

THE DETERMINANTS OF GOVERNMENT FINANCIAL REPORTS ONLINE*

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Abstract

The disclosure of financial documents can be extremely significant for improving information transparency as part of the management of financial resources to render public sector services. Therefore, this research focuses on the role played by new technologies in this respect, particularly in promoting the transparency of financial information documents and on the key determinants to make financial documents available on the World Wide Web.

To achieve this aim, an empirical test is made of models we propose, to discover whether the national websites of OCDE countries are using the Internet to provide citizens with governmental budgetary transparency and whether this disclosure is influenced by socio-economic factors.

The results of the study confirm that factors previously found to be important in paper-based reporting, such as education level, population, Internet access or fiscal pressure seem to have no influence on the public financial information disclosed on the Internet. Only debt seems to be a relevant factor in the degree of information transparency achieved via the Internet for accountability documents.

Keywords: financial documents, transparency, e-government, incentives.

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1. Introduction

Modern economic budgets are very complex, thus allowing the implementation of practices aimed both at concealing the real budget balance – which is connected to the bureaucratic behavior model (Niskanen, 1974) – and at avoiding expenditure reforms (Reviglio, 2001), a question related to the fiscal illusion theory (Niskanen, 1974). In this context, budget transparency is a key element for better governance in public sector agencies (OECD, 2001a), improves decision making (Bastida and Benito, 2007) and enhances the incentive for people to vote (Benito and Bastida, 2009). Also, improvements in budget transparency and expenditure management and control can effectively preclude practices such as budgetary gimmicks to bypass fiscal constraints (Reviglio, 2001).

Following Premchand (1993), budget transparency is defined as the public availability of information regarding governments' decision-making procedures and transactions. This implies the full disclosure of all relevant fiscal information in a timely and systematic manner, an effective role for the legislature and an effective role for civil society through the media and non-governmental organizations (Blöndal, 2003).

To make budgetary information more transparent, it is necessary to make use of tools that enhance budget disclosure. Today, OECD member countries recognize new Information and Communication Technologies (ICTs) as powerful tools for enhancing citizen engagement in public policy-making (OECD, 2003a) and for building trust and enhancing government-citizen relations via the identification, assessment and satisfaction of public needs (King and Stivers, 1998).

Accordingly, since June 2001, ministers of OECD countries have endorsed the importance of the e-government process to achieve better government (OECD, 2003a) because it provides a major tool to help meet the challenge of responding to public demand for more responsive, efficient, effective and participatory government (OECD, 2003b). As we enter the realm of e-democracy and e-governance (Brown, 2005), all this leads to increased efficiency, transparency and accountability in the use of public resources (United Nations, 2003a), to a stronger democracy (OECD, 2001b) and to the greater legitimacy of the state and its relationship with citizens and the rule of law.

In view of the foregoing comments, this research focuses on the role that new ICTs can play in achieving the transparency of government information and on the key determinants in making financial documents available on the Web. In particular, the objective of this paper is to determine whether the central governments of OECD member countries use the World Wide Web as a means of making financial budgetary disclosures and to analyze the key determinants of this process.

Our contribution in this article to the literature on governmental financial documents disclosure is twofold: firstly, we propose a model for scoring online governmental budgetary financial reporting under OECD 'Best Practices for Budget Transparency' (OBPBT) recommendations. Secondly, the proposed model is applied to the central governments of the countries examined, so as to compare the achievements of initiatives taken to promote online financial budgetary disclosures in terms of OBPBT fulfilment, in the different approaches analyzed.

This analysis is carried out on the belief that conformance to generally accepted procedures for budgetary disclosures could be considered as the base for developing quality evaluation on such disclosures. This assumption is according to prior researches related to the particular case of public sector financial information (Ingram and Copeland, 1981). In addition, this comparison may highlight the utility of different websites, thus contributing to promoting a benchmarking process among different public administration approaches, and to identifying and disseminating best practices. Thirdly, we analyze the question of whether key variables in government financial disclosure in paper-based reporting may also play a key role in government financial disclosure on the Internet.

2. OECD best practices for budget transparency

The lack of transparency is one of the critical factors which have increased the difficulty of enforcing fiscal discipline, particularly as regards expenditure control (Alesina, Mare and Protti, 1995). Thus, governments and international bodies have increasingly valued the role of fiscal and budget transparency to enhance trust in economic policies and, therefore, to improve fiscal performance (Von Hagen and Harden, 1995) and the outlook for economic growth. These concerns have given rise to the publication of international benchmarks with respect to fiscal and budget transparency (IMF, 1999).

These developments are based on the firm belief that transparent fiscal management and budget transparency promote accountability and increase the political risk involved in continuing non-sustainable political actions (IMF, 1999). As a traditional way of responding to the need for public accountability, the disclosure of public sector financial documents has helped to inform about public sector activities and their contribution to social and economic development.

In May 2001, the OECD issued a document entitled 'OECD Best Practices for Budget Transparency' (OBPBT), intended as a practical reference tool for OECD member and non-member countries in order to increase their degree of budget transparency. Although this document is not meant to constitute a formal standard, its compliance could be understood as a key element for disclosing quality budgetary information. Indeed, the OECD emphasizes that all fiscal reports referred to in these 'Best Practices' should be made publicly available, including making all reports accessible free of charge on the Internet (OECD, 2001a). Thus, the disclosure of fiscal reports on the Internet is highly significant for budget transparency and for improving democratic governance.

OBPBT is organized in three parts (OECD, 2001a): Part I lists the principal budget reports that governments should produce and their general content; Part II describes specific disclosures to be contained in the reports, including both financial and non-financial performance information, while Part III highlights practices for ensuring the quality and integrity of the reports.

The principal budget reports included in Part I can be separated into two groups: policy documents – ex-ante reports – and accountability documents – ex-post reports – (see Figure 1). The first group of documents comprises the pre-budget report, the

budget report and the long-term report. These documents contain descriptions of policies and the government’s economic and fiscal policy intentions for all government revenue and expenditure programs, with a detailed commentary on each one. These documents should explicitly state the government’s long-term economic and fiscal policy objectives and include long and medium-term outlooks illustrating how revenue and expenditure are expected to develop. In addition, an assessment of the long-term sustainability of current government policies is made. The long-term reports should be published at least every five years, or when major changes are made in substantive revenue or expenditure programs.

The monthly, mid-year, year-end and pre-election reports are the so-called ‘accountability documents’. These provide a comprehensive update on the implementation of the budget, including an updated forecast of the budget outcome for the current fiscal year and, at least, the following two fiscal years. Their main purpose is to show the progress made in implementing the budget. These, and in particular the year-end report, are the government’s key documents concerning accountability. These publications should also provide comparative information on the level of revenue and expenditure during the preceding year.

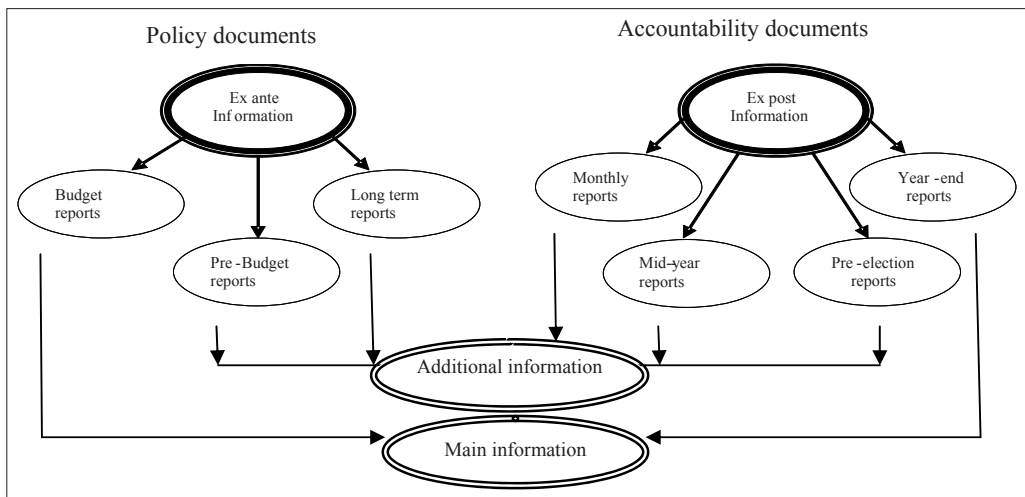


Figure 1: Budget reports in OECD best practices for budget transparency

Source: Author’s own elaboration

The disclosure of budgetary reports according to the OBPBT guidelines has to be structured into policy and accountability information. However, two documents are highlighted as key aspects to be issued and disseminated by OECD countries. In particular, the budget report (ex-ante report) and the year-end report (ex-post report). Therefore, the communication of these documents and the content of each of these budgetary reports could be a measure of the quality in budgetary information disclosure, as it is acknowledged that full disclosure of preferred data could also be considered as an indicator of excellent quality (Copeland and Ingram, 1983).

In brief, best practices are based on different member countries' experiences and, as it is mentioned above, are not meant to constitute a formal 'standard' for budget transparency. Therefore, we aim to analyze the quality and quantity of online budget transparency, in terms of OBPBT compliance, analyzing the performance of OECD central governments.

3. Background and incentives for online disclosure of government financial reports

An overview of the literature on empirical studies regarding the diffusion of public financial information in the last decade reveals that numerous studies have concentrated on describing the reality; in other words, revealing the characteristics and specific criteria adopted by each public accounting system under study; see, for example Christensen (1998).

However, although this information has been compiled, the difficulty experienced by citizens in accessing it has been made apparent on many occasions (OECD, 2003b). In this milieu, the disclosure of financial information on the Internet could be a new tool to improve its diffusion to different users.

On reviewing the research done in this respect, in the public sector, and particularly, in the field of public financial information disclosure via the Internet, professional guidelines have not yet been developed for orientating organizations on the most appropriate form and content for information provided via the Internet. However, some papers have recently been published that set out to measure the public financial information disclosure level, and suggest how this information should be structured (Gandía and Archidona, 2008).

Taking the above comments into account, our first research question is:

Question 1: Have OECD Central Governments taken into account the advantages that the Internet offers for the disclosure of public sector financial information, in terms of OBPBT compliance?

As regards incentives for the disclosure of public financial information, since the mid-1970s, various studies have been published, examining the causes and factors leading to more and better disclosure of public financial information. Those studies are mainly based on the agency and incentive theory, and analyze the socio-political and administrative environment in a country and its impact on the government accounting reform process (Zimmerman, 1976; Baber and Sen, 1984; Evans and Patton, 1987). Thus, examination of these factors helps explain why certain reforms take place in some countries and not in others.

The variables examined in these studies differ widely, but may be classified, following Ingram (1984) into four groups: (a) coalitions of voters; (b) administrative factors; (c) management incentives; and (d) alternative information source.

The main factors included in the 'coalitions of voters' group are political competition (Zimmerman, 1976; Baber and Sen, 1984; Evans and Patton, 1987), socio-economic level (Chan and Rubin, 1987), voters' educational level (Ingram, 1984) and population (Baber and Sen, 1984; Evans and Patton, 1987). On the other hand, the variables selection process (Ingram, 1984), size of government (Baber and Sen, 1984; Evans and

Patton, 1987) and complexity or form of government (Zimmerman, 1976) could be included in the 'administrative factors' group. 'Management incentives' group includes variables such as professionalism (Christiaens, 1999), cost of debt (Laswad, Fisher and Oyelere, 2005), state/federal funds transfers to other administrations (Ingram, 1984) and State/Municipal Wealth or Fiscal Pressure (Ingram, 1984). Finally, 'alternative information source' group refers to the variable strength of the press (Zimmerman; 1976; Ingram, 1984), i.e. whether the press affects the principals' monitoring behavior (interest groups: voters) and the agents' actions (political public sector managers).

The studies listed above are based on a search for reasons leading government to better disclose public financial information, and not focusing specifically on the reasons or causes for variation in the quantity and quality of the public financial information published on websites. Nevertheless, research has recently been conducted on the causes and factors that may have influenced the voluntary disclosure of more and better public financial information on the Internet (Laswad, Fisher and Oyelere, 2005; Gandía and Archidona, 2008), as was widely studied before in the field of private companies (Debreceeny, Gray and Rahman, 2002; Oyelere, Laswad and Fisher, 2003).

Taking the above comments into account, the next research question that arises is:

Question 2: What are the potential factors which might lead to differentiate the digital government financial documents disclosure between countries?

4. Empirical research

4.1. Description of the research methodology

4.1.1. Methodology for the analysis of research question 1

In order to determine whether there are differences in the online disclosure of budget transparency in terms of OBPBT compliance among countries that belong to the OECD, we established a coincidence index, implementing the Cooke index methodology (1989).

The data used in the coincidence index were obtained by means of a scoring sheet, and its components were chosen on the basis of the OECD 'Best Practices for Budget Transparency' (OECD, 2001). This coincidence index has two levels.

Level One: this level examines whether there are differences among countries, in terms of availability of budget reports on the Internet, irrespective of their content. This first level highlights 7 items (R), which coincide with each of the reports to be published as recommended in the OBPBT. However, as the latter includes, for the improvement of budget transparency, both ex-ante and ex-post budgetary information, we believe it is useful to distinguish these two elements within the first level. Thus, in level one we examine whether ex-ante budgetary information (A) and ex-post budgetary information (P) are published on the Web, or by the contrary the Key documents (K) or the Additional documents (AD), irrespective of the level of detail presented in these reports. In the category of ex-ante budgetary information, we consider whether the following reports are included: budget reports (*b*), pre-budget reports (*p-b*) and long-term reports (*l*). On the other hand, in analyzing the ex-post budgetary information published on the Web, we take into account the existence of monthly reports

(*m*), mid-year reports (*mi*), year-end reports (*y*) and pre-election reports (*p-p*). The key documents (K) embrace budgetary reports (*b*), the year-end reports (*y*) and the Additional documents (AD) include the rest of the information aforementioned.

Level Two: here, we concentrate on the content of each of the budgetary reports presented (RC). In the second level, the OBPBT distinguishes 75 elements, distributed among the reports as shown in Table 2. It should be borne in mind, however, that as two sections were distinguished in the first level, the same scheme will be adopted in the second.

Among the alternatives presented for the scoring of these items (R, RC), we opted for a dichotomous procedure in which an item scores 1 if the information recommended in the OBPBT is disclosed on the Web and 0 if it is not.

Once all the items have been scored, a coincidence index (TC) is created for each country to measure the level of consistency with the requisites of online budgetary information to be provided by each country of budget transparency, in accordance with OECD recommendations.

Taking into account the existence of two levels, and the fact that each contains two sections, the maximum number of items that could coincide is different in each case. Thus, we determine a first level coincidence index (TC_1), which could produce a maximum score of 7 points, of which 3 would correspond to the ex-ante budgetary information and 4 to ex-post budgetary information; it could be also scored by 2 that would correspond to the Key budgetary information and 5 to the additional budgetary information. Therefore, the TC_1 index is defined as:

$$TC_1 = TC_{1A} + TC_{1P} = TC_{1K} + TC_{1AD} = R_b + R_{p-b} + R_l + R_m + R_{mi} + R_y + R_{p-e}$$

Where: R_x is the online report scores obtained by each central government, irrespective of their content (1 or 0).

The second level coincidence index (TC_2) could produce a maximum score of 7, of which 3 would correspond to the ex-ante section, 4 to the ex-post section, 2 to the key section and 5 to the additional section (see Table 2).

Partial indexes for each of the following reports could be labelled as follows (see Table 2): TC_{2b} for budget reports – the maximum score is 1 if the content has the 22 recommended items; TC_{2p-b} for pre-budget reports – the maximum score is 1 if the content has the 5 recommended items; TC_{2l} for long-term reports; TC_{2m} for the monthly reports; TC_{2mi} for the mid-year reports; TC_{2y} for the year-end reports; TC_{2p-e} for the pre-election reports. Thus, the TC_2 index is defined as:

$$TC_2 = TC_{2A} + TC_{2P} = TC_{2K} + TC_{2AD} = TC_{2p} + TC_{2p-b} + TC_{2L} + TC_{2m} + TC_{2mi} + TC_{2y} + TC_{2p-e}$$

$$TC_2 = \frac{\sum_{i=1}^{22} RC_p}{22} + \frac{\sum_{i=1}^5 RC_{p-b}}{5} + \frac{\sum_{i=1}^2 RC_l}{2} + \frac{\sum_{i=1}^8 RC_m}{8} + \frac{\sum_{i=1}^{13} RC_{mi}}{13} + \frac{\sum_{i=1}^{19} RC_y}{19} + \frac{\sum_{i=1}^6 RC_{p-e}}{6}$$

Where: RC_x is the online budgetary information content scores for this item recommended by the OBPBT and obtained by each government (1 or 0).

On the other hand, Copeland and Ingram (1983) noted that the extent of the disclosure does not represent the quality of the information published. This conclusion is in line with prior researches from different fields of knowledge like environmental information disclosures (Wiseman, 1982), or particularly government budgetary information (OECD, 2003a). In this regard, while all OECD member countries provide an increasing amount of government information online, however, the quality of the information available varies considerably in terms of its accessibility, relevance and utility to those citizens that expect to be informed or participate in policy-making processes (OECD, 2003a).

Disclosure of excellent quality is very useful in the decision-making process and it should be measured by the information provided to users for decision-making purposes (Copeland and Ingram, 1983). Under this framework, budget report disclosure is considered to be a relevant aspect because when city officials release this information, the nature of the data published and the timing of its dissemination can influence citizens' perceptions of the budget process (Ebdon and Franklin, 2006). Likewise, the dissemination of this information fosters an effective citizen's participation in the budget (Ebdon and Franklin, 2004). Moreover, the year-end report is considered to be necessary for transparent budgetary practices (Petrie, 2003). This information is a key accountability document for the government (OECD, 2001a) and it serves to accomplish the government's moral obligation to their citizens, which implies to be transparent about their handling of taxpayers' money. This moral obligation has been described as a 'basic right' (Fölscher, Krafchik and Shapiro, 2000).

Therefore, a compound measure of disclosure quality, including both importance and extent of disclosure, may be useful for studying disclosure in governmental financial reports (Copeland and Ingram, 1983). Thus, in this paper, we also analyze the level of disclosure of the key budgetary reports in all sample countries as a measure of their quality disclosures regarding budgetary information. This research has been performed, firstly, through a descriptive analysis (research question 1) and, secondly, through an exploratory analysis of determining factors in budgetary transparency (research question 2).

4.1.2. Methodology for the analysis of research question 2 and hypothesis formulation

Although prior research has differed widely in the analysis of incentives for disseminating public financial information, the main variables analyzed have been focused on the political incentives or coalitions of voters, such as political competition (Baber and Sen, 1984), on the administrative incentives, such as the complexity or form of local government (Ingram and De Jong, 1987), on the management incentives, like fiscal pressure (Ingram, 1984), and on the alternative information sources, such as the press and public media (Zimmerman, 1977).

In our research we focus on variables that belong to the group of coalition of voters, administrative incentives and management incentives. Thus, within the category of 'coalitions of voters' we analyze political competition, educational level, population and the number of households with computers and internet access in the country,

in the 'administrative factors' group we analyze the form of government (complexity), and in the 'management incentives' group we study debt, fiscal pressure and economic wealth. Therefore, we consider a total of eight independent variables. Although, the former variables have been analyzed mainly on the local government context our research is focused on national governments because, generally, national governments have both financial resources and technical expertise. Hence, they are able to continuously move toward more sophisticated e-government (Gil-García and Martínez-Moyano, 2007).

Disclosure Incentives 1: Political Competition (POL-COMP). Strong party competition provides an incentive for national authorities to exercise influence over bureaucracy (Dye and Robey, 1980) and plays a key role in the decision of politicians to devolve institutional power to citizens (Smith and Fridkin, 2008). Thus, the impact of political competition is made apparent in pressures on political structures to disclose accounting information.

In this regard, Zimmerman (1977) found a positive link between political competition and public financial information disclosure, arguing that political leaders, seeking to obtain more votes, try to meet voters' needs as much as possible; therefore, the more competition exists, the more incentives are for asserting that a good management is carried out. This is especially relevant in the particular case of budgetary information published by national governments because an adequate transparency in such information improves the decision-making process and also, it encourages citizens to vote (Bastida and Benito, 2007).

Also, prior research demonstrates that a high degree of political rivalry can create a favorable environment for technological reforms (Tolbert, Mossberger and McNeal, 2008). The website has been considered as a cost-effective mechanism for online dissemination of information to voters and for discharging political agents' incremental monitoring obligations (Laswad, Fisher and Oyelere, 2005). Taking into account the previous comments made, the same incentives are to be expected for the website dissemination of governmental budgetary information. Thus hypothesis H1 can be stated as:

H1: There is a positive association between the governmental budgetary information provided via the website and the amount of political competition.

Disclosure Incentives 2: Debt (DEBT). Government managers have incentives to lower debt because this leads to lower property taxes, which are reflected as more votes (Gore, Sachs and Trzcinka, 2004), and to lower borrowing costs, which may increase the politician's welfare (Zimmerman, 1977). Thus, managers are motivated to minimize borrowing costs and to provide information in order to facilitate the monitoring of their actions (Laswad, Fisher and Oyelere, 2005).

In keeping with this, internet is likely to be an efficient means to disclose information as it helps creditors to monitor government activities in an easy and regular way (Debreceeny, Gray and Rahman, 2002). In fact, Laswad, Fisher and Oyelere (2005),

among others, reported a positive association between public debt and the voluntary disclosure of public financial information. Therefore, the following hypothesis may be proposed:

H2: There is a positive association between the governmental financial information reported on the website and the amount of debt.

Disclosure Incentives 3: Fiscal Pressure (FISC-PRESS). Citizens seek to obtain the maximum amount of services while paying the lowest possible amount of taxes (GASB, 1987). In this context, they have a clear incentive to assess government financial conditions in comparison to those of other governments, as a means of evaluating both current levels of taxes and services and the likelihood of changes in taxes or services (Lin and Raman, 1998). Ingram (1984) found that the greater the fiscal pressure, the more important is the disclosure of public sector financial information.

In addition, in a context of fiscal pressure, national governments see computers as a measure to cut down costs, increase efficiency and contribute to the rationalization of the public administration (Gupta and Panzardi, 2008). To this respect, fiscal pressure could encourage national governments to disclose budgetary information on the web with the aim at meeting citizenry demands for financial information and, as a means at disclosing this information in a more efficiently and less costly way. Therefore, the following hypothesis is proposed:

H3: There is a positive association between the governmental financial information reported on the website and the fiscal pressure imposed.

Disclosure Incentives 4: Education level (EDUC-LEV). Chan and Rubin (1987) studied whether the higher educational level of voters might lead to voters requiring a greater amount of information from government bodies. Some previous studies have observed a significant positive effect of educational level on information disclosure (Chaudhuria, Flamma and Horrigan, 2005), although others have found no significant association.

Furthermore, McNeal, Schmeida and Hale (2007) and Khalil (2011) evidence that education is the most powerful single predictor for the use of and attitudes towards e-government information and services and also, for e-disclosure policy. According to this, a well-educated and trained population will demand a higher volume of information from public administration (McNeal, Schmeida and Hale, 2007; Tolbert, Mossberger and McNeal, 2008). In particular, tertiary education may influence IT and e-Government diffusion (Kiiski and Pohjola, 2002). This is especially relevant at the national level of government, because it has been demonstrated that a higher education level is associated with a greater political activism through the Internet (Norris, 2005).

Therefore, in the present study, we propose the hypothesis that education level is positively related to the governmental disclosure of financial information via the Internet. Thus:

H4: There is a positive association between governmental financial information reported on the website and the overall education level.

Disclosure Incentives 5: Population (POPULAT). The literature identifies population size as one of the main catalysts for adopting e-government (Moon, 2002). According to the agency theory, larger governments are expected to face higher voter demands to disclose information as a way to reduce information asymmetry between politicians and citizens and to allow the latter to evaluate incumbents' performance (Zimmerman, 1977). According to Evans and Patton (1987) the greater the population, the greater the pressure that is exerted on those in government responsible for making financial information publicly available. However, other authors, such as Robbins and Austin (1986), have included the population factor in their study variables and found no significant relationship between this and the quality of financial reporting.

On the other hand, Cappel (2005) found a significant correlation between population and e-government involvement. Indeed, prior researches indicate that population size is one of the factors most associated with a greater governmental innovation (Brudney and Selden, 1995; Moon, 2002) and, particularly, in the disclosure of information through the Internet (Moon, 2002). Thus, based on the hypothesis that as the population grows the information disclosed is probably better, hypothesis H5 is stated as:

H5: There is a positive association between governmental financial information reported on the website and the level of population.

Disclosure Incentives 6: Internet access in the household (ACCESS-HH). Although the level of Internet usage has been rarely discussed in the literature, it is considered an important determinant factor of e-government performance. The more people with Internet access the more people could access the government websites and demand an efficient and responsible digital government (Kim, 2007). In this line, Debreceeny, Gray and Rahman (2002) noted that Internet take-up is an environmental variable that from a user's perspective creates demand for financial information and, from the supplier's perspective, creates a conduit for the more efficient dissemination of information. When the level of Internet penetration is high, citizens will expect from their local governments the same service access that they receive from the private sector, including financial information (Pina, Torres and Royo, 2010). Thus, in societies where there is heavy Internet usage, the availability of public financial information is likely to be greater.

For this reason, we expected the degree of Internet penetration in the household to favor governments' deciding to disclose more financial information on the net, as more potential real users exist. On these premises, our sixth hypothesis is as follows:

H6: There is a positive association between governmental financial information reported on the website and levels of Internet access in the household.

Disclosure Incentives 7: Form of government (FORM). Several studies have reported a significant relationship between the form of local government and monitoring incentives (e.g., Zimmerman, 1977; Evans and Patton, 1987; Ingram and DeJong, 1987; Giroux, 1989). The global world consists of two main government forms: republics

and monarchies. Monarchy is a form of government in which sovereignty is actually or nominally embodied in a single individual (the monarch) (Flexner and Hauck, 1993). Forms of monarchy differ widely based on (a) the level of legal autonomy the monarch holds in governance; (b) the method of selection of the monarch and, (c) any predetermined limits on the length of their tenure. Parliamentary monarchies are usually constitutional monarchies, in which the monarch retains a unique legal and ceremonial role, but exercises a limited or no political power depending on the written or unwritten Constitution, however, others monarchs have authority to govern. On the other hand, a republic is a form of government in which affairs of state are a 'public matter', not the private concern of the rulers, in which public offices are consequently appointed or elected rather than privately accommodated.

In keeping with this, prior research indicates that democracies are really republics, in which people elect representatives, who are responsible for making and enforcing the laws (Kroplinski, 2012). The principles and overall objectives of governments to sustain a republican form of government are associated with values such as equity, participation and publicness or openness. The existence and guarantee of civil liberties will contribute to interactions between citizens and governments (Kim, 2007). Therefore, the following hypothesis is derived:

H7: There is an association between governmental financial information reported on the website and the form of government.

Disclosure Incentives 8: Economic wealth (GDP). The economic wealth is directly related to the ability to purchase computers and Internet access. Hargittai (1999) noted that the best predictor of Internet penetration was economic wealth measured by gross domestic product per capita. In this sense, a positive association between the level of wealth and the use of e-government has been found in prior studies (e.g., Laswad, Fisher and Oyelere, 2005; Kim, 2007; Tolbert, Mossberger and McNeal, 2008).

From a governmental perspective, a highly developed ICT infrastructure requires a high level of economic development (Nour, AbdelRahman and Fadlalla, 2008). Singh, Das and Joseph (2007) stated that the major positive influence of GDP on e-government maturity occurs through ICT infrastructure. In this milieu, West (2004) demonstrates that rich countries tend to have more electronic services on their government websites, showing a significant association between the number of online services and the gross domestic product per capita.

In addition, countries with a high economic wealth are more transparent in relation with their budgetary information (Piotrowski and Van Ryzin, 2007). In fact, better economic performance can be considered essential for e-government development and for implementing on-line budget disclosure practices (Siau and Long, 2006; Kim, 2007). Based on these precedents, the eighth hypothesis is the following:

H8: There is a positive association between governmental financial information reported on the website and economic wealth.

On the basis of the methodology proposed for the analysis of the first question, we note that the disclosure index is divided into two sections: quantity and quality of the budgetary disclosures.

With respect to the quantity of budgetary information disclosed, the two dependent variables defined are: ex-ante information provided (**EXANTE-INFORM**) and ex-post information disclosed (**EXPOST-INFO**). By performing a regression analysis, we can determine to what extent each of the dependent variables depends on the above mentioned independent variables. Thus:

$$\text{MODEL 1: EXANTE-INFORM} = \alpha + \sum_{i=1}^8 \beta_j \chi_{ij} + \mu_i \quad \text{MODEL 2: EXPOST-INFO} = \alpha + \sum_{i=1}^8 \beta_j \chi_{ij} + \mu_i$$

In which:

Dependent factor = $\alpha + \beta_1$ Political competition + β_2 Population + β_3 Fiscal pressure + β_4 Debt + β_5 Level of education + β_6 Internet access in the household + β_7 Form of government + β_8 Economic wealth + μ_i

and where α is the constant term, X_{ij} represents the variables that influence budgetary information disclosure on the net, β_j is a coefficient vector to be calculated, and μ_i is the random error term, presumably with identical and independent distribution, with an average of 0.

On the other hand, regarding the quality of budgetary information disclosed, as aforementioned, the budget report and the year-end report have been called by the OBPBT as the key budgetary documents (OECD, 2001a). The first one is the key policy document and the second one is considered to be the key accountability document (OECD, 2001a). Therefore, an interesting analysis to be performed is to investigate whether the disclosure incentives mentioned previously also influence the quality of budgetary disclosures.

In this regard, the two dependent variables defined here are: key documents (**KEY-INFORM**) and additional documents (**ADDITIONAL-INFO**). By performing a regression analysis, we can determine to what extent each of the dependent variables depends on the above mentioned independent variables. Thus:

$$\text{MODEL 3: KEY-INFORM} = \alpha + \sum_{i=1}^8 \beta_j \chi_{ij} + \mu_i \quad \text{MODEL 4: ADDITIONAL-INFO} = \alpha + \sum_{i=1}^8 \beta_j \chi_{ij} + \mu_i$$

In which:

Dependent factor = $\alpha + \beta_1$ Political competition + β_2 Population + β_3 Fiscal pressure + β_4 Debt + β_5 Level of education + β_6 Internet access in the household + β_7 Form of government + β_8 Economic wealth + μ_i

and where α is the constant term X_{ij} represents the variables that influence budgetary information disclosure on the net, β_j is a coefficient vector to be calculated and μ_i is the random error term, presumably with identical and independent distribution, with an average of 0.

4.2. Setting and data collection

From an original membership of twenty countries in 1960, there have been successive enlargements of the OECD, and it currently has 34 member countries. The study sample was composed of 30 OECD member countries.

To gather this research data, we visited the Department of Finance websites of the respective bodies of each central government analyzed in the present study. The websites of these agencies were analyzed during October and November 2013. The data for the independent variables were obtained from the sources listed in Table 1.

Table 1: Explanatory factors

Variable	Source	Description	Relation
Population (POPULAT)	OECD database (stats.oecd.org)	Natural logarithm number of inhabitants in the municipality	+
Fiscal Pressure (FISC-PRESS)	OECD database (stats.oecd.org)	Natural logarithm income per capita	+
Debt (DEBT).	OECD database (stats.oecd.org)	Central Government debt per capita	+
Education level (EDUC-LEV).	OECD database (stats.oecd.org)	Percentage of population with university studies	+
Internet access in the household (ACCESS-HH)	OECD database (stats.oecd.org)	Percentage of households with internet	+
Political Competition (POL-COMP)	Each country general election results	Representatives elected for the party in power/total number of seats	+
Economic wealth (GDP)	World Bank database data.worldbank.org	Natural logarithm number of GDP per capita	+
Form of government (FORM)	Central Intelligence Agency 2010, The World Factbook 2010	Systems of Government by Country 0=monarchy, 1=repulican	+/-

Source: Author's own elaboration

4.3. Results analysis

4.3.1. First research question

The first level coincidence index (TC_1) shows that four Anglo-Saxon countries (Australia, Canada, New Zealand and United Kingdom) and one continental European country (Portugal) scored highest, publishing on the Internet 71.40% of the reports proposed by the OECD. This means that not all the budgetary reports set out in OBPBT are currently uploaded on the websites of the central governments of the OECD countries (Figure 2).

Examination of each of the sections within Level 1 (Figure 2) shows that the website of the United Kingdom central government attaches greatest importance to ex-ante budgetary information, providing all the policy information reports recommended by the OCDE. However, the central governments which prefer to publish the highest number of ex-post documents are Australia, Canada, Japan, New Zealand, Portugal and Poland, disclosing 75% of the accountability reports recommended by the OCDE.

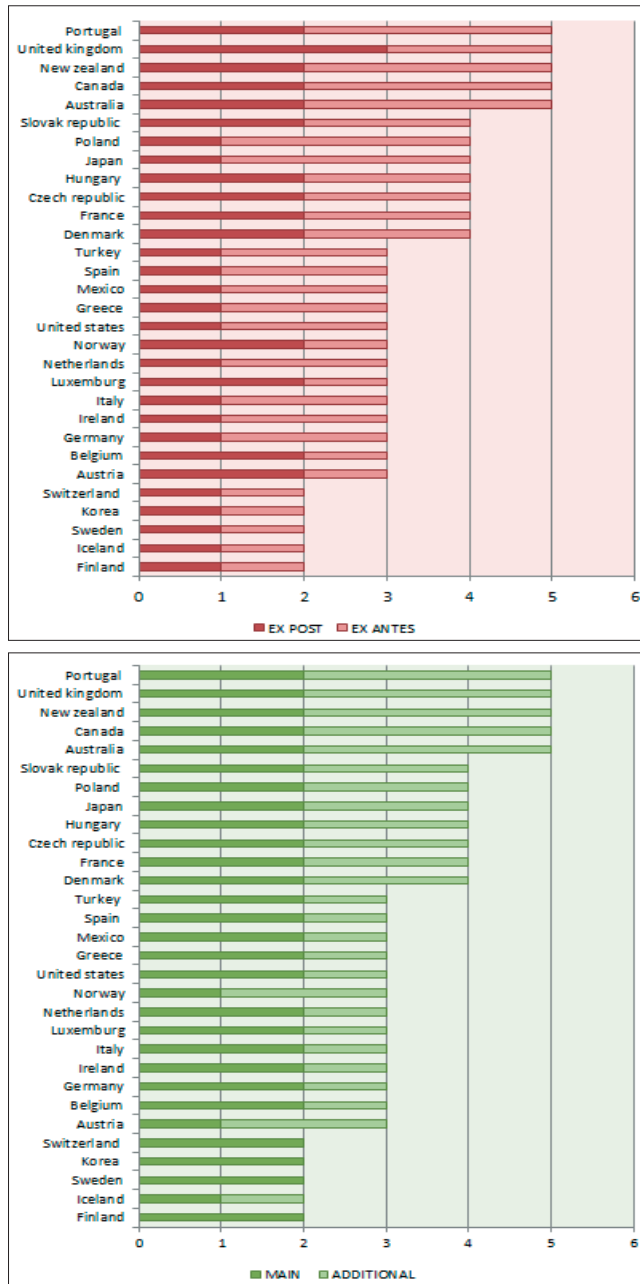


Figure 2: First level coincidence index

Source: Author's own elaboration

A more detailed analysis of the reports included on the Web shows that for the whole sample, the most significant ex-ante budgetary information disclosed on the Internet is the budget report, which illustrates how revenue and expenditure will develop during the forthcoming fiscal year. A less prominent position is occupied

by the key accountability document, the year-end report, which is most commonly published on the Internet by OECD countries (90%). All of them consider it important to complement the main information, and 60% provide, in addition to the year-end budget report, monthly reports that highlight the progress made in implementing the budget.

On the other hand, the mid-year report, which provides a comprehensive update on the implementation of the budget during the mid-year period, is considered necessary only by 36.6% of the OECD central governments. Finally, New Zealand is the only central government that discloses online information about the general state of government finances immediately before an election.

Taking into account that some of the first level reports are not disclosed by some countries, such as Korea and Belgium, the results for the second level of coincidence indicate that the contents of the online policy documents provided score more highly than those of the accountability documents, at 28.98% versus 24.04%. Furthermore, more detailed information is given for the main documents than for the additional ones, 46.02% versus 18.22% (see Table 2).

Analysis of the reports comprising the ex-ante section reveals that these governments are willing to provide detailed information of the budget report on the Internet (50.24%). As regards the pre-budget report content, compliance levels among the OECD countries are 20% of the recommended items. The item most frequently present in this report is the total level of revenue, expenditure, deficit or surplus; debt and all key economic assumptions are disclosed explicitly on the web. On the other hand, the item least complied with is the disclosure of a sensitivity analysis of the impact that changes in key economic assumptions would have on the budget.

With regard to the items related to the long-term report, the compliance level is 6.67%, but we should bear in mind that this report is only presented in Austria, Hungary, United Kingdom and New Zealand. Furthermore, the relative relevance of this report is low because it is awarded the lowest weighting in the OECD guidelines, with only two items.

Analysis of the content of the accountability documents reveals the importance of obtaining budgetary information more frequently than annually, namely monthly and mid-year information. To prevent this information from becoming outdated, the OECD proposes that the monthly report should be released on the Web within four weeks from the end of each month, and the mid-year report within six weeks from the end of the mid-year period.

Nevertheless, in practice, the full potential of the Internet is not employed for improving the timeliness of budgetary information because only 60% of OECD countries offer monthly information on their Web pages within the recommended period. This score is even lower in the case of the mid-year information (36.6%). Let us also note that the monthly report disclosed on the Web includes 32.91% of the items recommended for these reports; these values are lower in the case of the mid-year report (18.20% of the recommended items).

Table 2: Second level items of budget reports: descriptive statistics

	Number elements to be analyzed	DESCRIPTIVE STATISTICS			
		Maximum	Minimum	Element Mean	St. deviat. % Mean TC.
1. Budget reports (b)	22	22,000	0,000	11,066	4,242 50,24
<p>(1) The budget is comprehensive, encompassing all government revenue and expenditure; (2) The budget, or related documents, includes a detailed commentary on each revenue and expenditure program; (3) Non-financial performance data are presented for expenditure programs; (4) Comparative information on actual revenue and expenditure during the past year and an updated forecast is provided for each program; (5) Comparative information on actual non-financial performance data during the past year and an updated forecast for the current year is provided; (6) Expenditure is classified by administrative unit; (7) Expenditure is classified by economic category (8) Expenditure is classified by functional category; (9) A medium-term perspective illustrating how revenue and expenditure will develop during two years beyond the next fiscal year; (10) All key economic assumptions (the rate of employment and unemployment, inflation and interest rates, so on); (11) A sensitivity analysis is disclosed of what impact changes in the key economic assumptions would have on the budget; (12) The estimated cost of key tax expenditures is disclosed as supplementary information; (13) All financial liabilities; (14) All financial assets are disclosed; (15) Borrowings are classified by the currency denomination of the debt, the maturity profile of the debt, whether the debt carries a fixed or variable rate of interest, and whether it is callable; (16) Financial assets are classified by major type, including cash, investments in enterprises and loans advanced to other entities; (17) A sensitivity budget analysis is made showing what impact changes in interest rates and foreign exchange rates would have on financing costs; (18) Non-financial assets, including real property and equipment; (19) Employee pension obligations are disclosed; (20) Key actuarial assumptions underlying the calculation of employee pension obligations; (21) All significant contingent liabilities; (22) A summary of relevant accounting policies accompany the report.</p>					
2. Pre-budget reports (p-p)	5	5,000	0,000	1,000	1,527 20,00
<p>(1) The report states explicitly the government's long-term economic and fiscal policy objectives; (2) The report states the government's economic and fiscal policy intentions for the forthcoming budget and, at least, the following two fiscal years; (3) The total level of revenue, expenditure, deficit or surplus, and debt is highlighted; (4) All key economic assumptions are disclosed explicitly (the rate of employment and unemployment, inflation and interest rates, so on); (5) A sensitivity analysis is disclosed of what impact changes in the key economic assumptions would have on the budget.</p>					
3. Long term reports (l)	2	2,000	0,000	0,133	0,745 6,67
<p>(1) It should be released at least every five years; (2) The report should assess the budgetary implications of demographic change, such as population ageing over the long term (10-40 years).</p>					
4. Monthly Reports (m)	8	8,000	0,000	2,633	2,774 32,91
<p>(1) They are released within four weeks from the end of each month; (2) The amount of revenue and expenditure in each month and year-to-date; (3) A comparison should be made with the forecast amounts of monthly revenue and expenditure for the same period; (4) A brief commentary should accompany the numerical data; (5) Expenditure is classified by administrative unit; (6) Expenditure is classified by economic category; (7) Expenditure is classified by functional category; (8) Monthly borrowing activity.</p>					
5. Mid-Year Report (mi)	13	12,000	0,000	2,366	3,995 18,20
<p>(1) An updated forecast of the budget outcome for the current fiscal year; (2) An updated forecast of the budget outcome for the following two fiscal years; (3) The report should be released within six weeks from the end of the mid-year period; (4) The economic assumptions underlying the budget should be reviewed and the impact of any changes on the budget disclosed; (5) All financial liabilities; (6) All financial assets are disclosed; (7) Borrowings are classified by the currency denomination of the debt, the maturity profile of the debt, whether the debt carries a fixed or variable rate of interest, and whether it is callable; (8) Financial assets are classified by major type, including cash, investments in enterprises and loans advanced to other entities; (9) Non-financial assets, including real property and equipment; (10) Employee pension obligations; (11) Key actuarial assumptions underlying the calculation of employee pension obligations are disclosed; (12) All significant contingent liabilities; (13) A summary of relevant accounting policies.</p>					

DESCRIPTIVE STATISTICS						
	Number elements to be analyzed	Maximum	Minimum	Element Mean	St. deviat.	% Mean TC ₀
6. Year-End Report (y)	19	17.000	0.000	7.933	4.574	41.75
<p>(1) It is audited by the Supreme Audit Institution; (2) It is released within six months from the end of the fiscal year; (3) The year-end report shows compliance with the level of revenue and expenditures authorized by Parliament in the budget; Any in-year adjustments to the original budget are shown separately; (4) It should include non-financial performance information; (5) Comparative information on the level of revenue and expenditure during the preceding year should also be provided; (6) Similar comparative information should be shown for any nonfinancial performance data; (7) Expenditure is classified by administrative unit; (8) Expenditure is classified by economic category; (9) Expenditure is classified by functional category; (10) All financial liabilities; (11) All financial assets; (12) Borrowings are classified by the currency denomination of the debt, the maturity profile of the debt, fixed or variable rate of interest; (13) Financial assets are classified by major type, including cash, investments in enterprises and loans advanced to other entities; (14) Non-financial assets, including real property and equipment; (15) Employee pension obligations; (16) Key actuarial assumptions underlying the calculation of employee pension obligations; (18) All significant contingent liabilities; (19) A summary of relevant accounting policies.</p>						
7. Pre-Election Report (p-e)	6	6.000	0.000	0.200	1.077	3.33
<p>(1) The general state of government finances immediately before an election is disclosed; (2) Comprehensive discussion of the government's financial assets; (3) Comprehensive discussion of the government's liabilities; (4) Comprehensive discussion of the government's non-financial assets; (5) Comprehensive discussion of the government's employee pension obligations; (6) Comprehensive discussion of the government's contingent liabilities.</p>						
EX ANTE BUDGETARY INFORMATION (A) (1+2+3)		2.545	0.000	0.869	0.630	28.98
EX POST BUDGETARY INFORMATION (P) (4+5+6+8)		2.712	0.000	0.962	0.606	24.05
KEY BUDGETARY INFORMATION (K) (1+7)		1.894	0.000	0.920	0.379	46.02
ADDITIONAL BUDGETARY INFORMATION (AD) (2+3+4+5+6)		2.923	0.000	0.911	0.823	18.22
TOTAL (1+2+3+4+5+6+7)		4.500	0.000	1.865	1.031	26.16

In the monthly report, noteworthy is the low score of items such as expenditure classified by administrative unit (26%). In the mid-year report, in practically no case is disclosure made of the actuarial assumptions underlying the calculation of employees' pension obligations (6%) nor does any summary of relevant accounting policies accompany the report (3%).

With regard to the content of the key accountability report, the year-end report, 41.75 % of the OECD-recommended items are disclosed on the Internet, with special emphasis on the comparative information of the level of revenue and expenditure during the preceding year, showing all financial liabilities, all financial assets and expenditure classified by financial category. Meanwhile, the in-year adjustments to the original budget and the actuarial assumptions underlying the calculation of employee pension obligations are the items least commonly disclosed.

Taking into account that the pre-election report is only presented in New Zealand, the content presented by this report on the Internet is the lowest of all the reports, with only 3.33% of the items recommended by the OECD.

4.3.2. Second research question

Firstly, the Spearman correlation is used to examine the degree of association between each of the pairs of variables considered to be independent (Laswad, Fisher and Oyelere, 2005). Thus, Table 3 presents the Spearman correlation coefficients for all the independent variables included in the models. The highest correlations reported are between education level and Internet access in the household (0.76), GDP and Internet access (0.75), and education level and GDP (0.37).

Table 3: Spearman correlation matrix of independent variables, N= 30

	1	2	3	4	5	6	7	8
1. ACCESS-HH	1.0000							
2. EDUC-LEV	0.7650	1.0000						
3. DEBT	0.1276	0.2749	1.0000					
4. POL-COMP	-0.2871	-0.1185	-0.0106	1.0000				
5. FISCAL-PRES	0.3782	0.3029	0.1261	-0.3409	1.0000			
6. POPULAT	-0.2301	-0.0025	0.2397	0.5033	-0.3082	1.0000		
7. GDP	0.7561	0.6904	0.2492	-0.3079	0.4520	-0.3431	1.0000	
8. FORM	-0.4114	-0.5625	-0.1697	0.1261	-0.3960	0.1096	-0.5378	1.0000

When each of these variables was omitted from the analysis the results tended to be fairly similar. Thus, the conclusions offered below with respect to the effects of these variables are subject to this qualification.

After considering the correlation between the independent variables, multivariable linear regression was used to test the association between dependent and independent variables (Laswad, Fisher and Oyelere, 2005). The results obtained are shown in Table 4, where column '2' presents the predicted signs for each variable according

to the analyses in Section 4.1.2. As described earlier, the models generate the same expected sign for all the variables included.

Let us start with the analysis of the variables affecting the ex-ante public financial information provided (Model 1). The results reported in Table 4, columns A, show that only two variables are statistically significant ($p < 0.05$), one of which presents the expected sign and the other, the unexpected sign. There are exceptions, with three variables presenting an unexpected sign, but this is statistically insignificant ($p > 0.40$), and another three variables have the expected sign but are not statistically significant ($p > 0.30$).

Table 4: Multivariable linear regression results: Quantitative Models 1 and 2

	Expected sign	(A) MODEL 1: EX-ANTE				(B) MODEL 2: EX-POST		
		β	t-Statistic	t	β	t-Statistic	t	
1. POPULAT	+	-0.0065	0.0232	-0.28	.03203	.0227	1.41	
2. FISC-PRESS	+	0.0006	0.0047	0.15	.0038	.0046	0.83	
3. DEBT	+	-0.0018	0.0025	-0.73	-.0062	.0025	-2.47**	
4. EDUC-LEV	+	-0.0027	0.0054	-0.51	.0034	.0053	0.65	
5. ACCESS-HH	+	0.0003	0.0022	0.17	-.0038	.0022	-1.70	
6. POL-COMP	+	0.8141	0.3062	2.66**	.4862	.3029	1.60*	
7. GDP	+	0.0946	0.0786	1.20	.0788	.0787	1.00	
8. FORM	+	-0.15611	0.0703	-2.22**	-.0202	.0690	-0.29	

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Beginning with a detailed analysis of each of the variables, regarding the population variable, the governments of countries with larger populations were predicted to disclose better policy document reporting, because more resources were at stake; however, as shown in studies by Ingram (1984) and Ingram and Dejong (1987), no such statistical association is obtained ($p > 0.3$). Thus, it is not always the case that those responsible for the management of the larger governments, even though they have a larger budget and often a formal, well-established IT department, decide to include all the policy documents recommended by the OECD and with the detail recommended on the Internet.

The variable debt, on the other hand, does seem not to be statistically significant ($p > 0.2$), and the sign is not the one expected. Similar results were obtained by Baber (1983), Ingram (1984), Christiaens (1999), Robbins and Austin (1986), and Evan and Patton (1987), who found that this variable does not show a significant relation with public financial information disclosure.

In our study, the overall level of education does not present the expected sign, but neither does it appear to have a significant influence ($p > 0.1$). Thus, although a certain degree of education is necessary to acquire computer skills, the results obtained suggest that this factor does not impel governmental managers to provide a greater amount of ex-ante information on the Internet.

As regards fiscal pressure, it has been reported (Ingram, 1984) that this could be an important determinant of financial information disclosure. However, the results obtained in the present study do not agree with those of the above-cited author, but rather with those of Christiaens (1999), who concluded that net revenue as a percentage of total revenue was not significantly related to public financial disclosure ($p>0.4$).

A contrary result was obtained for the independent variable Internet access in the household: the sign was the expected one, but the relation was statistically insignificant ($p>0.4$). We had hypothesized that in countries with a high rate of Internet usage the governments could have introduced more on-line policy information, but in fact no such relation was found.

With respect to GDP, prior research had led us to expect that the richest countries would disclose a larger proportion of policy documents (Piotrowski and Van Ryzin, 2007). However, the results obtained failed to reflect any such relation, although the sign was the expected one.

Finally, let us note that the coefficient for political competition presents a positive sign, as in the initial hypothesis. According to earlier studies (Baber, 1983; Baber and Sen, 1984; Ingram, 1984), political competition was predicted to have a positive, statistically significant relation. Thus, the results obtained were as expected, and the sign was as predicted ($p=0.02$). Overall, this result suggests that incentives exist for government managers to improve the quantity of on-line policy information when the party in power has more political competition. Regarding the form of government, as observed in prior research, 'democracies are really republics, in which the people elect representatives, who are responsible for making and enforcing the laws' (Kroplinski, 2012). Therefore, it was expected that countries whose form of government is that of a republic would be more likely to disclose online policy information. Nevertheless, although this variable is significant, it does not present the expected sign, as it is the case of countries established as monarchies which are more likely to disclose the information in question ($p=0.03$).

Thus, the only two variables that seem to be relevant to the greater or lesser fulfilment of OBPBT required under the disclosure of online policy documents are the greater political competition and the form of government.

With regard to the independent variables comprising Model 2 (Table 4, column B), two variables are statistically significant, but their sign is not as expected. Four variables (population, GDP, fiscal pressure, internet access) had the expected sign but were not statistically significant ($p>0.40$) and another two variables (education level and form of government) were not significant, either, and in addition, did not present the expected sign. Thus, the two variables that seem to be relevant to the greater or lesser compliance with the accountability documents content required under the OBPBT are the strength of political competition and the level of debt.

In countries with a low rate of debt per capita, many managers have introduced on-line accountability reports to disclose the good situation regarding indebtedness. In other words, countries with a good economic situation tend to provide more ex-

post budgetary information than those with more debts. Overall, this result suggests that incentives exist for governments to improve the quantity of on-line ex-post information when there is less outstanding debt ($p=0.06$).

On the other hand, as indicated earlier, the level of political competition was predicted to have a positive and statistically significant relation. In our case, the results show that strong inter-party competition provides an incentive for national authorities to exercise influence over bureaucracy to disclose accountability information on the Internet ($p=0.09$). This positive link between political competition and public ex-post information disclosure could be accounted for by political leaders seeking to obtain more votes when they believe good management is being applied.

With respect to the main information, as can be seen in Table 5, with the exception of GDP, the variables do not present any statistically significant relation. In the case of GDP, and corroborating the opinions of Siau and Long (2006) and Kim (2007), it is the countries that achieve better economic performance which best implement on-line main budget disclosure practices.

Table 5: Multivariable linear regression results: Models 3 and 4

	Expected sign	(C) MODEL 3: MAIN			(D) MODEL 4: ADDITIONAL		
		β	t-Statistic	t	β	t-Statistic	t
1. POPULAT	+	0.0287	0.0323	0.89	.0064	.0226	0.28
2. FISC-PRESS	+	-0.0039	0.0065	-0.60	.0068	.0050	1.36
3. DEBT	+	-0.0039	0.0035	-1.09	-.0065	.0028	-2.27**
4. EDUC-LEV	+	0.0046	0.0076	0.61	-.0017	.0055	-0.32
5. ACCESS-HH	+	-0.0025	0.0031	-0.82	-.0026	.0024	-1.09
6. POL-COMP	+	0.5346	0.4258	1.26	.8532	.3235	2.64***
7. GDP	+	0.1992	0.1097	1.82*	.0630	.0813	0.78
8. FORM	+	-0.0725	0.0980	-0.74	-.0799	.0745	-1.07

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Finally, it can be seen that the additional information (model 4) is influenced by the same independent variables as are identified in Model 2, i.e. debt per capita and the level of political competition, with the same signs as for accountability information. The remaining variables present no significant relation. Therefore, in countries with a low rate of debt per capita and with strong inter-party competition, government managers have introduced on-line additional information to disclose the favorable situation regarding indebtedness.

5. Discussion and conclusions

In the trend towards e-government, the disclosure of financial documents can be an extremely significant element in improving information transparency, as part of the management of financial resources in rendering public sector services.

In our research, focused on compliance with the OBPBT using the Internet as a channel for financial budgetary disclosures by the central governments of OECD

member countries, the results obtained confirm that there are differences among the countries analyzed.

All OECD countries take into consideration the need to present online a document illustrating how revenue and expenditure will develop during the next fiscal year, i.e. the budget. Nonetheless, although these countries consider the budget to be the key online policy document, there is little agreement about its content. Furthermore, the OECD countries recorded the lowest content rate of online disclosure of policy and accountability documents. Only one of the OECD countries discloses online information about the pre-election report, and only for the long term report.

Therefore, on the whole, these results indicate that new technologies such as the Internet are still not an important means for OECD countries to disclose their budgetary information. In our opinion, the need to meet people's expectations – public accountability means that administrations should be more aware of the importance of including budgetary information on their websites. Such an attitude requires OECD countries to consider, first, elaborating the reports recommended by the OBPBT with all the parameters addressed in this guideline and second, making it available on their websites. For this purpose, a benchmarking process should be implemented among national OECD administrations in order to intensify the sharing of knowledge regarding real practices in this field.

As regards the analysis of potential determinants of the disclosure of public financial documents by OECD countries on their websites, we discovered that factors previously found to be important in paper-based reporting, such as education level, population, Internet access or fiscal pressure seem to have no influence on the public financial information disclosed on the Internet. Only debt seems to be a relevant factor in the degree of information transparency achieved via the Internet for accountability and additional documents. This could be due to the perceived importance of disseminating information on public debt, as a means of evaluating the responsibility and effectiveness of government bodies, especially when debt levels are low. Such a policy of transparency by public entities could be thought to favor greater involvement by the general public in the management of public resources, this being one of the main features of e-democracy.

Another aspect of interest is that of political competition; this seems to exert a great deal of influence, according to the results reported in the empirical section of our article. Thus, our study suggests that the quality and quantity of the additional policy and accountability reports made available online are associated with a political variable, that of political competence. Our research shows that increased political competition would enhance the possibility of interactivity between citizens and the public administration and satisfy information requirements in a more efficient way. This would help democratize the provision of information, by improving the transparency of public accountability.

The variable 'type of government' is only significant as regards policy information; thus, monarchical governments are more likely to provide this information. Interest-

ingly, GDP is a significant variable as concerns the main information, which is more often reported by the wealthier countries.

Therefore, the concept of transparency is of great significance in the contexts of accountability and democracy because it is an effective tool to ensure citizens' access to information. The digitalization of government affairs increases transparency and efficiency and, therefore, seems to have a positive influence on the development of democratic institutions. This, in turn, strengthens democracy and the legitimacy of the state and its relationship with citizens and the rule of law, and provides the means to enter the realm of e-democracy and e-governance.

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