



Public Expenditure Tracking Surveys: Planning, Implementation and Uses

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Important Note: This document relies on numerous draft reports, many of which may have been subsequently updated and revised and some of which indicate that they are not to be cited. This report must rely on these studies but readers should not take the characterizations here as definitive interpretations of what was written in these other studies. Rather, readers should seek out more recent versions and consult the original content of those documents.

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Public Expenditure Tracking Surveys: Findings and Uses

By William D. Savedoff

If social policies are to be effective, they need to be implemented. A key contributing factor to the success or failure of implementation is the way public sector funds are mobilized, allocated, and disbursed. This is widely recognized, as demonstrated by the wide range of studies analyzing public sector financing. Until relatively recently, attention was primarily focused on budgets and allocations while efforts were made to improve information systems and reporting. In the last decade, recognizing the poor quality of expenditure reporting, Public Expenditure Tracking Surveys (PETS) have been used to draw attention to whether funds are actually applied to their intended purposes.

This study looks at a number of PETS studies that have been completed in the last decade and reviews the existing literature on these studies. It discusses how PETS have come to be defined, what makes them distinctive, and how they are used. The key purposes are to demonstrate how and why PETS are useful and suggest some ways to increase their usefulness, with World Bank operational staff of HDN as the main audience.

1. Introduction

To improve social service delivery, a key contributing factor is the efficient use of public sector funds. Even when countries raise and allocate substantial resources for social service, this is only the first step for effective programs. The debate over whether public spending is associated with better health and education, for example, has mainly relied upon budget information at the national level (Filmer et al 2000, Pang 2005). But unless these budgeted funds are disbursed and used by frontline service providers, they cannot possibly have an impact on social conditions.

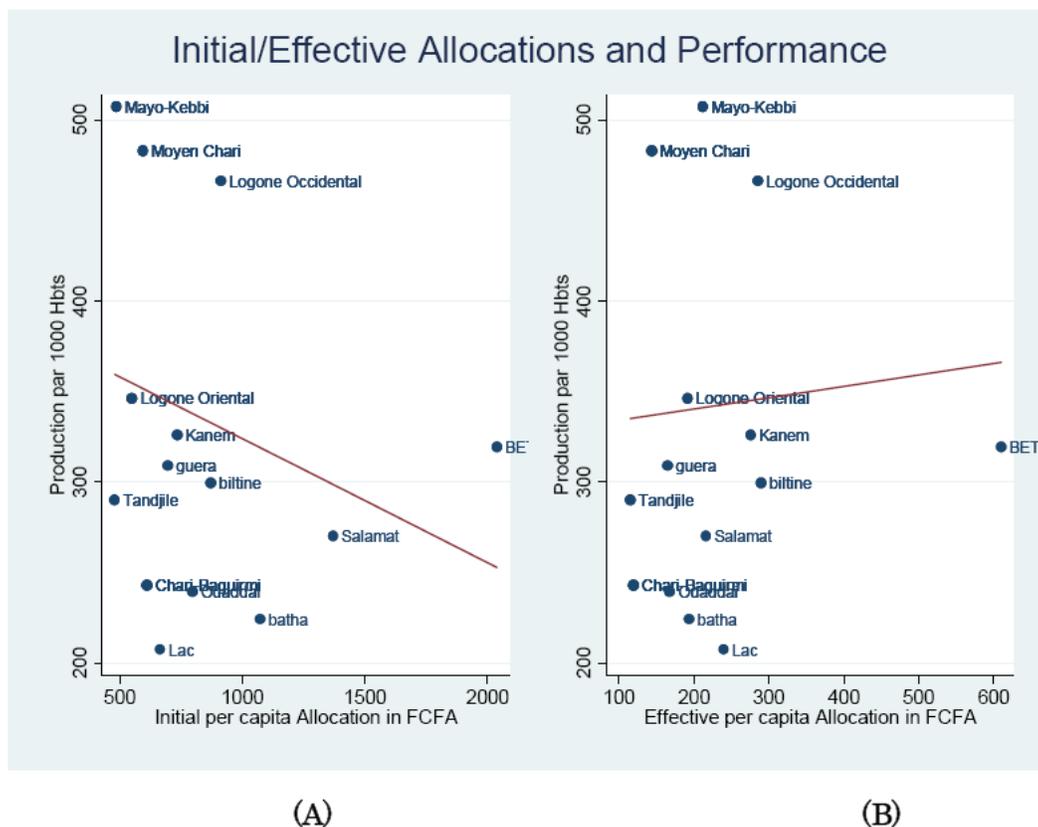
The first PETS was conducted in Uganda in the health and education sectors. The analysis of expenditure flows in education was motivated by the specific question of how education spending could have increased in Uganda without demonstrably improving enrollment and attainment. The study found that between 1991 and 1995, only 13 percent of the funds meant to provide education supplies in primary schools were actually reaching their intended uses (Ablo and Reinikka 1998). Later studies use similar approaches to investigate paradoxes in which additional spending is not associated with more service provision. For example, health districts with higher allocations in Chad reportedly provided fewer consultations. By tracking expenditures, however, one study demonstrated a gap between allocations and disbursements, and showed that districts that *received* more funds did indeed provide more services (Gauthier and Wane 2007, See Box 1).

Box 1: Effectiveness of Spending in Chad

In Chad, "...public resources allocated to regional delegations (RHD) in the central budget appear to have a negative impact on health center output. Regions that were officially allocated the highest per-capita health expenditures present the lowest ratio of patients having received health services in the region. This result supports empirical observations of the weak correlation between official health expenditures and health indicators in several countries (Filmer et al, 2000). In certain cases, it has even been observed that an increase in health expenditures is associated with a decrease in health indicators.

However, this negative conclusion does not hold once leakage of health expenditure is taken into account, and the reverse is actually true. Indeed, as illustrated in Figure 3(B) public expenditures do in fact have a strong positive impact on health output when they make it to the service delivery point. The main difference between Figures 3(A) and (B) is that in the second figure only effective public expenditures (that is, those that reach the regions) create this positive health impact. Public expenditures could therefore contribute to the improvement of population health, provided they reach the population. The tricky part is how to make sure that public resources reach their intended beneficiaries especially when it is the governmental apparatus itself that prevents those resources to travel their full path."

Figure: Operating Expenditures: Official vs. Effective Resources and Performance



Source: Gauthier and Wane 2007, Figure 3, Page 20.

Thus, the initial motivation for public expenditure tracking was to measure leakages and for good reason. “How large are the leakages in our system?” is possibly the first question that has to be asked of any public service system. The appropriate actions to take in the context of large leakages are entirely different than those in which there are few leakages. In this regard, PETS can be seen as an extremely useful tool for deciding how best to improve a public service system because it draws attention to the structure of resource flows, the quality of information and how it is used, and the extent to which resources reach their intended purposes.

Some PETS go further than looking at the extent to which resources *reach* frontline providers and provide detailed analysis of how the providers themselves function, that is, looking at the relationship between resources received and the output of services. The facility surveys are a very good tool for gathering information necessary for this kind of analysis, usually by adding questions regarding outputs and interviewing service users. Sometimes PETS are paired with a Quality Service Delivery Surveys (QSDS) which provides even greater detail on the efficiency of facilities. Such data gathering and analysis can reveal mismanagement, absenteeism, theft, or poor training that waste resources and keep services from reaching their goals (Kremer 2003, Glewwe 2002, Chaudhury and Hammer 2003).

The PETS and related studies can reveal problems and suggest which ones must be most urgently addressed. In making recommendations, however, they need to go beyond identifying leakages and suggest policy changes that will improve information flows and decision-making. These are two essential ingredients of “good governance” in the sense of improving institutions and rules so that key actors (e.g. citizens, politicians, public sector staff, service providers, service users) face incentives that are aligned with the aim of good service provision. A key aspect of such institutions is to develop appropriate accountability relationships, as has been discussed in a wide number of studies, the most prominent of which are the World Development Report 2004 (World Bank 2004) and the most directly relevant to this study is Gauthier and Reinikka (2007).¹

Gauthier and Reinikka’s document (hereafter GR 2007) succinctly describe a principal-agent framework that is relevant to social service delivery and demonstrates the key elements that affect how the system works. They describe the “long route” of accountability, from citizens to providers via the intermediation of politicians and policymakers; and the “short route” of accountability, from citizens directly to providers. They also discuss the features of social services that make them distinctive and can be problematic for effective provision. These distinctive features include multi-tasking, performance measurement difficulties, and responding to multiple principals. The study also recognizes the potential in public service to take advantage of non-pecuniary incentives whenever the motivation of providers can be aligned with the mission of the provider organization (GR 2007, citing Wilson 1989).

¹ Other expositions of this emphasis on accountability and principal-agency can be found in IDB 1996, Savedoff 1998, and Besley and Ghatak 2003.

A recurrent theme in GR 2007, in agreement with most of the literature on improving social service delivery, is the need for better accountability. Accountability, in turn, rests strongly on two elements of a social service system's governance: (1) the generation and use of information and (2) the coherence of the decision-making structures (i.e. scope and discretion, resources, and consequences for each individual, node or level). The premise is that positive behaviors can be encouraged when information about a particular agent (whether a frontline provider, district manager, politician or minister) is made available to someone who can take action on that information. This can occur in many different ways: when an audit reveals abuses that are referred to a prosecutor's office; when staff attendance records are sent to the payroll office; when a local facility gives clients information about funds received, expenditures, waiting times, or exam results; etc.

This review finds that PETS vary regarding the degree to which they achieve the goal of measuring leakages but they still frequently do good expenditure analysis and collect useful data on budget and finance process, much like good Public Expenditure Reviews (PERs). PETS are heterogeneous because they are implemented in different countries with different policy concerns. Rather than force all PETS into a common mold, it should be possible to make them more rigorous and useful by being clearer about their purposes. In particular, PETS could be:

- more like forensic audits, verifying data, sampling and investigating leakages more intensely;
- aimed squarely at answering particularly policy questions regarding leakages, delays, distributions or allocations; or
- analyzing processes in order to improve monitoring & evaluation, budget planning and disbursement, and financial controls.

This paper complements other PETS reviews that are in progress or have been published, including GR 2007, Engberg-Pedersen et al 2005 (hereafter EP 2005), and Reinikka and Smith 2004. This study largely confirms the conclusions of these other reviews and contributes a few additional insights. Its distinctive contribution, however, is to focus more on information flows – for improving future PETS studies, for better interpreting their results, and for making use of the PETS to improve policies. Readers are strongly encouraged to read the other reviews cited here for more comprehensive discussions of findings, comprehensive frameworks and additional practical suggestions for implementing and using PETS.

2. What are PETS?

EP 2005 define PETS as “quantitative exercises that aim to track the flow of public resources across various layers of the administrative hierarchy, from the allocating agency to the intended beneficiary, and determine inefficiencies in the system and their magnitude.”(EP 2005, page 4). They outline five stages of these exercises: defining objectives, mapping flows, measuring leakages, presenting findings, and informing policy (p. 8). This framework makes it possible for the authors to demonstrate good practices in PETS studies and highlight major findings from the studies that they have reviewed.

GR 2007 provides similar definitions, emphasizing the quantitative aspect of the exercise and its focus on tracking resource flows. However, GR 2007 also emphasizes the use of survey data to provide additional information. According to them, PETS are

... designed to track the flow of resources through the administrative system, *on a sample survey basis*, in order to determine how much of the originally allocated resources reach each level. It is a useful tool for locating and quantifying political and bureaucratic capture, leakage of funds, and problems in the deployment of human and in-kind resources such as staff, textbooks, and drugs.” (p. 15, emphasis added)

PETS fit into a range of studies that are used to analyze public sector financial management, including Public Expenditure Reviews (PERs), Country Financial Accountability Assessments (CFAAs), Country Procurement Assessment Reviews (CPARs) and Quality of Service Delivery Surveys (QSDS) at the World Bank. Other organizations have public finance analyses such as the compliance reports from the European Commission and IMF analytical studies; as well as developing countries themselves, such as Tanzania’s annual public expenditure review exercise.

These different kinds of reports each aim to improve public sector efficiency through understanding the flow of information and decisions taken at different levels regarding resource allocation and use. They use similar approaches – analyzing budget and expenditure data, collecting information from a selected group of subnational and even facility level units, and interviewing key informants in different parts of the system. Even the single element that would seem to distinguish PETS from PERs (i.e. sample based surveys of facilities to measure the resources they receive) is listed as a desirable source of information for a PER (World Bank 2005); and some documents called “Public Expenditure Tracking Surveys” do not include a facility survey (e.g. Albania 2004 – Health).

Facility surveys have become an important tool for financial management analyses as can be seen in the World Bank’s Public Financial Management guidelines. For example, one of the public finance management indicators proposed in those guidelines asks whether “(e)vidence is available that budgeted resources reach spending units in a timely and transparent manner” (PEFA 2005, Annex 1).

The PETS made available to this author (see Annex 1) generally contain the following elements (see also GR 2007 & EP 2005):

- Detailed descriptions of how funds are *supposed* to flow through the system, from the national treasury to frontline providers
- Collection of data from selected units at the national and subnational levels – including administrative data, interviews and structured questionnaires.
- Collection of data from facilities – through administrative data or structured questionnaires and with purposive or representative samples.

- Information of how things “really work” from interviews with service providers, facility managers, officials at different government levels, and others outside government.
- Analyses of whether spending reaches facilities and is applied to its intended uses.
- Other findings regarding such things as delays in spending, problems in obtaining information, and equity.
- Recommendations regarding information systems, publicizing government budget data, increasing supervision, introducing new accounting instruments, and changing the institutional channels for financial flows, among others.

Despite these common elements, each study is unique in form, focus, content, analysis and recommendations. These differences appear to be a consequence of the different institutional structures and country contexts, but also the availability of data, and the expertise of the analysts. But the most important difference is probably the choice of the policy questions that are addressed. While most seek to measure leakages, it is clear that a variety of other concerns are important to policymakers in these countries. For example:

- How are local governmental units allocating their block grants for education? (Albania – Education)
- Does the financial operation of the Priority Action Program work well relative to both international standards and the regular budget system? (Cambodia – Education)
- Are clients satisfied with education and health services? (Cameroon)
- Is the current financial allocation formula equitable? (Mongolia – Education)
- Do local expenditures affect service outputs? (Chad – Health)
- How can personnel management be improved? (Honduras – Education & Health)

3. Will a PETS be useful?

Just because PETS address a wide range of questions does not mean that they are always useful. In fact, an initial assessment of important policy questions, the structure of public finances, the condition of public financial systems, and the availability of data are all crucial to determining whether a PETS should even be conducted. Additional questions have been raised about whether PETS would be more useful if they were internationally comparable, more comprehensive, or included more than one sector.

Policy questions

Many policy questions require a clear understanding of public financial flows, including the primary question that motivated the original PETS: *do public funds that are allocated to providing public services reach the facilities that provide those services?* PETS are useful for other policy questions, but primarily those that require information about financial flows reaching the service provider, such as:

- if funds reach service facilities, do they arrive in a timely fashion? (e.g. one of the key objectives of the Mozambique study was to distinguish between delays and leakages);

- which types of funding are least vulnerable to leakage? (e.g. the Zambian study differentiated flows by whether they were rule-bound or discretionary and whether they were to schools or teachers);
- which forms of financial management are least vulnerable to leakage? (e.g. the Cambodian study compared two different budgeting mechanisms and found that the PAP was much more effective at assuring funds were disbursed as planned than the traditional approach);
- which administrative levels most influence the actual amount disbursed to service facilities? (e.g. In Chad, leakage of funds was large at the central and regional levels; in Uganda and Tanzania, local levels appeared to be the point at which leakages occurred); and
- is the actual distribution of spending equitable? (e.g. The Mongolian study analyzed per-student spending in schools between rural and urban areas and between provinces; the Zambian study depicted the distribution of spending across regions and schools before and after incorporating private spending by families).

Several PETS suggest there is a risk of looking at questions that can be answered by the data rather than focusing on the information that is relevant to policy decisions. The Albanian education study provides a great deal of information on differences between municipalities and communes, but never indicates whether the findings are relevant to a policy decision (e.g. eliminating administrative differences between municipalities and communes or altering funding formulas). Similarly, the Mongolian study expends a great deal of effort on alternative allocation formulas, but it is not clear whether Mongolian policymakers were concerned about these issues nor whether the differences are large enough to cause concern. In Yemen, the study changed completely once it became apparent that facilities only receive “in-kind” resources, with researchers refocusing their attention on absenteeism. Again, it is not clear if this was considered to be a potential policy-relevant problem or was analyzed because the data could be collected.

Questions that are not directly related to information about financial flows are less amenable to analysis through the lens of a PETS. For example, questions regarding personnel management, absenteeism, availability of medications at health facilities, etc. are more likely to be answered and analyzed effectively with a QSDS because the type of sampling, questions, and forms of verifying information (e.g. checking whether employees are actually present) for such issues is different from those needed to answer questions about financial flows. Similarly, questions about client satisfaction with services could be better analyzed with a QSDS or Consumer Report Card exercise. Questions related to national budget allocation and disbursement may be better answered by focusing on the kinds of interviews and data that a PER has traditionally collected and analyzed.

If the important policy question does not require information about financial flows, and whether or not they reach service providers in a timely fashion, then other approaches are likely to be more appropriate and fruitful.

Structure of public finances

Because PETS collect data and analyze financial flows, the structure of public finances also conditions whether or not such a study will be useful. In general, PETS have been most effectively implemented and used in cases where:

- the amount of funding allocated to a facility is clear (e.g. capitated formulas);
- lower levels of administration do not have independent sources of funds;
- lower levels of administration do not have discretion over the use of funds that they receive; and
- funds are not disbursed directly by the central government to service facilities.

The analysis in Uganda (1998) for the education sector fulfilled all of these conditions. The amount of funding allocated to each school was based on the number of students – a number that could be easily verified by the facility survey. Lower levels of government did not have the legal authority to alter the amount of grant money going to each school, but funds were distributed through them as intermediaries. Under these conditions, it was possible to estimate leakages because both the amounts allocated and the amounts received were clearly defined.

A number of studies, however, demonstrated the problems that emerge when one or more of these conditions are not fulfilled. For example, in some PETS it was difficult to estimate the funds that schools were supposed to receive due to multiple channels of funding and the poor quality of administrative data (e.g. Madagascar).

A particular difficulty arose for the analysis in several PETS because the service providers or local governments had independent sources of income and made it difficult to judge whether national funds were actually reaching the facilities as intended or whether national funds were being diverted and local governments compensated for the shortfall in funding. Several PETS found facilities or districts were spending *more* money than was allocated to them at the national level (e.g. Kenya), a clear indication of additional funding sources. Having independent sources of funding is not necessarily good or bad for service delivery but it does demand more comprehensive data collection and analysis for an accurate interpretation of the results..

Condition of public financial systems

The condition of the public financial system will also affect the utility of a PETS, but in a different fashion. Countries with strong public finance systems are more likely to have reliable data about financial flows – which makes it easier to collect information and analyze it; on the other hand, these are precisely the countries in which leakages are less likely as a result of stronger controls and audits. The Brazilian PETS argued that funds did arrive at the facility level based on financial system reports; it focused instead on the range of programs, funding sources, and confusion over financial *management* – questions which can be analyzed in other fashions than a PETS.

It appears that countries with weak public finance systems are more likely to find PETS to be useful. In these countries, official public accounts are problematic, data is less reliable, and independent data collection and analysis is truly required to determine whether funds are reaching their intended purposes. For example, in Senegal and Mozambique, the existing accounting information could not distinguish between delays in funds reaching facilities and leakages. By collecting data in a survey, these studies were able to show that delays were a more serious problem, suggesting that any reforms should focus on improving the timeliness of payments rather than on stopping leakages.

This issue can be taken one step further to see that PETS have been extremely useful in post-conflict situations in which the public finance system is still being recreated. For example, in Sierra Leone, the PETS was undertaken right after the civil war at a time when basic accounting procedures did not even exist. The study reports that the PETS exercise served an important function in providing valuable information under very difficult circumstances, that it raised awareness about the flow of funds, served as the basis for constructing new accounting structure, and was used by auditors, the poverty alleviation office and the Ministry of Finance. Similar observations were made in the Rwandan PETS, coming as it did soon after the end of the civil war and genocide. The Rwandan PETS helped the government to map out the flow of funds, determine how much is reaching the local level, and served as the basis for establishing a new public finance system.

Nevertheless, relying on PETS for a social service system's financial management and control is not a long term solution. Rather the reliance on the PETS probably should decline as the country develops its normal financial management and control systems. This suggests that in countries that are emerging from conflicts and catastrophes, the PETS could be a very useful instrument to aid the process of reconstruction.

Additional Questions

When beginning a PETS, it is useful to look at the questionnaires used by other studies and learn from them. It is also worth considering whether to conduct the survey with the same or similar questions so as to facilitate cross-country comparisons. Though this seems like an attractive approach, in practice, the institutional structure and financial flows vary so much between countries that it is very difficult to create reliable cross-country comparisons. Furthermore, the true value of a PETS is not so much in comparing across countries but in comparing the same country *over time*. By conducting PETS in 1996, 1999 and 2000, Uganda was able to verify that its policies reduced leakages in the per-pupil school grant. Rwanda also benefited by conducting a PETS in successive years, permitting it to judge whether financial management was improving and how. To be comparable over time, care needs to be taken to construct a questionnaire that is not only useful for today's questions but is also likely to be relevant in future years.

Another question that arises when beginning a PETS is whether to be focused or comprehensive. Some studies focus on a particular financial source and use (e.g. Uganda 1998 appears to be one of the few examples) while others try to measure every financial

flow in a given sector (e.g. Mozambique). The most successful studies at estimating leakages are those that either focused on a specific financial flow (e.g. per-pupil capitation grants) or were very precise and clear about the financial flows they were analyzing. For example, the Zambian study identified major financial flows to schools and selected a subset that could be measured with some degree of precision; comprised a large share of funds; and were relevant to policy decisions.²

Finally, it is worth considering whether to do more than one sector at a time. Several studies – including Albania, Ghana, Kenya, Rwanda and Tanzania – fielded surveys in both health and education. Though it would appear to be an efficient use of resources, in practice, the implementation of surveys in two different sectors at the same time is probably not advisable. The substantial differences in questionnaires require separate training; and sampling frames are likely to be compromised if they have to accommodate the distribution of facilities in separate sectors. Fielding surveys in different sectors one after another makes it possible not only to collect better quality information in each survey, but can also improve the quality of subsequent surveys as a result of learning from the implementation experience.³

Summary

In sum, a country should consider conducting a PETS when:

- important policy questions need information on the structure and amounts of funding reaching service facilities;
- the structure of the public finance system includes clearly identified allocations to service facilities which pass through intermediaries with relatively little discretion and few independent sources of funding; and
- the public finance reporting system is weak or lacking.

When conditions are appropriate for conducting a PETS, the quality of the information that is collected is likely to be better if it aims for intertemporal consistency rather than cross-country comparability; if it focuses on particular financial flows rather than seeking to map the finances of an entire sector; and if surveys are conducted separately for different sectors.

4. Can we improve implementation and analysis of PETS?

If the conditions are appropriate for conducting a PETS, particularly if the policy questions are clear and can be answered by tracking expenditures, then one can consider the best way to implement the study. An initial investigation is crucial for developing the terms of reference for the study in several ways.⁴ It can verify whether the conditions are appropriate for a PETS, assess whether it will be possible to collect information necessary to answer the policy question, identify which financial flows will be analyzed,

² GR 2007 argue that PETS will be more successful at estimating leakages to the extent that they focus on particular financial flows (p. 16-18).

³ These points were made by Waly Wane in a meeting on January 15, 2008 at the World Bank.

⁴ See Lindelow 2001 for a well-prepared initial assessment.

outline the basic structure of the public finance system – its decision points and information flows – and provide information necessary to design an appropriate data collection strategy. The rest of this section will discuss what could be learned from reviewing the PETS studies regarding the characteristics of good surveys and useful information. Further lessons from the experience of implementing PETS will be forthcoming in a PREM study.⁵

Surveys, Data Collection and Information Quality

PETS collect a wide range of information – qualitative information on the structure of financial flows and the public finance reporting systems; quantitative information on financial allocations, disbursements and receipts at numerous levels; and often both quantitative and qualitative information at service facilities. Because facility surveys are the most distinctive element of a PETS, this section will focus on the characteristics of these surveys.

Of the PETS that were reviewed for this study, all but two (Albania 2004 – Health and Senegal 2003 – Health)⁶ used facility surveys to collect data. In all but four cases, the aim was to produce a nationally representative sample.⁷ The general approach described in these studies is appropriate – stratified random samples of facilities are usually chosen to be statistically representative of the facilities in the country as a whole. Most studies survey between 80 and 500 facilities.⁸ Stratification is generally created to assure that data is obtained in a number of categories that are deemed significant; for example, to assure that observations are obtained in rural and urban, mountainous and coastal regions, or rich and poor communities.

It is difficult to assess from the studies whether the process of stratification and random selection really generates a nationally representative sample. In particular, while most studies report the share of the universe that was sampled (e.g. 281 health facilities out of the 3605 in the country), only one makes any mention of having estimated and addressed the variance between units of observation when choosing the form of stratification and sample size (Honduras 2001).

One of the most problematic omissions is that expansion weights are not reported except in two cases (Honduras 2001, Mongolia 2006). The reporting of expansion weights would assist both in assessing the quality of the report and in interpreting data.

⁵ Gurkan, Kaiser and Voorbrak. PREM, World Bank. Forthcoming.

⁶ The terms of reference for the Albanian study apparently called for an “abbreviated” expenditure tracking exercise, so a survey does not seem to have been part of the original intent. The Senegal report notes that the study is primarily aimed at auditing county level finances.

⁷ The exceptions are Papua New Guinea’s health surveys, which were chosen for convenience by proximity to the schools (which were nationally representative); Rwanda, which sought to conduct a complete census of all 351 health centers in the 2003 study; and Albania for which documentation of the survey methods were unclear (education) or no survey was done (health).

⁸ GR 2007 provides a detailed annex with information on the sampling approach and size. EP 2005 also provide tables that list the size of the various surveys.

Interpretation is difficult when documents fail to indicate whether they are presenting unexpanded or expanded results. For example, estimates for leakages could be calculated only for the sample facilities (unexpanded) or for facilities in the entire country (expanded). The absolute amount of leakages would certainly differ, but in most cases, the estimated share of funds that cannot be traced would also differ. Either result can be useful, but the interpretation and implications will differ.

In this regard, it is important to recognize that surveys do not have to be absolutely rigorous about being nationally representative. While this is desirable, collecting some information about a number of facilities still provides insights into what is happening in those particular facilities and those that may be like them. So, for example, if it were only possible to do surveys in urban areas, it might be possible to say something about facilities in urban areas. It is important in such cases, however, to be transparent and clear that the results should be interpreted in that light. Even when the sample is restricted, it can demonstrate problems in some places, information that can be used either to advocate for improved policies based on reasonable judgments of the generalizability of the findings, or to advocate for additional information gathering to determine whether the findings are, in fact, generalizable before taking action.

Thus, analysts can consider a number of approaches to constructing a sample:

- A purposive or convenience sample: facilities are chosen by researchers on the basis of prior information regarding characteristics that are deemed important to the analysis, as was done in the PETS for Tanzania and Namibia (e.g. choosing a fixed number of urban and rural facilities in environmentally and ethnically distinct parts of a country).
- A stratified random sample: districts are chosen at random and then facilities within those districts are chosen randomly (Mozambique 2002).
- A stratified random sample combined with other surveys: districts are chosen at random then facilities are chosen at random among those that correspond to census units that were or are the object of a complementary household survey (e.g. Ghana 2000).
- A stratified random sample combined with a census of facilities: districts are chosen at random and then all facilities within those districts are surveyed (e.g. Chad 2004). This is particularly useful when districts have multiple sources of income and significant discretion in allocating those resources (GR 2007).
- A census: all facilities are surveyed (see, for example, health facilities in Rwanda 2004).

While most studies will mention problems that were encountered in data collection, few appear to consider the impact of these limitations on the reliability of the results or to provide information that would assist in careful interpretations. Two of the most common limitations are:

- Non-response. Even if non-response is a small share of the sample, it could lead to serious bias in the findings if the facilities or government offices that do not provide information are systematically different. It is plausible, and perhaps likely, that

leakages are substantially higher in facilities and government offices that refuse to participate or which lack information.

- Verification. Questionnaires are a good source of information, but accuracy depends both on the recall ability of the individual being surveyed and on their integrity. If those being interviewed are concerned about how the information will be used, they are likely to give answers that reflect more favorably on the management of their facilities or offices (see Box 2).

When the quality of data is in question, some studies explicitly test the sensitivity of their results. For example, Zambia (2004) addressed uncertainty by calculating estimates three different ways: extrapolated from disbursements reported by districts going to schools in the sample; disbursements from districts to all schools based on recorded spending data; and funds reported by schools over a 6-month recall period. They argued that the results could be interpreted as providing upper and lower bounds for the true leakage in the system (See Zambia 2004, Table 12, p. 34).

Box 2: Problems encountered with verification

Ghana (2000) reported that “respondents in district offices and schools provided figures based on their records, but our enumerators did not demand to check the records in order to avoid giving an impression of a public auditing” (p. 3). Mongolia (2006) apparently relied on the principal to report whether or not teachers were present rather than directly observing their presence. In each case, it is useful to know that the information was “self-reported.” However, it would be even more helpful to the reader if the authors gave their views on the implications of this data collection approach. For example, did it bias the leakage and absenteeism estimates downward?

By contrast, Madagascar (2003) specifically asked for receipts to verify the reports of spending and disbursements at the district level. It would be useful to know why this approach was considered acceptable in Madagascar and not in Ghana.

5. Analysis: Leakages

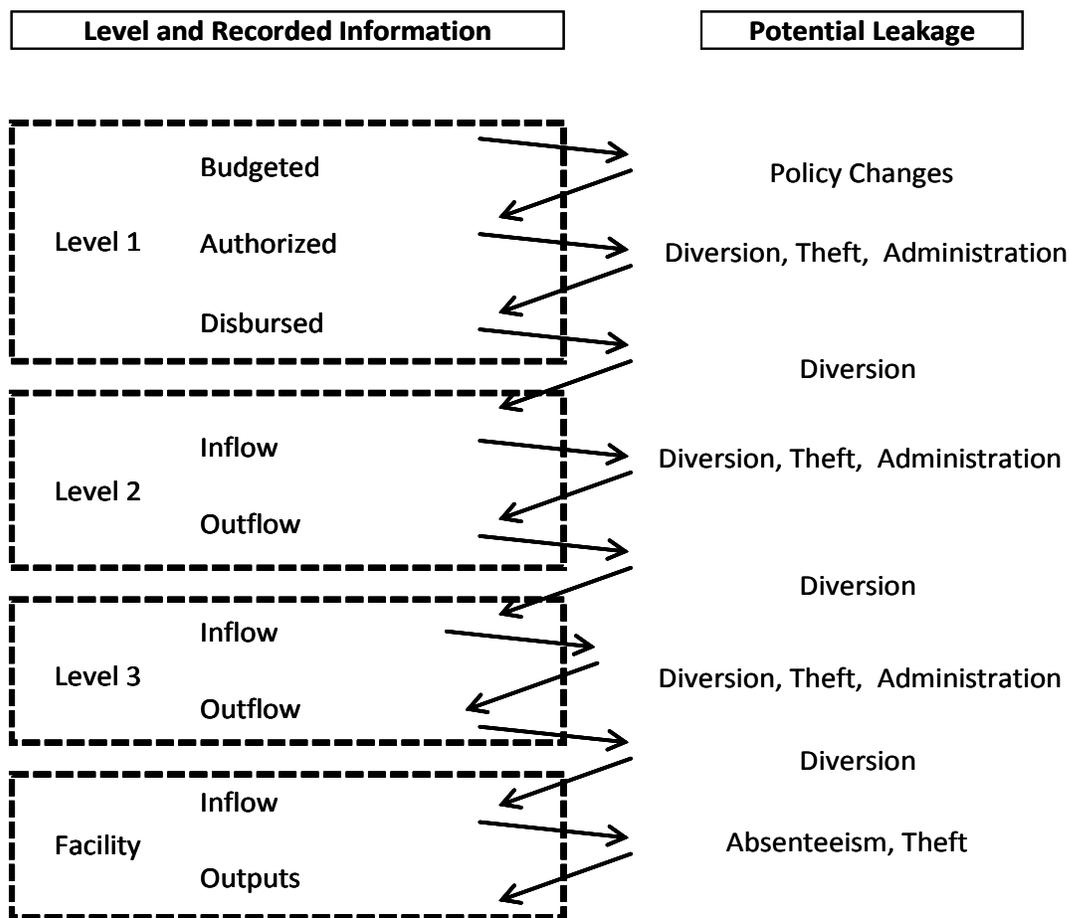
PETS have addressed a wide range of policy questions and have generated a wide range of useful findings. It is not the main purpose of this paper to summarize those findings, so readers are encouraged to read other reviews, including GR 2007 and EP 2005. This section will, however, assess the way PETS analyzed a specific question: how much funding fails to reach the service providers? This question is central to almost every PETS and provides the framework with which to answer other policy questions about funding for public services.

The original PETS (Uganda 1998) is a compelling study in part because it addresses a situation with a clearly defined rule for how national funds are to be allocated and a survey which assesses how much is actually available at the facility level. In this case, a per-pupil grant was supposed to be directly transferred to schools for non-wage expenditures. The difference between the expected and actual amounts received represented a “leakage,” one which could be caused by any number of things: poor

recordkeeping, inefficient management, diversion to other public services, theft, etc. The power of the study was two-fold: first, it identified and measured the extent of the problem so that further research could investigate the cause and location of the main leakages; second, it generated information at the facility level that was useful for holding individuals in the system accountable for their use of funds.

Other PETS have encountered a wide range of institutional arrangements and often tried to pinpoint the sources of leakages within the chain of fund transfers. In the process, each study has focused on different “potential leakage points” which can be represented schematically as in Figure 1.

Figure 1: Representation of Potential Leakage Points



Using Figure 1, the Ugandan PETS (1998) compared the Level 1 Budget Amounts (funds for non-wage expenditures at the school level determined by student enrollment) and the Facility Inflow amounts (based on a questionnaire filled out by interviewers who visited a sample of schools). The power of the study emerges from the clarity of the analysis that was made possible by focusing on non-wage expenditures that were allocated on a capitated basis and a survey that directly verified inflows at the facility level.

Other studies have been more ambitious, seeking to measure the outflows and inflows at each stage of the process. None are comprehensive and the choice of which potential leakage point to analyze tends to be determined either by the availability of data or by a particular policy question. It is obviously most useful if leakage estimates focus on gaps that are significant and can be remedied through policy changes.

The gaps in Figure 1 can be broken into five different categories:

- Comparing budgeted, authorized and disbursed amounts
- Comparing outflows from one level to the inflows at the next level
- Comparing inflows and outflows within a particular level
- Comparing inflows and outputs at the facility level
- Comparing two points in the structure that encompass more than one of these gaps

Planned versus authorized and disbursed resources

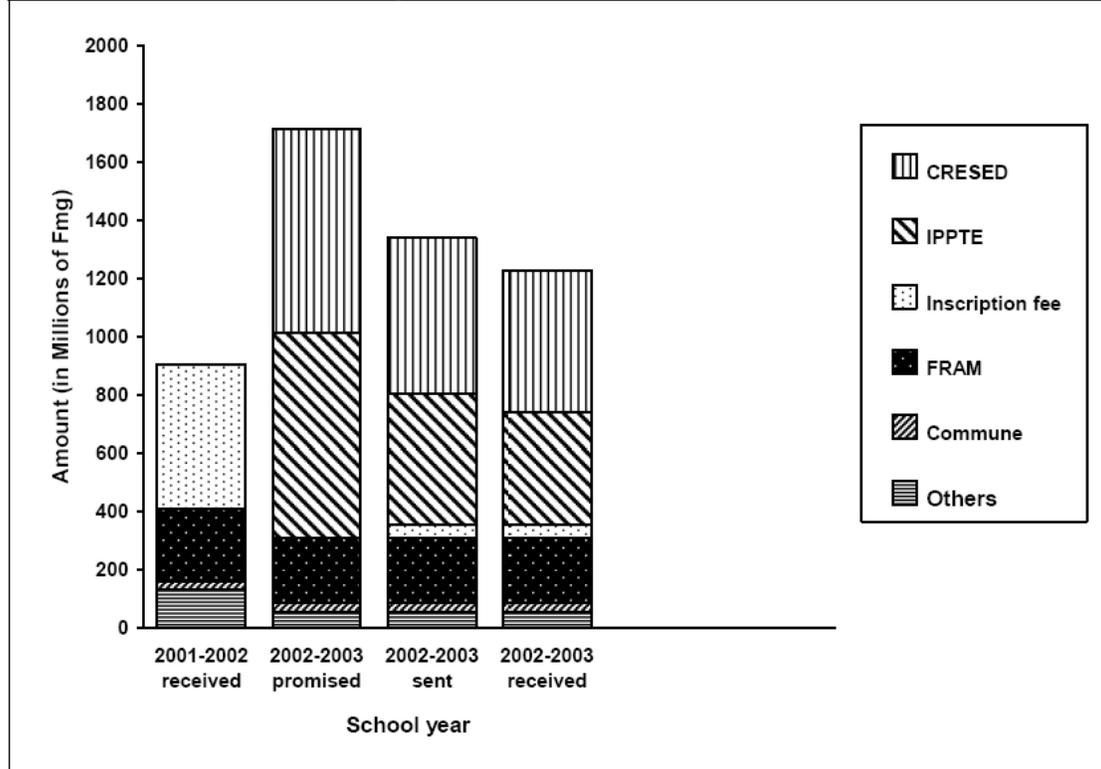
For decades, public expenditure analysis in developing countries has relied on budget information – essentially focusing on a country’s *planned* expenditures – because disbursement and actual expenditure data was either difficult to obtain, unreliable, or arrived with considerable delay. Interest in PETS emerged specifically because the gap between planned spending and actual spending is often quite large.

Several of the PETS focus explicitly at the gap between planned expenditure and actual disbursements within a particular level of government – generally, the national level. Looking at this gap can be important for a number of reasons. First, if the gap is large, it may indicate that the budget process is not realistic with regard to the government’s capacity to disburse funds as planned. Second, if overall leakages appear to be large and the possible difference between budgeted and disbursed funds is ignored, then recommendations may focus on the wrong levels (see Boxes 3 and 4).

Box 3: Gaps between budgeted and disbursed funds in Madagascar

The Madagascar PETS compared the amount of funds received by schools both to the budgeted amounts (i.e. promised funds) and to the amount disbursed. The funds received by schools represented only 62 percent of the budgeted amounts, suggesting serious diversion of funds. However, more than 90 percent of the funds that were *actually disbursed* did reach the schools. Thus, the largest “gap” between the budget and the schools occurred in the very first step – between the budgeted and the disbursed amounts (see Figure below, reproduced from World Bank 2003).

Figure 3: Total amount in cash (in Millions of Fmg) planned and received during the last two school years 2001-2002 and 2002-2003 (for the sample of schools visited)



Source: Budget Tracking Survey, World Bank, April/Mai 2003

Box 4: Gaps between allocations and disbursements in Kenya

Funds that are allocated at the national level for service delivery are not always disbursed. In this case, funds are either returned to the national treasury or are kept in a public account. A study in Kenya documented just such a gap between allocations and disbursements at both the national and district levels. The study found that in 2003-2004, the Ministry of Education allocated Ks. 296.4 million to schools and disbursed Ks. 200.0 million. The difference of Ks. 96.4 million was not, however, stored in the Ministry's account. Instead, the balance in the allocated account was only Ks. 10.6 million, leaving Ks. 85.8 million unaccounted for. In the sample of districts, Ks. 40.4 million was allocated and only Ks. 35.0 million was disbursed, a difference of Ks. 5.4 million that was also unaccounted for.

Leakages between levels

When accounting data is properly recorded, then it is relatively easy to verify whether resources sent by one level reached another. This is true of in-kind transfers (such as drugs for which stock cards record shipments and deliveries) as well as funds. On the other hand, in the absence of good accounting data, it is very difficult to detect diversion of resources between levels. Many PETS look for such accounting information and find it lacking. Others are able to find partial information, such as records of outflows but not

inflows. The absence of good accounting data is precisely one of the conditions that makes PETS useful – when accounting data is poor, surveys of facilities and questionnaires applied at different levels of the system may pinpoint serious leakages. The difficulty of getting the information itself can sometimes provide a strong argument for improving information systems, accounting procedures and audits (see Boxes 5 and 6).

Box 5: Measuring leakages between levels – medical supplies in Kenya

The Kenyan study (2004) shows how a PETS can measure leakages between levels – for a sample of in-kind transfers of drugs, vaccines, and contraceptives – using stock cards at the national distributional depots, regional depots and facilities. By comparing the outflow information on stock cards at the higher level with inflow information at the lower level, the study derives estimates of leakage. The transfers for Kenyan health supplies are part of a multiple payment mechanism because regional and facility level units supplement the resources they receive from the government with purchases from their own revenues or user fees and donations. By reorganizing the information in the study (combining three tables into one), it is possible to demonstrate leakages occurred in two instances – distribution of contraceptives from headquarters to regional depots and vaccines from districts to facilities (See Table below). Funds or supplies may have been diverted in the other cases, but if this were the case, the leakage is masked by supplementary inflows. (This was not the only analysis in the study which also looked at differences between budgeted funds and disbursements, as well as inflows and outputs at the facility level.)

Table: Leakage Estimates for Selected Health Care Supplies in Kenya, 2004

		(Ks\$ millions)				
	Source	Verification	Drugs	Contraceptives	Vaccines	
Outflow	HQ	HQ: All	Stock Cards	309.4	90.3	631.4
Inflow	Regional Depot	RD: All	Stock Cards	610.0	51.5	774.5
Outflow	Regional Depot	RD: Sample	Stock Cards	115.0	36.1	245.1
Inflow	Districts	D: Sample	Stock Cards	140.0	136.7	859.4
Outflow	Districts	D: Sample	Stock Cards	21.1	18.1	143.8
Inflow	Facilities	F: Sample	Stock Cards	28.7	19.5	77.1
			(Inflow)/(Outflow)			
Outflow	HQ	HQ: All	Stock Cards			
Inflow	Regional Depot	RD: All	Stock Cards	197%	57%	123%
Outflow	Regional Depot	RD: Sample	Stock Cards			
Inflow	Districts	D: Sample	Stock Cards	122%	379%	351%
Outflow	Districts	D: Sample	Stock Cards			
Inflow	Facilities	F: Sample	Stock Cards	136%	108%	54%

Source: Kenya 2004, pp. 26-27, Tables 4.1.6, 4.1.7 and 4.1.8.

Box 6: Contrasting different sources of information in Zambia

Zambia (2004) explicitly presents three different ways of estimating how much money flows from districts to schools. One approach relies on the results of information provided by district officers in an interview; the second relies on extrapolations from administrative data; and the third relies on information reported by the schools. Not only are these different approaches described in the text, but they are also clearly presented to readers in the notes to the relevant table (Zambia, 2004, Table 12, p. 34).

Leakages within a level

Appropriate accounting information can also be used to detect resources that are diverted from their intended purpose by comparing inflows with outflows at a given level. For PETS, this generally means analyzing financial flows at subnational levels. Measuring the difference between inflows and outflows is relatively easy whenever the rules for distributing and spending resources are explicit and the subnational unit has no additional resources of its own. However, whenever national funds are mediated without clear rules and/or the subnational units have access to additional funds, the estimates are much more difficult – both in practical terms and for interpretation.

Most of the Latin American PETS exposed potential leakages within subnational units. In particular, these countries appear to have a common problem of so-called “creative budgeting,” manipulation of accounts in ways that allow money to be spent without clearly indicating its final use (see Box 7). For example, the Honduran study noted that some of the largest expenditure categories were so general that they could be spent on almost anything. The two categories that were specifically named were *asignaciones globales* (i.e. global allocations) and *servicios centralizados* (i.e. centralized services). Note that this may be a functional response to overly rigid budget controls and represents the kind of example that requires further analysis and information before drawing lessons for policy.

Box 7: Creative budgeting and inefficiency in Peru

The Peruvian PETS analyzed similar issues, showing that the *departamento* of Loreto spent 30 percent of its nonwage education funds on per diems, which could be a real and necessary expenditure but could also be an easy way to extract funds from the public sector for private gain. Another indication of potential problems in Peru came from looking at efficiency indicators. Most of Peru’s Education Implementation Units report about 2 employees per 100 teachers; however in three of them – Pumabamba, Aija, and Canta – the ratio was 7, 11 and 13, respectively. This could simply be an indication of gross inefficiency, but it could also be a sign of “padded payrolls” or jobs being distributed for political patronage. Similarly, most Education Implementation Units spent about 3 percent on overhead; however, Canta and Aija spent 11 percent and 10 percent on overhead, respectively (Peru – Education).

As noted earlier, measuring these leakages within a level can be very difficult if information is not even recorded. In the case of Madagascar, the difference between inflow and outflow could not be ascertained at the district level because only 17 percent of the *Ciscos* (districts) could show evidence indicating how materials were purchased and distributed.

Leakages within facilities

Leakages within facilities are another example of a gap between inflows and outflows but merit a separate discussion because they are manifested in distinct ways. However, it is distinctive in the ways these leakages manifest themselves. While leakages at higher levels may involve diverting funds through budget and expenditure mechanisms, leakages in facilities often manifest themselves in terms of petty theft (e.g. drugs), absenteeism (i.e. staff being paid who do not provide the contracted services), and low productivity (i.e. staff are present but lack materials, skills, or effort to provide the required services).

Of the ways that leakages can occur within facilities, the most commonly measured form in PETS is related to absenteeism (see Box 8). For example, many studies investigated whether staff were present at service delivery units and reported the share that lacked a legitimate reason for being absent. Many of them found high levels of absenteeism that suggested serious leakages and possible abuses. In other cases, however, further investigation revealed that absenteeism was related to legitimate causes. Though PETS can measure absenteeism, other approaches – such as a QSDS – are likely to provide better quality information about absenteeism because such studies are more focused on the facility level than on tracking resources through other levels of the system.

Leakages across multiple levels

In most cases, the gaps encompass several levels. Frequently, such studies fail to distinguish whether they are analyzing outflow or inflow records. In Uganda, as noted earlier, the nonwage payments were allocated on the basis of enrollment and leakages were calculated as the difference between the budget allocation per student and the school level report of what was received. In this case, it wasn't necessary to find the exact point at which funds were being diverted because the information was sufficient (1) to demonstrate that large leakages were occurring and (2) to provide support for a new policy of informing the public of how much money each school was supposed to receive. Through interviews, the researchers had some indication that the diversion was probably occurring at the district level; however the policy that was chosen did not require them to pinpoint the actual problem.

The Cambodian PETS shows how difficult it can be to figure out the point at which leakages are occurring. Though it distinguished different levels, it could only measure the difference between one outflow and the next. Recordkeeping was so poor on the inflow of funds that the researchers had to assume that the outflows at the next highest level were the same as the inflows (World Bank Report on Cambodia, 2005, p. 21). Hence it

was impossible to distinguish between leakage that occurred *between* levels and leakage that occurred *within* levels. However, by informing readers of the actual source of the information (outflow records), the Cambodian study helps attentive readers draw appropriate conclusions from the information. It suggests that future PETS could be improved if they were to explicitly indicate in every table the source of information (disbursement receipts from districts, invoices from facilities, etc.).

Many of the PETS demonstrate the value of comparing units – whether facilities, districts or provinces – to detect inappropriate diversion of resources. When leakages are ubiquitous, comparisons will not reveal much; however, when leakages are concentrated in particular places or facilities, then comparisons will reveal them. The Peruvian study demonstrated substantial variation across departments, in productivity, overhead expenditures, and particular budget items, suggesting that further investigation would uncover either serious mismanagement or corruption among the outliers.

The PETS in Madagascar also demonstrated the value of making comparisons across provinces. The average gap of 36 percent between the funds that were reportedly sent by the Cisco (district level) to what the schools actually received obscured large variations across provinces. For example, in the Province of Antananarivo only 17 percent of schools reported discrepancies between the expected and actual funds received, with an overall mean gap of about 14 percent. By contrast, in Toliara, 57 percent of schools reported discrepancies, with an average difference of 44 percent between the expected and actual inflows (Madagascar, p. 24).

Overall, this study concurs with GR 2007 and EP 2005 that leakages can be quite significant. However, it is important not to lose sight of the number of cases where funds and resources are actually being applied to their intended purposes. Regarding the 24 PETS reviewed for this study:

- Half of the studies (12) did not present any estimates of leakages (Tanzania 2001, Rwanda 2000, Rwanda 2004, Mozambique 2002, Nigeria 2002, Senegal 2002, Cameroon 2003, Namibia 2003, Albania 2004a, Albania 2004b, and Sierra Leone 2003). This finding is confirmed by GR 2007, which shows that leakage estimates were unavailable in 10 of the 20 studies reported in their Table A2.⁹
- Wage payments are the largest share of education spending in every country and represent a significant share of health spending in most cases (ranging from 37 percent of recurrent spending in Chad to 78 percent in the Nigerian state of Kogi and as much as 90 percent in many of Brazil's primary care facilities). Wage payments were also the least likely to have significant leakages. Only Kenya, the Nigerian state of Kogi (but not Lagos), and Ghana reported significant leakages in wage payments. In the Nigerian State of Kogi, 42 percent of teachers reported they had not received any salary in the last six months; while Ghana had an estimated 20 percent diversion of wage payments. The rest of the countries reported that most salaries were paid, although in several cases, payments were made with considerable delays.

⁹ A "study" was counted twice if it reported results for two sectors (e.g. both health and education).

- Of the 13 PETS that reported leakage estimates, eight¹⁰ reported relatively low amounts – less than 20 percent of nonwage resources were diverted, representing less than 5 percent of total education or health spending (Zambian capitation grants, Madagascar, Mongolia, Cambodia, Peru, Brazil, Papua New Guinea and Uganda).
- Of the seven PETS that reported significant leakages in nonwage resource transfers, the average represents more than 50 percent of nonwage resources and about 15 percent of total spending (Tanzania, Ghana, Chad, Uganda, Papua New Guinea, Kenya, Zambian discretionary spending).
- While it is important to recognize that leakages might look small relative to total spending, the impact on service delivery can still be substantial if the leakages keep health facilities and schools from receiving critical complementary inputs (e.g. drugs, textbooks).

6. Other findings

Leakages are the common focus of almost all the PETS. However, the process of surveying facilities and tracking expenditures generates a range of additional findings in these studies. EP 2005 and GR 2006 address a number of these, including which kinds of transfers are most susceptible to diversion, as well as questions of efficiency and equity.

This review concurs with the findings of EP 2005 and GR 2006 on the following points:

- Rule-based funding is less vulnerable to diversion than discretionary funding.
- Wages are generally less vulnerable to diversion than non-wage transfers – because they are usually deposited directly in employees’ bank accounts and rule-based.¹¹
- In these studies, transfers from central government levels are less likely to be diverted than funds managed by states and local governments. (Studies which detect significant leakage at the local government level include Mozambique, Senegal, Rwanda, Uganda 1996, Tanzania, Madagascar, and Peru; while only two – Chad and Ghana – identified significant leakages at the central government level).
- Absenteeism was a significant problem in several countries; but in others, the rates of unexcused absences was surprisingly low (see Box 8).
- In countries with PETS for both education and health sectors, absenteeism was generally higher in health than education and, within health, higher for doctors than for other health care workers. None of the health studies found direct payment mechanisms as simple as the capitated payments per student.
- In-kind deliveries (e.g. drugs, medical supplies, textbooks) were more susceptible to leakage than financial transfers, partly because the monetary value of in-kind transfers is less transparent.
- Ghost workers account for significant losses in some countries and much less in others (See Box 9).

¹⁰ Zambia is counted twice in this list because it estimated large leakages for discretionary funds and small leakages for the rule-bound capitation transfers.

¹¹ The Zambian study distinguishes between teachers’ salaries, which are rule-bound and have low leakages, with one-time bonuses and benefits, which are more discretionary and subject to greater leakage.

- Delays in transferring funds to subnational governments, schools, facilities, and employees are problematic in many countries – contributing to low budget execution, inefficiency and inequity.
- Spending by households to support local service delivery often rivaled public resources; more than 50 percent of the resources used to provide local education and health services in Zambia, Uganda and Chad were paid by households either directly through user fees or indirectly through community funds.
- Inequitable distribution of resources by region and income class is quite common: the ratio of spending across districts was reported to be 10:1 in Mozambique’s education sector; 16:1 in Chad’s health sector; and 8:1 in Zambia’s education sector.¹²
- Basic accounting information needed to track resource flows and monitor spending are lacking or haphazard in most countries. In many cases, information is simply not recorded and basic documents (like receipts) are not filed and available. When information is recorded, it is frequently not standardized or stored properly. Audits are infrequent and weak, and budget information may be partial (see Box 11).
- Supervision is infrequent and poor in most countries, for example, 31 percent of Madagascar’s schools reported they had no inspections during the regular school year and very few sanctions.

Box 8: Absenteeism

Absenteeism is very serious in some countries (e.g. 37 percent of teachers in Uganda and over 40 percent of doctors in Honduras). In Papua New Guinea about 19 percent of health workers were absent from their posts. In Mongolia, absenteeism was estimated to be relatively low (5%) among urban teachers and higher (15%) among rural teachers. Nevertheless, the researchers had reason to believe that the absentee rates were strategically underreported by the respondents in the urban areas. Among teachers in Kenya, absenteeism was reported to be 8%; and among health workers in Honduras, 12%.

PETS studies that investigate the reasons for absence sometimes find that the problem is overstated and even, occasionally, insignificant. Honduras represents an example where absenteeism is a serious problem but one that is exaggerated by the raw data: 27 percent of health workers were absent, but 5 percent were on vacation, 2.5 percent were ill and 7 percent were absent for other legitimate reasons (e.g. compensation time), leaving about 12 percent unaccounted for. Thus, absenteeism is a problem, and management of staff time may be a problem, but not quite as high as the 27 percent figure would first suggest. In Papua New Guinea, about 15% of teachers were absent; however, only one-third of these teachers (i.e. 5%) were absent for unknown reasons. The rest were sick, in training, travelling or doing other job-related functions outside of their school posting. For more detailed discussion of absenteeism, see GR 2007 and EP 2005.

¹² The Zambian PETS does a particularly good job of calculating and analyzing the progressivity and regressiveness of different forms of spending.

Box 9: Ghost Workers

The problem of ghost workers is widespread, but in several countries it is not as large as originally suspected. Frequently, the impression that a large number of employees are collecting pay without working is created by the fact that many staff members transfer to different facilities without their official records being updated. For example, In Honduras, out of the 15,309 people officially employed by the Secretary of Health, more than 97 percent could be located. About 9 percent of these employees were working but not in the location indicated by the government's database, perhaps accounting for the belief that ghost workers are a more severe problem.

In sum, this study confirms the findings reported in GR 2006 and EP 2005, but offers a few additional observations. In particular, GR 2006 and EP 2005 reasonably focus on the problems revealed by PETS; however, it is important not to lose sight of a number of studies that demonstrate that leakages, absenteeism and ghost workers may be less serious problems than originally expected. It is surprising to find a large share of PETS that do not estimate leakages at all – about half. Regardless, almost all PETS studies identify serious problems in recordkeeping, supervision, auditing and information flows.

7. Can PETS contribute to improved governance?

Countries want to analyze public finances for a variety of reasons, but one of the most valuable uses of such analysis is to help a country improve the governance of its public sector. The term “governance” is used widely and loosely for a range of concepts related to the factors that influence the behavior of an entity – be it a government, a corporation or civic association. An important statement defines governance as “the traditions and institutions by which authority in a country is exercised” (Kaufmann et al 1999, page 1). In the specific case of public services, the traditions and institutions that influence whether funds reach their intended uses in provision of public services are key to improving the effectiveness of government action. By tracking expenditures through the offices that allocate and disburse funds, and by collecting information on the traditions and institutions that guide those actions, PETS can provide extremely valuable information for recommending changes in how public services are governed and thereby foster sustainable changes in the effectiveness of those public services.

One of the most helpful ways to analyze governance for public services is presented in the World Bank's World Development Report 2004, *Making Social Services Work*, which used a Principal-Agent framework and highlighted the relationship between clients, providers, and government. GR 2007 uses the same framework and applies it specifically to the implementation and analysis of PETS.

Taking this framework as the starting point, PETS delve into the details of accountability relationships. In particular, PETS specifically produce two kinds of information. The tracking exercise provides a map of decision points – individual public officials or offices where allocation and disbursement decisions are made – as well as a map of information

flows – including receipts, audits, and accounts.¹³ Decision points identify *who is taking action* in ways that promote or undermine funding effective public services. Information flows identify *who is accountable to whom and for what*. Therefore, the information collected by PETS can identify trouble spots – either decision points that are not functioning properly or information flows that are missing, inaccurate, or manipulated.

Many studies identify decision points by providing a flow chart that indicates which governmental units receive and disburse funds (e.g. Cambodia, p. 16; Ghana, pp. 4 and 5; Papua New Guinea p. 27; Brazil, p. 24; Cameroon, p. 15). Some do a better job than others of detailing the decisions that are made at each point in the public finance system and the extent to which individuals in these various units are given discretion over the allocation and use of funds. For example, the Cambodian study not only identifies decision points but also specifies how much discretion districts have to allocate funds and the kinds of financial reporting that are required for each unit. Zambia provides a table instead of a flow chart (Table 2, p. 24), which very effectively describes six different types of financial flows along with the responsibilities and discretion delegated to different governmental levels. A similar exercise can be conducted with financial flows for many of the other PETS (see Annex 2).

The Madagascar PETS explicitly delineates the budget planning, execution and personnel management decisions that are allocated to the national, provincial, district and commune levels (Table 2, p. 3). It even distinguishes the units that are responsible for different staff and the resources that they command. When the tracking exercise determined that the major gap between allocations and facility-level spending occurred between the allocation and disbursement steps, it could delineate the changes that were needed in the national planning and budgeting functions. A close look at the way schools dealt with discretionary funds also showed problems due to disagreements between teachers, parents and an official committee comprising the school director and community representatives.

The Nigerian PETS goes further. It not only describes the formal responsibilities for decisions at different levels, but also reports the views of informants regarding the actual exercise of authority in the system. Thus, local governments are generally considered to be the primary decision makers with regard to local health facilities. Nevertheless, in particular places or for particular kinds of expenditure decisions, the national government or community associations are the primary decision makers.

Many of the recommendations that come out of the PETS derive from this particular piece of the analysis. Many financial systems are set up with limited mechanisms for transparency toward actors who have the authority to take action when abuses are discovered. The studies often show limited involvement of clients – either individual or as part of committees or associations – and limited oversight by higher government levels or external auditors. Creating new entities to monitor financial management or strengthen existing ones – whether through community participation or government accounting

¹³ The term “decision points” is also used by Carolyn Winter in IIEP 2006.

offices – remains one of the most common and probably strongest recommendations to emerge from these studies.

The impact of transparency can be inferred from the responses in many countries to the simple fact of announcing that a survey is being conducted (See Box 10). A survey is not the same as a system for monitoring and auditing public accounts, but it can temporarily serve a similar function by drawing attention to information that can reveal malfeasance and abuses.

Box 10: A PETS demonstrates the potential impact of more frequent supervision

Regular supervision is more important for preventing than detecting the diversion of resources. Individuals are less likely to divert resources if they know there is a chance they will be discovered. In this sense, PETS are sometimes perceived by officials and staff as a supervisory visit and, if forewarned, may change their behavior – a kind of “Hawthorne Effect.” This has been described in at least one instance:

“In Mahajanga city, the Cisco [local district] only started distributing the IPPTE funds [funds available from debt-reduction agreement] after our visit. The chief of the Cisco was waiting for the rest of the money to arrive as he reported that the received IPPTE funds were not enough to pay for all the schools in the district. After our enumerators stopped by and asked about the use of the different types of funds, he visited some schools personally in order to transfer the money. By the time the enumerators arrived at the schools in his districts, they had all received the promised IPPTE funds.”

Source: Madagascar 2003, p. 17.

Along with identifying the decision points, the flow of financial information is critical. Most studies find that important financial information is lacking, of poor quality, or difficult to obtain (See Box 11). This is hardly surprising because it takes effort to collect and store information in a useable format and, consequently, staff need positive reasons to do it. In countries where financial information is regularly collected and available, a number of incentives are in place. In many cases, individuals will be disciplined or fired if they do not collect and keep proper financial records. In other cases, staff fulfill their responsibilities because they understand and agree with the use of the information (e.g. to control corruption). A third incentive to collect and keep proper records is when staff use the information themselves (e.g. using financial information to better manage resources, to provide better services, or to get greater access to funds – see Box 12). Of course, in cases where individuals are corrupt and are diverting resources, they will have a strong interest to confuse financial reporting by providing poor data. In such cases, improving the information system is going to be more difficult because it is likely to meet active resistance.

Box 11: Poor information is too common: selected examples

In Ghana only 15 of the 39 district health offices and 133 of the 173 clinics that were surveyed had complete records. The study reported that financial records were only kept on paper and “discarded promptly” and that heads of school rarely turned over any files to their successors (p. 7). In Madagascar, 50 percent of the *Ciscos* (districts) and 25 percent of the schools had incomplete records. Furthermore, 17 percent of the *Ciscos* could not present evidence on the distribution of materials. In Chad, no administrative records were available to document transfers between Regional Health Districts and their health centers. In Honduras, audit mechanisms were reportedly weak with unclear divisions of responsibilities among different audit units. In Brazil, only one municipality – Cuiabá – was cited as having an effective system for verifying costs and expenditures.

Box 12: Incentives for accurate and timely expenditure reports: Mozambique

In Mozambique, district offices received advances for their expenditures. Each month, they had to render accounts to the government, showing the budget control records, account balances, bank reconciliation statements and receipts for significant expenditures. Only when this information was cleared, was it possible for the district to receive its next advance (Mozambique 2002, p. 7).

Information needs to flow in many directions and often to several different agents at the same time. The upward flow of information is necessary to create accountability. Higher levels cannot manage service delivery or detect problems in either financial flows or service provision, without timely accurate information. Such upward flowing information requires at a minimum regular administrative reporting and some form of periodic auditing.

But upward flows of information are also critical for matching needs and resources since decentralized service units or districts are often the best sources of information about demand. The problems that emerge when this upward flow of information is ignored can lead to substantial inefficiencies when, for example, a Ministry determines the number of staff and assigns them to facilities without input from districts or facilities. A good PETS can uncover this kind of problem by demonstrating gaps in the upward flow of information and how this affects planning and allocations at national or state levels.

Downward flows of information can also play a significant role whenever funds flow through intermediaries. In such cases, it is extremely useful to convey the amount of resources that have been allocated to the designated recipient. Without this kind of information, recipients have no way of assessing whether they have received the resources that were allocated to them. This was noted in Tanzania, where district councils do not notify schools, health centers, or water authorities of how much the exchequer has allocated to them. Consequently, these service providers accept what they are given without having the opportunity to verify whether they have received their due or whether resources have been diverted from their intended use.

In Kenya, too, only 20 percent of schools knew the amount of money to which they were entitled. Consequently, the Kenyan study recommended that school principals should be informed of the amount of funds their school is supposed to receive so that they will know if their districts do not transfer the promised resources. Whether using the long or short route of accountability, “beneficiaries [and any recipient] need to be aware of the allocation rule, otherwise it equals no rule at all” (GR 2007, p. 26).

Even more important than the *direction* of information flows, is the *purpose* of the information. In the examples above, upward flows of information were useful for planning and allocation, while downward flows were useful for holding intermediaries accountable. The components of a comprehensive information system can be categorized in several different ways, but an important distinction is between information gathered for: management, accountability, and intelligence (See Box 13).

BOX 13: Three parts of an integrated information management system

The purpose of **information for management** is to provide managers with timely information to make decisions that improve the likelihood of reaching goals efficiently. It generally focuses on financial accounting, personnel management, outputs of services, results, client satisfaction, and whether the programs and policies are reaching the desired groups. This information has to be collected and reported regularly and frequently (e.g. daily, weekly, and monthly). The information is generally gathered through administrative channels, but may also include periodic surveys such as PETS, QSDS, or Citizen Report Cards.

The purpose of collecting **information for accountability** is to provide supervisory institutions with evidence for assessing the performance of those responsible for managing programs. Accountability information generally focuses on whether programs or policies attained their goals, applied resources as planned, and used resources efficiently. This information has to be collected and reported regularly, but it need not be quite as frequent (e.g. monthly budget reports to managers but quarterly results reported to a Minister and annual reviews of performance to a legislative oversight committee.) Information for accountability will come from administrative reports, but it also must include independent and reliable data from other sources, such as surveys like PETS.

The purpose of collecting **information for intelligence** is to identify trends, discover unexpected problems or opportunities, uncover malfeasance and noncompliance, and understand how people respond to programs and changing policies. It comprises a range of analytical work, including both investigative audits and social and behavioral research. This information is not necessarily collected on a regular basis, but it should be an ongoing activity. Information for intelligence comes from surveys (e.g. PETS), focus groups, and interviews, as well as forensic investigations.

Some information will be relevant to all of these categories. For example, periodic household surveys can give managers information that is useful for allocating resources and setting priorities; help the government assess whether programs are reaching

intended client populations; and be used for researchers to understand how economic conditions affect people's decisions to seek out and participate in programs. However, some information may be specific to a particular purpose. For example, focus groups may provide information that is useful to managers who are trying to increase client satisfaction, but not be statistically robust enough to make assessments regarding program performance or to do behavioral analysis.

Source: Adapted from Savedoff 2006.

If PETS are to be more than a one-time exercise, with short-lived recommendations and no lasting impact, then it is necessary to consider the government's information system as a *system* within which the PETS can play a particular role. A comprehensive information system to monitor and control the allocation, distribution, and allocation of resources involves much more than a single survey. It comprises a large number of different kinds of information gathering, analysis and reporting, with different purposes and different periodicity.

An integrated information system collects all three kinds of information and channels them in usable form to the appropriate users. It does not insist on cross-linking every piece of information (e.g. administrative data with surveys), but it does promote the use of common codes, formats and definitions, and facilitate cross-linking for some subsets of data. It also makes information publicly available to promote transparency, as long as there are safeguards in place to address ethical and privacy concerns.

Public Expenditure Tracking Surveys can play a role in all three of these cases, but they are most useful for *accountability* and *intelligence*. A well-functioning information system will provide accurate, timely and reliable information for management. In such cases, PETS are only needed for intelligence purposes – to verify that the administrative information is being reported accurately and to diagnose any problems in the regular system of recording and reporting information. This may be why PETS are relatively more popular in Africa, where financial information systems are poor, compared to Latin America, where financial information systems are relatively strong.

Decision Points and Information Flows to Improve Governance

Combining the analysis of decision points and financial information flows is the key to making useful recommendations, some of which require structural changes, while others involve procedural changes. Structural changes may be necessary when there are gaps between decision-making authority and control of resources. This can involve decentralizing decision-making authority in cases where funds are transferred through lower level governments; or recentralizing funds where decision-making authority remains at the national level. Structural changes also include the creation of new actors (such as those involving community or client participation or reorganizing supervisory offices) or shifting financial allocation methods (e.g. from discretionary to rule-bound formulas or vice versa).

Large improvements can sometimes be achieved with less far-reaching changes. Sometimes increasing supervision – through regular and random audits – is sufficient to reduce leakages. Often basic changes in financial reporting procedures –simplifying them, assuring that they are complete, and requiring public dissemination – can have a major effect (See Box 14).

Box 14: What kind of specific reporting is needed? Examples from Cambodia

The Cambodian study (World Bank 2005) is very clear about the kinds of reporting that can be used to improve financial flows in public (and many private) systems. The main records that are kept at each level are:

- A book in which received funds and receipts for expenditures are recorded
- A book that tracks budgeted against disbursed or spent funds
- A report that records all expenditures
- Files for purchase invoices and receipts

To be useful, these records have to be not only available but they have to be accurate. In order to reduce the chances that an individual can falsify the books, it is helpful:

- For each level to keep an independent set of records that are available for auditing
- Two separate people should be required to sign for any significant expenditure or transfer – generally one person to make the purchase or transfer and one person whose responsibility is to vouch for the accuracy and appropriateness of the transaction
- Periodically, the books at different levels should be reconciled, cross-checking to assure that outflows from one level match inflows at another
- Units should be supervised regularly, i.e. receive periodic visits at least once a year, to verify that records are being kept and to provide training, support, and encouragement to those responsible for maintaining records up-to-date and accessible.

As noted in other reviews (GR 2007 and EP 2005), more rigid and rule-bound flows seem to be less vulnerable to leakage than discretionary flows; however, there can be costs to such approaches. Flexibility is often necessary to adapt services to fluctuating needs and heterogeneous preferences of local communities. Such systems provide effective controls for public financial administration when they are conducted efficiently. Unfortunately, they can turn into nightmares of bureaucratic red tape when they are not carried out well. This demonstrates a need to balance the existing capacity with the instruments available and the likelihood of diverting funds. It is important not to single-mindedly focus on eliminating leakages so as not to lose sight of the broader picture of service management and provision which is the ultimate aim of the PETS analysis.

8. Conclusions

PETS vary regarding the degree to which they achieve the goal of measuring leakages but they still frequently do good expenditure analysis and collect useful data on budget and finance process, much like good Public Expenditure Reviews (PERs). So the available PETS contribute in different ways. Most of them:

- show in detail how financial management works in the particular country and sector;
- collect data that sheds light on the ways funds are budgeted allocated and disbursed;
- provide information on how things “really work” by interviewing service providers, facility managers officials at different government levels and others outside government; and
- analyze whether spending reaches facilities and is actually applied to intended uses.

Nevertheless, many PETS lack an analysis of leakages or present weak estimates either because they

- do not conduct a facility survey;
- cannot calculate the funds allocated to service providers because subnational units contribute their own revenues to the mix;
- cannot calculate the funds allocated to service providers because budget categories do not match across governmental levels or they are not sufficiently disaggregated;
- fail to verify the self-reported information;
- do not properly analyze the collected information; or
- do not present the analysis well.

This is only a serious problem if PETS are supposed to focus exclusively on the question of whether or not funds reach service providers. Recognizing that PETS are heterogeneous because they are implemented in substantially different contexts and, above all, oriented toward different policy questions, the goal should not be to force all PETS into a common mold. Rather, the goal could be to make them more rigorous and useful by being clearer as to each one’s purpose and methods. In particular, it would help to distinguish between three very different kinds of study. Those which are:

- more like forensic audits, verifying data, sampling and investigating leakages more intensely;
- aimed squarely at answering particularly policy questions regarding leakages, delays, distributions or allocations; or
- analyzing processes in order to improve monitoring & evaluation, budget planning and disbursement, and financial controls.

In any of these cases, the PETS can be seen as an entry point to diagnosing problems and finding ways to improve the flow of funds and provision of services in the public sector.

References

- Ablo, Emmanuel & Reinikka, Ritva, 1998. "Do budgets really matter? - evidence from public spending on education and health in Uganda," Policy Research Working Paper Series 1926, Washington, DC: The World Bank.
- Besley, Timothy and R. Burgess. 2003. "The Political Economy of Government Responsiveness: Theory and Evidence from India." *Quarterly Journal of Economics*, 117(4):1415-51.
- Chaudhury, Nazmul and Jeffrey S. Hammer. 2003. "Ghost Doctors: Doctor Absenteeism in Bangladeshi Health Centers." *World Bank Policy Research*, Working Paper 3065.
- Das Gupta, Monica, Varun Gauri and Stuti Khemani. 2004. "Decentralized Delivery of Primary Health Services in Nigeria: Survey Evidence from the States of Lagos and Kogi." Africa Region Human Development working Paper Series. Washington, DC: World Bank. June.
- Das, Jishnu, Stefan Dercon, James Habyarimana, and Paramila Krishnan. 2004. "Public and Private funding of Basic Education in Zambia: Implications of Budgetary allocation for Service Delivery." Africa Region Human Development Working Paper Series. Washington, DC: World Bank.
- DFID (Department for International Development). 2003. "Sierra Leone: Public Expenditure Tracking Surveys (PETS) Review, Final Report." Mimeo. May.
- Engberg-Pedersen, Poul, Kai Kaiser, Gregory Kisunko, Inna Kushnarova, Magnus Lindelow. 2005. "Public Expenditure Tracking Surveys: A Stocktaking." Draft Report. Washington, DC: World Bank. Mimeo.
- Filmer, Deon, Jeffrey S. Hammer and Lant H. Pritchett. 2000. "Weak Links in the Chain: A Diagnosis of Health Policy in Poor Countries", *World Bank Research Observer* 15(2): 199-224.
- Fofack, Hippolyte, Chukwuma Obidegwu, and Robert Ngong. 2003. "Public Expenditure Performance in Rwanda: Evidence form a Public Expenditure Tracking study in the Health and Education Sectors." Africa Region Working Paper Series No. 45. Washington, DC: World Bank. March.
- Fondo Nacional de la Discapacidad (FONADIS). 2006. "Desarrollo Inclusivo y Discapacidad: Oportunidades y Desafío." Seminario Internacional. Santiago, Chile: FONADIS. October.
- Galiani, S. and E. Schargrodsky. 2002. "School Decentralization and Education Quality: the Role of Fiscal Deficits." Buenos Aires: Universidad de San Andres.
- Garcia-Prado, A, Chawla, M. 2006. "The Impact of Hospital Reforms on Absenteeism in Costa Rica." *Health Policy and Planning*. 21(2):91-100. March
- Gauthier, Bernard (2006) "PETS-QSDS in Sub-Saharan Africa: A Stocktaking Study", HEC Montreal and World Bank, AFTKL, Washington D.C. September.

- Gauthier, Bernard and Ritva Reinikka (2007), "Methodological Approaches to the Study of Institutions and Service Delivery: A Review of PETS, QSDS and CRCS", African Economic Research Consortium Framework Paper, August.
- Gauthier, Bernard and Waly Wane (2007) "Leakage of Public Resources in the Health Sector: An Empirical Investigation of Chad," Policy Research Working Paper # 4351, Development Research Group, Washington, DC: World Bank. September.
- Glewwe, Paul. 2002. "Schools and Skills in Developing Countries: Education Policies and Socioeconomic Outcomes." *Journal of Economic Literature*, 40(2): 436-482. June.
- Gopakumar, K. 1998. "Citizen Feedback Surveys to Highlight Corruption in Public Services: the Experience of PAC, Bangalore", Transparency International Working Paper, September.
- Gray-Molina, G., E. Perez de Rada and E. Yáñez, "Does Voice Matter? Participation and Controlling Corruption in Bolivian Hospitals," Chapter 2 in di Tella and Savedoff eds. *Diagnosis Corruption: Fraud in Latin America's Public Hospitals*. Washington, DC: Inter-American Development Bank. pp. 27-56.
- Hirschman, Albert O. 1970. *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*. Harvard University Press.
- IDB (Inter-American Development Bank). 2006. *Social and Economic Progress Report 1996: Making Social Services Work*. Washington, DC: Inter-American Development Bank.
- IIEP (International Institute for Educational Planning). 2006. "Sub-Regional Course: Public Expenditure Tracking Surveys in Education," Co-sponsored by World Bank Institute in Accra, 22-26 May. UNESCO. <http://www.unesco.org/iiep/eng/focus/etico/pdfs/ghana.pdf>
- INS (Institut National de la Statistique). 2004. "Enquete sur le suivi des depenses publique et la satisfaction des beneficiaries dans les secteurs de l'education et de la santé – phase I: volet santé." Rapport principal des resultants, version proviso ire 12 mars 2004. Republic of Cameroon.
- Instituto Apoyo. 2002. "Public Expenditure Tracking Survey: The Education Sector in Peru." Lima, Peru: Instituto Apoyo. September 25.
- Jimenez, Emmanuel and Yasuyuki Sawada. 1998. "Do Community-Managed Schools Work? An Evaluation of El Salvador's EDUCO Program." Working Paper Series on Impact Evaluation of Education Reforms, Paper No. 8. Washington, DC: World Bank.
- Kaufmann, Daniel, Kraay, Aart and Zoido, Pablo, 1999, "Governance Matters." World Bank Policy Research Working Paper No. 2196. Washington, DC: World Bank. October.
- Kenya. 2004. "Public Expenditure Tracking Survey (PETS) 2004: Preliminary Report." Ministries of Planning and National Development, Finance, Health, and Education Science and Technology. Kenya.
- Kremer, Michael. 2003. "Randomized Evaluations of Educational Programs in Developing Countries: Some Lessons." *The American Economic Review*, 93(2): 102-106.

- Lindelov, Magnus and Jan Dehn. 2001. "Public Expenditure Tracking Survey: The Health Sector in Mozambique – Motivation, Approach and Methodology." Draft. February.
- Pang, Gaobo. 2005. "Efficiency of Public Spending in Developing Countries: An Efficiency Frontier Approach" (06/01/2005). World Bank Policy Research Working Paper Series No. 3645. Washington, DC: World Bank.
- Paul, S. and S. Sekhar. 2000. "Benchmarking Urban Services: the Second Report Card on Bangalore." Bangalore, India: Public Affairs Center. June.
- PEFA (Public Expenditure and Financial Accountability). 2005. "Public Financial Management: Performance Measurement Framework." Washington, DC: PEFA Secretariat, World Bank. June.
- Reinikka, Ritva and Nathanael Smith. 2004. *Public Expenditure Tracking Surveys in Education*. Paris: International Institute for Educational Planning, UNESCO.
- Reinikka, Ritva, and Jakob Svensson. 2004. "The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture." Policy Research Working Paper 3239. Washington, DC: World Bank.
- REPOA (Research on Poverty Alleviation) and ESRF (Economic and Social Research Foundation). 2001. "Pro-Poor Expenditure Tracking." Draft Report submitted to the PER Working Group. Washington, DC: World Bank. March.
- Rwanda. 2004. "Public Expenditure Tracking Survey: Education." Draft.
- Sappington, D. E. 1991. "Incentives in Principal-Agent Relationships," *Journal of Economic Perspectives*, 5(2).
- Savedoff, W.D. 1998. "Social Services Viewed Through New Lenses," in William D. Savedoff, ed. *Organization Matters: Agency Problems in Health and Education in Latin America*. Washington, DC: Inter-American Development Bank.
- Savedoff, W.D. 2006. "Política Pública Para Las Personas Con Discapacidad en Chile: Aprendiendo de las Experiencias Internacionales." Chapter 3 in Fondo Nacional de la Discapacidad (FONADIS). 2006. "Desarrollo Inclusivo y Discapacidad: Oportunidades y Desafío." Seminario Internacional. Santiago, Chile: FONADIS. October.
- Tibi, C. 2004a. "Public Expenditure Tracking Survey – Second Draft." Ministry of Education and Science, Project Implementation Unit, Tirana, Albania. September.
- Tibi, C. 2004b. "Public Expenditure Tracking Survey – Health Sector – Draft Report." Project Implementation Unit, Ministry of Health, Tirana, Albania. December.
- Wilson, J. Q. 1989. *Bureaucracies: What Government Agencies Do and Why They Do It*. New York: Basic Books.
- World Bank. 2001. "Honduras Public Expenditure Management for Poverty Reduction and Fiscal Sustainability." Report No. 22070. Washington, DC: World Bank. June.

- World Bank. 2003. "Service Delivery in Public Primary Schools in Madagascar: Results of a Budget Tracking Survey." Madagascar Country Office. Antananarivo, Madagascar. September.
- World Bank. 2004. "Papua New Guinea: Public Expenditure and Service Delivery (PESD)." Draft. June.
- World Bank. 2004. *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: World Bank.
- World Bank. 2005. "Cambodia: Public Expenditure Tracking Survey (PETS) in Primary Education." Washington, DC: World Bank. Draft of June 30, 2005.
- World Bank. 2005. "Preparing PERs for Human Development." Draft of March, 2005. Full Text: <http://siteresources.worldbank.org/EXTPERGUIDE/Resources/PER-Complete.pdf>
- World Bank. 2006. "Brazil, More Efficiency for Better Quality: Resource Management in Brazil's Unified Health System (SUS)." Report No. 36601-BR. Washington, DC: World Bank. June.
- World Bank. 2006. "Improving the Quality of Health Spending Resource Management in Brazil's Unified Health System (SUS)." Report No. 36601-BR. Washington, DC: World Bank. November.
- World Bank. 2006. "Public Financing of Education in Mongolia: Equity and Efficiency Implications." Report No. 36979-MN. Washington, DC: World Bank. September.
- Ye, Xiao and Sudharshan Canagarajah. 2002. "Efficiency of Public Expenditure Distribution and Beyond: A Report on Ghana's 2000 Public Expenditure Tracking Survey in the Sectors of Primary Health and Education." Africa Region Working Paper Series No. 31. Washington, DC: World Bank. May.

Annex 1: Studies Surveyed by Different Reviews

Country	Sector(s)	Survey Year	Study Year	Type	Savedoff 2008	Gauthier & Reinikka 2007	Engberg-Pedersen et al 2005	Author or Title of Study/Report
Albania	Education	2004	2004	PETS	X		X	C. Tibi
Albania	Health	2004	200	PETS	X		X	C. Tibi
Bangladesh							X	
Brazil	Health	2003/2004	2006	PETS	X			World Bank, LAC
Cambodia	Education	2004	2005	PETS	X		X	World Bank, EAP
Cameroon	Health	2003	2004	PETS	X	X	X	Republic of Cameroon
Chad	Health	2004	2007	PETS	X	X		B. Gauthier & W. Wane
Ghana	Hlth & Educ	2000	2000	PETS	X	X	X	X. Ye & S. Canagarajah
Honduras		2000	2001	PETS	X		X	World Bank, LAC
Kenya	Hlth & Educ	2004	2004	PETS	X	X	X	Republic of Kenya
Madagascar	Education	2003	2003	PETS	X	X	X	World Bank, Madagascar Country Office
Mongolia	Education	2005	2006	PETS	X			World Bank, Report No. 36979-MN
Mozambique	Health	Proposal	2001	PETS	X		X	M. Lindelow & J. Dehn
Mozambique		2002				X		
Namibia	Hlth & Educ	2003						
Nigeria		n.d.	n.d.	PER	X			Nigerian Delegation
Nigeria	Health	2002	2003	n.a.	X	X		M. Das Gupta, V. Gauri & S. Khemani
Papua New Guinea		2002	2004	PESD	X		X	Papua New Guinea: Public Expenditure and Service Delivery
Peru	Education	2002	2002	PETS	X		X	Instituto Apoyo
Rwanda	Education	2004	2004	PETS	X	X	X	Rwanda: Public Expenditure Tracking Survey - Education
Rwanda	Hlth & Educ	2000	2003	PETS	X	X		H. Fofack, C. Obidegwu & R. Ngong
Rwanda	Health	2004				X	X	Rwanda – education & health 2004
Senegal	Health	2002	n.d.	PETS	X	X	X	Expenditure Tracking Survey in Senegal: Health Sector
Sierra Leone		2000 & 2001	2003	PETS	X		X	L. Wallace, J. Edgerton, R. Harris and E. Ocheing
Tanzania	Hlth & Educ	2001	2001	PER	X	X	X	REPOA & ESRF
Tanzania	Hlth & Educ	1999		PETS		X	X	Tanzania PETS

Country	Sector(s)	Survey Year	Study Year	Type	Savedoff 2008	Gauthier & Reinikka 2007	Engberg-Pedersen 2005	Author or Title
Uganda	Hlth & Educ	1996	1998	PETS	X	X	X	E. Ablo & R. Reinikka
Uganda	Education	1999				X	X	Uganda
Uganda	Education	2000				X		Uganda
Zambia	Education	2002	2004	ESDS	X	X(2001)	X	J. Das, S. Dercon, J. Habyarimana & P. Krishnan

Notes: *Italic* indicates that year of survey was inferred from the report and this author could not find a clear statement of when the survey was administered. The study "type" refers to the title given to the study by the authors' of each report.

Annex 1 (continued)

Bibliography of PETS reviewed in this study, alphabetically by country:

- Albania 2004 Education: Tibi, C. 2004a. "Public Expenditure Tracking Survey – Second Draft." Ministry of Education and Science, Project Implementation Unit, Tirana, Albania. September.
- Albania 2004 Health: Tibi, C. 2004b. "Public Expenditure Tracking Survey – Health Sector – Draft Report." Project Implementation Unit, Ministry of Health, Tirana, Albania. December.
- Brazil 2006: World Bank. 2006. "Improving the Quality of Health Spending Resource Management in Brazil's Unified Health System (SUS)." Report No. 36601-BR. Washington, DC: World Bank. November.
- Cambodia 2005: World Bank. 2005. "Cambodia: Public Expenditure Tracking Survey (PETS) in Primary Education." Washington, DC: World Bank. Draft of June 30, 2005.
- Cameroon 2004: INS (Institut National de la Statistique). 2004. "Enquete sur le suivi des depenses publique et la satisfaction des beneficiaries dans les secteurs de l'education et de la santé – phase I: volet santé." Rapport principal des resultants, version provisoire 12 mars 2004. Republic of Cameroon.
- Chad 2007: Gauthier, Bernard and Waly Wane (2007) "Leakage of Public Resources in the Health Sector: An Empirical Investigation of Chad," Policy Research Working Paper No. 4351, Development Research Group, Washington, DC: World Bank. September.
- Ghana 2002: Ye, Xiao and Sudharshan Canagarajah. 2002. "Efficiency of Public Expenditure Distribution and Beyond: A Report on Ghana's 2000 Public Expenditure Tracking Survey in the Sectors of Primary Health and Education." Africa Region Working Paper Series No. 31. Washington, DC: World Bank. May.
- Honduras 2001: World Bank. 2001. "Honduras Public Expenditure Management for Poverty Reduction and Fiscal Sustainability." Report No. 22070. Washington, DC: World Bank. June.
- Kenya 2004: Kenya. 2004. "Public Expenditure Tracking Survey (PETS) 2004: Preliminary Report." Ministries of Planning and National Development, Finance, Health, and Education Science and Technology. Kenya.
- Madagascar 2003: World Bank. 2003. "Service Delivery in Public Primary Schools in Madagascar: Results of a Budget Tracking Survey." Madagascar Country Office. Antananarivo, Madagascar: World Bank. September.
- Mongolia 2006: World Bank. 2006. "Public Financing of Education in Mongolia: Equity and Efficiency Implications." Report No. 36979-MN. Washington, DC: World Bank. September.

- Mozambique 2001: Lindelow, Magnus and Jan Dehn. 2001. "Public Expenditure Tracking Survey: The Health Sector in Mozambique – Motivation, Approach and Methodology." Draft. February.
- Nigeria 2004: Das Gupta, Monica, Varun Gauri and Stuti Khemani. 2004. "Decentralized Delivery of Primary Health Services in Nigeria: Survey Evidence from the States of Lagos and Kogi." Africa Region Human Development Working Paper Series. Washington, DC: World Bank. June.
- Papua New Guinea 2004: World Bank. 2004. "Papua New Guinea: Public Expenditure and Service Delivery (PESD)." Draft. June.
- Peru 2002: Instituto Apoyo. 2002. "Public Expenditure Tracking Survey: The Education Sector in Peru." Lima, Peru: Instituto Apoyo. September.
- Rwanda 2003: Fofack, Hippolyte, Chukwuma Obidegwu, and Robert Ngong. 2003. "Public Expenditure Performance in Rwanda: Evidence from a Public Expenditure Tracking study in the Health and Education Sectors." Africa Region Working Paper Series No. 45. Washington, DC: World Bank. March.
- Rwanda 2004: Rwanda. 2004. "Public Expenditure Tracking Survey: Education." Draft.
- Senegal (#12) (No further identifying information).
- Sierra Leone 2003: DFID (Department for International Development). 2003. "Sierra Leone: Public Expenditure Tracking Surveys (PETS) Review, Final Report." Mimeo. May.
- Tanzania 2001: REPOA (Research on Poverty Alleviation) and ESRF (Economic and Social Research Foundation). 2001. "Pro-Poor Expenditure Tracking." Draft Report submitted to the PER Working Group. Washington, DC: World Bank. March.
- Uganda 1998: Ablo, Emmanuel & Reinikka, Ritva, 1998. "Do Budgets Really Matter? - Evidence from Public Spending on Education and Health in Uganda," Policy Research Working Paper Series. Washington, DC: World Bank.
- Zambia 2004: Das, Jishnu, Stefan Dercon, James Habyarimana, and Paramila Krishnan. 2004. "Public and Private Funding Of Basic Education in Zambia: Implications of Budgetary Allocation for Service Delivery." Africa Region Human Development Working Paper Series. Washington, DC: World Bank.

Annex 2

Country	Spending	Source	-----flow of funds----->					Recipient	
Ghana	Salaries	Min of Finance	Rule	\$	National Payroll Office	Rule	\$		Health workers' account
Ghana	Non-Salary	Min of Finance	Budget	\$	Natl Health Service	Discretion	in-kind		Facility
Madagascar	Non-Salary	Central Govt	Budget	\$	District	Discretion	in-kind		School
Madagascar	Salaries	Central Govt	Budget	\$	Payroll Office	Rule	\$		Employee's account
		Parents' Assoc	Discretion	\$/in-kind					Employee
Cambodia	Non-Salary	Natl Treasury	Budget	\$	Provincial Govt	Discretion	\$	District Educ Office Discretion	\$(cash) School
Cambodia	Non-Salary	Natl Treasury	Budget	\$	Provincial Govt	Discretion	\$	District Educ Office Discretion	\$/in-kind School
Cambodia	Non-Salary	Natl Treasury	Budget	\$	Provincial Govt	Discretion	in-kind	District Educ Office Discretion	in-kind School
Mozambique	Salaries	Natl Treasury	Budget	\$	District	Discretion	\$/ in-kind		School
Mozambique	Salaries	Natl Treasury	Budget	\$	District	Discretion	\$		Teachers
Peru	Salaries	Natl Treasury	Budget	\$	District	Rule	\$		Teachers
Peru	Supplies	Natl Treasury	Budget	\$	District	Discretion	in-kind		School
Peru	Utilities	Natl Treasury	Budget	\$	District	Discretion	\$		Utility Company
Rwanda	Salaries	Natl Treasury	Rule	\$					Teachers' Account
Rwanda	Non-Salary	Natl Treasury	Rule	\$					School
Senegal	Salaries	Natl Treasury	Rule	\$					Teachers' Account
					Decentralization				
Senegal	Non-Salary	Natl Treasury	Budget	\$	Fund	Discretion	\$		Facility
Zambia	Salaries	Natl Treasury	Budget	\$					Teachers' Account
Zambia	Fixed Grant	Natl Treasury	Rule	\$	District	Rule	\$		School
	Other								
Zambia	Recurrent	Natl Treasury	Budget	\$	District	Discretion	\$/ in-kind		School

Source: Author's interpretation of selected PETS reviewed in this study.