

ONLINE SUSTAINABILITY INFORMATION IN LOCAL GOVERNMENTS IN AN AUSTERITY CONTEXT: AN EMPIRICAL ANALYSIS IN ITALY AND SPAIN

Purpose: The present research aims to analyse and compare how austerity has influenced online sustainability information in Italy and Spain.

Design: We relate austerity policies to online information in order to ascertain whether austerity plays a role in the financial, organizational, social and environmental information disclosed on local government websites. The research has been conducted by analysing the websites of all Italian and Spanish local governments with more than 100,000 inhabitants.

Findings: The results show that institutional and legislative pressures, as well as austerity measures, have played a relevant role in the increased production of information by local governments, although not all information is fully provided.

Originality/value: The results may be of interest to managers and politicians as a stimulus to increase the flow of information. They may also be useful to policy makers, regulators and other stakeholders in order to foment environmental information.

Keywords: Online information, Sustainability, Austerity, Local government, Comparative research, Italy, Spain.

1 Introduction

Governments are facing austerity with increasing cuts in their budgets at a time when their incomes are decreasing and there is an increase in the demand for public services (Alt and Lowry, 2010; Lowndes and Pratchett, 2012; Overmans and Noordegraaf, 2014). “Since the crisis has structural reasons, any reasonable plan to solve it needs to address them and to use the language of transparency” (Caperchione *et al.*, 2014, p.135). To inform citizens of the reasons behind these policies and to promote democratic participation may help governments to legitimize their policies (Piotrowski and Van Ryzin, 2007). Governments are using the information and communication technologies (ICT) to enable and promote citizen participation in policy formulation and evaluation and to encourage greater information exchange between citizens and government (Macintosh and Whyte, 2008).

This research aims to analyse the dissemination of online information related to sustainability (including both financial and non-financial aspects) of Italian and Spanish local governments (LGs) in an era of austerity. The study attempts to identify the degree to which governments carrying out austerity policies have adopted the appropriate communication strategies. Our main contribution is the study of the impact of austerity on online information and the comparative perspective of the determinants of local government transparency.

Italy and Spain have introduced austerity policies promoted by the European Union and both have recently passed transparency laws. The two countries have similar cultural and administrative traditions, which may drive the way people think and act (Hofstede, 2001). Nevertheless, some contextual and institutional factors (e.g. density of population, education, engagement in political activities, legal framework) as well as citizen predisposition towards governments (Grimmelikhuijsen *et al.*, 2013) can create differences in the way in which LGs tackle the need for increasing transparency in times of austerity, and these factors deserve to be investigated.

The analysis covers all Italian and Spanish LGs with more than 100,000 inhabitants. We have considered the Global Reporting Initiative's sustainability reporting framework (supplement for public agencies, GRI 2010), as a reference to select the information on organizational, financial, social and environmental aspects published by LG on their websites. We related some characteristics of LGs and austerity measures (in terms of changes in the level of taxes, revenues, capital expenditure and debts) to investigate the relation - if any - between austerity policies and online information.

The research is organized as follows. Section two presents an overview of the literature on austerity and online information used to design the hypotheses that are then tested in the study. Section three describes the Italian and Spanish contexts while section four presents the research methodology. The empirical results are shown in section five. Section six is devoted to a discussion of the results and the main implications.

2 Transparency and online information in local government

Transparency has become a key factor in the reforms of public administrations around the world (Hood, 2006; Piotrowski and van Ryzin, 2007; Guillamón *et al.*, 2011; Meijer, 2013), as well as being a means of reacting to austerity (Lowndes and Pratchett, 2012). According to the literature, transparency can be defined from the principal-agent theory, considering it as “the ability to find out what is going on inside a public sector organization through avenues such as open meetings, access to records or the proactive posting of information on Web sites” (Piotrowski and Van Ryzin, 2007, p. 308) or from an institutional perspective as “the availability of information about an actor that allows other actors to monitor the workings or performance of the first actor” (Meijer, 2013, p. 430). In both cases, citizens should be considered not only as recipients of the activities of public entities but also as collaborative partners for building democratic and effective governance (O’Leary *et al.*, 2010).

Consequently, LGs tend to enhance transparency while citizens require an increasing amount of information, possibly including access to all public documents and deliberations which can have consequences for the management of resources (García-Sánchez *et al.*, 2013). However, we must be aware that transparency does not always produce the benefits claimed for it and that it may provoke some negative effects.

In the literature, there is an ongoing debate on this question (*transparency optimists versus transparency pessimists*, Grimmelikhuijsen, 2011: 36; or *proponents versus opponents*, Meijer, 2009). Some empirical studies provide evidence that transparency does not always lead to greater participation (Welch, 2012) or to an increase in citizen trust (Grimmelikhuijsen, 2009; Grimmelikhuijsen *et al.*, 2013). Curtin and Meijer (2006, p. 120) include some interesting arguments urging caution on the question of transparency: few citizens access the information provided and those that do are confronted with an information overload; the information could result in more negative stories in the press and undermine legitimacy; and transparency can be used as an excuse by policymakers to stick to strict procedures and avoid innovative solutions. Bearing in mind these possible limitations, our research does not intend to test the consequences of transparency, but rather to depict the extent to which information is released on the websites of Italian and Spanish LGs in times of austerity.

2.1 Factors driving online information

The motivations of governments to disclose information have been argued in the literature from different theoretical approaches (Serrano-Cinca *et al.*, 2009; Cuadrado-Ballesteros *et al.*, 2014) that can be used as a motivation of our study.

First, the increasing interest in accountability and transparency by LG can be explained by the *legitimacy theory* (i.e. Dowling and Pfeffer, 1975; Roberts, 1992). From this perspective, LGs

(like other corporations) have to act within the boundaries of what is considered socially acceptable and consistent with citizens' expectations. So, legitimisation can be achieved if the entity operates in a way that is consistent with social values (Dowling and Pfeffer, 1975). Furthermore, decision makers may increase their legitimacy simply by carefully justifying their decisions after they have been taken behind closed doors (de Fine Licht *et al.*, 2011). In fact, people informed about decisions affecting their everyday lives are more willing to accept the process by which the decisions have been taken if they are given an insight into the reasoning behind the decisions. Therefore, LGs should consider what is acceptable to citizens and, at the same time, release more information to explain the results obtained. The application of the legitimacy theory in an era of austerity may lend support to the idea that the introduction of transparency can help governments to obtain legitimacy in spite of the adoption of measures that involve sacrifices from citizens, both in terms of higher taxes and fewer services or investments.

Other scholars have framed the determinants of transparency within the boundaries of the *agency theory* (Alt and Lassen, 2006; Gandía and Archidona, 2008): citizens act as the principal while managers and politicians are the agent. Online information may reduce uncertainty about the agent's behaviour, thereby making the principal more confident in delegating powers to the agent (Holmström, 1979). Cuadrado-Ballesteros *et al.* (2014) argue that online sustainability information is influenced by media pressure as most of the news published focuses on negative issues, so entities under closer scrutiny by the media are less inclined to disclose information.

However, the interest of politicians in disseminating information will depend on the level of interest shown by the citizens which, in turn, is reflected in their engagement and political participation. Moreover, from a principal-agent perspective, it is possible to relate fiscal

revenues and fiscal pressure – which are the typical means of austerity policies – with the dissemination of information (Ferejohn, 1999)

Another strand of the literature (Ball and Grubnic, 2009) has interpreted the increasing production of information from the perspective of the *new institutional theory*. This theory emphasizes the existence of isomorphism to explain changes, suggesting that governments will be pushed into different practices by isomorphism, trying to do what other similar governments do. With regard to sustainability reporting, Mussari and Monfardini (2010) consider the adoption and diffusion of tools such as social, environmental or gender reporting in the Italian public administrations as an isomorphic process triggered by normative processes, mimetic isomorphism and coercive mechanisms.

In accordance with the theories mentioned, the influence of austerity should be similar in Italian and Spanish LGs. Nevertheless, some differences may emerge in a comparative study due to certain internal characteristics. In fact, as already shown by scholars (Marcuccio and Steccolini, 2009), LGs are affected by various contingent factors in disclosing information (e.g., educational level, internal culture, citizen engagement, etc.) which may differ, especially between countries. Thus, it is worth testing whether these differences exist.

2.2. Development of hypothesis

Previous studies have shown that the information provided on LG websites has increased over time in response to a number of factors (Alt and Lassen, 2006; Caba *et al.*, 2008; Alt and Lowry, 2010; Albalade del Sol, 2013; García-Sánchez *et al.*, 2013). Scholars have generally promoted the idea of increasing transparency as a means of reducing the risk of corruption and of enhancing accountability, as well as a result of democratic participation (Yetano *et al.*, 2010). Under austerity policies, transparency through online information can be interpreted as a way of explaining political choices and the value for money of public services. Looking at cutback policies, we would expect that a reduction both in capital expenditure and in total

expenditure would lead entities to release more information, both to justify the rationality of their choices and to gain legitimacy as well as to give a proper explanation of the way in which resources have been employed. In addition, we want to test whether there are differences between Italian and Spanish LGs in the impact of austerity measures.

Thus, we can set our first and second hypotheses as follows:

Hypotheses 1: The entities with a higher decrease in capital expenditure disseminate more information.

Hypothesis 2: The entities with a higher decrease in total expenditure disseminate more information.

In an era of austerity, transfers by central government and revenues tend to be reduced. Even if LGs can exercise stronger fiscal pressure, this cannot compensate for the reduction of transfer and other revenues. As a consequence, the total amount of revenues tends to be reduced year by year. In this situation, the rationality offered by the theoretical framework adopted suggests that entities should provide more detailed explanations about the use of financial resources as well as sustainability matters. Thus, keeping our comparative perspective, we set the third hypothesis:

Hypothesis 3: The entities with a higher decrease in total revenues disseminate more information.

From a principal-agent perspective, it is possible to relate an increase in fiscal revenues - due to higher fiscal pressure per capita - with the dissemination of information: citizens want to know how their money has been spent. Ferejohn (1999) evidences a positive relation between taxes and the demand for transparency. Guillamón *et al.* (2011) demonstrate that in Spain municipalities collecting more taxes disclose more financial information. However, in the same context, Caba *et al.* (2008) found no significant influence. Thus, we intend to test the following hypothesis in a comparative perspective:

Hypothesis 4: The entities with higher fiscal pressure disseminate more information.

Austerity policies aim to produce a reduction in government debt, both at central and local level (Lowndes and Pratchett, 2012). In line with legitimacy theory, LGs that act within what is considered legally and socially acceptable will be more interested in disseminating information. Similarly, agency theory states that in entities that behave responsibly the agents will be more interested in giving information to the principal to reduce uncertainty. In the literature, some scholars have found that financial and social information has been adopted as a tool to inform about the financial equilibrium and to access public funds (Marcuccio and Steccolini, 2005; Guillamón *et al.*, 2011).

Consequently, we can expect that a reduction in the level of debt will lead to greater financial disclosure as a result of a successful application of austerity policies. Previous studies (Evans and Patton, 1987; Fisher *et al.*, 2005) have discussed the association between debt and the voluntary disclosure of public financial information. Albalade del Sol (2013) shows that the debt level has no effect on fiscal transparency. Similarly, Guillamón *et al.* (2011) find no statistical relationship between debt and transparency in Spanish municipalities. On the contrary, Alt, Lassen & Rose (2006), analysing a sample of OECD countries, report that when LGs debt increase, the transparency decreases.

Thus, always from a comparative point of view, our last hypothesis is as follows:

Hypothesis 5: The entities with a higher decrease in the level of indebtedness disseminate more information.

To strengthen our analysis, several *control variables* representing the municipal context (transfer for capital expenditure per capita) and internal factors (citizen engagement and educational level) have been added to our model, following the extant literature.

In the context of austerity, the interest of politicians in disseminating information will also depend on the level of interest shown by citizens which, in turn, is reflected in their engagement and political participation. Previous studies demonstrate that there is a close interconnection between transparency and political participation (Piotrowski and Bertelli, 2010, Yetano *et al.* 2010).

Moreover, the educational level of the population has also been considered as a determinant of a demand for greater transparency (Alt and Lassen, 2006; Piotrowski and Van Ryzin, 2007). Taking into account the relation between education level and transparency, we expect that well-educated people are more likely to demand innovation and greater transparency from their LGs (Tolbert *et al.*, 2008).

Lastly, we include *size* as a control variable to verify to what extent there are differences between larger entities and medium-sized entities. Some prior research shows that municipalities with larger populations have a greater dissemination of information (Pina et al., 2009; Albalade del Sol, 2013).

3. The legal framework in Italy and Spain

In Italy and Spain, public administrations have been driven to introduce significant cuts in budgets in the last few years because of the financial crisis (so called Spending review). This situation, coupled with the high level of corruption perceived by citizens in both countries (Survey by TNS Opinion & Social for the European Commission, 2014), has meant that transparency has been a priority of governments. Table 1 shows the structure of Italian and Spanish LG.

[TABLE 1 HERE]

3.1 Transparency and Online Information in Italy

The Italian public administration has a three-tier structure: National Government, Regional Governments (21) and Local Governments, comprising 110 Provinces and 8,092 Municipalities, most of which have few inhabitants, as Table 1 shows.

Different kinds of forces drive Italian public administrations towards greater transparency and social reporting exploded around the middle of 2000's as a kind of Italian fashion (Marcuccio and Steccolini, 2005; Mussari and Monfardini, 2010). The most significant regulation is the Legislative Decree 150/2009, which has added an evaluation system of performance in all areas of the public administration to enhance transparency regarding services and worker performance. Moreover, since February 2013, open access through the LG websites to information about organization, performance and financial data as well as information on the management of each area of the public administration has become mandatory (decree 33) and each administration has had to create a special section on the LG website called "Transparent Administration" and to appoint an official responsible for transparency. In addition, a strong institutional pressure to enhance transparency has been exerted by the CIVIT (the Independent Commission for Evaluation, Transparency and Integrity of Public Administrations – the National Anti-Corruption Authority).

As regards social and environmental reporting, even if it is not mandatory, there are three main guidelines that a large number of ILGs tend to follow (Secchi, 2006): those issued by the *Dipartimento della Funzione Pubblica* in 2006 (operating within the Ministry of the Interior), the standards proposed by the GBS (the Group for the Social Reporting) between 2004 and 2013, and the international standard prepared by GRI (2011).

3.2 Transparency and Online Information in Spain

The political structure of Spain consists of a state level, the regional level (17 Autonomous Communities) and local level (52 provinces and 8116 municipalities). In Spain, as in Italy, the majority of the municipalities are small.

In Spain, the law 19/2013, on “Transparency, access to public information and good governance” requires the publication of institutional, organizational and planning information, juridical information and economic, budgetary and statistical information. The law gives regional and local governments a period of two years to adapt to the compulsory requirements. It makes no mention of how the information should be published, missing the opportunity to require the use of open data standards such as those of the World Wide Web Consortium.

In the environmental area, the law 27/2006 aimed to facilitate the gradual diffusion of environmental information to the public, but not all public entities publish such information, which are still voluntary (García-Sánchez *et al.*, 2013).

Previous studies have mainly analysed the transparency of economic and financial information, showing that there are significant differences in transparency between Spanish local governments (SLG) (Gandía and Archidona, 2008; International Transparency-Spain, 2013). There are very few papers that deal with the publication of sustainability information in SLG (Navarro *et al.*, 2010; García-Sánchez *et al.*, 2013), but all available studies conclude that local entities have limited experience of providing social and environmental information (Navarro *et al.*, 2010; García-Sánchez *et al.*, 2013).

4. Research methodology

In order to investigate what information is published by local governments, we have analysed the websites of all Italian and Spanish LGs with more than 100,000 inhabitants, assuming that

larger municipalities have greater economic and technological resources and that they are responsible for large communities, so would publish more information than smaller ones (Serrano-Cinca *et al.*, 2009; Tagesson *et al.*, 2013). The sample originally comprised 46 Italian and 59 Spanish LGs, but we had to eliminate two Italian entities due to the lack of some financial data.

We have constructed an index of total disclosure using as a reference the Supplement for Public Agencies of the Global Reporting Initiative (GRI, 2010) and following the same method already used in previous studies (Caba *et al.*, 2008; Gallego-Álvarez *et al.*, 2011). According with it, we have identified a list of 52 items that have been analysed in local government websites (see Appendix 1).

The information has been grouped into four areas: *organizational profile, strategy and governance* (A, 16 items), *financial information* (B, 21 items) *social information* (C, 11 items) and *environmental information* (D, 4 items). In the area of social information, we have included a special section about citizen participation and democracy, which can be considered an essential part of the transparency process.

In order to analyse the influence of austerity policies on transparency, we have collected accounting data from the financial reporting of the LGs in 2008 and 2011 (For ILGs, we have collected the information on the database managed by the Ministry of the Interior and available at <http://finanzalocale.interno.it/apps/floc.php/in/inputIn/4> while, for the SLGs, we have obtained the data on the website of Ministry of Public Administrations, <http://www.minhap.gob.es>). To test our hypotheses, we have considered five different measures as proxies of austerity, as detailed in Table 2. We have also included the expected sign of the variables, according to the definition of the hypothesis.

We have also introduced some control variables to capture the influence of other financial factors representing the municipal context (transfers for capital expenditure per capita) and internal factors (citizen engagement and education level).

In order to test to what extent these variables behave differently in Italian and Spanish LGS, we have included the interaction of all the variables in the table with the country.

[TABLE 2HERE]

To analyse the effect of the independent variables on the total disclosure index, we have constructed a model of dependency, using multiple linear regression, as follows:

$$Y = \alpha + \beta_1 \Delta KE + \beta_2 \Delta TE + \beta_3 \Delta TR + \beta_4 FP + \beta_5 \Delta FP + \beta_6 \Delta FS + \beta_7 TKE + \beta_8 Cit_eng + \beta_9 Ed_lev + \beta_{10} LN(Size) + \beta_{11} \Delta KE * Country + \beta_{12} \Delta TE * Country + \beta_{13} \Delta TR * Country + \beta_{14} FP * Country + \beta_{15} \Delta FP * Country + \beta_{16} \Delta FS * Country + \beta_{17} TKE * Country + \beta_{18} Cit_eng * Country + \beta_{19} Ed_lev * Country + \beta_{20} LN(Size) * Country + \varepsilon$$

In order to identify whether a stronger relation exists between any specific area of our disclosure index and the independent variables selected, the model has been repeated for each of the four areas. The model parameters in the study were estimated using SPSS software.

The regression has been estimated using the stepwise procedure. To check the robustness of the results, we tested whether the selected models fulfill the assumptions for linear regression: Cook's D statistics have been used to test influential points; the Variance Inflation Factor of the variables introduced into the model allows us to check that there are no problems of multicollinearity; and the plots of the residuals and predicted values have been used to check the homoscedasticity of the errors.

5. Analysis of Results

5.1. Online Information in Spanish and Italian Local Governments

Table 3 summarizes the descriptive statistics for each group into which the information index has been clustered, as well as the total index for both countries. The analysis is based on the mean of the items disclosed for the two countries.

[TABLE 3 HERE]

As can be seen, the level of information is low in most of the areas: in Italy the mean is over fifty percent of the items only for *organization profile, strategy and governance information* (61.63%); while in Spain the percentage is over fifty percent of the items only for *environmental information* (53.50%).

In particular, concerning the first area Italian and Spanish entities disclose more information about the operational structure of the organization, the governance structure and the political managers, whereas disclosure of information about challenges and targets for the entity is still low in both countries (see Appendix 1).

In *financial information*, around 44.41% (44.48% in Italy and 44.57% in Spain) of the items are disclosed in both countries. Nearly all entities disclose the initial approved budget, while the percentage of entities that publish the execution of the budget is only 45.45% in Italy and 64.41% in Spain (details in the Appendix 1). The balance sheet and operative statement are also disclosed by a high percentage of entities, especially in the case of Italy. This area contains a higher percentage of the total items analysed (21 out of 52) and the results show that it represents a relevant percentage in the total disclosure of LG. This result confirms the relevance of financial information in the transparency of LGs (Navarro *et al*, 2010; García-Sánchez *et al*, 2013), as it is one of the most important components of public accountability.

Analysing the dissemination of *social information*, it can be seen that LGs on average disclose about 5 items (45.64% in ILGs and 43.18% in SLGs). The mean value for disclosure of social information is slightly higher for Italy than for Spain.

Lastly, examining the dissemination of *environmental information*, results show a wider disclosure in Spain, since it can be observed that ILGs on average disclose about 1 item (30.00%) while SLGs disclose about 2 (53.50%).

In order to compare the situation in the two countries, Levene's test and the T-test have been applied (Appendix 2). Differences are statistically significant for *organizational profile*, *governance and strategy* and *environmental information*, as Italian LGs show greater transparency than the Spanish. This difference could be explained by different institutional pressures.

The T-tests show that the difference between means is not statistically significant for either the *financial* information items or for those relating to *social* information. On average, Italian and Spanish LGs have a similar level of disclosure in financial information. This can be interpreted as a result of a *coercive isomorphism* (Di Maggio and Powell, 1983) because in both countries the legislative pressure for transparency is focused mainly on economic information. Furthermore, in Italy the law (Leg. Decree 33/2013) that makes disclosure of the aforementioned information mandatory is very recent and there are no penalties for local governments that do not disseminate this information.

However, as a result of legislative pressure (Leg. Decrees 150/2009 and 33/2013) high attention has been paid in Italy to the organizational profile (9.86) (Table 2), with the dissemination of information about missions or values and codes of conduct as well as service procurement procedures and the number of employees. There are also differences in environmental information, as Spanish entities pay more attention to this kind of data.

Table 4 shows the Pearson correlations (parametric) between the different groups, with the p-values in brackets. In both countries, there is a moderate correlation between the four groups, slightly higher in Spain. ILG presents a moderate correlation (0.533) between *social* information and *organizational profile, strategy and governance* information while for SLG *financial* information shows a higher correlation with *social* information (0.656) and *environmental* information (0.684) while the latter two groups are positively correlated with each other (0.677).

[TABLE 4 HERE]

In Italy, this relation can be explained by the fact that laws related to the diffusion of financial information have also invited entities to disclose social information as well as information concerning the organization and management of each public administration.

The production of a separate sustainability report is voluntary and the widespread availability of these reports could also be read as a result of institutional pressure coming from the European Commission which has issued a variety of communications to encourage LGs to adopt sustainability strategies and to voluntarily report on these activities (Farneti et al, 2010).

The behaviour of Italian and Spanish LGs can also be considered in the light of the *legitimacy theory* (Dowling and Pfeffer, 1975) because LGs disclose social and environmental information in order to demonstrate to citizens that their activities are consistent with citizens' expectations (Dowling and Pfeffer, 1975). In Spain, entities that want to be transparent include the three types of information, confirming previous research results (García-Sánchez *et al.*, 2013).

5.2 Drivers for online information in an austerity context

Table 5 shows results of the regression analysis for each area as well as for the total disclosure. Considering that we have ten independent variables and that our aim is to select those that have greater explanatory power over the dependent variable, the stepwise model regression has been used to select the predictive variables with an automatic procedure (Hopkins and Ferguson, 2014).

[TABLE 5 HERE]

As can be seen, for the *overall level of information*, there are three significant variables: *variation in total revenues*, *relative variation in fiscal pressure* and *transfers for capital expenditure*country*. The first two variables have a negative influence while the last has a positive influence. The first variable indicates that entities that have suffered a higher reduction in their revenues and, thus, face greater austerity, give more information. The second one indicates that the entities that have had a greater increase in fiscal pressure give less information. The effect of the variables is similar in the two countries: with the same level of variation in revenues or in fiscal pressure, an Italian and a Spanish entity give similar levels of disclosure. The third variable shows that entities with a higher level of transfers for capital expenditure have introduced more information onto their websites. Moreover, this variable has a different effect in each country, higher in Spain than in Italy.

Focusing on *organizational profile, strategy and governance*, three independent variables are statistically significant: *variation in total revenues*, *transfers for capital expenditure received* and *the fiscal pressure per capita*. The interpretation of the first will be directly related to austerity, as those entities that suffer a greater reduction in their revenues give more information. The transfers for capital expenditure positively influence the level of transparency: in this regard, it should be noted that this is often the consequence of the requirements that other entities can impose when they finance capital expenditure. Similarly,

higher fiscal pressure positively affects disclosure. This can be interpreted using the agency theory, as those entities that raise more money directly from citizens through taxes are more interested in giving general information to reduce conflicts.

However, with respect to *financial information*, there are only two variables which significantly affect transparency in the model: *size* and *the transfers for capital expenditure*country*. The first variable shows that bigger entities disseminate more financial information. Therefore, in line with some previous studies (Pina et al., 2009; Albalade del Sol, 2013), our results show that size positively affects the dissemination of financial information on the website. Moreover, the entities with a higher level of transfers for capital expenditure have introduced more information in their websites. This can be explained by the fact that entities with a high level of transfers for capital expenditure obtained by successfully competing for national or European subsidies for specific projects have to explain how such resources have been employed. Moreover, the variable affects each country differently, higher in Spain than in Italy.

Regarding information in the *social area*, there are two significant variables in the model: *transfers for capital expenditure*country* and the *relative variation in capital expenditure*. The first variable has a positive sign, showing that a higher level of transfers for capital expenditure is linked to a higher level of social transparency. The effect is also different in each country, being higher in Spain than in Italy. The second variable, with a negative sign, shows that entities that have reduced their investments are more interested in offering information about the salaries of the politicians and in the use of democratic participative tools that can make citizens aware of austerity policies.

Finally, our results show that *environmental reporting* is not influenced by austerity measures. Therefore, the municipality's budgetary capacity is not a major determinant for greater environmental transparency (García-Sánchez et al, 2013). The only significant variable is the

*size of the local governments*country*. The positive and significant relationship between size and environmental disclosure is consistent with previous results obtained by Frost and Semaer (2002) and García-Sánchez *et al*, (2013). Largest municipalities have introduced more tools for management (Torres et al. 2011) and can have more possibilities for environmental disclosure. The effect is different in each country, higher in Spain than in Italy. Therefore, as already shown before, Spanish entities pay more attention to this kind of data.

Of the five variables chosen to analyse the influence of austerity measures on transparency, the relative variation of capital expenditure (as a proxy of austerity) is the only significant one with respect to social information, so our first hypothesis can be partially accepted.

The third hypothesis can be accepted: focusing on the results of the overall disclosure and organization disclosure, entities facing a reduction in their revenues are more likely to give more information to justify their policies and, especially, to explain how this can affect organizational aspects.

Fiscal pressure also influences the level of disclosure of LGs in the area of organizational information. Entities with higher fiscal pressure give more information to citizens, which leads us to accept - although partially - our fourth hypothesis. This confirms the results obtained previously by Ferejohn (1999) which indicated a positive correlation between the amount of taxes and the transparency level of public entities.

However, the relative variations in total expenditure and in the debt have not been significant in the model and consequently our second and fifth hypotheses should be rejected.

However, the results show that the variation in debt per capita has no influence on the dissemination of information by Italian and Spanish LGs. In the literature there is a debate on this issue. Some previous research results (Alt and Lassen, 2006, Albalade del Sol, 2013) have indicated that the level of debt is not significant while others (Evans and Patton, 1987;

Fisher *et al.*, 2005) have revealed a positive relation between debt and the disclosure of public financial information. Finally, our results show that transparency is related neither to political participation, thus diverging from previous studies (Piotrowski and Bertelli, 2010), nor to the educational level. The latter is line with the results of Caba *et al.* (2008) for Spain.

Conclusions

LGs are facing austerity and cutbacks in their budgets, which has motivated a public debate about whether these policies are appropriate or not. Informing citizens of the reasons behind these policies and promoting democratic participation may help governments to legitimize their policies. However, there is no information available about how austerity can influence transparency in practice.

Italy and Spain have both introduced austerity policies driven by the European Union and both have recently passed transparency laws as a tool for fighting corruption, requiring public administrations to inform citizens about their activities. Furthermore, both countries have similar cultural and administrative traditions, but some country-specific factors could create some differences (Marcuccio and Steccolini, 2009; Grimmeliikhuijsen et al., 2013) in how austerity measures influence the dissemination of information. Thus, comparing the results obtained could allow a better understanding of the influence of the context on transparency.

An analysis of the websites of all Italian and Spanish LGs with more than 100,000 inhabitants has highlighted that the objectives of transparency have only partially been met, and that differences arise between different information areas. In fact, the area with the highest level of disclosure is that of *organizational profile, strategy and governance*. On the other hand, *financial* information has average values which reveal that governments disclose under 50% of the items analyzed. Disclosure of *social* and *environmental* information is also

low. This shows that in spite of the political promotion of transparency as being a principal objective of the parties in power and its continual emphasis in social networks and the media, in practice there is still room for improvement.

In Italy laws requiring greater disclosure of information have progressively been introduced in the last few years, including a comprehensive Transparency Law, while in Spain such information disclosure will be mandatory in 2016, possibly producing further changes in entities that, at present, do not even publish their budgets. Nevertheless, the differences between the two countries are limited, apparently supporting the idea that mimetic is even stronger than coercive isomorphism.

Our results show that austerity measures - in particular as far as they affect the relative variation in total revenues, in capital expenditure and capital expenditure per capita - have influenced the disclosure of information. These results can be interpreted through the lens of the legitimacy theory: entities facing greater austerity are more interested in informing citizens in order to gain their trust and obtain legitimization. Moreover, from the agency theory perspective, politicians and managers, as agents, give more information to citizens (principals) in a context of austerity in an attempt to reduce uncertainty and consequently gain consensus. It is, however, difficult to assess whether or not greater transparency has really increased legitimacy and to evaluate the persuasive effects of transparency.

The study does have a further limitation due to the fact that many other variables that potentially affect disclosure could be considered, and these would probably enhance the explanatory power of the models. In any case, our objective was not to explain the level of transparency, but rather to show to what extent transparency of financial and non-financial information is widespread in Italian and Spanish Local Governments and to what degree austerity measures have affected the dissemination of information. Given that our results show that those entities facing higher austerity provide more information, a twofold

contribution can be derived from this research: to have shed light on the relation between austerity and transparency and to have offered useful insights for local government managers and politicians as a stimulus for increasing the amount of information released and for creating stronger citizen awareness of the information released (with forums, press releases and other media) as well as for policy makers and regulators to support the enhancement of such information. In future research, it would be of interest to test whether those entities with higher transparency have in fact achieved more legitimacy or not and to examine the effects that transparency can have in practice. A further development of this research could be a comparison between countries belonging to different administrative systems, to verify whether stronger differences in transparency arise. This is a field that deserves more empirical analysis.

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Table 1: Dimension of Italian and Spanish Local Government

	Italy	Spain
Provinces	110	52
Municipalities	8092	8116
<i>With more than 100,000 inhabitants</i>	46	59
<i>100,000 -50,000 inhabitants</i>	95	86
<i>50,000 -20,001 inhabitants</i>	366	254
<i>20,000-5,001inhabitants</i>	1883	915
<i>With fewer than 5,000 inhabitants</i>	5702	6802

Source: Census by Italian National Institute of Statistics (2011) and Spanish Ministry for Public Administration (2012)

Table 2. Definition of independent variables

Variable	Definition	Hypothesis	Expected sign
ΔKE (Relative Variation in capital expenditure)	Capital exp. 2011-Capital exp. 2008/ Capital exp. 2008	H1	-
ΔTE (Relative Variation in total expenditure)	Total exp. 2011-Total exp. 2008/ Total exp. 2008	H2	-
ΔTR (Relative Variation in total revenues)	Total rev. 2011-Total rev. 2008/ Total rev. 2008	H3	-
FP (Fiscal pressure per inhabit.)	Fiscal revenues 2011/n. inhabitants	H4	+
ΔFP (Relative Variation in fiscal pressure)	Fiscal pressure 2011- Fiscal pressure 2008/ Fiscal pressure 2008	H4	+
ΔFS (Relative Variation in debt per capita)	Debt pc 2011- Debt pc 2008/ Debt pc 2008	H5	-
TKE (Transfers for capital expenditure per capita)	Transfers capital expenditure 2011/n. inhabitants	Control variable	+
Cit_eng (Citizens engagement)	% of participation to the last election	Control variable	+
Ed_lev (Educational level)	Population with studies after 16 years/population over 16	Control variable	+
$Size$	Ln (number of inhabitants)	Control variable	+

Table 3 - Descriptive statistics of dependent variables

	Country	Mean %	Mean	Std. Deviation	Std. Error mean
<i>Organizational profile, strategy and governance information</i>	Italy	61.63%	9.86	3.515	.530
	Spain	44.94%	7.19	3.324	.433
<i>Financial information</i>	Italy	44.48%	9.34	2.803	.423
	Spain	44.57%	9.36	5.668	.738
<i>Social information</i>	Italy	45.64%	5.02	1.592	.240
	Spain	43.18%	4.75	2.862	.373
<i>Environmental information</i>	Italy	30.00%	1.20	.851	.128
	Spain	53.50%	2.14	1.468	.191
Total information	Italy	48.90%	25.43	6.953	1.048
	Spain	45.04%	23.42	11.227	1.462

Table 4 - Correlation between the areas

ITALY	<i>Organizational profile, strategy and governance</i>	<i>Financial- information</i>	<i>Social- information</i>	<i>Environmental- information</i>
<i>Organizational profile, strategy and governance information</i>				
<i>Financial information</i>	.505 (0.000)			
<i>Social information</i>	.533(0.000)	.358(0.017)		
<i>Environmental information</i>	.507(0.000)	.340(0.024)	.408(0.006)	
SPAIN	<i>Organizational profile, strategy and governance</i>	<i>Financial- information</i>	<i>Social- information</i>	<i>Environmental- information</i>
<i>Organizational profile, strategy and governance information</i>				
<i>Financial information</i>	.533(0.000)			
<i>Social information</i>	.509(0.000)	.656(0.000)		
<i>Environmental information</i>	.451(0.000)	.684(0.000)	.677(0.000)	

Table 5 Austerity and sustainability information by Italian and Spanish LGs

OVERALL						
	<i>Standardized Coefficient</i>	<i>t</i>	<i>Sig.</i>			
<i>Relative variation in total revenue</i>	-.333	-3.664	.000			
<i>Relative variation in fiscal pressure</i>	.211	2.154	.034			
<i>Transfers for capital expenditure*country</i>	.363	3.676	.000			
<i>R-squared</i>	.178					
<i>F model</i>	8.295		.000			
ORGANIZATIONAL			FINANCIAL			
	<i>Standard. Coefficient</i>	<i>t</i>	<i>Sig.</i>	<i>Standard. Coefficient</i>	<i>t</i>	<i>Sig.</i>
<i>Rel. variation in total revenues</i>	-.371	-4.273	.000	-.215	-2.269	.025
<i>Fiscal Pressure per capita</i>	.195	2.261	.026	0.154	1.619	.109
<i>Transfers for capital expenditure</i>	.310	3.600	.001	0.062	.622	.535
<i>Transfers capital expend.*country</i>	0.012	.131	.896	.310	3.272	.001
<i>R-squared</i>	.267			.108		
<i>F model</i>	13.281		.000	7.135		.001
SOCIAL			ENVIRONMENTAL			
	<i>Standard. Coefficient</i>	<i>t</i>	<i>Sig.</i>	<i>Standard. Coefficient</i>	<i>t</i>	<i>Sig.</i>
<i>Relative variation in capital ex.</i>	-.299	-3.143	.002	-0.027	-.283	.778
<i>Transfers capital expend.*country</i>	.256	2.684	.009	0.164	1.643	.104
<i>Size *country</i>	-0.047	-.442	.660	.381	4.120	.000
<i>R-squared</i>	.111			.137		
<i>F model</i>	7.316		.001	16.972		.000

Appendix 1 . Items included in the transparency index

A) Organization profile, strategy and governance information	Italy		Spain	
Strategy of the council	59.09%	C	61.02%	V*
Strategies about sustainability	47.73%	V	57.63%	V
Main challenges for the next year	36.36%	C	49.15%	V*
Main challenges for the next 3-5 years	31.82%	C	28.81%	V*
Politicians responsible	97.73%	C	96.61%	V*
Operational structure of the organization	97.73%	C	93.22%	V*
Number of employees	95.45%	C	20.34%	V
Environmental responsibility, or Sustainability department	90.91%	V	72.88%	V
Governance structure of the organization	100.00%	C	91.53%	V*
Ethical or good governance code	59.09%	C	22.03%	V
Statements of mission or values, codes of conduct, and principles	68.18%	V	22.03%	V*
Services procurement procedures	81.82%	C	23.73%	V*
Externally developed economic, environmental, and social principles to which the organization subscribes	36.36%	V	40.68%	V
Memberships of associations	34.09%	V	30.51%	V
List of stakeholder groups engaged by the organization	22.73%	V	5.08%	V
Approaches to stakeholder engagement	27.27%	V	3.39%	V
B) Financial information				
Initial Approved Budget	97.73%	C	91.53%	V*
Modifications of the budget	6.82%	V	67.80%	V*
Explanation of modifications of the budget	11.36%	V	55.93%	V
Execution of the budget	45.45%	C	64.41%	V*
Budget of decentralized entities	9.09%	V	45.76%	V
Detailed budget reporting	22.73%	V	55.93%	V*
Consolidated budget	0.00%	V	57.63%	V*
Consolidated reporting	6.82%	V	3.39%	V
Consolidated Performance Reporting	4.55%	V	1.69%	V
Single Report including all financial information	18.18%	V	33.90%	V
Balance Sheet	93.18%	C	62.71%	V*
Performance Statement	81.82%	C	62.71%	V*
Performance Indicators	77.27%	C	5.08%	V*
Audit Statement	27.27%	C	33.90%	V*
Service charters	97.73%	C	40.68%	V
Financial statements of controlled entities	50.00%	C	13.56%	V
Gross expenditure broken down by financial classification	70.45%	C	66.10%	V*
Current expenses by financial classification	56.82%	C	64.41%	V*
Capital expenditure by financial classification.	56.82%	C	42.37%	V*
Economic criteria that apply to expenditure and financial commitments.	4.54%	C	0.72%	V*
Reference to open data	95.45%	C	66.10%	V
C) Social information				
Labor practices	25.00%	V	40.68%	V
Human rights (non-discrimination)	13.64%	V	57.63%	V*
Society (impact on the community, corruption)	6.82%	V	27.12%	V
Product responsibility (customer health and safety)	4.55%	V	38.98%	V

Dialog boxes for sending suggestions to political representatives	68.18%	V	74.58%	V
Establishing contact with political representatives via email	95.45%	C	33.90%	V
Videos or reproduction online of board sessions	61.36%	V	18.64%	V
Discussion forums and chats to discuss specific issues	50.00%	V	47.46%	V
Social criteria that apply to expenditures and financial commitments.	4.55%	V	37.29%	V
Salary of politicians responsible	100.00%	C	25.42%	V*
Department and procedures for citizen participation	72.73%	V	72.88%	V
D) Environmental information				
Environmental Indicators	20.45%	V	72.88%	C
Local Agenda 21	81.82%	V	61.02%	V
Procurement policy relating to sustainable development.	13.64%	V	42.37%	V
Environmental criteria that apply to expenditure and financial commitments.	4.55%	V	37.29%	V

C: Compulsory; V: Voluntary, V*: Voluntary at the moment of the study but compulsory since 2016.

Appendix 2. - Independent sample T-test of dependent variables

		Levene's Test for Equality of Variances		T-Test for Equality of Means						
		F	Sig.	t	gl	Sig. (2-tailed)	Difference of Means	Std. Error Mean	95% Confidence Interval of the Difference	
									Lower	Upper
<i>Organizational profile, strategy and governance information</i>	Equal variances assumed	.095	.758	3.945	101	.000	2.677	.679	1.331	4.023
<i>Financial information</i>	Equal variances not assumed			-.018	89.322	.986	-.015	.850	-1.705	1.675
<i>Social information</i>	Equal variances not assumed			.625	94.227	.534	.277	.443	-.603	1.157
<i>Environmental information</i>	Equal variances not assumed			-4.045	95.830	.000	-.931	.230	-1.388	-.474
Total information	Equal variances not assumed			1.116	98.027	.267	2.008	1.799	-1.561	5.577