



World Bank / Development Research Group

Public Services Research

Research Project

Information and Voice in Public Spending

Summary

Recent studies confirm that bureaucratic or political capture of public funds can be a serious obstacle to improving basic service delivery in many developing countries. Practical evidence suggests that information campaigns using mass media can reduce leakage by mitigating the problem of asymmetric information. This research project will evaluate the impact of informational innovations on leakage in non-wage education spending in Uganda. Key research questions are: Are better-informed schools, holding other determinants constant, more likely to receive their entitlements? Is it possible that by raising some schools' knowledge (information), other schools will also gain? The project assesses the relationship *between* individual schools and the government, as well as possible externalities in the acquisition of information *across* schools.

Keywords

Asymmetric information, capture, education, public spending

Regional focus

Africa (Uganda)

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Contents

Why focus on information and voice?	1
Analytic approach	1
Background	2
Part 1. Empowerment through information	4
Part 2. A policy experiment	6
Part 3. Externalities in information	7
Study products and audiences	8
Implementation and partnerships	9
References	9

Why focus on information and voice?

Little empirical (quantitative) evidence exists on the impact of policies to empower and inform citizens about their rights and entitlements. Educational spending in Uganda is a case in point. A survey of schools in Uganda— conducted to gauge the extent to which public resources actually filter down to the intended end-user— revealed that in the mid-1990s, for every dollar spent by the central government to support nonwage expenditures in the primary schools, on average, these schools received only 22 cents. Most funds were captured at the local government (district) level. The survey also revealed considerable variation in funds received by schools, suggesting that schools’ bargain with other parts of government to secure a great share of their entitlements. As a result of the 1996 survey findings, government began information campaigns to “empower” schools and citizens to monitor and challenge abuses of the system. While this experience has created a great interest in many other countries, it has not been rigorously evaluated. This research project proposes such an evaluation.

Analytic approach

This research project consists of three parts, each with a specific but closely interlinked objective.

1. *A non-experimental (or econometric) approach to estimate the impact of the information campaign on leakage of funds in primary education.* The 250 primary schools in the initial public expenditure tracking survey of 1996 will be revisited. By evaluating the information campaign after a few years, we hope to identify the long-run impact of the changes.

2. *An experiment to complement the econometric approach.* The experiment expands the sample of schools and randomly assigns a sub-sample of schools to receive training in the workings of the grant program. The sample of schools will be revisited late in the year and information on funding will again be collected. An attempt will also be made to evaluate different methods of informing schools.
3. *An investigation of possible externalities in the acquisition of information across schools.* The purpose is to examine whether the acquisition of information or empowerment of a given school increases the likelihood that nearby schools also receive additional funding.

Background

“Knowledge” and “empowerment” have become buzzwords in the policy debate on development. From a research perspective this might seem surprising, given so little empirical (quantitative) information on the impact of policies to empower and inform citizens about their rights and entitlements.¹ First the data are hard to find. Second, the government and a country’s legal institutions—and conventional mechanisms, such as audit and legislative reviews—may not be enough to enforce public accountability. Collusion, organizational deficiencies, abuses and lack of responsiveness to citizens needs cannot easily be detected and rectified even with the best of supervision. When the institutions are weak, as is common in many developing countries, the government’s potential role as auditor and supervisor is even more constrained.

Educational spending in Uganda is a case in point. As described in Reinikka and Svensson (2001), a survey to gauge the extent to which public resources actually filter down to the intended end-user revealed that in mid-1990s, for every dollar spent by the central government to support non-wage expenditures in the primary schools, on average, these schools received only 22 cents. Most schools received nothing. Typically, funding was captured at the local government (district) level. The data also revealed that the schools that did receive funds tended to be larger, they had students with relatively wealthy parents, and they had more qualified teaching staff. These findings suggest that resource flows—and capture—are endogenous to the schools’ sociopolitical endowment, as schools use their bargaining power vis-à-vis other parts of government to secure greater shares of funding. Thus, the extent to which funding reached the intended beneficiary had little to do with conventional audit and supervision mechanisms, and more to do with the schools’ opportunity and ability to voice and exert political pressure over the funds.

The Uganda case also illustrates the possible impact that collection and dissemination of quantitative data on public spending and services can have as a tool to

¹ This lack of empirical evidence is even more surprising given that social scientists, for a long time, have stressed a free press as an essential institution for citizens to make well-grounded decisions about public affairs (although the role of information in improving public service delivery is typically not stressed).

mobilize “voice” (Hirschman 1970). Individual and isolated complaints about services or characterizations about services tend to be brushed aside as anecdotal or partial evidence. However, when systematic comparative data support public feedback, it is difficult to ignore and, as the Uganda case shows, it can spark public action. For example, as evidence of the degree of leakage became public knowledge in Uganda, the central government responded by publishing the monthly transfers of public funds to the districts in newspapers, broadcasting information on the transfers on radio, and requiring primary schools to post information on inflows of funds. The objective of this “information campaign” was to promote transparency and increase public sector accountability by giving citizens access to information needed to understand and examine the workings of the capitation grant program for primary schools. The idea was to empower schools and citizens by providing adequate information to monitor and challenge abuses of the system.

Initial (and internal) assessments of these reforms a few years later show that the flow of funds improved dramatically (Republic of Uganda 2000, 2001). Such an improvement suggests that provision and dissemination of information can indeed play a crucial role in improving outcomes. Evaluating the impact of the informational innovations; that is, empowering schools/parents through improved information on entitlements is the subject of this research project. An evaluation of the “information campaign” in Uganda is not only interesting from the Ugandan perspective, but provides compelling evidence on the effectiveness of a simple but potentially powerful policy instrument (that is, the provision of information on public services, entitlements, and spending items) with wide applicability to other developing countries.

Relation and relevance to other literature

This empirical research project links broad areas in economics, political science, and education. First, there is a small but growing literature on the role of mass media in shaping public policy. Strömberg (2001a, 2001b) considers how the press influences redistributive programs in a model of electoral policies. The role of the media is to increase voters’ awareness and thereby increase the sensitivity of turnout to favors granted. Besley and Burgess (2001) focus on the media’s role in increasing political accountability, also in a model of electoral policies. Our focus, on the contrary, is how the execution of already determined policies (that is, public spending and service delivery) is affected by more informed (empowered) citizens. Empirically, we will use micro data from frontline service providers, that is, primary schools (rather than state-level data) to study these issues.

While our earlier study (Reinikka and Svensson 2001) explored the extent to which public funds were diverted for other purposes (including for private gain by local officials), and provided one of the first quantitative attempts systematically to quantify capture in a basic service delivery system, the new survey will focus on the role of

information and voice in reducing capture. Capture and corruption are areas that up to now almost exclusively have been studied using cross-country data.²

In the public economics literature (but also in other related fields) it is traditionally (and implicitly) assumed that allocated funds reach the intended beneficiary. The focus therefore has largely been on allocation and demand issues. Our line of research instead focuses on the supply system, and issues of moral hazard, local accountability, informational asymmetries, empowerment of citizens, and local capture, the latter in line with the theoretical work of Bardhan and Mookherjee (1999, 2000).

The project will also extend the emerging empirical literature on school funding (or more generally public goods provision) in developing countries. Miguel (2000) shows that higher ethnic diversity is associated with sharply lower primary school funding (school fees collected from parents and local fund-raisers), and worse school-level facilities in western Kenya, suggesting that collective action problems may be more severe in the presence of greater cultural and linguistic differences.³ We focus instead on central government funding for schools and the influence of local political and socioeconomic factors on the actual outcomes. A special focus will be on information.

Part 1. Empowerment through information

The objective of this first part of the study is to estimate the impact of the information policy (or campaign) that was initiated in 1997. Does it affect the amount of funds schools in the end receive? Are better-informed schools, holding other determinants constant, more likely to receive their entitlements? To answer these questions we will collect data from the 250 schools in the initial Ugandan public expenditure tracking survey carried out in 1996.

The fundamental problem in assessing the role and impact of information arises from the impossibility of observing what would happen to a school in both the states in which it is informed of its entitlements and where it is not. Impact evaluation methods therefore involve establishing a counterfactual state (in this case “not having access to information”) against which the current state will be compared (in this case “having access to information”). While there are many approaches to establishing such a counterfactual state, it is common to differentiate between an experimental approach and a non-experimental or econometric approach.⁴ Part 1 of the study relies on a non-experimental approach.

² For an attempt to quantify corruption, see Svensson (2003) and references given therein.

³ The literature on school funding in developed countries is large, particularly in the United States (see for instance Fernandez and Rogerson 1996, and references given therein). Most of this literature explains the actual educational expenditures per student financed at the local level. This paper explores the extent to which centrally financed educational expenditures are diverted at the local government level.

⁴ The experimental versus the non-experimental approach are debated in Burtless (1995) and Heckman and Smith (1995).

In attempting to identify the impact of the information campaign, we face the problem that the pre-reform data was not collected with an evaluation purpose in mind. Specifically, we do not have survey data on the extent to which schools were informed about the grant program before the information campaign. Below we discuss three complementary empirical strategies to overcome this problem.

A before-and-after approach

The simplest (and crudest) way to assess the impact of the information campaign is through a before-and-after comparison. In theory, this is an appropriate approach since there was no mass media-based information dissemination before the first survey. In addition, the policy changes implemented in Uganda in response to the initial (1996) survey findings are characterized by being nonexclusive. Specifically, information about the workings of the grant program and releases of transfers of funds from the Ministry of Finance were published in national (daily) newspapers and broadcast on national radio. Under certain conditions, we can use the 1995 data as a baseline (counterfactual) to evaluate the policy change. Thus, the initially surveyed schools will serve as their own control group, and the effect of the policy change (information campaign) will be determined by comparing the share of funding received by the schools relative to that allocated to them by the central government in 1995 and in 2001, accounting for the effect of other (exogenous) influences.

The before-and-after approach has the advantage that it is simple to apply. The panel dimension also makes it possible to control for unobservable features, such as ability, that influence schools initial funding level. There are at least two major drawbacks with the before-and-after approach. First, it “only” provides an estimate of the average impact of the information campaign. Presumably, not all schools had the means or ability to acquire the necessary information on funding from the information campaign. Specifically, not all schools had access to infrastructure to acquire information (for instance, access to radio and newspapers), and not all schools may have had the ability to process and use the new information to strengthen its bargaining position vis-à-vis the district authorities. Thus, it is important to note that what is estimated is the impact of this particular information campaign (or a campaign of this type), and not the impact of having more informed schools.

Second, and most importantly, in order to derive an unbiased estimate of the impact of the information campaign, one must control for all other potential explanatory variables, and in particular control for other changes that might have occurred since the last survey. For example, schools are now required to have their own bank account (although, based on the pilot to prepare this proposal it is unclear to what extent this rule is followed) and supervision visits are supposedly carried out at regular intervals (although there might be large regional differences). Controlling for these other policy changes are not only important in order to identify the causal effect of the information

campaign, it also has a value in itself, since they are examples of complementary policy measures to reduce leakage.

Variation in media access

While the information campaign was broad and nonexclusive, the pilot survey reveals that schools do differ in degree of knowledge about the workings of the grant program. As noted above, this may be due to lack of means or infrastructure to acquire information (including access to radio and newspapers), and/or lack of ability to process and use the new information to ensure the entitlements of the school.

A complementary approach to estimate the impact of the information campaign is therefore to explore the variation in media access across schools. While providing a tighter test of the role of information, however, the identification strategy crucially relies on the assumption that the means of acquiring information about the grant program can be measured. This is a questionable assumption. While it is straightforward to document if the headmasters has access to radio and newspapers, he or she might have received information about the grant program from other sources (for instance parents with access to radio and newspapers, or other informed citizens or colleagues). By exploiting the panel dimension we control for ability, which may be correlated with both funding received and the likelihood of having access to media.

Measuring ability

Yet an alternative approach is to directly measure the schools' awareness of their entitlements. Clearly, a crucial assumption then is the possibility to measure ability. The strategy will be to collect data on both schools' awareness of their entitlements and data on general knowledge (ability) about public affairs.

Note that to the extent there are other forms of abilities than what can be measured (that is, not directly related to knowledge about public affairs), they will not cause any problems, as long as they can be treated as fixed.⁵

Part 2. A policy experiment

As apparent from part 1, identifying the effect of the information campaign is a difficult task even when information on outcomes is available both ex ante and ex post. In our case identification boils down to a set of assumptions on what can be measured and how and through what channels information influences the outcome. These assumptions are not uncontroversial. An alternative (and complementary) approach is to use an experimental design. In this case the source of identification comes directly from a

⁵ For instance, if some schools are politically connected in both survey periods and politically connected schools receive more funding, this will be controlled for.

randomized experiment.⁶ Part 2 of the project is based on a proposed social experiment. The objective is to randomly assign n schools out of a random sample of N eligible schools. The n schools will be assigned to receive training on the workings of the grant program. All eligible schools will then be revisited and information on funding will again be collected.

As discussed in Heckman, Lalonde, and Smith (1999), like other evaluation methods social experiments provide estimates of the parameters of interest under certain behavioral and statistical assumptions. In this set-up, the key assumption is that randomization does not alter the schools behavior. Provided that this is true, the obvious advantage of the experimental design is that it is free from selection bias that potentially taints all estimates discussed in part 1. The obvious shortcoming is generalizability. However, by linking the results to the non-experimental findings in part 1 this possible shortcoming will be minimized.

In addition, an attempt will be made to evaluate different methods of informing schools.

Part 3. Externalities in information

The traditional evaluation literature usually only studies the direct effect of a program, defined to be the effect of the program on participants (that is, schools) explicitly enrolled in the program (that is, receiving training). However, social programs in general, and policy measures aimed at increasing knowledge and empowering the end-user in particular, may also have important indirect effects.

Unlike parts 1 and 2, which focus on the relationship between individual schools and the government (that is, direct effects), this part will study possible externalities in the acquisition of information across schools. The general purpose is to investigate if and through which mechanism the acquisition of information and empowerment of a given school increases the likelihood that “nearby” schools also receive additional funding. Although identifying possible externalities are interesting for their own sake, they are also important for policy, as it may influence how optimally to disseminate information.

Part 3 will involve both analytical and empirical work. The analytical work provides a conceptual framework for studying externalities in the acquisition of information across schools. We will explore two hypotheses. The first hypothesis is based on the presumption that district officials who want to divert school grants to other uses (including personal gain) cannot perfectly distinguish schools that are informed from those that are not. Thus, it is possible that by raising some schools’ knowledge of the grant program, other schools will also gain. The district official will choose to let a higher

⁶ The last decade has witnessed increasing use of experimental designs to evaluate public programs in developing countries (see review in Newman, Rawlings, and Gertler 1994).

share of funds reach the schools in order not to invoke a protest from schools aware of their entitlements.

The second hypothesis rests on the assumption that schools will compare their funding with the funding that “nearby” schools receive, irrespective of their actual knowledge of the grant program. Such a competition effect may cause uninformed schools to demand a higher share just because “nearby” informed schools receive more funds.

However, if the externalities are small or nonexistent, being close to informed school may not necessarily be beneficial. Public officials may shift spending away from uninformed to informed schools.

We will use the conceptual framework to guide the empirical work on the role of externalities. In terms of data, the objective will be to link data on knowledge and funding in nearby schools in order to estimate whether externalities are important.

Study products and audiences

The project will produce high quality, public access longitudinal data (with full documentation) covering 250 schools in 1991-95 and 2001-02 and 150 additional schools in 2001-02. A number of working papers and journal articles will be produced. The results will be widely disseminated within and outside the Bank to have as much impact on operational work as possible. We expect to organize a workshop in Uganda, one regional workshop in Africa, and two workshops in other developing regions. The audiences for the research include the international development community at large, human development and public sector specialists, evaluation experts and scholars generally interested in development policy, and methodologies for evaluating public spending and service delivery.

Relevance to Bank operations

This study will be relevant to a large number of the Bank’s client countries, as problems described here are by no means unique to Uganda. Similarly, opportunities to use information campaigns and mass media to mitigate problems of moral hazard and to combat corruption in weak institutional settings are also ubiquitous. Inspired by the initial Ugandan school survey of 1996, several countries have implemented similar diagnostic public expenditure tracking surveys (PETS), including Albania, Ghana, Honduras, and Tanzania (for a summary see Reinikka and Svensson 2002). Many others are currently being carried out as part of debt relief, programmatic lending, or the Bank’s economic and sector work, including Cameroon, Chad, Laos, Madagascar, Mozambique, Nigeria, Papua New Guinea, Peru, Rwanda, Senegal, and Zambia.

The Honduran study focused on moral hazard in public employment, that is, ghost workers, absenteeism, and job capture by employees (World Bank 2001). In Africa, capture of public funds is usually the main concern. The three Sub-Saharan African

studies completed to date (Uganda, Tanzania, and Ghana) indeed confirm that local capture in non-wage health and education expenditures ranges from 40 to over 80 percent. This is obviously a huge problem to service delivery. Asymmetric information (between government and beneficiaries) is an underlying factor in each of these studies.

Uganda, with its existing panel data set, provides an excellent opportunity for a rigorous evaluation of the impact of information to improve current service delivery systems. Given the multi-country evidence from the PETS studies to date, the findings of this research can be expected to be widely applicable to developing countries.

Finally, the proposed project will provide a rigorous empirical test of “empowerment,” a key priority for the Bank (but where there is little hard empirical evidence and data currently available).

Implementation and partnerships

The local partner organization is the Economic Policy Research Centre (EPRC) at Makerere University. The EPRC is one of the leading institutes in economic analysis in Uganda. It was also involved in the school initial survey in 1996. This research project is funded by the Research Committee and the Africa Region of the World Bank.

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