Political determinants of fiscal transparency: a panel data empirical investigation

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1. Introduction

Over the last twenty years, a considerable amount of research focused on fiscal transparency and supported the idea that it matters for governance (Heald, 2013). Although fiscal transparency is "more often invoked than defined" (Hood, 2006), p.3) a number of alternative definitions have been provided by scholars (James E Alt & Lassen, 2006a, 2006b; Bastida & Benito, 2007; Kopits & Craig, 1998; Poterba & Von Hagen, 1999), all basically sharing the idea that it consists in the timely and systematic disclosure of internationally comparable and reliable information concerning governments' budget data (Kopits & Craig, 1998).

The provision of information concerning governments' financial position may significantly reduce the opportunistic behavior of policymakers by minimizing voters' fiscal illusions (James E Alt & Lassen, 2006a, 2006b; Debrun & Kumar, 2007; Von Hagen & Harden, 1996). Visibility of public expenditure and revenue makes policymakers accountable for their actions, thus promoting good governance, alleviating corruption and securing better resource allocation (Benito & Bastida, 2009; Hameed, 2005; Haque & Neanidis, 2009). For these reasons, fiscal transparency "is widely regarded as an important precondition for macroeconomic fiscal sustainability, good governance, and overall fiscal rectitude. [and] is a necessary condition for sound economic policy" (de Renzio & Wehner, 2015; Kopits & Craig, 1998), p. 1-2). Moreover, fiscal transparency is supposed to be positively evaluated by financial markets and therefore should have a positive impact on credit ratings and lower the cost of sovereign borrowing (Arbatli & Escolano, 2015; Bernoth & Wolff, 2008; T. Wang, Shields, & Wang, 2014).

A wide variety of measures of fiscal transparency have been proposed by international organizations (such as the International Monetary Fund, the Organization for Economic Co-operation and Development (OECD) and non-governmental organizations such as the International Budget Partnership (IBP), Transparency International). Also some scholars provided their own measures by relying on available information about national budgetary practices and fiscal disclosure (Andreula & Chong, 2015; Arbatli & Escolano, 2015; Bastida & Benito, 2007; Bernoth & Wolff, 2008; Dabla-Norris et al., 2010; Hameed, 2005; Weber, 2012).

The evidence brought by these many indexes reveals that fiscal transparency is rather heterogeneous across countries. The investigation of the sources of such an heterogeneity, indeed, motivated a number of researches devoted to the identification of the determinants of fiscal transparency. Nevertheless, most of the existing empirical literature on this topic is based on cross-sectional (James E. Alt, Lassen, & Rose, 2006; Andreula & Chong, 2015; Bastida & Benito, 2007; Harrison & Sayogo, 2014; Ríos,

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Bastida, & Benito, 2014; Tejedo-Romero & de Araujo, 2015; Wehner & de Renzio, 2013) data and this definitely complicates the identification of determinants of fiscal transparency.

In this paper we take the analysis of the determinants of fiscal transparency one step further by performing a panel data analysis (2003-2013) that considers a wide set of democracies and exploits the fiscal transparency measure recently provided by the IMF database on fiscal reporting (R. F. Wang, Irwin, & Murara, 2015). By relying on a longitudinal structure we are able to propose static and dynamic panel regression models that allow to disentangle the causal effect of different variables on fiscal transparency.

Our analysis is specifically focused on the identification of political determinants of fiscal transparency. Indeed, since fiscal reforms towards the path of transparency have to be enforced by political actors, the investigation of political variables that trigger fiscal transparency is crucial in order to understand sources of transparency enhancements. As James E. Alt et al. (2006) suggest, "although politicians may not have incentive to increase transparency, it nevertheless does sometimes happen" (p.34). In this perspective, our investigation is aimed at identifying the political setting under which this happens.

Our analysis expressly focuses on three variables that contribute to the definition of this political setting. First, ideological orientation of government. The existing literature has found some evidence that ideology matters in conditioning fiscal transparency (Sol, 2013) which, nevertheless, has been contradicted by other studies (James E. Alt et al., 2006; Ríos et al., 2014). Second, government control over the legislature. There are reasons to believe that "when leaders wield control over the parliamentary agenda they typically resist or weaken transparency [while] when leaders lack control over the parliamentary agenda, they become more likely to yield to strong transparency measures" (Michener, 2015). We test this hypothesis by looking at the effect on fiscal transparency exerted by the share of legislative seats held by government parties. Third, political competition. Part of the existing literature suggests that fiscal transparency arises as the result of competition among political parties since alternative political forces ask for tools of monitoring spending behavior of governments (James E Alt & Lassen, 2006a, 2006b; James E. Alt et al., 2006; Wehner & de Renzio, 2013). Nevertheless, a negative effect of political competition on fiscal transparency is also possible since the higher political competition is, the higher is governments' incentive to limit the disclosure of information potentially usable to criticize their actions (Messick, 2002). Our analysis provides a test of these alternative hypotheses about the impact of political competition on fiscal transparency.

According to our results, political factors do cause the evolution of fiscal transparency over time. In line with the predictions made by the literature, we find that government control over the Parliament exerts a negative causal impact on fiscal transparency. Furthermore we find that legislature fragmentation exerts a negative effect on fiscal transparency which is consistent with the idea that governments react to political competition by reducing the accessibility to information. Finally, while government ideology is found to be correlated with fiscal transparency in our static models, with left-wing parties definitely more positively oriented towards transparency, dynamic models do not confirm it.

These results are potentially interesting for both citizens and international organizations who investigate how to trigger improvements in the provision of information by their governments or to remove obstacles that impede it.

The remainder of the paper is organized as follows: section 2 provides a brief survey of the existing literature on fiscal transparency determinants. Data used in our empirical elaborations and the methodology applied in order to carry out the analysis are presented in section 3. Section 4, instead, illustrates and discusses the results obtained through our elaborations. Finally, section 4 concludes.

2. Politics and fiscal transparency: what do we already know?

The existing literature on factors driving disclosure of fiscal information may be divided into two main branches. On the one hand, papers focusing on within country fiscal transparency and its determinants, based on regional or local data (looking at recently released studies, Spanish data were analyzed by: Esteller-Moré and Polo Otero (2012); Gandía and Archidona (2008); García and García-García (2010); Guillamón, Bastida, and Benito (2011); Sol (2013), U.S. State-level data were considered by James E. Alt et al. (2006); Chinese data were investigated by Deng, Peng, and Wang (2013); New Zealand data were taken into account by Laswad, Fisher, and Oyelere (2005); Brazilian States were analyzed in Zuccolotto and Teixeira (2014)). On the other hand, country-level analyses (among those recently released: Andreula and Chong (2015); de Renzio and Angemi (2012); Harrison and Sayogo (2014); Ríos et al. (2014); Wehner and de Renzio (2013), which are definitely less widespread.

Alongside economic and institutional factors, such as economic wealth, financial condition of the public authority and type of legal system, political factors are also considered among main drivers of fiscal transparency. Indeed, fiscal transparency reforms are carried out by governments and the political setting in which governments act can incentivize them or alternatively discourage them from promoting the disclosure of fiscal information.

The existing literature suggests that three main features of the political system have the most significant impact on fiscal transparency: ideological orientation of government, government control over the legislature and political competition.

(a) Ideological orientation of government

The evidence about the effect of political orientation on fiscal transparency is mixed. While some contributions do not find any effect of ideology on fiscal disclosure (James E. Alt et al., 2006; Ríos et al., 2014) others support the opposite. Piotrowski and Van Ryzin (2007) show that citizens' ideology matters for transparency of local governments, Guillamón et al. (2011) find that the right-wing ideology of municipal ruling party negatively affects transparency and Sol (2013) finds a similar result. Indeed this provides support to the argument by Ferejohn (1999) according to which left-wing governments enhance transparency to defend a larger public sector. Hence the following hypothesis can be formulated:

H1: Left-wing ideology of governments has a positive effect on fiscal transparency

(b) Government control over the Legislature

In governments' perspective, the benefits arising from secrecy may outweigh the cost of information openness (Hazell & Worthy, 2010; Michener, 2015; Roberts, 2006). Therefore "when leaders wield control over the parliamentary agenda they typically resist or weaken transparency [while] when leaders lack control over the parliamentary agenda, they become more likely to yield to strong transparency measures" (Michener, 2015). Following this reasoning, we expect that government support in parliaments, as measured by the seat share of government's parties (GOV_SUP), negatively affects fiscal transparency:

H2: The stronger is the ruling parties' control over the Legislature, the less likely fiscal transparency measures are promoted.

(c) Political competition

Political competition can also be a strong predictor of fiscal transparency. Indeed, parties that compete with the government or within the government may call for more transparency in order to enhance their control over governmental activities. Not surprisingly, empirical analyses do find a beneficial effect of political competition on fiscal disclosure, albeit with some exceptions (Zuccolotto & Teixeira, 2014). James E. Alt et al. (2006) as well as Ríos et al. (2014) observe that political competition tends to increase fiscal transparency. Wehner and de Renzio (2013) find that partisan fragmentation positively influences budgetary information disclosure when free and fair elections take place. Andreula and Chong (2015) show that political competition exerts a positive role on fiscal transparency.

On the basis of these contributions, the following hypothesis is formulated:

H3: Transparency is enhanced in highly fragmented party systems.

2 Data and empirical approach

A number of country-level fiscal transparency indexes, provided by both international institutions and academic researchers, exists. All these indexes measure countries' performance in fiscal transparency, namely in dimensions that contribute to "public openness in government institutions, fiscal policy intentions, public sector accounts, indicators, and forecasts" (Kopits & Craig, 1998).

Although there is a proliferation of available transparency measures, the unevenness in country and time interval coverage has limited the spread of studies on country-level fiscal transparency determinants (Heald, 2013).

Majority of empirical analyses that investigate fiscal transparency determinants and effects use Open Budget Survey (OBS) data in order to measure transparency (de Renzio & Angemi, 2012; Harrison & Sayogo, 2014; Ríos et al., 2014; Wehner & de Renzio, 2013).

Other studies, instead, relied on other sources to develop their own indexes of fiscal transparency. Some of these studies are based on the IMF's fiscal transparency Reports on the Observance of Standards and Codes (ROSC) (Andreula & Chong, 2015; Hameed, 2005). Others (Dabla-Norris et al., 2010) use multiple sources such as the International Budget Partnership (IBP), Public Expenditure and Financial Accountability (PEFA) reports and ROSC. Scholars also used measures calculated starting from countries' compliance with the Organization for Economic Co-operation and Development (OECD) requirements (Bastida & Benito, 2007) or from the OECD/World Bank survey of budget practices (Bernoth & Wolff, 2008). James E Alt and Lassen (2006b) index is also partially constructed

on variables belonging to the OECD survey but, in order to derive an aggregate indicator they also rely on survey responses of a research specific questionnaire.

Finally, a group of studies propose alternative ways to measure transparency. This is the case of Debrun and Kumar (2007) whose transparency index aims to measure absence of creative accounting calculated as 1 minus the median coefficient of correlation (in absolute value, 15-year rolling correlation) between stock-flow adjustments and the overall budget balance in percentage of GDP over 2004-1990. Kaufmann and Bellver (2005) using multiple sources, construct an overall transparency index based on the weighted average of two sub- indices of transparency (namely economic/institutional transparency and political transparency), calculated by using Unobserved Component Model (UCM).

Differently from these previous empirical analyses, ours is drawn on a fiscal transparency measure provided by the IMF database on fiscal reporting (R. F. Wang et al., 2015). Consistently with the availability of the political variables we are interested in studying, this measure is available for 36 countries[1] observed over the period 2003-2014 for a total of 396 observations. The major benefit arising from using this measure of fiscal transparency is that it is available for a wide set of countries and for multiple years; indeed, this allows to build a panel dataset whose use in an empirical analysis is crucial in order to provide insights on the causal link connecting political variables to fiscal transparency.

The fiscal transparency measure provided by R. F. Wang et al. (2015) is an aggregate index based on information reported to the IMF's Statistic Department by member countries. It ranges from 1 to 100, in ascending order of fiscal transparency. Its trend for each country included in the dataset can be seen in fig. 1.

[FIG. 1]

While some countries show the same level of fiscal transparency during the years covered, most countries experienced some variation of fiscal reporting, represented both by increases and decreases of GFS transparency index. As shown in tab. 1 the average level of the GFS indicator is 49.80, with a higher standard deviation between (18.44) than within (15.29) countries. From 2003 to 2013 the cross-state GFS score increases on average from 36.42 to 56.33, as shown by the average trend by year in fig. 2.

[TAB. 1]

[FIG. 2]

[1] Countries are: Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, USA, United Kingdom.

In order to study the political drivers of fiscal transparency we build a set of covariates to be used in our regression analyses. More specifically, three variables were selected in order to measure the political drivers of fiscal transparency whose impact has been hypothesized in the previous section.

A first variable observes cabinet ideological composition. As it is reported in tab.2, this is a categorical variable that has five modalities: hegemony of right-wing, dominance of right wing, balance of power between left and right, dominance of social-democratic/left parties and hegemony of social-democratic/left parties.

A second variable measures government control over the parliament. This control is measured by looking at the share of seats in the legislature held by parties in government. In our sample the lowest value observed is 0%, which is found for Italy in 2012, when a technocratic government took office with the mandate of facing the economic crisis. The governments with the highest control over the Parliament in terms of seat held is the one of Switzerland in 2003, that reports the value of 86.44%.

In order to measure political competition, we followed Wehner and de Renzio (2013) and use one variable that captures parties fractionalization in the legislature. More specifically we relied on the original Rae legislative fractionalization index (Rae, 1968) whose original values ranging between 0 and 1 were multiplied by 100 to make the index consistent with the scale of the dependent variable. Since it is based on the share of seats of parties, lower values indicate less parties sitting in the legislative assembly, to a minimum of 0 in a hypothetic single party with 100% of seats composition.

Our set of political regressors is completed by one dummy taking the value of one in case of electoral years. Since over the time span covered by this dataset there have been elections and changes in governments, a control for electoral years seems appropriate.

[TAB. 2]

Additional socio-economic controls used are GDP per capita (PPP constant 2011 international $) from the World Bank[2], and GDP growth, fiscal deficit and population, whose source is again the Comparative Political Dataset.

[TAB. 3]

The basic specification of the model used to test the effect of our interest variables on fiscal transparency can be written as:

$$GFS_{it} = a_i + \beta_1 POLVAR_{it} + \beta_2 POLVAR_{it-3} + \beta_3 X_{it} + \delta_t YEAR_t + \upsilon_{it}$$

where GFS_{it} is the level of fiscal transparency of country i in year t, a_i are country fixed effect, $POLVAR_{it}$ is a vector including our political variables of interest observed in country i in year t (RAE,

[2] Extracted January 14th 2016.

GOV_SUP, GOV_PARTY). *POLVAR* is a vector including our political variables observed at *t* and *t-3* "in order to capture a slower pace of institutional change, being fiscal transparency an institutional device" (Debrun & Kumar, 2007). X_{it} is a vector of control variables for each country-year, $YEAR_t$ are *t* dummy variables for each year of observation and υ_{it} is the error term. The modified Wald test for groupwise heteroskedasticity in fixed regression model results in a rejection of the null hypothesis of homoskedasticity of the error terms, therefore the regressions were performed using robust standard errors. Indeed the lagged variables prevent the correlation of the error term with the contemporaneous variable, which would lead to biased estimates, but at the same time the inclusion of lags restricts the time dimension, and force us to perform the analysis on fewer observations.

Dynamic model

In order to assess a causal relation between the dependent and the independent variable we can exploit the longitudinal nature of our data performing a dynamic analysis. Furthermore testing the static model for serial correlation strongly confirms that the current values of GFS depend on past values. The dynamic panel models are mostly based on the Arellano-Bond (AB) estimation, which uses the generalized method of moments (GMM) on a set of instrumental variables, which usually are the differenced regressors. The Arellano-Bover or Blundell-Bond estimator improves AB by making the additional assumption that first differences of instruments are uncorrelated with the fixed effects. This estimator – called system GMM – builds a system of two equations and allows the introduction of more instruments, improving efficiency. Here we use two-step estimation with Windmeijer corrected standard errors, which is seemingly superior to cluster-robust one-step estimation (Roodman, 2009). The specification may be written as:

$$GFS_{it} = a_i + \gamma_1 GFS_{it-1} + \beta_1 POLVAR_{it} + \beta_2 POLVAR_{it-3} + \beta_3 X_{it} + \delta_t YEAR_t + \upsilon_{it}$$

which is equal to the notation of the static model except for the inclusion of the first lag of GFS in order to account for the first-order autocorrelation of the dependent variable.

In building our specification we are aware that we stand on a thin line, since a smaller number of instruments produces a smaller bias, while a full set of instrument almost always increases the efficiency of the estimates. Furthermore we have to face a issue related with the size of our sample and the number of interest variables. Indeed the number of instruments grows with the number of variables and is quadratic in T, while it has to be at least lower than the number of units in the dataset – which is 36. This drives us to excogitate a solution both on the number of instruments and on the number of variables included in the model. As for what concerns the former we reduce the lags to be used as instruments and collapse the instruments matrix. For addressing the latter we limit the number of variables included in the specification analyzing one interest variable at a time, while keeping the macroeconomic controls described above.

3 Findings

Static model

In the static model we test the current and third lags of a set of our political variables of interest. The results are shown in tab. 4. The current values of GOV_PARTY indicate that a dominance and an hegemony of left parties are associated with higher values of transparency, even though the amplitude of this link is not tightly estimated (10% significant). These results are in line with Ríos et al. (2014) and

confirm that ideology matters in fiscal policy concerns. However, the lagged values are not statistically different from zero, so as the coefficient associated with the circumstance of an election. The most precise point estimate is the coefficient of the lagged value of government support, which is negative and significant at 5%. Governing parties are less prone to fiscal transparency (confirming H2) as, following James E. Alt et al. (2006) argument, incumbent may decide to maintain a low-transparency regime in order to enjoying the informational advantages afforded by low transparency. Interestingly the coefficient for the current value of RAE is significant and negative, while the lagged value is associated to a positive and significant coefficient (both at 10%). This result, albeit not in line with majority of empirical literature, does not confirm our third hypothesis and suggests that fractionalized legislatives are more prone to fiscal profligacy and have less interest in pursuing fiscal transparency (Roubini & Sachs, 1989).

Dynamic model

In the static model an hegemony and a dominance of left parties was associated with a positive and significant coefficient. The dynamic version of the model raises some computational issues, since the categorical nature of this interest variable increases considerably the number of instruments, so that increased caution is needed. Using the same specification we used for legislative fractionalization and government support indeed the number of instruments explodes to 60, well beyond the rule of thumb represented by the number of subjects (Roodman, 2009). Using just the difference of the second lag for GOV_PARTY the number of instruments is still too high (44 instruments), so we use less lags of the dependent and the control variables for the estimation of the system and the levels equation, which results in 37 instruments. However with this specification the coefficients are very poorly estimated, and their values are not statistically different from zero.

The effect of strength of government support keeps the same negative sign as the static model, however its statistical precision becomes a bit lower, since in this specification the point estimate of the associated coefficient is significant just at 10%. Indeed as above this model identifies a negative causal effect of the support of government three years before and the current level of fiscal transparency. The effect is lower than the one of fractionalization but still notable, as a one standard deviation increase of government support cause the fiscal transparency index to be lower of 1.18 points. Along our second hypothesis our results confirm that in stronger governments the benefits of secrecy outweigh the cost of budgetary disclosure.

The coefficients associated with the current and lagged index of fractionalization keep the same signs as the static model, however the positive association with the three times lagged value is not statistically different from zero, while the negative coefficient of the current value is significant at the 5%. Indeed we detect a causal nexus between legislative fractionalization and fiscal transparency: a higher fractionalization will cause a lower fiscal transparency. The magnitude of this effect is such that an increase of one standard deviation of the index of fractionalization causes a 5.5 point decrease of fiscal transparency index. Against our third hypothesis we conclude that more parties in parliament imply less transparency, as the fragmentation problem suggests (Leachman, Rosas, Lange, & Bester, 2007). Indeed when legislative fractionalization is high the opposition parties may not be a credible threat to incumbents (Berliner, 2014), which may choose secrecy over transparency.

[TAB. 4]

4 Conclusions

This paper examined the determinants of fiscal transparency in 36 countries from 2003 to 2013. Thanks to a recently released fiscal transparency index (R. F. Wang et al., 2015), a methodology is adopted that improve previous analysis by examining the causes of fiscal disclosure with a longitudinal analysis.

In summary, some interesting remarks can be drawn from our results, especially from the dynamic models the estimates of which allow us to identify causal links. In line with Alt et al. (2006), a higher control of the government over the parliament will lead to lower fiscal transparency, for the higher benefits deriving from secrecy. Contrary to previous findings (Alt et al., 2006; Andreula & Chong, 2015) fractionalized legislatives have less interest in pursuing fiscal transparency, which suggests that fiscal transparency is affected by the "fragmentation problem" (Leachman et al., 2007). Indeed when legislative fractionalization is high the opposition parties may not be a credible threat to incumbents (Berliner, 2014), which may choose secrecy over transparency. Further, according to our findings GOV_SUP does not immediately exercise its influence over fiscal transparency, suggesting that this factor mostly matters in the policy design phase. On the other hand, political competition is found to immediately impact on fiscal transparency, suggesting that this factor matters in the policy implementation phase. Finally, no causal interpretation can be inferred from the analysis on the results for cabinet ideology, although the results of the static model suggest that the presence of left-wing governments is correlated with higher fiscal transparency.

Our analysis helps to shed more light on the effective causes of fiscal transparency by improving upon previous results. A better understanding of the complex interplay between politics and budgetary disclosure is important for two reasons: first, it will help public managers and reformers to determine under what conditions they can reasonably expect fiscal transparency to emerge as a common practice and how to improve the political setting which give rise to better fiscal governance agenda. Second, it will enable citizens to judge policymakers' effort in improving fiscal transparency by observing the underlying political environment.

References

Alt, J. E., & Lassen, D. D. (2006a). Fiscal transparency, political parties, and debt in OECD countries. *European Economic Review, 50*(6), 1403-1439.

Alt, J. E., & Lassen, D. D. (2006b). Transparency, political polarization, and political budget cycles in OECD countries. *American Journal of Political Science, 50*(3), 530-550.

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.

Andreula, N., & Chong, A. (2015). Do good institutions improve fiscal transparency? *Economics of Governance*, 1-23. doi: 10.1007/s10101-015-0175-8

Arbatli, E., & Escolano, J. (2015). Fiscal Transparency, Fiscal Performance and Credit Ratings. *Fiscal Studies, 36*(2), 237-270. doi: 10.1111/1475-5890.12051

Bastida, F., & Benito, B. (2007). Central government budget practices and transparency: an international comparison. *Public Administration, 85*(3), 667-716.

Benito, B., & Bastida, F. (2009). Budget transparency, fiscal performance, and political turnout: An international approach. *Public Administration Review, 69*(3), 403-417.

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. doi: 10.1111/j.1467-9485.2008.00462.x

Dabla-Norris, E., Allen, R., Zanna, L.-F., Prakash, T., Kvintradze, E., Lledo, V., . . . Gollwitzer, S. (2010). Budget institutions and fiscal performance in low-income countries. *IMF working papers*, 1-56.

de Renzio, P., & Angemi, D. (2012). Comrades or culprits? Donor engagement and budget transparency in aid-dependent countries. *Public Administration and Development, 32*(2), 167-180. doi: 10.1002/pad.1603

de Renzio, P., & Wehner, J. (2015). The impacts of fiscal openness: A review of the evidence. *Available at SSRN 2602439*.

Debrun, X., & Kumar, M. (2007). The discipline-enhancing role of fiscal institutions: theory and empirical evidence. *IMF working papers*, 1-45.

Deng, S., Peng, J., & Wang, C. (2013). Fiscal transparency at the Chinese provincial level. *Public Administration, 91*(4), 947-963.

Esteller-Moré, A., & Polo Otero, J. (2012). Fiscal Transparency: (Why) does your local government respond? *Public Management Review, 14*(8), 1153-1173.

Ferejohn, J. (1999). Accountability and authority: toward a theory of political accountability. *Democracy, accountability, and representation, 131*, 133.

Gandía, J. L., & Archidona, M. C. (2008). Determinants of web site information by Spanish city councils. *Online Information Review, 32*(1), 35-57. doi: doi:10.1108/14684520810865976

García, A. C., & García-García, J. (2010). Determinants of Online Reporting of Accounting Information by Spanish Local Government Authorities. *Local Government Studies, 36*(5), 679-695. doi: 10.1080/03003930.2010.506980

Guillamón, M.-D., Bastida, F., & Benito, B. (2011). The Determinants of Local Government's Financial Transparency. *Local Government Studies, 37*(4), 391-406. doi: 10.1080/03003930.2011.588704

Hameed, F. (2005). *Fiscal transparency and economic outcomes*: International Monetary Fund.

Haque, M. E., & Neanidis, K. C. (2009). Fiscal Transparency and Corruption. *Centre for Growth & Business Cycle Research Discussion Paper Series, 114*.

Harrison, T. M., & Sayogo, D. S. (2014). Transparency, participation, and accountability practices in open government: A comparative study. *Government Information Quarterly, 31*(4), 513-525. doi: http://dx.doi.org/10.1016/j.giq.2014.08.002

Hazell, R., & Worthy, B. (2010). Assessing the performance of freedom of information. *Government Information Quarterly, 27*(4), 352-359. doi: http://dx.doi.org/10.1016/j.giq.2010.03.005

Heald, D. (2013). Strengthening Fiscal Transparency. In R. Allen, R. Hemming, & B. H. Potter (Eds.), *The International Handbook of Public Financial Management* (pp. 711-741). London: Palgrave Macmillan UK.
Hood, C. (2006). *Transparency in historical perspective*: Oxford University Press.
Jorge, S., Sá, P., Pattaro, A. F., & Lourenço, R. P. (2011). *Local government financial transparency in Portugal and Italy: A comparative exploratory study on its determinants.* Paper presented at the 13th Biennial CIGAR Conference, Bridging Public Sector and Non-Profit Sector Accounting.
Kaufmann, D., & Bellver, A. (2005). Transparenting transparency: Initial empirics and policy applications. *Available at SSRN 808664*.
Kopits, M. G., & Craig, M. J. (1998). *Transparency in government operations*: International monetary fund.
Laswad, F., Fisher, R., & Oyelere, P. (2005). Determinants of voluntary Internet financial reporting by local government authorities. *Journal of Accounting and Public Policy, 24*(2), 101-121. doi: http://dx.doi.org/10.1016/j.jaccpubpol.2004.12.006
Leachman, L. L., Rosas, G., Lange, P., & Bester, A. (2007). The political economy of budget deficits. *Economics & Politics, 19*(3), 369-420. doi: 10.1111/j.1468-0343.2007.00320.x
Messick, R. E. (2002). Strengthening Legislatures: Implications from Industrial Countries: The World Bank.
Michener, G. (2011). FOI laws around the world. *Journal of Democracy, 22*(2), 145-159.
Michener, G. (2015). How Cabinet Size and Legislative Control Shape the Strength of Transparency Laws. *Governance, 28*(1), 77-94. doi: 10.1111/gove.12075
Munoz, L. A., Bolivar, M. P. R., & Hernandez, A. M. L. (2013). Financial determinants for improving public sector accountability: a meta-analytic study. *Transylvanian Review of Administrative Sciences, 9*(SI), 66-87.
Piotrowski, S. J., & Van Ryzin, G. G. (2007). Citizen Attitudes Toward Transparency in Local Government. *The American Review of Public Administration, 37*(3), 306-323. doi: 10.1177/0275074006296777
Poterba, J., & Von Hagen, J. (1999). Fiscal Rules and Fiscal Performance. *Chicago: University*.
Rae, D. (1968). A note on the fractionalization of some European party systems. *Comparative Political Studies, 1*(3), 413.
Ríos, A.-M., Bastida, F., & Benito, B. (2014). Budget Transparency and Legislative Budgetary Oversight An International Approach. *The American Review of Public Administration*, 0275074014565020.
Roberts, A. (2006). *Blacked out: Government secrecy in the information age*: Cambridge University Press.
Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *Stata Journal, 9*(1), 86-136.
Roubini, N., & Sachs, J. D. (1989). Political and economic determinants of budget deficits in the industrial democracies. *European Economic Review, 33*(5), 903-933. doi: http://dx.doi.org/10.1016/0014-2921(89)90002-0
Sol, D. A. d. (2013). The institutional, economic and social determinants of local government transparency. *Journal of Economic Policy Reform, 16*(1), 90-107. doi: 10.1080/17487870.2012.759422
Tejedo-Romero, F., & de Araujo, J. F. F. E. (2015). Determinants of Local Governments' Transparency in Times of Crisis: Evidence From Municipality-Level Panel Data. *Administration & Society*. doi: 10.1177/0095399715607288
Von Hagen, J., & Harden, I. (1996). Budget processes and commitment to fiscal discipline.
Wang, R. F., Irwin, M. T., & Murara, L. K. (2015). *Trends in Fiscal Transparency: Evidence from a New Database of the Coverage of Fiscal Reporting*: International Monetary Fund.
Wang, T., Shields, P., & Wang, Y. (2014). The Effects of Fiscal Transparency on Municipal Bond Issuances. *Municipal Finance Journal, 35*(1).
Weber, A. (2012). *Stock-flow adjustments and fiscal transparency: A cross-country comparison*: International Monetary Fund.
Wehner, J., & de Renzio, P. (2013). Citizens, Legislators, and Executive Disclosure: The Political Determinants of Fiscal Transparency. *World Development, 41*, 96-108. doi: http://dx.doi.org/10.1016/j.worlddev.2012.06.005

Zuccolotto, R., & Teixeira, M. A. (2014). Budgetary Transparency and Democracy: The Effectiveness of Control Institutions. *International Business Research, 7*(6), 83.

Tables and figures

	Mean	Std. Dev.	Min	Max
GFS fiscal transparency				
Overall	49.80	23.77	0	100
Between		18.44	16.16	96.97
Within		15.29	-27.47	89.20

Note: Number of countries=36; Number of years=11; Within min and max refer to the variation from each country's average.

Tab. 1: Descriptive statistics of GFS level of transparency. Source: Wang et al., 2015.

Variable (LABEL)	Modalities	Description	Obs.	Mean	Std. Dev.	Min	Max
Cabinet composition (GOV_PARTY)	Hegemony of right/center parties	Dummy = 1 for a cabinet composition with hegemony of right or center parties	395	0.58	0.49	0	1
	Dominance of right/center parties	Dummy = 1 for a cabinet composition with dominance of right or center parties					
	Balance of power between left and right	Dummy = 1 for a cabinet composition with balance of power between left and right parties	395	0.17	0.38	0	1
	Dominance of left parties	Dummy = 1 for a cabinet composition with dominance of right or center parties					
	Hegemony of left parties	Dummy = 1 for a cabinet composition with hegemony of left parties	395	0.25	0.43	0	1
Government support (GOV_SUP)		Total government support: seat share of all parties in government, weighted by the number of days in office in a given year	396	54.48	10.06	0	86.44
Election year (ELECT)		Dummy = 1 for years of parliamentary elections (lower house)	396	0.28	0.45	0	1
Rae fractionalization index (RAE)		Index of legislative fractionalization of the party system (Rae index*100)	396	70.08	10.27	48.34	88.14

Tab. 2: Descriptive statistics of political independent variables. Source: Comparative Political Dataset

Variable (LABEL)	Source	Description	Obs.	Mean	Std. Dev.	Min	Max
Gross Domestic Product (GDP)	World Bank	GDP per capita based on purchasing power parity in constant 2011 international dollars	396	35413.24	14433.6	10849.26	96711.05
Real GDP growth (REALGDPGR)	Comparative Political Dataset	Percentage GDP change from previous year	396	1.90	3.64	-14.81	11.62
Deficit (DEFICIT)	Comparative Political Dataset	Deficit (overall balance) as percentage of GDP	395	-2.56	4.85	-32.55	18.696
Population (POP)	Comparative Political Dataset	Total population, in thousands	389	28018.27	54565.24	289.3	316129

Tab. 3: Descriptive statistics of country control variables

	Static model GFS b/se	Dynamic model GFS b/se	Dynamic model GFS b/se	Dynamic model GFS b/se
Lagged GFS		0.58** (0.23)	0.52*** (0.18)	0.82*** (0.26)
RAE	-0.36* (0.21)	-0.55** (0.26)		
Lagged RAE	0.57* (0.31)	0.28 (0.29)		
GOV_SUP	-0.02 (0.12)		-0.04 (0.19)	
Lagged GOV_SUP	-0.24** (0.11)		-0.12* (0.07)	
GOV_PARTY				
Dominance of right/center	0.92 (1.45)			9.43 (14.48)
Balance of power	3.21 (2.22)			-0.50 (13.08)
Dominance of left	3.27* (1.70)			18.03 (16.14)
Hegemony of left	5.61* (2.84)			3.07 (5.18)
Lagged Dominance of right/center	0.38 (2.90)			6.06 (11.70)
Lagged Balance of power	1.57 (1.95)			-2.52 (7.19)
Lagged Dominance of left	-0.67 (1.86)			10.45 (14.57)
Lagged Hegemony of left	3.37 (4.21)			7.27 (4.98)
Year dummies	Yes	Yes	Yes	Yes
N of observations	280	281	281	280
N of units	36	36	36	36
N. of instruments	-	36	36	37

Note: Standard Errors in parenthesis. ***=p-value<0.01 **=p-value<0.05 *=p-value<0.10. Base level for GOV_PARTY: Hegemony of right/center parties. Control variables: Election dummy, GDP p/c, real GDP growth, deficit, population.

Tab. 4: Results of static and dynamic regressions

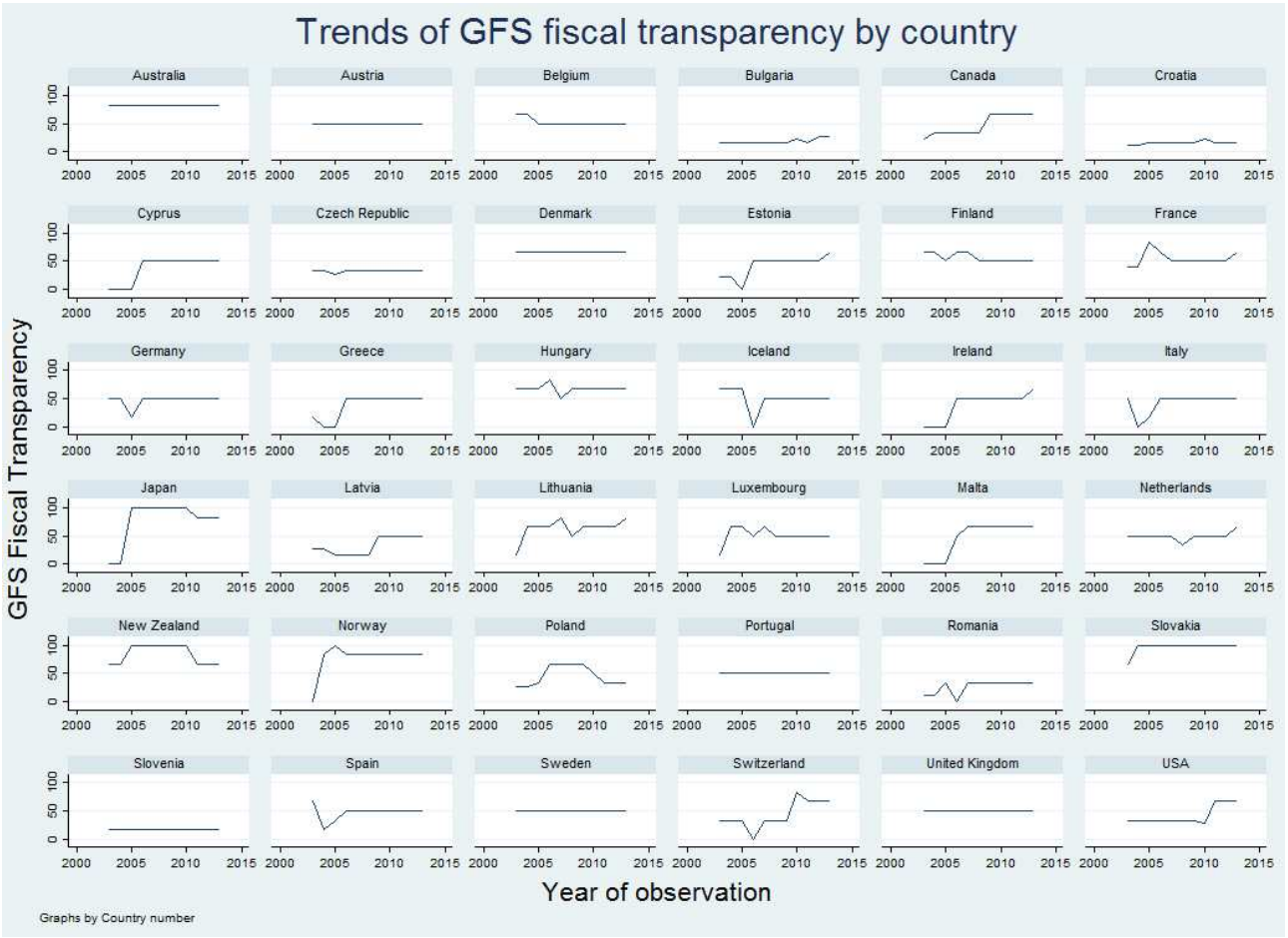

Fig. 1: Trends of GFS Fiscal Transparency by country

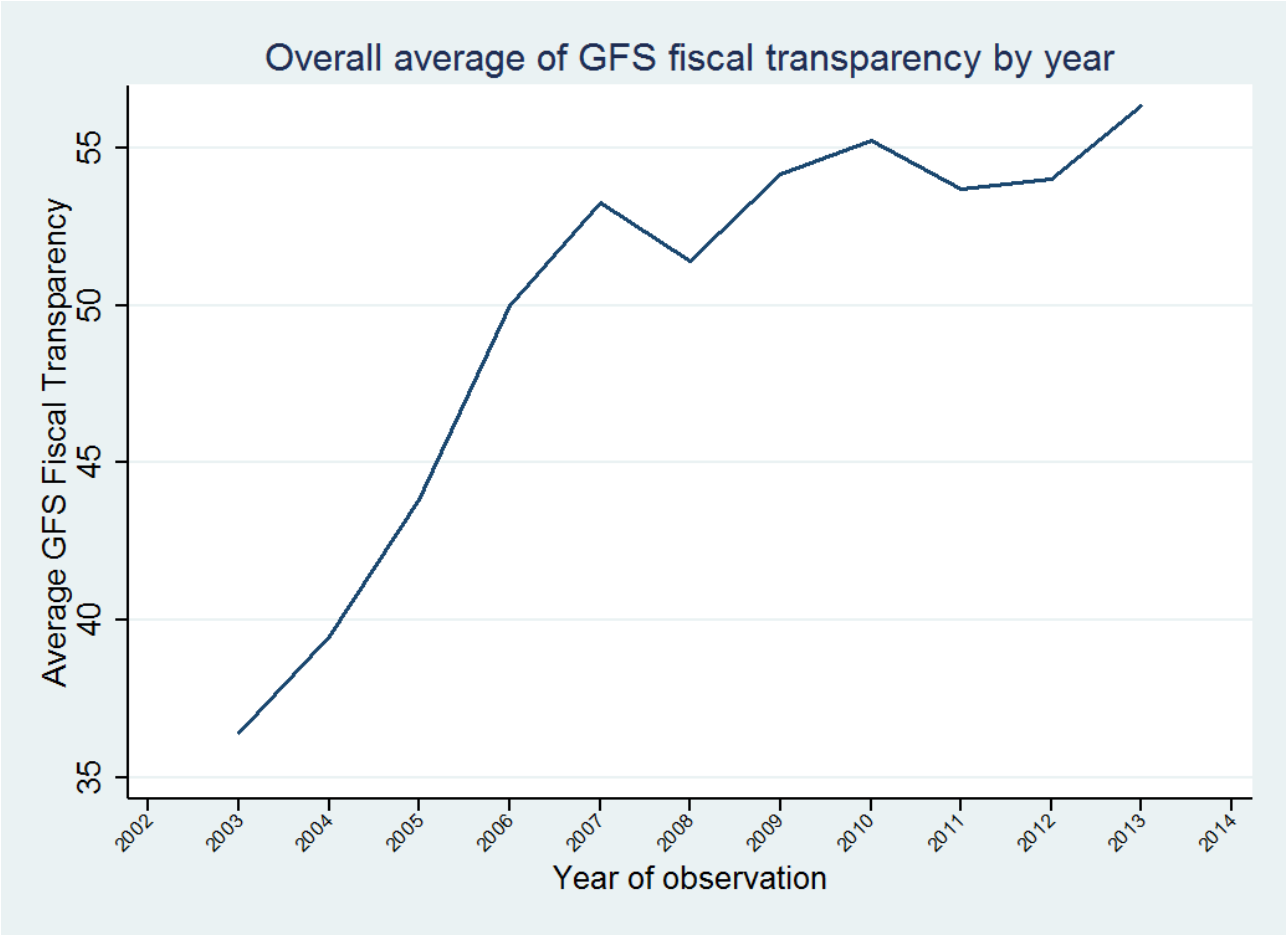

Fig. 2: Overall average of GFS fiscal transparency by year