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Citizens, Legislators, and Executive Disclosure: The Political Determinants of Fiscal Transparency

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Summary. — Increased fiscal transparency is associated with improved budgetary outcomes, lower sovereign borrowing costs, decreased corruption, and less creative accounting by governments. Despite these benefits, hardly any effort has been invested in exploring the determinants of fiscal transparency. Using a new 85-country dataset, we focus on two important sources of domestic demand for open budgeting: citizens and legislators. Our results suggest that free and fair elections have a significant direct effect on budgetary disclosure, and that they dampen the adverse effect on fiscal transparency of dependence on natural resource revenues. We also find that partisan competition in democratically-elected legislatures is associated with higher levels of budgetary disclosure.

Key words — fiscal transparency, Open Budget Index, governance, accountability

1. INTRODUCTION

Evidence on the benefits of transparency for economic and governance outcomes is mounting (Hameed, 2005; Islam, 2003). With regard to budget (or fiscal) transparency, a key dimension of government openness, empirical studies have found that it improves fiscal performance (Alt & Lassen, 2006a, 2006b), lowers sovereign borrowing costs (Glennerster & Shin, 2008), decreases corruption (Reinikka & Svensson, 2004), and limits creative accounting (Alt, Lassen, & Wehner, 2012). The International Monetary Fund (International Monetary Fund, 2007a, p. 8) maintains that budget transparency "helps to highlight potential risks to the fiscal outlook that should result in an earlier and smoother fiscal policy response to changing economic conditions, thereby reducing the incidence and severity of crises." [1] Others argue that governments have a moral obligation to their citizens to be transparent about their handling of taxpayers' money and describe this as a "basic right" (Fölscher, Krafchik, & Shapiro, 2000, p. 5). Some authors highlight potential limits of fiscal transparency (Heald, 2003; Kolstad & Wiig, 2009), but on balance there is exceptionally strong agreement on the content and desirability of transparent budgetary practices (Petrie, 2003).

Despite this growing interest, hardly any effort has been invested in exploring the determinants of fiscal transparency. This is perplexing. Given the widespread agreement that fiscal transparency is desirable, surely the next question to ask is how to obtain it. Thus far, however, there is only one comprehensive quantitative study of the causes of fiscal transparency: Alt, Lassen, and Rose (2006) consider the evolution of transparent budget procedures in the US States and find that it is affected by political dynamics as well as past fiscal conditions. Surprisingly, there is no comparably thorough investigation of this question with cross-national data. [2] This paper contributes toward filling this gap with a first look at the political determinants of fiscal transparency across countries. Specifically, we explore the role of two important sources of domestic demand for fiscal transparency: citizens and legislators. A government's decision to publish or withhold information is inherently political, and we expect it to be influenced by citizens through their exercise of the right to vote, and by the nature of party politics and political competition. We explore these relationships with a uniquely detailed dataset of budget transparency in 85 countries developed by the International Budget Partnership (2009a).

This analysis makes an important contribution to understanding important determinants of fiscal transparency, but it also helps to advance the wider literature on "the quality of government" (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999). One of the disadvantages of this literature is that it relies heavily on subjective measures in its assessment of aspects of the quality of government, and on general labels such as "government effectiveness," "rule of law," or "control of corruption" (Kaufmann, Kraay, & Mastruzzi, 2009). Fiscal transparency can be measured objectively, in contrast to a swathe of more amorphous measures of the quality of government. Moreover, we study a very specific attribute of the quality of government, that is, the extent to which governments provide fiscal information to the public. This approach is in line with prominent calls for the development and use of a sec-

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ond generation of governance indicators that are more "institutionally specific" (Knack, Kugler, & Manning, 2003, p. 346). A related advantage of our approach is that, by focusing on a specific element of governance and a particular aspect of transparency, it may be easier to assess the plausibility of the underlying causal arguments. In short, we add a new layer of specificity to the literature on "the quality of government."

The paper is structured as follows: In Section 2, we commence by defining fiscal or budget transparency. We also discuss the main frameworks that have been used to assess the extent of executive disclosure of fiscal information, as well as their advantages and disadvantages. In Section 3, we draw on the broader literature on governance and the more limited research on fiscal transparency to develop a set of testable hypotheses about the political determinants of budget transparency. Our focus is on citizens and legislators as two major sources of demand for fiscal disclosure by the government. We conclude this part with a discussion of other covariates and related data issues. Section 4 reports the main results, while the conclusion assesses the implications and opportunities for further research.

2. ASSESSING THE SUPPLY OF FISCAL INFORMATION

The systematic assessment and measurement of fiscal disclosure is a relatively recent phenomenon. In little more than a decade, three major initiatives have emerged, which we review below.[3] Unlike in the broader literature on "governance," a comparison of these initiatives reveals a strong consensus about the meaning of fiscal transparency (Petrie, 2003), pithily summarized by the Organization for Economic Cooperation and Development (2002, p. 7) as "the full disclosure of all relevant fiscal information in a timely and systematic manner." Kopits and Craig (1998, p. 1) elaborate:

> Fiscal Transparency is... 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 internationally comparable information on government activities—whether undertaken inside or outside the government sector—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.

One major initiative that promotes fiscal transparency, the OECD's (2002) "Best Practices for Budget Transparency," recommends a menu of seven types of budgetary reports to maximize fiscal disclosure. This list comprises a comprehensive budget with performance data and medium-term projections, a pre-budget report stating the government's economic and fiscal policy objectives and intentions over the medium term, monthly implementation updates, a more comprehensive mid-year update on budget execution, an independently audited year-end report released within six months of the end of the fiscal year, a pre-election report that illuminates the general state of government finances immediately before an election, as well as a long-term report to assess the sustainability of current policies. The OECD also recommends several specific disclosures, for instance in relation to economic assumptions, tax expenditures, pension obligations, and contingent liabilities. Finally, it highlights several practices to ensure integrity and accountability. These include clear accounting policies, as well as systems that ensure effective internal financial control, external audit, and legislative scrutiny and oversight. Governments or independent researchers can use these standards to assess the transparency of budget systems (Benito & Bastida, 2009), but the OECD itself does not carry out systematic assessments of member countries.

The IMF first published its "Code of Good Practices on Fiscal Transparency" in 1998, with updates in 2001 and 2007 (International Monetary Fund, 2007b). The code has four sections. The first considers the clarity of roles and responsibilities, including the role of government and the public sector in the economy, as well as the legal and administrative framework. The second section deals with public availability of information on past, current, and projected fiscal activity, and the timeliness of relevant publications. Open budget preparation, execution, and reporting are the subject of the third part, which stresses the specification of fiscal policy objectives, the macro-economic framework, the policy basis of the budget, and identifiable fiscal risks. It also requires a presentation format to facilitate analysis and accountability, clear procedures for execution and monitoring, as well as regular reporting to the legislature and the public. The focus of the final section is on assurances of integrity, which entails the provision of fiscal data according to data quality standards and the independent scrutiny of fiscal information. Together with the accompanying manual (International Monetary Fund, 2007a), the code provides a detailed assessment framework. Unlike the OECD, the IMF formally assesses compliance with the code as part of the Reports on the Observance of Standards and Codes (ROSC) initiative. However, the IMF does not produce an official composite indicator that promotes cross-national comparison, although individual researchers have used the results for this purpose (Hameed, 2005; Weber, 2012). It is also important to note that the IMF cannot unilaterally prepare these reports. They require an official request by a country's government, which also has to consent to the publication of the results. By September 2010, reports for 92 countries had been published, 27 of which also had updates or complete reassessments.[4]

The International Budget Partnership, a non-governmental organization, carries out the most comprehensive effort to assess budget transparency, with an explicit aim to compare disclosure across countries. Following a pilot survey in 2005, the organization launched the Open Budget Index (OBI). The index is based on 91 questions from an extensive questionnaire, which focus on the public availability of key budget documents similar to those propagated by the OECD and the IMF: The executive budget proposal and supporting documents, an easy access summary for the wider public in the form of a "citizen budget," a pre-budget statement, in-year reports and a mid-year review, as well as a year-end and audit reports. The index is calculated as a simple average of the individual scores for each question, and can range between 0 and 100.[5] The data are subjected to internal review as well as a peer review process, the results of which are published along with any editorial decisions (International Budget Partnership, 2009a).[6]

The OBI data show that in 2008 budget transparency varied greatly across a global sample of 85 countries. Figure 1 reports the country scores that we use in our empirical analysis. Countries can be divided into five groups based on their overall index scores, distinguishing governments that disclose extensive (81–100), significant (61–80), some (41–60), minimal (21–40), and scant or no information on the budget (0–20). The results reveal that only five countries provide extensive budget information to the public, while 25 countries present scant or no information at all. A separate summary report (International Budget Partnership, 2009a) provides further details (see also note 6).

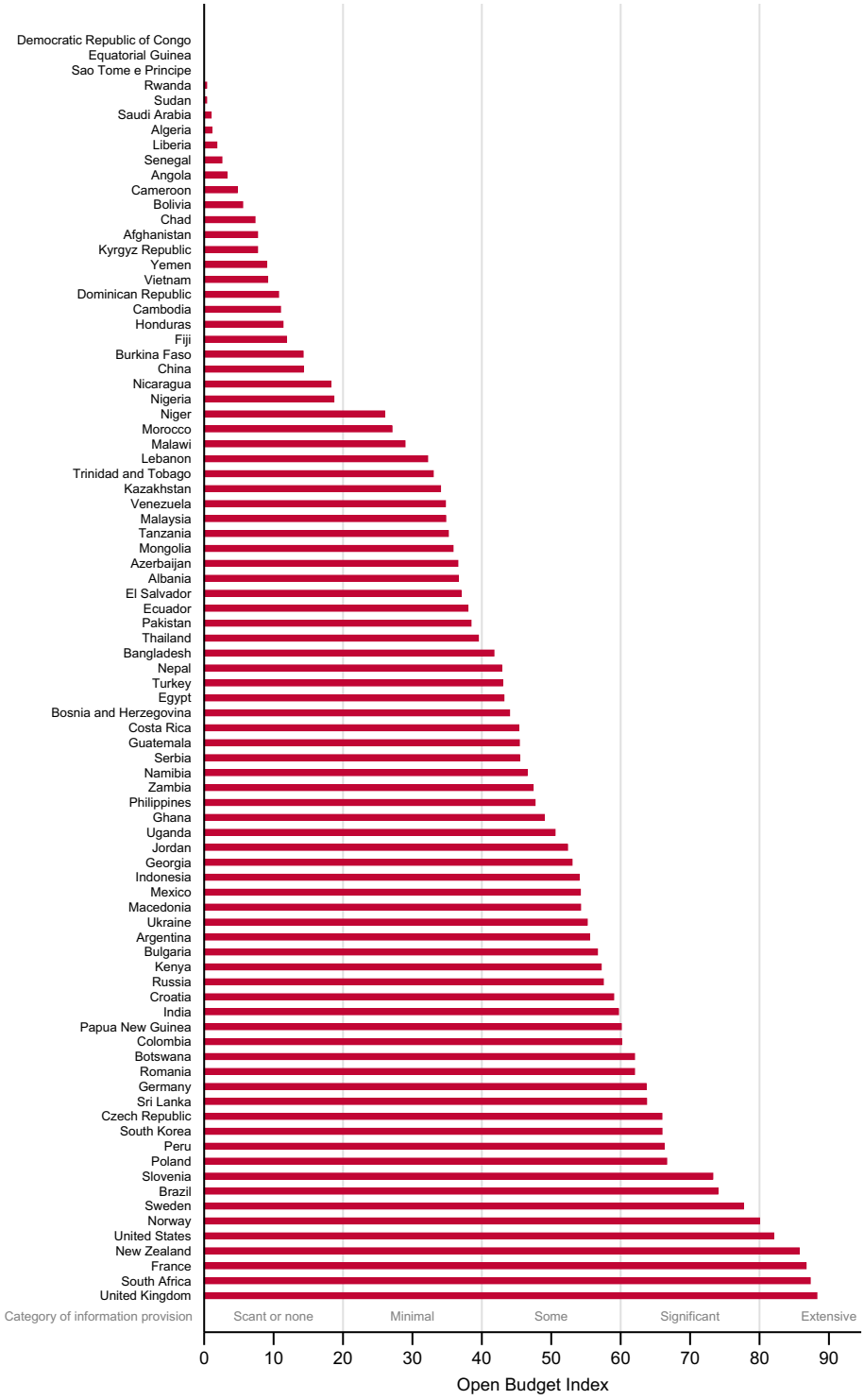

Figure 1. *Country performance on the 2008 Open Budget Index. Note: For full details including country scores and questionnaires see http://www.openbudgetindex.org.*

Several features make the OBI data superior to those provided by the IMF: First, OBI assessments do not require government consent and cannot be censored.[7] In contrast, the IMF needs countries to agree to their assessment and the publication of the results, which introduces the problem of self-selection bias (Rosendorff & Vreeland, 2006; Ross, 2006). The 85 countries covered by the OBI were selected to cover a wide range of geographical areas, levels of income, and other country characteristics such as political regime and administrative heritage. Although the sample was not randomly selected, an analysis by Ross (2011, p. 10) finds no statistically significant differences between countries that are included in the sample and those that are not in terms of a number of country characteristics such as levels of income per capita,

democracy, or press freedom scores. Second, the OBI initiative collects data across countries simultaneously, so that the dataset provides a comparative snapshot of fiscal transparency at one point in time. Some of the IMF's assessments, on the other hand, were carried out more than a decade apart, such as those of Argentina (April 1999) and Thailand (August 2009). Changes in fiscal transparency practices may occur during such a period, as indicated by some countries for which the IMF was allowed to produce and publish updates.

Finally, the IMF relies heavily on governmental cooperation. This can undermine the quality of the data. For instance, an update for Greece—published in the wake of the country's first infamous large-scale fiscal data revisions in 2004 (Eurostat, 2004)—bluntly admits that "the mission often did not have the opportunity of verifying and cross-checking the information provided by the authorities" (IMF, 2005, p. 1). The thoroughness and independence of the OBI research process, including the publication of peer reviews and editorial decisions, make it far less susceptible to government manipulation. Overall, the OBI has crucial advantages over the IMF data, and provides a superior basis for exploring the political determinants of fiscal transparency. [8]

3. SOURCES OF DEMAND FOR FISCAL DISCLOSURE

Given such great differences in the levels of budget transparency across countries, what do we know about the determinants of this variation? The International Budget Partnership (2009a, pp. 18–19) briefly discusses and presents evidence on a number of factors that are associated with significant variance in budget transparency scores. These include geographical location, level of income, dependency on revenues resulting from foreign aid flows and natural resource extraction, as well as the quality of democracy. It presents some bivariate analysis and finds significant differences in the average scores between groups of countries categorized on the basis of these variables. It also detects significant outliers within each group. For example, while the average score for Sub-Saharan Africa is among the lowest, South Africa and Botswana both score high on the index. Among oil-producing countries, whose average score for budget transparency is significantly lower than for the whole sample, Colombia, Mexico, and Norway still perform strongly. No attempt, however, is made at multivariate analysis, to assess the joint contribution of the various factors. Moreover, what exactly promotes fiscal transparency, as well as how and why, requires further exploration. As a step toward further understanding the determinants of fiscal transparency, we identify the relevant actors who may have incentives to demand disclosure of budgetary information. Specifically, we investigate two crucial sources of demand: citizens and legislators. We then turn to some other factors that need to be taken into account in the empirical analysis.

The idea that citizens have a right to fiscal information has a venerable tradition. The Declaration of the Rights of Man and the Citizen in 1789, a fundamental document of the French Revolution, went as far as declaring fiscal transparency a universal right. [9] Yet, this right is unlikely to be fulfilled without a mechanism that helps to ensure disclosure. Where governing power is derived from free and fair elections, citizens as voters have access to such a mechanism—the ballot box—that allows them to get rid of executives that govern badly. This, in turn, may affect fiscal transparency levels (Brender & Drazen, 2005, p. 1290). However, studies in other policy areas point out that democratically-elected governments can have incentives to limit disclosure (Kono, 2006; Mani & Mukand, 2007; Rejali, 2007). Hollyer, Rosendorff, and Vreeland (2011) assume that governments wish to limit disclosure, but go on to show that with free and fair elections the benefits of obfuscation are outweighed by the welfare-enhancing effect of more precise information. They also present empirical evidence that free and fair elections are associated with more extensive reporting of various economic statistics to international organizations (see also Rosendorff & Vreeland, 2006). Our data allow a direct test of their hypothesis with regard to fiscal information.

H1: Governments that are subject to free and fair elections provide more and better fiscal information than those that are not, ceteris paribus.

To investigate this hypothesis, we require a measure of electoral accountability. There is an array of measures of democracy, some of which are more precisely focused on elections than others (Munck & Verkuilen, 2002). Following Hollyer *et al.* (2011), we work with a "minimalist" dichotomous measure proposed by Cheibub, Gandhi, and Vreeland (2010). They classify a regime as a democracy, with a score of one, if it satisfies four conditions: the popular election of both (a) the chief executive and (b) the legislature, (c) the presence of more than one party competing in the elections, and (d) at least one past occurrence of alternation in power under stable electoral rules. Failure to meet any of these conditions results in a regime being classified as undemocratic, with a score of zero. This definition is highly transparent, and it captures the most fundamental essence of democratic rule, that political power needs to be contested and decided through regular elections. We call this variable Democracy (C). Our second measure is the Polity IV composite score (Marshall, Gurr, & Jaggers, 2010), which goes beyond the existence of contested elections to include in its definition of democracy the existence of institutionalized constraints on executive power, and the competitiveness of political participation. This is a less precise operationalization of the concept we wish to capture, so we use it mainly as a robustness check. One benefit of this second data source is that it covers an extended time period. This is useful for a related variable that we discuss further below. We label this second measure Democracy (P). To make the coefficients of our two measures comparable, we rescale Democracy (P) so that it ranges from 0 (always completely undemocratic) to 1 (always completely democratic). For both of these variables, we average data over the 2000–2006 period, so as to capture a broader pattern rather than a one-year observation, which may be atypical. The correlation between the two measures is .79, suggesting not only substantial agreement but also differences in classification (more on this below). [10]

Underpinning the accountability hypothesis is an assumption that voters have the ability to interpret fiscal information. This, however, may not necessarily be the case. Brender and Drazen (2005) find that electoral budget cycles can be observed in new democracies but not in established ones. They attribute this phenomenon to a "learning process" (p. 1292), where fiscal literacy increases over time as voters find out how to extract and interpret budgetary information and become less susceptible to manipulation. These results suggest that an accountability effect may take time to emerge, and that it may increase as voters accumulate experience with electoral politics. In addition, O'Donnell (1998) has argued persuasively that, in countries where experience with authoritarianism is relatively recent, and in particular when this experience was long lasting, even democratically-elected executives at times are tempted to resist and undermine accountability. If these arguments are correct, new democracies may suffer from a lack of budget literacy on the demand side and executive recal-

citrance on the supply side, which would dampen the accountability effect. We therefore expect the positive effect of electoral accountability on fiscal transparency to be stronger in mature democracies, and weaker in countries with a shorter history of democracy.

H2: Countries with a long history of free and fair elections have governments that provide more and better fiscal information than others, ceteris paribus.

To capture the maturity of electoral accountability, we use a measure of democratic age developed by Persson and Tabellini (2003). They use an uninterrupted string of positive yearly Polity scores, measured on a scale from −10 (for strongly autocratic) to 10 (for strongly democratic), to construct the ratio of continuous democratic years over the sample period. We use the latest version of the Polity dataset, for the years 1800–2006, to construct this variable, which we call Age (P). The data collected by Cheibub *et al.* (2010) cover a shorter time period, starting after the end of World War II. We extract their data for the years 1946–2006 and calculate a corresponding age score, labeled Age (C), based on the unbroken string of years in which the authors classify a country as a democracy. The resulting scores are between 0 (for countries lacking unbroken experience with democracy) and 1 (for those always classified as democratic). Due to the different underlying definitions as well as the different time periods covered by the two data sources, we obtain rather different assessments of democratic age for some countries. For instance, Polity assigns positive scores to Botswana for the entire post-independence period, whereas Cheibub and colleagues classify it as a nondemocracy, as the required alternation in power has not yet taken place. Still, the correlation between our two measures of democratic age, with a coefficient of .76, is fairly strong. In the empirical section, we report results obtained with both of these measures.

Whether citizens demand disclosure is, however, also likely to be linked to the way in which governments extract revenues for their activities. Fiscal sociologists have long argued that "sources of state revenues have a major impact on patterns of state formation" (Moore, 2004, p. 297; see also Bräutigam, Fjeldstad, & Moore, 2008; Levi, 1988; Tilly, 1990). Governments are likely to be more accountable the more they depend on taxing their own citizens for revenues, rather than on "rents." In this literature, direct taxation is seen to entail a social contract, or, as Moore (2004, p. 310) puts it, a "negotiated relationship between the state apparatus and society." The underlying idea is highly intuitive: If governments spend money they extract from citizens, the latter are more likely to demand accountability—and revolt if it is not forthcoming, as English, American, or French history illustrates. In contrast, reliance on revenues from natural resources, such as oil, engenders less demand for accountability, as people care less about these funds than their own tax contributions. Moreover, abundant resource revenues allow governments to dispense patronage to shore up support (Ross, 2001, pp. 332–334; see also Jensen & Wantchekon, 2004). As a result of dampened accountability, fiscal transparency may be lower in countries with abundant natural resources. We already have some evidence to support this hypothesis. Using data from the 2006 OBI survey, de Renzio, Gomez, and Sheppard (2009) find that resource-dependent countries suffer from a "transparency gap." For non-resource-dependent countries, the average index score is 50, while resource-dependent countries average 40 (see also Ross, 2011). We provide a test of this hypothesis.

H3: Governments reliant on rents from natural resources provide less and worse fiscal information than others, ceteris paribus.

To capture resource dependence, we use the value of oil and gas production per capita (plus one to eliminate zero values), in constant year 2000 US dollars, logged and averaged over the period 2000–2006, using data provided by Michael Ross. We considered the use of alternative measures of natural resource rents, which net out extraction costs (Ross, 2008). Due to the poor quality of estimates for extraction costs, we prefer to work with the value of the produced amounts instead. The focus here is on the effect of oil and gas revenues, given their prominence in the literature (Humphreys, Sachs, & Stiglitz, 2007; Ross, 2001). However, we also experimented with broader measures of resource dependency based on the IMF's (2007c, pp. 62–63) classification of countries as hydrocarbon and mineral-rich. Although we do not present any of these results here, the use of these alternatives did not substantially affect our main findings.

The above hypothesis appears at odds with the experience of countries such as Norway or Colombia, which achieve relatively high levels of budget transparency despite their oil dependence (Anderson, Curristine, & Merk, 2006). These outliers may suggest a more complex relationship between resource dependency, democracy, and fiscal transparency. Norway's and Colombia's politicians may be less prone (and less able) to misuse oil revenues because they know that voters can respond by kicking them out of office at the next election.[11] In such countries, electorally-accountable politicians may in fact have incentives to increase fiscal transparency, so as to preempt any suspicions that resource revenues are mismanaged or stolen (Rosendorff & Vreeland, 2006). In countries without regular elections and where effective political competition is stifled, an opposite vicious circle might take hold instead, with governments ensuring that opaque budget systems allow them to divert oil revenues as secretly as possible. Most of the existing literature focuses on the link between resource dependency and democracy, and does not directly address this possibility (Jensen & Wantchekon, 2004; Ross, 2001). We add a new twist to this literature, by exploring the possibility that the governance impact of natural resource dependency is conditional. More precisely, we test whether resource dependency has a negative effect on fiscal transparency only in countries that lack fully democratic institutions.[12]

H4: Governments reliant on revenues from natural resources provide more and better fiscal information if electoral accountability is strong, but limit disclosure when electoral accountability is weak, ceteris paribus.

The legislative arena provides a second potential source of demand for fiscal information, and the literature offers some clues about the conditions under which this demand is likely to be greatest. Research on parliamentary committees highlights their role in monitoring and enforcing coalition agreements (Hallerberg, 1999; Martin & Vanberg, 2004). This work suggests that legislators' demand for information about executive actions may be lower under single-party majority governments. Alt *et al.* (2006) investigate how partisan dynamics affect fiscal transparency in US States (see also Alt & Lowry, 2010). Their most robust finding is that political competition has a positive association with fiscal transparency. They use three measures of political competition, namely divided government, as well as gubernatorial and legislative competition measures based on vote and seat shares, respectively. The underlying logic is that politicians who share policy-making authority under divided government, or who are faced with a high probability of losing power in the next election, have incentives to attempt to tie the hands of their competitors with reforms that promote transparency and reduce discretion. However, an alternative dynamic is possible.

Messick (2002) notes that opposition party members have greater demand for credible information about the executive's actions than members from the governing majority, and goes on (p. 3): "[T]he more the opposition uses such information to criticize government, the greater the majority's interest in abolishing or weakening the units that provide it." In short, political competition may also induce governments to limit the disclosure of information that could be used to scrutinize and criticize their actions. Our analysis contributes a first direct test of this relationship in a cross-national setting.

H5: Governments that face strong political competition provide more and better fiscal information than those with low competition, ceteris paribus.

To capture political competition, we require a measure that "travels" well across a very diverse set of political systems. The variables used by Alt *et al.* (2006) make sense for the US context, which is characterized by two-party competition, but they are difficult to translate neatly into multi-party settings. In another paper, Alt and Lassen (2006b, pp. 1425–1430) endogenize fiscal transparency with a small sample of 19 OECD countries. Here, they use turnover to measure competition. They also include a dummy for presidential systems, arguing that legislative demand is higher under divided government, which they associate with presidential government. We found no such effect in our data across a range of specifications. One reason might be that Alt and Lassen's sample only includes two countries they classify as presidential (Switzerland and the US). Moreover, minority government in parliamentary systems—a regular occurrence in some countries—may have a similar effect on the demand for fiscal disclosure.

Instead, we use a Herfindahl-based measure of partisan fragmentation calculated with the seat shares of political parties represented in the legislature, similar to those frequently used in comparative work on party systems (Laakso & Taagepera, 1979; Lijphart, 1999). The idea behind our measure is that executive control of the legislature is more difficult the more parties are represented, and the more evenly their power is distributed. We take the sum of the squared seat shares of all parties represented, with independents treated as single-seat parties for this purpose, and subtract them from one (Persson, Roland, & Tabellini, 2007, p. 174; Wehner, 2010). The resulting index of partisan fragmentation takes a value of zero if a single party occupies all seats in the legislature, and very close to one if each seat belongs to a different political party. To calculate this measure, we extract annual Herfindahl scores based on legislative seat shares from the 2008 version of the World Bank's Database of Political Institutions (Beck, Clarke, Groff, Keefer, & Walsh, 2001). Again, we average over the 2000–2006 period to capture the recent pattern. We also experimented with a measure of divided government, defined as "the absence of simultaneous same-party majorities in the executive and legislative branches of government" (Elgie, 2001, p. 2). However, we were not confident that our source data systematically captures the extent of legislative support for governments, for example in situations where a governing party had a legislative cooperation agreement with another party that did not however join the cabinet. Hence, we prefer our measure of partisan fragmentation, although we also ran robustness checks with alternative measures and obtained broadly consistent results.

While the focus of our analysis is firmly on the role of citizens and legislators, we also need to take into account other variables that are likely to impact on levels of fiscal transparency. The list of potential candidates is long, and we are mindful to avoid the trap of "garbage-can regressions" (Achen, 2005) or "kitchen-sink models" (Schrodt, 2010) in which swathes of poorly theorized and correlated "controls" are dumped on the right-hand side of regression equations. Borrowing from the classic piece by La Porta *et al.* (1999) on "the quality of government," we include a small set of covariates: an indicator of legal origin, the log of GDP per capita, a measure of ethno-linguistic fractionalization, and a measure of distance from the equator. The latter two have been identified in the governance literature as contributing to poor outcomes, and can plausibly be treated as exogenous. We briefly comment on the former two, before discussing other potentially relevant variables.

The design of budget systems, including its level of transparency, is linked to the overall administrative machinery of a country. This includes the division of responsibilities among different parts of government for producing and checking the accuracy of budget information. For example, while in some countries the auditing of public accounts is carried out by an entity that reports to the legislature, in others this function belongs to a special arm of the judiciary (Santiso, 2009). More broadly, work by Lienert (2003) and Andrews (2009) on budget systems in Africa suggests an important effect of administrative heritage on current procedures and practices. In other words, budget systems might reflect historical circumstances and institutional "path dependency" (North, 1990). Such ideas are also reflected in the wider governance literature, which has looked at legal origin and assessed its impact on countries' subsequent economic performance. La Porta and colleagues (1999) establish that more interventionist legal traditions based on civil law predict inferior government performance on a range of indicators, including corruption, than those based on the British common law tradition. Alt and Lassen (2006b, p. 1429) find that a common law legal origin is positively correlated with their measure of fiscal transparency in a set of 19 OECD countries. Here, we are interested to see whether this relationship holds for a global sample of countries.

Another consistent finding across the broader literature on governance is that richer countries achieve better transparency and governance standards (Bellver & Kaufmann, 2005; Kaufmann & Kraay, 2002). However, reverse causality problems loom large. Indeed, many scholars have sought to establish causal links from governance to wealth or economic growth, arguing that it is better institutions that bring about higher levels of economic wellbeing (examples include Acemoglu, Johnson, & Robinson, 2001; Barro, 1991; Keefer & Knack, 1997; Knack & Keefer, 1995). Rodrik (2008, p. 2) even asserts that "the existence of a *causal* link from [good governance] to [high incomes] is now… widely accepted." However, Kurtz and Schrank (2007) point out that the low quality of existing measures of governance makes it hard to establish a convincing link with economic performance. Here, we use a much better quality measure of an important aspect of governance than in most of this literature, but we make no causal arguments involving economic wealth and fiscal governance. More modestly, we include this variable to test the IMF's (2007a, p. 8) claim that its recommended practices are "potentially achievable by countries at all levels of economic development." If we find a strong positive correlation between GDP per capita and fiscal transparency, we would have reasons to doubt this perhaps overly optimistic view, and to dig deeper in follow-up research.

For all variables covered in this study, we provide definitions and sources in Appendix A, and summary statistics in Appendix B. Note that none of the bivariate correlations of our independent variables (except our measures of democracy

and democratic age) exceed a coefficient of .6 and most are much lower. Of course, there are additional factors that we might have included. Notably, Alt *et al.* (2006) find that improvements in fiscal transparency often follow periods of fiscal distress. However, other studies suggest that transparency is a cause of fiscal performance (Hameed, 2005). To tackle reverse causality issues, a convincing test of this relationship requires panel data or instruments, which we do not have.[13] We also contemplated the inclusion of variables that fiscal sociologists identify as determinants of accountability, such as tax revenues or income from direct taxes. The inclusion of these variables raises the problem of selection bias, as low-transparency countries are also, by definition, less likely to provide the required fiscal data (Rosendorff & Vreeland, 2006). We collected data on overall tax revenues and direct taxes for our sample, using World Bank and IMF sources, and detected a pattern of missing observations that confirmed this expectation. These data would not only reduce the size of our sample (by one-third and more); more worryingly, our estimates with the reduced sample would only capture relatively small differences in a group of mostly higher-transparency countries. Finally, we considered exploring the effect of donors on fiscal transparency in aid-dependent countries (Bräutigam, 2000; Bräutigam & Knack, 2004; Collier, 2006). However, such an analysis is so riddled with endogeneity problems that we lack a credible empirical strategy with the available data. We acknowledge these important angles, but the current data limitations are such that they can only be tackled fruitfully in follow-up research.[14]

4. RESULTS

All of our models include a dummy for civil law countries, logged GDP per capita, a measure of ethno-linguistic fractionalization, and distance from the equator (see Appendix A for full details). We also experimented with more fine-grained measures of legal origin, as introduced in La Porta *et al.* (1999). However, separate indicators for French, German, Scandinavian, and Socialist legal origin yielded coefficients with identical signs and similar magnitude.[15] Since this is not the main focus of our inquiry, we conserve degrees of freedom and only present results with our more parsimonious measure of legal origin, which reflects the most basic distinction by La Porta *et al.* (2008, p. 288) between common law and civil law countries.

We commence by adding our measures of democracy to the baseline model (see Table 1), first Cheibub, Gandhi, and Vreeland's democracy indicator (column 1) and then our measure of democratic age based on the same dataset (column 2). Both of these are strongly correlated with fiscal transparency, but when we include these variables simultaneously only the current level of democracy has a highly significant coefficient (column 3). According to these estimates, a switch from autocracy to democracy improves fiscal transparency by about 18 points. As a robustness check, we repeat the same specifications, but this time using the Polity data to measure democracy. The results are substantively very similar (columns 4–6). One difference is in the size of the coefficients, which are twice as large when we use the Polity data, most likely because this variable is more fine-grained than the variable by Cheibub and colleagues. Another difference is that when both current levels as well as the age of democracy are included simultaneously, the coefficient on the latter achieves significance, although only at the 10% level. Moreover, the estimated effects of democratic age are much smaller than those for recent levels of democracy. These results challenge the view that high levels of fiscal transparency result from a process of democratic maturation (Brender & Drazen, 2005, p. 1290). Rather, recent experience with democracy is more important. This finding is particularly encouraging for reformers, as it suggests that the rapid improvements in fiscal transparency observed in some cases (Robinson & Vyasulu, 2008) might be possible across a larger number of new democracies.

Table 1. *Democracy and fiscal transparency*

	(1)	(2)	(3)	(4)	(5)	(6)
Democracy (C)	18.76		18.20			
	(4.64)***		(4.71)***			
Age (C)		21.38	1.59			
		(8.53)**	(8.50)			
Democracy (P)				39.37		35.31
				(8.46)***		(8.20)***
Age (P)					39.67	18.66
					(15.65)**	(10.50)*
Ethno-linguistic fractionalization	16.00	13.13	16.12	6.26	8.32	6.43
	(9.80)	(10.62)	(9.88)	(8.80)	(10.68)	(8.78)
Civil law	−13.81	−12.16	−13.70	−12.78	−8.36	−10.58
	(4.87)***	(5.69)**	(5.04)***	(4.49)***	(6.25)	(4.76)**
GDP per capita	7.61	6.52	7.47	5.38	5.20	4.08
	(1.62)***	(2.29)***	(2.03)***	(1.57)***	(2.44)**	(1.92)**
Latitude	45.63	44.69	45.71	40.59	43.16	40.76
	(11.07)***	(12.72)***	(11.19)***	(10.91)***	(13.26)***	(11.03)***
Constant	−36.91	−22.93	−36.06	−32.36	−12.74	−23.91
	(12.93)***	(15.92)	(14.36)**	(12.82)**	(16.71)	(14.23)*
Observations	85	85	85	82	82	82
Adjusted *R*-squared	0.56	0.49	0.55	0.57	0.47	0.58

Note: Ordinary least squares regressions. The dependent variable is the 2008 OBI. Huber-White robust standard errors are in parentheses.
* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

Table 2. *Resource dependency and fiscal transparency*

	(1)	(2)	(3)	(4)	(5)
Oil and gas per capita	−1.88	−2.12	−2.91	−1.63	−3.90
	(0.86)**	(1.02)**	(1.08)***	(1.02)	(1.67)**
Age (C)		13.81			
		(11.13)			
Democracy (C)			7.97		
			(5.48)		
Age (P)				39.96	
				(23.46)*	
Democracy (P)					16.46
					(11.25)
Oil and gas per capita × Age (C)		1.50			
		(2.13)			
Oil and gas per capita × Democracy (C)			3.10		
			(1.48)**		
Oil and gas per capita × Age (P)				−0.75	
				(3.69)	
Oil and gas per capita × Democracy (P)					4.59
					(2.19)**
Ethno-linguistic fractionalization	8.64	11.73	11.53	8.50	4.65
	(10.19)	(9.94)	(8.66)	(10.31)	(8.92)
Civil law	−13.04	−11.10	−11.95	−8.31	−12.10
	(5.81)**	(5.60)*	(4.49)***	(6.26)	(4.26)***
GDP per capita	10.77	8.15	8.04	7.04	6.49
	(1.77)***	(2.20)***	(1.69)***	(2.34)***	(1.74)***
Latitude	39.81	40.66	42.24	41.13	38.15
	(12.92)***	(12.86)***	(11.12)***	(13.51)***	(11.14)***
Constant	−38.91	−26.82	−28.77	−20.23	−20.82
	(15.56)**	(16.33)	(12.96)**	(16.65)	(14.62)
Oil and gas per capita|Age (C) = 1		−0.63			
		(1.68)			
Oil and gas per capita|Democracy (C) = 1			0.19		
			(1.07)		
Oil and gas per capita|Age (P) = 1				−2.38	
				(3.12)	
Oil and gas per capita|Democracy (P) = 1					0.69
					(1.12)
Observations	85	85	85	82	82
Adjusted *R*-squared	0.48	0.51	0.59	0.49	0.59

Note: Ordinary least squares regressions. The dependent variable is the 2008 OBI. Huber-White robust standard errors are in parentheses.
* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

The results in Table 1 are also in line with our expectations with regard to most of the covariates. Civil law regimes are associated with lower levels of budget transparency, by more than ten points in most regressions. This effect is significant across most specifications. In other words, administrative heritage appears to systematically affect budget transparency, in the way that the analysis by La Porta *et al.* (1999) and the findings by Alt and Lassen (2006b, p. 1429) would suggest. The association between GDP per capita and fiscal transparency is positive and highly significant. A log-unit increase in per capita income (similar to an increase from, say, Poland's average of roughly 5,000 to New Zealand's of 14,500, measured in constant year 2000 US dollars) is predicted to increase budget transparency by about five points or more. Although the direction of causality is far from clear, these estimates do suggest that the IMF's (2007a, p. 8) claim that its fiscal transparency standards can all be met independent from a country's level of income might be somewhat optimistic. Distance from the equator has a positive and highly significant correlation, in line with La Porta and colleagues (1999). In contrast, the coefficient on ethno-linguistic fractionalization has a positive sign, which is unexpected, but it fails to achieve statistical significance at standard levels.

We proceed to explore the effect of natural resource dependency on fiscal transparency. Table 2 reports the results. The model in column (1) includes a direct effect of per capita oil and gas revenues only, which has the expected sign. According to the estimate, a switch from no oil and gas revenues to a per capita level found in Equatorial Guinea (averaging about 7,500 in constant year 2000 US dollars), equivalent to about nine log-units, is associated with a 17-point reduction of a country's OBI score. In column (2) we test whether in countries with mature democracies, natural resource dependence may not adversely affect the quality of governance. The results do not support this reasoning; the interaction term is not statistically significant. In column (3), we report an alternative specification, where we interact our resource dependency measure with current levels of democracy. This assumes that the effect of resource dependency on budget transparency is conditioned by the current accountability context rather than its his-

Table 3. *Partisan fragmentation and fiscal transparency*

	(1) OBI	(2) Partisan fragmentation	(3) OBI	(4) OBI	(5) OBI
Partisan fragmentation	41.79		42.21	27.24	12.14
	(11.86)***		(21.23)**	(11.92)**	(15.09)
Proportional electoral system		0.22			
		(0.05)***			
Mixed electoral system		0.20			
		(0.05)***			
Democracy (C)				13.24	−23.51
				(4.75)***	(15.47)
Age (C)				0.37	
				(8.12)	
Partisan fragmentation × Democracy (C)					59.97
					(23.48)**
Ethno-linguistic fractionalization	3.35	0.05	3.29	10.31	11.04
	(8.97)	(0.10)	(8.94)	(9.25)	(8.48)
Civil law	−18.08	−0.02	−18.13	−16.77	−17.49
	(4.49)***	(0.06)	(4.91)***	(4.54)***	(4.09)***
GDP per capita	7.92	−0.00	7.92	7.26	6.76
	(1.55)***	(0.02)	(1.53)***	(1.93)***	(1.52)***
Latitude	36.71	0.21	36.64	41.18	46.14
	(11.20)***	(0.12)*	(11.32)***	(10.22)***	(9.63)***
Constant	−42.12	0.42	−42.23	−41.66	−32.01
	(13.00)***	(0.17)**	(13.38)***	(13.98)***	(13.46)**
Partisan fragmentation|Democracy (C) = 1					72.11
					(17.32)***
Method	OLS	OLS	2SLS	OLS	OLS
First-stage F (instruments = 0)		10.04			
Over-identification: Wooldridge robust score test (df)			1.33 (1)		
Observations	83	83	83	83	83
Adjusted *R*-squared	0.52	0.24		0.56	0.60

Note: Huber-White robust standard errors are in parentheses.
* Significant at 10%.
** Significant at 5%.
*** Significant at 1%.

torical maturity. We find a statistically significant interaction between the two variables. In other words, recent levels of democracy, rather than democratic age, condition the effect of resource dependency on fiscal transparency. These findings are robust to the use of our alternative measures of democracy and its maturity (columns 4 and 5).

The results in Table 2 require additional interpretation in order to estimate the effect of resource dependency in democratic countries (Kam & Franzese, 2007). Our calculations at the bottom of column 3 show that in countries with a Democracy (C) score of one (the highest level), such as Norway, the estimated effect of a log-unit increase in per capita oil and gas revenues is close to zero: $3.10 - 2.91 = .19$, with a standard error of 1.07 ($p = .86$). On the other hand, for a country such as Equatorial Guinea that lacks free elections, so that the conditioning variable is set to zero, the estimated effect of a log-unit increase in such revenues is −2.91, with a standard error of 1.08 ($p < .01$).[16] In fully democratic countries, there is no effect of resource dependency on fiscal transparency, while in countries without free and fair elections, the effect is negative and highly statistically significant. Under the latter set of conditions, the estimated effect of switching from no oil and gas revenues to a level similar to Equatorial Guinea's is to decrease fiscal transparency by about 26 points. It appears that autocratic rulers have incentives to further limit disclosure when they have the possibility to extract rents from natural resources. This conditional effect of natural resource dependency is robust to the use of our alternative measure of democracy, based on Polity data, which again increases the size of the estimated effects (column 5). Substantively, these results bode well for a country such as Ghana, where the imminent exploitation of offshore oil reserves discovered in 2007 takes place in a context of relatively recent but vibrant electoral competition that in 2009 led to the second peaceful and constitutional transfer of executive power since 1992. Given these conditions, our estimates suggest that the government is unlikely to significantly tighten disclosure.

Finally, we turn to testing the effect of partisan competition in the legislature on fiscal transparency and report our results in Table 3. When we add partisan fragmentation to the basic model, we get a highly significant and substantively large effect (column 1). A switch from single party rule to a situation where every single legislator hails from a different political party is predicted to increase a country's budget transparency score by about 40 points. More realistically, an increase from two to three parties with equal seat shares in the legislature (i.e., an increase in partisan fragmentation from .5 to .67) adds about seven points. We obtained similar results (not reported) with various alternative or related measures of competition, such as the "effective number of parties" (Laakso & Taagepera, 1979), an indicator of divided or minority government, and the seat share of the governing party or parties in the legislature.

As a robustness check, to protect against problems associated with reverse causality, omitted variables, and measurement er-

ror, we instrument partisan fragmentation with two indicators of the electoral system (for a similar approach, see Persson *et al.*, 2007). These capture pure proportional representation as well as mixed systems that combine proportional representation with elements of plurality voting (see Appendix A for details). Systems based on proportional representation, compared with majoritarian systems, tend to encourage partisan fragmentation in the legislature (Lijphart, 1999). We assume that the type of electoral system affects fiscal transparency, but only through its effect on partisan fragmentation in the legislature.[17] Based on the first-stage regression results (column 2), we can reject the hypothesis that the coefficients on our instruments are both zero with an F-statistic of 10; weak instruments are not a concern (Stock & Watson, 2007, p. 441). In the second stage, the size of the coefficient on partisan fragmentation is almost unchanged and significant at the 5% level (column 3). Our instruments also pass a test of the over-identification restrictions.

One possibility is that the results in Table 1 merely reflect the fact that democratic states have more competitive political systems than autocratic ones. What precisely is it about democracy that leads to more fiscal disclosure: electoral accountability, more competitive politics, or both? When we add our democracy variables (column 4), the coefficient on partisan fragmentation drops by about one third but remains statistically significant at the 5% level. The direct effect of democracy is statistically significant at the 1% level, although the magnitude of the coefficient also drops somewhat compared to the results reported in Table 1. Democratic age has no significant effect. We note that partisan fragmentation scores in some countries without free and fair elections between 2000 and 2006, according to Cheibub *et al.* (2010), are very high, for instance .9 in Morocco. Does partisan fragmentation have the same quality and effect in countries without free and fair elections as it does in fully democratic polities? We explore this by interacting the two variables (column 5). It turns out that partisan fragmentation has a highly significant and large effect on fiscal transparency in democracies, with a conditional coefficient of 72, while it has no effect in non-democracies. In other words, the accountability effect of partisan fragmentation is conditional on free and fair elections. These patterns also emerge when we use our alternative democracy measures instead, as well as when we control for per capita oil and gas production (not reported).

5. CONCLUSIONS

Our analysis shows that domestic political factors play a crucial role in determining the level of fiscal transparency. Free and fair elections have a significant positive effect on budgetary disclosure (H1), whereas the effect of democratic maturity is not robust (H2). On average, oil and gas wealth has the expected negative effect on fiscal disclosure (H3). However, recent experience with free and fair elections, rather than democratic maturity, dampens the adverse effect on fiscal transparency of dependence on natural resource revenues (H4). Finally, we obtain robust results that partisan fragmentation in the legislature is associated with higher levels of budgetary disclosure (H5), but only in countries with free and fair elections. This last result, obtained with cross-national data, nicely complements work on US States by Alt *et al.* (2006), who find that political competition is a main cause of fiscal transparency. Overall, our findings suggest that citizens and legislators are important sources of demand for fiscal transparency.

Of course, these are initial results that should be built upon with follow-up work. Notably, further waves of data collection on fiscal transparency practices will eventually allow the construction of a panel dataset with which the relevance of some of the factors identified here can be studied by exploiting within-country variation. It will take a few more years before such an analysis makes statistical sense, but each successive wave of the survey makes this more feasible. Until then, it could be useful to further explore the factors highlighted in our analysis using a more in-depth qualitative approach that tracks the evolution of fiscal transparency in a few carefully-selected cases that have undergone substantial reform, backsliding, or both. Furthermore, some of the results of this preliminary analysis could be tested using broader measures of transparency that go beyond our narrower focus on fiscal matters.

We conclude by highlighting two broader substantive implications of this analysis. First, our research highlights the potential of a more focused approach for research on the quality of governance. Fiscal transparency is a widely accepted feature of well-run governments, and we can assess its relative presence or absence more objectively than is possible with more abstract catchall notions of "good governance." Moreover, our targeted inquiry allows clearer exposure of the possible causal mechanisms. The broader debate on the determinants of the quality of governance requires more work along these lines. In terms of policy implications, our results suggest that donors and other external partners who strive to improve governance should pay close attention to domestic politics. Given the fundamental importance of citizens and voters as sources of demand for budgetary disclosure, we have strong doubts that external initiatives can achieve progress by trying to impose fiscal accountability where internal demand is weak.

NOTES

1. The European debt crisis in the wake of the global economic crisis that unfolded in 2008 illustrates a number of these arguments. Greece—which has repeatedly violated fiscal reporting standards (Koen & van den Noord, 2005)—significantly revised upward its reported budget deficit data, followed by downgrades in credit ratings and increasing borrowing costs (*The Economist*, December 12, 2009).

2. In one cross-national study of the relationship between fiscal transparency and debt, Alt and Lassen (2006b) address endogeneity concerns by considering some factors that may affect disclosure, but only briefly and for a small set of 19 OECD countries.

3. Of course, there were relevant standard-setting initiatives prior to this, but they typically focused on more narrow aspects of fiscal transparency and were not intended to underpin systematic cross-national measurement. An important example is the "Lima Declaration of Guidelines on Auditing Precepts," first adopted at a meeting of external auditors in 1977, which set out for the first time several key standards for the independent audit of governments (International Organization of Supreme Audit Institutions, 1998). Our discussion also omits one-off measures of fiscal transparency and those that cover only a small sample of countries, such as in von Hagen (1992, p. 64) and Alt and Lassen (2006a, 2006b).

4. The IMF's fiscal transparency portal (http://www.imf.org/external/np/fad/trans/index.htm) provides full details and access to published country assessments.

5. The index is based on an implicit weighing procedure, as some budget documents are the focus of a larger number of questions. Re-calculating the index using alternative aggregation methods that correct for this implicit weighing generates alternative measures that are highly correlated with the original one. For further details, see de Renzio and Castro (2011).

6. The homepage of the OBI provides access to all reports and individual country assessments (http://www.openbudgetindex.org).

7. The organization invited 61 governments to comment on the 2008 results, but only five—those of El Salvador, Guatemala, Norway, South Africa, and Sweden—chose to do so (International Budget Partnership, 2009, p. 12).

8. Alt et al. (2012) report positive correlations between the OBI and several other measures of budget transparency for European Union countries.

9. According to article 14, '[a]ll citizens have the right to ascertain, by themselves, or through their representatives, the need for a public tax, to consent to it freely, to watch over its use, and to determine its proportion, basis, collection, and duration.' In addition, article 15 demands: "Society has the right to ask a public official for an accounting of his administration."

10. We also considered using the widely known Freedom House scores. However, this measure exhibits "problems in all three areas of conceptualization, measurement, and aggregation" (Munck & Verkuilen, 2002, p. 28). We nonetheless experimented with these data and obtained similar results. Due to lack of theoretical fit as well as data quality concerns, we do not report these findings.

11. As suggested by Dunning (2008), Norway and Colombia might also belong to a group of "resource-rich" but not "resource-dependent" countries, where more diversified economies might further dampen the negative impact of natural resources on governance standards, including fiscal transparency.

12. Ross (2011) carries out a similar analysis, with results that are consistent with ours.

13. Using data for US States, Alt and Lowry (2010) consider budget process transparency, gubernatorial elections, and tax increases in a structural model.

14. We further considered the possibility that OECD membership may be a confounder, as it could be correlated with fiscal transparency (due to the organization's promotion of best practices) as well as democracy (a fundamental criterion for membership). The coefficient on an indicator of OECD membership never came close to statistical significance when we added this variable to our models, and its inclusion had no substantive effect on the results. In addition, we contemplated controlling for bureaucratic quality, but lack an objective cross-national measure. However, we do control for GDP per capita, which "is likely to relate to the *ability* [emphasis in the original] of governments to collect and disseminate high-quality statistical data" (Hollyer et al., 2011, p. 9).

15. In a later paper, La Porta, Lopez-de-Silanes, and Shleifer (2008, p. 288) drop the Socialist category and group countries according to what they consider their legal origin prior to a country's pre-Russian Revolution or pre-World War II legal system. This alternative had little effect on our results.

16. We omit a plot of the coefficient and standard errors at each value of the conditioning variable, since all except seven of the countries in our sample score either a perfect zero or a perfect one.

17. Others might argue that electoral institutions influence fiscal disclosure in ways beyond the degree of electoral fragmentation, for instance by affecting accountability (Kunicová & Rose-Ackerman, 2005).

REFERENCES

Acemoglu, D., Johnson, S., & Robinson, J. S. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review, 91*(5), 1369–1401.

Achen, C. H. (2005). Let's put garbage-can regressions and garbage-can probits where they belong. *Conflict Management and Peace Science, 22*(4), 327–339.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth, 8*(2), 155–194.

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

Alt, J. E., Lassen, D. D., & Wehner, J. (2012). *The politics and economics of fiscal gimmickry in Europe*. Unpublished manuscript.

Alt, J. E., Lassen, D. D., & Rose, S. (2006). The causes of fiscal transparency: Evidence from the US States. *IMF Staff Papers, 53*(Special Issue), 30–57.

Alt, J. E., & Lowry, R. C. (2010). Transparency and accountability: Empirical results for US States. *Journal of Theoretical Politics, 22*(4), 379–406.

Anderson, B., Curristine, T., & Merk, O. (2006). Budgeting in Norway. *OECD Journal on Budgeting, 6*(1), 7–43.

Andrews, M. (2009). Isomorphism and the limits to African public financial management reform. *Faculty Research Working Papers Series*, RWP09-012. Cambridge, MA: Harvard University, Kennedy School of Government.

Barro, R. J. (1991). Economic growth in a cross section of countries. *Quarterly Journal of Economics, 106*(2), 407–443.

Beck, T., Clarke, G., Groff, A., Keefer, P., & Walsh, P. (2001). New tools in comparative political economy: The database of political institutions. *World Bank Economic Review, 15*(1), 165–176.

Bellver, A., & Kaufmann, D. (2005). *Transparenting transparency: Initial empirics and policy implications*. Unpublished manuscript.

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

Bräutigam, D. A. (2000). Aid dependence and governance. Stockholm: Almqvist & Wiksell.

Bräutigam, D. A., & Knack, S. (2004). Foreign aid, institutions, and governance in Sub-Saharan Africa. *Economic Development and Cultural Change, 52*(2), 255–285.

Bräutigam, D. A., Fjeldstad, O., & Moore, M. (2008). Taxation and state-building in developing countries: Capacity and consent. Cambridge: Cambridge University Press.

Brender, A., & Drazen, A. (2005). Political budget cycles in new versus established democracies. *Journal of Monetary Economics, 52*(7), 1271–1295.

Cheibub, J., Gandhi, J., & Vreeland, J. (2010). Democracy and dictatorship revisited. *Public Choice, 143*(1), 67–101.

Collier, P. (2006). Is aid oil? An analysis of whether Africa can absorb more aid. *World Development, 34*(9), 1482–1497.

de Renzio, P., & Castro, M. (2011). *Is the Open Budget Index an accurate measure of budget transparency? A research note investigating alternative aggregation methods*. Unpublished manuscript.

de Renzio, P., Gomez, P., & Sheppard, J. (2009). Budget transparency and development in resource-dependent countries. *International Social Science Journal, 57*(s1), 57–69.

Dunning, T. (2008). Crude democracy: Natural resource wealth and political regimes. Cambridge: Cambridge University Press.

Elgie, R. (Ed.) (2001). *Divided government in comparative perspective*. Oxford: Oxford University Press.

Eurostat (2004). Report by Eurostat on the revision of the Greek government deficit and debt figures. Luxembourg: Eurostat.

Fölscher, A., Krafchik, W., & Shapiro, I. (2000). Transparency and participation in the budget process. Cape Town: Idasa.

Glennerster, R., & Shin, Y. (2008). Does transparency pay?. *IMF Staff Papers, 55*(1), 183–209.

Hallerberg, M. (1999). The role of parliamentary committees in the budgetary process within Europe. In R. R. Strauch, & J. von Hagen (Eds.), *Institutions, politics and fiscal policy* (pp. 87–106). Boston, MA: Kluwer Academic Publishers.

Hameed, F. (2005). Fiscal transparency and economic outcomes. *IMF Working Paper*, WP/05/225. Washington, DC: International Monetary Fund.

Heald, D. (2003). Fiscal transparency: Concepts, measurement and UK practice. *Public Administration, 81*(4), 723–759.

Hollyer, J. R., Rosendorff, B. P., & Vreeland, J. R. (2011). Democracy and transparency. *Journal of Politics, 73*(4), 1191–1205.

Humphreys, M., Sachs, J., & Stiglitz, J. E. (Eds.) (2007). *Escaping the resource curse*. New York, NY: Columbia University Press.

International Budget Partnership (2009a). Open budgets. Transform lives. The open budget survey 2008. Washington, DC: International Budget Partnership.

International Budget Partnership. (2009b). The transparency gap: Resource-dependent countries perform poorly on open budget index. *Budget Brief, 5*. Washington, DC: International Budget Partnership.

International Monetary Fund (2005). Greece: Report on the observance of standards and codes – Fiscal transparency module – Update. Washington, DC: International Monetary Fund.

International Monetary Fund (2007a). Manual on fiscal transparency. Washington, DC: International Monetary Fund.

International Monetary Fund (2007b). Code of good practices on fiscal transparency. Washington, DC: International Monetary Fund.

International Monetary Fund (2007c). Guide on resource revenue transparency. Washington, DC: International Monetary Fund.

International Organization of Supreme Audit Institutions (1998). The Lima declaration of guidelines on auditing precepts. Vienna: International Organization of Supreme Audit Institutions.

Islam, R. (2003). Do more transparent governments govern better? *World Bank Policy Research Working Paper*, 3077. Washington, DC: World Bank.

Jensen, N., & Wantchekon, L. (2004). Resource wealth and political regimes in Africa. *Comparative Political Studies, 37*(7), 816–841.

Kam, C. D., & Franzese, R. J. (2007). Modeling and interpreting interactive hypotheses in regression analysis. Ann Arbor, MI: University of Michigan Press.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). Governance matters VIII: Aggregate and individual governance indicators 1996–2008. *World Bank Policy Research Working Paper*, 4978. Washington, DC: World Bank.

Kaufmann, D., & Kraay, A. (2002). Growth without governance. *Economia, 3*(1), 169–229.

Keefer, P., & Knack, S. (1997). Why don't poor countries catch up? A cross-national test of an institutional explanation. *Economic Inquiry, 35*(3), 590–602.

Knack, S., & Keefer, P. (1995). Institutions and economic performance: Cross-country tests using alternative institutional measures. *Economics and Politics, 7*(3), 207–227.

Knack, S., Kugler, M., & Manning, N. (2003). Second-generation governance indicators. *International Review of Administrative Sciences, 69*(3), 345–364.

Koen, V., & van den Noord, P. (2005). Fiscal gimmickry in Europe: One-off measures and creative accounting. *OECD Economics Department Working Paper*, 417. Paris: Organization for Economic Cooperation and Development.

Kolstad, I., & Wiig, A. (2009). Is transparency the key to reducing corruption in resource-rich countries?. *World Development, 37*(3), 521–532.

Kono, D. (2006). Optimal obfuscation: Democracy and trade policy transparency. *American Political Science Review, 100*(3), 369–384.

Kopits, G., & Craig, J. D. (1998). Transparency in government operations. *IMF Occasional Paper*, 158. Washington, DC: International Monetary Fund.

Kunicová, J., & Rose-Ackerman, S. (2005). Electoral rules and constitutional structures as constraints on corruption. *British Journal of Political Science, 35*(4), 573–606.

Kurtz, M. J., & Schrank, A. (2007). Growth and governance: Models, measures, and mechanisms. *Journal of Politics, 69*(2), 538–554.

Laakso, M., & Taagepera, R. (1979). 'Effective' number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3–27.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The economic consequences of legal origins. *Journal of Economic Literature, 46*(2), 285–332.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. *Journal of Law, Economics, and Organization, 15*(1), 222–279.

Levi, M. (1988). Of rule and revenue. Berkeley, CA: University of California Press.

Lienert, I. (2003). A comparison between two public expenditure management systems in Africa. *IMF Working Paper*, 03/2. Washington, DC: International Monetary Fund.

Lijphart, A. (1999). Patterns of democracy: Government forms and performance in thirty-six countries. New Haven, CT: Yale University Press.

Mani, A., & Mukand, S. (2007). Democracy, visibility and public good provision. *Journal of Development Economics, 83*(2), 506–529.

Marshall, M. G., Gurr, T. R., & Jaggers, K. (2010). Polity IV project: Political regime characteristics and transitions, 1800–2009. *Dataset users' manual*. Severn, MD: Center for Systemic Peace.

Martin, L. W., & Vanberg, G. (2004). Policing the bargain: Coalition government and parliamentary scrutiny. *American Journal of Political Science, 48*(1), 13–27.

Merino-Dorantes, A., Gallego-Cuervo, P., & Vera-Sandoval, A. (2009). Budget transparency: Determinants, impacts on policy outcomes and the role of audit institutions. *Report prepared for the International Budget Partnership*. London: London School of Economics and Political Science.

Messick, R. E. (2002). Strengthening legislatures: Implications from industrial countries. *World Bank PREM Note*, 63. Washington, DC: World Bank.

Moore, M. (2004). Revenues, state formation, and the quality of governance in developing countries. *International Political Science Review, 25*(3), 297–319.

Munck, G. L., & Verkuilen, J. (2002). Conceptualizing and measuring democracy: Evaluating alternative indices. *Comparative Political Studies, 35*(1), 5–34.

North, D. C. (1990). Institutions, institutional change and economic performance. New York, NY: Cambridge University Press.

O'Donnell, G. (1998). Horizontal accountability in new democracies. *Journal of Democracy, 9*(3), 112–126.

Organization for Economic Cooperation and Development (2002). OECD best practices for budget transparency. *OECD Journal on Budgeting, 1*(3), 7–14.

Persson, T., & Tabellini, G. E. (2003). The economic effects of constitutions. Cambridge, MA: MIT Press.

Persson, T., Roland, G., & Tabellini, G. (2007). Electoral rules and government spending in parliamentary democracies. *Quarterly Journal of Political Science, 2*(2), 155–188.

Petrie, M. (2003). Promoting fiscal transparency: The complementary roles of the IMF, financial markets, and civil society. *IMF Working Paper*, WP/03/199. Washington, DC: International Monetary Fund.

Reinikka, R., & Svensson, J. (2004). The power of information: Evidence from a newspaper campaign to reduce capture. *World Bank Policy Research Working Paper*, 3239. Washington, DC: International Monetary Fund.

Rejali, D. M. (2007). Torture and democracy. Princeton, NJ: Princeton University Press.

Robinson, M., & Vyasulu, V. (2008). Democratising the budget: Fundar's budget analysis and advocacy initiatives in Mexico. In M. Robinson

(Ed.), *Budgeting for the poor* (pp. 47–72). Basingstoke: Palgrave Macmillan.
Rodrik, D. (2008). One economics, many recipes: Globalization, institutions, and economic growth. Princeton, NJ: Princeton University Press.
Rosendorff, B. P., & Vreeland, J. R. (2006). *Democracy and data dissemination: The effect of political regime on transparency*. Unpublished manuscript.
Ross, M. L. (2001). Does oil hinder democracy?. *World Politics, 53*(3), 325–361.
Ross, M. L. (2006). Is democracy good for the poor?. *American Journal of Political Science, 50*(4), 860–874.
Ross, M. L. (2008). Oil, Islam, and women. *American Political Science Review, 102*(1), 107–123.
Ross, M. L. (2011). Mineral wealth and budget transparency. *IBP Working Paper*, 2. Washington, DC: International Budget Partnership.
Santiso, C. (2009). The political economy of government auditing: Financial governance and the rule of law in Latin America and beyond. New York, NY: Routledge.
Schrodt, P. A. (2010). Seven deadly sins of contemporary quantitative political analysis. Paper presented at the annual meeting of the American Political Science Association, Washington, DC, September 2–5.
Stock, J. H., & Watson, M. W. (2007). Introduction to econometrics. Boston, MA: Pearson/Addison Wesley.
Tilly, C. (1990). Coercion, capital, and European states, AD 990-1990. Oxford: Basil Blackwell.
von Hagen, J. (1992). Budgeting procedures and fiscal performance in the European communities. *Economic Papers*, 96. Brussels: Directorate-General for Economic and Financial Affairs, Commission of the European Communities.
Weber, A. (2012). Stock-flow adjustments and fiscal transparency: A cross-country comparison. *IMF Working Paper*, WP/12/39. Washington, DC: International Monetary Fund.
Wehner, J. (2010). Institutional constraints on profligate politicians: The conditional effect of partisan fragmentation on budget deficits. *Comparative Political Studies, 43*(2), 208–229.
World Bank (2008). *World development indicators*. Washington, DC: World Bank.

APPENDIX A. VARIABLE DEFINITIONS AND SOURCES

Age (C): Age of democracy, calculated as (2007—first year of democratic rule)/61, ranges from 0 to 1. The first year of democratic rule corresponds to the first year of a string of years classified as democratic in the Democracy–Dictatorship (DD) dataset. Source: Cheibub *et al.* (2010).

Age (P): Age of democracy, calculated as (2007—first year of democratic rule)/207, ranges from 0 to 1. The first year of democratic rule corresponds to the first year of a string of positive yearly values of Polity scores. Source: http://www.systemicpeace.org/polity/polity4.htm.

Civil law: Dummy variable, equal to 1 if the legal origin of a country is in French, German, Scandinavian or Socialist law, 0 otherwise (indicating countries with a common law legal origin). Source: La Porta *et al.* (1999).

Democracy (C): Democracy scores in the DD dataset, averaged over the period 2000–2006. Scores range from 0 (always undemocratic) to 1 (always democratic). Source: Cheibub *et al.* (2010).

Democracy (P): Revised Combined Polity scores in the 2008 dataset of the Polity IV project, averaged over the period 2000–2006. Rescaled to range from 0 (always completely undemocratic) to 1 (always completely democratic). Source: http://www.systemicpeace.org/polity/polity4.htm.

Ethno-linguistic fractionalization: The average of the available data for ethnic and linguistic fractionalization. Source: Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003).

GDP per capita: Natural log of GDP per capita in constant US$, base year 2000, averaged over the period 2000–2006. Source: World Bank (2008).

Latitude: The absolute value of the latitude of a country's capital city, divided by 90 so as to take theoretical values between 0 and 1. Source: La Porta *et al.* (1999).

Mixed electoral system: Dummy variable, equal to 1 if the country uses a mixed electoral system combining proportional representation with plurality elections, 0 otherwise. Source: http://www.idea.int/esd/world.cfm.

Oil and gas per capita: Natural log of the value of oil and gas production per capita (plus one to eliminate zero values) in constant US$, base year 2000, averaged over the period 2000–2006. Source: Personal correspondence from Michael Ross.

Open Budget Index: The degree of budget transparency in 2008, ranging from 0 (complete lack of transparency) to 100 (full transparency). Sources: International Budget Partnership (2009a), http://www.openbudgetindex.org.

Partisan fragmentation: One minus the sum of the squared seat shares of all parties in the legislature. Independents are counted as single-member political parties. Source: Beck et al. (2001; April 2008 update).

Proportional electoral system: Dummy variable, equal to 1 if the country uses a proportional representation electoral system, 0 otherwise. Source: http://www.idea.int/esd/world.cfm.

APPENDIX B. SUMMARY STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Age (C)	85	0.25	0.32	0.00	1.00
Age (P)	82	0.13	0.20	0.00	1.00
Civil law	85	0.69	0.46	0.00	1.00
Democracy (C)	85	0.58	0.48	0.00	1.00
Democracy (P)	82	0.71	0.27	0.00	1.00
Ethno-linguistic fractionalization	85	0.43	0.26	0.00	0.93
GDP per capita	85	7.30	1.43	4.45	10.58
Latitude	85	0.27	0.19	0.00	0.69
Mixed electoral system	84	0.17	0.37	0.00	1.00
Oil and gas per capita	85	3.10	2.80	0.00	9.35
Open Budget Index	85	39.44	25.36	0.00	88.27
Partisan fragmentation	83	0.60	0.20	0.00	0.93
Proportional electoral system	84	0.44	0.50	0.00	1.00

Note: Refer to Appendix A for full variable definitions and sources.