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# 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

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## Abstract

This paper analyzes the public expenditure flows from the line ministries in Ghana to the basic service provision facilities, including primary and junior secondary schools, and health clinics. The study is mainly based on the data collected from a pilot public expenditure tracking survey (PETS) in 2000. A review of public expenditure distribution systems shows that the recording procedures for salary and non-salary expenditures are different. Salary expenditure is recorded in terms of cedis, from Ministry of Finance down to the public employees, who receive the salaries. Non-salary expenditures, although recorded in terms of cedis at the line ministry level, are largely distributed to the district offices and facilities in form of materials, with no monetary values indicated. This disconnect in the recording systems gives little local accountability of the higher level offices and provides few opportunities for the facilities to give feed back on their needs in resource allocation. The results from PETS data indicates that only about 20 percent of non-salary public health expenditure and 50 percent of non-salary public education expenditure reached the facilities. In health sector, evidences suggest that a large proportion of the leakage occurred between the line ministries and the district offices, where the public expenditures are turned into materials from cash flows. Based on our analysis of the tracking survey data, we conclude that a consistent and transparent recording system from the line ministries to the service provision facilities may significantly improve the efficiency of public resource distribution by providing easy public access to the resource flow data.

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# I. INTRODUCTION

In its latest version of "Ghana Poverty Reduction Strategy" (GPRS, by the Ministry of Finance, February 20, 2002), the Government of Ghana (GOG) stated that "significant gaps exist in access to and utilization of basic services by the poor", and the major issues with regard to basic service provisions are "quality, equity, efficiency and financing gaps". The GOG has committed to "enhancing the delivery of social services to ensure location equity and quality". To achieve this objective, The GOG not only has increased its budget share for health and education sectors, it also has increased the share of basic services within the sector budgets.

Higher budget expenditures, however, are only one part of the story. Whether a higher budget translates into better performance in the invested sector is, perhaps, the more important part of the story. In order to achieve the desired outcome, it is crucial to ensure that the resources allocated to social services are distributed efficiently to the public service provision facilities such as schools and health facilities, and that these facilities reach the service users, especially the poor.

There are two broad categories of reasons that might cause inefficiencies in the distribution of public expenditures. The first one is *corruption*, namely leakage of resources to individuals or unintended organizations. The second one is *wasting*, namely inefficient use of resources, such as a mismatch between what facilities need and what the government distributes. The GOG keenly recognizes the problems and the consequences of corruption. It has established a Serious Fraud Office (SFO) for the purpose of combating corruption. According to the SFO's annual report of 1999, it discovered problems with regard to ghost names that appeared on government payrolls, especially in the education and health sectors, and serious fraud in public procurement.

In supporting the GOG's effort in streamlining public spending and improving related outcome in social sectors, the focus of the Ghana Public Expenditure Tracking Survey (PETS) is to measure the first type of inefficiency, the leakage between different points of resource distribution. Ideally, a track of records should be available on the flow of government expenditures from the line ministries to district offices, from the district offices to the facilities, and finally on how resources are used by the facilities. However, in Ghana such records are not available. Based on the experiences of a tracking study conducted in Uganda (Ablo and Reinikka, 1998), this tracking survey aims to identify the bottlenecks in resource flows in Ghana, and to explore ways of ensuring that monies meant for service delivery reach their targeted points.

It is widely accepted that an improvement in the availability and access of public facilities, as well as enhanced utilization, would contribute substantially in effecting positive changes in the welfare of the population. To achieve these positive changes, the GOG has determined to bring local government administration to the doorsteps of the people, and to make social service provision more participatory. Decentralization policies, reflected in "bottom-up" approaches, have been adopted. The GOG has decided that the basic unit of administration is the local government at district level, however some of the main financial channels are still controlled by the central government. The new local government system is built on the assumptions that:

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*"development is that which responds to people's problems and represents their goals, objectives and priorities. Decentralization was the concept envisioned to transfer functions, powers, means and competence to the District Assemblies from the Central Government, Ministries and Departments." (Ghana Interim PRSP 2000).*

Although the legal framework of decentralization has been conceptualized, the fiscal decentralization is much less clear and will take time. Currently, the actual flows of public resources are mainly based on the pre-decentralization module, which are either controlled centrally (salaries) or are channeled through the central agencies such as Ghana Education Services or Ghana Health Services.

The PETS was designed to track down to what extent public resources flow between three points, central government agencies, district offices and service delivery facilities. First, we obtained the budget sheet from Ghana Education Services (GES) and Ministry of Finance for the Health sector expenditure, which gave us the actual expenditures by different level of service provisions and by budget items. Second, we conducted the tracking survey, which was based on a sample of basic education and primary health care facilities, as well as the district offices in charge of education and health.

At the district offices and schools, we conducted PETS on actual annual public non-salary expenditures received for the last two years. In-kind public resources were asked to be converted to monetary values by the respondents. The respondents 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.

This tracking survey is meant to provide only one piece of puzzle to the whole picture of improving public services and implementing decentralization: namely, enhancing transparency and accountability of public expenditure distribution. It needs to be borne in mind that the survey represents a pilot project. Due to its moderate scale and the experimental nature, the results of the study are meant to be more provocative than conclusive. Nonetheless, we expect that the results will generate a broad interest among government agencies and civil society, encouraging the discussion of further steps.

This paper is organized as follows. Section 2 describes the implementation of the Ghana PETS and the lessons learned from conducting such a survey. These lessons represent valuable experiences for a larger scale survey in the future, if need arises. In addition to general study environment, such as availability of classrooms, text books, etc., and students academic performances, Sections 3 and 4 focus on the analysis of resources flow from the central governments to primary and Junior Secondary Schools (JSS), respectively. Section 5 covers the results of an analysis on the resource flows to health care facilities and health service provision. Finally, section 6 summarizes the findings.

# II.   THE IMPLEMENTATION OF PETS IN THE SECTORS OF EDUCATION AND HEALTH

*The systems of public expenditure distribution*

The biggest challenge that we encountered in conducting this tracking survey was to understand the systems of public resource distribution in Ghana. On paper, all resources at the level of the central government are allocated by the Ministry of Finance to the line ministries with clearly marked heads and subheads, indicating where the funds should go. In reality, however, the distribution systems of public spending are rather complicated. On the one hand, the salary component of the public expenditures is distributed directly by a central government agency, the Controller Accountant General (CAG), to public employees, through the banking system. On the other hand, the monetary values marked at the level of the line ministries for non-salary recurrent expenditure were largely distributed to the public service provision facilities in the form of in-kind materials, the monetary values of which were not indicated and thus frequently not accurately known at the level of the facilities. We chose to focus our survey on tracking the non-salary expenditure in this study due to both that some work has been previously done in tracking ghost teachers by GOG and that tracking salary spending would require a whole set of different survey instruments, which were beyond scope of this survey.

Ghana's distribution system has both its strengths and its weaknesses. The first strength is that public employees are mostly paid fully and on time, which often is a serious concern in other Sub-Saharan Africa (SSA) countries. The second strength, being perhaps also a weakness, is that a large proportion of public resources are distributed in form of in-kind materials. On the one hand, given the current situation in marketing and local capacity, it may be necessary to procure at the level of the central government for scale merits. On the other hand, there is hardly any mechanism built into the distribution system that would make it possible to routinely track the actual flows of public resources or to easily prevent inefficient use or misuse of resource at the central government level. On a different issue, the system also does not allow for feedbacks from the facilities to the procurement agencies to ensure on time delivery of needed items.

It is a distribution system that has a tightly top down control mechanism to prevent corruption, but very little leverage for bottom up accountability. The Ghana budget distribution systems for the sectors of education and health are illustrated in figure 1 and 2. The solid lines represent cash flows, the dotted lines mostly material flows. Codes in gray boxes indicate resources retained in the agency; resources of other codes should flow to the next level of agencies or facilities. Through the PETS we have obtained information on the agencies/facilities with a thicker frame.

Figure 1 shows the allocations of public expenditures from the MOF down to the level of primary and secondary schools with clearly marked expenditure categories. For example, Codes 142.02.x denote primary schools and 142.03.x denote JSS. Of these, 142.02.2 to 5 and 142.03.2 to 5 are for recurrent expenditures of different categories, such as travel and transport, general expenditure, maintenance, etc. The codes 142.02.1 and 142.03.1 are used for salaries, and distributed by the CAG. District Assembly Common Fund (DACF) is a newly established fund to distribute public resources in a form of cash flows to support the decentralized functions of district assemblies.

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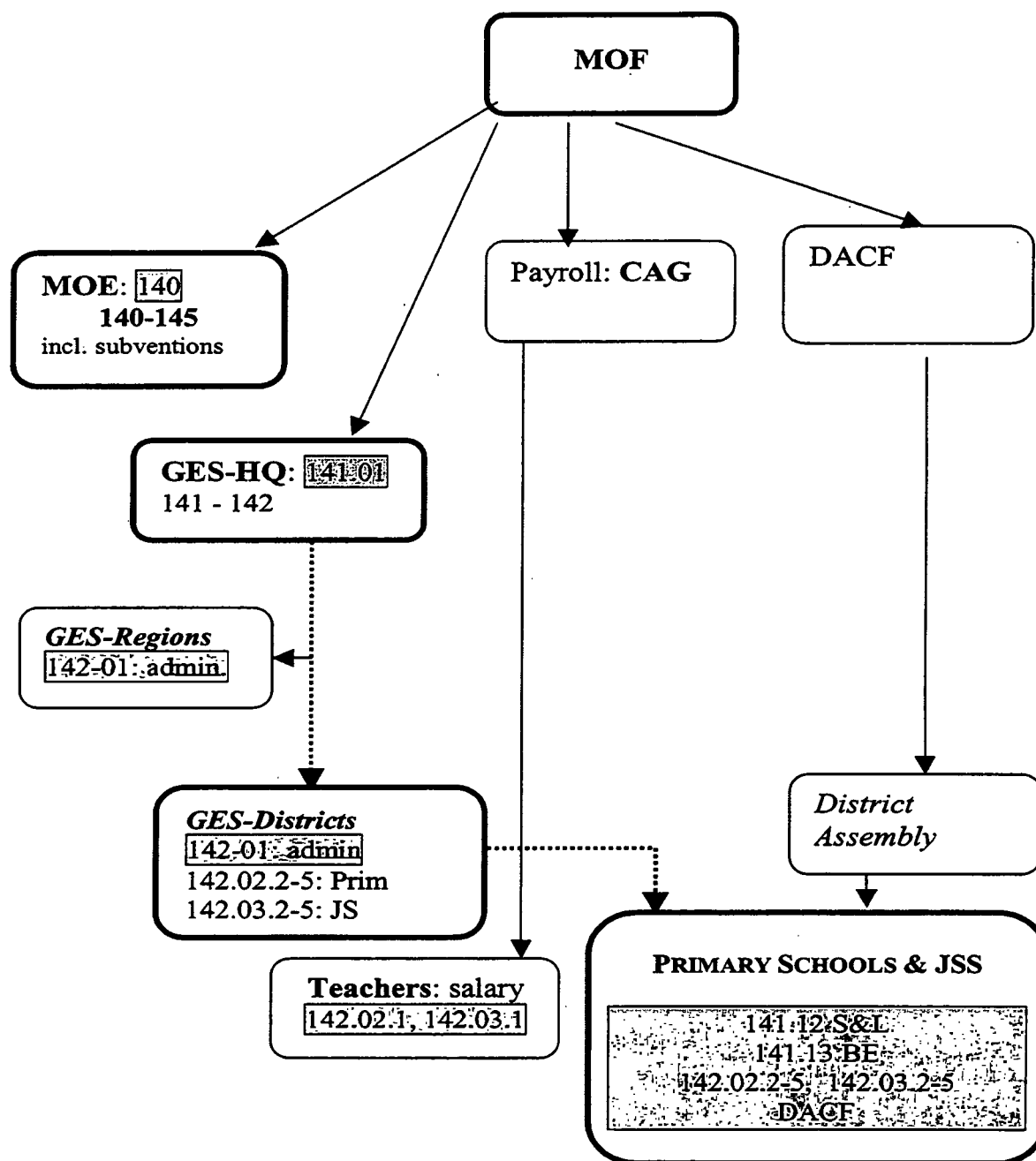
**Figure 1: Ghana: Flow of Basic Education-Related Public Funds**

Figure 2 shows the allocation of public expenditure from the MOF down to the level of hospitals and health clinics. The PETS tracks financial/resource flows between the agencies with thick frames, namely, MOF, district health offices and clinics. For example, codes 165.503 items 2 to 5 are non-salary recurrent expenditures for clinics, which allocated by MOF to Ghana Health Services (GHS), who in turn should distribute the designated resource to District Health Offices (DHO). However, while budget allocation of non-salary recurrent expenditure from MOF to GHS is in monetary values (represented by solid line), the majority resource flows are changed into materials (represented by dotted line) between GHS and DHO. Clinics we

surveyed reported that they hardly receive any public expenditure in form of cash, and the monetary values of the distributed materials are not indicated. Clinics mainly depend on internally generated funds (IGF) for all non-salary recurrent expenditures.

**Figure 2: Ghana: Flow of Health Care Related Public Funds**
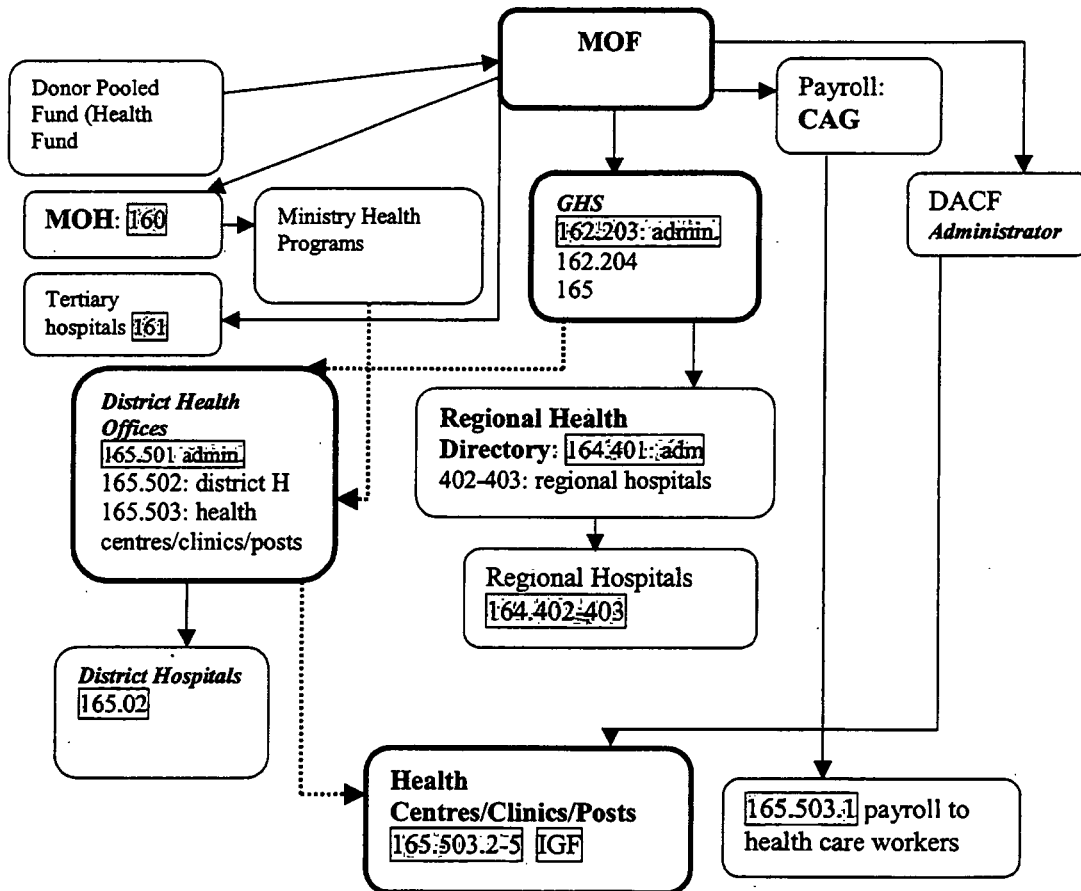


The knowledge gap between the monetary values and the material form of the resource flows may create much more serious leakage in health than in education sector for two reasons. First, the salary component of recurrent expenditures amounts to only 35 percent in the health sector, but to 90 percent in the basic education sector. This means that CAG controls only 35 percent budget distribution in health sector. Given the very direct distribution channels of CAG, the salary budget may have fewer channels to leak. Second, the materials procured within the health sector, such as drugs, are much more resalable than text books.

As shown in Figures 1 and 2, schools and clinics in general receive very little cash. Based on our estimation, on average, each primary school student only received 819 cedis in cash in 1999, which translates to about 10 percent of total government non-salary recurrent expenditures. For JSS, each student received 1500 cedis, about 13 percent of total non-salary recurrent expenditures. A large proportion of public expenditures targeted to these facilities are in-kind, with no indication of their monetary values. Therefore, although the central government has a precise plan on how to allocate public expenditures, there is very little knowledge at the

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district offices or the level of facilities on the monetary values of what they are entitled to receive and what they actually received.

*Implementation of the PETS*

The sample design of the Expenditure Tracking Survey is multistage. Firstly, four districts were chosen from each of the ten regions in Ghana. Based on the natural resource endowment of the districts, and an interplay of factors such as the level of infrastructure development, the income and welfare levels of the population, two depressed, one average and one better off district were selected in each region.

The second stage involved the selection of service delivery facilities. From the district list of schools provided, five basic education schools (three primary schools and two junior secondary schools) per district were selected. The same procedure was applied for the selection of health facilities, including three health posts (the first point of call in rural communities), one clinic and one health center per district. It should be mentioned that before starting with the fieldwork, a health center was generally considered as a higher level facility than a clinic, however, the survey showed that the use of the notions "center" and "clinic" is not strictly related to the level of health facilities. In some cases, a "clinic" was actually a higher-level facility than a "health center". In addition, district level information was sought from District Education Officers and District Health Officers respectively.

To facilitate the link with the Ghana Living Standards Survey Round 4 (GLSS 4) data set, conducted in 1998, Enumeration Areas (EAs) falling within the selected districts were chosen first. Service facilities located in the selected EAs automatically became part of the sample of health or educational facilities. Finally, facilities not located in the selected EAs but reportedly used by GLSS 4 households were added as well. For purposes of tracking and comparability, the PETS data can be matched with GLSS 4. The GLSS 4 sample was selected from a sampling frame of 13,000 EAs developed from the 1984 Population Census. Each EA indicated its locality status (rural, semi-urban or urban), population and household information. The frame was first stratified by ecological zones (coastal, forest and Savannah). Within each zone the EAs were subsequently stratified by rural, semi-urban and urban. The GLSS 4 is based on a stratified nationally representative sample of households. At the first stage, 300 EAs were selected with a probability proportional to size (PPS). At the second stage, 20 households were selected from EA. The PETS was designed with the aim of matching data from the survey with the GLSS 4 data set.

The PETS covered 143 EAs of the 300 GLSS 4 EAs. The distribution is presented below:

**Table 1: Distribution of enumeration areas by type and region**

| Region | Rural Eas | Urban EAs | Total |
|---|---|---|---|
| Western | 10 | 7 | 17 |
| Central | 15 | 4 | 19 |
| Great Accra | 5 | 13 | 18 |
| Volta | 14 | 4 | 18 |
| Eastern | 9 | 5 | 14 |
| Ashanti | 12 | 3 | 15 |
| Brong Ahafo | 9 | 4 | 13 |
| Northern | 7 | 5 | 12 |
| Upper East | 8 | 1 | 10 |
| Upper West | 5 | 2 | 7 |
| ALL | 95 | 48 | 143 |

A team of 2 enumerators was assigned to each region. The team moved from one district to the other. The first points of call were the District Education Office and the District Health Office. Thereafter, the team split, with one enumerator administering questionnaires to selected health facilities, and the other covering educational facilities. The fieldwork was preceded by a two-day training, and hands on experience at Kasoa (in the Central Region), Labadi, James Town, Oyarifa and Kaneshie in the Greater Accra Region. The fieldwork took place in May 2000.

The total responding rate from district offices was high, amounting to 98 percent. It was similarly high for schools, i.e., 99 percent. It was much more difficult to survey health facilities, as the responding rate of 87 percent suggests. In general, there were fewer problems in collecting data from the district offices. With regard to facilities, the non-financial data are quite accurate, and indeed consistent with what we found from the data of the ministry. However, there were more problems in collecting financial data. Some frequently cited reasons for this problem included the lack of systematic filing procedures, the problem of data filed in different places, etc. All data, including those in district offices, are recorded on papers (not in computers) and get discarded promptly. Heads both of health or school facilities changed frequently. However, when a head left, he/she typically did not transfer information to the next head.

# III. PRIMARY EDUCATION AND PUBLIC RESOURCE FLOWS

*Study environment*

In the tracking survey, we first asked about basic information regarding the number of teachers, students, textbooks, classrooms, sources of drinking water, etc. Table 2 provides a general picture of the study environment by region for 1998 and 1999. In general, most classes have their own classrooms. In Accra, however, every three classes had to share two classrooms. Most of the classrooms are permanent. Average class-size has increased from 36 pupils per classroom in 1997/98 to 38 in 1998/99. However, class-sizes are much larger in the Northern and Upper East regions, with about 45 pupils per classroom. There is not a great deal of classroom sharing at the same time among different grades, but it occurs more frequently in the North and Upper West regions.

Most students must share their desks and chairs, especially in the three poorest regions, namely Upper West, Upper East and Northern Region, as well as in Accra. The supply of both textbooks and teachers' handbooks increased slightly between 1997/98 and 1998/99. Students had on average 1.7 textbooks available in 1998/99. Considering that there are five to seven subjects taught in primary schools, less than two books per pupil signifies a great deal of textbook sharing. Sharing handbooks among teachers is also common. The majority of teachers have graduated from a teacher's college, although this is less true for teachers in the Northern region.

**Table 2: Primary school learning environment by region, 1997/98 and 1998/99**

|  | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # of classes per classroom, 98 | 1.4 | 1.2 | 1.4 | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 | 1.3 | 1.2 | 1.2 |
| # of classes per classroom, 99 | 1.3 | 1.2 | 1.4 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.3 | 1.2 | 1.2 |
| % of temporary classrooms, 98 | 13.3 | 3.0 | 2.7 | 19.4 | 6.1 | 9.5 | 31.3 | 12.5 | 10.5 | 14.8 | 12.1 |
| % of temporary classrooms, 99 | 11.4 | 7.2 | 2.7 | 10.9 | 6.1 | 10.3 | 26.5 | 9.5 | 10.2 | 13.4 | 10.6 |
| Average class size, 98 | 39 | 33 | 37 | 35 | 32 | 34 | 29 | 45 | 46 | 28 | 36 |
| Average class size, 98 | 39 | 34 | 41 | 37 | 31 | 38 | 31 | 45 | 45 | 32 | 38 |
| % classroom sharing by different grade, 98 | 2 | 0 | 6 | 3 | 8 | 6 | 4 | 11 | 4 | 12 | 5 |
| % classroom sharing by different grade, 99 | 4 | 0 | 2 | 5 | 9 | 7 | 4 | 11 | 4 | 11 | 6 |
| Teachers/class, 98 | 0.97 | 0.97 | 0.99 | 1.07 | 0.96 | 1.30 | 1.05 | 1.43 | 0.94 | 0.80 | 1.05 |
| Teachers/class, 99 | 0.99 | 0.99 | 1.01 | 1.03 | 0.96 | 1.29 | 1.06 | 1.42 | 0.91 | 0.83 | 1.05 |
| Pupils/teacher, 98 | 40 | 34 | 38 | 33 | 34 | 26 | 28 | 32 | 49 | 35 | 35 |
| Pupils/teacher, 99 | 40 | 35 | 41 | 36 | 33 | 30 | 29 | 32 | 49 | 38 | 36 |
| Pupils/sitting place, 98 | 1.4 | 1.2 | 1.4 | 1.0 | 1.1 | 1.2 | 1.2 | 1.8 | 2.9 | 2.2 | 1.4 |
| Pupils/sitting place, 99 | 1.4 | 1.2 | 1.4 | 1.0 | 1.1 | 1.2 | 1.2 | 1.8 | 2.9 | 2.2 | 1.4 |
| Pupils/writing place, 98 | 1.5 | 1.2 | 1.4 | 1.2 | 1.2 | 1.3 | 1.2 | 1.8 | 3.1 | 1.4 | 1.5 |
| Pupils /writing place, 99 | 1.5 | 1.2 | 1.4 | 1.2 | 1.2 | 1.3 | 1.2 | 1.8 | 3.1 | 1.4 | 1.5 |
| Textbooks per pupil, 98 | 2.3 | 1.1 | 0.9 | 1.5 | 1.5 | 1.4 | 2.1 | 1.6 | 1.2 | 0.7 | 1.4 |
| Textbooks per pupil, 99 | 2.3 | 1.4 | 1.2 | 1.4 | 2.1 | 1.9 | 2.4 | 2.0 | 1.3 | 1.1 | 1.7 |
| Handbooks per teacher, 98 | 2.3 | 3.4 | 1.9 | 2.8 | 6.2 | 1.2 | 2.3 | 0.8 | 1.8 | 2.6 | 2.4 |
| Handbooks per teacher, 99 | 2.8 | 3.8 | 1.8 | 2.1 | 9.5 | 1.6 | 2.6 | 1.0 | 2.2 | 2.9 | 2.8 |
| Teachers per office, 98 | 9.9 | 9.5 | 9.3 | 12.4 | 8.5 | 10.0 | 9.0 | 9.0 | 9.6 | 5.4 | 9.2 |
| Teachers per office, 99 | 9.2 | 8.8 | 9.5 | 11.7 | 8.5 | 10.1 | 9.2 | 8.5 | 9.5 | 5.5 | 9.0 |
| % of teacher from teacher training college, 98 | 88 | 93 | 99 | 100 | 91 | N/A | 80 | 78 | 88 | 95 | 90 |
| % of teacher from teacher training college, 99 | 83 | N/A | 96 | 100 | 87 | 94 | 78 | 77 | 86 | 91 | 88 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

In addition to the classroom environment we also surveyed the sources of drinking water for students, since it concerns students' health. Table 3 summarizes results on different sources of drinking water and the type of drinking water storage for students. On average about one third of schools had pipe water, and a quarter had well/spring water. "Other type" of water supply could be considered as "bought water", since it is a common practice. If these sources are considered safe, the majority of schools provide safe drinking water for their students. However, seven percent of schools do not supply any drinking water. If lake/river/rain water sources are categorized as unsafe, in Brong Ahafo and the Northern region, close to 20 percent of schools supply students with unsafe drinking water. The majority of schools store their water supply in coolers, which are considered to be sanitary.

**Table 3: Sources of drinking water**

| Type of drinking water supply, % | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
| Pipe | 33 | 73 | 67 | 31 | 25 | 43 | 17 | 25 | 25 | 8 | 34 |
| Well/spring | 25 | 27 | 17 | 8 | 67 | 29 | 8 | 25 | 17 | 17 | 24 |
| Lake/river/rain | 0 | 0 | 8 | 15 | 8 | 7 | 17 | 19 | 8 | 0 | 9 |
| Other unspecified | 25 | 0 | 8 | 31 | 0 | 14 | 42 | 31 | 42 | 67 | 26 |
| None | 17 | 0 | 0 | 15 | 0 | 7 | 17 | 0 | 8 | 8 | 7 |
| Type of drinking water storage, % | | | | | | | | | | |
| | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
| Standing Pipe | 0 | 9 | 0 | 0 | 0 | 0 | 17 | 0 | 8 | 8 | 4 |
| Cooler | 83 | 73 | 75 | 77 | 92 | 93 | 50 | 25 | 42 | 50 | 65 |
| Bowl/other | 0 | 0 | 25 | 8 | 8 | 0 | 0 | 19 | 8 | 42 | 11 |
| None | 17 | 18 | 0 | 15 | 0 | 7 | 33 | 56 | 42 | 0 | 20 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

*Academic performance and gender bias*

Table 4 presents some education indicators for two categories, academic performance and gender bias. The academic performance indicators show that girls' performance is the same as that of boys. The percentages of girls who dropped out of school or who repeated grades are not higher compared to their male counterparts. Based on MOE's 1995/96 data, the promotion rates from P6 to JSS1 among boys and girls are also very similar. This means that the difference in enrollment ratios between boys and girls through JSS1 is mainly caused by gender bias, namely that less girls than boys are sent to first grade, not by gender differences in terms of academic performance. Indeed, based on MOE's 1997/98 data, the first grade gross intake rate is 81 percent for boys, and 76 percent for girls.

**Table 4: Primary school academic performance by region**

| | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Academic performance* | | | | | | | | | | | |
| % drop outs among fem., 98 | 2.3 | 2.3 | 1.9 | 2.7 | 4.7 | 2.6 | 4.1 | 1.0 | 3.9 | 3.7 | 2.8 |
| % drop outs among males, 98 | 4.2 | 2.2 | 1.2 | 3.1 | 3.2 | 2.2 | 4.4 | 0.3 | 2.3 | 3.3 | 2.5 |
| % drop outs among fem., 98 | 4.4 | 3.3 | 1.0 | 2.4 | 6.2 | 2.6 | 4.4 | 0.9 | 2.3 | 2.4 | 2.8 |
| % drop outs among males, 98 | 4.8 | 2.7 | 1.1 | 1.9 | 5.5 | 2.8 | 3.4 | 0.5 | 2.5 | 1.8 | 2.6 |
| % repeats among females, 98 | 3.4 | 1.4 | 1.1 | 1.7 | 6.4 | 2.5 | 4.3 | 1.4 | 2.4 | 4.3 | 2.7 |
| % of repeats among males, 98 | 4.2 | 1.9 | 1.2 | 1.8 | N/A | 2.5 | 3.5 | 2.7 | 2.5 | 5.9 | 2.8 |
| % repeats among females, 99 | 6.2 | 1.9 | 1.9 | 2.6 | 7.9 | 3.6 | 7.0 | 2.7 | 2.5 | 6.3 | 3.9 |
| % of repeats among males, 99 | 7.1 | 2.0 | 1.9 | 2.8 | 7.0 | 4.1 | 6.5 | 1.3 | 3.5 | 7.8 | 4.1 |
| *Gender bias* | | | | | | | | | | | |
| % fem. pupils, 98 | 49 | 50 | 52 | 50 | 49 | 50 | 48 | 39 | 43 | 45 | 47 |
| % fem. pupils, 99 | 49 | 49 | 51 | 50 | 48 | 51 | 47 | 40 | 44 | 46 | 48 |
| Among those who finished P6, % females, 98 | 45 | 49 | 48 | 50 | 46 | 49 | 45 | 31 | 43 | 49 | 45 |
| Among those who finished P6, % females, 99 | 51 | 48 | 51 | 46 | 50 | 52 | 44 | 32 | 42 | 46 | 46 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

*Resource flows to primary schools*

The tracking survey at schools provided very interesting and somewhat different information than indicated by the statistics of the MOE. We first split total recurrent expenditure into salary and non-salary components. This is necessary because these two components reach schools through different channels. While salaries are distributed directly through the banking system by the Controller Accountant General (CAG), the non-salary recurrent expenditures are managed by the Ghana Education Services, GES, its headquarter in Accra and the district education offices.

For non-salary recurrent expenditures, schools provided information on the amount of public expenditures, both in monetary terms and in quantities of in-kind materials. As noted earlier, a large proportion of subsidies is supplied in-kind, such as in the form of books, stationary or chalks. Schools typically are not aware of the exact monetary value of these materials. Thus, the monetary values provided below are based on rough estimates by the respondents from the schools, typically the headmaster. In addition, schools do not keep records

of teachers' salaries. To account for the cost of salary subsidies, we estimated salary costs based on the average cost of salaries of school teachers and headmasters.[1]

Based on these estimates, Table 5 includes a comparison between the expenditures allocated by the MOE to primary schools and the resources received by primary schools. In 1997/98, about 64 percent of the public expenditures that left the GES reached schools, after taking into account overhead administrative cost. Specifically, 51 percent of non-salary and 65 percent of salary recurrent expenditure reached the primary schools. The non-recurrent expenditures in 1998/99 are by about 10 percent lower than in 1997/98. The salary expenditures have increased due to a cross board increase in teacher's salaries. We do not have budget data from the MOE/GES for 1998/99, thus no estimates of public expenditures leakage is available for 1998/99.

**Table 5: Primary school recurrent expenditure (cedis), per enrolled student**

|  | 1997/98 | | | 1998/99 | | |
|---|---|---|---|---|---|---|
|  | Non-salary | Salary | Total | Non-salary | Salary | Total |
| Based on MOE/GES estimates[2] | 12,081 | 108,724 | 120,805 | N/A | N/A | N/A |
| Based on District Education Office estimates[3] | N/A | N/A | N/A | N/A | N/A | N/A |
| Based on school budget estimates | 5,730 | 65,828 | 71,558 | 5,104 | 78,735 | 83,839 |
| Adjusted for 8% overhead cost | 6,188 | 71,094 | 77,283 | 5,512 | 85,033 | 90,546 |
| As % of MOE/GES estimates | 51 | 65 | 64 | N/A | N/A | N/A |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Interestingly, the pupil teacher ratio (PTR) calculated by the surveyed schools is exactly the same as shown by the GES data and teachers get paid in full on time. Several possibilities could suggest the unaccounted 35 percent of salaries in 1997/98. One is that the basis for calculating average salaries for school teachers was too low, which is unlikely since we were aiming at a higher end of salary scale. Second is that there are more teachers on the payroll of the CAG's than there are actually in the schools. Unfortunately, we did not obtain payroll information from CAG. A comparison of information on the number of teachers available from GES and CAG could answer this question more precisely.

Table 6 shows the components of total school spending on non-salary recurrent expenditures, which consists both public spending and private contributions. The GOG non-salary recurrent expenditures have decreased from 72 percent in 1997/98 to 52 percent in 1998/99. While there is a decrease in GOG expenditures, the non-governmental/private funding

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[1] Based on the GHS teachers salary structure, we estimated that the average monthly salary in 1997/98 amounted to 190,000 cedis for primary school teachers, which is the middle point for trained teachers of grade A.39 in 1998. This is at a somewhat higher end of primary teachers' pay grade, and 280,000 for headmasters. For 1998/99, the grade system was changed, the corresponding grade of A.39 was approximately Level 6 and salary in general was increased by 23 percent. Thus, the estimated salaries were 230,000 and 340,000 cedis, respectively. The monthly salary was multiplied by 12 to obtain the annual salary.

[2] Based on the MOE 1998 budget sheet, the salary is about 90 percent of total recurrent expenditure.

[3] For education sector, district official estimates on unit cost are not available due to lack of data.

increased significantly during these two years. This, however, was mainly the result of a large increase in the Ashanti region. Western and Great Accra also received a significant increase from non-governmental contributions. If inflation is taken into account, the total recurrent non-salary expenditure per student in 1998/99 maintained at a similar level as in 1997/98.

**Table 6: Components of primary school non-salary expenditures, per enrolled student**

|  | 1997/98 | | 1998/99 | |
|---|---|---|---|---|
|  | Percent | Cedis | Percent | Cedis |
| Government Cash | 6 | 454 | 8 . | 819 |
| Government in kind subsidies, recurrent | 66 | 5,246 | 44 | 4,382 |
| **Total government recurrent expenditure** | **72** · | **5,701** | **52** | **4,523** |
| District Levies | 6 | 471 | 6 | 554 |
| PTA contributions | 14 | 1,071 | 15 | 1,528 |
| Non-government cash contribution | 1 | 116 | 3 | 261 |
| Non-government in kind subsidies, recurrent | 7 | 568 | 25 | 2,448 |
| **Total private contributions to recurrent expenditure at school** | **28** | **2,225** | **48** | **4,167** |
| *Current cedis per student* |  | *7,926* |  | *8,690* |
| *1997/98 cedis (15% of inflation)* |  | *7,926* |  | *7,387* |
|  |  |  |  |  |
|  |  |  | . |  |
| Government capital investment | 11 | 121 | 3 | 141 |
| Non-government capital investment | 89 | 1,026 | 97 | 4,732 |
| *Current cedis per student* |  | *1,147* |  | *4,873* |
| *1997/98 cedis (15% of inflation)* |  | *1,147* |  | *4142* |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

In the context of decentralization, the GOG has delegated financial resources to the District Assemblies Common Fund (DACF) to invest in projects and programs of local priorities. From our tracking survey, however, we were only able to observe a small amount of resources flowing from DACF to schools. For the two-year period covered by the survey, only three schools received a total of 280,000 cedis from DACF. There was some government rehabilitation spending is recoded. Even assuming that all the rehabilitation spending actually came from DACF, still there was only an insignificant resource flow between DACF and schools. It should be mentioned here that one expenditure we did not capture from the DACF is the development capital expenditure (i.e. building new schools).

*Reasons for not attending school and ways to improve primary education*

From the perspective of schoolmasters we asked questions in regard to why school-aged children do not attend school and what can be done to improve the quality of primary education. Table 7 lists responses to the first question, which were ranked according to three levels of importance. Economic constraints are the top, and lack of interest the second most important reason for not attending school. Lowering school fees, however, would apparently not suffice, as only 13 percent of responses cited that too high fees were an economic constraint. The other 45 percent of the responses referred to economic constraints in the households, including low pay and unemployment of the parents and the need for the child's labor at home. This points to the depth and scope that the universal primary education in Ghana faces. Some of the factors

deterring children from attending school are clearly beyond the scope of the Ministry of Education.

There are similarities between the responses to why children did not attend school in the 1997 CWIQ and in the 1999 tracking survey.[4] The most frequently cited reasons (36%) for not attending school among parents/students are economic constraints, with 24% referring to too high fees and 12% to labor needed at home. The second most important reason cited by parents/students, about 30%, was the lack of interest in school. Mostly by parents account, a very low proportion of responses referred to long distance as a reason for not attending school.

**Table 7: Reasons for not attending school**

|  | Most important | Second important | Third important | Weighted average of column percentages |
|---|---|---|---|---|
| **Economic constraints** | **64** | **57** | **57** | **59** |
| Fee too high | 21.5 | 10.3 | 7.5 | 13 |
| Transport and food too expensive | 0.0 | 0.9 | 0.9 | 0.6 |
| Parents incomes too low | 20.6 | 15.9 | 17.8 | 18 |
| Parents unemployed | 5.6 | 3.7 | 15.0 | 8 |
| Children's labor needed at home | 15.9 | 26.2 | 15.9 | 19 |
| *Perception reasons* | **34** | **36** | **32** | **34** |
| Students lack interest for school | 11.2 | 13.1 | 7.5 | 11 |
| Parents lack interest for school | 22.4 | 23.4 | 24.3 | 23 |
| *Physical constraints* | **3** | **7** | **11** | **7** |
| School too far away | 0.0 | 0.9 | 2.8 | 1 |
| Marriage/pregnancy | 0.0 | 4.7 | 2.8 | 2 |
| Other | 2.8 | 0.9 | 5.6 | 3 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

The tracking survey also included some objective questions such as what the respondents thought about the degree of improvements for certain items since the last three years, and what could be done to improve the quality of primary education. The summary of responses is listed in Table 8. About 50 percent of schoolmasters felt that improvements have been made with regard to PTA, state of classrooms, and availability of teaching supplies. Most frequently cited complaints include the fixed assets of schools, i.e., the repair of classrooms and desks/chairs. These complaints are consistent with the government budget, which allocates almost no funding on the rehabilitation of schools. Almost 80% of schoolmasters viewed that their quality of education had improved, which, however, has probably to do with their objective view on their work performance.

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[4] The two surveys are not strictly comparable. The choices given by the two questionnaires are very similar, though not exactly the same. In addition, in CWIQ respondents could only choose one answer while in the tracking survey they could pick the three most important reasons.

**Table 8: Improvements of primary schools**

|  | Improved | Worsened | No change | Don't know | Total |
|---|---|---|---|---|---|
| PTA | 55.2 | 12.8 | 30.4 | 1.6 | 100 |
| State of repair of classrooms | 49.6 | 24.0 | 26.4 | 0.0 | 100 |
| Classroom space per pupil | 37.7 | 15.6 | 46.7 | 0.0 | 100 |
| Availability of school desks/tables/chairs | 45.6 | 32.8 | 20.8 | 0.8 | 100 |
| Availability of school supplies (textbooks, chalks, etc.) | 51.2 | 15.4 | 32.5 | 0.8 | 100 |
| Quality of education | 77.6 | 9.6 | 12.0 | 0.8 | 100 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Interestingly, the responses to a similar question in the CWIQ survey from parents' students are largely consistent with those of school headmasters.[5] Around 40 to 50 percent of primary students complained about a lack of school supplies, overcrowded classrooms, and bad conditions of facilities/classrooms. A significant proportion of students (40 percent) did not experience any problems at school on the issues asked. In short, the complaints from teachers and students alike are mostly centered around things funded by non-salary expenditures.

Finally, the tracking survey asked school headmasters about what the government can do to increase school enrollment and to improve the quality of education. The results are listed in Table 9. To improve access to education, the first important thing which was cited most frequently is to give more assistance to the needy families. This response highlights that one of the most important barriers to increase enrollment is derived from the demand side. Currently, based on the tracking survey, only 12 out of 126 primary schools provided fee exemptions for students in 1999. A total of 264 students received fee exemptions, which is less than one percent out of a total of 35,895 students. The second is to build more classrooms in existing schools, and the third is to build more schools.

In terms of improving the quality of education, the most frequently cited reason was to recruit more qualified teachers, both the second and the third important reasons referred to improvements of classroom conditions. It is interesting to note that an increase of teachers' salaries has not been most frequently cited as a way to improve education, although it is cited by about a quarter of responses. In short, teachers' training and improving classroom conditions are on top of the list to improve the quality of education.

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[5] In the CWIQ survey, parents/students were asked if they have any problems with regard to the distance of the school, the quality of teaching, the lack of teachers/over crowding or bad facilities. We have chosen the responses from primary students only to be consistent with primary school tracking survey.

**Table 9: Suggested ways to improve access to education and the quality of education**

| *What can the government do to improve the access to education?* | Most important | Second important | Third important |
|---|---|---|---|
| Give more assistance to the needy families | 55 | 27 | 13 |
| Build more schools | 7 | 18 | 38 |
| Build more classrooms in existing schools | 30 | 42 | 23 |
| Other, specify | 7 | 12 | 26 |
| | | | |
| *What can the government do to improve the quality of education?* | | | |
| Increase the number of qualified teachers | 45 | 17 | 18 |
| Improve classroom conditions | 16 | 38 | 27 |
| Reduce over-crowding in classrooms | 5 | 17 | 19 |
| Increase teachers' pay | 28 | 27 | 25 |
| Others, specify | 6 | 2 | 12 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

# IV. JUNIOR SECONDARY SCHOOL EDUCATION AND PUBLIC RESOURCE FLOWS

*Study environment*

Similar to the primary schools surveys, the JSS surveys also asked questions in regard to the learning environment and educational performances. As shown in Table 10, each JSS class has on average one classroom. The average class-size amounts to 38 pupils per classroom, similarly to primary schools. The pupil teacher ratio remains quite equal across all regions at the low 20's. Pupils per sitting and writing-place reveal less crowded schools in comparison to primary schools. Textbook supplies have improved slightly between 1997/98 and 1998/99, amounting to an average of 4.2 books per student. Given that eight or nine subjects are taught in JSS, the textbook supply is much better in JSS than in primary schools. Teachers' handbook supply varies significantly across regions, and 35 percent of all schools reported that they do not have any teacher's handbooks at all.[6] The proportion of teachers that attended a Teachers' Training College is slightly lower as compared to the primary school teachers, amounting to 87 percent.

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[6] In JSS each teacher teaches one or two subjects to all classes, while in primary schools each teacher teaches all subjects to one class.

**Table 10: JSS learning environment by region, 1997/98 and 1998/99**

| | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # of classes per classroom, 98 | 1.0 | 1.1 | 1.5 | 1.1 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 | 1.0 |
| # of classes per classroom, 99 | 1.0 | 1.1 | 1.1 | 1.2 | 0.9 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 | 1.0 |
| % of temporary classrooms, 98 | 6 | 7 | 25 | 17 | 8 | 0 | 3 | 29 | 0 | 14 | 11 |
| % of temporary classrooms, 99 | 6 | 4 | 25 | 18 | 8 | 0 | 3 | 20 | 0 | 14 | 10 |
| Average class size, 98 | 33 | 32 | 28 | 31 | 34 | 36 | 32 | 49 | 47 | 33 | 35 |
| Average class size, 98 | 39 | 33 | 38 | 33 | 34 | '39 | 31 | 52 | 50 | 36 | 38 |
| Pupils per teacher, 98 | 23 | 20 | 23 | 21 | 22 | 19 | 20 | 21 | 25 | 20 | 21 |
| Pupils per teacher, 99 | 24 | 21 | 22 | 23 | 21 | 21 | 18 | 23 | 27 | 19 | 22 |
| Pupils per sitting place, 98 | 1.1 | 0.9 | 1.3 | 1.0 | 1.0 | 1.1 | 1.1 | 1.4 | 1.3 | 1.0 | 1.1 |
| Pupils per sitting place, 99 | 1.1 | 0.9 | 1.2 | 1.1 | 1.0 | 1.2 | 1.0 | 1.2 | 1.4 | 1.1 | 1.1 |
| Pupils per writing place, 98 | 1.1 | 0.9 | 1.3 | 1.2 | 1.0 | 1.1 | 1.1 | 1.4 | 1.3 | 0.9 | 1.1 |
| Pupils per writing place, 99 | 1.1 | 0.9 | 1.2 | 1.3 | 1.0 | 1.1 | 1.0 | 1.2 | 1.4 | 1.0 | 1.1 |
| Textbooks per pupil, 98 | 4.9 | 2.4 | 3.2 | 3.6 | 4.5 | 3.8 | 6.4 | 2.9 | 3.3 | 4.1 | 3.8 |
| Textbooks per pupil, 99 | 4.2 | 3.0 | 4.3 | 3.9 | 5.0 | 3.8 | 7.9 | 3.4 | 3.5 | 4.8 | 4.2 |
| Handbooks per teacher, 98 | 0.3 | 2.0 | 0.5 | 0.5 | 1.8 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.7 |
| Handbooks per teacher, 99 | 0.3 | 2.6 | 0.5 | 0.9 | 1.6 | 0.5 | 0.3 | 0.4 | 0.4 | 0.6 | 0.8 |
| Teachers per office, 98 | 7.0 | 6.3 | 7.2 | 9.5 | 6.2 | 6.9 | 6.0 | 10.9 | 6.8 | 6.7 | 7.2 |
| Teachers per office, 99 | 7.6 | 6.1 | 7.3 | 9.5 | 6.6 | 6.9 | 6.5 | 8.8 | 6.3 | 7.5 | 7.2 |
| % of teacher from teacher training college, 98 | 92 | 82 | 90 | 93 | 77 | 92 | 92 | 82 | 89 | 85 | 87 |
| % of teacher from teacher training college, 99 | 83 | 84 | 93 | 93 | 75 | 94 | 90 | 86 | 86 | 84 | 87 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Table 11 provides drinking water supplies in JSS for 1998 and 99.[7] It shows a similar pattern as compared to primary schools. The majority of schools have a relatively safe drinking water supply, if well/spring water and other supply are considered safe. The water storage

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[7] Since we only surveyed 8 JSS in each region, we did not want to present regional percentages due to the small sample.

equipment is mainly a bowl type of container with cover, which is probably less safe than coolers which are most frequently used in primary schools. There have not been much changes in terms of the drinking water supply between 1997/98 and 1998/99.

**Table 11: JSS drinking water supply and storage**

| Type of drinking water supply, % | | |
|---|---|---|
| | 1998 | 1999 |
| Pipe | 34 | 38 |
| Well/spring | 23 | 20 |
| Lake/river/rain | 8 | 6 |
| Other unspecified | 30 | 30 |
| None | 5 | 5 |
| Type of drinking water storage, % | | |
| | 1998 | 1999 |
| Standing Pipe | 5 | 4 |
| Cooler | 4 | 4 |
| Bowel/other | 68 | 70 |
| None | 14 | 13 |
| | 9 | 10 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

*Academic performance and gender bias*

Table 12 presents education indicators in two categories, academic performance and gender bias. Data on the performance indicators suggest that female students in general perform as well as or even better than male students. For example, the proportion of female students who passed BECE is much higher than of male students. However, the bias indicators indicate that only 31 percent of all female students who passed BECE went to SSS in 1999, while this has been the case for 38 percent of male students. As a result, female students account for only about 40 percent of students who went to SSS, in spite of their superior academic performance.

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**Table 12: JSS academic performance by region**

| | WES | CEN | GRA | VOL | EAS | ASH | BRA | NOR | UEA | UWE | GHA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Academic performance* | | | | | | | | | | | |
| % of drop outs among F, 98 | 1.6 | 2.7 | 0.9 | 0.7 | 1.6 | 0.9 | 5.0 | 0.6 | 2.3 | 3.8 | 1.8 |
| % of drop outs among M, 98 | 1.8 | 4.6 | 1.7 | 1.4 | 5.7 | 1.1 | 11.1 | 0.5 | 5.2 | 4.2 | 3.2 |
| % of drop outs among F, 99 | 1.9 | 1.5 | 1.0 | 1.3 | 1.0 | 0.7 | 5.0 | 0.2 | 1.7 | 3.2 | 1.5 |
| % of drop outs among M, 99 | 2.4 | 1.6 | 4.2 | 1.9 | 3.3 | 0.5 | 6.5 | 0.3 | 4.5 | 5.4 | 2.7 |
| % of repeats among F, 98 | 3.5 | 3.2 | 1.5 | 1.1 | 2.4 | 3.3 | 3.1 | 0.4 | 3.6 | 3.0 | 2.5 |
| % of repeats among M, 98 | 2.5 | 2.1 | 0.9 | 0.8 | 2.1 | 2.7 | 1.6 | 1.0 | 3.7 | 2.4 | 1.9 |
| % of repeats among F, 99 | 2.1 | 3.2 | 0.6 | 1.6 | 3.7 | 3.3 | 3.2 | 8.2 | 3.5 | 3.3 | 3.2 |
| % of repeats among M, 99 | 3.3 | 2.9 | 0.8 | 0.9 | 1.7 | 2.5 | 1.3 | 6.6 | 3.6 | 2.5 | 2.8 |
| % of females passed BECE, 98 | 36 | 44 | 46 | 31 | 42 | 41 | 31 | 27 | 40 | 35 | 37 |
| % of males passed BECE, 98 | 31 | 19 | 26 | 35 | 25 | 31 | 14 | 31 | 25 | 28 | 27 |
| % of females passed BECE, 99 | 45 | 41 | 48 | 29 | 42 | 41 | 27 | 26 | 43 | 34 | 39 |
| % of males passed BECE, 99 | 23 | 16 | 27 | 24 | 23 | 27 | 12 | 26 | 24 | 31 | 24 |
| *Gender Bias* | | | | | | | | | | | |
| % of female students, 98 | 45 | 47 | 46 | 44 | 48 | 49 | 43 | 33 | 48 | 46 | 45 |
| % of female students, 99 | 45 | 46 | 48 | 38 | 48 | 48 | 44 | 32 | 45 | 49 | 44 |
| % of females who passed BECE went to SSS, 98 | 14 | 9 | N/A | 42 | 77 | 30 | 21 | 17 | 91 | 6 | 37 |
| % of males who passed BECE went to SSS, 98 | 15 | 5 | N/A | 70 | 70 | 31 | 25 | 45 | 83 | 4 | 43 |
| % of females who passed BECE went to SSS, 99 | 14 | N/A | N/A | 39 | 47 | 28 | 24 | 14 | 87 | 3 | 31 |
| % of males who passed BECE went to SSS, 99 | 20 | 14 | N/A | 38 | 43 | 28 | 25 | 49 | 85 | 5 | 38 |
| Of whom went to SSS, % of females, 98 | 36 | N/A | 14 | 33 | 55 | 42 | 28 | 30 | 41 | 50 | 41 |
| Of whom went to SSS, % of females, 99 | 38 | 19 | 43 | 43 | 54 | 43 | 27 | 24 | 42 | 30 | 40 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Thus, fewer girls than boys enter the first grade of primary school, which represents a first barrier to girls' education. After they enter primary school, they tend to remain in education up to their graduation of JSS, just like boys. However, in spite of their superior academic performance, girls are more likely to drop out of education after finishing JSS, while boys are more likely to go on. Thus, entering SSS represents a second barrier to girls' education.

The questionnaire for JSS PETS on the budget flow is the same as that of the primary school surveys. The non-salary expenditure subsidies are reported by the schools, and the salary component of recurrent expenditures is based on our estimates.[8] As shown in Table 13, in 1997/98 a little over 70 percent of the total public expenditures for JSS have reached the schools. Of these, about 75 percent salary expenditure, and less than 50 percent of non-salary recurrent expenditures, reached schools. The expenditure per student has increased between 1998 and 1999 in real terms. This, however, may be the result of a reduction in the number of students rather than an increase in expenditures.

Since the salary component is estimated based on the average salary level, the discrepancy between the MOE/GES and the school level estimates could be a result of underestimating teachers' salaries. However, since our estimates of salary was based on the higher end of JSS teacher's pay, it is most likely that the discrepancy between the MOE/GES and the school estimates on the salary component reflects a certain degree of financial leakage in the system. Remarkably, the unit non-salary recurrent expenditures have increased by 40 percent between 1998/99 and 1997/98, possibly a result both of smaller numbers of students and less leakage, since we know that the GOG did not increase the education expenditures that much.

**Table 13: JSS government recurrent expenditure (cedis), per enrolled student**

| | 1997/98 | | | 1998/99 | | |
|---|---|---|---|---|---|---|
| | Non-salary | Salary | Total | Non-salary | Salary | Total |
| Based on MOE/GES estimates[9] | 19,665 | 176,984 | 196,649 | N/A | N/A | N/A |
| *Based on District Education Office estimates* | N/A | N/A | N/A | | | |
| *Based on school budget estimates* | 8,765 | 123,500 | 132,265 | 11,292 | 146,718 | 158,010 |
| *Adjusted for 8% over head cost* | 8,765 | 123,500 | 132,265 | 12,195 | 158,455 | 170,650 |
| As % of MOE/GES estimates | 48 | 75 | 73 | N/A | N/A | N/A |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Table 14 shows the different components of non-salary recurrent expenditures, including private contributions. The government supports a large proportion of non-salary recurrent expenditures, about 70 percent. The capital investments remain very low on average. In reality, only a few schools received resources on rehabilitation and capital investment, the majority of schools received no resources for such purposes. Again, government expenditures are mainly distributed as in-kind materials. It is worth mentioning, however, that it is common in Ghana that each student carries a small amount of building material, such as stones or sands, to his/her school once every few months at the request of schools teacher. It is quite possible that these private contributions were not accounted for.

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[8] Based on the GHS salary structure, at grade A.49, the higher end of the basic education teacher's monthly salary is about 210,000 cedis in 1997/98, we estimated 300,000 for a headmaster. In 1998/99, given a 23 percent increase in salary, the salary estimates are 250,000 for a teacher and 369,000 for a headmaster, respectively. The monthly salary was then multiplied by 12 to get the annual salary.

[9] Based on MOE 1998 budget sheet, the salary is about 90 percent of total recurrent expenditure.

**Table 14: Components of JSS non-salary expenditures (cedis), per enrolled student**

| | 1997/98 | | 1998/99 | |
|---|---|---|---|---|
| *Recurrent expenditures* | Percent | Cedis | Percent | Cedis |
| Government Cash | 10 | 1,290 | 9 | 1,503 |
| Government in kind subsidies, recurrent | 58 | 7,475 | 59 | 9,789 |
| **Total government recurrent expenditure** | **68** | **8,765** | **68** | **11,292** |
| District Levies | 6 | 712 | 6 | 917 |
| PTA contributions | 24 | 3,142 | 21 | 3,499 |
| Non-government cash contribution | 0 | 41 | 1 | 92 |
| Non-government in kind subsidies, recurrent | 2 | 291 | 5 | 751 |
| **Total private contributions to recurrent expenditure at school** | **32** | **4,186** | **32** | **5,260** |
| | | | | |
| Total non-salary recurrent expenditure, current cedis per student | | 12,951 | | 16,552 |
| *1997/98 cedis (15% of inflation)* | | *12,951* | | *14,393* |
| *Rehabilitation/capital expenditures* | | | | |
| Government capital investment | 32 | 1,399 | 42 | 2,015 |
| Non-government capital investment | 68 | 3,026 | 58 | 2,756 |
| Total capital investment, current cedis per student | | 4,425 | | 4,771 |
| *1997/98 cedis (15% of inflation)* | | *4,425* | | *4,149* |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

In short, more than 90 percent of the education budget is financed by the GOG, mainly because salaries account for 90 percent of the total recurrent budget. Private contributions are PTA fees and district levies. PTA fees are retained by schools, while district levies are turned over to the district education offices.[10] The district levies from students only make up a very small proportion of the district education office managing budget.

*Reasons for not attending school and ways to improve JSS education*

As in primary schools, we asked JSS schoolmasters why children did not attend schools and – according to their opinion – what the government could do to improve access to JSS and the quality of education. Table 15 shows the responses to the first question. Again, economic related reasons are most important obstacles for attending school. The second important cause is the lack of interest in school from both parents and their children. The distance to schools and the cost of transportation are, however, rarely cited as obstacles. The economic causes for not attending school, from the perspective of the schoolmasters, are rooted in the economic development of the society, and thus well beyond the scope of the Ministry of Education. For example, it is not clear that a child can attend school on a scholarship if his or her labor is needed at home.

From the perspective of students and parents, the CWIQ survey also demonstrates that economic issues are the most frequently cited reasons for not attending schools. 32 percent cited that schools are too expensive, and 17 percent cited that labor is needed at home. The second

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[10] The four poorer regions, Brong Afro, Northern, Upper West and Upper East did not report collection of district levies.

frequently cited reason is that schools are useless and not interesting, 40 percent. Only six percent of children cited that the school was too far as a reason not to attend. In short, the responses from teachers and students alike are highly consistent, and suggest that demand side issues are the first important reason for not attending school.

**Table 15: Reasons for not attending school**

| | Most important | Second important | Third important | Weighted average of column percentages |
|---|---|---|---|---|
| **Economic constraints** | **61** | **48** | **44** | **50** |
| Fee too high | 16 | 4 | 7 | 9 |
| Transport and food too expensive | 0 | 4 | 0 | 1 |
| Parents incomes too low | 19 | 18 | 15 | 17 |
| Parents unemployed | 9 | 4 | 9 | 7 |
| Children's labor needed at home | 17 | 18 | 13 | 16 |
| *Perception reasons* | 32 | 37 | 43 | 37 |
| Students lack interest for school | 7 | 22 | 19 | 16 |
| Parents lack interest for school | 25 | 15 | 24 | 21 |
| *Physical constraints* | 5 | 15 | 13 | 11 |
| School too far away | 0 | 3 | 6 | 3 |
| Marriage/pregnancy | 2 | 12 | 3 | 6 |
| Other | 3 | 0 | 4 | 2 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

Schoolmasters were also asked about their subjective opinions on the organization and state of the schools in the last three years. As shown in Table 16, over half of the schoolmasters felt that the classroom repairs and the PTA had improved. About three quarters announced that school supplies, such as textbooks and chalks, have improved. However, the majority of schoolmasters reported a deterioration in terms of supplies with desks, chairs and tables. From the students' point of view, based on the CWIQ survey, about one third of students cited book supply and bad facility conditions as the problem.

**Table 16: Improvements of JSS**

| | Improved | Worsened | No change | Don't know | Total |
|---|---|---|---|---|---|
| PTA | 57 | 11 | 31 | 1 | 100 |
| State of repair of classrooms | 50 | 19 | 31 | 0 | 100 |
| Classroom space per pupil | 32 | 19 | 49 | 0 | 100 |
| Availability of school desks/tables/chairs | 32 | 61 | 0 | 0 | 100 |
| Availability of school supplies (textbooks, chalks, etc.) | 74 | 11 | 15 | 0 | 100 |
| Quality of education | 78 | 15 | 7 | 0 | 100 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

As for what the government can do to improve access to JSS, by far the most important way according to schoolmasters is to provide needy students with more assistance. Currently, based on the tracking survey, only 46 out of 13,354 students were exempted from school fees. The second on the list is to build more classrooms in existing schools. This seems to be consistent with very few student complaints on the distance to school as a barrier to attend. As

to improving teaching quality, the first two priorities listed by the schoolmasters are to increase the number of qualified teachers, and to increase teachers' pay. Given the already low PTR, increasing numbers of qualified teachers probably should involve on-the-job training and increasing supply of teachers' handbooks.

**Table 17: Suggested ways to improve access to JSS and the quality of education**

| What can the government do to best improve the access to education? | Most important | Second important | Third important |
|---|---|---|---|
| Give more assistance to the needy families | 65 | 21 | 16 |
| Build more schools | 5 | 29 | 40 |
| Build more classrooms to existing schools | 26 | 38 | 26 |
| Other, specify | 4 | 12 | 18 |
| What can the government do to best improve the quality of education? | | | |
| Increase the number of qualified teachers | 43 | 30 | 13 |
| Improve classroom conditions | 15 | 30 | 30 |
| Reduce over crowding in classrooms | 5 | 16 | 16 |
| Increase teachers' pay | 32 | 21 | 25 |
| Others, specify | 5 | 3 | 16 |

*Source: Ghana Public Expenditure Tracking Survey, 2000.*

# V.  PRIMARY HEALTH CARE AND PUBLIC EXPENDITURES

*Health facilities and service provision*

We surveyed a total of 94 health centers, 44 clinics and 34 health posts. Most of them were staffed with nurses or medical assistants, only about 10 percent of the facilities we surveyed had doctors. Table 18 shows the number of people in the population per health care personnel, including doctors, medical assistants and nurses. Data suggest that at the primary level each health care worker serves on average over 3,000 people. By comparison, if nurses from all hospitals are also included, each nurse serves on average between 1,000 to 2,000 people (Canagarajah and Ye, 2001). In some poorer regions, including Eastern, Bron Ahafo, Nothern and Upper East, each health care worker serves over 5,000 people.

**Table 18: Population per health care worker at primary health care level**

| | Population per health care worker | |
|---|---|---|
| Region | 1998 | 1999 |
| Western | 3468 | 2697 |
| Central | 2973 | 3078 |
| Greater Accra | 1972 | 2068 |
| 1dVolta | 2713 | 2678 |
| Eastern | 6682 | 5891 |
| Ashanti | 4474 | 4662 |
| Brong Ahafo | 5140 | 5345 |
| Northern | 6279 | 5917 |
| Upper Eest | 5622 | 6137 |
| Upper West | 4563 | 4779 |
| Ghana | 3243 | 3287 |

*Source: Ghana PETS, 2000.*

We also asked about basic conditions of clinics, which vary substantially from region to region. For example, electricity supply – which includes electricity supplied by national grid, centrally or facility based generators – was improved significantly in Volta and the Eastern region, solely due to the expansion of national grid lines. In addition, 18 percent of facilities had solar power in 1999. On average, over 70 percent of clinics had refrigerators, and over 60 percent had pharmacies. But in the Northern and Upper East regions, most of the clinics do not have a pharmacy.

**Table 19: Basic conditions of health facilities**

|  | % of clinics with electricity | | % of clinics with pharmacy | | % of clinics with refrigerator/freezer | |
| --- | --- | --- | --- | --- | --- | --- |
| Region | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 |
| Western | 75 | 82 | 88 | 89 | 82 | 89 |
| Central | 78 | 89 | 100 | 100 | 100 | 100 |
| Greater Accra | 89 | 89 | 94 | 95 | 94 | 89 |
| Volta | 47 | 71 | 44 | 44 | 53 | 58 |
| Eastern | 39 | 78 | 38. | 41 | 61 | 74 |
| Ashanti | 57 | 64 | 67 | 67 | 86 | 71 |
| Brong Ahafo | 50 | 59 | 80 | 75 | 56 | 53 |
| Northern | 31 | 35 | 20 | 20 | 76 | 76 |
| Upper East | 25 | 25 | 31 | 31 | 38 | 50 |
| Upper West | 0 | 20 | 70 | 70 | 75 | 75 |
| Ghana | 47 | 60 | 62 | 63 | 71 | 73 |

*Source: Ghana PETS.*

We also asked about the number of consulting rooms in the facilities. There was not much change between 1998 and 1999, thus we only present the results of 1999 in Table 20. Although not shown in Table 20, Great Accra is the only region that has clinics with more than four consulting rooms. The Western, Central and Ashanti regions are the regions that have clinics with up to four consulting rooms. It is clear that in poorer regions, clinics tend to be smaller.

**Table 20: Number of consulting rooms in clinics, % of clinics**

| | Number of consulting rooms | | | | |
| --- | --- | --- | --- | --- | --- |
| Region | Zero | One | Two | Three | Four or more |
| Western | 0 | 78 | 16 | 0 | 6 |
| Central | 0 | 45 | 22 | 11 | 22 |
| Greater Accra | 0 | 53 | 11 | 11 | 25 |
| Volta | 0 | 56 | 22 | 22 | 0 |
| Eastern | 11 | 72 | 11 | 6 | 0 |
| Ashanti | 0 | 60 | 7 | 20 | 13 |
| Brong Ahafo | 12 | 76 | 6 | 6 | 0 |
| Northern | 6 | 59 | 35 | 0 | 0 |
| Upper East | 0 | 75 | 19 | 6 | 0 |
| Upper West | 0 | 90 | 5 | 5 | 0 |
| Ghana | 3 | 68 | 15 | 8 | 6 |

*Source: Ghana PETS.*

Assuming similar demographic characteristics of the population, Table 21 provides estimates on the proportion of the population who sought medical care and family planning. Data suggest that the percentage of the population seeking health care is lower in the Eastern, Northern and Volta regions than in the other regions. In terms of family planning service utilization, on average 2.6 percent of the reproductive-aged population sought the services in

1998, and 3.3 percent in 1999. Assuming that all people looking for family planning services practiced contraception, this means that about 7 percent of the reproductive-aged population were on family planning in 1999. The Western, Northern and Eastern regions had the lowest participation rates, amounting to only about 3 percent. Great Accra had the highest rate, 12 percent. These percentages refer only to family planning services sought from public clinics. It needs to be kept in mind, though, that private clinics also provide such services.

**Table 21: Utilization of the clinic services**

| Region | % of population sought medical care | | % of reproductive age population sought family planning [a] | | % of patients referred to higher level health care |
|---|---|---|---|---|---|
| | 1998 | 1999 | 1998 | 1999 | 1999 |
| Western | 17 | 22 | 0.9 | 1.2 | 0.8 |
| Central | 21 | 20 | 2.0 | 2.1 | 0.6 |
| Greater Accra | 19 | 18 | 4.2 | 6.1 | 1.6 |
| Volta | 15 | 15 | 1.4 | 2.6 | 1.4 |
| Eastern | 11 | 10 | 1.1 | 1.7 | 3.0 |
| Ashanti | 18 | 18 | 2.2 | 2.0 | 0.4 |
| Brong Ahafo | 14 | 12 | 1.8 | 2.4 | 5.3 |
| Northern | 9 | 11 | 1.3 | 1.6 | 1.0 |
| Upper East | 22 | 24 | 4.1 | 3.2 | 4.3 |
| Upper West | 20 | 25 | 2.7 | 3.3 | 1.6 |
| Ghana | 17 | 17 | 2.6 | 3.3 | 1.8 |

[a] *Reproductive population is defined as aged 18 to 49, roughly 40 percent of total population based on Ghana CWIQ.*

*Public health expenditures and internally generated funds*

Public health care in Ghana is financed by funding from two broad categories, public health expenditures, financed by the GOG and donors, and internally generated funds (IGF), paid by the patients. There are IGF I, which include the fees that patients paid for medical services, and IGF II, which represent payments for drugs.[11] As calculated in the Ghana PER study (Canagarajah and Ye, 2001), total government recurrent expenditures to clinics in 1998, including donors' funds, amounted to about 5200 cedis per person. About 35 percent of 5200 cedis is the salary component of recurrent expenditure. But since we do not have salary expenditures in our tracking survey, we only compare the 65 percent of 5200 cedis, which is the non-salary recurrent expenditure, with the funding received by the clinics.

As shown in Table 22, the tracking survey shows that by the district office account, expenditures per outpatient amounts to only about one third of what had been allocated from the MOH to the District Health Office (DHO). From the DHO to the clinics, 67 and 62 percent of funds reached clinics in 1998 and 1999, respectively. Overall, only 20 percent of non-salary recurrent expenditures reached the clinics. Under the assumption that the total of the 35 percent of the salary expenditures reached the clinics, about 50 percent of the total government health expenditure reached the clinics.[12]

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[11] Drugs are procured at the central government level and sold at the clinics with marginal mark-ups for the administrative cost.

[12] It should be noted that the data on which these estimates are based upon are limited due to incomplete records. For example, out of 39 DHOs we surveyed, only 15 and 19 of which provided complete records for 1998 and 1999, respectively. For health clinics, of 173 surveyed, 133 and 142 facilities' records were used for 1998 and 1999, respectively. Many clinics did not receive

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One contributing factor to the discrepancy could be that the monetary value of medical equipment and supplies procured at the headquarter level does neither enter the balance sheets of the DHOs, nor those of the clinics. Thus the DHO and clinic per outpatient expenditures could have been somewhat higher than estimated here. However, a 50 percent difference cannot be solely explained by incomplete records of expenditures.

**Table 22: Public non-salary recurrent expenditure flow to health clinics**

| Public non-salary expenditure of per out patient visit in 1998 cedis | 1998 | 1999 |
|---|---|---|
| *BASED ON MOH ESTIMATES* | 3875 | N/A |
| *Based on District Health Office estimates* | 1231 | 1599 |
| *As % of MOH estimates* | 31.8 | N/A |
| *Based on Sub-district level clinic estimates* | 830 | 991 |
| *As % of District office estimates* | 67.4 | 62.0 |

*a) These estimates do not include the overhead administrative expenditures.*

A comparison of the share of budget sources also reveals the disconnect between the magnitude of public expenditures allocated at the top and received at the clinics. Based on MOH's account, at sub-district clinic level, the GOG and donors provide a total of 87 percent of medical care cost for patients. However, the survey of the facilities reveals that the sub-district clinics are only paid for about 40 percent of its budget (Table 23) by the GOG.[13] The internally generated funds, which are paid by patients, amount to over half of the total medical cost. Financial resources from NGO's foot 7 percent of total budget.

**Table 23: A comparison of public financing at ministry and facility level**

| | PERCENT OF FINANCIAL RESOURCES FROM | | |
|---|---|---|---|
| | GOG AND DONOR POLED FUND* | INTERNALLY GENERATED FUND | NGO'S ASSISTANCE |
| **Based on MOH estimates for sub-district clinics** | 87 | 13 | |
| BASED ON SUB-DISTRICT CLINIC ESTIMATES | 39 | 54 | 7 |

*\*Including MOH program funding.*

*Data sources: Ghana PER and PETS 2000 calculation.*

*Improvements of health facilities*

In the PETS, the head nurse was asked about improvements of their facilities and the medical supplies between 1995 and 2000. As shown in Table 24, a significant proportion of facilities reported improvements in all areas listed. The only areas for which over 20 percent of

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any cash assistant from GOG except salaries, solely operating on their internally generated fund (IGF). There were about 40 percent of clinics which did not receive any cash assistance in 1998 and 1999, respectively.

[13] We added 1864 cedis to the total government expenditure per out patient for the salary cost, which is 35.5 percent of 5251 cedis, the MOH's expenditure per out patient.

facilities reported a deterioration are facility repairs and financing. About one third of the facilities and more reported no changes in all areas except for drug supplies.

**Table 24: Improvements of health facilities and medical supplies**

|  | *IMPROVED* | *WORSENED* | *NO CHANGE* | *DON'T KNOW* |
|---|---|---|---|---|
| Number of health workers | 40 | 16 | 43 | 1 |
| State of repair of the health facilities | 47 | 21 | 31 | 1 |
| Availability of medical equipment | 45 | 11 | 42 | 2 |
| Availability of drugs and other supplies | 84 | 5 | 10 | 2 |
| Availability of medical logistics | 58 | 7 | 33 | 2 |
| Availability of finances | 34 | 22 | 35 | 9 |

*Data source: Ghana 2000 PETS.*

In the CWIQ survey, patients were asked about problems encountered in the health facilities. Table 25 presents the satisfaction rate of patients by different types of facilities. The satisfaction rate among public health facilities amounts to about 50 percent, i.e., a slightly lower rate than compared to private health facilities. Consistent with the PETS, drugs were not frequently listed as a problem encountered by patients. The most frequent complaints refer to too high costs and too long waiting times. These correspond to frequent responses from head nurses that patients need financial assistance, that more qualified health care workers are needed, and that working conditions of health care workers need to be improved.

**Table 25: Satisfaction rate of health services**

|  | Public hospitals /clinics | Community health center | Private hospitals/ clinics | Missionary hospitals | pharmacist/ drugstore | Traditional healer |
|---|---|---|---|---|---|---|
| % of patients complained | 51 | 48 | 55 | 39 | 65 | 66 |
| Facilities were not clean | 1 | 1 | 1 | 0 | 0 | 1 |
| Long waiting time | 15 | 12 | 8 | 19 | 1 | 1 |
| No trained professionals | 1 | 5 | 1 | 1 | 1 | 0 |
| Too expensive | 29 | 25 | 33 | 36 | 26 | 10 |
| No drugs available | 7 | 14 | 5 | 7 | 2 | 1 |
| Treatment unsuccessful | 12 | 7 | 5 | 14 | 8 | 24 |
| Other | 1 | 0 | 1 | 1 | 1 | 1 |
| Number of patients | 5068 | 545 | 1452 | 590 | 3923 | 955 |
| % of patients | 40 | 4 | 12 | 5 | 31 | 8 |

*Data source: staff calculation from 1997 CWIQ survey.*

# VI. CONCLUDING REMARKS

The initial objective of this public expenditure tracking survey was narrowly defined to quantify the financial flows from the central government to the district offices, and from the district offices to the primary health care and the basic education facilities. In the process, however, we learned that an accurate estimate of public expenditure flows cannot start from a

tracking survey, rather, it must start from the distribution and recording systems which would allow for an accurate tracking.

The strategies to improve these systems are clearly beyond the scope of this study. However, we will present below the problems encountered while trying to track public expenditures, and hope this would provide an entry point for relevant parties to discuss best ways of increasing the efficiency of public expenditure distribution or flow. In the end, we will also present our estimated resource flows, based on the information we have. Although we do not want to claim the accuracy of our estimates in absolute terms, the patterns of the public expenditure distribution revealed by our estimates were consistent with the perceptions of district level education and health officers, to whom we presented these results in a workshop in Ghana.

The first lesson we learned about the systems of public expenditure distribution is the disconnect between the measurement of the resource flows at the central government and at the facility levels. At the central level, the GOG is committed to provide more resources, measured in monetary terms, to basic education and health care. However, public schools and clinics receive a large proportion, if not all, of public non-salary expenditures in the form of in-kind materials. Moreover, salaries are paid in cash, but distributed directly to public employees by a central government agency, the Controller Accountant General, through the banking systems. Consequently, at the facility level, there is little knowledge about what public resources and how much should be due to them. This disconnect between the allocation of resources in terms of their monetary values at the central government level and the non-monetary knowledge in regard what is received at the facility level makes it difficult to accurately monitor the financial flows between the central government and the facilities in a timely fashion.

The second lesson is about record keeping and record filing systems. There were no standard sheets to keep financial records at the facility level. People who kept records often had no relevant training. There was also no standard procedure for filing records. Records were often filed at different places and kept by different people. There was very little institutional memory. When a person who kept records, usually the head nurse or headmaster, was transferred, his/her records would be lost. We had great difficulties to collect 1998 records in early 2000, mainly due to personnel transfers or discarding of old records. These problems also exist at the district office level. Since records get lost very quickly, it is impossible to monitor efficiency of resource distribution or to compare the public expenditures received from one year to the next year.

In short, we learned that the public resource distribution systems were designed in a way with great control from the central government level. This is probably necessary for the moment given the limited local capacity and the small economic scale issues. However, a centrally controlled system could also be locally accountable, which we found lacking. Service users or providers do not know how much resources are due to them nor do they know the monetary values of the materials received. In addition, the systems have hardly any feedback mechanisms. In the survey, we found that schoolmasters in general were not consulted for what they needed. For example, there were incidences when more books than needed on one subject were shipped to a school, while there was demand for books in other subjects. In health sector, there were complaints about drugs being more expensive at clinics, which are publicly procured and are supposedly sold at the procured prices with marginal mark-ups for the administrative costs, than those sold by private pharmacies.

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In spite of the shortcomings in the record keeping systems, we estimated public expenditures at the central government, district and facility levels. There was sufficient evidence to demonstrate that significant resource leakage existed both in health and education sectors, revealing certain patterns. First, the leakage is much higher in health sector than in education sector. This should not be surprising, given that the proportion of salary expenditure in education amounts to around 90 percent, and to only about 35 percent in health sector. The distribution procedures described above suggest that leakage of non-salary expenditures are much more likely to occur than leakage of salary expenditures.

The second pattern is that the major leakage occurred between the central and the district level offices. There are some leakages between district offices and facilities, but to a much lesser extent. This coincides with the public resource distribution procedure. The majority of non-salary public expenditures are transformed from cash to in-kind at the central government level, and the distribution of salaries does not go through district offices. This means that there are much fewer opportunities to divert public funds at the district level, and it is also harder to divert materials than divert money. Unfortunately, the leakage of public expenditures in the health sector means that the service users bear a much higher proportion of the costs than intended by the central government. We found that at the facility level, the patients bear more than half of the health care costs, while the central government intends for patients to pay less than 20 percent of the total costs.

In addition to the financial flows we also investigated other indicators with regard to the health and education sectors. The main findings include the followings. First, progress did occur just over the past few years. About half of all primary school teachers and two thirds of the Senior Second School (SSS) teachers reported improvements in school supplies. The majority of health clinics reported improvements in terms of drug supplies. Also, about 50 percent of the teachers and nurses reported improvements over the state of facility repairs. Another interesting finding concerns the gender bias in post basic education. The academic performance of females is actually better than that of males, measured by the proportions who passed BECE, a qualification test for entering SSS. However, a smaller percentage of qualified girls continue to SSS than compared to boys, resulting in a comparatively lower enrollment rate of girls in SSS.

To conclude: this study represents a first pilot case of a public expenditure tracking survey for Ghana. We recommend that a successful survey of this kind in the future should start by reviewing the systems of the distribution of public expenditures, and record keeping and filing procedures. We believe that by improving the consistency and transparency of the public expenditure distribution systems and the record keeping procedures, the local accountability of the government agencies and the popular participation of the public expenditure allocation will be enhanced. This would result in a greater financial resources flowing to the service provision facilities without increasing the central government budget. We did not give specific recommendations on how to improve because we believe that local solutions can only emerge from discussions among government agencies, civil societies, NGO advocates, and service providers and users.

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