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Budgetary Transparency and Democracy: The Effectiveness of Control Institutions

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Abstract

The objective of this paper is to identify the effectiveness of the Supreme Audit Institutions (SAIs) and of the legislatures in relation to the fiscal transparency of countries. To test the theory empirically, an analysis was also conducted of how transparency improves accountability and how transparency and accountability jointly relate to the degree of democracy of a country and to the perception of corruption. To conduct the proposed test, multiple linear regression models were used with the ordinary minimum squares method. The data were obtained from official reports on transparency, democracy and corruption, such as Open Budget Partnership, Transparency International, The Economist Intelligence Unit’s Index and Index Mundi. The results have shown that countries in which the legislatures and the SAIs have greater constitutionally determined interdependence have greater budgetary transparency. It was also found that countries that are more transparent have more and better accountability mechanisms and, consequently, a greater level of democracy and less corruption, all of which points to the importance of transparency in the process of democratic consolidation.

Keywords: accountability, civil society, corruption, democracy, transparency

1. Introduction

Neither the word transparency nor its many meanings, as they are discussed today, are an invention of this century, since transparency was among many of the administration rules of the 19th century. However, only in the last decade of the twentieth century did this concept acquire social importance and enter government agendas (Bessette, 2001; Hood, 2006). One of the main reasons driving these discussions and the growth of initiatives around greater transparency in public administration was concern with the notion that when the background of political options is unknown, the electorate is incapable of “punishing” politicians involved with corruption and other forms of illegal conduct (Fox, 2006).

Thus, using a political perspective as a starting point, government transparency has been seen as an integral part of the attempts to improve the public sector’s governance since the early 1990s. Briefly, it can be defined as the degree to which citizens, the media and the financial market can observe government strategies, their actions and their results (Alt, Lassen, & Rose, 2006).

Some of the socially legitimated means of communicating these objectives, targets and results are government budgets and accounting statements. This is also known as fiscal transparency. Several scholars studying transparency (Alt & Lassen, 2006; Bernoth & Wolff, 2008; Hallerberg & Wolff, 2008; Heppke-Falk & Wolff, 2008) have stressed that preparing budgets and public balance sheets that are more transparent, along with suitable supervisory mechanisms, limits corruption and unnecessary spending, improves liquidity and makes access to financial markets easier.

Consequently, budgetary transparency has become a core theme of the debates on international development. It has been used in connection with international cooperation and conflict solution (Pallas & Urpelainen, 2011), the monitoring of international agreements (whether commercial or financial), monitoring the funds received as aid by developing countries or by countries undergoing financial crises (Chandy & Kharas, 2011), reducing corruption, and improving economic performance.

Przeworski (2010) writes that transparency enables citizens to know whether governments are defending public interests or not, so citizens can apply appropriate sanctions. Thus, politicians whose acts are favorable to citizens' interest will be reelected, while those whose acts do not further these interests will lose elections. In other words, transparency makes it possible for governments to be held accountable for their acts, at least politically speaking. However, in a democratic environment, with strong, consolidated institutions, accountability should not only exist in the political sphere. This being the case, Schedler (1999) establishes three issues considered necessary for its effectiveness: information, justification and punishment. The first two (information and justification) refer to what the author calls "answerability", namely, the duty of those who hold public office to inform, explain and answer for their acts; whereas the latter (punishment) concerns the capacity of enforcement, in other words, the capacity of agencies to impose sanctions and loss of power for those who violate their public duties.

Corroborating the previous statements, Meijer (2009) points out that transparency is supposed to improve governments worldwide, because it reduces corruption and increases accountability to citizens. Additionally, it can be stressed that transparency is a fundamental tool for governments for increasing their credibility, improving their international relations, gaining access to markets and credit, and reducing corruption, among other elements (Mulgan, 2007; Cuillier & Piotrowski, 2009; Relyea, 2009; Shuler, Jaeger, & Bertot, 2010).

Kaufmann, Kraay, and Mastruzzi (2005), however, stresses that implementing and developing transparency depends on efficient budgetary institutions (Note 1). Thus, in the budgetary process, two types of institution play a central role for the development and institutionalization of transparency: Supreme Audit Institutions and the legislatures. Corroborating this statement, the International Budget Partnership (2010) stressed the importance of the independence of Supreme Audit Institutes (SAIs) (Note 2) and of legislatures when it comes to approving budgets and budget amendments and, consequently, for increasing the fiscal transparency of countries, which helps reduce corruption.

Although many studies have been conducted on the theme of transparency and, more specifically, of fiscal transparency, none has focused on learning about the effectiveness of democratic institutions for developing transparency and combating corruption. Therefore, given all the arguments presented, this paper seeks to answer the following question: How effective are the control bodies (SAIs) and the supervision (legislature) in improving transparency and consequently in reducing corruption in the public sector?

In general, given the proposed problem as a starting point, the objective is to identify the importance of the independence of the legislative power and the SAIs for country transparency and, secondarily, to identify the extent to which: i) transparency influences accountability mechanisms; ii) transparency and accountability influence the perception of corruption; and iii) transparency and accountability influence the level of democracy of countries.

The structure of this paper is as follows: Section 2 presents the concepts of transparency and the research on which this work is based; Section 3 presents the data collection and analysis methods; Section 4 presents the research findings; and Section 5 presents the final thoughts in this paper.

2. Theoretical Framework

2.1 Transparency and Its Importance

As Grigorescu (2003) highlights, awareness of the importance of transparency and of its explanatory power is becoming increasingly relevant for researchers in several fields of knowledge. Additionally, because of the variety of interests involving the information flow, the transparency concept has not been monopolized by any particular field of study. As a result, it can be found in studies on international conflicts, international organizations, political environment, monetary policy, trade, corruption, democratic theory, public administration, etc.

Regardless of the field of study, the debate about transparency has become a core theme in the agenda of almost all organizations, whether they are public or private, large or small (Hood, 2006). This suggests that transparency has reached a "quasi-religious" level of significance in the debate about governance and institutional performance. Ball (2009) suggests that the transparency theme is beginning to subsume accountability in public discourse on good governance. This pronounced demand for transparency is based on a number of factors. The first is that transparency is one of the fundamental moral requirements of democratic societies, in which the people's right to have access to information is broadly accepted (Pasquier & Villeneuve, 2007). The second is that transparency is a practical measure for reducing corruption, acting as a dissuasive element in relation to corrupt behavior. In other words, it dissuades civil servants from abusing their positions in order to fulfill private interests, since transparency constantly fosters the vigilance of citizens (Florini, 2007). Corroborating the preceding statements, (O'Neill, 2006) observes that transparency can also be used as a strategy for deterring corruption and correcting poor performance. The third factor is that transparency has a positive impact on confidence and on accountability (Heald, 2003). According to Holzner and Holzner (2006), "transparency is associated with rendering accounts and with accountability" (p. 114), as it enables citizens to monitor the quality of public service, and consequently encourages governments to improve the quality of spending and services provided to citizens.

Broadly speaking, as Fox (2006) highlighted, one of the main reason that drove the discussions and growth of initiatives around greater transparency in public administration was a concern with the fact that, when the history of political actions is unknown, the electorate is incapable of "punishing" the politicians that are involved with corruption and other forms of illegal conduct. Additionally, (Speck, 2002) explains that transparency is important because (i) it is the basis for the practice of accountability; ii) it is a tool for combating bad administration and corruption; iii) it fosters public confidence; and iv) it enables citizens to have access to information about public administration.

2.2 Conceptual Interfaces between Fiscal Transparency, Democracy, Accountability and the Perception of Corruption

Although the concept of transparency is increasingly found in academic literature, its meaning continues to be fluid. This is due, in part, to the fact that this concept is used in different aspects of information flow. In the literature on conflicts between countries, one country is transparent if the other manages to obtain information about the preferences of society and its respective support for government actions. However, in the literature on international regimes, transparency refers to the information that all countries provide to international organizations. In studies on corruption, transparency refers to the existence of information about corruption practices in a country and how the existing set of measures designed to combat corruption can be put in motion. However, in Political Science literature, the transparency concept is linked to governments divulging information to internal and external players (Grigorescu, 2003).

Piotrowski (2007) points out that transparency is generically defined as the flow of information that is open to society and that the literature on transparency in the relationship between those who govern and citizens has increasingly emphasized the importance of this opening. The author then complements his thinking by stating that government transparency is equal to opening up government.

Oliver (2004), in turn, argues that transparency in an organization does not only concern what is communicated externally, but, above all, what it is right to communicate. This author introduces the concept of "new transparency" to describe the current trend toward organizations being required to divulge information. The author also highlights that in the past several governments provided information passively, in other words, only when they were required to do so. Currently, however, the demand that governments actively divulge more and better information has grown significantly.

As for its definition, the classic concept of (Kopits & Craig, 1998) highlights that fiscal transparency can be defined as:

As openness toward the public at large about government structure and functions, fiscal policy intentions, public sector accounts, and projections. It involves ready access to reliable, comprehensive, timely, understandable, and inter-nationally comparable information on government activities … so that the electorate and financial markets can accurately assess the government's financial position and the true costs and benefits of government activities, including their present and future economic and social implications (p. 1).

Given the preceding concept, Colecchia and Schreyer (2002) state that a transparent budgetary process is one that provides all information about a government's fiscal policy and that does so simply, with little accounting complexity and with understandable financial statements. Finally, they say that budgets that are accessible to the public and to those who formulate public policy, as well as those that present consolidated and understandable information, are transparent.

Nevertheless, transparency has not always been present in the administration models of governments, having only appeared following the introduction of the model called Public Service Orientation (PSO), which, besides equity, introduced accountability (holding administrators responsible). To be effective, this must be preceded by transparency (Philipps & Stewart, 2008). This change in objectives from effectiveness/quality to accountability/equity, as highlighted by Matias-Pereira (2002), was driven by how one focuses on the target audience, ascribing to them, in addition to rights, also duties vis-à-vis the State and other citizens. The author also stresses that another important PSO element is that it is based on the decentralization of public services, thereby enabling the introduction of accountability as well as citizen participation in determining public policies.

Because of the decentralization of the state, Silva (2001) says that the institution of the state implicitly carries with it a potential distributive conflict between the private agents that try to obtain political representation by way of pressure groups. These practices may go hand-in-hand with defense of the private interests of the public agents themselves and, for this reason, it becomes necessary to establish a legal system capable of minimizing the possibility of undue appropriation of public resources resulting from any distributive conflict among all society agents. Matias-Pereira (2002) further adds that it becomes evident, then, that the pursuit of transparency in democratic countries calls for the creation of institutions for the control, rights and guarantee of public assets. Therefore making information available by means of an effective policy of public transparency of government acts becomes indispensable for citizens to become allies of the control institutions in the function of caring for the integrity of the administration of public resources.

However, public transparency is not fully realized if it is dissociated from democratic processes. As seen in the definition of transparency, the term democracy is also loaded with controversies (Sartori, 1994), but bringing this discussion to the sphere of political relations, Arantes, Loureiro, Couto, and Teixeira (2010) point out three principles that guide the existence of a democratic regime: 1) the government must emanate from the will of the people, who become the main source of sovereignty; this is what confers legitimacy upon the governing entity and its acts; 2) those governing must render accounts to the people, justifying their acts and omissions during the exercise of power, enabling citizens to have access to information in order to demand accountability from public authorities and to decide whether or not to confer upon the incumbent the right to remain in his or her post, when the time comes for voting; and 3) the State and state authorities must be governed by rules that *a priori* outline their field of action and give citizens the right to complain whenever they feel their rights are being threatened by the actions of the such authorities.

After all, on what other counts does public transparency depend on the existence of democracy? The possibility of contradictory elements is indispensable for the consistency of the information provided to society. Government data should be questioned and deconstructed up to the point of confirming whether it is true. Situations of this kind are only possible in democratic regimes. In situations in which the sources of information cannot be questioned and argued against, transparency does not properly fulfill its role of empowering society and its representatives. A lack of information or poor quality information weakens the institutions that form the accountability system because citizens are deprived of necessary and understandable information that can enable them to demand the defense of their interests, requiring that public authorities be responsible. It is worth recalling that Prado and Diniz (2012, p. 19) state that the conceptual dimension of accountability "touches upon not only the rendering of accounts and the publicizing of government actions, but also upon the existence of institutional mechanisms for controlling public administration, all of which can give rise to incentives and sanctions."

Accountability depends fundamentally on the existence of transparency in the acts of those in government. The quality and consistency of the transparency and the existence of mechanisms for complaining about and holding governing entities accountable are inherent to the democratic regime. If, as Thompson (2002, p. 97) states, corruption can be understood as "perversion or lack of integrity in the performance of public duties through bribes and favors", the perception of society about corruption practices will tend to increase in an environment of political freedom (democracy), where competition for power and the availability of information require greater publicity regarding public dealings. As Ribeiro (2000) stated, revealing corruption schemes is one of the virtues of the democratic environment and not a problem of democracy, as one is often led to think.

The establishment of an environment that favors minimizing those practices that adversely affect public assets by improving the legal framework, strengthening institutions and creating channels for dialogue between society and the control institutions is only possible if transparency, accountability and democracy are linked simultaneously. If the existence of democracy is an absolute prerequisite for efficient transparency and accountability tools to come into play, an improvement in and consolidation of democracy are the inevitable outcomes in a society with a large degree of transparency and where control institutions are efficient mechanisms for preserving public integrity.

The next section will discuss the importance of institutions for increasing transparency and accountability in countries.

2.3 The Importance of Budgetary Institutions in the Transparency Process of Countries

According to Hagen (2007), budgetary institutions are all the formal and informal rules and principles, according to which budgets are prepared, approved and implemented. Moreover, this set of rules breaks the process down into different stages, determining who does what at each stage, besides regulating the information flow between the various players in this process. The author stresses that institutions shape the results of the budgetary decision-making process they govern. He also stresses that these institutions vary from country to country and, to a lesser extent, over time. Therefore, they can be used to explain fluctuations in fiscal policy and consequently in transparency and accountability among countries. Furthermore, as Hall and Taylor (2003) stress, the choice of different institutions can be a function of social, political and historical variables that may influence both institutional choice and the fiscal result.

Therefore, since institutions result from a socio-historical-cultural process, they only seldom change and so can be regarded as predetermined, at least in the short and medium term. In other words, as it is expensive and complex to change current institutions, they must produce extremely unsatisfactory performance to make it worthwhile altering them and, as a result, there is a strong predisposition towards maintaining the *status quo* in institutional reforms.

In general, one can distinguish between two types of institution: laws that prescribe budgetary targets and procedural rules. Regarding the laws that establish budgetary targets, they are normally associated with macroeconomic theories and will not be discussed in depth in this paper. Regarding procedural rules, one can identify three stages in the budgetary process: i) formulation of the budget proposal within the executive branch of government ("the executive"); ii) presentation and approval of the budget in the legislature; and iii) the execution of the budget by those in government (Alt & Lassen, 2006).

However, what stands out is that for many years preparing budgets was an activity that belonged solely to the executive, which, normally, would then delegate it to the ministry of finance or the treasury. In this process, besides the fact that little information was divulged about the budget, nothing was known about how priorities were determined. Nevertheless, the emergence of a new, management-oriented public administration emphasizing greater opening of the budgetary process and the need for strong supervisory institutions led to the creation of a budgetary system in which three government areas acquire a formal role in the budgetary process: the executive, the legislature, and the SAIs (Santiso, 2004).

The reasons for the existence of these three areas of government, as previously described, in modern public finance systems is to provide proper control of accounts and thus to ensure that the funds collected will be spent in such a way as to reflect national priorities and to promote development (IBP, 2010). In this sense, the role of the executive is to propose the budget; the legislature, as a representative of the people, is responsible for improving the budget, discussing it, amending it, approving it and vetoing it, besides monitoring its execution by governments; as for SAIs, they are in charge of overseeing the execution of the budget, helping the legislature in this role.

The SAIs function as agencies that inform the legislature and help it to oversee the execution of the budget. Therefore, they check whether revenues are being collected and whether executive spending is in line with both the approved budget and financial legislation regulations. Generally, the SAIs present their audit reports to the legislatures, which, in turn, organize hearings to discuss the conclusions of these reports. Based on these hearings, corrective measures are recommended to the executive. The legislature then assesses whether the executive has fulfilled all the recommendations that were required of it, thus closing the cycle of accountability (IBP, 2010).

To conduct effective supervision of budgets, legislatures and SAIs must have legal authority, preferably of a constitutional nature, which specifies their functions and the nature of their relationship with the executive. Thus, legislatures and SAIs tend to be more effective in performing their roles when they have been constitutionally granted legal powers, investigation capabilities and full information about public finances.

Many countries, however, still have legislatures and SAIs with little independence, without defined constitutional powers, with poor investigation capabilities and, consequently, little information on the spending and tax collection of their governments. Consequently, it is believed that the degree of transparency in countries where these institutions are weak is lower, which jeopardizes the instruments of accountability and, consequently, the level of democracy. As the objective of this study is to identify how the independence of institutions designed to monitor and control the executive furthers the process of transparency, the main hypotheses of this paper are:

H_a: Countries with more independent monitoring and control institutions divulge more fiscal information and have budgets that are more transparent.

H_b: Countries that divulge more and better budgetary information have more and better accountability mechanisms.

H_c: Countries that are more transparent and that have more accountability mechanisms have a greater level of democracy.

H_d: Countries that are more transparent and with better accountability mechanisms have lower rates of perceived corruption.

The methodological path used in this study to test these hypotheses and consequently to confirm the existing theory is described below.

3. Methodology

Regarding its objectives, this study can be classified as a descriptive one, since it aims to establish the relationships that exist between the transparency, accountability and democracy variables. As for the technical procedures, the research is of the documental kind, being based on the reports of official organizations such as the Open Budget Partnership, The Economist, Transparency International and Index Mundi. It is also experimental, given that a study object was determined, variables capable of influencing this object were selected and ways of controlling and observing the effects of variables on the object were defined.

As for data collection, what was used was a sample of 94 countries grouped into the following geographical regions: East Asia and Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean, the Middle East and North Africa, South Asia, and Sub-Saharan Africa. As no information on transparency was available for all the countries, the sample consisted of the same countries listed in the *Open Budget Survey* 2010 (Note 3). Still, one should stress that the countries São Tomé and Principe, as well as Fiji, were excluded from the sample because the former had no information on its level of democracy and the latter, no information on its level of corruption.

As for the variables used in this study, Table 1 shows the variables that were employed, their meaning, the source of the data used and the signals expected for each variable. It also summarizes the theoretical basis for each variable.

Table 1. Variables used in the study

Variable	Notation used	Source	Expected sign
Transparency	Transp	OBI Index 2010	
Level of democracy	demlevel	The Economist Intelligence Unit's Index 2010	Positive
Wealth	Wealth	Index Mundi	Positive
Power of the legislature	legpower	OBI Index 2010	Positive
Power of the SAIs	SAIpower	OBI index 2010	Positive
Accountability	account	The Economist Intelligence Unit's Index 2010	Positive
Corruption	corrup	Transparency International	Positive*

Note. *The relationship is expected to be positive because the scales are inversely proportional.

Identification of and justification for the variables:

- Level of democracy (demlevel): the IBP report (2010) indicates that countries in which democracy is better consolidated have greater rates of transparency.
- Wealth (GDP/capita) (wealth): a study by Alt et al. (2006) indicates that wealthier countries tend to be more transparent.
- Power of the legislature (legpower): the power that the legislature of a country has to approve budgets at the beginning of the year and to approve the amendments made during the course of the tax year. In addition, it also takes into account the time the legislature has to evaluate the budget and for budget discussions. A study by Kaufman (2005) indicates that legislatures that are more independent improve fiscal transparency. Kaufman (2005) indicated that SAIs with a greater degree of independence from the executive improve fiscal transparency.

- Accountability (account): degree of accountability. A study by Meijer (2009) and Florini (2007) indicates that transparency improves the accountability of countries.
- Corruption (corrup): perception of corruption in the countries. The theoretical studies of Meijer (2009), Relyea (2009) and Florini (2007) indicate that transparency and the mechanisms of accountability reduce corruption and increase the level of democracy.

To test the hypotheses, we used the ordinary least squares (OLS) method. The tests were conducted in stages and for each hypothesis.

In the first hypothesis, what was tested was the effectiveness of the SAIs in relation to the fiscal transparency of the countries and the model used was the one presented in Equation 1.

$$Transp = \alpha + \beta_{1legpower} + \beta_{2SAIpower} + \beta_{6wealth} + e_i \tag{1}$$

In order to empirically prove the theory that establishes that transparency improves accountability and consequently raises the level of democracy and reduces corruption, three models were tested. The first aimed to identify whether greater transparency did indeed lead to more accountability mechanisms and, consequently, to more accountability. This model is presented in Equation 2.

$$Account = \alpha + \beta_{1transp} + \beta_{2wealth} + e_i \tag{2}$$

The purpose of the second model was to identify whether greater transparency and more accountability mechanisms did, indeed, improve the level of democracy of countries. The model is presented in Equation 3.

$$Democ = \alpha + \beta_{1transp} + \beta_{2account} + \beta_{3wealth} + e_i \tag{3}$$

Finally, the third model had the purpose of identifying whether greater transparency and greater accountability did indeed result in lower rates of corruption. This model is presented in Equation 4.

$$Corrup = \alpha + \beta_{1transp} + \beta_{2account} + \beta_{3wealth} + e_i \tag{4}$$

In all the models, the *per capita* wealth variable was used as a control variable, since countries with better economic conditions may have more information mechanisms available, though not necessarily because of their level of democracy or corruption. To carry out the tests, Eviews 6.0 software was used and the significance level for all tests was 0.05 (5%).

4. Presentation and Analysis of the Results

This section presents the results of the study and is broken down into four sections. The first aims to identify the relationship between the independence of the SAIs and the legislature, on one hand, and the transparency level of the countries, on the other. The second aims to identify the relationship between the countries' accountability mechanisms and transparency. The third aims to identify the relationship between transparency and accountability on the level of democracy of the countries in the sample, while the fourth aims to establish the association between the transparency and accountability variables and the level of democracy of the countries in the sample.

4.1 Power of the SAIs and the Independence of Legislatures

As was previously described, the first test conducted in this study consisted of identifying the effectiveness of the SAIs upon the fiscal transparency of countries. The model used for this was presented in Equation 1. The "Wealth" variable was used as a control variable.

The results presented in Table 2 indicate that the variables that are related with the effectiveness of the SAIs and of the legislatures (Equation 1) were statistically significant at the 5% level. In addition, the model presented an adjusted R^2 of 0.5827 (58%) and the constant was not statistically significant. One should also highlight that there was a concern with controlling the model with regional dummy variables (East Asia and Pacific, Eastern Europa and Central Asia, Latin America and the Caribbean, Middle East and North of Africa, South of Asia, and Sub-Saharan Africa). These did not, however, turn out to be significant in the presented models and occasionally, even if they had some statistical significance, they made no sense in the tested models.

As for the assumptions underlying the presented regression, one can see in Table 3 that they were met, which points to the effectiveness of the theory stating that democratic and budgetary institutions with greater constitutional powers increase the fiscal transparency of countries.

Table 2. Regression result—equation 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Legislature Independence	0.261547	0.113030	2.313953	0.0489
Power of SAIs	0.508204	0.096519	5.265479	0.0000
GDP/*capita*	0.000303	0.000166	1.822520	0.0718
Constant	3.018251	4.537539	0.665175	0.5077

Note. Significance level of 5%.

Table 3. Tests of regression assumptions—equation 1

Assumption	Test	α used	α found
Normality	Jarque-Bera	0.05	0.3155
Autocorrelation	Breush-Godfrey (LM test)	0.05	0.3743
	Durbin-Watson	Not used	1.9387
Homoscedasticity	White	0.05	0.0467*
Perfect non colinearity	Variance inflation factor (VIF)	> 10	2.47
	Tolerance	> 0.05	0.4035

Note. * To correct the problem of hereroscedasticity, White's correction was applied and the analysis was conducted with robust standard errors.

4.2 The Influence of Transparency on Accountability Mechanisms

In this stage of the research, what was tested was whether, according to the theory, countries with greater transparency indicators also had more accountability mechanisms. It is believed that because more information is available, there will be more social monitoring and, consequently, more accountability.

When the Equation 2 calculations were worked out, the transparency variable (transp) turned out to be significant at the 5% level (sig. 0.0008) and with R^2 equal to 22%. This indicates that the theory seems to be correct, i.e., countries with a greater level of transparency have more accountability mechanisms. One should point out that the constant did not turn out to be significant.

Additionally, the assumptions of the regression were also tested and the results are shown in Table 4.

Table 4. Tests of regression assumptions—equation 2

Assumption	Test	α used	α found
Normality	Jarque-Bera	0.05	0.1301
Autocorrelation	Breush-Godfrey (LM test)	0.05	0.7461
	Durbin-Watson	Not used	1.8625
Homoscedasticity	White	0.05	0.2224
Perfect non colinearity	Variance inflation factor (VIF)	< 10	1.29
	Tolerance	> 0.05	0.7751

Therefore, as the regression assumptions were met and there were no model specification errors, one can infer that greater transparency increases social control and, consequently, results in more mechanisms for holding administrators responsible.

4.3 Influence of Transparency and of Accountability on the Democracy of Countries

Once again, in aiming to check the effectiveness of the theory, which mentions that greater transparency and accountability improve the level of democracy of countries, the tests shown in Equation 3 were conducted; the results of this are set out in Table 5.

Table 5. Regression result—equation 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Degree of Transparency	0.050752	0.006942	7.310891	0.0000
Accountability	0.004801	0.002826	1.699270	0.0928
GDP/capita	3.10E-05	1.37E-05	2.263034	0.0261
Constant	2.953560	0.276683	10.67487	0.0000

As can be seen in Table 5, the transparency variable turned out to be significant at 5%, whereas the accountability variable was significant only at the 10% level. Thus, one can state not only that transparency improves accountability, but that the two together improve the level of a country's democracy, since a greater and better level of information results in greater political or legal accountability and, consequently, in people having greater power to choose and punish their administrators.

One should point out that the model's R^2 was 66%, which indicates that a major portion of the variation in the level of democracy of the countries studied is explained by transparency and accountability jointly.

For one to be able to use a model to make inferences, it is necessary for the linear regression assumptions to be supported. Thus, in seeking to prove the effectiveness of the model and support for the regression assumptions, the same were tested. The results of this are shown in Table 6.

Table 6. Tests of regression assumptions—equation 3

Assumption	Test	α used	α found
Normality	Jarque-Bera	0.05	0.6162
Autocorrelation	Breush-Godfrey (LM test)	0.05	0.4702
	Durbin-Watson	Not used	1.9927
Homoscedasticity	White	0.05	0.051*
Perfect non-colinearity	Variance inflation factor (VIF)	> 10	3.00
	Tolerance	> 0.05	0.3323

Note. * To correct the problem of heteroscedasticity, White's correction was applied and the analysis was conducted with robust standard errors.

Given that all the assumptions were supported, one can infer from Equations 2 and 3 that transparency increases accountability and that the two together improve the level of democracy of countries. In this sense, one can state that transparency is a major factor for consolidating the accountability of countries and, therefore, that the population should demand it.

4.4 Influence of Transparency and Accountability on the Level of Corruption of Countries

Finally, aiming to identify the relevance of transparency and accountability in regard to corruption in countries, the calculations pertaining to Equation 4 were carried out. The coefficients, levels of significance and probabilities are shown in Table 7.

Table 7. Regression result—equation 4

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Degree of Transparency	0.023048	0.006743	3.417898	0.0010
Accountability	0.003080	0.002398	1.284747	0.2023
GDP/capita	8.639102	1.512260	5.712709	0.0000
Constant	1.559865	0.233530	6.679500	0.0000

As one can see in Table 7, the transparency, GDP/capita (wealth) and the constant were significant in the tested model. The accountability variable turned out not to be significant. As the regression R^2 was 67.92%, one can infer that transparency does indeed reduce corruption, as more information generates more social pressure and a stronger demand for more efficient democratic institutions.

The assumptions of this model were tested to verify its effectiveness and to enable us to make inferences as a result. As the model was approved in all the assumptions, one can use it to make inferences about the transparency of countries. The results of this are shown in Table 8.

Table 8. Tests of regression assumptions—equation 4

Assumption	Test	α used	α found
Normality	Jarque-Bera	0.05	0.0870
Autocorrelation	Breush-Godfrey (LM test)	0.05	0.1130
	Durbin-Watson	Not used	2.3501
Homoscedasticity	White	0.05	0.0132*
Perfect non colinearity	Variance inflation factor (VIF)	> 10	3.1172
	Tolerance	> 0.05	0.3208

Note. * To correct the problem of heteroscedasticity, White's correction was applied and the analysis was conducted with robust standard errors.

According to the previously presented models, one can infer that in countries where the budgetary process occurs under the supervision of SAIs and legislatures that are independent and with constitutionally defined powers, there is greater fiscal transparency, which is evidence of the relevance of these institutions for the fiscal transparency of countries.

In addition, the study indicated that countries with greater transparency have more accountability mechanisms and that both transparency and accountability are strongly associated with the level of democracy. Finally, one also saw that transparency reduces corruption, indicating the relevance of transparency to the democratic, economic and financial process of countries.

5. Conclusion

This study aimed to identify the effectiveness of SAIs and of legislatures on the fiscal (budgetary) transparency of the countries included in the Open Budget Index 2010 and, additionally, to verify the effectiveness of the theory, which states that greater transparency improves democracy and reduces corruption.

What was found was that, indeed, countries with more SAIs with greater independence and greater constitutionally defined power have greater transparency, since these institutions, thanks to their greater power and independence from the executive, can act on the basis of interests that are different from those of the executive, thus reducing conflicts of interest between those who govern and those who are governed.

Furthermore, the study also found that in those countries where the legislatures have independent budgetary processes, with powers to approve, veto and amend budgets, transparency was greater. This indicates that both individually and jointly the independence of the legislatures and SAIs helps to make the budgetary process more transparent, allowing the public to monitor it and, consequently, to demand accountability and to reward public administrators by keeping them in power in the positions to which they are elected.

Regarding the accountability mechanisms, what the study found is that they are associated with greater transparency, but with low representativeness. This finding should not be considered to be odd, since more accountability mechanisms will not imply greater transparency and the existence of the latter makes more accountability mechanisms possible, provided the democratic institutions of a country are efficient. Moreover, accountability can occur in the electoral process, as voters may punish public administrators by not reelecting them for a new term. Even though this last hypothesis was not tested in this study, there is evidence that the existence of information about the conduct of administrators at the head of public business does have an influence on the process of determining votes. The perception of corruption, when it acquires a public dimension, can interrupt political careers previously seen as promising.

In line with the theory, the study also found that when transparency increases, it brings democracy in its wake and, as a result of greater transparency and greater democracy, corruption tends to fall. Thus, besides confirming the effectiveness of the theories, the study also identified the effectiveness of the roles of the legislatures and of the SAIs in the transparency process, bringing into evidence the importance of transparency in the process of democratic consolidation, since it enables citizens to become aware of relevant information in order to punish or reward administrators and to demand from the existing institutions greater efficiency in the punishment of these administrators as far as concerns their misuse of public funds. Consequently, transparency leads to greater democracy and less corruption.

In this sense, the responsibility of citizens in the electoral process becomes increasingly important, because when they elect good representatives to parliament there is a possibility of a more consistent and independent legislature. Moreover, to consolidate transparency and accountability and to reduce corruption, it is essential for the people to take part in the political and information process. For this participation to become effective, people must have analytical and critical capabilities regarding the political and administrative process, in order to punish administrators based on sound information.

Finally, it is suggested that future research should investigate whether countries with greater transparency have fairer costs of raising financial resources than less transparent countries; whether divulging deficits and surpluses influences the results of elections; and how the contractual relationship between states and international organisms influences budgetary transparency.

References

Alt, J. E., & Lassen, D. D. (2006). Fiscal transparency, political parties, and debt in OECD countries. *European Economic Review*, *50*(6), 1403–1439. http://dx.doi.org/10.1016/j.euroecorev.2005.04.001

Alt, J. E., Lassen, D. D., & Rose, S. (2006). The Causes of Fiscal Transparency: Evidence from the U.S. States. *IMF Staff Papers*, *53*, 30–57. Retrieved from http://www.jstor.org/stable/30036021

Arantes, R. B., Loureiro, M. R., Couto, C., & Teixeira, M. A. C. (2010). Controles democráticos sobre a administração pública no Brasil. In M. R. Loureiro, F. L. Abrucio, & R. S. Pacheco (Eds.), *Burocracia e Política no Brasil: Desafios para a ordem democrática no século XXI* (pp. 109–147). Rio de Janeiro: FGV.

Ball, C. (2009). What is Transparency? *Public Integrity*, *11*(4), 293–308. http://dx.doi.org/10.2753/PIN1099-9922110400

Bernoth, K., & Wolff, G. B. (2008). Fool the markets? Creative accounting, fiscal transparency and sovereign risk premia. *Scottish Journal of Political Economy*, *55*(4), 465–487. http://dx.doi.org/10.1111/j.1467-9485.2008.00462.x

Bessette, J. M. (2001). Accountability: Political. In N. J. Smelser & P. B. Baltes (Eds.), *International Encyclopedia of the Social & Behavioral Sciences* (pp. 38–41). Amsterdam: Elsevie. http://dx.doi.org/10.1016/B0-08-043076-7/01091-3

Chandy, L., & Kharas, H. (2011). Why Can't We All Just Get Along? The Practical Limits to International Development Cooperation. *Journal of International Development*, *23*(5), 739–751. http://dx.doi.org/10.1002/jid.1797

Colecchia, A., & Schreyer, P. (2002). The contribution of information and communication technologies to economic growth in nine OECD countries. *OECD Economic Studies*, *34*, 153–171. Retrieved from http://www.oecd.org/economy/productivityandlongtermgrowth/2496902.pdf

Cuillier, D., & Piotrowski, S. J. (2009). Internet information-seeking and its relation to support for access to government records. *Government Information Quarterly*, *26*(3), 441–449. http://dx.doi.org/10.1016/j.giq.2009.03.001

Florini, A. (2007). The Battle over transparency. In A. Florini (Ed.), *The Right to Know: Transparency for an Open World* (pp. 1–16). New York: Columbia University Press.

Fox, J. (2006). Government transparency and policymaking. *Public Choice*, *131*(1–2), 23–44. http://dx.doi.org/10.1007/s11127-006-9103-3

Grigorescu, A. (2003). International Organizations and Government Transparency: Linking the International and Domestic Realms. *International Studies Quarterly*, *47*(4), 643–667. http://dx.doi.org/10.1046/j.0020-8833.2003.04704003.x

Hagen, J. V. (2007). Budgeting Institutions for Better Fiscal Performance. In A. Shah (Ed.), *Budgeting and*

Budgetary Institutions (pp. 27–51). Washington DC: The Wolrd Bank.

Hall, P. A., & Taylor, R. C. R. (2003). As três versões do neo-institucionalismo. *Lua Nova: Revista de Cultura E Política*, *58*, 193–223. http://dx.doi.org/10.1590/S0102-64452003000100010

Hallerberg, M., & Wolff, G. B. (2008). Fiscal institutions, fiscal policy and sovereign risk premia in EMU. *Public Choice*, *136*(3–4), 379–396. http://dx.doi.org/10.1007/s11127-008-9301-2

Heald, D. (2003). Fiscal Transparency: Concepts, Measurement and UK Practice. *Public Administration*, *81*(4), 723–759. http://dx.doi.org/10.1111/j.0033-3298.2003.00369.x

Heppke-Falk, K. H., & Wolff, G. B. (2008). Moral Hazard and Bail-Out in Fiscal Federations: Evidence for the German Lnder. *Kyklos*, *61*(3), 425–446. http://dx.doi.org/10.1111/j.1467-6435.2008.00411.x

Holzner, B., & Holzner, L. (2006). *Transparency in global change: the vanguard of the open society*. Pittsburgh: University of Pittsburgh Press.

Hood, C. (2006). Transparency in historical perspective. In C. Hood & D. Heald (Eds.), *Transparency: The Key to Better Governance?* (pp. 3–23). New York: Oxford University Press. http://dx.doi.org/10.5871/bacad/9780197263839.003.0001

IBP. (2010). International Budget Partnership. *Open Budget Survey 2010*. Retrieved March 18, 2014, from http://internationalbudget.org/what-we-do/open-budget-survey/full-report/

Kaufman, D. (2005). *Special Report, Transparency Matters: The "Second Generation" of Institutional Reform'*.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2005). Governance Matters IV: Governance Indicators for 1996–2004. *SSRN Electronic Journal*. http://dx.doi.org/10.2139/ssrn.718081

Kopits, G., & Craig, J. (1998). *Transparency in government operations*. Retrieved from http://www6.iadb.org/leg/Seminar/Documents/Transparency Kopitz Eng.pdf

Matias-Pereira, J. (2002). Reforma do Estado e transparência: estratégias de controle da corrupção no Brasil. Retrieved from http://repositorio.bce.unb.br/handle/10482/940

Meijer, A. (2009). Understanding modern transparency. *International Review of Administrative Sciences*, *75*(2), 255–269. http://dx.doi.org/10.1177/0020852309104175

Mulgan, R. (2007). Truth in government and the politicization of public service advice. *Public Administration*, *85*(3), 569–586. http://dx.doi.org/10.1111/j.1467-9299.2007.00663.x

O'Neill, O. (2006). Transparency and the ethics of communication. In C. Hood & D. Heald (Eds.), *Transparency: The Key to Better Governance?* (Vol. 2, pp. 75–90). New York: Oxford University Press. http://dx.doi.org/10.5871/bacad/9780197263839.003.0005

Oliver, R. E. (2004). *What is Transparency*. New York: McGraw Hill Professional.

Pallas, C. L., & Urpelainen, J. (2011). NGO monitoring and the legitimacy of international cooperation: A strategic analysis. *The Review of International Organizations*, *7*(1), 1–32. http://dx.doi.org/10.1007/s11558-011-9125-6

Pasquier, M., & Villeneuve, J. P. (2007). Organizational barriers to transparency: a typology and analysis of organizational behaviour tending to prevent or restrict access to information. *International Review of Administrative Sciences*, *73*(1), 147–162. http://dx.doi.org/10.1177/0020852307075701

Philipps, L., & Stewart, M. (2008). Defining Fiscal Transparency: Transnational Norms, Domestic Laws and the Politics of Budget Accountability. *CLPE Research Paper*, *4*(7). Retrieved from http://www.celrl.law.unimelb.edu.au/download.cfm?downloadfile=748829F0-A60A-11E1-8CF00050568D0140&typename=dmFile&fieldname=filename

Piotrowski, S. J. (2007). *Governmental Transparency in the Path of Administrative Reform*. Albany: State University of New York Press.

Prado, O., M., R. M., & Diniz, E. (2012). Governo eletrônico e transparência: olhar crítico sobre os portais do governo federal brasileiro. In J. A. G. Pinho (Ed.), *Estado, sociedade e interações digitais: expectativas democráticas* (pp. 13–39). Salvador: Editora EDUFBA.

Przeworski, A. (2010). *Democracy and the limits of self-government* (9th ed.). New York: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511778490

Relyea, H. C. (2009). Federal freedom of information policy: Highlights of recent developments. *Government*

Information Quarterly, *26*(2), 314–320. http://dx.doi.org/10.1016/j.giq.2008.12.001

Ribeiro, R. J. (2000). *A sociedade contra o social: o alto custo da vida pública no Brasil*. São Paulo: Companhia das Letras.

Santiso, C. (2004). Legislatures and budget oversight in Latin America: Strengthening public finance accountability in emerging economies. *OECD Journal on Budgeting*, *4*(2), 47–77. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.177.2359&rep=rep1&type=pdf

Sartori, G. (1994). *A teoria democrática revisitada*. São Paulo: Editora Ática.

Schedler, A. (1999). Conceptualizing accountability. In A. Schedler, L. Diamond, & M. F. Plattner (Eds.), *The self-restraining state. Power and accountability in new democracies* (pp. 13–28). London: Lynne Rienner Publishers.

Shuler, J. A., Jaeger, P. T., & Bertot, J. C. (2010). Implications of harmonizing the future of the federal depository library program within e-government principles and policies. *Government Information Quarterly*, *27*(1), 9–16. http://dx.doi.org/10.1016/j.giq.2009.09.001

Silva, M. F. G. (2001). *A economia política da corrupção* (Vol. 2). São Paulo. Retrieved from http://www.transparencia.org.br/docs/MFernandes1.pdf

Speck, B. W. (2002). *Caminhos da transparência* (p. 516). Campinas: Unicamp.

Thompson, J. B. (2002). *O escândalo político*. Petrópolis: Editora Vozes.

Notes

Note 1. Hagen (2007) highlighted that budgetary institutions consist of all the rules and regulations according to which budgets are prepared, approved and implemented.

Note 2. Acronym for *Supreme Audit Institution*. In Brazil, this is the Federal Accounts Court (*Tribunal de Contas da União—TCU)*. Regarding the institutional development and constitutional duties of the *TCU*, see Teixeira (2010).

Note 3. The *Open Budget Index* is an independent piece of research conducted biannually by the Open Budget Partnership and its objective is to build a comparative and regular measure of budgetary transparency and accountability worldwide.

Appendix

Appendix 1. List of countries in the sample

N.	Country	N.	Country	N.	Country
1	Afghanistan	32	Spain	63	Norway
2	South Africa	33	United States	64	New Zealand
3	Albania	34	Phillippines	65	Papua New Guinea
4	Germany	35	France	66	Pakistan
5	Angola	36	Ghana	67	Peru
6	Saudi Arabia	37	Georgia	68	Poland
7	Algeria	38	Guatemala	69	Portugal
8	Argentina	39	Equatorial Guinea	70	United Kingdom
9	Azerbaijan	40	Honduras	71	Democratic. Rep. Congo
10	Bangladesh	41	Yemen	72	Republic of Kyrgystan
11	Bolivia	42	India	73	Dominican Republic
12	Bosnia- Herzegovina	43	Indonesia	74	Tchek Republic
13	Botswana	44	Iraq	75	Romania
14	Brazil	45	Italy	76	Rwanda
15	Bulgaria	46	Jordan	77	Russia

16	Burkina Faso	47	Kenia	78	Senegal
17	Cameroon	48	Lebanon	79	Serbia
18	Cambodia	49	Liberia	80	Sri lanka
19	Kasakhstan	50	Macedonia	81	Sudan
20	Chad	51	Malasia	82	Sweden
21	Chile	52	Malawi	83	Thailand
22	China	53	Mali	84	Tanzania
23	Colombia	54	Morroco	85	East timor
24	South korea	55	Mexico	86	Trinidad and Tobago
25	Costa Rica	56	Mozambique	87	Turkey
26	Croatia	57	Mongolia	88	Ukraine
27	Egypt	58	Namibia	89	Uganda
28	El Salvador	59	Nepal	90	Venezuela
29	Ecuador	60	Nicaragua	91	Vietnam
30	Slovakia	61	Niger	92	Zambia
31	Slovenia	62	Nigeria		