

## **Online information disclosure in Spanish municipal-owned enterprises: A study based on the compliance with transparency requirements**

**Purpose-** This paper examines the amount of online information reported by Spanish municipal-owned enterprises (MOEs) according to the legal requirements indicated in the Spanish Law 19/2013 on Transparency and Good Governance. In addition, we analyse how different variables can affect the extent of online information reported by such enterprises.

**Design/methodology/approach-** To do this, we conducted a content analysis of the web pages of Spanish MOEs located in cities with more than 100.000 habitants, as well as those cities that are provincial capitals. To find information about these enterprises, we accessed the General Intervention Board of the State Administration (IGAE) webpage (<http://www.igae.pap.minhfp.gob.es/sitios/igae/es-ES/Paginas/inicio.aspx>). This sample was composed of 273 enterprises majority owned and controlled by local governments.

**Findings-** The findings reveal that the amount of information reported by Spanish MOEs, in accordance with the legal requirements, is quite reduced. The most influential variables for explaining Spanish MOEs's commitment to information disclosure are population size, political positioning of the local government and reputation.

**Originality/value-** This study seeks to contribute to the scarce literature on mandatory transparency in the public sector as well as to reinforce the degree of compliance with requirements of information disclosure.

**Keywords-** municipal-owned enterprises, disclosure, legitimacy, stakeholder, institutional, transparency.

**Paper type-** Research paper.

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## **Introduction**

At international level, many cases of accounting fraud, financial scandals and political corruption have proliferated in the public sector in recent years (Pasquier and Villeneuve, 2007; Garcia-Tabuyo *et al.*, 2015). This increase is presumably due to citizens being more interested in knowing how public institutions and governments are managing their resources (Brusca *et al.*, 2016; Saez-Martin *et al.*, 2017ab). As a solution to this phenomenon, the concept of transparency has gained relevance and today it is configured as a tool to improve the credibility, legitimacy and confidence of public institutions towards society (Cerrillo, 2011; Guillamon *et al.*, 2011; Brusca *et al.*, 2017). Also, other researchers have manifested that increased transparency is positively associated with greater efficiency and performance of public institutions, as transparency is a basic aspect in the process of public accountability (Caba-Perez *et al.*, 2008; Biondi and Lapsley, 2014). Conceptually, the transparency term is defined by the Organization for Economic Cooperation and Development (OECD, 2001) as “a full disclosure of all relevant information in a timely manner” from which it follows that an excess of information disclosed could negatively affect credibility, legitimacy and confidence (Cerrillo, 2011; Grimmelikhuijsen *et al.*, 2013).

This growing concern for improving transparency has had its institutional support in the approval of laws related to public access to information by governments from different countries (Pasquier and Villeneuve, 2007; Relly and Sabharwal, 2009; Cerrillo, 2011). In particular, more than 100 countries have approved their own regulation on transparency and public access to information (Sáez-Martín *et al.*, 2017a). Different authors have stated that regulating on transparency issues could be essential for democratic governments and as a key aspect to public management (Guillamon *et al.*, 2011; Garcia-Tabuyo *et al.*, 2015). In this regard, the regulation on transparency in the Spanish context has been late compared to other countries, which could be an influential factor for corruption to be spread throughout society in a generalized way (Garcia-Tabuyo *et al.*, 2016). The report made by Transparency International on the corruption perceptions in 2016 shows that Spain is ranked in an intermediate position and very far from the leading countries, which are from Nordic and Anglo-Saxon regions (Transparency International, 2017). Moreover, the Sociological Research Center in Spain has conducted numerous surveys on citizenship and the results reveal that one of the main societal concerns is corruption along with unemployment (Sociological Research Center, 2018).

From a research point of view, both at an international and national level, most of the academic literature on the public sector has focused on examining the amount of information voluntarily disclosed by local governments (Gandia and Archidona, 2008; Serrano-Cinca *et al.*, 2009; Brusca *et al.*, 2016; Tirado-Valencia *et al.*, 2016), public utilities (Papenfuß *et al.*, 2015) and public universities (Gallego *et al.*, 2011). Nevertheless, the topic of how enterprises owned by the public administration are reporting on their financial or non-financial performance is under-researched (Sokol, 2010). Some studies have been conducted in the context of state-owned enterprises of China (Ferguson *et al.*, 2002) or New Zealand (Luke, 2010). Focusing on the Spanish context, few papers to date have analyzed the disclosure of information by enterprises publicly owned. Escamilla *et al.* (2016) examined the disclosure of corporate social responsibility information reported by 17 publicly owned urban public transport companies. Garde *et al.* (2017) examined the amount of social responsibility information reported by Spanish state-owned enterprises and how different variables can affect it. To do this, they collected the data by means of a survey administered to public managers. Royo *et al.* (2017) analyzed the online information disclosed by a reduced sample of Spanish state-owned enterprises on their web pages.

In this way, the academic literature has emphasized the need to focus on examining the transparency level of enterprises publicly owned, which are characterized by the fact that the public administration has meaningful control through full or majority ownership (Alexius and Cisneros, 2015; Greiling *et al.*, 2015). Enterprises owned by the public administration operate at the intersection of the market and the public sector and this requires that they have to reconcile two diverging goals: create public value and achieving profits (Khongmalai *et al.*, 2010; Alexius and Cisneros, 2015). Therefore, they are required to meet informational needs of a large number of stakeholders which involves the need to have an appropriate accountability system (Grossi and Thomasson, 2015; Denis *et al.*, 2015). Among the different types of enterprises publicly owned, those companies whose ownership is majority controlled by local governments deserve special attention because of their closeness to citizens (Caba-Perez *et al.*, 2008; Gillamon *et al.*, 2011). Taking as reference the contributions of Grossi *et al.* (2015), we can conceptualize such organizations under the municipal owned-enterprises (MOEs) term whose definition could be configured as those enterprises controlled by the local government through a proportion of full, majority or meaningful minority ownership.

In view of the above arguments, together with the fact that the institutional concern about transparency in Spain has been recent, the main goal of this paper is to examine the amount of information reported by Spanish MOEs according to the obligations of information disclosure contained in the regulation on transparency recently approved by the Spanish government (named as Spanish Law 19/2013 on Transparency and Good Governance). Secondly, we try to determine how different variables can affect the extent of mandatory information reported by such MOEs. To accomplish our goals, this paper is based on the legal requirements on transparency resulting from the Spanish Law 19/2013 on Transparency and Good Governance. This Law establishes, for entities of the public sector, certain requirements of online information disclosure in relation to three main aspects: institutional, organizational and planning; normative; and economic issues. This Law stipulates disclosure obligations through the Internet only for those enterprises whose ownership is fully or majority controlled by the public administration. Hence, enterprises minority owned by the public administration are excluded from the scope of this Law.

This paper is supported by the following rationale. First, there is a general lack of research that has examined the online mandatory information reported by entities of the public sector (García-Tabuyo *et al.*, 2015, 2016; Sáez-Martín *et al.*, 2017a). Therefore, there is the need to increase the literature on mandatory online information disclosure in the public sector because such studies would help to contribute to implementing and reinforcing compliance with transparency regulation (Saez-Martin *et al.*, 2017b). Second, there is the need to focus on the Spanish context to a great extent as the culture of accountability in Spain has traditionally been lower compared to other countries, such as the United Kingdom, USA or Nordic European countries (Navarro *et al.*, 2014). The recent approval of the Spanish transparency regulation can help reduce corruption, improve good governance and contribute to openness (Garcia-Tabuyo *et al.*, 2016). This regulation emphasizes the use of electronic means (Internet) for the diffusion of information by entities of the public sector. Different authors have stated that new information technologies are likely to have an important impact on transparency of public entities (Caba-Perez *et al.*, 2008; Gandia and Archidona, 2008; Cerrillo, 2011). Third, the lack of research on enterprises owned by the public administration, especially those owned by local governments, infers there is a gap that has to be addressed. MOEs are a type of corporation that is acting halfway between public and private and they can be defined as hybrid institutions (Bruton *et al.*, 2015). Grossi *et al.* (2015, p. 275)

pointed out that “a hybrid organization is said to be market oriented and it operates in a business-like manner to provide public services with public funding and is politically governed.” It is interesting to examine how MOEs in Spain are complying with obligations of information disclosure contained in the transparency regulation. Such enterprises, unlike state-owned enterprises, are more inserted among citizens because their purpose is to provide local public services (Caba-Perez *et al.*, 2008).

The remainder of this paper is structured as follows. First, we explain the institutional background of the study. Second, we provide a section to analyse the theoretical framework, followed by a section aimed at explaining the hypotheses. Third, we explain the sample, data collection and methods. Next, we report the results followed by the discussion section and the limitations and suggestions for future research.

### **Institutional background**

From a general perspective, many regulations and documents have been approved to improve the transparency level of organizations (Garcia-Tabuyo *et al.*, 2016). In Europe, one of the most recent initiatives to improve transparency and the disclosure of non-financial information is the EU Directive 2014/95 approved by the European Parliament (Royo *et al.*, 2017). This regulation is aligned with the guidelines of the EU strategy 2011-2014 for Corporate Social Responsibility (CSR) and tries to improve undertakings' disclosure of social and environmental information (Reverte, 2015). The obligations of information disclosure contained in this regulation are for those enterprises with an average number of employees in excess of 500.

In Spain, the government has recently approved the Law 18/2017 regarding non-financial information and diversity as a transposition of the EU Directive 2014/95, and the obligations of non-financial information disclosure for large organizations are similar to those requirements contained in the European Directive (Institute of Accounting and Auditing, 2017). The Spanish regulation came into force at the end of November 2017. Other regulations have been passed by the Spanish government in relation to the need for a greater accountability; these include the Law 2/2011 on Sustainable Economy and the Spanish strategy on companies' CSR practices 2014-2020. Both documents contain some information disclosure requirements for enterprises owned by the State Administration (Reverte, 2015).

Focusing on the public sector at the international level, the approval of transparency regulation and access to public information had its origins in the 1960s, with the exception of Sweden, whose law was approved over 200 years ago (Relly and Sabharwal, 2009; Cerrillo, 2011). The United States of America and Nordic European countries were pioneering countries in regard to approving transparency regulations (Martisi, 2013). However, the period of massive approval of transparency laws by OECD member countries was during the 1980s and 1990s (Relly and Sabharwal, 2009; Cerrillo, 2011). In Spain, one of the most important initiatives to regulate transparency issues was passed by the Spanish government in 2004 (Villoria, 2014). Nevertheless, the most important and recent legislation approved by the Spanish government in this regard is the “Law 19/2013 on Transparency and Good Governance,” being Spain the last European country that has approved their own Transparency Act (Saez-Martín *et al.*, 2017a). This Law aims to reinforce the commitment toward transparency and good governance principles of public sector entities as a tool to achieve economic growth and social development.

The structure of this Law consists of three main pillars. First, this regulation stipulates different online information disclosure obligations that must be fulfilled by all entities of the public sector, including enterprises with a proportion of public ownership (direct or indirect) higher than 50%. These obligations are associated with information about institutional, organizational and planning issues; information consists of legal relevance and information about economic affairs. Second, the present law states that the online access to information is guaranteed as a right of wide scope. Third, this law establishes certain requirements of good governance that must be fulfilled by public officials and the potential consequences of their non-compliance. To ensure that the online information disclosure is in accordance with the legal requirements on transparency, this law establishes the creation of a transparency portal where information has to be publicly available online. The legal obligations emanated from this law, it came into force in December 2013, with a one-year implementation period for national entities of the public sector and two years for local and regional institutions.

Focusing on the context of enterprises publicly owned, it was carried out a process of privatization of Spanish public enterprises during the period from 1980s and 1990s due to the pressure exerted by the European Union for complying with public deficit objectives (Cuadrado and Carrillo, 2008). Conversely, there has been a remarkable growth of Spanish MOEs during the last twenty years as a response to “The Flight of

Administrative Law” (Almonacid, 2013). Different authors have stated that the proliferation of this kind of enterprise during the last twenty years has been to avoid administrative regulation and controls associated with legal regulations (Gomez and De Abel, 2003). Thus, these enterprises have benefited from the private regulation (Cuadrado and Carrillo, 2008). In view of such arguments, our expectation is that the amount of online information reported by Spanish MOEs fits better with a pattern of voluntary disclosure rather than mandatory. This leads us to determine how different variables can explain different behaviors to the extent of information reported.

## **Review of the literature**

### ***Theoretical approaches on disclosure practices***

Empirical research that has examined the extent of information disclosed by public organizations has been supported by different theoretical approaches, the most commonly employed being the institutional, legitimacy and stakeholder theories (García-Sánchez *et al.*, 2013; Brusca *et al.*, 2016; Tirado-Valencia *et al.*, 2016). Such theories have been selected because disclosure practices are too complex to be supported by a single theory (Garde *et al.*, 2017). In depth, the institutional theory is performed to discuss whether the Spanish MOEs’ level of compliance with information disclosure requirements is affected by institutional reasons. Meanwhile, legitimacy and stakeholder theories are employed to discuss whether the amount of information reported by Spanish MOEs is influenced by certain variables.

The institutional theory has often been used to examine reporting practices by different organizations (Matten and Moon, 2008; Jensen and Berg, 2012). The rationale of this theory is built on the argument that behaviors of organizations must have been analyzed according to the institutional environment in which they are incorporated (Chatelain-Ponroy and Morin-Delerm, 2016). Thus, the institutional theory allows the possibility of explaining corporate reporting practices under the perspective of institutional isomorphism identified in three main processes: normative, coercive and mimetic (Di Maggio and Powell, 1983; Mussari and Monfardini, 2010). Normative forces are connected with standardization from professional organizations (Jensen and Berg, 2012; Chatelain-Ponroy and Morin-Delerm, 2016). In the public sector, the introduction of managerialism by means of the New Public Management (NPM) reforms has emphasized a view based on improving efficiency and performance and this has resulted in an increased concern for transparency of public entities (Lapsley and

Wright, 2004; Broadbent and Guthrie, 2008). Coercive pressures are exerted by regulatory forces that impose certain mandatory practices (Larran *et al.*, 2018). For this study, the Spanish regulation on transparency could be a coercive factor in reporting information. Mimetic processes are associated with a behavior in which organizations tend to imitate practices that have been successfully adopted by leading institutions (Chatelain-Ponroy and Morin-Delerm, 2016). In the public sector, some authors have pointed out that “soft” regulations could be construed as driving forces of mimetic behaviors, acting as an alternative to rigid mechanisms that impose mandatory practices (Mussari and Monfardini, 2010).

The legitimacy theory is built on the arguments that organizations have to operate within the boundaries of what society recognizes as acceptable behavior and this is categorized under the term “social contract” (Deegan, 2002; García-Sánchez *et al.*, 2013). On this basis, organizations have to act in accordance with external pressure to obtain social legitimacy as well as to improve their reputations (Brusca *et al.*, 2016; Garde *et al.*, 2017). In this regard, public sector entities, such as MOEs, are politically visible and this suggests that external stakeholders are aware of their behavior in society, which involves a response from such organizations to be socially legitimised (García-Sánchez *et al.*, 2013; Tirado-Valencia *et al.*, 2016). Different studies found that public institutions’ information disclosure is driven by reputation forces, due to the need to acquire greater legitimacy from their external stakeholders and enhance their corporate reputation (Brusca *et al.*, 2016; Garde *et al.*, 2017). With regard to the Spanish public sector, different authors have found the presence of different problems for Spanish public entities in regard to the compliance with obligations of online information disclosure contained in the Spanish regulation (Fernandez, 2005; Guichot, 2014). Some of these problems are associated with the lack of resources, the lack of maturity of the regulation or the lack of clarity of the regulation in regard to where the information should be reported. In accordance with the legitimacy theory, this could mean that the disclosure of information by Spanish MOEs responds to reputation issues and the need to legitimize their behavior in society.

The stakeholder theory stems from the interests of all agents involved in organizations activities (Freeman, 1984). Different researchers have pointed out that the implementation of accountability practices into an organization requires the identification of its social responsibilities to a broad number of stakeholders that affect and are affected by the organization’s activities (García-Sánchez *et al.*, 2013; Larran *et*



*al.*, 2018). Based on the stakeholder theory, public managers have to identify which stakeholders might be more relevant to make certain decisions and which demands should be considered to be incorporated into the reporting strategy of public institutions (Tirado-Valencia *et al.*, 2016; Garde *et al.*, 2017). In the case of MOEs, because they are hybrid institutions, they have to combine different and diverging goals; this would suggest, according to the stakeholder theory, MOEs have to report increased levels of information to meet the needs of a broad number of stakeholders, since the municipality in which they are inserted is the main agent (Grossi and Thomasson, 2015; Grossi *et al.*, 2015).

### ***Factors that can affect the information disclosure of MOEs***

In the business context, previous studies have often selected institution size, sector, profitability or leverage as influential variables in the disclosure of information of private companies (Brammer and Pavelin, 2008; Castelo and Lima, 2008; Reverte, 2009). From a context based on enterprises publicly owned, previous research has employed a set of organizational variables to explain differences in regard to the disclosure of information by state-owned enterprises (Garde *et al.*, 2017; Royo *et al.*, 2017). Within the public sector literature, most of academic studies have been focused on examining how certain political and socioeconomic variables, as well as internal aspects of the organization, can affect the amount of information reported by local governments (Caba-Perez *et al.*, 2008, 2014; Serrano-Cinca *et al.*, 2009; Garcia-Sanchez *et al.*, 2013; Sáez-Martín *et al.*, 2017a).

In our case, although MOEs are hybrid institutions and their behavior could be explained by other variables, we have selected a set of factors commonly employed in the literature on online information disclosure in local municipalities (Caba-Perez *et al.*, 2008; Gandía and Archidona, 2008). The reason behind this is that this type of enterprise usually provides public services that are essential for society, such as water management, infrastructure or transport (Escamilla *et al.*, 2016). This leads to a closer relationship with citizens and, therefore, it would be expected that variables associated with the socioeconomic and political environment could affect the amount of information reported (Navarro *et al.*, 2010; Alcaraz *et al.*, 2014). Taking into account the previous literature (Garcia-Sanchez *et al.*, 2013; Caba-Perez *et al.*, 2014; Sáez-Martín *et al.*, 2017a), the variables selected can be grouped into three main sections: local environment (economic capacity of the population, education level, access to

internet), internal aspects of public institutions (population size, local public debt, transparency ranking) and political factors (ideological positioning of the local government). Based on these variables, the following hypotheses are proposed.

#### *Population size*

In the business sphere, the literature has found a positive relationship between the amount of information disclosed by private enterprises and the organizational size of such institutions (Reverte, 2009; Tamby *et al.*, 2013). Focusing on the public sector, and with a special emphasis on local governments, population size is a variable commonly used to examine whether the amount of information disclosed is dependent on the population size of the municipality (Caba-Perez *et al.*, 2014; Garcia-Tabuyo *et al.*, 2016). Different studies have found a positive association between the population size and the extent of information disclosed by local governments (Garcia-Sanchez *et al.*, 2013; Sáez-Martín *et al.*, 2017a). Theoretically, and according to the principles of the legitimacy theory, it is expected that Spanish MOEs located in larger municipalities are politically more visible and exposed to public scrutiny and this could drive the disclosure of a greater amount of information to legitimize their behavior in society (Brusca *et al.*, 2016). Under the principles of the stakeholder theory, we assume that Spanish MOEs located in the largest municipalities have to satisfy informational needs and demands of a broad number of stakeholders (Tirado-Valencia *et al.*, 2016). Hence, the following hypothesis is suggested:

*H1:* Spanish MOEs located in larger municipalities will report more information in accordance with the legal requirements on transparency.

#### *Economic capacity*

This variable has been commonly used to explain whether the economic status of citizens can affect the amount of public information disclosed by municipalities (Caba-Perez *et al.*, 2014; Sáez-Martín *et al.*, 2017a). In this regard, some researchers have found that there is a positive relationship between the economic capacity of a municipality and the commitment to online transparency by local governments (Serrano-Cinca *et al.*, 2009; Alcaide-Muñoz *et al.*, 2016). The explanation for such findings is associated with the argument that cities with low per capita income report less information due to the lack of demand among their citizenship for online services (Caba-Perez *et al.*, 2014; Sáez-Martín *et al.*, 2017a). Based on the stakeholder theory,

we assume that Spanish MOEs located in municipalities with higher economic status will report more information due to the demands exerted by citizens, which include satisfying their informational needs (Garcia-Sanchez *et al.*, 2013). Also, and according to the principles of the legitimacy theory, it is expected that Spanish MOEs located in cities whose citizens earn more income could feel more pressure from society to report how they are spending public resources (Brusca *et al.*, 2016). Then, such enterprises are driven to report a great amount of information to legitimize their behavior in society. In view of the above considerations, the following hypothesis is proposed:

*H2*: Spanish MOEs located in municipalities with higher economic status will report more information in accordance with the legal requirements on transparency.

#### *Local public debt*

In the business context, previous researchers have documented inconclusive results about the association between leverage and the amount of corporate information disclosed by private enterprises (Castelo and Lima, 2008; Reverte, 2009). While some authors found a negative association between the extent of information disclosed and the level of leverage (Uwuibe and Egbibe, 2012), other scholars found that leverage did not affect the amount of information reported (Brammer and Pavelin, 2008; Tamby *et al.*, 2013). Focusing on the public sector, different authors have stated that the level of borrowing can affect the amount of information disclosed by local governments as a strategy to reduce conflicts of interest between creditors and politicians (Gandia and Archidona, 2008; Caba-Perez *et al.*, 2014; Sáez-Martín *et al.*, 2017a). Therefore, it is expected that a greater level of local public debt is positively associated with a great amount of information disclosed by such entities (Caba-Pérez *et al.*, 2008; Alcaide-Muñoz *et al.*, 2016). For enterprises majority owned by local governments, we assume that, according to the stakeholder theory, the amount of information reported will be higher in Spanish MOEs located in local municipalities with greater levels of local public debt due to the need to satisfy interests of different agents involved that require to know how these enterprises are using their money (Saez-Martin *et al.*, 2017a). Hence, the hypothesis is raised as follows:

*H3*: Spanish MOEs located in municipalities with higher levels of local public debt will report more information in accordance with the legal requirements on transparency.

### *Public access to Internet*

Different authors have argued that the Internet and new information technologies could be positively associated with the amount of information disclosed by public entities because higher levels of public access to the Internet leads to a greater proportion of users of online information (Caba-Perez *et al.*, 2014; Garcia-Tabuyo *et al.*, 2016; Saez-Martín *et al.*, 2017a). Nevertheless, Caba-Pérez *et al.* (2008) stated that not many empirical studies to date have examined the effect of this variable in relation to the information disclosure of local governments. From a theoretical point of view, it is expected that, according to the stakeholder theory, the demand for greater transparency will be higher in those municipalities with a higher proportion of citizens with access to the Internet because they have greater opportunities to access information and enterprises publicly owned could report information to satisfy their informational demands (Garcia-Sanchez *et al.*, 2013). Also, and under the principles of the legitimacy theory, such enterprises could use the disclosure of information to improve their reputation in society in response to the external pressure exerted by citizenship (Brusca *et al.*, 2016). Then, we propose the following hypothesis:

*H4:* Spanish MOEs located in municipalities with higher public access to the Internet will report more information in accordance with the legal requirements on transparency.

### *Education level*

Different papers have noted that the education level among citizens may affect the amount of information disclosed by entities of the public sector (Caba-Perez *et al.*, 2008; Brusca *et al.*, 2016; Saez-Martin *et al.*, 2017a). Different authors have found a positive and significant association between the amount of information disclosed by local governments and the education level of their citizens (Gandia and Archidona, 2008; Serrano-Cinca *et al.*, 2009; Alcaraz *et al.*, 2014). To explain this, Tolbert *et al.* (2008) pointed out that local governments whose citizens have higher levels of education could be more pressured to disclose a greater amount of information. According to the legitimacy theory, MOEs located in such local municipalities could use the disclosure of information as a tool for improving their reputation and visibility in a better educated society that demands responsible behavior from public entities (Saez-Martin *et al.*, 2017a). In view of the previous comments, the following hypothesis is proposed:

*H5:* Spanish MOEs located in municipalities with better educated citizens will report more information in accordance with the legal requirements on transparency.

#### *Political positioning of the local government*

Previous studies have argued that political ideology is a potential variable for explaining the commitment to information disclosure (Gandía and Archidona, 2008; Guillamón *et al.*, 2011; Garcia-Sanchez *et al.*, 2013). Different authors argued that local governments with a progressive ideology tend to have a higher orientation to social policies, while conservatives are more oriented to develop policies more concerned with economic issues (Garcia-Tabuyo *et al.*, 2016; Sáez-Martín *et al.*, 2017a). Consequently, and according to the stakeholder theory, previous studies have found that progressive local governments tend to report a great amount of information, compared to conservative ones, in response to the need to satisfy social demands exerted by different agents (Guillamón *et al.*, 2011; Garcia-Sanchez *et al.*, 2013). Therefore, we suggest the following hypothesis:

*H6:* Spanish MOEs located in municipalities governed by progressive political parties will report more information in accordance with the legal requirements on transparency.

#### *Reputation*

In line with the arguments of the legitimacy theory, previous studies have documented that best-placed public entities in different rankings tend to report a greater amount of information due to the social pressure for their positioning and reputation (Larran *et al.*, 2018). Following the contributions of McNamara (2010), and according to the stakeholder theory, the highest-ranking public entities are expected to be powerful leaders in the movement for social change, which leads such institutions to promote the online information disclosure to meet demands of different stakeholders. For the purpose of this paper, reputation is configured as a proxy variable for the position of Spanish regions in transparency rankings. Hence, it is proposed the following hypothesis:

*H7:* Spanish MOEs located in municipalities top-listed in transparency rankings will report more information in accordance with the legal requirements on transparency.

## **Research design and methodology**

### ***Sample***

As in previous studies on information disclosure among local governments, the sample was composed of MOEs located in cities with more than 100.000 habitants, as well as those cities that are provincial capitals (Garcia-Sanchez *et al.*, 2013; Saez-Martin *et al.*, 2017a). To find information about these enterprises, we accessed the General Intervention Board of the State Administration (IGAE) webpage (<http://www.igae.pap.minhfp.gob.es/sitios/igae/es-ES/Paginas/inicio.aspx>). Once we accessed the IGAE webpage, the next step was to choose the tab “Inventory of public sector entities” (INVENTE acronym in Spanish language), selecting among all entities those enterprises majority owned and controlled by local governments. Next, we introduced some key words in the search criteria menu to find our list of Spanish MOEs. In depth, we used the following expressions as key words in the “inventory” and “entity type” variables: “inventory of entities of local public sector” and “public enterprise,” respectively. The previous process was carried out during the period from January 1, 2017 to January 20, 2017. According to the data published by the IGAE webpage on January 30, 2017, the sample of Spanish MOEs incorporated into our study was composed of 273 enterprises majority owned and controlled by local governments.

The IGAE webpage is also composed of enterprises owned by public administration, where the central government and regional governments have a higher proportion of control or ownership. Nevertheless, this study only focuses on enterprises majority owned by local governments, not including enterprises owned by different kinds of public administrations which can alter the interpretation of results. Also, we expect that the findings from this study can be sufficiently representative of the global overview of all Spanish enterprises majority owned by central, regional and local governments.

### ***Data collection process***

The next stage was to perform a descriptive examination of the amount of information disclosed by the 273 MOEs selected for this paper. To do this, a web content analysis was carried out during the period from March to July 2017. Secondly, we conducted an empirical analysis to determine how different variables can affect the amount of information disclosed by the total population of this study.

### *Descriptive analysis: Web-content analysis*

Studies based on web content analysis have been widely used to analyse the amount of information reported by public sector entities, mainly in the context of local governments (Guillamon *et al.*, 2011; Caba-Perez *et al.*, 2014; Garcia-Tabuyo *et al.*, 2015). Among its advantages, the use of information and communication technologies (e.g. Internet) makes access to public information easier and it is a cheap and fast instrument to collect data (Garcia-Sanchez *et al.*, 2013). This research method is employed to score the presence or absence of certain indicators, assigning 1 when the information item is disclosed and 0 otherwise, which provides a numerical indicator of the amount of information reported, commonly called a disclosure index (Garcia-Tabuyo *et al.*, 2016; Sáez-Martín *et al.*, 2017a). Thus, the extent of online information disclosed by Spanish MOEs into their web pages can be easily measured on a consistent basis (Farneti and Siboni, 2011). Recent studies have performed a scoring system composed of a more profound scale (e.g. from 0 to 3) to measure different levels of disclosure of information instead of a dichotomous scoring system (Miras and Escobar, 2016). However, for this study, it has been checked that Spanish MOEs have experienced two opposite patterns: disclosure or non-disclosure of information. This process was performed on a sample of Spanish MOEs that are integrated into this research study. Specifically, some enterprises were examined that have reported more than eight indicators and a list of enterprises reported less than four indicators.

For this study, we carried out the following procedure: First, we examined whether each of the 273 Spanish MOEs selected had on its own web page a “Transparency Portal” in which all information required was disclosed in accordance with the legal requirements on transparency. Second, we developed a disclosure index to measure the amount of information disclosed by Spanish MOEs. To identify the set of information items to be analysed, although several international organizations (such as the Chartered Institute of Public Finance and Accountability or the Global Reporting Initiative) have published standards to measure public transparency, we employed the content included in the Spanish Law 19/2013 on Transparency and Good Governance. The reason behind this is that our goal was to check how MOEs are complying with obligations of information disclosure contained in the Spanish regulation on transparency.

The analysis of the regulation allowed us to identify the mandatory information to be disclosed by public sector entities. In more detail, the obligations of information

disclosure of this law are contained in the articles 6, 7 and 8. Nevertheless, the content of Article 7 only contains requirements for information disclosure for public administrations and not for all entities of the public sector. For this reason, its content excludes the scope of enterprises majority owned by the public administration. In regard to the other articles, which are applicable to all entities of the public sector, Article 6 contains obligations of information disclosure in relation to institutional, organizational and planning aspects. In total, this article is composed of five items to measure the compliance with legal requirements on institutional, organizational and planning information. Article 8 incorporates requirements of information disclosure about economic and budgetary issues and it is integrated by a total of nine items. Therefore, the coding framework to measure the amount of information reported by Spanish MOEs, according to the legal requirements contained in the Law 19/2013 on Transparency and Good Governance, consisted of a total of 14 items.

Since this law does not stipulate what information items are more important to be disclosed, the disclosure index was un-weighted, assigning the same score and weight to each item as in previous studies (Garcia-Tabuyo *et al.*, 2016). With regard to how the disclosure index was calculated, we proceeded as follows: for each item, the index was measured as the sum of the presence of each item reported in all enterprises divided by the 273 Spanish MOEs sampled. The global index was measured as the sum of the presence of the 14 items reported in all enterprises divided by the 273 Spanish MOEs sampled multiplied by the 14 items examined. To reduce potential biases, the data collection process was carried out for three different researchers and potential disagreements were duly solved among them (Larran *et al.*, 2018).

### ***Statistical analysis: Non-parametric tests and linear multivariate regression models***

Once the data were coded, the following step was to examine how certain variables can affect the amount of information disclosed among Spanish MOEs selected. First, we performed the Kolmogorov-Smirnov normality test and Table 1 shows that all variables selected for this study were not based on a normal population. To examine whether the presence or absence of a transparency portal is affected by the set of variables selected, we performed non-parametric tests. To explore whether the disclosure of information is influenced by certain variables, we selected a linear multivariate regression model whose statistical method is characterized by the dependent variable being continuous.

[Insert Table 1 here]



In view of the above comments, the dependent variables were coded as follows:

Transparency/no transparency portal: presence (1) and absence (0);

Information disclosure index: This variable is measured as the proportion of information reported by Spanish MOEs.

The independent variables selected for this paper were coded as follows:

*Population size:* According to the literature, this variable was measured as the natural logarithm of population of municipalities in which each MOE is located (Guillamón *et al.*, 2011). This information was retrieved from the Spanish Institute of Statistics in relation to the Spanish population in 2016.

*Economic capacity:* Using as a reference the literature (Alcaide-Muñoz *et al.*, 2016), the economic status was measured as the average local income per capita in 2016, which was extracted from the report Urban Indicators (2017) made by the Spanish Institute of Statistics.

*Local public debt:* As suggested by Saez-Martin *et al.*, (2017a), this variable was measured as the ratio of local public debt/municipal population (during 2016) This data was extracted from the General Secretary of local and regional funding, which is dependent on the Ministry of Finance.

*Public access to Internet:* We measured this variable as the local broadband Internet (Garcia-Sanchez *et al.*, 2013) whose information was obtained from the Broadband coverage report of 2016 made by the Ministry of Industry, Energy and Tourism.

*Education level:* To measure this variable, like other researchers (Guillamon *et al.*, 2011), we used the proportion of citizens over 16 with higher education in 2016 whose information is publicly available in the Spanish Institute of Statistics.

*Political positioning of the local government:* This variable was measured as categorical and takes 1 when the MOE is located in a municipality whose local government is progressive and 0 when the local government is conservative. To codify this variable, we used as a reference citizens' perception of the political ideology of local governments. This information was extracted from the report prepared by the Spanish Sociological Research Center in October 2017.

*Reputation:* To measure this variable, we used as reference the recent report prepared by the International Transparency regarding the transparency index of municipalities (2017). This organization makes a ranking with the intention of measuring the transparency level of the corresponding municipalities through data

publicly available in relation to 80 indicators. For our study, we coded this variable as the degree of compliance with transparency indicators extracted from the International Transparency. In this case, Ceuta and Melilla are not included in the report. Therefore, the sample of this variable is composed of 259 observations.

The linear multivariate regression model is summarized as follows:

$$\text{Information disclosure index}_i = \beta_0 + \beta_1 \text{ POPULATION SIZE} + \beta_2 \text{ ECONOMIC CAPACITY} + \beta_3 \text{ LOCAL DEBT} + \beta_4 \text{ INTERNET} + \beta_5 \text{ EDUCATION LEVEL} + \beta_6 \text{ POLITICAL POSITIONING} + \beta_7 \text{ REPUTATION}$$

## Results

### *Descriptive findings*

Table 2 describes the profile of the MOEs selected for this study according to whether such enterprises have their own web page and, if so, whether such institutions have their own Transparency Portal. In the first place, not all MOEs examined have their own web page. In particular, 60 of 273 MOEs examined (22% of the sample selected) do not have their own web page to disclose information to their stakeholders. Focusing on the rest of the sample, we found that only 110 of 213 Spanish MOEs have on their web page a “Transparency Portal” in which information is publicly available in accordance with the legal requirements on transparency. This represents 51.67% of the sample composed of MOEs that have their own web pages. However, and taking into account all MOEs selected, the proportion is quite reduced (110 of 273, 40.3% of the total).

[Insert table 2 here]

To measure the amount of mandatory information disclosed by Spanish MOEs in accordance with the legal requirements on transparency, this paper used as a reference all enterprises initially selected. This was done because those MOEs without a “Transparency Portal” can disclose information about different aspects on their web page. Therefore, we also analyzed the extent of information MOEs disclosed on their web page in those cases where the institutions had no “Transparency Portal.” Table 3 shows the results on the amount of information disclosed by the 273<sup>1</sup> MOEs selected for this study. In general, the information disclosure index shows a lower number, with an average value of 32%, which suggests that the proportion of information disclosed by

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<sup>1</sup> We have considered all Spanish MOEs because our empirical analysis consists of variables that are not associated with not having a web page. Likewise, the fact of not having an own web page is a clear indication of a general lack of transparency and this reinforces our findings.

Spanish MOEs in accordance with the legal requirements on transparency is quite reduced. Comparatively, results show that Spanish MOEs have reported more information about institutional, organizational and planning issues (41%) than information related to economic and budgetary matters (27%). Focusing on the information disclosure about institutional, organizational and planning issues, Spanish MOEs show greater compliance with information disclosure requirements on their main functions, followed by a greater commitment to comply with legal requirements on organizational structure issues. In middle position is listed the compliance with obligations of information disclosure on normative issues and rules. Ranked in last positions are the compliance with plans and programs as well as monitoring and control. Taking into the account the information disclosure on economic and budget issues, the most disclosed information item is about contracts, followed by information disclosure about annual reports and the budget. The least reported information items are related to compatibility recognition, annual declaration of assets and statistical reports about level of compliance.

[Insert table 3 here]

### *Empirical findings*

Table 4 shows the results of non-parametric tests performed to examine whether the presence or absence of a transparency portal is explained by different reasons. We can note that there are important mean differences in four variables: population size, economic capacity, education level and reputation. According to the data extracted from Table 4, we assume that MOEs that have a transparency portal are larger, have more economic capacity, are placed in cities with better educational levels and are ranked in top positions in transparency rankings and, therefore, are more reputable. In regard to the other variables, results reveal that mean differences are scarce. Also, Table 4 reports on tests statistics, confirming the previous comments. Therefore, four main variables are influential in explaining the presence of a transparency portal: population size, economic capacity, education level and reputation.

[Insert table 4 here]

**Table 5 shows the Spearman correlation coefficients among all independent variables selected. Results show that there are some correlations statistically significant at the 1% level, such as the association between population size and local public debt ( $r=-.157$ ). Nevertheless, we did not find multicollinearity**

**problems among independent variables because the variance inflation factors (not reported) did not exceed the critical value of 10.**

**[Insert table 5 here]**

Taking into account the information disclosure index, Table 6 reports the results of regressing the independent variables depending on the linear multivariate regression model proposed. Findings from this table show that the independent variables explain 17.9% of the variation of the information disclosure index. This R-square means that other variables not included in this research could improve the explanatory capacity of the empirical model. **The adjusted R-square shows that the variables selected explain the 15.6% of the variation of the dependent variable. Other empirical studies that have performed regression models in the public sector accounting research have obtained lower R-square values and this was not a problematic issue for the global significance of the model (Larran et al., 2015). In fact, we have performed an ANOVA test and the results reveal that the model used is significant according to the p-value of the F of Snedecor (Table 7).**

According to the statistical results of the Table 6, the most influential variables for explaining the amount of information disclosed by Spanish MOEs are population size, political positioning of the local government and reputation.

With regard to the population size, and consistent with our expectation, the positive standardized regression coefficient shows that Spanish MOEs located in larger municipalities are strongly engaged with the disclosure of information according to the legal requirements on transparency. Therefore, Hypothesis 1 cannot be rejected.

Secondly, research findings show a negative and statistically significant association between the amount of information reported by Spanish MOEs and the political positioning of the local government. This means that MOEs located in regions governed by conservative parties have reported more information than other MOEs and this is contrary to our initial expectation defined in Hypothesis 6. Thus, this hypothesis is rejected.

Thirdly, we find a positive and significant association between reputation and the information disclosure index and, consistent with our expectation, we cannot reject Hypothesis 7 that stipulated that Spanish MOEs located in municipalities top-listed in transparency rankings will be more engaged with the compliance with legal requirements on transparency.

Fourthly, and in regard to the other factors, results have revealed the lack of statistical differences for explaining the amount of information reported by Spanish MOEs. Focusing on economic capacity, statistical findings reveal that this variable is negatively associated with the amount of information reported by Spanish MOEs. Nevertheless, its significance level shows that this association is not statistically significant. In view of such comments, Hypothesis 2 is rejected. Based on the local public debt, although there is a negative association between the proportion of information reported by Spanish MOEs and this variable, this relationship is not statistically significant and, therefore, Hypothesis 3 is rejected. The public access to the Internet variable is positively associated with the extent of information reported by Spanish MOEs. However, the statistical test shows that this association is not significant. Therefore, Hypothesis 4 is rejected. Finally, the level of education, according to the significance level, is not statistically significant for explaining the amount of information reported by Spanish MOEs. Thus, Hypothesis 5 is not rejected<sup>2</sup>.

**To confirm our statistical results, we have also performed the backward version of the linear multivariate regression model which is characterized by incorporating those variables that are statistically significant. Results show that the three most influential variables are population size, political positioning of the local government and reputation (Table 8).**

[Insert table 6 here]

**[Insert table 7 here]**

**[Insert table 8 here]**

## **Discussion of results**

Focusing on the main goal of the present paper, the findings reveal that, despite the legal requirements established by the Spanish Law 19/2013 on Transparency and Good Governance for entities of the public sector, Spanish MOEs have not complied with such obligations of online information disclosure and a general lack of transparency is perceived. Our results are similar to those obtained by different authors. In the context of local governments, previous research has found that the online disclosure of voluntary or mandatory information is far from being adequate and sufficient to satisfy

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<sup>2</sup> Although not reported in the text, non-parametric tests were also performed to measure the individual effect of each variable and the same conclusions were obtained about the amount of information reported (index of information disclosure).

citizens' demands (Gandia and Archidona, 2008; Guillamon *et al.*, 2011; Garcia-Sanchez *et al.*, 2013; Caba-Perez *et al.*, 2014; García-Tabuyo *et al.*, 2015; Saez-Martin *et al.*, 2017a). Considering the particular case of enterprises publicly owned, Sokol (2010) found that the general lack of transparency among state-owned enterprises is a major global problem. Different reports, such as the document prepared by the World Bank (2014), state that, despite progress, the degree of compliance with obligations of information disclosure remains a challenge among state-owned enterprises. In the Spanish context, Royo *et al.* (2017) have found that the amount of online information reported by state-owned enterprises is reduced and limited. Similar findings were reached by Escamilla *et al.* (2016) and Garde *et al.* (2017) who pointed out that the commitment to the disclosure of social responsibility information is poor.

We find different theoretical arguments to justify why the amount of information reported by Spanish MOEs is reduced, limited and fragmented. In accordance with the arguments of the institutional theory, normative, coercive and mimetic forces are explaining why Spanish MOEs do not reveal information in accordance with the disclosure requirements contained in the Spanish regulation on transparency. First, and adopting a perspective based on the normative process of institutional isomorphism, previous scholars have argued that common cultural backgrounds lead organizations to adopt an isomorphic behavior (Mussari and Monfardini, 2010). However, many studies have documented that there are important differences in regard to the commitment to transparency and the amount of information reported by entities belonging to the public sector (Navarro *et al.*, 2014, 2017). Such papers stated that institutions from Anglo-Saxon countries are leading in reporting practices compared to organizations from Southern countries (Navarro *et al.*, 2017). This could be associated with the fact NPM reforms were originally framed in Anglo-Saxon countries and then they were transferred to other regions (Larran *et al.*, 2018). This also is manifested in the fact that Spain has been one of the last OECD countries to approve its own regulation on transparency, which suggests that the low degree of maturity of this law can negatively impact the level of information disclosure (Garcia-Tabuyo *et al.*, 2016; Saez-Martin *et al.*, 2017a).

Second, the lack of coercive forces could be a factor to explain the low amount of online mandatory information reported by Spanish MOEs. In conducting an in-depth examination of the Spanish regulation on transparency, we have appreciated that this law does not include a strong sanctioning regime that penalizes non-compliance with

obligations of online information disclosure (Garcia-Tabuyo *et al.*, 2016; Royo *et al.*, 2017). Specifically, the responsibility of imposing sanctions and infractions rests with the Ministry of Finance and Public Administrations, which implies a lack of independence and makes it practically impossible to impose sanctions (Blanes, 2015). This is contrary to what Mussari and Monfardini (2010) mentioned, that the law is an effective instrument to impose compliance.

Third, another variable associated with the low level of information disclosure is explained by mimetic behavior. The Spanish regulation on transparency is ambiguous and does not explain precisely where information has to be reported (Burgar, 2016; Pardo, 2016). This means there is some discretion as to where to include the information required by law. As a result, different institutions, like local governments have not complied with its requirements of information disclosure (Royo *et al.*, 2017; Saez-Martin *et al.*, 2017b). Thus, in a context dominated by uncertainty, organizations like Spanish MOEs tend to adopt a similar behavior to other public institutions with greater social recognition, such as local governments (Mussari and Monfardini, 2010).

Based on the stakeholder theory, Spanish MOEs are not disclosing sufficient and adequate information because its hybrid profile between public and private sectors has led them to a complex and ambiguous situation in which it is not clear ‘who is accountable to whom’ and ‘for what.’ Likewise, Spanish local governments, configured as the main owner of these enterprises and, therefore, their main stakeholder, are not complying with legal requirements on information disclosure (Navarro *et al.*, 2017). Thus, Spanish MOEs are not being accountable to the society and to the local government in spite of the informational demands and needs of their different types of stakeholders (Grossi and Thomasson, 2015).

In view of the above considerations, it would be expected that Spanish MOEs that have reported higher levels of information are those institutions whose media exposure is relevant for their survival. Then, and according to the legitimacy theory, such institutions tend to report information as a mechanism to improve legitimacy and social visibility. In this way, our empirical results show that the extent of information reported by Spanish MOEs is mainly affected by size, reputation and political ideology. Concerning the other variables, our results have not found any statistical difference to explain the amount of information reported by Spanish MOEs.

With regard to population size, we found that Spanish MOEs located in larger municipalities have shown a strong compliance with legal requirements on transparency

compared to others and this corroborates the results of previous studies (Garcia-Sanchez *et al.*, 2013; Saez-Martin *et al.*, 2017a). In accordance with the legitimacy theory, Spanish MOEs located in larger cities are more exposed to public scrutiny and this could explain why these institutions have reported more information, due to the need to improve their reputation in society (Brusca *et al.*, 2016; Garde *et al.*, 2017). Also, larger Spanish MOEs tend to have more financial and human resources compared to smaller ones and this makes it easier for enterprises to increase the level of information they report (Reverte, 2009). Concerning the reputation variable, those Spanish MOEs located in municipalities with top marks in transparency rankings have reported more information compared to others. Based on the legitimacy theory, these institutions are more visible and exposed to society and, in response to this, they have to reinforce their social legitimacy by means of the disclosure of information (Brusca *et al.*, 2016; Tirado-Valencia *et al.*, 2016).

Regarding the political positioning of the local government, our research findings have been in contrast with the initial expectation. We have found that Spanish MOEs located in regions governed by conservatives have reported more information than others. Theoretically, this is contrary to the arguments of the stakeholder theory in which it would be expected that Spanish MOEs dependent on progressive governments would show a greater concern for social issues and this would be associated with increased levels of information disclosure (Guillamon *et al.*, 2011; Garcia-Sanchez *et al.*, 2013). In this way, and based on the legitimacy theory, it would be assumed that Spanish MOEs located in regions governed by conservatives have reported more information to improve their reputation and legitimacy in society in response to citizens' perception that conservative governments are more concerned with economic issues than social issues.

In conclusion, it seems that the approval of the Spanish Transparency Law has been directed toward the need to improve the reputation and social legitimacy of public entities instead of providing a means by which transparency is used as a tool to improve the culture of accountability and identify and satisfy the information needs of different stakeholders (Navarro *et al.*, 2014; Pardo, 2016). In this regard, it has been pointed out that entities of the public sector, such as enterprises owned by local governments, are not dedicating their efforts to detecting and analyzing the demands and information needs of the different agents involved (Garde *et al.*, 2013).



## **Implications for practice and future research**

The results of this paper have some practical implications. One of these is associated with the need to reduce the low level of compliance with obligations of information disclosure and, for this, it may be necessary to establish monitoring measures to strengthen legal compliance. A potential solution would be the implementation of a strong penalty system that encourages the compliance with legal requirements on transparency and penalizing non-compliance. Another recommendation is the need to provide a better education to future professionals and other agents involved in aspects related to ethics, good governance and accountability. As we have recognized, one of the main problems in Spain lies in the lack of a culture of accountability and the lack of good training to prevent and correct such problems. Third, better drafting and simplifying transparency regulation would make it easier to understand legal guidelines for all parties involved, which would improve its implementation by public sector entities.

For future research, considering the hybrid profile of Spanish MOEs, certain variables, like organizational size, industry sector, profitability or leverage, that have been widely examined in the literature on the disclosure of non-financial information by private corporations could be examined as influential factors. Indeed, a limitation of the empirical analysis is that the R-square of the model proposed is quite low, so much remains unexplained. This could be improved by means of the incorporation of other influential variables like those mentioned above.

Second, we propose the ongoing examination of the degree of compliance with obligations of information disclosure among Spanish MOEs because it allows us to check the effect of legal requirements on transparency over time. Third, although it has been explained why a dichotomous scoring system has been used, a next step could be to perform an in-depth codification to differentiate other levels of information disclosure, using a scoring system that ranges from 0 to 3, for example. Also, we suggest, as future investigation, to extend this research to other European countries to analyze how the compliance with mandatory information disclosure depends on the country of origin. Finally, we propose to make an in-depth study on the extent of mandatory information disclosure among enterprises owned by public administration and how this could be improved and stimulated. To accomplish this task, this would involve performing semi-structure interviews with public managers and/or other stakeholders.

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**The authors declare that the work described has not been published previously**

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Table 1. Kolgomorov-Smirnov normality test

Variable	Z Kolgomorov-Smirnov	Sig.
Population size	2,447	,000
Economic capacity	2,208	,000
Local public debt	2,847	,000
Public access to internet	2,476	,000
Education level	2,877	,000
Political positioning of the local government	6,179	,000
Transparency ranking	4,000	,000
Portal/no portal	8,020	,000
Information disclosure index	3,133	,000

Table 2. Profile of MOEs sampled

<b>Whole population</b>	<b>Number</b>	<b>%</b>
MOEs without web page	60	22.0
MOEs with web page	213	78.0
Total	273	100.0
<b>Sample with web page</b>		
<b>Sample with web page</b>	<b>Number</b>	<b>%</b>
MOEs with Transparency Portal	110	51.6
MOEs without Transparency Portal	103	49.4
Total	213	100.0

Table 3. Extent of information disclosed according to legal requirements on transparency

<b>Transparency</b>		
<b>Dimension</b>	<b>Items</b>	<b>Information disclosure index</b>
Institutional, organizational, and planning issues	Information related to function definition	211 (77%)
	Information related to normative/rules	111 (41%)
	Information related to organizational structure (chart)	146 (53%)
	Information related to annual or multi-annual plans or programs	63 (23%)
	Information related to level of compliance	42 (15%)
Total institutional, organizational, and planning issues		573 (42%)
Economic and budgetary issues	Information related to contracts	155 (57%)
	Information related to agreements signed	77 (28%)
	Information related to grants and subsidies received	63 (23%)
	Information related to budget	93 (34%)
	Information related to annual reports	104 (38%)
	Information related to salaries of senior management	77 (28%)
	Information related to compatibility recognition	37 (14%)
	Information related to annual	24 (9%)

	declaration of assets	
	Information related to statistical reports about level of compliance	36 (13%)
Total economic and budgetary dimension		666 (27%)
<b>Total</b>		<b>1239 (32%)</b>

Table 4. Non-parametric test of means

Transparency Portal	N	Mean Rank	Mann-Whitney U	Asymp. Sig. (2-tailed)
Population size				
0	163	109,50	4482,000	<b>,000***</b>
1	110	177,75		
Total	273			
Economic capacity				
0	163	130,13	7845,000	<b>,080*</b>
1	110	147,18		
Total	273			
Local public debt				
0	163	138,22	8766,500	,756
1	110	135,20		
Total	273			
Public access to Internet				
0	163	138,99	8640,500	,612
1	110	134,05		
Total	273			
Education level				
0	163	127,79	7464,500	<b>,018**</b>
1	110	150,64		
Total	273			
Political positioning of the government				
0	163	135,78	8766,000	,701
1	110	138,81		
Total	273			
Reputation				
0	150	122,06	6983,500	<b>,042**</b>
1	<b>109</b>	<b>140,93</b>		
Total	<b>259</b>			

\*\*\*P-value<0.01

\*\*P-value<0.05

\*P-value<0.10

**Table 5. Spearman correlation coefficients among independent variables**

	Population size	Economic capacity	Local public debt	Public access to internet	Educational level	Political positioning	Reputation
Population size		,058	-,157***	,051	,152***	,263***	,180***
Economic capacity	,058		-,023	,220***	,428***	,062	,277***
Local public debt	-,157***	-,023		,081	-,358***	-,235***	-,110
Public access to internet	,051	,220***	,081		-,056	,145**	,075
Educational level	,152**	,428***	-,358***	-,056		,277***	,456***
Political positioning	,263***	,062	-,235***	,145**	,277***		,108
Reputation	,180***	,277***	-,110	,075	,456***	,108	

\*\*\*P-value<0.01

\*\*P-value<0.05

**Table 6. Linear multivariate regression results of information disclosure index**

Variables	Coef.	T	Sig.
Population size	,141	6,128	,000***
Economic capacity	-2,817E-8	-,006	,995
Local public debt	-,007	-,277	,782
Public access to Internet	,034	,093	,926
Educational level	,001	,113	,910
Political positioning	-,073	-1,724	,086*
Ranking	,003	1,881	,061*
Constant	-1,667	-4,286	,000***
R square 17.9%			
<b>Adjusted R square 15.6%</b>			

\*\*\*P-value<0.01

\*P-value<0.10

**Table 7. ANOVA Test**

Model	ANOVA				
	Sum of Squares	df	Mean Square	F	Sig.
Regression	4,453	7	,636	7,833	,000***
Residual	20,384	251	,081		
Total	24,837	258			

Dependent variable: Information disclosure index

\*\*\*P-value<0.01

**Table 8. Backward model of linear multivariate regression results of information disclosure index**

	Variables	Coef.	T	Sig.
	(Constant)	-1,649	-6,136	,000***
	Population size	,142	6,526	,000***
	Political positioning	-,070	-1,754	,081*
	Reputation	,003	2,104	,036**
<b>R-Square</b>				<b>17.9%</b>
<b>Adjusted R-Square</b>				<b>16.9%</b>
<b>Significance level of F-Snedecor</b>				<b>18.518 (.000***)</b>

\*\*\*P-value<0.01

\*\*P-value<0.05

\*P-value<0.10