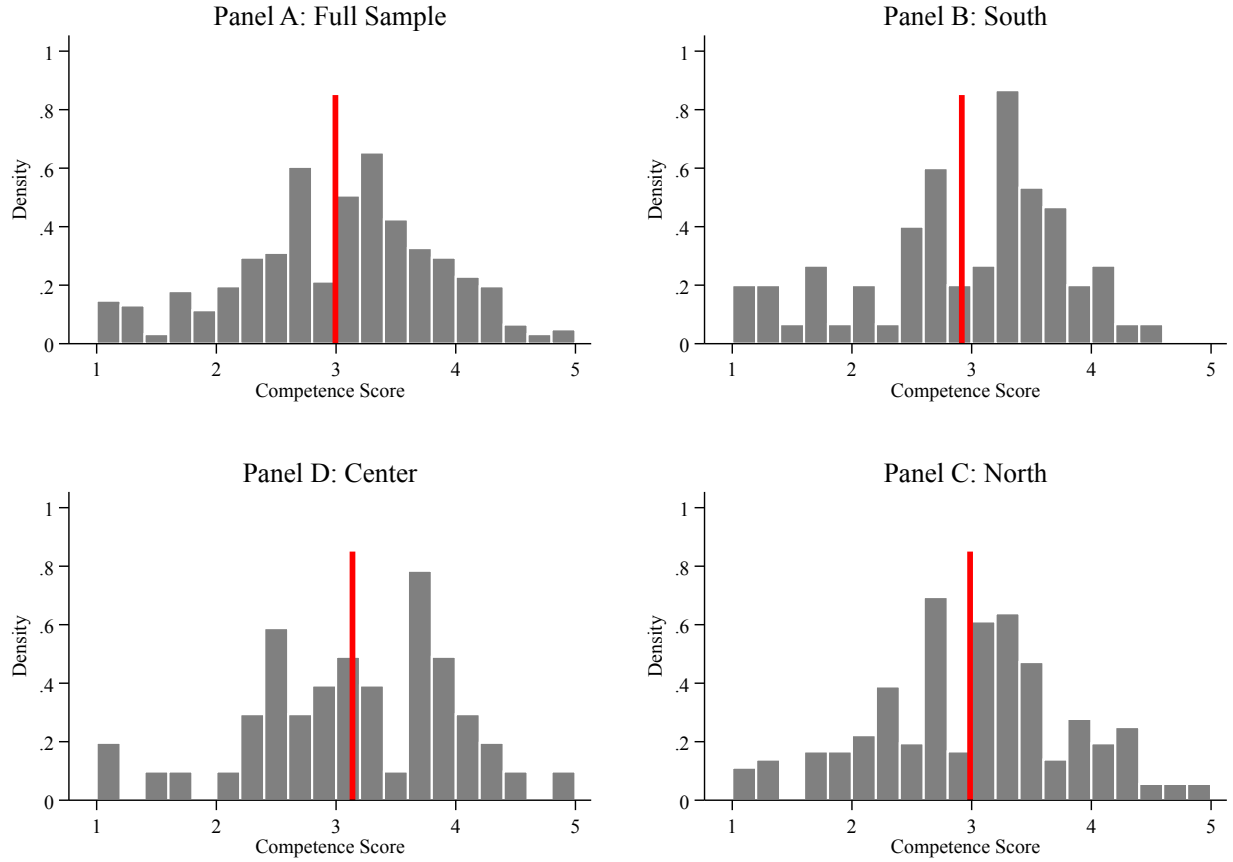
3.2.3 Validity of the Competence Score

My original measure of politicians' competence is valuable if it meets a minimum of two conditions: *i*) it meaningfully captures the competence of a politician, and *ii*) it explains a dimension of politicians' competence that is not captured by other readily available measures. In this section I provide two suggestive tests that my measure meets the two conditions mentioned above.

If my variable satisfies condition *i*, it should correlate with politicians' characteristics that intuitively correlate with their competence. If my variable satisfies condition *ii*, a substantial portion of its variation should be unaccounted for by the alternative measures of politicians' competence employed in the literature. I test these claims in Table 4 which shows coefficient estimates and the R-squared for a set of OLS regressions of my original measure of politicians' competence on a series of mayor and municipality-specific characteristics. Column (1) shows that my measure of quality is negatively correlated with age and that female and male mayors do not seem to differ, on average, in terms of their managerial competence. Column (2) shows that both high school and university graduates have higher competence scores than mayors who have not completed high school.¹⁹ Column (3) reports the correlation between the quality score and the skill content of the previous job held by the mayor before taking office. We can see that mayors with a high-skilled or low-skilled job perform better in terms

¹⁹The coefficients on *Education – HighSchool* and *Education – University* are indistinguishable from each other. I cannot reject that their difference is different from zero, with a p-value of 0.76.

Figure 2: Distribution of the Competence Score across Italy.



Notes: The plots above represent the distribution of the competence measure of mayors for the full sample, and only mayors in Southern, Northern and Central Italy respectively. The red vertical lines mark the mean value for each of the four samples. The sample size in the four plots is 306 in the full sample, 75 in the South, 180 in the North, and 51 in the centre. The mean value of the competence score is 2.99 in the full sample, 2.92 in the South, 2.99 in the North, and 3.14 in the Centre.

of the quality score than those mayors who were unemployed or out of the labour force (like pensioners and students).²⁰ Columns (4) shows that, conditional on educational attainment and skill content of the previous job, the competence score is not correlated to the length of the mayor's career as a local administrator. Columns (5) to (7) suggest no systematic association between the politicians' self-declared party identification and their competence score.

Looking at the R-squared in columns (1) through (7), we can see how the residual variation in my measure of competence is sizeable. Columns (5) to (7) further include fixed effects

²⁰The coefficients on *Job – Highskill* and *Job – Lowskill* are indistinguishable from each other. I cannot reject that their difference is different from zero with a p-values of 0.88.

for the party of the mayor, for the year of the term that the mayor is serving (one through five), and for the macro region where the mayor was elected (South, Centre, North). Column (7), in which the most comprehensive set of variables is included, shows that only 17 percent of the variation in the competence score is accounted for. Table 4 provides evidence that my original measure of politicians' competence is positively correlated to standard measures of politicians' human capital but at the same time the latter measures leave a sizeable portion of the politicians' competence unexplained. This is not surprising in light of the evidence that *i*) human capital is an insufficient measures of competence (Carnes and Lupu 2015, Lahoti and Sahoo 2017, Dal Bó et al. 2017) that *ii*) does not adequately capture at least two relevant dimensions of my competence score: leadership (Dal Bó et al. 2017) and effort.

Table 4: Correlates of the Competence Score

	Dependent Variable: Mean Competence Score						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age	-0.014*** (0.005)	-0.014*** (0.005)	-0.010** (0.005)	-0.012** (0.005)	-0.012** (0.005)	-0.013** (0.005)	-0.014** (0.005)
Female	-0.052 (0.139)	-0.066 (0.139)	-0.077 (0.137)	-0.058 (0.138)	-0.104 (0.139)	-0.125 (0.143)	-0.108 (0.150)
Education - Highschool		0.505** (0.225)	0.527** (0.226)	0.552** (0.227)	0.510** (0.228)	0.511** (0.230)	0.466** (0.231)
Education - University		0.476** (0.223)	0.459** (0.230)	0.488** (0.231)	0.450* (0.235)	0.445* (0.236)	0.458* (0.239)
Job - High Skill			0.428*** (0.152)	0.403*** (0.154)	0.397** (0.153)	0.395** (0.154)	0.428*** (0.157)
Job - Low Skill			0.408** (0.182)	0.401** (0.182)	0.393** (0.182)	0.403** (0.184)	0.443** (0.187)
Years of Government Experience				0.007 (0.006)	0.007 (0.006)	0.006 (0.007)	0.006 (0.007)
Party - Left					0.249 (0.154)	0.253 (0.155)	0.269 (0.163)
Party - Centre Left					0.229* (0.127)	0.230* (0.129)	0.188 (0.134)
Party - Centre Right					-0.009 (0.146)	-0.025 (0.149)	-0.066 (0.158)
Party - Right					0.549 (0.422)	0.574 (0.424)	0.815* (0.431)
Observations	306	306	303	303	303	303	303
R-squared	0.029	0.045	0.073	0.077	0.100	0.107	0.172
Year of Term FE						✓	✓
Area FE							✓

Notes: The education variables refer to the highest completed educational level. The excluded category is "Less than High School". The job variables refer to the last job held by the politician before taking office. I classify as high-skilled all professionals (lawyers, doctors, engineers, architects), self-employed and individuals holding administrative white collar jobs. Jobs classified as low skill are blue collar jobs and non-administrative white collar jobs. The excluded category includes individual who are unemployed or out of the labor force (pensioners, students, housewives). The excluded category for the party is an indicator taking value one if the mayor self-identifies as "centrist" or "independent". Year of term fixed effects control for the year (1 to 5) of the current mandate that the mayor is serving. Areas are North, Centre and South. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

3.2.4 Reliability of the Competence Score

My measure of politicians’ competence could suffer from measurement error. I present a series of tests that lends support to the reliability of my competence score measure.

First, I validated the reliability of the data collected by double scoring a random subset of 43 interviews. The inter-rater reliability, *i.e.* the correlation coefficient between the competence scores assigned by 2 different interviewers on this subset of interviews, is 0.675 (p-value of 0.000). The relationship is shown graphically in Panel A of Figure 3. Moreover, as shown in Panel B of the same figure, there is no relationship between the degree of measurement error in the scoring and the competence score: this means that high scores are as likely to be well measured as average and low scores.

Second, I show that the four components of the competence score are strongly positively correlated. Table 5 shows the coefficients from a series of pairwise regressions of the components of the competence score: with an average coefficient of .432, these correlations suggest that mayors who score high in one of the components of the competence score are likely to score high also on the other components. Moreover, as an alternate measure of internal reliability consistency, I calculate the Cronbach’s alpha (Cronbach, 1951) of the competence score which yields a value of .754.

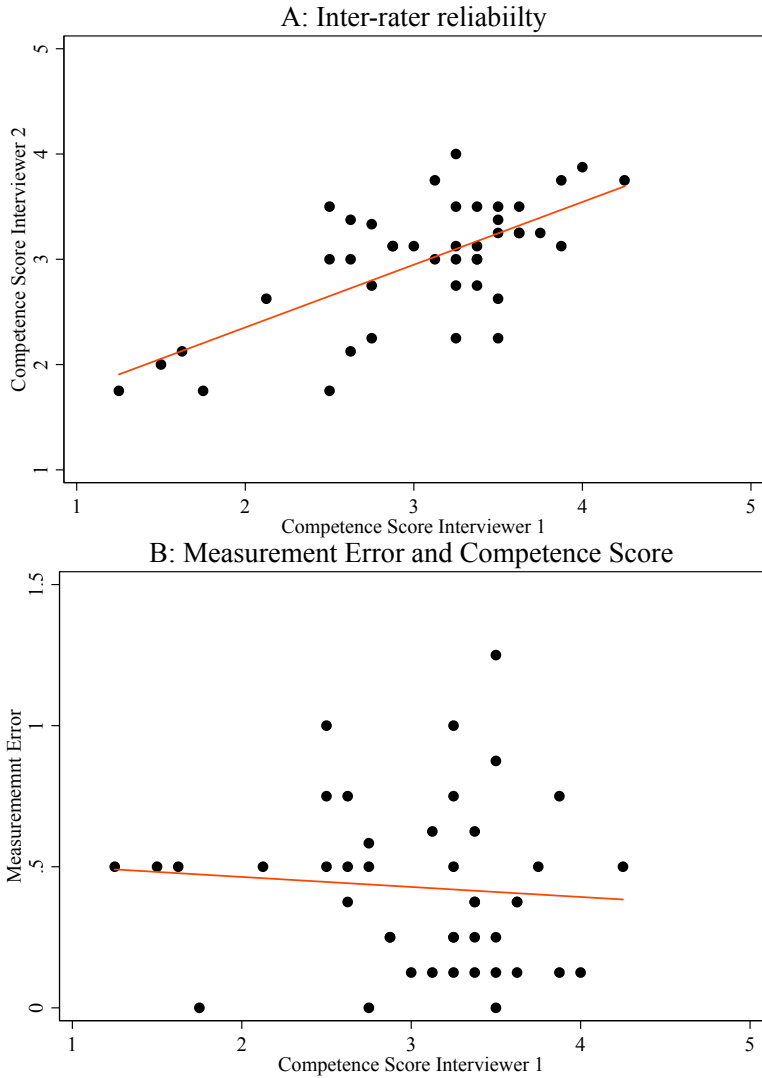
Table 5: Reliability of competence: pairwise correlations of components

	Target Setting	Operations	Performance Monitoring
Operations	.382***		
Performance Monitoring	.405***	.456***	
Incentives	.459***	.402***	.486***

Notes: Each coefficient reported in the table is from a regression of the variable reported in the column on the variable reported in the row and a constant term using the 306 observations in the cross-sectional dataset. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Finally, the results presented in the rest of the paper are not driven by any single component of the mean competence score: as shown in Table A7 in the Appendix, results are robust to excluding from the competence score, one at a time, *i*) each of the four management practices, or *ii*) each of the seven questions that compose the competence score.

Figure 3: Reliability of the Competence Score.



Notes: Panel A shows the correlation between the competence scores assigned to the same mayor by the two different interviewers. Panel B shows the correlation between the measurement error in the competence score (calculated as the absolute value of the difference of the two scores in Panel A) and the competence score by interviewer 1.

4 Empirical Strategy and Results

In order to study the effect of the mayor’s competence on policies, I employ two empirical strategies. I first explore the relationship descriptively with a cross-sectional analysis controlling for a wide set of mayor-specific and municipality-specific characteristics. Second,

to address the concern about unobservable determinants of both mayoral competence and outcomes, I use a difference-in-differences model exploiting the availability of the outcomes variables for the years preceding the election of the interviewed mayors. Throughout, the effect of mayoral competence is analysed as a function of the institutional environment in which the mayor operates.

4.1 Cross-Section

Using data on the quality of the mayors interviewed during the summer of 2016 and coupling it with administrative records on the budget of their municipality for all years during which the interviewed mayors were in power, I build an unbalanced panel of 306 municipalities over the 2010-2015 period. Using this data, I estimate the following model:

$$y_{it} = \beta MeanCompetenceScore_i + \alpha_r + \gamma' X_i + \varepsilon_{it} \quad (4.1)$$

where y_{it} is a budget outcome of municipality i for year t of the mandate of the interviewed mayor, the variable of interest $MeanCompetenceScore_i$ records the mean competence score of the mayor of municipality i . The variable α_r represent region fixed effects,²¹ while the matrix of controls X_i includes the party of the elected mayor, the mayor's age, gender, educational attainment, years of government experience and skill content of previous employment. Standard errors are clustered at the municipality level.

I start by studying the correlation between mayors' competence and the relative size of the municipal surplus which is, as explained in the institutional background section, one of the main dimensions of an efficient use of public funds in the Italian context: we expect more competent mayors to achieve a smaller surplus, all else constant.²² Panel A of Table 6 presents results for the entire sample, while Panels B, C and D present results for the subset of municipalities in the Italian South, North and Center respectively. Mayors with higher competence scores are associated with a reduction in the municipal surplus in Southern Italy only. The coefficient of interest is consistent across specifications and the effect is sizeable in magnitude: a one point increase in the competence score ranging from 1 to 5 is associated with a decrease ranging from 1.9 to 3.2 percentage points in the surplus as a function of the overall budget size, an effect ranging between 20 percent to 34 percent of the dependent variable's standard deviation. Appendix Table A5 shows that the difference in the effect in

²¹Italy's 8003 municipalities are divided among 20 regions. All regions are represented in the sample with the exception of Valle d'Aosta.

²²The variable is constructed as $\frac{TotalRevenues - TotalExpenditures}{TotalExpenditures}$

the South vs. the rest of Italy is statistically significant.

Table 6: Competence Score and Budget Surplus

	(1) Surplus	(2) Surplus	(3) Surplus	(4) Surplus
<i>Panel A: Full Sample</i>				
Mean Competence Score	0.001 (0.005)	0.001 (0.005)	0.002 (0.005)	0.002 (0.005)
Observations	939	927	927	927
Municipalities	306	303	303	303
R-squared	0.069	0.073	0.081	0.093
SD DV	0.0907	0.0911	0.0911	0.0911
<i>Panel B: South</i>				
Mean Competence Score	-0.019* (0.011)	-0.028** (0.014)	-0.033** (0.014)	-0.032** (0.014)
Observations	240	233	233	233
Municipalities	75	73	73	73
R-squared	0.138	0.180	0.211	0.230
SD DV	0.0934	0.0939	0.0939	0.0939
<i>Panel C: North</i>				
Mean Competence Score	0.008 (0.006)	0.009 (0.006)	0.010 (0.007)	0.011 (0.007)
Observations	552	547	547	547
Municipalities	180	179	179	179
R-squared	0.090	0.096	0.111	0.118
SD DV	0.0892	0.0895	0.0895	0.0895
<i>Panel D: center</i>				
Mean Competence Score	0.001 (0.008)	-0.014 (0.011)	-0.007 (0.014)	-0.004 (0.015)
Observations	147	147	147	147
Municipalities	51	51	51	51
R-squared	0.099	0.222	0.246	0.262
SD DV	0.0916	0.0916	0.0916	0.0916
Mayor Controls		✓	✓	✓
Party FE			✓	✓
Year of Term FE				✓

Notes: The dependent variable is the value of the per-capita municipal surplus relative to the budget size (total revenues minus total expenditures) over total expenditures, winsorized at the 1 percent level. The standard deviation of the dependent variable is reported in the table. All specifications include fixed effects for the year, region, and interviewer. Mayor controls include: *i*) the gender of the mayor, *ii*) the age of the mayor, *iii*) the mayor's previous occupation, and *iv*) the mayor's educational attainment. Standard errors clustered at the municipality level are shown in parenthesis. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

4.2 Difference-in-Differences

The results presented in the cross-sectional analysis are subject to two related potential concerns: municipalities that elect a more competent mayor might be more likely to experience, in the pre-election years, *i)* lower *levels* of surplus, or *ii)* a decreasing *trend* in surplus. In this section I address these two concerns. Exploiting fact that information on each municipality’s surplus is available also for the years preceding the election of the interviewed mayor and I build a panel in which each municipality is observed for a maximum of four years preceding and four years following the election of the interviewed mayor. Because of the staggered nature of Italian local elections, the election year for the mayors in my sample ranges between 2005 and 2015. First, I establish that municipalities that eventually elect a high vs. low-competence mayor exhibit similar *levels* of surplus in the years preceding the election. This is evident from Table 7 showing the average effect of mayoral competence on budget outcomes in each of the four years preceding the election of the mayor. Municipalities that eventually elect a high-competence mayor do not show on average any difference in the level of surplus with respect to municipalities that eventually elect a low-competence mayor, in any of the pre-election years.

Table 7: No difference in pre-election surplus for high vs. low-competence mayors

	(1) Surplus (Full Sample)	(2) Surplus (South)	(3) Surplus (North)	(4) Surplus (Centre)
Mean Competence Score \times year 1	-0.005 (0.007)	-0.003 (0.017)	-0.003 (0.011)	-0.016 (0.011)
Mean Competence Score \times year 2	0.008 (0.007)	0.021 (0.016)	0.003 (0.010)	-0.003 (0.017)
Mean Competence Score \times year 3	-0.007 (0.007)	0.000 (0.016)	-0.006 (0.009)	-0.021 (0.014)
Mean Competence Score \times year 4	-0.001 (0.007)	-0.003 (0.013)	0.000 (0.010)	-0.006 (0.014)
Observations	1,212	293	586	201
Municipalities	305	74	147	51
R-squared	0.075	0.109	0.066	0.129
SD Surplus	0.106	0.115	0.104	0.0968

Notes: the specification includes fixed effects for each year preceding the election year. Standard errors clustered at the municipality level are shown in parenthesis. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Second, I use a difference-in-differences model to show that *i)* municipalities that eventually elect a high-competence mayor exhibit similar *trends* in surplus in the years preceding the election, and *ii)* the effect of the competence of the interviewed mayor on surplus materializes only after her election. Intuitively, if the selection concern is valid, we would expect municipalities that elect better mayors to follow a different trend in terms of their surplus

even before the election. We rule out this concern by incorporating a placebo test in the analysis shown above: I show that the quality of the mayor does not affect the municipal surplus before her election. Specifically, I compare the differential *change* in surplus before and after the election of the interviewed mayor between municipalities where better and worse mayors are elected.²³ I estimate:

$$y_{it} = \alpha_i + \beta_t + \gamma(\text{MeanCompetenceScore}_i \times \text{Post}_t) + \delta_y + \sum_{k=1}^m \lambda_k(x_{ki} \times \text{Post}_t) + \varepsilon_{it} \quad (4.2)$$

where t represents a normalized measure of years, indexing the number of years since the interviewed mayor of municipality i was elected, with $t = 0$ being the election year. Municipality fixed effects, α_i , control for any time-invariant municipality-specific characteristic that has an effect on budget outcomes. Normalized year fixed effects, β_t , control for political budget cycles, addressing the possibility that the municipal surplus changes for all municipalities as the election approaches. The coefficient of interest, γ , captures the average difference in surplus for municipalities with better mayors after the mayor's election relative to before the election. The calendar year fixed effects, δ_y control for year-specific effects. The k controls x_i are the ones in the matrix X_i in equation 4.1 and 4.2. Standard errors are clustered at the municipality level.

The crucial assumption of this design is that the budget of municipalities that elect better mayors would have evolved similarly to the budget of municipalities that elect worse mayors in absence of the treatment (i.e. the election of mayors with different competence levels). To provide evidence in support of this assumption, I analyze whether there are differential pre-trends in surplus between municipalities that will elect mayors of different competence levels by estimating a version of equation (4.2) where the effect of $\text{MeanCompetenceScore}_i$ is allowed to vary flexibly over time:

$$y_{it} = \alpha_i + \beta_t + \sum_{t=-4}^{+4} \gamma_t \text{MeanCompetenceScore}_i + \delta_y + \sum_{t=-4}^{+4} \lambda'_t X_i + \varepsilon_{it} \quad (4.3)$$

²³This is similar to the approach used in Bandiera et al (2018) to evaluate the effect of CEO performance, measured cross-sectionally through a survey, on firm productivity.

Table 8: Competence Score and Budget Surplus - Diff-in-Diff

	(1)	(2)	(3)	(4)
	Surplus	Surplus	Surplus	Surplus
<i>Panel A: Full Sample</i>				
Mean Competence Score \times Post	-0.001 (0.004)	-0.002 (0.005)	-0.002 (0.005)	-0.001 (0.005)
Observations	2,362	2,362	2,339	2,339
Municipalities	306	306	303	303
R-squared	0.690	0.697	0.869	0.699
SD Surplus Pre	0.109	0.109	0.109	0.109
<i>Panel B: South</i>				
Mean Competence Score \times Post	-0.024*** (0.007)	-0.024*** (0.007)	-0.036*** (0.009)	-0.036*** (0.010)
Observations	588	588	571	571
Municipalities	75	75	73	73
R-squared	0.746	0.749	0.897	0.761
SD Surplus Pre	0.120	0.120	0.120	0.120
<i>Panel C: North</i>				
Mean Competence Score \times Post	0.010 (0.007)	0.010 (0.007)	0.009 (0.008)	0.008 (0.008)
Observations	1,143	1,143	1,143	1,143
Municipalities	147	147	147	147
R-squared	0.668	0.676	0.851	0.680
SD Surplus Pre	0.107	0.107	0.107	0.107
<i>Panel D: center</i>				
Mean Competence Score \times Post	-0.002 (0.009)	-0.009 (0.009)	-0.017* (0.010)	-0.003 (0.015)
Observations	382	382	382	382
Municipalities	51	51	51	51
R-squared	0.703	0.718	0.907	0.747
SD Surplus Pre	0.0978	0.0978	0.0978	0.0978
Region FE		✓	✓	✓
Mayor Controls			✓	✓
Party FE				✓

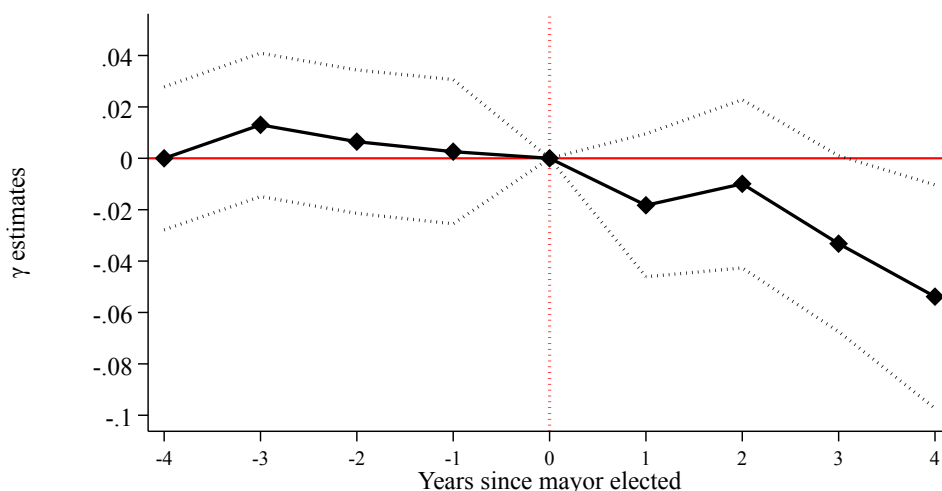
Notes: See Table 6 for table notes. The variable *Post* is an indicator taking value one for each year of the interviewed mayor's first term. The standard deviation of the dependent variable in the pre-period is reported in the table. All specifications include fixed effects for the municipality, the year since the mayor was elected, and the calendar year. All controls, as well as region and party indicators, are interacted with the *Post* indicator.

Table 8 confirms the cross-sectional results reported in Table 6, i.e. we see that better mayors are associated, in the Italian South only, with a reduction in the municipal surplus. The effect is consistent across specifications and economically meaningful: an increase in one unit of the competence score ranging between 1 and 5 leads to a reduction between 2.4 and 3.6 percentage points in the municipal surplus as a function of the budget size, effects

corresponding to 20 percent and 30 percent of a standard deviation in the outcome in the period preceding the election of the interviewed mayor. Appendix Table A6 shows that the difference in the effect in the South vs. the rest of Italy is statistically significant.²⁴

Crucially, Figure 4 shows that the decrease in surplus observed in municipalities that elect better mayors takes place precisely after the new mayor is elected, with no differential pre-trends in surplus in the years leading up to the election. Intuitively, the change in the surplus of each municipality in the years preceding the election does not predict the competence of the new mayor elected at time zero.

Figure 4: Timing of surplus reduction in the South



Notes: The coefficient plot above represents the coefficient estimates γ_t from the difference-in-differences model in equation (4.3). Dotted lines plot the 95 percent confidence intervals.

Table 4 has shown that the competence of the interviewed mayors is correlated to a number of their characteristics. Leveraging the availability of some of these characteristics (age, education level and skill content of the previous job) for the previous mayors for each municipality, Panel A of Table 9 shows that there is no correlation between the competence of the interviewed mayor and any of the available characteristics (age, education and skill content of previous job) of the previous mayor. Moreover, Panel B of Table 9 shows that there is no persistence over time in the characteristics of elected mayors. The evidence presented

²⁴The results presented in the rest of the paper are not driven by any single component of the competence score. Appendix Table A7 shows that results are robust to excluding from the competence score, one at a time, *i*) each of the four management practices, or *ii*) each of the seven questions that compose the competence score. Appendix Table A8 reports for the South the effect of each of the four components of the competence score, i.e. the scores received by the mayors for *target setting*, *performance monitoring*, *operations*, and *people management*, and shows that the four dimensions of competence contribute similarly to the effect reported in Panel B of Table 8.

in Table 9 suggests that the competence of the interviewed mayor should be uncorrelated to the competence of the previous mayor, further alleviating the selection concern.

Table 9: No Correlation with Previous Mayor’s Characteristics in the South

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Previous Mayor’s			
	Age	Job High Skill	Job Low Skill	Job Unemployed	Education <Highschool	Education Highschool	Education University
Panel A							
Mean Competence Score	1.017 (1.021)	-0.003 (0.068)	0.003 (0.049)	-0.001 (0.059)	0.034 (0.023)	-0.061 (0.064)	0.027 (0.066)
Observations	73	73	73	73	73	73	73
R-squared	0.014	0.000	0.000	0.000	0.030	0.013	0.002
Panel B							
Dependent Variable for interviewed Mayor	0.121 (0.083)	0.105 (0.160)	0.220* (0.123)	0.283 (0.302)	- -	-0.104 (0.122)	-0.141 (0.125)
Observations	73	71	71	71	73	73	73
R-squared	0.029	0.006	0.044	0.013	0.000	0.010	0.018

Notes: See the data section for a description of the variables. The unit of observation is the municipality. The coefficient in column (5) of Panel B is missing because no previous mayor had completed less than highschool. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

In light of Table 4 showing the correlation between competence and other characteristics of the mayor such as education and previous occupation, one might wonder if these characteristics have an effect on the budget surplus conditional on the competence score of the mayor. Table A9 in the Appendix rules out this concern.

The estimates shown in Table 8 are calculated using an unbalanced sample. For instance, if an interviewed mayor was elected for the first time in 2013, her municipality would appear in the dataset for the years 2009-2015, i.e. for all four years preceding the election but for only two years following it. In order to rule out the concern that results are driven by the sample composition in the pre and post election years, I estimate equation (4.2) for the subset of municipalities whose budget data is available for the full ± 4 years window around the mayor’s election. Appendix Table A10 shows robustness to this sample restriction.

Finally, we want to rule out the possibility that the negative effect of competence on surplus is driven the small number of municipalities with a budget deficit, i.e. a negative surplus. Appendix Table A11 shows that results are virtually unchanged if the absolute value of the surplus is used as a dependent variable.

4.3 Better mayors and more long-term investments

Results show that more competent mayors manage the budget more efficiently by closing the gap between revenues and expenditures. In this section, I investigate how better mayors

attain this reduction in surplus. Better mayors may affect the expenditure side of the budget, by raising capital or current expenditure of the municipality, or they may affect the revenue side, through taxation and transfers from the central government. The first column of Table 10 shows that mayors with a higher competence score are especially able to raise total expenditures. Columns (2) to (4) further show that the increase in total expenditures is explained by an increase in capital rather than current expenditures, i.e. better mayors are spending more in long term investments such as infrastructure building and multi-year projects. An increase of one unit in the Mean Competence Score is associated to an increase in capital expenditures of 92 euros per capita, corresponding to 26 percent of the mean value of capital expenditures in the South over the four pre-election years. The effect of competence on the ability to raise capital expenditures is consistent with evidence from my survey showing that 66 percent of the interviewed mayors listed at least one capital investment among the main objectives of their mandate. The higher likelihood of competent mayors to deliver capital investments might stem from a longer time-horizon or from a greater ability to put together the necessary bureaucratic and monetary resources to approve more complicated projects. These results are in line with the evidence for U.S. mayors who overwhelmingly identify an increase in infrastructure investment projects as their top priority (Einstein and Glick 2016).

Importantly, competent mayors increase capital investments without increasing taxes (column 6). While there is a small increase in total revenue, which is marginally significant at the 10 percent level (p-value 0.09), this is not driven by an increase in taxes, but rather by a modest increase in the residual component of budget revenues, mostly consisting of fees collected for municipal services (among others fees collected for services at the city hall, public transportation, touristic services, fines by the police, the use of municipal sport infrastructure).

Table 10: Competence Score and Surplus Components in the South

	Expenditures				Revenues			
	Total (1)	Current (2)	Capital (3)	Other (4)	Total (5)	Taxes (6)	Transfer (7)	Other (8)
Mean Competence Score \times Post	150.244** (57.575)	18.039 (13.058)	78.813** (33.795)	54.462* (32.048)	91.614* (53.166)	-9.529 (10.704)	16.309 (11.202)	77.107 (48.377)
Observations	571	571	571	571	571	571	571	571
Municipalities	73	73	73	73	73	73	73	73
R-squared	0.610	0.875	0.347	0.672	0.610	0.929	0.897	0.545
SD Surplus Pre	551.8	184.3	385.1	230.6	552.4	164.8	151.9	496.2

Notes: See Table 8 for table notes. The dependent variables are expressed in per capita terms and are winsorized at the 1 percent level.

4.4 Better mayors and better service provision

Do the lower surplus and higher capital expenditures associated with more competent mayors translate into better public goods for the municipality's citizens? In order to investigate this question I use data on the quality of service provision in each municipality in my sample. It is key to investigate the effect of competence on policies by coupling the data on public spending presented so far with data on the quality of service provision, since it is well documented that the cost of public investment does not directly translate into the value of existing capital (Golden and Picci 2005, Olken 2007, Pritchett 2000). Starting in 2010, the *Italian Ministry of Economic Affairs and Finance*, appointed a task force that gathered and analyzed data for each municipality on its expenditures and on the quantity and quality of services provided.²⁵ The resulting measure, available for the years 2010 and 2013 only, is a municipality-level index ranging between 1 and 10, which measures how virtuous each municipality is by weighting i) the quality of its services vis-à-vis the quality of services provided by comparable municipalities, and ii) the amount spent on these services vis-a-vis the expenditure of comparable municipalities.²⁶ Coefficients in Table 11 shows the effect of an increase in the quality of the elected mayor on the index of services quality in the Italian South (column 1), North (column 2) and Center (column3). While the small sample size limits the external validity of the results, Table 11 shows that, in line with results presented so far, the election of a high-quality mayor translates into better services provision only where the quality of institutions is lower. An increase of one unit in the Mean Competence Score of the elected mayor in the South leads to an increase, after the election, of .74 in the index of quality of service provision ranging from 1 to 10. The magnitude of the effect is sizeable as it roughly corresponds to .4 of a standard deviation in the dependent variable. Effectively, competent mayors in the South bridge the North-South gap in the quality of service provision. This can be seen in Figure 5. Here the North-South gap is represented by the vertical distance between the two red lines. Southern mayors lying in the right tail of the competence distribution partly bridge this gap by achieving levels of the quality of service provision index that are within one standard deviation of the average level in the North (red line in Panel A).

²⁵The reliability of the measure of service quality is subject to the caveat that performance measurement systems could be used as political discipline mechanisms even when performance measures are compiled by formally independent administrative agencies (Bertelli and John 2010).

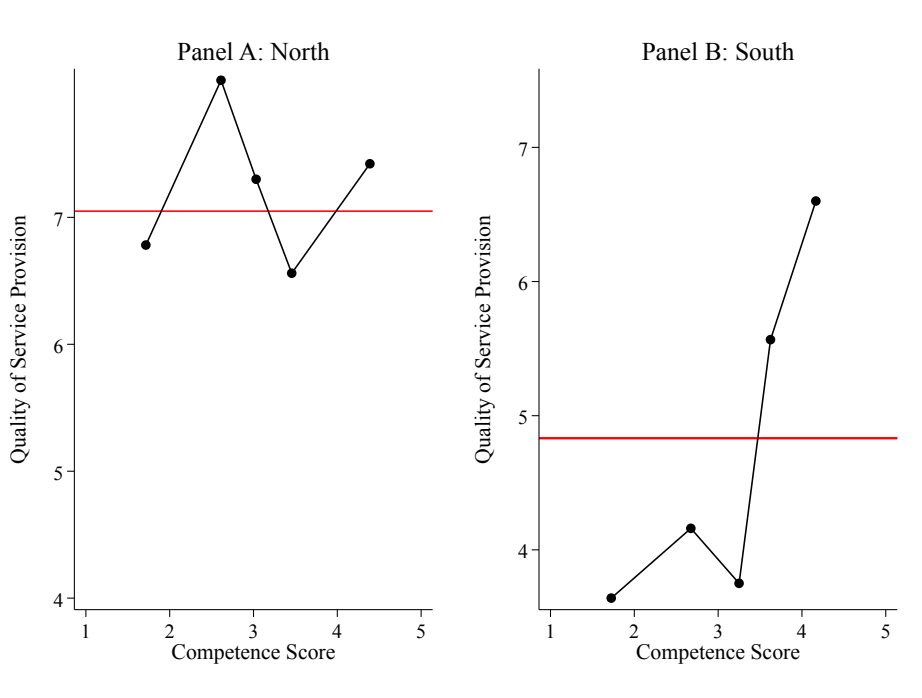
²⁶For a detailed methodological note on the index construction see Porcelli et al. (2016) and <http://www.mef.gov.it/ministero/commissioni/ctfs/>.

Table 11: Competence Score and Quality of Service Provision

	(1) Quality of Services (South)	(2) Quality of Services (North)	(3) Quality of Services (Centre)
Mean Competence Score \times Post	0.744** (0.347)	0.389 (0.313)	-0.386 (0.496)
Observations	48	101	28
Municipalities	25	54	15
R-squared	0.794	0.752	0.725
SD DV Pre	1.862	1.714	1.875
Sample	South	North	Center

Notes: The dependent variable is an index of service provision quality ranging from 1 to 10. All specifications include fixed effects for the municipality and the year since the mayor was elected. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Figure 5: Competent southern mayors bridge the North-South service provision gap



Notes: The binned scatter plots above displays the relationship between the mean competence score and the quality of service provision index in 2013, when the interviewed mayors were in office. I construct 5 equally sized bins of the competence scores given to each mayor and, for each bin, plot the value of the service provision index of the mayor's municipality. The horizontal red lines represent the mean quality of service provision in the pre-election period, i.e in 2011, in the North (Panel A) and in the South (Panel B).

4.5 Alternative measures of institutions

It is theoretically ambiguous whether the quality of institutions and that of politicians are complements or substitutes. On one hand, if better institutions enhance the ability of good mayors to operate, institutions and mayoral quality will act as complements. On the other hand, mayoral competence may play an increasingly significant role as the quality of institutions becomes worse. Intuitively, competent politicians could have a larger impact where low quality institutions leave more room for improvement, while high quality institutions might impose a ceiling effect on the marginal impact of a politician.²⁷

Results presented so far seem to provide evidence in favour of the substitutability between politicians' and institutions' quality, showing that more competent politicians are effective in the Italian South only. I have so far attributed this heterogeneity to the lower quality of institutions in the South vis-a-vis the rest of Italy. However, the different effect of politicians competence in the South vis-a-vis the rest of Italy could be due to any other South-specific characteristics that moderates the effect of competence. In this section, I strengthen my interpretation by employing three alternate municipality-level measures of institutional quality as an alternative to the crude North-South distinction and I show that results are consistent across these three measures.

I focus on informal institutions, since formal institutions are constant across Italy. While formal political institutions (such as the mayoral powers, the rules governing the bureaucracy, the budgetary rules) are the same throughout Italy, their proper functioning is conditional on the presence of the appropriate informal institutions (Stokes 2006), intended here as creating or strengthening incentives to comply with formal institutions (Helmke and Levitsky 2004). A long body of literature has emphasized that the South is more deficient in terms of informal institutions, due to the inherent difficulties presented by a setting with lower social capital (Putnam 1993) more corruption (Golden and Picci 2005), clientelism (Alesina et al. 2016, Chubb 1982), and a stronger presence of organized crime (Pinotti 2015). Measuring informal institutions is empirically challenging, given their unwritten nature (Helmke and Levitsky 2004). I focus here on three alternative aspects of informal institutions that can be measured in a meaningful way at the municipality level in Italy and each of the three measures of institutional quality, I estimate the equation below.

²⁷Institutions have been found to operate as ceiling effects in a wide variety of contexts, such as economic reform (Acemoglu et al 2008), the effectiveness of hereditary rule (Besley and Reynal-Querol 2017), and development projects design (Khwaja 2009).

$$\begin{aligned}
y_{it} = & \alpha_i + \beta_t + \gamma(\text{MeanCompetenceScore}_i \times \text{Post}_t \times \text{PoorInstitutions}_i) + \\
& + \delta(\text{MeanCompetenceScore}_i \times \text{Post}_t) + \lambda(\text{PoorInstitutions}_i \times \text{Post}_t) + \\
& + \kappa_y + \sum_{k=1}^m \rho_k(x_{ki} \times \text{Post}_t) + \varepsilon_{it}
\end{aligned} \tag{4.4}$$

where $\text{PoorInstitutions}_i$ is an indicator taking value one for every municipality i characterized by a low-level of institutional quality as measured by, respectively, social capital, mafia presence and bureaucratic norms. I describe each of these three measures in detail below.

4.5.1 Social Capital

I test whether the effect of mayoral competence is heterogenous with respect to the level of social capital in a municipality. Social capital is intended to capture the unwritten rules of trust and reciprocity in a community that can affect the functioning of democratic institutions (Fukuyama 1995, Gambetta 1988, Knack and Keefer 1997, La Porta et al 1997, Putnam 1993). I use data on social capital at the municipality level from Nannicini et al (2013). I construct an inverse covariance weighted index of social capital (Anderson 2008) for each municipality in my sample based on the following variables: blood donations, number on nonprofit organizations, number of non-sport daily newspapers sold, answer to the trust question in the World Value Survey, and turnout in the most recent referendum. Based on this measure, I construct an indicator of low social capital, taking value one for all municipalities in the sample whose social capital is below the 25th percentile of the distribution, a value corresponding to the 40th percentile in the Italian South. Column (1) of Table 12 shows that a one unit increase in the mayor’s competence score in municipalities characterized by low social capital decreases the municipal surplus by 2.8 percentage points, an effect equivalent to 28 percent of a standard deviation in the pre-election surplus, while we see no effect for the remaining municipalities. However, since social capital is lower in Southern municipalities as shown in Appendix Tables A1 to A3, it could be the case that Southern municipalities are driving the effect of the *Low Social Capital* indicator. To address this concern, column (2) presents a horserace between the *South* and the *Low Social Capital* indicators and shows that the effect of low social capital is not entirely driven by Southern municipalities. As expected, the coefficient in column (2) is smaller than in column (1), since social capital is only one dimension of the overall quality of informal institutions. The remaining dimensions are captured by the *South* indicator.

4.5.2 Mafia Presence

I look at the presence of mafia organizations as an additional dimension of informal institutions (Gambetta 1993, Lauth 2000). The presence of organized crime can affect the job of a mayor through several channels, such as making the procurement operations more delicate given the threat of corruption. I employ a municipality-level measure of the number of businesses, goods and buildings confiscated for mafia involvement by the Italian police that however, given the distribution of organized crime in Italy, has a meaningful variation across and within regions in the South only.²⁸ Column (3) of Table 12 shows that the effect of more competent mayors on the budget surplus is stronger in municipalities with mafia presence, where a one-point increase in the Mean Quality Score leads to an average reduction in surplus of about 46 percent of a standard deviation, while the average reduction in municipalities without mafia presence is of 25 percent of a standard deviation.

4.5.3 Letters experiment

Finally, I collect a behavioral measure of bureaucratic norms from a group of bureaucrats who are not under the mayor's supervision: postal office workers. While the rules governing the bureaucracy are formal institutions, their efficacy is affected by the informal norms of bureaucratic behavior (Hamilton-Hart 2000). I send to each of the municipality in my sample a letter addressed to a fictitious recipient at a fictitious address but bearing the correct municipality name and postal code.²⁹ Italian municipal postal offices are responsible for returning to the sender any letter mailed to an incorrect address. As in Chong et al (2014), I record whether each letter is returned and use it as a proxy for the quality of bureaucratic norms. This measure presents two advantages. First, it is available for the whole sample. Second, postal offices operate in each municipality but do not depend from the mayor or the municipal government.³⁰ Note that this measure of institutional quality is orthogonal to the North-South divide, with the median return rate of my letters being similar across the North, South and Center. The analysis performed in column (4) is underpowered in light of the fact that for only 15 percent of municipalities the letter was not returned to the sender. However, results presented in column (4) of Table 12 are qualitatively in line with those presented in columns (1) to (3) and confirm the substitutability between the quality of mayors and that of the local institutions by showing that the effect of high-competence mayors in the whole sample is driven by those municipalities whose postal office did not

²⁸More details in the additional data section in the Appendix.

²⁹All letters were addressed to Giovanni Verde in Via Atlante 36 and were all sent from the same zip code on the same day.

³⁰As required by the DDL 261/1999, all municipalities in my sample have a postal office.

comply with the rule of sending back the letter.

Table 12: Heterogeneous effect with alternative measures of institutional quality

	(1) Surplus	(2) Surplus	(3) Surplus (in South)	(4) Surplus
Mean Competence Score × Post × Low Social Capital	-0.028*** (0.010)	-0.018* (0.010)		
Mean Competence Score × Post × South		-0.022** (0.011)		
Mean Competence Score × Post × Mafia Presence			-0.056** (0.023)	
Mean Competence Score × Post × No Letter				-0.014 (0.014)
Mean Competence Score × Post	0.006 (0.005)	0.008 (0.006)	-0.030*** (0.011)	0.000 (0.005)
Observations	2,011	2,011	571	2,339
Municipalities	262	262	73	303
R-squared	0.689	0.689	0.898	0.870
SD DV Pre	0.110	0.110	0.120	0.109

Notes: See table 8 for table notes.

5 Conclusion

In this paper, I ask to what extent politicians' competence as managers of the public administration matters for policy and if it can compensate for low-quality informal institutions. I develop a survey instrument to measure the competence of executive politicians and I administer it to a representative sample of Italian mayors.

The election of more competent mayors translates into a more effective use of funds, an increase in long-term investments, and better service provision without an increase in taxes, only where the quality of institutions is low. This is true across a series of different measures of institutional quality: Southern versus Northern Italy, presence of organized crime, social capital, and a behavioral measure of the efficiency of local bureaucratic norms.

The results of my paper point to the fact that the quality of elected politicians and the quality of informal institutions act as substitutes rather than complements. Mayoral competence plays an increasingly significant role as the quality of institutions become worse. In light of these findings, efforts to increase the managerial competence of local politicians may represent a cost-effective way of increasing the quality of public goods provision.

While the focus of this paper is on Italian mayors, its findings are likely to be relevant across different settings. The role of local governments and their executive politicians has recently drawn considerable attention in the U.S. context (Arnold and Carnes 2012,

Tausanovich and Warshaw 2014), with local policies representing an increasing share of government activities (Trounstone 2009). Recent evidence suggests that local governments might be the very place where significant policy change can take place, given the lower relevance of partisan polarisation in this context (Ferreira and Gyourko 2009). Applying the methodology that I developed in this paper to the study of politicians managing U.S. municipal governments represents a promising area of future research.

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Appendix

Table A1: Summary statistics for Southern Italy

	Mean	Std. Dev.	Min.	Max.	N
<i>Panel A: Cross-Sectional Variables</i>					
<i>Mayor characteristics</i>					
Mean Competence Score	2.92	0.85	1	4.5	75
Age	53.59	10.21	31	81	75
Female	0.07	0.25	0	1	75
Job - High Skill	0.84	0.37	0	1	73
Job - Low Skill	0.14	0.35	0	1	73
Job - Unemployed/Pension	0.03	0.16	0	1	73
Education - Less than Highschool	0.01	0.12	0	1	75
Education - Highschool	0.25	0.44	0	1	75
Education - University	0.73	0.45	0	1	75
Years of Government Experience	13.24	6.82	0	31	75
Year in Office	2.63	1.09	1	5	75
Party - Left	0.16	0.37	0	1	75
Party - Centre Left	0.43	0.5	0	1	75
Party - Centre/Independent	0.29	0.46	0	1	75
Party - Centre Right	0.09	0.29	0	1	75
Party - Right	0.03	0.16	0	1	75
<i>Municipality characteristics</i>					
Population	4811.07	784.64	3622	6462	75
Low Social Capital	0.41	0.5	0	1	75
No Letter	0.12	0.33	0	1	75
<i>Panel B: Panel Variables</i>					
Surplus	0.13	0.12	-0.13	0.36	588
Total Expenditures (euros per capita)	1276.95	589.80	473.45	3863.21	588
Total Revenues (euros per capita)	1287.35	596.41	463.43	3798.69	588
Current Expenditures (euros per capita)	528.59	190.94	269.42	1516	588
Capital Expenditures (euros per capita)	342.83	379.73	12.25	1990.57	588
Other Expenditures (euros per capita)	249.11	245.14	61.24	1119.35	588
Tax Revenues (euros per capita)	391.93	176.66	104.65	1165.12	588
Transfer Revenues (euros per capita)	208.44	159.81	9.56	644.35	588
Other Revenues (euros per capita)	674.95	524.02	130.28	2661.91	588
Quality of Service Provision Index	4.75	1.78	1	8.80	48

Table A2: Summary statistics for Northern Italy

	Mean	Std. Dev.	Min.	Max.	N
<i>Panel A: Cross-Sectional Variables</i>					
<i>Mayor characteristics</i>					
Mean Competence Score	2.99	0.83	1	5	180
Age	51.7	10.26	28	76	180
Female	0.17	0.38	0	1	180
Job - High Skill	0.63	0.49	0	1	179
Job - Low Skill	0.23	0.42	0	1	179
Job - Unemployed/Pension	0.14	0.35	0	1	179
Education - Less than Highschool	0.07	0.26	0	1	180
Education - Highschool	0.51	0.5	0	1	180
Education - University	0.42	0.49	0	1	180
Years of Government Experience	12.89	8.26	2	41	180
Year in Office	2.39	0.78	1	5	180
Party - Left	0.15	0.36	0	1	180
Party - Centre Left	0.34	0.48	0	1	180
Party - Centre/Independent	0.22	0.41	0	1	180
Party - Centre Right	0.28	0.45	0	1	180
Party - Right	0.01	0.11	0	1	180
<i>Municipality characteristics</i>					
Population	4988.85	783.71	3555	6468	180
Low Social Capital	0.1	0.3	0	1	180
No Letter	0.11	0.32	0	1	180
<i>Panel B: Panel Variables</i>					
Surplus	0.12	0.11	-0.13	0.36	1143
Total Expenditures (euros per capita)	1053.65	510.59	473.45	3863.21	1143
Total Revenues (euros per capita)	1044.53	504.23	463.43	3798.69	1143
Current Expenditures (euros per capita)	548.22	222.68	269.42	1562.92	1143
Capital Expenditures (euros per capita)	206.17	236.91	12.25	1990.57	1143
Other Expenditures (euros per capita)	169.81	166.19	46.47	1119.35	1143
Tax Revenues (euros per capita)	443.03	186.95	117.31	1165.12	1143
Transfer Revenues (euros per capita)	120.33	104.9	9.56	644.35	1143
Other Revenues (euros per capita)	463.49	327.68	130.28	2661.91	1143
Quality of Service Provision Index	7.13	1.63	2.8	10	101

Table A3: Summary statistics for Central Italy

	Mean	Std. Dev.	Min.	Max.	N
<i>Panel A: Cross-Sectional Variables</i>					
<i>Mayor characteristics</i>					
Mean Competence Score	3.14	0.85	1	4.88	51
Age	52.94	10.78	34	77	51
Female	0.1	0.3	0	1	51
Job - High Skill	0.67	0.48	0	1	51
Job - Low Skill	0.14	0.35	0	1	51
Job - Unemployed/Pension	0.2	0.4	0	1	51
Education - Less than Highschool	0.02	0.14	0	1	51
Education - Highschool	0.35	0.48	0	1	51
Education - University	0.63	0.49	0	1	51
Years of Government Experience	13.16	8.22	2	41	51
Year in Office	2.29	0.58	2	5	51
Party - Left	0.24	0.43	0	1	51
Party - Centre Left	0.49	0.5	0	1	51
Party - Centre/Independent	0.12	0.33	0	1	51
Party - Centre Right	0.16	0.37	0	1	51
Party - Right	0	0	0	0	51
<i>Municipality characteristics</i>					
Population	4994.92	686.05	3819	6332	51
Low Social Capital	0.31	0.47	0	1	51
No Letter	0.35	0.48	0	1	51
<i>Panel B: Panel Variables</i>					
Surplus	0.13	0.1	-0.13	0.36	382
Total Expenditures (euros per capita)	1453.32	613.56	623.31	3863.21	382
Total Revenues (euros per capita)	1455.75	621.07	629.54	3798.69	382
Current Expenditures (euros per capita)	642.94	219.49	269.42	1562.92	382
Capital Expenditures (euros per capita)	327.38	354.83	12.25	1990.57	382
Other Expenditures (euros per capita)	282.78	281.99	55.51	1119.35	382
Tax Revenues (euros per capita)	480.46	167.2	169.78	1078.65	382
Transfer Revenues (euros per capita)	167.39	129.61	9.56	644.35	382
Other Revenues (euros per capita)	798.33	556.04	130.28	2661.91	382
Quality of Service Provision Index	5.23	1.88	1	8.19	28

Table A4: Balance between interviewed and non-interviewed mayors

	Declined Interview	Accepted Interview	Difference	s.e. of Difference
Panel A: South				
Age	52.20	53.59	1.39	(1.45)
Female	0.10	0.07	-0.04	(0.04)
Job - High Skill	0.82	0.84	0.02	(0.06)
Job - Low Skill	0.09	0.14	0.05	(0.05)
Job - Unemployed/Pensioner	0.09	0.03	-0.06	(0.04)
Education - Less than Highschool	0.03	0.01	-0.01	(0.02)
Education - Highschool	0.30	0.25	-0.05	(0.07)
Education - University	0.67	0.73	0.06	(0.07)
Total Revenues (euros per capita)	1425.05	1412.17	-12.88	(84.27)
Total Expenditures (euros per capita)	1378.61	1375.84	-2.77	(82.13)
Surplus	0.20	0.20	0.00	(0.01)
Observations	106	75	181	
Panel B: North				
Age	51.81	51.58	-0.23	(1.33)
Female	0.19	0.13	-0.06	(0.04)
Job - High Skill	0.70	0.66	-0.04	(0.06)
Job - Low Skill	0.16	0.20	0.05	(0.05)
Job - Unemployed/Pensioner	0.13	0.14	0.00	(0.04)
Education - Less than Highschool	0.09	0.08	-0.01	(0.03)
Education - Highschool	0.44	0.50	0.05	(0.06)
Education - University	0.47	0.42	-0.04	(0.06)
Total Revenues (euros per capita)	957.04	998.73	41.69	(48.65)
Total Expenditures (euros per capita)	950.43	988.71	38.27	(47.90)
Surplus	0.19	0.19	-0.00	(0.01)
Observations	120	147	267	
Panel C: Center				
Age	49.92	52.67	2.74	(1.54)*
Female	0.18	0.20	0.02	(0.06)
Job - High Skill	0.62	0.59	-0.03	(0.08)
Job - Low Skill	0.18	0.23	0.05	(0.06)
Job - Unemployed/Pensioner	0.15	0.18	0.03	(0.06)
Education - Less than Highschool	0.05	0.02	-0.03	(0.03)
Education - Highschool	0.37	0.44	0.07	(0.08)
Education - University	0.58	0.54	-0.04	(0.08)
Total Revenues (euros per capita)	1,290.61	1,335.79	45.18	(79.10)
Total Expenditures (euros per capita)	1,271.49	1,313.44	41.95	(77.10)
Surplus	0.19	0.19	0.00	(0.01)
Observations	78	84	162	

Notes: The number of observations for the variables *Job - High-skill*, *Job - Low-skill*, and *Job - Unemployed* is 176 (103 not interviewed and 73 interviewed) in Panel A, 261 (114 not interviewed and 147 interviewed) in Panel B, and 155 (72 not interviewed and 83 interviewed) in Panel C. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A5: Competence Score and Surplus: south vs. rest of Italy

	(1)	(2)	(3)	(4)
	Surplus	Surplus	Surplus	Surplus
Mean Competence Score \times South	-0.024** (0.012)	-0.031** (0.013)	-0.028** (0.013)	-0.029** (0.013)
Mean Competence Score	0.007 (0.005)	0.007 (0.005)	0.008 (0.005)	0.008 (0.005)
Observations	939	927	927	927
Municipalities	306	303	303	303
R-squared	0.077	0.085	0.091	0.103
SD DV	0.0907	0.0911	0.0911	0.0911
Mayor Controls		✓	✓	✓
Party FE			✓	✓
Year of Term FE				✓

Notes: The dependent variable is the value of the per-capita municipal surplus relative to the budget size (total revenues minus total expenditures) over total expenditures, winsorized at the 1 percent level. The variable *South* is an indicator taking value one for all municipalities in southern Italy and value zero for municipalities in northern and central Italy. All specifications include year and region fixed effects. The *South* indicator is absorbed by region fixed effects. The standard deviation of the dependent variable is reported in the table. Mayor controls include: *i*) the gender of the mayor, *ii*) the age of the mayor, *iii*) the mayor's previous occupation, *iv*) the mayor's educational attainment, and *v*) fixed effects for the year of the mayor's current mandate (1-5). Standard errors clustered at the municipality level are shown in parenthesis. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A6: Competence Score and Surplus (Diff-in-Diff): south vs. rest of Italy

	(1)	(2)	(3)	(4)
	Surplus	Surplus	Surplus	Surplus
Mean Competence Score \times Post \times South	-0.030*** (0.008)	-0.027*** (0.009)	-0.030*** (0.010)	-0.030*** (0.010)
Mean Competence Score \times Post	0.006 (0.005)	0.004 (0.005)	0.005 (0.005)	0.005 (0.005)
Post \times South	0.084*** (0.024)			
Observations	2,362	2,362	2,339	2,339
Municipalities	306	306	303	303
R-squared	0.693	0.699	0.870	0.700
SD Surplus Pre	0.109	0.109	0.109	0.109
Region FE		✓	✓	✓
Mayor Controls			✓	✓
Party FE				✓

Notes: The dependent variable is the value of the per-capita municipal surplus (total revenues minus total expenditures) relative to the budget size, winsorized at the 1 percent level. The variable *Post* is an indicator taking value one for each year of the interviewed mayor's term following the mayor's first election. The variable *South* is an indicator taking value one for all municipalities in southern Italy and value zero for municipalities in northern and central Italy. In columns (2)-(3) the variable *Post* \times *South* is absorbed by region fixed effects interacted with the *Post* dummy. The standard deviation of the dependent variable in the pre-period is reported in the table. All specifications include fixed effects for the municipality, the year since the mayor was elected and the calendar year. Mayor controls include the mayor's age, gender, educational attainment, years of government experience and skill content of previous employment. All controls, as well as region and party indicators, are interacted with the *Post* indicator. Standard errors clustered at the municipality level are shown in parenthesis. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A7: Reliability of Competence Score in the South

		Dependent Variable : Surplus						
<i>Panel A - Mean Competence Score excludes practice:</i>		Target Setting	Operations	Performance Monitoring	Incentives			
Mean Competence Score (excluding one practice) × Post		-0.035*** (0.010)	-0.033*** (0.011)	-0.027*** (0.009)	-0.035*** (0.010)			
Observations		571	571	571	571			
R-squared		0.762	0.761	0.758	0.762			
SD Surplus Pre		0.120	0.120	0.120	0.120			
<i>Panel B - Mean Competence Score excludes question:</i>		(1)	(2)	(3)	(4)	(5)	(6)	
Mean Competence Score (excluding one question) × Post		-0.037*** (0.010)	-0.036*** (0.010)	-0.035*** (0.010)	-0.032*** (0.010)	-0.034*** (0.010)	-0.037*** (0.011)	
Observations		571	571	571	571	571	571	
R-squared		0.762	0.762	0.761	0.760	0.760	0.762	
SD Surplus Pre		0.120	0.120	0.120	0.120	0.120	0.120	

Notes: The table above replicates results shown in Table 8 (for the Italian south only) using alternate definitions of the Competence Score. Panel A shows results for four alternate Competence Scores, each calculated as the average of three out of the four practices used to calculate the Competence Score used throughout the paper. Panel B shows results for seven alternate Competence Scores, each calculated as the average of all but one of the 7 questions used to calculate the Competence Score used throughout the paper. All columns show results for the full specification including party and region fixed effects and mayor controls (i.e. party indicators, region indicators and mayor control variables interacted with the *Post* indicator). *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A8: Competence Score components (in South)

	(1)	(2)	(3)	(4)
	Surplus	Surplus	Surplus	Surplus
<i>Panel A</i>				
Target Setting × Post	-0.012*	-0.011	-0.019**	-0.017*
	(0.007)	(0.007)	(0.010)	(0.010)
Observations	588	588	571	571
R-squared	0.741	0.745	0.894	0.756
<i>Panel B</i>				
Performance Monitoring × Post	-0.019***	-0.020***	-0.027***	-0.028***
	(0.006)	(0.007)	(0.007)	(0.009)
Observations	588	588	571	571
R-squared	0.747	0.751	0.897	0.762
<i>Panel C</i>				
Operations × Post	-0.014***	-0.014**	-0.017**	-0.018**
	(0.005)	(0.006)	(0.007)	(0.007)
Observations	588	588	571	571
R-squared	0.743	0.747	0.895	0.758
<i>Panel D</i>				
Incentives × Post	-0.013*	-0.012	-0.016**	-0.013
	(0.007)	(0.007)	(0.008)	(0.008)
Observations	588	588	571	571
R-squared	0.742	0.746	0.894	0.755
Municipalities	75	75	73	73
SD Surplus Pre	0.120	0.120	0.120	0.120
Region FE		✓	✓	✓
Mayor Controls			✓	✓
Party FE				✓

Notes: Each panel replicates Panel B table 8 using one of the four management practices or components of the Mean Competence Score in lieu of the Mean Competence Score. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A9: Competence Score and Human Capital Measures

	(1) Surplus South	(2) Surplus North	(3) Surplus Centre
Mean Competence Score \times Post	-0.036*** (0.011)	0.010 (0.007)	-0.005 (0.013)
Female \times Post	-0.043 (0.027)	-0.005 (0.015)	0.038 (0.027)
Age \times Post	-0.001 (0.001)	0.000 (0.001)	0.000 (0.001)
Job - High Skill \times Post	-0.021 (0.022)	-0.003 (0.012)	-0.028 (0.020)
Education - University \times Post	0.013 (0.019)	0.005 (0.012)	0.021 (0.020)
Years of Government Experience \times Post	-0.001 (0.001)	0.000 (0.001)	-0.000 (0.001)
Observations	571	1,143	382
Municipalities	73	147	51
R-squared	0.759	0.679	0.728
SD Surplus Pre	0.120	0.107	0.0978
Region FE	✓	✓	✓
Party FE	✓	✓	✓

Notes: See Table 8 for table notes. *** is significant at the 1 percent level, ** is significant at the 5 percent level, * is significant at the 10 percent level.

Table A10: Robustness to Balanced Sample

	(1)	(2)	(3)	(4)
	Surplus	Surplus	Surplus	Surplus
<i>Panel A: Full Sample</i>				
Mean Competence Score \times Post	0.002 (0.005)	0.001 (0.005)	-0.000 (0.006)	-0.000 (0.006)
Observations	1,296	1,296	1,287	1,287
Municipalities	144	144	143	143
R-squared	0.731	0.739	0.846	0.742
SD Surplus Pre	0.0844	0.0844	0.0845	0.0845
<i>Panel B: South</i>				
Mean Competence Score \times Post	-0.013** (0.006)	-0.014** (0.007)	-0.028*** (0.009)	-0.030** (0.011)
Observations	333	333	324	324
Municipalities	37	37	36	36
R-squared	0.811	0.814	0.904	0.829
SD Surplus Pre	0.0935	0.0935	0.0942	0.0942
<i>Panel C: North</i>				
Mean Competence Score \times Post	0.013 (0.009)	0.011 (0.009)	0.009 (0.011)	0.007 (0.011)
Observations	639	639	639	639
Municipalities	71	71	71	71
R-squared	0.684	0.696	0.809	0.700
SD Surplus Pre	0.0842	0.0842	0.0842	0.0842
<i>Panel D: Centre</i>				
Mean Competence Score \times Post	-0.007 (0.007)	-0.008 (0.007)	-0.018* (0.010)	-0.021* (0.011)
Observations	189	189	189	189
Municipalities	21	21	21	21
R-squared	0.786	0.787	0.895	0.804
SD Surplus Pre	0.0705	0.0705	0.0705	0.0705
Region FE		✓	✓	✓
Mayor Controls			✓	✓
Party FE				✓

Notes: The Table replicates Table 8 using a balanced panel sample. See Table 8 for additional table notes.

Table A11: Results not driven by more competent mayors generating negative deficit

	(1) Surplus (Absolute Value)	(2) Surplus (Absolute Value)	(3) Surplus (Absolute Value)	(4) Surplus (Absolute Value)
<i>Panel A: Full Sample</i>				
Mean Competence Score × Post	0.000 (0.004)	-0.000 (0.004)	-0.001 (0.004)	-0.000 (0.004)
Observations	2,362	2,362	2,339	2,339
Municipalities	306	306	303	303
R-squared	0.684	0.692	0.900	0.696
SD Surplus Pre	0.0937	0.0937	0.0937	0.0937
.				
<i>Panel B: South</i>				
Mean Competence Score × Post	-0.022*** (0.006)	-0.022*** (0.007)	-0.029*** (0.008)	-0.027*** (0.009)
Observations	588	588	571	571
Municipalities	75	75	73	73
R-squared	0.763	0.767	0.920	0.781
SD Surplus Pre	0.110	0.110	0.110	0.110
.				
<i>Panel C: North</i>				
Mean Competence Score × Post	0.009 (0.007)	0.008 (0.007)	0.004 (0.007)	0.004 (0.007)
Observations	1,143	1,143	1,143	1,143
Municipalities	147	147	147	147
R-squared	0.634	0.646	0.889	0.651
SD Surplus Pre	0.0865	0.0865	0.0865	0.0865
.				
<i>Panel D: Centre</i>				
Mean Competence Score × Post	0.002 (0.007)	-0.002 (0.008)	-0.013 (0.009)	-0.002 (0.015)
Observations	382	382	382	382
Municipalities	51	51	51	51
R-squared	0.736	0.743	0.931	0.774
SD Surplus Pre	0.0890	0.0890	0.0890	0.0890
.				
Mayor Controls	✓	✓	✓	
Region FE		✓	✓	
Party FE			✓	

Notes: The Table replicates Table 8 using the absolute value of the municipal surplus as dependent variable. See Table 8 for additional table notes.

Open Questions			
Target Setting			
1) Target Inter-Connection Tests whether objectives are associated to practical and measurable targets and how well they cascade down to each member of the government and bureaucracy Score: 1□ 2□ 3□ 4□ 5□ .□	a) Could you describe which main objectives you set for your mandate and what are the practical targets associated to each of these main objectives? b) How are these targets cascaded down to individual members of the government and of the bureaucracy?		
	<i>Score 1: Objectives and targets are very loosely defined; They do not cascade down throughout the administration</i>	<i>Score 3: Objectives are defined and targets are defined but only for some objectives; They do cascade, but only to members of the government.</i>	<i>Score 5: Objectives have clearly defined associated targets; Cascade to individual members of government and bureaucracy and increase in specificity as they cascade</i>
2) Time Horizon of Targets Tests whether the administration has a rational approach to planning and setting targets Score: 1□ 2□ 3□ 4□ 5□ .□	a) What kind of time scale are you looking at with your targets? b) Which goals receive the most emphasis? c) Are the long-term and short-term goals set independently?		
	<i>Score 1: The administration's main focus is on short-term targets</i>	<i>Score 3: There are short and long-term goals for every area; as they are set independently, they are not necessarily linked to each other</i>	<i>Score 5: Long-term goals are translated into specific short-term targets so that short-term targets become a 'staircase' to reach long-term goals</i>
Operations			
3) Efficiency of Procurement Tests knowledge of procurement and efforts to ensure law conformity and avoid cost duplication Score: 1□ 2□ 3□ 4□ 5□ .□	a) Could you talk me through the process of writing a call for tender in your administration? b) How early do you typically issue a call for tender? c) How standardized is this procedure across different areas of the administration? In particular, how standardized is the procedure to make sure that the call for tender is law-compliant?		
	<i>Score 1: Mayor has vague understanding of the process.</i>	<i>Score 3: Mayor know the process well and call for tender are programmed in advance.</i>	<i>Score 5: Mayor knows the process very well; call for tender are programmed in advance; there are common official guidelines.</i>

Monitoring			
4) Performance Tracking Tests whether municipality performance is measured with the right methods and frequency Score: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> . <input type="checkbox"/>	a) What kind of main indicators do you use to track your performance in reaching your mandate objectives? What sources of information are used to inform this tracking? b) How frequently are these measured? Who gets to see this performance data?		
	<i>Score 1: Tracking does not happen</i>	<i>Score 3: Some performance indicators are tracked formally; Data is gathered for some objectives; tracking is overseen by the government leadership only.</i>	<i>Score 5: Performance is tracked systematically; data is measured and communicated, both formally and informally to a large number of members.</i>
5) Performance Review Tests whether performance is reviewed with appropriate frequency and follow-up Score: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> . <input type="checkbox"/>	a) How often do you review the performance of the municipality-formally or informally - with staff (executives, legislators, bureaucrats)? b) Tell me about a recent meeting. c) Who is involved in these meetings? Who gets to see the results of this review? d) What sort of follow-up plan would you leave these meetings with?		
	<i>Score 1: Performance is not reviewed or reviewed infrequently and in an unstructured way.</i>	<i>Score 3: Performance is reviewed periodically with successes and failures identified; results are only communicated to main government members; no clear follow up/ action plan is adopted</i>	<i>Score 5: Performance is continually reviewed, based on indicators; all aspects are followed up to ensure continuous improvement; results are communicated to both government and bureaucracy.</i>
People Management			
6) Building a High-Performance Culture through Incentives and Appraisals Tests systematic approach to identifying and rewarding good/bad performers Score: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> . <input type="checkbox"/>	a) Do you have an appraisal system? b) How can the members of your staff evaluate their performance against that of the other members? c) Are there any rewards for the best performers across all staff groups? How does it work?		
	<i>Score 1: No appraisal system. Staff members cannot compare their performance. No type of reward for top-performers</i>	<i>Score 3: There is an evaluation system which allows comparison and awards good performance but awards are never awarded or are not based on performance.</i>	<i>Score 5: Formal evaluation system with public evaluations rewarding individuals based on performance; rewards are awarded as a consequence of well-defined achievements</i>
7) Removing Poor Performers Score: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> . <input type="checkbox"/>	a) If you had a staff member who was struggling or who could not do his/ her job, what would you do? Can you give me a recent example?		
	<i>Score 1: Poor performance is not addressed.</i>	<i>Score 3: Poor performance is addressed, but only with formal complaints that d not translate into action or with limited coaching methods.</i>	<i>Score 5: Repeated poor performance is frequently addressed, beginning with targeted interventions using a variety of methods (coaching; change of assignments)</i>



Gentile Sindaco,

siamo un team di ricerca della New York University (NYU) che sta lavorando a un progetto di ricerca, diretto da Maria Carreri e supportato dall'Anci, sulle pratiche e stili amministrative nelle amministrazioni locali in Italia. Crediamo fermamente che gli amministratori giochino un ruolo di fondamentale importanza per il successo di un comune e per il benessere dei suoi cittadini. È proprio per questa convinzione che siamo interessati a comparare diverse pratiche e stili amministrativi in Italia e il suo contributo sarà prezioso. La invitiamo a partecipare attraverso una conversazione telefonica sulla sua esperienza nelle amministrazioni locali in Italia.

Benefici per lei includono:

- Una copia dei risultati della nostra ricerca accademica, prima che vengano resi pubblici.
- L'opportunità di contribuire a uno studio accademico che ha il potenziale di informare e suggerire *best practices* nelle amministrazioni locali.
- Altri sindaci hanno apprezzato la nostra intervista e l'hanno considerata un'ottima opportunità per discutere di e riflettere sul loro stile e pratiche amministrative in un ambiente confidenziale.

La nostra conversazione toccherà 4 macro tematiche relative alle pratiche amministrative: targets, monitoraggio della performance, gestione delle operazioni e gestione del personale. Inoltre le faremo delle brevi domande sul suo carattere. La conversazione sarà di 25 minuti. Non è prevista una ricompensa e né il sindaco né il comune incorreranno in alcuna spesa relativa alla partecipazione al progetto. Infine, tutte le sue risposte saranno confidenziali per garantire l'assenza di alcun rischio legato alla sua partecipazione a questo studio accademico. Né la sua identità né quella del suo comune potranno essere menzionate nel nostro studio accademico. Saremo felici di rispondere a ogni sua domanda in ogni momento. La invitiamo anche a contattare Maria Carreri, che supervisiona il progetto. Ovviamente, lei ha il diritto di cancellare il nostro appuntamento telefonico e la sua partecipazione al nostro studio in qualunque momento.

La contatteremo telefonicamente ma qualora fosse più conveniente per lei saremmo felici se lei volesse contattarci via mail a maria.carreri@nyu.edu oppure telefonicamente (recapito della dottoressa Carreri qui sotto) per fissare un appuntamento telefonico o anche per porci qualunque domanda sul progetto.

La ringraziamo ancora per la sua disponibilità,

A handwritten signature in cursive script, appearing to read "Maria Carreri".

Maria Carreri
Telefono: +1 (857) 445-2367
Email: maria.carreri@nyu.edu

English Translation: Dear Mayor, we are a research team working on an academic research project on the different managerial practices and styles employed in local governments across Italy. We believe that mayors play a fundamental role for the success of their city and the well-being of its citizens. It is based on this conviction that we are interested in understanding the different practices and managerial styles employed across the country, and your input would be extremely valuable in making this project successful. We invite you to take part in our study through a brief and confidential phone conversation revolving around your experience as mayor. Potential benefits to you include: a copy of the results of our academic research prior to their publication; an opportunity to contribute to an academic study with the potential to identify best practices across city governments; other mayors have enjoyed our phone conversation and have considered it a great opportunity to discuss and reflect upon their managerial practices in a confidential environment. The phone conversation will touch upon four macro areas related to your government practices: targets, performance monitoring, operations and people management. We will also pose a few questions on your background. The conversation is expected to last 25 minutes. No compensation will be provided and neither the mayor nor the city will incur any expense as a result of the study. The conversation will be confidential to guarantee that no risk will be associated to your participation to this academic study. Your identity and the name of the city will be kept confidential and not mentioned by name in the study. We will be delighted to answer any questions you might have at any time. You have the right to cancel your participation and the phone conversation at any time. We will be in touch by phone in the coming days. Should it be more convenient for you to contact us directly, we will be grateful to receive an email or a phone call. Thank you for your consideration.



Roma, 12 Maggio 2016

All'attenzione del Sindaco.

Oggetto: Lettera di supporto al progetto di ricerca sulle pratiche e gli stili amministrativi nelle amministrazioni locali in Italia della New York University.

Gentile Sindaco,

in qualità di Capo Ufficio Studi dell'Anci confermo il valore della ricerca della New York University diretta da Maria Carreri e sottoscrivo il supporto dell'Anci a questo progetto. Lo studio della New York University (che trova descritto nell'allegato) parte dalla convinzione che gli amministratori giochino un ruolo di fondamentale importanza per il successo di un comune e per il benessere dei suoi cittadini. Per questo motivo, il progetto di ricerca intende comprendere e comparare le diverse pratiche amministrative presenti oggi nelle amministrazioni locali in Italia.

La invito a contribuire a questo studio accademico rendendosi disponibile a partecipare ad una conversazione telefonica, della durata media di 25 minuti, sulla sua esperienza nelle amministrazioni locali.

Cordiali saluti,

Paolo Testa
Capo Ufficio Studi Anci

English Translation: Rome, May 16th 2106. To the attention of the mayor. Subject: endorsement letter for the academic research project on managerial practices and styles across Italian local governments by New York Univeristy. Dear mayor, as Director of Research at Anci, I certify the value of the research conducted by Maria Carreri at New York University and I confirm Anci's endorsement. The study by New York University, whose description is attached, starts from the belief that local governments play a fundamental role for the success of their communities and the wellbeing of their citizens. For this reason, the academic study intends to learn about and compare the different managerial practices and styles that are today present across Italian local governments. I encourage you to take part to this academic study by making yourself available for a 25-minutes phone conversation on your experience in local governments.