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Transparency and local government corruption: what does lack of transparency hide?

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Abstract. This paper empirically investigates the causal relationship between local government transparency and political corruption in a sample of Spain's 110 largest municipalities. After implementing a two-stage probit estimation procedure, our evidence indicates that transparency is inversely related to the likelihood of local political corruption. This result supports the hypothesis that a lack of transparency conceals corrupt activities and that an unwillingness to provide information is a good proxy of the likelihood of corruption.

Keywords. Political Corruption, Transparency, Local Government.

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1. Motivation

Corruption is the focus of a growing body of literature in many fields, concerned with understanding its determinants and consequences. Corruption has obvious negative impacts on the political system and on citizen confidence in a country's institutions. Empirical evidence has shown the negative relationship between institutional trust and corruption (Mishler and Rose, 2001; Anderson and Tverdova, 2003). Thus, corruption weakens the credibility of institutions through the erosion of confidence (Bowler and Karp, 2004).

Beyond the political sphere, the literature has extensively shown that corruption also becomes a major burden for any economy, given that it distorts the allocation of resources and damages the functioning of institutions (Knack and Keefer, 1995; Williamson, 2000; Acemoglu et al., 2002; Kaufman and Kraay, 2002). Corruption has been shown to affect the development, prosperity and equity of an economy (See Bardhan, 1997, Aidt, 2009 for reviews).

Transparency is one of the main cornerstones of corruption. It has been widely considered in the literature, but rarely tested as a determinant of corruption (Lindstedt and Naurin 2010). For this reason, the aim of this study is to evaluate the impact of transparency on the probability of corrupt behavior at the local level. In the first instance we seek to determine the extent to which government openness can prevent corruption. Our results indicate a negative relationship

between the transparency index and the likelihood of corruption in the largest municipal governments of Spain. As such, the paper provides evidence of the potential role of transparency in designing policies aimed at fighting local political corruption.

The rest of the paper is organized as follows. After this introduction, next section reviews the empirical literature on this topic. Then we describe the empirical strategy by presenting our main hypothesis, the data used and the empirical method implemented. We report our main results and interpret them. Finally, the paper finishes with some concluding remarks and policy recommendations that can be derived from our empirical analysis.

2. Literature review

The pioneering work of Mauro (1995) associated corruption with lower levels of investment and, hence, of economic growth. This negative impact was subsequently confirmed by Mo (2001), Ali and Isse (2003), Meon and Sekkat (2005) and Aidt (2009) among others. Similarly, Gupta et al. (2002) reported a positive relationship between corruption and economic inequality and poverty. Institutional quality and better governance, are two of the main drivers of economic growth (Olson et al. 2000; Meon and Weill 2008), and have become central to the study of corruption. In fact, Meon and Sekkat (2005), Aidt (2009), Blackburn and Forges-Puccio (2009) and Swaleheen (2011), all situate institutions in the central area for economic growth.

The study of corruption determinants has flourished over the last years. Major determinants appear to be the low wages of public servants (Fisman and Gatti (2002b), the larger size of government expenditure (Goel and Nelson, 1998, 2010; Del Monte and Papagni, 2007), low educated and low income constituencies (Glaeser and Sak, 2006), high income inequality (You and Khagram, 2005), and more centralized political systems (Fisman and Gatti, 2002a). At micro level, Mocan (2008) identifies the individual features that induce being offered bribes. In all, corruption seems to respond to standard economic incentive theory, although officials find alternative strategies to pursue rents and, by doing so, attenuate the effects of anti-corruption policies (Olken and Pande, 2012).

There is evidence that audits may limit corruption, suggesting that traditional top-down monitoring can play an important role in reducing corruption, even in a highly corrupt environment (Olken, 2007). Together with audits, electoral and judicial accountability increase the perceived future probability of being exposed to punishment, leading to a political context less favorable to corruption (Ferraz and Finan, 2008). Furthermore, the fight against corrupt activities have also moved in favor of higher levels of transparency and accountability understanding that the "increased flow of timely and reliable economic, social and political information, which is accessible to all relevant stakeholders", as it is described in Kaufmann and Kraay (2002), is good prescription against corruption. In addition, transparency is an essential component of the political system of deliberative democracies (Elster, 1998; Grigorescu, 2003; Bellver and Kaufman, 2005; Rosendorff and Doces, 2006; Naurin, 2007).

As such, transparency is directly connected to the process of accountability (Meijer 2003) and provides better incentives that favor the efficient allocation of resources. As a result, transparency is expected to promote economic growth by minimizing the moral hazard and principal-agent problems, improving the allocation of resources (Holmström 1979) and limiting private-rent seeking (Baumol 1990; Murphy et al., 1993; Calderón and Chong, 2006). In fact, information is a public good that improves the functioning of markets and, as a result, it is desirable (Stigler 1961; Stiglitz and Weiss 1981; Stiglitz 2000).

Among other impacts, transparency has been shown to improve public finance, by lowering the accumulation of debt and deficits (Alt and Lassen, 2006a), to lower financing costs for governments (Glennerster and Shin, 2008), to improve market valuation from rating institutions and to improve fiscal discipline of governments (Hameed, 2005), and finally, to limit opportunistic behavior of governments in their fiscal policy according to the electoral cycle (Alt and Lassen, 2006b). On the other side, the main determinants of transparency are found to be the economic development (Bellver and Kaufmann, 2005; IBP, 2013), social and historical and cultural heritage (La Porta et al. 1999), administrative heritage (Wehner and De Renzio, 2013), political competition and better fiscal heritage in terms of low debt stocks (Alt et al 2006).

Although transparency has been widely considered in the literature (Blumkin and Gradstein 2002; Eingen, 2002; Peisakhin and Pinto 2010), it has been rarely tested as a determinant of corruption (Lindstedt and Naurin 2010). The available but scarce literature offers evidence on the positive relationship between fiscal transparency and control of corruption (Hameed, 2005; Bellver and Kaufmann, 2005; Kolstad and Wiig, 2009; Whener and De Renzio, 2012). Indeed, many studies have been limited to a consideration of access to information laws (Costa, 2012), or to information technologies, including digital access, internet connection or press coverage, but not to public disclosure (See Brunetti and Weder, 2003; Gentzkow et al. 2006 or Di Rienzo et al. 2007).

Among others, one mechanism through which transparency mitigates corruption has to do with the principal-agent theory. Voters (the principal) have only limited information on the government performance (the agent). They are only able to check indirectly the behavior of politicians by looking at some imperfect signals. Politicians may pursue private interests only if the asymmetry of information between them and the principal is high enough. Discretionary policies are only possible with large information asymmetries. However, this mechanism and causality relationships are far from being obvious. Indeed, there may be underlying factors that explain both the extent of transparency and the level of corruption. Selection bias and endogeneity concerns (governments that are more honest may tend to be more transparent) may hamper the identification of true causality links between both concepts. To illustrate this concern, the literature discusses and describes a number of factors that lead to corruption environments that can also separately explain transparency levels. See for instance the works by Andvig and Moene, 1990 and Ali and Isse (2003), Del Monte and Papagni (2007), among others.

According to Kolstad and Wiig (2009), the lack of transparency increases the bias and

variance of the signal used by the voters to check the performance of governments. It is in fact, a rational behavior to increase information rents in a way they may perpetuate the appropriation of large public rents (Stiglitz, 2002). Transparency acts as a barrier to this discretionary room of governments, by lowering the asymmetry of information between the principal and the agent. This may prevent rent-seeking strategies and improve the ability of voters to check closely the behavior and performance of elected governments. As a result, transparency minimizes the moral hazard problem by improving public control, which should be correlated with lower corruption.

The likelihood of committing a crime depends on the risk of being caught, the possible gain (booty) and the probable punishment (Becker, 1968). Transparency works on the risk of getting caught, given that it improves public control and diminishes the asymmetry of information. However, recent literature has also shown that transparency alone cannot be the only solution to corruption (Kolstad and Wiig, 2009; Lindstedt and Naurin, 2010).

The literature on local corruption and transparency is mainly recent in publication and makes few connections between the two issues. In the case of corruption, most studies have been concerned with estimating its subsequent impact at the ballot box (Ferraz and Finan 2008 and 2011 for Brazil). The findings are that the impact is limited unless media coverage is broad (Fernández-Vázquez and Rivero 2010; Costas-Pérez et al. 2012) and that the impact varies depending on whether the party revealed as being corrupt is on the left or right of the political ideological spectrum (Jiménez and García, 2018). Moreover, local corruption is contagious (González et al, 2017).

As for transparency, research has sought to identify the institutional, social and economic determinants of local government transparency (Styles and Tennyson, 2007; Guillamón et al. 2011; Esteller and Polo-Otero, 2012; Albalade 2013). Political competition, the size of population, the economic specialization of the city, and fiscal imbalances and debt accumulation are some of the factors indicated as determinants of local government transparency. However, the relationship between transparency and corruption for local governments has been surprisingly neglected.

3. Empirical Strategy

3.1 Hypothesis

The objective of our analysis is to evaluate the relationship between transparency and corruption at the local government level, drawing on data from Spain. Transparency is expected to limit corruption and, therefore, we expect local governments providing better information, or satisfying high transparency standards, to be less prone to corruption: first, because a greater availability of information increases the probability of being caught in private rent-seeking activities; and, second, because local governments that are more willing to make information

available are assumed to be more honest than municipalities that prefer to conceal information. If our expectations are met, then transparent local governments should suffer fewer cases of corruption. The main hypothesis being tested in this paper, therefore, can be stated as follows:

H1. *Local government transparency is inversely related to corruption cases (ceteris paribus).*

Thus, we evaluate the extent to which levels of transparency are informative, or it hinders the search for private rents, of the likelihood of corruption at the local level. If our results confirm the hypothesis, then the prescription of greater transparency would be justified.

3.2 Data on corruption and transparency

First, we constructed a new database by compiling data on local corruption cases affecting local public servants and politicians in Spain. These data were obtained by examining both published and electronic newspapers in Spain. At least two references to an impeached politician were needed before the case of corruption was added to the dataset (see Jiménez and García, 2018).¹ Following this principle, we define an alleged offence as *a case of corruption* only when the accused had been impeached before the court. Clearly, however, we need to distinguish between an accusation of corruption and a proven case of corruption. Thus, in our database politicians are considered as impeached but not guilty if a judgment had not been passed during the period considered in our study.

Note that our corruption variable will be therefore built on real corrupt behavior, rather than being an index based on subjective perception of corruption, which has been a common strategy to deal with corruption measurement. However, subjective indexes have limitations because perception is not always perfectly correlated with real facts.² Fortunately, we follow the strategy of previous studies like Fisman and Gatti (2002b) and Fisman and Miguel (2007), which also compiled data on real corrupt activities.

Second, we use the transparency information made public by the NGO Transparency International-Spain in order to construct a variable that captures the degree of willingness on the part of the municipal government to be transparent. Note that Spain is one of the few European countries yet to have a transparency law and local governments are not, therefore, required to provide information on their activities or decision-making procedures. As a consequence, actual information disclosure is a voluntary act by governments, which enables us to identify differences across municipalities.

Given this situation of voluntary transparency, the NGO Transparency International (TI-

¹ The database is compiled as in Jiménez and García (2012). We first recorded all the electronic news items referring to local corruption in Spain and then checked them to both national and regional newspapers. In fact, *Google* publishes a "local corruption map" on which most of these cases are identified. Our database contains a similar number of cases to those on other databases.

² See Tresman (2007) for a discussion on corruption indexes and their limitations.

Spain) has been producing a transparency index for local governments in Spain since 2008. This index contains data for the years 2008, 2009, 2010 and 2012 and is based on the collection of information and survey responses gathered from municipalities examining five areas of transparency: transparency of the municipal corporation, social transparency in relations with citizens, fiscal transparency, urban planning and procurement transparency, and transparency in the contracting of services.³ This index has been already used in Guillamón et al. (2011) and Albalade (2013).

TI's indexes range from 0 to 100, with 100 indicating a perfectly transparent government and 0 a government with no transparency at all. The transparency index is constructed with the affirmative and negative responses of municipalities to the 80 items considered and with information collected by TI directly from public sources. By using this index, we are able to exploit differences in the characteristics of the municipalities and the cases of corruption reported in these administrative areas.

As Transparency International does not cover all the municipalities in Spain, our empirical strategy is limited to examining the relationship between corruption and transparency in a subset of the 110 largest local governments, that is, those included in the TI reports. **Table 1** reports the number of annual corruption cases since 2008 (we also include as informative previous cases from 2000 to 2007), identifying specifically those affecting the municipalities considered in the TI reports. In spite of the limitations produced by the available index, our sample includes all corruption cases reported in the 110 largest municipalities in the country.

Table 1. Local corruption cases in Spain by year

| Period | Total number ⁴ | Corruption cases included in our sample | Cases in sample as a percentage of total number of cases in Spain |
|--------------|---------------------------|---|---|
| 1999-2007 | 42 | 1 | 2 |
| 2008 | 19 | 3 | 16 |
| 2009 | 38 | 9 | 24 |
| 2010 | 54 | 11 | 20 |
| 2011 | 53 | 10 | 19 |
| Total | 206 | 34 | 17 |

Source: own elaboration from Jiménez and García (2018).

³ For more information on the methodological process adopted in the conducting of this survey, see Transparency International-Spain's website: <http://www.transparencia.org.es/>

⁴ Total cases of local corruption in municipalities with population higher than 1,000 inhabitants, which they represent more than 94 per cent of total population in Spain.

3.3 Variables

Following the literature on local government corruption, we introduce the following variables:

Dependent variable

Corrupt: binary variable that takes a value of 1 if there has been a case of corruption in municipality i in year t , between the period 2008 and 2012 – year 2011 is missing for the purpose of this study because Transparency International did not compute the transparency index for that year. Thus, we have four observations per municipality, one per year. Source: Authors' own data (see previous paragraphs).

Explanatory variables

Transparency: A continuous variable that ranges from 0 to 100, where 100 is the value associated with a local government that satisfies all the transparency requisites included on the Transparency International questionnaire; and 0 is the value associated with a local government that does not supply any of the information required on the questionnaire. As this variable may well be endogenous, given that corrupt politicians have considerable incentives to provide less transparency and honest politicians may be willing to provide more transparency, instruments are required. These instruments, which have been shown to be significant determinants of local government transparency in Albalade (2013), are:

- i) The ideology of the mayor, taking a value of 1 if the mayor belongs to a left-wing party.
- ii) The size of the majority enjoyed by the mayor in the city council plenary.

Population: the population of municipality i in year t . This variable controls for the size of the municipality. Other papers have found that the size is a factor that affects corruption (see Jiménez, 2013, for example). Source: *La Caixa* municipal database.

Unemployment: the unemployment rate in municipality i in year t . This variable captures the economic situation of the municipality. Source: *La Caixa* municipal database.

Debt per capita: Debt per capita of municipality i in year t . This variable controls for the financial accounts of the municipality. Source: General Database of Local Entities, Spanish Ministry of Treasury.

Provincial_Capital: binary variable taking a value of 1 if municipality i is a provincial capital and 0 otherwise. This variable controls for the greater degree of scrutiny to which the governments of provincial capital are exposed. Source: *La Caixa* municipal database.

Tourism: Comparative index measuring the importance of the tourist sector, based on 2010

information. The index is based on the tax on the economic activities included under the heading of tourism, which in turn is based on the tourist establishment category, number of rooms and annual occupancy (throughout the year or for just part of a year). As such it serves as a good indicator of tourism. The variable controls for differences in the intensity of tourism, a sector that accounts for the positive correlation between tourist activity and construction and commercial development. In the Spanish coastal municipalities, especially, such development has been found to be a potential source of corruption at the local government level. In fact, Jiménez et al (2014) have found a positive relationship among tourism municipalities and local corruption using a bigger sample than we use in our paper. Source: *La Caixa* municipal database.

Trend: a variable indicating the year of the observation. It is included to control for potential time effects in the data pool. We included the year to control for differences over time that could affect the probability of having a corruption case. We expect less cases of corruption over time as a general trend affecting all municipalities.

The descriptive statistics of these variables are shown in Table 2. The information is presented by non-uncovered and corrupt municipalities.⁵ The percentage of corrupt municipalities in the sample is 32%, while 68% did not report any cases of corruption between 2008 and 2012. Note that the average transparency indicator is 3.6 per cent higher in non-uncovered municipalities (63.1 versus 60.93). We provide information on the mean, standard deviation, minimum and maximum values of all the variables included. An initial inspection of these descriptive statistics shows that corrupt municipalities have a slightly higher population, enjoy lower rates of unemployment and debt and tend to have higher intensities of tourist activities.

Table 2. Descriptive statistics by municipality

| Variables | Mean | | Std. Dev. | | Minimum | | Maximum | |
|--------------------|---------|----------------|-----------|----------------|---------|--------|---------|-----------|
| | C | Non-U | C | Non-U | C | Non-U | C | Non-U |
| Transparency | 60.93 | 63.1 | 20.76 | 21.18 | 12.5 | 17.5 | 100 | 100 |
| Population | 179,419 | 170,763.9 0 | 159,526 | 207,154.2 0 | 54,600 | 35,037 | 7041,98 | 1,621,537 |
| Unemployment rate | 10.1 | 10.8 | 3.4 | 3.6 | 3.4 | 3.7 | 17.3 | 20.9 |
| Debt per capita | 61.57 | 73.05 | 47.81 | 57.49 | 0 | 7.52 | 440.2 | 542.95 |
| Provincial_Capital | 0.44 | 0.46 | 0.5 | 0.5 | 0 | 0 | 1 | 1 |
| Tourism | 549.94 | 285.88 | 1369 | 477.4 | 9 | 3 | 7532 | 2973 |

Note: C: Corrupt municipality; Non-U: Non-uncovered municipality.

⁵ We refer to these municipalities as “uncovered” because we cannot confirm whether they are corrupt or not just with the absence of uncovered corruption scandals.

3.4 The method

We specify the following model that is then estimated using an instrumental variable *probit* method. To solve the problem of endogeneity of transparency we use a two-stage estimation procedure, employing in the first stage of the estimation the instruments presented above.

$$\begin{aligned} \text{Corrupted}_{it} = & \alpha_i + \rho_1 \text{Transparency}_{it} + \beta_1 \text{Population}_{it} + \beta_2 \text{Unemployment}_{it} + \\ & + \beta_3 \text{Debt}_{-pc}_{it} + \beta_4 D_i^{\text{Capital}} + \beta_5 \text{Tourism}_i + \beta_6 \text{Year}_i + \varepsilon_{it} \end{aligned} \quad [1]$$

Given this model, ρ_1 is the coefficient estimating the impact of transparency on the probability that cases of corruption are uncovered in a given municipality. We expect a negative coefficient estimate indicating that high transparency indexes are signals of a low likelihood of corruption.

3. Results

Table 3 shows our main results obtained from the instrumental variable *probit* models. All the statistical tests examining the strength and validity of the instruments used to treat the endogeneity of transparency give satisfactory results. The Wald test shows there to be no endogeneity and the data treatment to be appropriate ($\text{Chi}2(1) = 2.40$ $\text{Prob} > \text{chi}2 = 0.12$), while the instruments can be considered strong and valid according to the *Kleibergen-Paap rk LM* statistic ($\text{Chi}2(2)=0.003$) and the *Hansen J-statistic* of overidentification ($\text{Chi-sq}(1)$ $P\text{-value} = 0.32$).

Columns (1) and (2) display results for the pooled models in which we estimate the relationship between transparency and corruption. The only difference is that standard errors account for all types of correlation within the same municipalities in model (2) by using municipality clusters. As expected, there is an inverse relationship between transparency and corruption, which implies that transparency prevents corruption or is, at least, a good proxy of good governance, which deters corruption.

Corruption also appears to be negatively related to the unemployment rate and a city's status as a provincial capital, reflecting the higher degree of scrutiny to which a government is exposed by the media and citizenship. Similarly, the size of a municipality's population is statistically significant, having a positive impact on the probability of cases of corruption. This means there is more probability of cases of corruption being uncovered in large municipalities, *ceteris paribus*. These results serve to minimize any potential limitations in our sample, given that we have used data from Spain's largest municipalities.

The same positive impact is found with the trend variable, indicating that a greater number of cases of corruption are uncovered over time. Finally, we find no evidence of a relationship

between the intensity of tourism and local government corruption in our sample. Although we report a positive coefficient, our model does not support the hypothesis that municipalities with highly developed tourist sectors (and which have experienced major construction and commercial developments and, consequently, more opportunities for private appropriation of rents) present a higher probability of suffering political corruption.

As for the estimation procedure, it should be noted that the inclusion of clusters in the error estimations in model (2) does not seem to affect our main result, thus confirming its consistency. However, other coefficients are affected by the inclusion of these clusters. In Model (2), the statistical significance of *Provincial Capital* falls, while in the case of *Population* the significance disappears altogether.

Robustness Check

Although there is a clearly negative correlation between transparency and the number of corruption cases, it could be argued that models (1) and (2) fail to deal appropriately with the timing of transparency measures and corruption cases, given that levels of transparency may well improve after cases of corruption have been reported. However, a review of changes in transparency following cases of corruption does not support this argument. To demonstrate the robustness of this analysis, we estimate model (3) taking into consideration only the data for 2008, the first year in our sample (i.e., the first year for which transparency indexes became available). In this specification [2], we replicate the estimation with all the observations for 2008 and provide estimates for a model in which the dependent variable takes a value of 1 when there is a corruption case after 2008 and 0 otherwise.

$$Corrupted_i = \alpha_i + \rho_1 Transparency_{i,2008} + \beta_1 Population_{i,2008} + \beta_2 Unemployment_{i,2008} + \beta_3 Debt_pc_{i,2008} + \beta_4 D_i^{Capital} + \beta_5 Tourism_{i,2008} + \varepsilon_{i,2008} \quad [2]$$

In this way, we are able to determine whether the transparency reported in the first year for which information was available might account for the cases of corruption that appeared over the short-term. Column (3) displays these results and shows that the coefficient associated with transparency remains negative and statistically significant. This means that 2008 transparency is inversely related to the probability of cases of corruption occurring between 2008 and 2012. Our results support the hypothesis that the lack of transparency might conceal corruption or, at least, account for the lower probability of corruption remaining hidden.

Table 3. Estimates from IV Probit Two Stage Procedure.

| Explanatory variables | Corruption | Corruption IV | Corruption IV |
|-----------------------|---------------------------|------------------------|------------------------|
| | IV Probit Pooled | Probit Pooled 2008- | Probit Year 2008 |
| | 2008-2012 | 2012 | |
| | (1) | (2) | (3) |
| Transparency | -0.0401*** (0.0053) | -0.0401*** (0.0086) | -0.0495*** (0.0117) |
| Debt_pc | -0.0019 (0.0019) | -0.0019 (0.0020) | -0.0009 (0.0021) |
| Unemployment | -0.0858*** (0.0179) | -0.0858*** (0.0284) | -0.0924** (0.0404) |
| Population | 1.00e-06*** (3.88e-07) | 1.00e-06 (7.30e-07) | 1.41e-06* (8.6e-07) |
| Province_Capital | -0.3679*** (0.1228) | -0.3679* (0.2106) | -0.2812 (0.2544) |
| Tourism | 0.0001 (0.0001) | 0.0001 (0.0001) | 0.00004 (0.0001) |
| Trend | 0.3881*** (0.0723) | 0.3881*** (0.0827) | - |
| Clusters | No | Yes | No |
| Observations | 407 | 407 | 95 |
| Wald Chi2 | 130.14*** | 53.12*** | 29.98*** |
| Log pseudolikelihood | -2032 | -2033 | -455.7 |

Note: *** 1%, ** 5%, *10% significance test. Robust to heteroskedasticity. Standard errors shown in parenthesis. In model (2) we used clustered standard errors at the municipal level.

4. Conclusions

The relationship between transparency and corruption is coming under the increasing scrutiny of both academia and policy makers, but while recent studies have devoted first efforts to examining this relationship at national and international levels, there is still a lack of research at local government level. This paper offers early empirical evidence that reports an inverse relationship between transparency indexes (willingness to provide information) and political corruption in Spain's 110 largest local governments. After correcting for the endogeneity of transparency, our results suggest that local governments with low levels of transparency are more likely to suffer cases of political corruption than municipalities that provide greater amounts of information. In the absence of a specific transparency law providing for the compulsory provision of information to the public, it has been possible to conduct this test thanks to the existence of voluntary information disclosure at the local level in Spain.⁶

⁶ A Law on Transparency has recently been passed in Spain, although our database does not contain data after that change. *Ley 19/2013, 09 de diciembre, Ley de transparencia, acceso a la información pública y buen gobierno.*

It would seem that this result reflects the preventive action associated with increased transparency, which ensures greater scrutiny of political actions, or, alternatively, it might be the case that honest politicians are more willing to offer information. Although we are unable to identify the specific mechanism or source accounting for this negative causality, our results clearly show that transparency indexes explain in part the probability of corruption. And for this reason transparency is a powerful tool in the hands of policy makers in their efforts to stamp out corruption.

Our study uncovers a clear negative relationship between transparency and real corruption activities and overcomes any of the problems of the research based on subjective corruption perceptions. However, a limitation of this study is that transparency might be correlated with better governance or other features of government performance that can be, in turn, linked to a more honest behavior of politicians and public servants. However, the availability of data does not offer the possibility to execute an experimental design able to fully identify the solely effect of transparency indexes. Even in this case, our results show that transparency indexes are worth taking into account in the analysis of corruption, offering a contribution for further research on corruption determinants also at local government level.

Despite the statistical significance associated with transparency in our results, we cannot fully reject arguments that transparency on its own may be insufficient (Kolstad and Wiig 2009; Lindstedt and Naurin, 2010). Transparency levels appear unable to offer unequivocal predictions of the probability of corruption and it seems that other mechanisms of support (sanctions, social embarrassment, education, broadcasting media, etc.) are required to control corruption. Indeed, the promise of transparency is not satisfied with the mere existence of laws, but would seem to depend on institutional quality (Fung et al., 2007; Hood and Heald, 2006). However, our results show the undeniable importance of transparency in predictions of the likelihood of corruption. Indeed, the evidence reported here supports the implementation of policies aimed at promoting public information disclosure as a deterrent to political corruption and as a mechanism for enhancing accountability in local government.

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