The Impacts of Fiscal Openness: A Review of the Evidence

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April 29, 2015

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 38 empirical studies published between 1991 and 2015. Fiscal openness variables are associated with different aspects of the quality of the budget, including 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 impacts, including reduced corruption, enhanced electoral accountability, and improved allocation of resources. Yet, gaps in the literature leave it to future research to clarify which specific interventions produce impacts, the relative effectiveness of different interventions and their relationships, the multiple impacts they generate, and the conditions under which these impacts materialize.

Acknowledgments: We thank Hugh Batrouney for outstanding research assistance, and Alta Fölscher, Jonathan Fox, Juan Pablo Guerrero, Tim Irwin, Sanjeev Khagram, Steve Kosack, Victoria Louise Lemieux, Greg Michener, Murray Petrie, Nicola Smithers, and Martin J. Williams for helpful comments and suggestions. This work was supported by the Global Initiative for Fiscal Transparency (GIFT).
Transparency and participation are in vogue in international policy circles. These concepts are listed alongside “accountability” and “inclusion” as forming a new development consensus that has become “nearly universal” in the policy statements of major international organizations (Carothers and Brechenmacher 2014: 1), linking them to a series of desirable outcomes. The fiscal policy arena is no exception. For example, on its website the International Monetary Fund (IMF) claims that fiscal transparency “is critical for effective fiscal management and accountability”.¹ 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 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 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.).² Finally, the Global Initiative for Fiscal Transparency (GIFT) – which defines itself as “a

² Recommendations are a formal instrument of the OECD, with which member countries should comply.
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—has developed High-Level Principles that were endorsed by the United Nations General Assembly in December 2013. These principles enshrine the right of citizens to gain access to fiscal information and to have effective opportunities to participate in fiscal policymaking.

As with many norms and principles that gradually gain international acceptance, arguments in their favor can be divided between normative and instrumental ones. On the normative side, the value of fiscal openness is increasingly recognized. As shown above, 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 to 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 documented above, the list of supposed benefits that proponents present is substantial. 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 acknowledging potential threats to valid inference.

To provide a firmer empirical grounding for these debates, we carry out the first systematic review of existing evidence on the impacts of transparency and participation in budgeting. Others

3 See http://fiscaltransparency.net/ [accessed March 2, 2015].
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. Some 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.

We first describe our approach and analytic framework, 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 broad categories of impacts. Finally, we assess the strength of the existing evidence, before drawing conclusions and developing potential directions for future research.

1. Approach and framework

The scope of 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

4 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](http://www.transparency-initiative.org/about) [accessed March 2, 2015]. Fox’s work was commissioned by the Global Partnership for Social Accountability (GPSA), a World Bank initiative. See [http://www.thegpsa.org/sa/](http://www.thegpsa.org/sa/) [accessed March 2, 2015].
criteria below, and describe the resulting set of studies for this review.\textsuperscript{5} We also set out a framework that guides our analysis in the following sections.

We examine empirical work that focuses on, 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 we 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.\textsuperscript{6}

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 measure of government disclosure of information that also includes fiscal material, but is not limited to it, giving rise to a type of “compound treatment” problem. 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” conveys important insights about the effects of transparency and participation on the delivery of

\textsuperscript{5} 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.

\textsuperscript{6} In particular, Speer (2012), Carlitz (2013), Gaventa and McGee (2013), Fox (2014), and Kosack and Fung (2014).
public services and the accountability of service providers. 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 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 consider 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 other unpublished work, 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 consider working paper publications from the IMF, the World Bank, and a few other institutions that have contributed significantly to the debate on fiscal openness and/or are frequently cited in other studies that we examine. Also, we include material that contains comments or critiques that are crucial for interpreting or possibly qualifying other empirical studies that we discuss (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 published between 1991 and early 2015 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

7 Fox (2014), Joshi (2014), and Kosack and Fung (2014) review these studies.
based on cross-national data. The appendix contains a summary listing with basic overview information.

[FIGURE 1 ABOUT HERE]

Figure 1 provides a visual guide to our analysis. The boxes identify different sets of variables, and the arrows connections between them. Figure 1 should be read from the bottom up, indicating possible relationships between fiscal openness interventions, the budget process, and different types of impacts. Transparency and participation interventions potentially can relate to any of the four stages of the budget process: formulation within the executive branch (drafting stage), legislative review and approval, execution (when resources are raised and spent based on the approved budget), or ex post audit and evaluation. By altering the process of budgeting, a fiscal openness intervention may affect the quality of the budget in terms of its aggregates (for instance, how much is spent in total, or the size of the deficit), priorities, or operational efficiency (the conversion of inputs purchased with funds into tangible goods and services). This, in turn, may affect governance outcomes (such as corruption, or the reelection prospects of politicians) and development outcomes. Proponents of fiscal openness also often posit that governance affects development. Hence, Figure 1 shows a direct impact of the budget on development outcomes, and an indirect one (via better governance). These relationships are embedded in particular contexts, suggesting possible scope conditions for the effectiveness of particular interventions and the specific nature of any impacts. The following sections flesh out the various elements in Figure 1.

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8 Of course, economic or social development may also affect governance outcomes. In this instance, we highlight a core relationship posited, often implicitly, by proponents of fiscal openness.
2. 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”. 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).

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 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.

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). In these cases, we cannot be certain that any of the impacts they identify are due to fiscal transparency instead of some other aspect of government disclosure.

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

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10 We thus exclude studies of legislative participation from the scope of this review, unless they examine public participation via a legislative body. Wehner (2014) reviews the literature on legislatures and public finance.
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 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).\textsuperscript{11} 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 a 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).\textsuperscript{12} It is striking that transparency interventions targeted at the earlier drafting or approval stages of the budget process (see Figure 1) are not examined. Other important aspects of fiscal transparency are also overlooked. For example, we largely lack evidence on the impact of revenue transparency, including in relation to the management of natural resource revenues. Overall, cross-national studies of fiscal transparency impacts tend to use broad and encompassing measures, while several single-country studies focus on selected disclosures.

\textsuperscript{11} For example, the Open Budget Index assesses the availability and quality of the pre-budget statement, the executive budget proposal and supporting documents, the budget law as enacted by the legislature, in-year reports, a mid-year review, the year-end report, audit reports, and popular versions in the form of a “citizen budget” (International Budget Partnership 2012).

\textsuperscript{12} Below, we count these and several related publications as a single study and cite the 2011 paper.
As far as participation in budget processes is concerned, studies 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 in detail. 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 general terms, without rigorous empirical assessment. More recently, the Brazilian experience has been assessed in quantitative studies comparing 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).13

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 inform, consult, involve, collaborate, and empower.14 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 allocations.

3. Summary of impacts

The 38 studies fall into several groups of impacts represented in Figure 1: (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 used by public finance practitioners and scholars of budgeting.15 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

13 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].
15 The World Bank’s (1998: 17) Public Expenditure Management Handbook popularized three levels of budget 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). We summarize impacts in the first category separately, as they make up a very significant share of the literature.
delivery of public services. Category (c) has 11 studies that look at what we label 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.

**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).\(^\text{16}\)

In pioneering work, Alt and Lassen (2006a, 2006b) examine the role of budget transparency in electoral budget cycles and its impact on public debt. Their measure of fiscal transparency is based

\(^{16}\) 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 borrowing controls are important aspects of fiscal management, but they are not closely related to the quality of budget information.
on a survey of budget procedures carried out by the OECD in 1999, from which they draw ten items to construct an index 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 large swings in the budget balance in low-transparency countries, where 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 find an association of their index with deficits, but not with debt levels, in the year 2003. However, this analysis is restricted to simple correlations and 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 cross-national nature of these studies limits the quality of the evidence. We return to this point and related issues later. Elsewhere, Alt et al. (2002) and Alt and Lowry (2010) report a positive direct effect of fiscal transparency on the size of government in US states.

A second 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 GDP per capita, default history, external debt, and deficits. 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 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 increases costs but that a medium level lowers them.

Two related papers look at impacts of broader measures of transparency, including but not limited to fiscal disclosure. Transparency attracts and retains equity fund investments in emerging markets (Gelos and Wei 2005), and lowers sovereign borrowing costs (Glennerster and Shin 2008). The latter result is in line with work on fiscal transparency in this area, but we cannot be sure about the contribution of fiscal disclosure.

More recent is an empirical focus on the role of transparency in containing creative accounting or fiscal gimmicks, as proxied by “stock-flow adjustments” – the difference between the
change in the stock of debt and annual deficits. Using a measure of fiscal transparency based on IMF fiscal ROSC data for a sample of 87 countries, Weber (2012) finds that fiscal transparency decreases such deviations. Alt et al. (2014) explore several conditional relationships of fiscal transparency, using an OBI-based measure, in a panel of 14 EU countries from 1990 to 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. They also identify the types of transactions that governments typically manipulate to distort their fiscal position.17 Fiscal transparency affects creative accounting both directly and indirectly.

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 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

17 Alt et al. (2014) identify transactions in shares and other equity, as well as the recording of “other accounts payable”. Consistent with the former result, Seiferling and Shamsuddin (2015) find that fully transparent governments generate between 6 and 8 percent higher returns on their equity portfolios than others.
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 document a link between public participation and 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 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 on experiences in a variety of countries. Their main contribution is the comparison of different types of participatory practices, distributed along the various steps of IAP2’s participation spectrum, and the discussion of their relative effectiveness 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) evaluates 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 perceived in the roads, housing and child services sectors. They also identified projects approved after the start of the campaign as 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.

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 a country-wide National Solidarity Program delivered by the government with assistance from donors to provide grants for village projects. Project selection through a secret-ballot referendum was much less likely to be affected by elite preferences – and therefore better reflects the needs of the majority of the population, as captured in villagers’ satisfaction levels – than projects in villages where decisions were taken in village council meetings, where elites could wield more influence. 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 than representative village meetings. The conclusion from these two papers is that direct – rather than representative – participation promotes 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 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. 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 effects on agricultural services of mandatory participatory budgeting introduced by the central government in Peru against those of voluntary participatory fora. By facilitating flows of information and collective action, voluntary fora are associated with an increase in the quantity and quality of agricultural services. Mandatory participatory budgeting processes with their more rigid structures imposed from above yield more ambiguous results.

**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)
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 negatively correlated with corruption. 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. However, the cross-national approach in these papers makes it difficult to identify a causal link.

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 attempts to replicate this approach have been less successful in other countries (Sundet 2008). 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 that did not receive the audit treatment. Elsewhere, villagers were invited to “accountability meetings” where they could query officials about project implementation, and provide anonymous comments. The participation treatment was associated with much smaller, and statistically insignificant, reductions in corruption. In addition to demonstrating that public audits 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, with some municipalities audited prior to elections in 2004 and some afterwards. Where audits were carried out prior to the elections and 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, a few additional papers focus on other governance-related outcomes. 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 at 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 suggest that participatory budgeting has improved various aspects of local governance.

**Development outcomes**

Finally, we turn to the evidence on the impact of fiscal openness on development. As far as fiscal transparency is concerned, evidence is very thin. The paper by Bellver and Kaufmann (2005) also reports a 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.

4. 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. The quality of other quantitative evidence varies greatly depending on the extent to which it 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 governments they examine, 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.\textsuperscript{18} 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 – 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 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: 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

\textsuperscript{18} 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.
audit treatment, and cannot be disentangled from the mere disclosure of audit information. We need further work along these lines in order 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. Such evidence can be operationally crucial for setting priorities in terms of advocacy or the development of specific reform initiatives.

5. Towards a research agenda

This paper provides the first comprehensive review of evidence on the impacts of fiscal openness in terms of its principal 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 methods. Most studies fall into three main categories of impacts: macro-fiscal, resource allocation and service delivery, and governance. A fourth, development outcomes, contains only a small number of studies.

The evidence about the effect of fiscal openness on different macro-fiscal outcomes is typically based on broad measures of transparency. This work shows that transparency lowers deficits, debt, and borrowing costs, and that it directly and indirectly limits 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 a negative correlation 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 varies. Yet, the most convincing evidence – a small number of experiments and natural or quasi-experimental studies – documents impacts that many would consider beneficial: lower government borrowing costs due to macro-fiscal disclosure (Glennerster 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), and improved budget allocations due to citizen participation (Beath and Enikokpov 2012, Olken 2010). While this is a surprisingly small collection of papers, the overall direction of this causal or plausibly causal evidence is good news for fiscal openness 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, as summarized in Figure 1. To get further down the chain, the evidence seems to suggest that participation needs to kick in, to ensure that governments are better informed about and more responsive to citizens’ needs and priorities. This may then lead to better service
delivery and improved livelihoods as captured by indicators of human development. On the other hand, 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 offers little guidance on the kinds of fiscal disclosure that form the basis for engaging citizens. Generally speaking, the literature leaves a number of gaps and open questions that require answers if the push towards fiscal openness is to 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 its budget proposal (and which part of the latter)? In a context of limited institutional capacity, 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 changes. Similarly, what specific disclosures might mobilize citizens and render participation more effective? Are citizens more interested in budget allocation data, or in what was actually spent, and how do they react to and use such information in holding politicians and bureaucrats to account? Evidence on these questions 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. How do 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 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 studies of 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 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. 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 may yield evidence that could help to build 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. Figure 1 suggests 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? Most studies reveal little about the complex chain from the budget process to initial or immediate and ultimate impacts, with few exceptions (Reinikka and Svensson 2011, Touchton and Wampler 2014). Since what we ultimately care about is the quality of people’s lives and how it might be improved, these linkages require urgent attention. Moreover, understanding the multiple impacts of an intervention may yield clues about the incentives of politicians and bureaucrats to support reform, for example due to its effects on corruption and electoral accountability.

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 methodological limitations of this approach, makes arguably the strongest case that the results 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.
References


Figure 1: From fiscal openness interventions to impacts

Diagram:
- **Development Outcomes** ↔ **Governance Outcomes**
  - **Quality of the Budget**:
    - Fiscal Discipline
    - Allocations
    - Service Delivery
  - **Budget Process**:
    - Drafting
    - Approval
    - Execution
    - Audit
  - **Fiscal Openness Interventions**:
    - Transparency Interventions
    - Participation Interventions

Context
Appendix: Overview of studies included in the review

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Date</th>
<th>Independent variable category</th>
<th>Main impact category (secondary categories)</th>
<th>Quantitative</th>
<th>Empirical context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt &amp; Lassen</td>
<td>2006a</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>19 OECD countries, 1990s</td>
</tr>
<tr>
<td>Alt &amp; Lassen</td>
<td>2006b</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>19 OECD countries, 1990s</td>
</tr>
<tr>
<td>Arbatli &amp; Escolano</td>
<td>2012</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>56 OECD and developing countries, 2010</td>
</tr>
<tr>
<td>Bastida &amp; Benito</td>
<td>2007</td>
<td>Transparency</td>
<td>Governance</td>
<td>Yes</td>
<td>41 OECD and non-OECD countries, 2003</td>
</tr>
<tr>
<td>Benito &amp; Bastida</td>
<td>2009</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>41 OECD and non-OECD countries, 2003</td>
</tr>
<tr>
<td>Blume &amp; Voigt</td>
<td>2013</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>47 OECD and non-OECD countries, 1990s</td>
</tr>
<tr>
<td>Ferraz &amp; Finan</td>
<td>2008</td>
<td>Transparency</td>
<td>Governance</td>
<td>Yes**</td>
<td>373 municipalities in Brazil, 2003-2005</td>
</tr>
<tr>
<td>Fukuda-Parr et al.</td>
<td>2011</td>
<td>Transparency</td>
<td>Development</td>
<td>Yes</td>
<td>64 countries, 2008</td>
</tr>
<tr>
<td>Glennerster &amp; Shin</td>
<td>2008</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes**</td>
<td>23 emerging market economies, 1999-2002 (quarterly data)</td>
</tr>
<tr>
<td>Hameed</td>
<td>2011</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>68 countries, 2004-2009 (monthly data)</td>
</tr>
<tr>
<td>Hameed</td>
<td>2005</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes (governance)</td>
<td>Yes</td>
<td>57 countries, 1998-2002</td>
</tr>
<tr>
<td>Hubbard</td>
<td>2007</td>
<td>Transparency</td>
<td>Governance</td>
<td>No</td>
<td>Uganda</td>
</tr>
<tr>
<td>Islam</td>
<td>2006</td>
<td>Transparency</td>
<td>Governance</td>
<td>Yes</td>
<td>170 countries, 2002</td>
</tr>
<tr>
<td>Lindstedt &amp; Naurin</td>
<td>2010</td>
<td>Transparency</td>
<td>Governance</td>
<td>Yes</td>
<td>110 countries, 2000s</td>
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<tr>
<td>Reinikka &amp; Svensson</td>
<td>2011</td>
<td>Transparency</td>
<td>Governance (development)</td>
<td>Yes**</td>
<td>218 Ugandan primary schools, 1996 and 2002</td>
</tr>
<tr>
<td>von Hagen &amp; Harden</td>
<td>2009</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>12 EU countries, 1980s</td>
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<td>Weber</td>
<td>2012</td>
<td>Transparency</td>
<td>Macro-fiscal outcomes</td>
<td>Yes</td>
<td>87 countries, 1980-2010</td>
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<tr>
<td>Beath &amp; Enikokpov</td>
<td>2012</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>Yes*</td>
<td>250 Afghan villages, 2007-2009</td>
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<tr>
<td>Besley et al.</td>
<td>2005</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>Yes</td>
<td>522 villages in four states in South India, 2002</td>
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<tr>
<td>Brätigam</td>
<td>2004</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>No</td>
<td>Case studies of Brazil, Ireland, Chile, Mauritius, and Costa Rica</td>
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<tr>
<td>de Sousa Santos</td>
<td>1998</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>No</td>
<td>Porto Alegre, Brazil</td>
</tr>
<tr>
<td>Diaz-Cayeros et al.</td>
<td>2010</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>Yes</td>
<td>570 municipalities in Oaxaca, Mexico, 1990-2010</td>
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<tr>
<td>Goldfrank &amp; Schneider</td>
<td>2006</td>
<td>Participation</td>
<td>Governance</td>
<td>No</td>
<td>Rio Grande do Sul, Brazil, 1999-2002</td>
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<tr>
<td>Gonçalves</td>
<td>2014</td>
<td>Participation</td>
<td>Development</td>
<td>Yes</td>
<td>3651 Brazilian municipalities, 1990-2004</td>
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<tr>
<td>Heller et al.</td>
<td>2007</td>
<td>Participation</td>
<td>Development</td>
<td>Yes</td>
<td>72 local governments in Kerala, India, 2002</td>
</tr>
<tr>
<td>Jaramillo &amp; Wright</td>
<td>2015</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>Yes</td>
<td>100 Peruvian municipalities, 2001 and 2007</td>
</tr>
<tr>
<td>Olken</td>
<td>2010</td>
<td>Participation</td>
<td>Allocation and delivery</td>
<td>Yes*</td>
<td>49 Indonesian villages, 2005-2006</td>
</tr>
<tr>
<td>Touchton &amp; Wampler</td>
<td>2014</td>
<td>Participation</td>
<td>Governance (allocation and delivery; development)</td>
<td>Yes</td>
<td>253 Brazilian municipalities, 1989-2008</td>
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<tr>
<td>Olken</td>
<td>2007</td>
<td>Transparency and participation</td>
<td>Governance</td>
<td>Yes*</td>
<td>608 Indonesian villages, 2003-2004</td>
</tr>
</tbody>
</table>

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