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# “The Institutional, Economic and Social Determinants of Local Government Transparency”

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### *Abstract*

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Interest in public accountability and government transparency is increasing worldwide. The literature on the determinants of transparency is evolving but is still in its early stages. So far, it has typically focused on national or regional governments while neglecting the local government level. This paper builds on the scarce knowledge available in order to examine the economic, social, and institutional determinants of local government transparency in Spain. We draw on a 2010 survey and the transparency indexes constructed by the NGO Transparency International (Spain) in order to move beyond the fiscal transparency addressed in previous work. In so doing, we broaden the analysis of transparency to the corporate, social, fiscal, contracting, and planning activities of governments. Our results on overall transparency indicate that large municipalities and left-wing local government leaders are associated with better transparency indexes; while the worst results are presented by provincial capitals, cities where tourist activity is particularly important and local governments that enjoy an absolute majority. The analysis of other transparency categories generally shows the consistent impact of these determinants and the need to consider a wider set of variables to capture their effect.

***JEL classification:*** H11; H70; Z18

***Keywords:*** Transparency; Local Government; Corruption

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*The truth is incontrovertible. Malice may attack it,  
ignorance may deride it, but in the end, there it is.*

*W. Churchill*

## **1. Introduction**

The economic downturn and the responsibilities and performance of many public officials with respect to the management of the public administration have renewed demands for democratization and accountability. In this context, transparency becomes a necessary tool for the public to monitor and evaluate the performance of their representatives and public servants. Furthermore, transparency becomes an important component of good governance and institutional quality, which in turn, are proven drivers of economic growth and public welfare (Knack and Keefer 1995; Williamson, 2000; Acemoglu, Johnson and Robinson, 2002; Kaufman and Kraay, 2002).

There are many definitions of transparency but all of them hold the role of information accessibility at their core. For instance, Kaufmann and Kraay (2002) define transparency as the increased flow of timely and reliable economic, social, and political information, accessible to all relevant stakeholders. This definition may be applied to several public activities. For instance Islam (2004) focuses on the timely availability of economic data. However, transparency may also be focused on political markets. Whatever the case may be, transparency is always a necessary condition for accountability, since access to information constitutes the first step in accountability processes (Meijer, 2003).

In addition, improving transparency to reduce corruption has been the focus of a broad literature (Blumkin and Gradstein, 2002; Lindstedt and Naurin, 2010; Peisakhin and Pinto, 2010; among others).<sup>1</sup> Alesina and Perotti (1996) identify two theories, the fiscal-illusion and principal-agent theories, to explain why politicians are not encouraged to adopt the most transparent practices. Nonetheless, greater transparency acts to minimize the moral hazard problem by facilitating public control, which is linked to less corruption. As stated in the seminal paper on the economic theory of crime by Becker (1968), the probability that an individual commits a

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<sup>1</sup> One common definition of corruption is the “improper use of public office in exchange for private gain” (Lindstedt and Naurin, 2010).

crime depends on the assumed risk, the possible gain, and the probable punishment. Transparency works by increasing the risk of being caught. However, transparency alone may not be sufficient (Kolstad and Wiig, 2009; Lindstedt and Naurin, 2010), and we need other accompanying mechanisms (sanctions, social embarrassment, education, media circulation, etc.).

From the perspective of democracy, the transparency and dissemination of information is critical for different social groups to participate in the decision-making process (Bellver and Kaufmann, 2005). Information dissemination is a core concept of deliberative democracies that affects the behavior of the political system. Formal institutions of political competition are not sufficient to deliver a responsive government, particularly in the case of the most vulnerable and poorly informed citizens, unless voters have real authority to discipline poorly functioning incumbents thanks to effective institutions of information transmission (Besley and Burgess, 2002).

Beyond the institutional view, transparency is desirable from the economic perspective, because it increases efficiency in the allocation of resources by reducing principal-agent problems (Holmström, 1979) and discouraging rent-seeking instead of productive activities (Baumol, 1990; Murphy, Shleifer, and Vishny, 1991). In fact, transparency is based on the accessibility of information, which is a public good that improves the functioning of markets and prevents market failures, according to classical papers by Stigler (1961), Stiglitz and Weiss (1981), and Stiglitz (2000), among others.

Finally, by making corruption less probable or more difficult, transparency provides a better context for economic growth, efficiency, and development as a means of improving governance (Mauro, 1995; Olson, Sarna, and Swamy, 2000; Meón and Wells, 2005). Alt and Lassen (2006) show the effects of fiscal transparency on the accumulation of public debt, and how institutional factors influence this specific type of transparency. Nonetheless, other recent theoretical papers, such as the work of Gavazza and Lizzeri (2009), cast doubt on the expected and unambiguous benefits of fiscal transparency by showing that it might promote incentives to wasteful spending in the case of full transparency of revenues. Others, like Bac (2001, p. 93), argue that “transparency enhances the incentives to establish connections for corruption by improving the information about the identities of the ‘key’ policy makers”.

In spite of the clear social and economic relevance of transparency in public institutions, and the broad literature discussing and formalizing the role of information and corruption, there are still few empirical studies of the determinants of transparency. Furthermore, most of the existing studies are devoted to national government transparency or country-specific transparency, focusing either on the public administration or on the private sector. As far as we know, the literature has neglected study of the determinants of local government transparency and there are very few studies in this research area; a state of affairs noted by Piotrowski and Bertelli (2010).

The contribution of this paper is an empirical assessment of local government transparency determinants drawing on the transparency index constructed by the NGO Transparency International for the major Spanish municipalities, taking into account the role of institutional, economic, and social explanatory factors. Our empirical strategy serves to explore and identify how political, economic, and socio-demographic conditions affect the transparency of local governments. With this purpose in mind, the paper builds on the scarce existing empirical literature on local government transparency, which has mainly focused on the area of fiscal and budget transparency. Beyond this, the present study takes a broader approach by incorporating into the analysis not only other potential determinants of local government transparency, but also the evaluation of these models in different areas such as procurement and urban planning, corporate transparency or the relationship between the council and the citizen.

## **2. Local government transparency**

In order to position the main contributions of this paper, it is necessary first to provide a brief review of the existing literature on empirical evaluations of local government transparency, giving special attention to those studies devoted to the Spanish experience that may be institutionally more closely linked to our empirical exercise.

As far as we know, very few studies have examined the determinants of transparency at the local level and no well-established theoretical literature has yet been consolidated. Among the most interesting empirical papers on transparency, we would mention the work by Esteller and Polo-Otero (2008), who constructed a database for Catalan municipalities in which fiscal transparency appears to be

determined by political competition, the number of inhabitants, and the accumulation of debt. The role of the size of the city was confirmed by Styles and Tennyson (2007) in their study on the accessibility of financial reporting for US municipalities on the Internet.

Similarly, Caamaño et al. (2011) study budget transparency for 33 municipalities in Galicia (Spain). Their results provide new insights into the role of unemployment, which appears to be negatively correlated with budget transparency, and on the non-significance of institutional variables such as coalitions in governments. However, their results on debt accumulation contrast with the results of Esteller and Polo-Otero (2008), finding the opposite relationship.

Moving on to the fiscal transparency of local government, Guillamón, Bastida, and Benito (2011) evaluate the importance of political and socio-economic factors and shed light on further relationships. For instance, the authors indicate that municipalities collecting more taxes and receiving more transfers disclose more financial information. Therefore, fiscal imbalances and debt seem to play a significant role in financial transparency.

Another recent working paper is that of Piotrowski and Bertelli (2010), who measure municipal transparency in New Jersey based on a set of interviews conducted according to an item response model. Their paper treats transparency as a broader term than simply budget or fiscal transparency. However, while their empirical model considers different groups of socio-economic, institutional, and economic determinants, it suffers from very limited explanatory power. Among the factors introduced in the model we find regressors measuring transparency demand, socio-economic status factors related to political engagement, fiscal ratings, and different forms of government. Only the population's level of education, the percentage of elderly inhabitants in the population, and the size of the budget appear to be statistically significant. However, the two latter determinants show counter-intuitive coefficient signs that are contrary to expectations.<sup>2</sup>

Jorge et al. (2011) address fiscal transparency from a comparative international perspective, studying the transparency of Portuguese and Italian local governments' website content. Their regression model finds only two statistically significant variables:

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<sup>2</sup> The reason for this seems to be linked to the criteria used in the construction of the transparency index.

the size of the municipality – although this confirmation of the relationship between size and transparency only holds for Italy – and the rate of abstention in the last local elections. The latter variable offers an unexpected and counter-intuitive impact, because abstention appears to be a positive determinant of transparency in their analysis.

As a result, this pioneering literature has focused basically on the role of political, accounting, and budget determinants on fiscal transparency. Even in the field of fiscal transparency, there is still a great deal to do in order to improve our understanding of the determinants of local government transparency. And an even longer road lies ahead in the case of other transparency categories. In this paper, we build upon the literature on fiscal transparency by confirming and rejecting some of the previous results across a wide sample of more than 100 Spanish cities. However, we take a broader approach to transparency by including other transparency areas beyond the fiscal category, such as those related to corporate transparency, social transparency in relationships with citizens, services contracting transparency, and procurement and urban planning transparency. In addition to some standard explanatory factors introduced in the above literature, we introduce variables on the economic and institutional context, testing them as determinants of transparency for the first time.

### **3. A Transparency Index for Spanish Local Governments**

Spain is one of the few European countries that do not yet have a transparency law. In fact, it is the only one if you consider only countries with more than one million inhabitants. Under the current Spanish framework, governments are not required to provide the public with information on their activities or decision-making procedures. This affects every level of government in a decentralized country that has a central government, regional governments, and local entities, including counties and municipalities at the local level. For this reason, the new Spanish government elected in 2012 has decided to introduce a draft law that will be discussed in the national parliament in 2012 and is expected to be passed in the second half of the year.

Given this context of voluntary transparency, the NGO Transparency International (TI-Spain) has been producing a transparency index for local



governments in Spain since 2008.<sup>3</sup> This index contains information for the years 2008, 2009, and 2010 and is based on the collection of information and questionnaires sent to municipalities on five different transparency areas: corporate transparency, social transparency in relationships with citizens, fiscal transparency, urban planning and procurement transparency, and services contracting transparency.

TI transparency indexes range from 0 to 100, with 100 indicating a perfectly transparent government and 0 a government with no transparency at all. The global transparency index and each of the five specific indexes are constructed with the affirmative and negative responses of municipalities to the 80 items considered and with information collected by TI directly from public sources. A summary of these items is presented in the appendix of this paper (A1). The number of municipalities contained in the 2010 survey is 110. Their names are also displayed in **table 1** together with their overall transparency score. As can be observed, we find values between 22 and 100, giving wide variation to the sample.

**<<Insert table 1 about here>>**

Guillamón, Bastida, and Benito (2011), who also used this index in their empirical analysis of budget transparency for the year 2008, noted that Spanish laws determine the minimum information municipalities must disclose, but that the majority of TI-Spain questionnaire items exceed these minimum requirements, thus falling within the category of voluntary disclosure.

Thanks to this index we are able to exploit differences in the institutional, political, social, and economic characteristics of cities. This should enable identification of the main determinants of overall transparency and all separate transparency indexes.

#### **4. Empirical strategy**

The most recent transparency index of Transparency International is the one derived from the 2010 survey. The overall index and the indexes for different

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<sup>3</sup> Transparency International (TI) is an international organization that is non-governmental, non-partisan and nonprofit. It is dedicated to fighting corruption at national and international levels. Since its founding in 1993, TI has been widely recognized with putting the fight against corruption on the global agenda.

categories serve as our set of dependent variables. First, we examine the determinants of the overall transparency index. Second, we apply the same empirical model in explaining the five separate transparency indexes in order to evaluate their different drivers.

The empirical model for estimating the factors that explain municipal transparency uses the following groups of variables: socio-demographic variables, fiscal variables, institutional variables, and economic context variables. The variables included in each of these categories are set out below:

#### Socio-demographic variables

*Population:* Size of the city in terms of inhabitants (in thousands). This variable tests for differences in transparency by size of city. It has usually been included in previous works that have found a positive and statistically significant impact (Styles and Tennyson 2007; Esteller and Polo-Otero, 2009; Jorge, et al. 2011). The data are collected from the Spanish National Statistics Institute.

*Gender:* % of men over the total local population. Verba, Nie, and Jae-On (1978) find that men are more active politically and more politically engaged (Piotrowski and Van Ryzin, 2007). The data are collected from the Spanish National Statistics Institute.

*Elderly:* % of citizens aged 65 years or older over the total local population. It must be noted, however, that some papers find that this variable may have an opposite effect depending on how transparency is considered. The weight of website information within the transparency index may be a source of the inverse effects on the relationship between the elderly and transparency. The data are collected from the Spanish National Statistics Institute.

#### Fiscal variables

*Debt:* Local government debt as a % of total budget. This is extracted from the Budget of Local Governments in Spain, published by the Ministry of Public Finance.

*Budget\_imbalance:* Local government balance. Deficit or surplus as a % of total budget. This is extracted from the Budget of Local Governments in Spain, published by the Ministry of Public Finance.

### Institutional variables

*Left\_Mayor*: Dummy variable taking a value of 1 if the ruling local government leader belongs to a left-wing party, and 0 otherwise. This variable tests for the role of ideology, assuming that left-wing governments might be more sensitive to the provision of transparency than right-wing parties. Piotrowski and Van Ryzin (2007) show that ideology is a determinant of transparency. The data are collected from the Ministry of Home Affairs.

*Left\_Majority*: Dummy variable taking a value of 1 if the ruling left-wing local government leader's party enjoys a  $\frac{1}{2}+1$  majority of representatives in the elected council. This variable identifies left-wing governments not needing agreements with other parties to govern the city. The data are collected from the Ministry of Home Affairs.

*Right\_Majority*: Dummy variable taking a value of 1 if the ruling right-wing local government leader's party enjoys a  $\frac{1}{2}+1$  majority of representatives in the elected council. This variable identifies right-wing governments not needing agreements with other parties to rule the city. The data are collected from the Ministry of Home Affairs.

*Capital*: Binary variable taking a value of 1 if the municipality is a provincial capital. These capitals have important exceptions or particularities with respect to other cities based on the simple fact that they political capitals in Spain.<sup>4</sup> Moreover, the public administration has a greater presence in these cities than in other cities, because state administration and central government delegations have offices in them. Also, other administrations such as the provincial authorities or *diputaciones*, which provide additional services to municipalities and citizens, are constituted at the province level and are established in provincial capitals.

*Turnout*: Percentage of participation in the last local elections in the municipality. This variable serves as a proxy for citizens' concern or interest in politics and, therefore, it is a proxy for the demand for accountability and transparency. The data are collected from the Ministry of Home Affairs.

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<sup>4</sup> Several rules apply to provincial capitals. For instance, these cities do not need to have 50,000 inhabitants in order to receive subsidies for transportation services as others cities do, simply by virtue of being provincial capitals.

### Economic context variables

*Unemployment*: Share of unemployed inhabitants in the municipality. The importance of this variable is reflected by Caamaño, et al. (2011) in the case of budget transparency in the region of Galicia.

*Economic\_Activity*: Index of economic activity per capita. Comparative index of all economic activity. This index is obtained from the taxes corresponding to the total of all economic activity (industry, trade, and services) and professional activity. It draws on the municipal database elaborated by the “La Caixa” savings bank.

*Tourism*: Index of tourist activity per capita. We use the comparative index of tourist importance provided by the municipal database elaborated by the “La Caixa” savings bank. This index is obtained from the fee or business tax levied on tourist activities, which in turn is based on the category of tourist facilities (hotels and motels, apartments and B&Bs, inns and guest houses, campsites and apartments managed by companies), number of bedrooms, and annual occupancy (all year or partial year), so it is virtually an indicator of the level of tourist activity.

The empirical specifications tested for all transparency indexes take the following forms:

#### Specification 1

$$\begin{aligned} \text{Transparency\_Index}_i = & \alpha_i + \beta_1 \text{Population}_i + \beta_2 \text{Gender}_i + \beta_3 \text{Elderly}_i + \beta_4 \text{Debt}_i + \beta_5 \\ & \text{Deficit}_i + \beta_6 D^{\text{capital}}_i + \beta_7 D^{\text{Left\_Major}}_i + \beta_8 \text{Turnout}_i + \beta_9 \text{Unemployment}_i + \beta_{10} \\ & \text{Economic\_Activity}_i + \beta_{11} \text{Tourism}_i + \varepsilon_i \end{aligned}$$

#### Specification 2

$$\begin{aligned} \text{Transparency\_Index}_i = & \alpha_i + \beta_1 \text{Population}_i + \beta_2 \text{Gender}_i + \beta_3 \text{Elderly}_i + \beta_4 \text{Debt}_i + \beta_5 \\ & \text{Deficit}_i + \beta_6 D^{\text{capital}}_i + \beta_7 D^{\text{Left\_Majority}}_i + \beta_8 D^{\text{Right\_Majority}}_i + \beta_9 \text{Turnout}_i + \beta_{10} \text{Unemployment}_i \\ & + \beta_{11} \text{Economic\_Activity}_i + \beta_{12} \text{Tourism}_i + \varepsilon_i \end{aligned}$$

The first specification uses the political orientation binary variable  $D^{\text{Left\_Mayor}}$ , while the second specification takes into account the degree of the majority with which

local government leaders rule, considering the political orientation of local government leaders with an absolute majority ( $D^{Left\_Majority}$ ;  $D^{Right\_Majority}$ ) in the council with respect to local government leaders without such a majority.

First, these models will be estimated using Ordinary Least Squares (OLS). Given the presence of heteroskedasticity we apply the White robust correction of errors. We also take into account the possible correlation between municipalities of the same region by including clusters at regional level.<sup>5</sup> Second, we estimate a censored regression model given that transparency indexes are right-censored at 100 points, although only five municipalities achieve this value. Descriptive statistics are displayed in **table 2**.

<<Insert table 2 about here>>

## 5. Results

**Table 3** displays our main results for the overall transparency index, while **table 4** presents estimates for each of the transparency categories.<sup>6</sup>

<<Insert table 3 about here>>

Regarding socio-demographic covariates, we found that only population is statistically significant and has the expected sign. Therefore, we confirm that larger municipalities tend to enjoy better transparency than smaller municipalities. Moreover, this is consistent across all types of transparency except in the case of service contracting. The remaining socio-demographic variables are not statistically significant in any of our models.

Fiscal variables are not relevant in the determination of the overall transparency index. In fact, our results on the non-significant role of debt level are consistent with results obtained by Alt and Lassen (2006) on fiscal transparency. However, we find an interesting result in the specific contracting category in the case of budget imbalance. As shown in **table 4**, budget surplus is positively associated with contracting

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<sup>5</sup> We use the cluster-robust variance correction included in the statistical package STATA. This is known as the Huber/White/sandwich estimate of variance (See Williams, 2000).

<sup>6</sup> Multicollinearity is discarded given the low variance inflation factor value obtained: VIF = 1.20. The model has no omitted variables (Prob > F = 0.8409).

transparency. In other words, there is an interesting negative correlation between deficits and contracting transparency.

<<Insert table 4 about here>>

Institutional variables provide the most interesting results. A local government leader's ideology or political party does influence the local government transparency index. According to our results, left-wing local government leaders are positively correlated with the overall transparency index and with most of the transparency categories. Political orientation has the greatest impact on the category of fiscal transparency. This result confirms the view of Ferejohn (1999), who argued that left-wing governments, wanting a larger public sector, are expected to implement higher levels of transparency. Therefore, these results are consistent with Guillamón, Bastida, and Benito (2011) as well. The smallest impact is found in the case of corporate transparency, which does not present any difference between right-wing and left-wing local government leaders in terms of statistical significance, although the coefficient presents a difference of four percentage points.

Beyond the difference by ideology, it is interesting to evaluate the role of local government leaders with an absolute majority compared to local government leaders without an absolute majority in the council, and break down the comparison by political party. Column 2 in **table 3** shows that when a local government leader enjoys an absolute majority (more than 50% of elected councilors), his or her municipality gets worse results in transparency indexes, regardless of ideology, according to the OLS regression model. In the case of the censored regression model, we find that this is only true for right-wing local government leaders (column 4, **table 3**). That said, right-wing local government leaders with an absolute majority always present larger negative coefficients than left-wing local government leaders. In fact, according to the OLS estimates, while cities with right-wing local government leaders enjoy around four percentage points less of transparency, when these local government leaders enjoy an absolute majority the negative percentage points increase to about nine with respect to municipalities without an absolute majority of any political orientation.

Another interesting result is the relationship between provincial capitals and transparency in Spain. Their associated coefficient is one of the largest and shows significance levels among the greatest across all models. Being a political capital of a Spanish province is largely associated with lower transparency indexes in all aspects

or categories of transparency. Provincial capitals are the last arms of central government power in the territory and enjoy a larger presence of public administrations. As a consequence, economic resources and political power are significantly higher in this type of municipality, regardless of size or local economic context. Our results indicate that this particularity impedes the extent of transparency.

According to our OLS estimates, provincial capitals have lower transparency by 15 percentage points than the remaining municipalities. Interestingly, this coefficient increases to 28 in the case of fiscal transparency, resulting in the worst record of transparency found in our estimates. The presence of more public administrations and the fact of being the last arm of the central government administration in the territory seem to pose an obstacle to transparency in these cities.

As the last institutional variable in our estimates, turnouts do not appear to be statistically significant, contrary to what happens in other studies previously cited on fiscal transparency.

Regarding economic context variables, we found that only the coefficient related to how important tourist activity is in municipalities is statistically significant and presents a negative sign. Nonetheless, we must point out that the size of the coefficient is very small for the overall transparency index and for each of the categories tested.

## **6. Conclusions**

While the literature on the determinants of government transparency is evolving, it is still in its early stages. This is even more marked in the case of local government transparency if we take into account the scarce knowledge available and the small number of papers that address this topic. For this reason, there is a great deal to learn from the first efforts devoted by researchers to an issue of increasing importance in societies demanding higher accountability and transparency in the management of public administrations.

Our results for Spanish local governments indicate that the drivers of transparency are: the size of a municipality (population); whether tourist activity is a leading economic and social factor in a municipality; the institutional characteristics of the local government, as the leader's ideology and its majority; and whether a municipality is a provincial capital. The latter two institutional particularities are,

according to the magnitude of their coefficients, the most important drivers of transparency. These results are consistent across most categories of transparency, indicating that more effort should be devoted to improving transparency in provincial capitals and cities where local government leaders enjoy an absolute majority, especially when they belong to a right-wing party.

The use of several categories, beyond the standard focus on fiscal transparency in the early literature, serves to identify a number of relationships neglected in the case of overall transparency models, justifying such efforts in the aim of devising transparency indexes for different segments or government activities. For instance, we find that budget imbalances are important in the determination of contracting transparency and that unemployment and the percentage of the elderly are relevant in the case of fiscal transparency.

Although these models and results provide interesting insights into the determinants of local government transparency, it is obvious that there is still a great deal of work to do in order to improve our understanding of the motivations and obstacles related to transparency at this level of government. Meanwhile, our results indicate some areas of concern that should receive in-depth analysis in future research.

As a final remark, it is necessary to acknowledge that although the literature has shown that transparency is correlated with corruption, we must be cautious about the interpretation of our results and avoid drawing a causal link between low rates of transparency and corruption. That said, our results do point to the main determinants of local government transparency in Spain, and we examine several areas in order to enrich the existing knowledge of transparency.



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**TABLES**

**Table 1. Municipalities contained in the 2010 TI survey**

<b>Local Government</b>	<b>Transparency Index</b>	<b>Local Government</b>	<b>Transparency Index</b>
BILBAO	100	EL EJIDO	70
GIJÓN	100	LOGROÑO	70
PONFERRADA	100	SEGOVIA	70
PUERTO DE SANTA MARÍA	100	CUENCA	69
SABADELL	100	FERROL	68
SANT CUGAT DEL VALLÉS	100	SAN SEBASTIÁN DE	
ALCOBENDAS	99	LOS REYES	68
MATARÓ	99	DOS HERMANAS	66
AVILÉS	96	HOSPITALET DE	
ELCHE	96	LLOBREGAT	66
GANDÍA	95	MURCIA	66
MÁLAGA	95	PAMPLONA	66
GETXO	93	ZARAGOZA	66
JAÉN	93	SAGUNTO	65
MADRID	91	TOLEDO	65
SORIA	91	VALLADOLID	65
TERRASSA	91	BENIDORM	64
PALENCIA	90	CORNELLÁ DE	
REUS	90	LLOBREGAT	64
BARCELONA	89	TARRAGONA	64
OVIEDO	89	MAJADAHONDA	63
ALCORCÓN	88	ALGECIRAS	61
LUGO	88	BADALONA	61
ROQUETAS DE MAR	88	LAS ROZAS	61
RUBÍ	88	ALICANTE	58
VITORIA	88	PONTEVEDRA	58
JEREZ DE LA FRONTERA	86	LORCA	56
SANTIAGO DE		OURENSE	56
COMPOSTELA	86	GRANADA	55
BARAKALDO	85	MARBELLA	55
CARTAGENA	85	TORREJÓN DE ARDOZ	55
MANRESA	85	HUESCA	54
SANTA COLOMA DE		POZUELO DE ALARCÓN	54
GRAMENET	85	ÁVILA	53
LÉRIDA	84	CIUDAD REAL	53
SANT BOI DE LLOBREGAT	84	ZAMORA	53
VIGO	84	ORIHUELA	51
A CORUÑA	83	SAN SEBASTIÁN-	
ALBACETE	83	DONOSTIA	49
GETAFE	83	CÁDIZ	48
SEVILLA	83	ALCALÁ DE HENARES	45
TORRENT	81	BURGOS	41
CASTELLÓN DE LA PLANA	80	TALAVERA DE LA REINA	41
LEGANÉS	80	HUELVA	40
PARLA	79	LEÓN	39
COSLADA	78	VALENCIA	39
MÓSTOLES	78	SAN FERNANDO	38
FUENLABRADA	76	ALCALÁ DE GUADAÍRA	36
TORREVIEJA	76	BADAJOS	36
GUADALAJARA	75	CHICLANA DE LA	
CÓRDOBA	74	FRONTERA	36
GIRONA	74	CÁCERES	35
SANTANDER	74	TERUEL	33
VÉLEZ-MÁLAGA	74	ALMERÍA	29
MIJAS	71	SALAMANCA	29
		FUENGIROLA	23
		<b>Mean</b>	<b>70</b>

**Table 2. Descriptive statistics of covariates**

<b>Regressors</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>
<b>Socio-demographic variables</b>				
Population (thousands)	202	360	35.39 0.46	3255.94 0.56
Gender	0.48	0.01	2.9	55.68
Elderly	16.53	5.62		
<b>Fiscal variables</b>				
Debt	5.23	2.73	0	19
Budget_Surplus	4.74	23.50	-59	99
<b>Institutional and political variables</b>				
Capital	0.44	0.49	0	1
Left_Mayor	0.52	0.50	0	1
Left_Majority	0.13	0.34	0	1
Right_Majority	0.36	0.48	0	1
Turnout	61.90	7.14	46	75
<b>Economic context variables</b>				
Unemployment	7.83	2.04	3.4	13.5
Economic_Activity (thousands)	2.19	0.66	0.77	4.06
Tourism	2.10	4.69	0.02	42.5

**Table 3. Least square and censored regression models estimates for overall transparency index**

Regressors	OLS (1)	OLS (2)	Censored (3)	Censored (4)
<b>Socio-demographic variables</b>				
Population	<b>0.0108**</b> (0.0039)	<b>0.0116***</b> (0.0038)	<b>0.0107**</b> (0.0053)	<b>0.0117**</b> (0.0053)
Gender	0.4138 (1.079)	0.6281 (1.128)	0.0634 (1.536)	0.2480 1.5436
Elderly	0.2422 (0.306)	0.2277 (0.2276)	0.2498 (0.3684)	0.2232 (0.3710)
<b>Fiscal variables</b>				
Debt	0.5902 (0.7178)	0.5827 (0.7681)	0.6356 (0.6909)	.5973 .7004
Budget_Surplus	0.0385 (0.0695)	0.0076 (0.0559)	0.0302 (0.0892)	-.0029 .0894
<b>Institutional and political variables</b>				
Capital	<b>-14.505***</b> (4.7933)	<b>-14.803***</b> (4.467)	<b>-15.621***</b> (4.463)	<b>-15.899***</b> (4.473)
Left_Mayor	<b>7.707***</b> (2.888)	-	<b>7.322**</b> (3.764)	-
Left_Majority	-	<b>-4.343**</b> (1.9215)	-	-5.222 6.0841
Right_Majority	-	<b>-8.293***</b> (3.5492)	-	<b>-8.3173**</b> (4.1649)
Turnout	-0.0032 0.2093	-0.0366 (0.2424)	-0.0569 (0.2916)	-0.0967 (0.2966)
<b>Economic context variables</b>				
Unemployment	-1.4709 (0.9950)	-1.5401 (1.0156)	-1.491 (1.0337)	-1.651 (1.0398)
Economic_Activity	2.426 (3.361)	1.702 (3.026)	2.458 (3.138)	1.376 (3.234)
Tourism	<b>-0.6615***</b> (0.1799)	<b>-0.5722***</b> (0.2228)	<b>-0.6807*</b> (0.3903)	-0.5759 (0.3972)
<b>N. Observations</b>	103	103	103	103
<b>R<sup>2</sup></b>	0.23	0.23	-	-
<b>F-Test (Joint Significance)</b>	108.27***	273.28***	-	-
<b>Log-Likelihood</b>	-	-	-428.59	-428.46
<b>Wald Chi2</b>	-	-	25.79***	26.05**

Note 1: Standard errors in parentheses (robust to heteroskedasticity and adjusted for correlation between municipalities of the same region).

Note 2: Statistical significance at 1% (\*\*\*), 5% (\*\*), 10% (\*).

**Table 4. Least square estimates for different areas of transparency**

<b>Regressors</b>	<b>Fiscal Transparen cy (5)</b>	<b>Corporate Transparen cy (6)</b>	<b>Social Transparen cy (7)</b>	<b>Procureme nt Transparen cy (8)</b>	<b>Contracting Transparen cy (9)</b>
<b>Socio-demographic variables</b>					
Population	<b>0.0132**</b> (0.0067)	<b>0.0123***</b> (0.0038)	<b>0.0093**</b> (0.0038)	<b>0.0093***</b> (0.0035)	0.0072 (0.0066)
Gender	1.175 (2.417)	-1.029 (0.9612)	-0.1120 (1.323)	0.8493 (1.0502)	-0.5867 (2.280)
Elderly	<b>0.4971*</b> (0.2829)	-0.0197 (0.1576)	0.0223 (0.3115)	0.2736 (0.3251)	<b>0.7526**</b> (0.3355)
<b>Fiscal variables</b>					
Debt	0.5319 (0.6951)	0.9570 (0.9202)	0.2065 (0.6203)	1.0670 (0.8608)	-0.0572 (0.9436)
Budget_Imbalance	-0.0220 (0.1027)	0.0130 (0.0660)	0.0231 (0.0395)	0.1219 (0.0908)	0.1888*** (0.0614)
<b>Institutional and political variables</b>					
Left_Mayor	<b>13.285**</b> (5.367)	4.301 (4.408)	<b>5.864*</b> (2.841)	<b>6.320**</b> (3.301)	<b>9.8173**</b> (5.050)
Capital	<b>-27.863***</b> (8.412)	-10.983* (5.725)	<b>-7.794**</b> (3.475)	<b>-9.391**</b> (3.672)	<b>-17.396**</b> (6.073)
Turnout	-0.0435 (0.4281)	-0.0128 (0.2052)	0.1081 (0.2101)	-0.0434 (0.1559)	0.0916 (0.3422)
<b>Economic context variables</b>					
Unemployment	<b>-3.874***</b> (1.558)	-1.236 (1.1325)	-0.9806 (0.9647)	-0.0261 (0.7863)	-0.1037 (0.8751)
Economic_Activity	7.809 (5.513)	-1.241 (3.611)	3.913 (2.684)	0.9121 (3.189)	-2.466 (4.071)
Tourism	<b>-1.7502***</b> (0.1307)	-0.1084 (0.2473)	<b>-0.7815***</b> (0.2612)	-0.2728 (0.2233)	0.1276 (0.1819)
<b>N. Observations</b>	103	103	103	103	103
<b>R<sup>2</sup></b>	0.29	0.13	0.18	0.13	0.16
<b>F-Test (Joint Significance)</b>	68.37***	41.85***	546.91***	19.07***	13.28***

Note 1: Standard errors in parentheses (robust to heteroskedasticity and adjusted for correlation between municipalities of the same region).

Note 2: Statistical significance at 1% (\*\*\*), 5% (\*\*), 10% (\*).

## APPENDIX

### A1. International Transparency (TI) Local Index composition

<b>CORPORATE TRANSPARENCY (19 items)</b>
- Basic information on elected officials and public servants (7 items)
- Information on a council's internal organization (6 items)
- Information on municipal rules, norms and regulatory measures (6 items)
<b>SOCIAL TRANSPARENCY (18 items)</b>
- Characteristics of a council's webpage (2 items)
- Information and citizen services (10 items)
- Commitment to citizens (6 items)
<b>FINANCIAL TRANSPARENCY (19 items)</b>
- Accounting and budget information (9 items)
- Information on revenues and expenditures (6 items)
- Information on debt (4 items)
<b>SERVICES CONTRACTING TRANSPARENCY (7 items)</b>
- Information on services contracting procedures (4 items)
- Relationships and operations with contracted providers (3 items)
<b>URBAN PLANNING AND PROCUREMENT TRANSPARENCY (17 items)</b>
- Urban planning information (4 items)
- Decisions on urban rezoning and awards (2 items)
- Ads and procurement (3 items)
- Information on auctions and bidders: offers and resolutions (2 items)
- Works tracking and control (3 items)
- Indicators on public procurement and urban planning (3 items)

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