

# Incentives research

The Impacts of  
Fiscal Openness:  
A Review of the  
Evidence

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# Abstract

Fiscal transparency and participation in budgeting are widely promoted and enshrined in an increasing number of international standards and norms. We provide the first structured review of the impacts of “fiscal openness” interventions, based on a database of 38 empirical studies. Fiscal openness variables are associated with the quality of the budget in terms of macro-fiscal outcomes, resource allocation, and service delivery, as well as wider governance and development outcomes. While only a handful of studies can make a convincing claim to identify causal effects, the most rigorous tests tend to find that fiscal transparency and participation in budgeting have desirable outcomes. Yet, gaps in the literature limit our understanding of exactly which interventions produce impacts, the relative effectiveness of different interventions and their relationships, the multiple impacts they generate, and under what conditions. We set out questions for future research.

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# I. Introduction

Transparency and participation are in vogue in international policy circles. Carothers and Brechenmacher (2014: 1) list these two concepts alongside “accountability” and “inclusion” as forming a new development consensus that has become “nearly universal” in the policy statements of major international organizations, linking them to a series of desirable outcomes. The fiscal policy arena is no exception. For example, on the landing page of its website dedicated to fiscal transparency, the International Monetary Fund (IMF) claims that fiscal transparency “is critical for effective fiscal management and accountability”.<sup>1</sup> The brochure of the World Bank’s Budget Transparency Initiative (n.d.) asserts that budget transparency leads to less corruption, more efficient use of resources, more trust in government, and higher revenues. In fact, many organizations promoting fiscal openness seem to do so based on an implicit theory of change that sees transparency and participation in fiscal matters leading to a number of desirable impacts on macro-fiscal outcomes, budget allocations and service delivery, governance, or human development.

This positive view of the potential impact of transparency and participation in fiscal matters has in turn led to a

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<sup>1</sup> See <https://www.imf.org/external/np/fad/trans/> [accessed March 2, 2015].

growing set of international standards and norms. In its 2014 Fiscal Transparency Code, the IMF sets out benchmarks for fiscal reporting, forecasting and budgeting, and the management of fiscal risks. For the first time since the inception of the Code in 1998, it also encourages governments to provide their citizens with “an opportunity to participate in budget deliberations” (section 2.3.3.). In 2015, the Council of the Organisation for Economic Co-operation and Development (OECD) approved a “Recommendation on Budgetary Governance” which incorporates specific language on the need for budget documents and data to be “open, transparent and accessible” and for budget debates to be “inclusive, participative and realistic” (sections II.4. and II.5.).<sup>2</sup> Finally, the Global Initiative for Fiscal Transparency (GIFT) – which defines itself as “a multi-stakeholder action network working to advance and institutionalize global norms and significant, continuous improvements in fiscal transparency, participation, and accountability in countries around the world”<sup>3</sup> – has developed a set of High-Level Principles that were endorsed by the United Nations General Assembly in December 2013. These principles enshrine citizens’ right to gain access to fiscal information and to have effective

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<sup>2</sup> Recommendations are a formal instrument of the OECD, with which member countries should comply.

<sup>3</sup> See <http://fiscaltransparency.net/> [accessed March 2, 2015].

opportunities to participate in fiscal policymaking.

As with many norms and principles that gradually gain acceptance at the international level, arguments in their favor can be divided between normative and instrumental ones. On the normative side, the value of fiscal openness is increasingly recognized. International institutions have developed norms, principles and instruments, and country governments have started to translate them into domestic laws, regulations and practices, albeit unevenly. A review of budget laws in over one hundred countries found that more than half explicitly mention transparency, at least as a key principle that should guide fiscal policymaking. On the other hand, only seven budget laws included explicit provisions for citizen participation and engagement (de Renzio and Kroth 2011).

What about the instrumental side of the debate? Skeptics are right to demand credible evidence that fiscal openness “matters” by contributing to the achievement of desirable objectives that are of interest to governments, citizens, and market actors. As mentioned above, the list of supposed benefits that proponents present is substantial: transparency and participation – both fiscal and not – are said to increase government legitimacy and trust, reduce corruption, improve efficiency and effectiveness, enhance accountability, lead to better public services, etc. Yet,

these claims are rarely backed up by rigorous evidence. Too often, perceived positive impacts in a single case metamorphose into “best practice” examples, while findings from cross-country statistical studies are cited without full acknowledgment of potential threats to valid inference.

To provide a firmer empirical grounding for these debates, we carry out a systematic review of existing evidence on the impacts of fiscal openness, broadly conceived. We take stock of research documenting a wide range of effects of transparency and participation in budgeting. To the best of our knowledge, this is the first such review. Others have reviewed the impact of “citizen engagement” or “participatory governance” on improvements in governance and development (Gaventa and Barrett 2012, Speer 2012), leaving out questions linked to transparency and access to information, and without focusing specifically on government budgets. Other reviews (Kosack and Fung 2014, Fox 2014) are restricted to a small set of impact evaluation studies related to growing donor support for “social accountability” or “transparency and accountability” initiatives.<sup>4</sup> Some

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<sup>4</sup> The paper by Kosack and Fung was written as part of a research project funded by the Transparency and Accountability Initiative (TAI), a donor collaborative working to expand the impact and scale of transparency and accountability interventions. See <http://www.transparency-initiative.org/about> [accessed March 2, 2015]. Jonathan Fox’s work was commissioned by the Global Partnership for

reviews resemble our focus (Carlitz 2013, Ling and Roberts 2014) but consider a more limited range of evidence, and often group together a disparate set of interventions without some of the necessary conceptual underpinnings.

The paper is structured as follows: The next section provides a description of the sample of articles and papers used as a basis for the review, followed by conceptual background and an overview of how “transparency” and “participation” in budgeting have been operationalized in the literature. We then summarize the evidence, organized by four categories of impact. Finally, we assess the strength of the existing evidence, before drawing conclusions and developing potential directions for future research.

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Social Accountability (GPSA), a World Bank initiative. See <http://www.thegpsa.org/sa/> [accessed March 2, 2015].

## II. Sample description and overview

This review includes studies that (i) empirically evaluate a causal claim about the impact of an element of fiscal openness; (ii) have achieved publication as a peer-reviewed academic article, or as a book with an academic press or well-known commercial publisher; and (iii) are of sufficient length to qualify as a substantial piece of original research. We elaborate on some aspects of these criteria below, and note the resulting set of studies for this review.<sup>5</sup>

We examine empirical work that focuses, or otherwise makes a significant contribution to, the evaluation of a causal argument about the impact of fiscal transparency or participation in budgeting. Hence, we do not cover work that is purely theoretical, although in some instances (e.g. Milesi-Ferretti 2003) this has laid the foundation for subsequent empirical work that falls within the scope of our review. Scholars have also contributed conceptual discussion and commentary (e.g. Heald 2003), or descriptive information of particular cases (e.g. de Sousa Santos 1998). We acknowledge that such work can make an important contribution, and give impetus to critical reflection, but it falls outside the scope of our review. In addition, since we directly look at primary empirical research on the topic, we do not cover related literature reviews although several were useful for our survey.<sup>6</sup>

Some empirical studies help us to understand the impact of fiscal openness, but are not precisely focused on an explanatory variable or intervention that falls under our definition, which we discuss in detail in the following section. This may be the case when a study uses a broader concept that includes a relevant component of fiscal openness, but is not limited to it, giving rise to a type of “compound treatment” problem. For example, some analyses of the effects of transparency use a measure of government disclosure of information that also includes fiscal material, but is not limited to it. As a result, any reported effects cannot be precisely attributed to fiscal transparency, thus limiting the conclusions that we can draw for our purposes. Nonetheless, there are instances where the link is plausibly strong, and we include such a study while noting this qualification.

In addition, an increasing number of studies under the broad topic of “social accountability” convey important insights about the effects of transparency and

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<sup>5</sup> For reasons of time and capacity, we limit ourselves to research published in the English language. Moreover, all leading academic journals in the relevant disciplines are published in English.

<sup>6</sup> In particular, Speer (2012), Carlitz (2013), Gaventa and McGee (2013), Fox (2014), and Kosack and Fung (2014).

participation on the delivery of public services and the accountability of service providers.<sup>7</sup> Only a few of these look at transparency and participation in budgetary matters, and many of them investigate interventions that were not spearheaded by governments, but rather by non-governmental organizations or researchers. For this paper, our focus is on interventions that are due to government action, such as the publication of budget information or the provision of participation opportunities in the budget process. We do refer to pertinent results from such work where relevant, even though it may not be part of our core database.

Our initial stock-take included working papers and so-called “grey literature” more generally, but for this paper we limit our analysis to material that passed the hurdle of achieving publication as a book or peer-reviewed article. However, we hesitate to apply this criterion in an overly rigid way and make some exceptions. First, we also include working paper publications from the IMF, the World Bank, and a few other reputable institutions that have contributed significantly to the debate on fiscal openness and/or are frequently cited in other studies that we examine, as the exclusion of this work would distort our review. Second, we were also open to the inclusion of more recent and as yet unpublished studies with a strong likelihood of achieving publication in a scholarly journal in due course.

Most opinion and comment pieces, while often insightful, do not meet our criteria for inclusion. Yet, there are examples of comments or critiques that are crucial for interpreting or possibly qualifying other empirical work that we discuss, and we also cover such pieces (e.g. Hubbard 2007).

Following an initial sweep of the literature and applying the above criteria to filter the resulting list of over a hundred studies, we identified a core set of 38 papers as the basis for this literature review. Of these, 23 investigate the effects of variables related to fiscal transparency, and 14 relate to participation in budgetary decisions. Only a single study (Olken 2007) looks at both transparency and participation interventions separately to explore their relative impacts. About three-quarters of all studies use quantitative methods, most of them based on observational data. Only four studies are based on experimental designs, and three might be labeled quasi- or natural experiments. Twenty studies use evidence from a single country, and 18 are based on cross-national data. The appendix provides a summary listing and basic overview information

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<sup>7</sup> Fox (2014), Kosack and Fung (2014), and Joshi (2014) review these studies.

### III. Transparency and participation as independent variables

In this paper, we use the term “fiscal openness” to refer to a set of principles and practices around both transparency and participation in fiscal matters. The IMF defines fiscal transparency as “the comprehensiveness, clarity, reliability, timeliness, and relevance of public reporting on the past, present, and future state of public finances”.<sup>8</sup> This definition captures much of what we consider important regarding the regular disclosure and dissemination of detailed and accessible information on all aspects of fiscal policy by the government (see also Kopits and Craig 1998, OECD 2001). Empirically, the concept is operationalized as the availability and quality of budget information. For example, the Open Budget Index assesses the executive budget proposal and supporting documents, pre-budget statement, in-year reports, mid-year review, year-end report, audit report, and popular versions in the form of a “citizen budget”.

Existing definitions of public participation in budget processes are less well developed. In general, it refers to a wide set of possible practices through which citizens, civil society organizations, and other non-state actors interact with public authorities through various means and to influence the design and execution of fiscal policies. This may occur at different stages of the budget cycle or in relation to specific service delivery or public investment issues.<sup>9</sup>

In studies of fiscal transparency impacts, the specificity of the independent variable of interest varies greatly. Least precise are measures of government transparency that include fiscal material, but are not limited to it (e.g. Bellver and Kaufmann 2005, Gelos and Wei 2005, Glennerster and Shin 2008, Lindstedt and Naurin 2010). Some, although by no means all, of these studies are especially compelling in terms of their design. However, we cannot be certain that any of the impacts they identify are due to fiscal transparency instead of some other aspect of government disclosure.

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<sup>8</sup> See <https://www.imf.org/external/np/fad/trans/> [accessed March 3, 2015].

<sup>9</sup> We thus exclude studies of legislative participation in budgeting from this review, unless they examine public participation via a legislature. Wehner (2014) reviews the literature on legislatures and public finance.

By far the most common operationalization of fiscal transparency in the literature is a broad one that captures a wide range of disclosures with reference to the IMF Code and OECD Best Practices for Budget Transparency. Cross-national studies use data from IMF fiscal transparency assessments based on the Reports on the Observance of Standards and Codes (ROSC) initiative (e.g. Hameed 2005, Arbatli and Escolano 2012, Weber 2012), budget practice surveys by the OECD (e.g. Alt and Lassen 2006a and 2006b, Benito and Bastida 2009), the Open Budget Index (Blume and Voigt 2013, Alt et al. 2014), or an early budget transparency assessment for European Union countries (von Hagen and Harden 1994, Bernoth and Wolff 2008). This “broad” approach is rarely replicated at the subnational level, with the exception of several studies based on a dataset of budget transparency practices across the US states (Alt et al 2002).

Studies of the impact of specific components of fiscal transparency are rare. Three studies examine the effects of external auditing, one cross-national (Bernoth and Wolff 2008) and the remaining two in the context of a single country (Olken 2007, Ferraz and Finan 2008). One well-known study focuses on the publication of information related to budget execution, specifically the disbursement of funds to local schools (Reinikka and Svensson 2005, 2011).<sup>10</sup> It is striking that important components of fiscal transparency are not examined. For example, we largely lack evidence on the impact of revenue transparency, including in relation to the management of natural resource revenues. Overall, almost all cross-national studies of fiscal transparency impacts use broad and encompassing measures, while several single-country studies focus on selected disclosures as part of an experimental or quasi-experimental research design.

As far as participation in budget processes is concerned, papers broadly belong to two groups. The first group looks at “participatory budgeting” as a specific mechanism first adopted in the southern Brazilian city of Porto Alegre, before spreading within Brazil and further afield. Participatory budgeting is a process of democratic deliberation consisting of organized assemblies through which citizen representatives are able to define and choose among local public investment priorities, which are then funded and implemented by government. It represents a set of well-established practices and has been around, in some cases, for more than 20 years, making it possible to assess its impacts with more detail and rigor. Some of the early literature on participatory budgeting (e.g. de Sousa Santos 1998) focused on its practice and potential for democratic development, without looking at impact in a structured way. Several qualitative case studies from different countries (Ebdon and Franklin 2004, Kasymova and Schachter 2014, Wu and Wang 2011) discuss impact only in broad terms, without a rigorous empirical assessment of the effects of participatory budgeting. More recently, the Brazilian experience has been assessed in quantitative studies comparing

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<sup>10</sup> Below, we count these and several related publications as a single study and cite the 2011 paper.

municipalities that introduced participatory budgeting with those that did not (Boulding and Wampler 2010, Touchton and Wampler 2014, Gonçalves 2014).

A second group of papers looks at a variety of other participatory mechanisms adopted as part of decisions on city-level services, decentralization reforms (Heller et al. 2007), public investment programs or other similar initiatives, that allow citizens to have a voice in determining budget priorities and resource allocation. These range from citizen surveys (Simonsen and Robbins 2010, Watson et al. 1991), direct mechanisms like referenda or plebiscites (Beath et al. 2012, Olken 2010), to village forums shaped around voluntary or traditional practices (Diaz-Cayeros et al. 2010, Jaramillo and Wright 2015). The effects of these mechanisms are studied in sub-national contexts, with some papers comparing the effects of different mechanisms against each other. We could not find any studies that utilize cross-country data, or that look at national-level practices to empirically analyze the impacts of public participation in budget processes, except for the very broad comparisons in Bräutigam (2004).<sup>11</sup>

When looking at participation, it is useful to refer to the “Public Participation Spectrum” of the International Association for Public Participation (IAP2), which classifies different mechanisms depending on the intensity of public involvement. From weakest to strongest, public participation can be used to: (a) inform; (b) consult; (c) involve; (d) collaborate; and (e) empower.<sup>12</sup> The mechanisms in the surveyed literature span the whole range, with citizen surveys at the weaker end and participatory budgeting as the strongest form of putting citizens in charge of specific decisions on budget allocation.

A final caveat: Our focus on budget transparency and participation as key independent variables means that accountability is one of the outcomes we investigate, rather than another intervention. If the key research question is “What are the documented effects of fiscal transparency and public participation in budgeting?” then accountability – the responsiveness of governments to citizen demands – belongs among those outcomes. We turn to these in the following section.

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<sup>11</sup> At the time of writing (2014 and early 2015), GIFT was working on country case studies of public participation in budget processes which look at national-level experiences as well. Drafts of these are available at: <http://fiscaltransparency.net/2014/11/participation-case-studies-and-synthesis/> [accessed March 3, 2015].

<sup>12</sup> See <http://www.iap2.org.au/resources/iap2s-public-participation-spectrum> [accessed March 3, 2015].

## IV. Summary of impacts

To structure our analysis, we categorized the 38 papers into four groups of impacts: (a) macro-fiscal, (b) allocation and service delivery, (c) governance, and (d) development outcomes. The first two relate to the quality of budgets themselves, and are linked to a framework that public finance practitioners use to examine budget outcomes.<sup>13</sup> The latter two look at the consequences of resource decisions and management. In category (a), 14 studies look at impacts on fiscal performance, credit worthiness, and creative accounting (or “fiscal gimmickry”). Group (b) contains nine studies linking fiscal openness to the allocation of budget resources across different sectors or projects, and the delivery of public services. Category (c) has 11 studies that look at what we might call governance outcomes, from corruption, political accountability, to the mobilization of citizens. The final category (d) is small and considers impacts on development outcomes in areas such as health and education. In a few instances, scholars look at different impacts that fall into more than one category (e.g. Alt et al 2002, Hameed 2005, Reinikka and Svensson 2011). We acknowledge this in the appendix by highlighting secondary impact categories. However, most of the studies have a distinct or main dependent variable. We examine each group in turn.

### IV.1. Macro-fiscal outcomes

One of the most established areas of empirical research probes the relationship between budget transparency and fiscal outcomes, such as deficits or debt. An important early contribution is the work by von Hagen (e.g. von Hagen and Harden 1995), in which he develops several indices of budget institutions for 12 European Union countries. While the analysis reveals that the quality of the budget process is associated with fiscal outcomes, it does not isolate the effect of fiscal transparency. His measure of the “informativeness” of the draft budget is only a component of the indices developed by von Hagen that he does not analyze separately here or in later updates of this work (e.g. Hallerberg et al. 2009).<sup>14</sup>

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<sup>13</sup> The World Bank's (1998: 17) Public Expenditure Management Handbook popularized three levels of outcomes: aggregate fiscal discipline; resource allocation and use based on strategic priorities; and efficiency and effectiveness of programs and service delivery. This is a reformulation of an older framework (Schick 1966).

<sup>14</sup> Elsewhere, Alesina et al. (1999) develop a ten-item index of budget institutions in Latin America. Their analysis includes results with a subindex that they interpret as “an indirect measure of transparency” (p. 269), based on two components. The first captures whether the central government typically assumes debt originally contracted by other public agencies, and under what circumstances. The second assesses the borrowing autonomy of subnational governments and public enterprises. Bailout practices and

In pioneering empirical work, Alt and Lassen (2006a, 2006b) examine the role of budget transparency in accounting for electoral budget cycles and levels of public debt. Their measure of fiscal transparency is based on a survey of budget procedures carried out by the OECD in 1999, from which they draw ten items to construct an index of the transparency of the budget process that is closely related to the OECD Best Practices for Budget Transparency. Based on a panel of 19 OECD countries in the 1990s, they find that low-transparency countries have large swings in the budget balance; deficits are more than 1% of GDP lower in a post-election year than in an election year (Alt and Lassen 2006a). In a related study, they show that the dampening effect of transparency on electoral cycles over time leads to lower levels of public debt (Alt and Lassen 2006b).

Benito and Bastida (2009) construct a 40-item index of budget transparency based on a 2003 survey of budget procedures by the OECD and the World Bank. Using a sample of up to 41 developed and developing countries, they show an association of their index with deficits, but not with debt levels, in the year 2003. However, this analysis is restricted to simple correlations, based on fiscal data for only a single year. Blume and Voigt (2013) find no association of the 2006 Open Budget Index with government spending levels in a cross-section of 47 countries in the 1990s. The purely cross-national nature of the data in these studies does limit the quality of the evidence. We return to this point and related issues later. Elsewhere, Alt et al. (2002) and Alt and Lowry (2010) – discussed below – report a positive direct effect of fiscal transparency on the size of government in US states.

A second well-developed strand of research in this category links fiscal transparency to sovereign credit ratings and related variables. Hameed (2005) examines the association between budget transparency, measured with IMF fiscal ROSC data, and sovereign credit ratings. Increasing transparency is associated with better credit ratings in a cross-section of 32 countries, also when controlling for several other variables such as GDP per capita, default history, and external debt and deficit levels. In follow-up work, Hameed (2011) uses 2008 Open Budget Index data to confirm this association in a larger cross-section of 68 countries, as well as panel data with monthly observations over the 2004 to 2009 period. For countries with similar credit ratings, higher transparency is associated with lower spreads, and changes in spreads are smaller for more transparent countries. Arbatli and Escolano (2012) also examine the relationship between fiscal transparency, fiscal performance, and credit ratings using cross-sectional transparency data from the IMF and the OBI. In a sample of up to 56 countries, they confirm the association between higher transparency and better ratings. They further

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borrowing controls are important aspects of fiscal management, but they are not closely related to the quality of budget information.

present correlations suggesting that budget transparency works indirectly via its effect on fiscal outcomes for developed countries, whereas the effect on credit ratings is direct for developing countries.

Several papers consider the relationship between transparency and borrowing costs. Looking at European Union countries and the United States, Bernoth and Wolff (2008) find that transparency mediates the effect of detected creative accounting on risk premia in government bond markets, using von Hagen's transparency measure and a measure of external audit quality based on a 2003 World Bank-OECD survey. The transparency and audit measures also have a direct negative effect on bond spreads in some regressions. Wang et al (2014) study borrowing costs with a sample of 562 state bond issuances in the United States between 1986 and 2012, using transparency data based on Alt et al (2002). Their results are only partly compatible with previous findings. When they assume a linear effect of fiscal transparency, the impact on borrowing costs is positive, whilst a non-linear specification suggests that both high and low budget transparency increase costs but that medium levels of fiscal disclosure yield lower costs.

Two related papers look at the impact of a broader measure of transparency, including fiscal transparency, on equity fund investments in emerging markets (Gelos and Wei 2005) and sovereign credit spreads (Glennester and Shin 2008). The impact of transparency is to attract and retain investment, and to lower borrowing costs, respectively. This is in line with most of the work on fiscal transparency in this area, but we cannot be sure about the contribution of fiscal transparency to these effects.

More recent is an empirical focus on the role of transparency in containing creative accounting or fiscal gimmicks, as proxied by "stock-flow adjustments" (SFAs) – the difference between the change in the stock of debt and annual deficits. Using a measure of fiscal transparency largely drawn from the IMF's fiscal ROSCs, Weber (2012) finds a correlation in a sample of 87 countries. Alt et al (2014) explore several conditional relationships of fiscal transparency, using an OBI-based measure, in a panel of 14 EU countries for 1990-2007. They show that fiscal transparency dampens or eliminates the effect on fiscal gimmicks of electoral cycles, fiscal rules (the Stability and Growth Pact), and economic downturns. Fiscal transparency affects creative accounting both directly and indirectly.

## IV.2. Resource allocation and service delivery outcomes

Strong evidence linking fiscal openness to shifts in resource allocation and improvements in the provision of public services is more recent. Relevant work focuses

on the effects of different types of participatory mechanisms used by governments in budget processes, rather than on fiscal information disclosure. Unsurprisingly, much of this evidence is based on the well-known Brazilian experience with participatory budgeting, one of the earliest and better-known experiments with citizen engagement in the budget process.

Goldfrank and Schneider (2006) document how after the introduction of participatory budgeting, the local administration in the city of Porto Alegre increased the share of spending dedicated to the social sectors – by much more than in other places where participatory institutions had not been established – and improved its performance in project completion. More recent papers exploit the widespread adoption of participatory budgeting practices across Brazil, and the data produced as a consequence of that, to carry out more sophisticated and rigorous analyses. Boulding and Wampler (2010), for example, use a dataset covering 220 large Brazilian cities – 64 of which introduced participatory budgeting during 1989-2000 – to show that the adoption of participatory budgeting is associated with changes in resource allocation, especially increases in health and education programs. A similar finding, with a narrower focus on health, is reported by Touchton and Wampler (2014), using a larger sample and a longer time period. Gonçalves (2014) confirms this pattern, finding that health and sanitation spending increased by 20-30% after municipalities introduced participatory budgeting.

These papers provide credible evidence of the impact of public participation on resource allocation. However, they all refer to a specific type of participatory institution and to a single country, albeit a very large one. We thus know little about the external validity of these results and their relevance for other country contexts. Discussing the prospects for participatory budgeting around the world, Bräutigam (2004) looks at similar experiences across five countries. She notes that claims about the pro-poor nature of participatory budgeting might misrepresent or overstate reality. In many cases, she suggests, its impact is conditional on left-wing political parties winning power and using it to advance their progressive agenda, and on the existence of strong auditing institutions as well as free, open, and well-informed public policy debates (p. 665).

Complementing the evidence above, another group of papers looks at public participation beyond participatory budgeting, drawing from experience in a variety of countries. Their main contribution is in the comparison of different types of participatory practices, distributed along the various steps of IAP2's participation spectrum, and in the discussion of which ones are more effective in bringing about desirable outcomes.

For example, Simonsen and Robbins (2000) and Watson et al. (1991) document how two US cities have used citizen surveys to consult citizens in order to assess support for taxes for different services, or to help prioritize parts of the budget. In the former case,

the disclosure of tax amounts lowered support for taxes to fund services, while in the latter surveys were found to provide helpful inputs into the city's budgetary allocation decisions.

Heller et al. (2007) collected extensive survey data to evaluate the impact of a campaign for decentralized planning and budgeting introduced in 1996 by the Kerala state government in India. Structures and processes were created in each *panchayat* (local government) to directly involve citizens in planning and budgeting for devolved local spending. Survey respondents from 72 randomly selected *panchayats* indicated that service provision had improved significantly, with the greatest improvements being in the roads, housing and child services sectors. They also identified projects approved after the start of the campaign as being much more appropriate and responding to local needs and priorities. These views were widely shared, including by respondents from opposition parties and civil society. Looking at survey evidence across four states in South India, Besley et al. (2005) examine the effect of village meetings, or *Gram Sabhas*, that discuss resource allocation. People from disadvantaged groups are more likely to attend these meetings than those from other groups, and these meetings appear to be associated with access to resources and services. However, women are less likely to participate than men, which affects representativeness.

In another paper, Beath et al. (2012) use a randomized field experiment in 250 villages across Afghanistan to assess the impact of different participatory mechanisms on elite influence and resource allocation outcomes for local development projects. All villages were part of the National Solidarity Program, a nation-wide community-driven development program put in place by the Government of Afghanistan with assistance from the World Bank and other donors to provide grants for village projects identified through participatory institutions. The experiment shows how projects selected in villages where decisions happened through a secret-ballot referendum were much less likely to be affected by elite preferences – and therefore better reflect the real needs of the majority of the population, as reflected in villagers' satisfaction levels – than projects in villages where decisions were taken in village council meetings, as elites could wield more influence. In other words, the type of participatory mechanism chosen can affect resource allocation patterns and villagers' satisfaction with project selection. Olken (2010) finds a similar pattern in the Kecamatan Development Program in Indonesia, where the use of election-based plebiscites led to much higher satisfaction with selected projects when compared to representative village meetings. The conclusion from these two papers is that direct – rather than representative – participation seems to lead shifts in resource allocation.

Two additional papers look at the experience of Mexico and Peru in promoting participatory governance at the local level. Diaz-Cayeros et al. (2013) consider the

introduction of a reform in the state of Oaxaca in Mexico in 1995 that allowed indigenous communities to opt for a form of traditional governance called *usos y costumbres*, rather than the normal form of representation through political parties. Traditional institutions are based on non-partisan leadership elections, consensus-based decision-making, and monitoring compliance through informal enforcement and community justice. Their results show that municipalities governed by *usos y costumbres*, characterized by participatory practices in budgeting and implementation, increased their energy provision and improved education and sewerage services much faster than municipalities governed by political parties, where decisions are taken by politicians without citizen involvement. Jaramillo and Wright (2015) compare the effects of mandatory participatory budgeting reforms introduced by the central government in Peru against those of voluntary participatory fora on the provision of agricultural services. They find that voluntary fora, by better facilitating flows of information and collective action, are associated with an increase in the quantity and quality of agricultural services, while mandatory participatory budgeting processes with their more rigid structures imposed from above, yield more ambiguous results.

### IV.3. Governance outcomes

A large share of papers in this category deals with the question of whether transparency reduces corruption, or – paraphrasing a famous quote – whether sunlight is indeed the best disinfectant. A first group attempts to do that by using cross-country regressions. Bellver and Kaufmann (2005) were among the first to develop a measure of transparency for 194 countries based on 20 independent sources looking at access to information, budget transparency, and press freedom, for example. They use an unobserved component model to construct an index with two dimensions, one looking at economic/institutional transparency and the other at political transparency. Their analysis finds that “transparency is significant in reducing corruption, even after controlling for differences in income per capita and administrative regulations” (p. 30). Hameed (2005) and Bastida and Benito (2007) detect similar correlations looking more specifically at fiscal transparency with data from the IMF and OECD respectively, but with smaller samples of countries. Lindstedt and Naurin (2010) add a further twist. They use Bellver and Kaufmann’s index to check whether transparency alone is sufficient to curb corruption. They find that two further conditions need to be satisfied. First, press freedom ensures that citizens are informed about government actions. Second, accountability mechanisms such as elections need to be in place for citizens to be able to sanction bad governments. In other words, transparency contributes to lower corruption only when the information provided is accessible and can be utilized to hold

governments to account. The cross-national approach in these papers makes it difficult to identify a causal link between fiscal transparency and corruption.

Two papers make a causal or plausibly causal link of specific transparency interventions to corruption. Reinikka and Svensson (2011) report on a widely cited case of school grants in Uganda. A 1996 survey by the World Bank and the Government of Uganda found that only a small percentage of funds released by the central government for supporting local schools with materials and equipment actually reached the schools. District officials diverted the rest through leakage and corruption. After the government started publishing information on these transfers in national newspapers, and posting them on school notice boards, a follow-up survey in 2002 showed that the mean share of disbursements that reached schools had increased drastically, from an average 25.4% in 1996 to 81.8% in 2001, most markedly in areas that had better access to newspapers. This case is often cited as evidence that transparency can reduce corruption by giving citizens information that enables them to hold officials to account, and made Public Expenditure Tracking Surveys (PETS) famous as a tool to produce that information. One question is why similar tools have not had a similar impact in other countries. Hubbard (2007) provides a possible reason, pointing out that in the years following the first survey, a number of education reforms were introduced in Uganda that also contributed to the improvements in the share of grants reaching the schools.

An unambiguously causal piece of evidence in this area is a field experiment carried out in Indonesia to test alternative approaches to lower corruption in village road projects (Olken 2007). Some villages were told that their project would be audited by the central government audit agency, and audit findings were discussed at open village meetings. As a result, the amount of misused funds (measured as the difference between actual costs and an estimate provided by independent engineers) was eight percentage points lower compared to villages where the announcement was not made. Elsewhere, villagers were invited to “accountability meetings” where they could query officials about project implementation, and provide anonymous comments. The participation experiment was associated with much smaller, and statistically insignificant, reductions in corruption. In addition to providing evidence that audits and the disclosure of their results mitigate corruption, this study calls into question the common assumption that community monitoring is a powerful deterrent for corrupt behavior. Although citizen engagement did have some effect on variations in project costs, its overall impact was far from decisive.

Some studies link fiscal openness to electoral accountability. Alt et al. (2002) find that fiscal transparency has a positive effect on gubernatorial popularity, using cross-sectional data for US states covering the 1986 to 1995 period. Alt and Lowry (2010) extend this work using panel data for 1972-2002. They find no direct effect of budget

transparency on the retention of incumbent governors, but transparency dampens the negative effect of tax increases on their retention. The most convincing paper in this category is a study by Ferraz and Finan (2008), who examine how the public release of audit reports on federally transferred funds affects the reelection prospects of incumbent mayors. They exploit the fact that the timing of audits was randomized, so that some municipalities were audited prior to elections in 2004 and some afterwards. Where the audits revealed violations associated with corruption, their publication significantly reduced reelection probabilities, especially in municipalities with local radio stations that could publicize the audit findings.

Lastly, there are a few additional papers that use other governance-related dependent variables. Islam (2006) builds a transparency index that measures the timeliness of economic data (including government revenue and expenditure) published by the government, and shows that it is positively related to the quality of governance, as measured by the World Governance Indicators. Again, these cross-national results suffer from endogeneity concerns. Touchton and Wampler (2014) look participatory budgeting in Brazilian municipalities, and report that it is associated with a statistically significant increase of 8% in the number of active civil society groups. They interpret this as evidence that participatory budgeting promotes collective action, citizen mobilization, and monitoring of state action. Other papers, including Goldfrank and Schneider (2006) also document cases in which participatory budgeting has improved various aspects of local governance

#### IV.4. Development outcomes

Finally, we turn to the available evidence on the impact of fiscal openness on development results. As far as fiscal transparency is concerned, evidence is very thin. A previously cited paper by Bellver and Kaufmann (2005) reports some correlation between their transparency index and better socio-economic and human development indicators. Fukuda-Parr et al. (2011) also find that the Open Budget Index is positively correlated with human development, but the correlation weakens and disappears once control variables are included in the regression. Reinikka and Svensson (2011) find that access to budget information on school grants led to increases in school enrollment, and to some extent educational achievement, measured through exam scores. The authors claim that these results could have some relevance for countries where similar education policies are in place, but also warn of some of the contextual factors that might limit external validity.

In addition, limited evidence is available about the impact of participatory budgeting on social indicators. Both Touchton and Wampler (2014) and Gonçalves (2014) report that Brazilian municipalities that introduced participatory budgeting saw their infant mortality rates drop significantly more than other municipalities. The main reasons for this, Gonçalves posits, is that citizen participation allows for better targeting of public policies and spending, which affects resource allocation and efficiency of spending. Touchton and Wampler also show that the impact of participatory budgeting increases over time.

## V. Assessing the strength of the evidence

In this section, we assess the strength of the available empirical evidence against two criteria. One is the degree to which a study minimizes threats to valid inference due to the strength of its research design or methods. The second criterion is the substantive importance of a study, which has to do with the nature of the impact under investigation as well as the degree to which we can draw broader implications, including beyond the immediate empirical context, from the results.

Very few studies can plausibly claim to identify a causal effect of fiscal openness. Of the quantitative studies in our dataset, merely four are based on experimental designs (Beath et al 2012, Olken 2007 and 2010, Simonsen and Robbins 2000) while one exploits a natural experiment (Ferraz and Finan 2008) and another a quasi-experiment (Reinikka and Svensson 2011). In addition, the study by Glennerster and Shin (2008) is quasi-experimental, but it cannot claim to identify the causal effect of *fiscal* disclosure. More frequent are other quantitative studies based on observational data. The quality of this evidence varies greatly depending on the extent to which the empirical work addresses internal validity concerns. For example, panel regression results gain credibility when they are based on within-estimation that contains the threat arising from omitted variable bias, which is a major concern for cross-sectional analyses. Some quantitative studies with observational data use instrumental variable strategies, but convincing instruments are exceedingly rare. Measurement error also induces bias – this is a particular concern where measures of budget transparency are constructed from survey data that largely relies on responses from the very governments that are being examined, and with limited quality control.

Case studies can help to clarify underlying mechanisms. However, they often rely on intuition rather than rigorous data analysis, usually pay little attention to constructing a counterfactual scenario, and are sometimes commissioned by organizations that have an interest in documenting positive impacts. In some cases, variables are poorly conceptualized and operationalized. Moreover, case selection is a concern. As Carlitz (2012: 10) notes, “successful initiatives have been examined in greater detail than unsuccessful ones” which “can make it difficult to draw conclusions about the factors that lead to impact.” The latter point could also be raised with regard to some of the quantitative literature. Nonetheless, some studies (mostly employing case study approaches) do fruitfully explore the specific context and mechanisms in which fiscal openness initiatives have worked. These studies often produce insights and hypotheses that can then be tested elsewhere and help to advance knowledge in a way that better pinpoints the specific ways in which initiatives succeed or fail (see, for example, the case studies in Khagram et al. 2013).

Yet, rigor in a study's design and use of methods needs to be complemented by substantive importance, which can be limited for various reasons. One of these relates to how much we care about the documented impact.<sup>15</sup> Take Simonsen and Robbins (2000), who examine how citizens react to different types of budget information. While the documentation of such public opinion impacts can be valuable – not least for governments that wish to manipulate public sentiments towards fiscal policy – arguably more important is whether people's lives were materially affected. The dependent variables in Beath et al (2012) and Olken (2010) get closer, capturing impacts on project selection as well as villager satisfaction or attitudes. Olken (2007) and Reinikka and Svensson (2011) document direct impacts on actual service provision, while Ferraz and Finan (2008) show effects on the ability of citizens to hold corrupt politicians to account via the ballot box. All of these studies come with the usual questions about generalizability, but a priori there are no strong grounds for assuming that the results are meaningless beyond the immediate empirical context in which they were obtained. Their wider relevance and applicability remains, above all, an empirical question.

The work by Olken (2007) is not only empirically amongst the most convincing that exist in this area, but it is also substantively unique in one respect that is of fundamental importance for proponents of fiscal openness: this is the only study that relates to the relative importance of fiscal transparency and participation in budgeting. In this case, the evidence suggests that “top-down” external audit trumps “bottom-up” grassroots participation in project monitoring. Yet, this does not mean that any kind of participation has no effect. Moreover, the audit treatment included their delivery by the auditors to a special village meeting, which meant that “retribution from the village” was a potential sanction (p. 210). Thus, a form of participation was built into the audit treatment, and cannot be disentangled from the mere disclosure of audit information. Nonetheless, the results focus attention on the need to rigorously assess different types of participation interventions (see also Olken 2010), and how they may or may not amplify any impacts of passive information disclosure. For proponents of fiscal openness, such evidence can be operationally crucial for setting priorities in terms of advocacy or the support of specific reform proposals.

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<sup>15</sup> The nature of impacts and their substantive importance are linked to the nature of a fiscal openness intervention. Direct public involvement in budgetary decisions – activities classified as “collaboration” and “empowerment” on the IAP2 spectrum – establishes a clear potential link to resource allocation and service delivery. However, it remains an empirical question to what extent “weaker” forms of participation, or fiscal transparency interventions, may yield similar impacts as well. Without further empirical research that identifies causal effects of a diverse set of fiscal openness interventions, it is impossible to judge their substantive importance in relative and absolute terms. We return to this point in the conclusion.

## VI. Conclusions

This paper provides the first comprehensive review of available evidence on the impacts of fiscal openness in terms of its principal component dimensions, transparency and participation. It is based on 38 journal articles and papers that empirically investigate the effect of government disclosure of budgetary information and of mechanisms for public participation in the budget process on different outcome variables of interest, using both qualitative and quantitative evidence. Most studies fall into three main categories of impacts: macro-fiscal, resource allocation and service delivery, and governance. A fourth impact category, related to development outcomes, contains only a small number of studies.

The evidence about the effect of fiscal openness on different macro-fiscal outcomes – such as indicators of fiscal performance, borrowing costs, and creative accounting practices – is typically based on broad measures of transparency. This work is consistent in finding that transparency has a beneficial impact, lowering deficits or debt, borrowing costs, and directly or indirectly limiting fiscal gimmickry. Only a handful of studies in this category investigate the impact of specific components of budget transparency. Evidence on resource allocation and service delivery mainly looks at the impact of participatory mechanisms. This work is no longer limited to the well-documented Brazilian experience with participatory budgeting, and provides insights on why certain mechanisms may work better than others.

Looking at governance, findings are more varied, also because studies use different definitions and measures. Cross-country studies document negative correlations between (fiscal) transparency and corruption, but they cannot make any causal claims. Evidence from specific cases in Uganda, Indonesia, and Brazil provide much richer accounts of how budget information disclosure can reduce corruption and promote accountability – by incentivizing citizens to monitor governments, and public officials to refrain from corrupt behavior. It also appears that participatory mechanisms widen citizen involvement and mobilization. Findings on how fiscal openness affects development outcomes are scarce, but suggest impacts on education in Uganda and health in Brazilian municipalities.

The quality of the evidence that we document is varied. However, the most convincing evidence – in particular the small number of experimental or quasi-experimental studies – documents impacts that many would consider beneficial: lower government borrowing costs due to macro-fiscal disclosure (Glennster and Shin 2008), lower corruption due to the audit of government programs (Olken 2007) and the disclosure of specific budget execution information (Reinikka and Svensson 2011), greater electoral accountability of

politicians (Ferraz and Finan 2008), improved budget allocations due to citizen participation (Beath and Enikokpov 2012, Olken 2010), and participatory budgeting leading to improved health outcomes (Touchton and Wampler 2014, Gonçalves 2014). While this is a surprisingly small collection of papers, the overall direction of this causal or plausibly causal evidence is good news for fiscal activists and reformers.

How do these findings relate to the implicit theory of change that proponents of fiscal openness seem to work with? The documented impacts of transparency are largely limited to intermediate steps – such as macro-fiscal outcomes or reduced corruption – in the long chain leading to development outcomes. To get further down the chain, the evidence seems to suggest, participation needs to kick in, ensuring that governments are better informed about and more responsive to citizens' needs and priorities. Only then can fiscal openness lead to improved service delivery and improved livelihoods as captured by indicators of human development. On the other hand, the existing literature sheds very little light on the link between transparency and participation, or between some of the earlier and later steps in the theory of change. For example, the evidence on the impact of participatory mechanisms is not very detailed on the kinds of fiscal information disclosure that form the basis for engaging citizens across different cases. Is it akin to some of the broad measures of budget transparency used for documenting impact on macro-fiscal outcomes? Or is it rather a more targeted kind of transparency, more directly relevant to users' needs and interests? Generally speaking, the literature leaves a number of gaps and open questions that require answers if the push towards fiscal openness is to maintain momentum and make further progress in the coming years.

First, a largely untapped potential lies in disaggregating broad transparency measures to examine which specific disclosures are doing the work. For example, the Open Budget Index provides a detailed assessment of a package of eight budget documents. It would not be difficult to disaggregate this index to separately examine the impacts of these different budget documents, or of fiscal disclosure across different stages of the budget process (drafting, approval, execution, and audit). Similarly, transparency on the revenue and expenditure sides could be distinguished, or specific disclosures within these, such as natural resource revenues. Without such disaggregation, the absolute and relative contribution of specific elements is unclear, making it difficult to prioritize reforms and isolate impacts. For instance, to contain public debt, should a government strengthen in-year execution updates, audit results, or the quality of the government's budget proposal (and which part of the latter in particular)? In a context where institutional reform capacity is limited, reform may have to be targeted or phased, and it is essential to know where to reap the greatest gains and produce quick results – not least to build the case for further reform. Similarly, what specific disclosures might mobilize citizens and render participation more effective? Are they more interested in

budget allocation data, or in what was actually spent, and how do they react to and use such information in holding government accountable? Evidence on these types of questions is urgently needed and would have immediate policy relevance.

Second, with few exceptions discussed above (notably Olken 2007, 2010), the evidence thus far tells us little about the relationships and trade-offs between different elements of fiscal openness, and the relative effectiveness of different interventions. For example, we might be interested to know how different types of participation (such as consultative meetings or referenda) compare against particular disclosures (such as audits or in-year execution information) in terms of their impact on the leakage of funds and service delivery. This may entail examining interactive effects by combining different interventions. For instance, is the disclosure of execution information more effective in curbing corruption when it is complemented with a participatory monitoring opportunity? Finding answers to such questions requires that studies examine alternative interventions and their various combinations within the same research design. The rewards of such research in terms of enhancing service delivery and development in poor countries are potentially very large.

Third, and related, is the question of how fiscal transparency and participation in budgeting affect one another. Existing research into this complex area is limited, partly due to diverging views and emphases among major proponents of fiscal openness. For some, like the IMF, macroeconomic stability is the ultimate goal. Here, the focus is clearly on fiscal transparency and its effects on macro-fiscal outcomes. Others, such as development practitioners and civil society actors, are often more interested in promoting participation to affect allocations, service delivery, and governance outcomes. Partly as a result, research has tended to focus on one of the main components, less on how they affect one another, with only a few exceptions (Khagram et al 2013). Fundamental questions remain in this area: Under what conditions does fiscal disclosure lead to greater participation in budgetary decisions? When and how does participation, in turn, lead to greater demand for fiscal transparency? Rigorous examination of this potentially reciprocal relationship has the potential to yield evidence that is required for building a stronger case for enhancing participation.

Fourth, very few studies examine a variety of impacts simultaneously. Yet, this is crucial in order to understand the mechanisms through which fiscal openness interventions affect people's lives. The outcome categories that we examined suggest possible chains of relationships that should be carefully investigated. For instance, if participation leads to changes in budget priorities, how is this linked to the quality of service delivery and the accountability of elected office holders to voters, and, ultimately, development outcomes such as infant mortality? There are also more nuanced questions about context conditionality that concern parts of such a chain of impacts. We know little about

these complex chains from initial or immediate to ultimate impacts, with very few exceptions in the existing literature (e.g. Reinikka and Svensson 2011). Since what we ultimately care about is the quality of people's lives and how it might be improved, these questions require urgent attention. Moreover, understanding the multiple impacts of an intervention may yield clues about the incentives for reform, in particular in relation to corruption and the electoral accountability of politicians.

Finally, future research should generate insights relating to the conditions under which fiscal openness interventions have a particular effect. Thus far, the cross-national nature of much of the research on macro-fiscal impacts of fiscal transparency, despite the methodological limitation inherent in this approach, makes arguably the strongest case that these impacts hold generally across a large number of countries. In contrast, participation interventions are usually studied in the context of particular countries, with one country (Brazil) dominating the evidence on participatory budgeting. Since left-wing parties tend to favor pro-poor spending policies (Bräutigam 2004: 665), they also have the strongest incentives to introduce participatory mechanisms that bring previously excluded groups into the decision-making process and provide legitimacy for reprioritization. It is less clear whether participatory budgeting will produce the same effects in politically less receptive environments (see Kosack and Fung 2014). Multi-country analyses of comparable interventions are needed to identify crucial scope conditions.

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Appendix: Empirical studies of the impacts of fiscal openness variables

Author(s)	Date	Independent variable category	Main impact category (secondary categories)	Quantitative	Empirical context
Alt & Lassen	2006	Transparency	Macro-fiscal outcomes	Yes	19 OECD countries, 1990s
Alt & Lassen	2006	Transparency	Macro-fiscal outcomes	Yes	19 OECD countries, 1990s
Alt & Lowry	2010	Transparency	Governance (macro-fiscal outcomes)	Yes	US states, 1972-2002
Alt et al.	2014	Transparency	Macro-fiscal outcomes	Yes	14 EU countries, 1990–2007
Alt et al.	2002	Transparency	Governance (macro-fiscal outcomes)	Yes	US states, 1986-1995
Arbatli & Escolano	2012	Transparency	Macro-fiscal outcomes	Yes	56 OECD and developing countries, 2010
Bastida & Benito	2007	Transparency	Governance	Yes	41 OECD and non-OECD countries, 2003
Benito & Bastida	2009	Transparency	Macro-fiscal outcomes	Yes	41 OECD and non-OECD countries, 2003
Bernoth & Wolff	2008	Transparency	Macro-fiscal outcomes	Yes	15 EU countries, 1991-2005
Blume & Voigt	2013	Transparency	Macro-fiscal outcomes	Yes	47 OECD and non-OECD countries, 1990s
Ferraz & Finan	2008	Transparency	Governance	Yes**	373 municipalities in Brazil, 2003-2005
Fukuda-Parr et al.	2011	Transparency	Development	Yes	84 countries, 2008
Gelos & Wei	2005	Transparency	Macro-fiscal outcomes	Yes	137 funds, 1996-2000
Glennerster & Shin	2008	Transparency	Macro-fiscal outcomes	Yes**	23 emerging market economies, 1999-2002 (quarterly data)
Hameed	2011	Transparency	Macro-fiscal outcomes	Yes	68 countries, 2004-2009 (monthly data)
Hameed	2005	Transparency	Macro-fiscal outcomes (governance)	Yes	57 countries, 1998-2002
Hubbard	2007	Transparency	Governance	No	Uganda

Islam	2006	Transparency	Governance	Yes	170 countries, 2002
Lindstedt & Naurin	2010	Transparency	Governance	Yes	110 countries, 2000s
Reinikka & Svensson	2011	Transparency	Governance (development)	Yes**	218 Ugandan primary schools, 1996 and 2002
von Hagen & Harden	2009	Transparency	Macro-fiscal outcomes	Yes	12 EU countries, 1980s
Wang et al.	2014	Transparency	Macro-fiscal outcomes	Yes	US states, 562 issuances of bonds, 1986 to 2012
Weber	2012	Transparency	Macro-fiscal outcomes	Yes	87 countries, 1980-2010
Beath & Enikokpov	2012	Participation	Allocation and delivery	Yes*	250 Afghan villages, 2007-2009
Besley et al.	2005	Participation	Allocation and delivery	Yes	522 villages in four states in South India, 2002
Boulding & Wampler	2010	Participation	Development	Yes	220 Brazilian municipalities, 1996-2000
Bräutigam	2004	Participation	Allocation and delivery	No	Case studies of Brazil, Ireland, Chile, Mauritius, and Costa Rica
de Sousa Santos	1998	Participation	Allocation and delivery	No	Porto Alegre, Brazil
Diaz-Cayeros et al.	2010	Participation	Allocation and delivery	Yes	570 municipalities in Oaxaca, Mexico, 1990-2010
Goldfrank & Schneider	2006	Participation	Governance	No	Rio Grande do Sul, Brazil, 1999-2002
Gonçalves	2014	Participation	Development	Yes	3651 Brazilian municipalities, 1990-2004
Heller et al.	2007	Participation	Development	Yes	72 local governments in Kerala, India, 2002
Jaramillo & Wright	2015	Participation	Allocation and delivery	Yes	100 Peruvian municipalities, 2001 and 2007

Olken	2010	Participation	Allocation and delivery	Yes*	49 Indonesian villages, 2005-2006
Simonsen & Robbins	2000	Participation	Allocation and delivery	Yes*	Eugene, Oregon, US, 1991-1992
Touchton & Wampler	2014	Participation	Governance (allocation and delivery; development)	Yes	253 Brazilian municipalities, 1989-2008
Watson et al.	1991	Participation	Allocation and delivery	Yes	Auburn, Alabama, US, 1985-1990
Olken	2007	Transparency and participation	Governance	Yes*	608 Indonesian villages, 2003-2004

Notes: Entries are grouped by independent variable category. \* Field experiment. \*\* Natural experiment or quasi-experiment.