Ghana

Public Expenditure Tracking Surveys (PETS), 2007

Education and Health

(In Two Volumes): Main Report *(Final Draft)*

Steering Committee for the 2007 Public Expenditure Tracking Surveys

ACKNOWLEDGEMENTS

LIST OF ACRONYMS

CHPS	Community-based Health Planning and Services
DACF	District Assembly Common Fund
DDE	District Director of Education
DEO	District Education Office
DHIS	District Health Insurance Scheme
DHO	District Health Office
DPF	Donor Pooled Funds
EMIS	Education Management Information System
ERPFM	External Review of Public Financial Management
ESP	Education Strategic Plan
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GES-HQ	Ghana Education Office – Head Quarters
GETFund	Ghana Education Trust Fund
GHS	Ghana Health System
GoG	Government of Ghana
GSS	Ghana Statistical Service
HIPC	Highly Indebted Poor Country
IGF	Internally Generated Funds
JHS	Junior High School
JSS	Junior Secondary School
MDAs	Ministries, Departments & Agencies
MMDAs	Metropolitan, Municipal and District Assemblies
MOESS	Ministry of Education, Science and Sports
MOFEP	Ministry of Finance and Economic Planning
MOH	Ministry of Health
NEPAD	New Partnership for Africa's Development
NHIA	National Health insurance Authority
NHIS	National Health Insurance Scheme
PETS	Public Expenditure Tracking Survey
REO	Regional Education Office
RHO	Regional Health Office
SC	Steering Committee for PETS 2007
SCLF	Sports and Culture Levies/Fees
SHS	Senior High School
SSS	Senior Secondary School
SOF	Sources of Financing
TTC	Teacher Training College
TVTS	Technical and Vocational Training School

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EXECUTIVE SUMMARY

As part of measures in taking forward the findings of the External Review of Public Financial Management (ERPFM) in 2006, Government launched Public Expenditure Tracking Surveys (PETS) in the education and health sectors. This was to support Government's efforts in streamlining public spending and improving related outcomes in education and health sectors.

The objective of PETS for Ghana was to increase understanding of the link between public spending and service delivery at the facility level in order to contribute to improving the effectiveness and accountability in the use of public funds. Specifically, this PETS focused on identifying the discrepancies/leakages, inefficiencies and delays in public spending execution for selected expenditures in the education and health sectors. The findings will contribute to refine policies and procedures to achieve a more effective use of public resources and achieve better social outcomes.

The PETS was led by an inter-ministerial Steering Committee consists of staff from Ghana Statistical Services, Ministry of Finance and Economic Planning (MOFEP), Ministry of Education, Sciences and Sports (MOESS), and Ministry of Health (MOH). United Kingdom's Department for International Development (DFID) and the Danish International Development Agency (Danida) generously provided the financial resources for the work and the World Bank provided technical assistance.

After wide consultations with Ministry of Education, Ministry of Health, Ghana Education Service, Ghana Health Service and Development Partners (DFID, Danida, GTZ, Netherlands Embassy, UNICEF), a few expenditures were selected, based on their financial and strategic importance in the sectors. In the education sector, selected expenditures are: capitation grants, textbooks, service activity expenditures (Item 3) and investment expenditures (item 4) in basic education.

In the health sector, selected expenditures were: selected medications and medical supplies, Administrative Expenditures (Item 2), service activity expenditures (Item 3) and the National Health Insurance Scheme. The survey was designed to be nationally representative.

The main challenge faced by a tracking survey is the availability and accuracy of records keeping. **The Ghana PETS highlights a general lack of systematic information recording with exception of Ghana Education Services.** Under the leadership of Steering Committee (SC), Ghana Statistical Service (GSS) conducted a successful tracking survey going to extraordinary lengths to collect all the necessary data from the field. The richness of the data is impressive although due to low capacity, especially at the district level, reconciliation of data between different levels of administration proved to be difficult. GSS has also gone to an extraordinary length to enter all the data collected, especially for the district level information when data are presented all in different formats and styles.

The general methodology of a PETS is intuitively simple, consisting of charting budget flows and release mechanisms (funds and materials) from the centre until service providers such as schools, clinics and hospitals. The in- and out-financial and material flows are compared (ideally reconciled) at each of the consecutive nodes of the observed spending channels that correspond to the specific resource distribution mechanisms. This is often referred to as **vertical tracking**.
In practice, a PETS is inherently complicated and cumbersome to implement due to the complexity of the financial management system and depends heavily on the quality and availability of data. When vertical tracking is not possible due to lack of information, an alternative approach, relying less on detailed data, is simply to compare per capita resource flows at each administrative node, which is often referred to as **horizontal tracking.** The Ghana PETS uses both tracking methods wherever applicable.

Given that adequate information is available, a PETS can only reveal discrepancies of resource flows between any two consecutive administrative nodes, but cannot identify their causes, except possibly during dissemination. This is the case since the findings are only available after the survey is completed and the reconciliation exercise is done. As such a PETS is not an audit, rather the real value of a PETS is to identify where the bottlenecks are, where resource shortfalls and delays occur in the distribution channels, and whenever possible, make recommendations on how to improve the systems to reduce these inefficiencies.
There are three types of inefficiencies that are most relevant to financial management. First is the quality of record keeping, which is crucial to enforce the transparency of resource flows. Second are delays in resource deliveries, which in fact are as bad as resource leakages, since both inefficiencies result in no access to necessary resources at the service provider level. And third are discrepancies through the resource distribution process.

Education Sector PETS

The Education Sector PETS focused on selected expenditures: capitation grants, textbooks, service activity expenditures (Item 3) and investment expenditures (item 4) in basic education.

The PETS revealed that the record keeping for Capitation grants (Cg) was of high quality from MOFEP to GES and from GES to DEOs. In addition, the amount of Cg distributed by GES and received by DEOs were largely consistent with no indication of leakages. Funds were transferred by GES to DEOs mostly on time with some delays for the third tranche. However, the DEOs' records on their Cg distribution to schools were scarce, accounting for only 50 percent of schools surveyed. The lack of records was especially extensive in the Central and Upper West regions. The lack of distribution data indicates a lack of downward accountability by DEOs to schools. Without DEOs' accountability to schools, it is

very difficult to reinforce the DEOs obligations on timely and efficient transfers of Cg.

Given the above data caveats, by tracking the exact amount of the Cg distributed by DEOs and received by schools, the PETS revealed that for Upper East and Upper West regions, DEOs reported Cg transfers 20 percent higher than the school-reported Cg receipts. Short falls also existed for Western, Great Accra, Eastern, Brong Ahafo and Northern regions, but to a lesser extent. Schools in Central and Ashanti regions, on the other hand, reported to have received significantly higher amounts than that distributed by DEOs.

It is also found that there was on average about one to two months delays between the time DEOs received the Cg and when they distributed Cg to schools. Occasionally, DEOs also withheld the Cg distribution on account of schools not having fulfilled obligations of filing expenditure returns report. However, this rule was not applied consistently across regions, and appeared to be ineffective in enforcing the filing requirement.

At school level, significant variations exist on Cg per student received, ranging from less than 10,000 cedis to more than 50,000 cedis. After having taken into account the discrepancy in enrollment records between the DEOs and schools, the variations represent significant inefficiency although PETS could not reveal the reasons behind the large variations.

In summary, Cg distribution is relatively efficient between MOFEP and GES, and between GES and DEOs. However, the Cg amount of 30,000 per student did not reach schools as intended by GES. DEOs appear to be the bottleneck for the effective Cg distributions. Several improvements can be made to improve the financial management at the level of DEOs. **The key issue is accurate record-keeping from DEOs to school-levels.**

The GES' book policy for basic education is to distribute a new textbook per subject per student every year, which should include students who attend private schools. If this policy is effectively implemented, it means that each student will have all the textbooks that he or she needs. This means that textbooks will have no resale values and thus there will be no incentive for any person to divert textbooks for personal gains.

The PETS reveals that the records on number of books distributed by suppliers are complete and were well presented in a clear format in one book. It would appear that the consistent format and the easy reference for all textbooks distributed to DEOs facilitate greatly the transparency of textbook flows. Indeed, the number of books distributed by suppliers and that received by DEOs are largely consistent. However, delays appeared to be prevalent. For academic year 2005/06, most books were delivered to DEOs after November 2005, and as late as January or February 2006.

The quality of record keeping of textbooks distributed by DEOs to schools is poor. There were many data gaps, only 50 percent of DEOs provided PETS with their distribution records to schools. When there were data, they were not recorded in a consistent format and were preserved by different means such as photocopies and hand written notes. Such confusion created loopholes in the distribution channels. Indeed, the textbook vertical tracking, based on available data from both DEOs and schools, showed a 2.4 percent of difference between the number of books distributed by DEOs and those received by Schools. Although this was not a big percentage, they were based on districts with good records. It is very possible that districts with no records had higher inefficiencies.

DACF submitted their fund distribution to DAs on diskette to PETS in a good format. The DACF's records, however, were grossly inconsistent with the records reported by DAs. In fact, DAs reported to have received much higher amount than that claimed by DACF to have distributed. Given this caveat, the analysis of DACF will focus on the use of the funding at district level, which is one of the aspects of efficient use of public resources.

Based on DACF's account, it retained 42 percent of DACF at the centre. This seems to be a large proportion to be retained at the centre given that the purpose of the DACF is to empower districts with more financial resources for local projects. This point, however, is beyond the scope of this PETS. DACF have allocated about 40 percent of DAs' funding to primary school construction. This allocation, however, was not enforced. Based on DAs' report, only 11 percent of the total funding received was used for primary school infrastructure projects.

Based on the above findings, transparency appears to be an important issue in allocating and distributing DACF at both the centre and the district level. It is critical to put DACF under public scrutiny because financial resources are much more fungible than materials such as textbooks.

The issues to track Item 3 expenditure in education sector were inconsistent record reporting, frequent delays in fund transfers, and low percentage of spending. Majority DEOs received their Items 3 funds in November and March when the academic year was already well in session. Based on expenditure return from REOs, only one third of funds transferred to them was accounted for in expenditure returns. DEOs, on the other hand, have disbursed their Item 3 funding as soon as they received it, however, up to 80 percent of funding received.

Health Sector – PETS

In the health sector, selected expenditures were: some medications and medical supplies, Administrative Expenditures (Item 2), service activity expenditures (Item 3) and the National Health Insurance Scheme. The survey was designed to be

national and regionally representative. Due to problems with data recording at district levels and below, some findings for Item 2 could not be reported on.

PETS revealed significant delays, confusions in record keeping, and funds divergence at all levels of administrative offices (It appears record keeping at the MOH and GHS is relatively good , we have received copies of audited reports of the Ministry). There is therefore similarity between the two Ministries in this regard. The PETS revealed that out of 57.7 billion cedis budgeted for Items 3, MOFEP transferred 45.7 billion cedis, or 79 percent of the budget, to MOH. The remaining 21 percent of Item 3 budget was used for Item 4 (investment) based on an application from MOH to be used for exchange rate fluctuations on capital expenditure. This was however reported to PETS as a transfer to MOH for item 3. This caused confusion on whether there was a leakage between MOFEP and MOH.

There were few delays on the GHS part in channeling Item 3 to DEOs, with about three quarters of Item 3 funds channeled to DHOs in September or October. Majority of DEOs, 96 percent of them, received only one tranche Item 3 in 2006. They in turn transferred the funds to facilities in September. The PETS revealed that significant delays and the infrequent (mostly one tranche) transfers to DEO and facilities were due to the ripple effects of delayed transfers from MOFEP to MOH.

There was no evidence indicating leakages between GHS and DHOs on item 3 transfers. The PETS, however, was not able to analyze consistency of Item 3 transfers between DHOs and sub-districts. This was primarily due to the fact that DHOs often spent Item 3 on behalf of sub-districts, which were not consistently recorded as sub-districts' expenditures.

In summary, PETS identified delays as a major issue in efficient resource transfers for Item 3. Most facilities and below-central level offices received only one tranche toward later part of 2006, which can have significant impact on the quality of services due to lack of funding for a good part of the year. The bottleneck lies in the delayed budget release from MOFEP to MOH, whose ripple effect was felt at the hospitals and clinics.

The NHIA receives funding from MOFEP and Social Security and National Insurance Trust (SSNIT) to pay for subsidies and re-insurance through District Health Insurance Scheme.

In 2006, significant delays in resource transfer occurred. The SSNIT released total GH¢213 billion to NHIA in May, August and December, while NHIA reported to have received only 189 billion cedis. It is possible that the December release did not register on NHIA's account, but such transfers should have been realized in the same day since it was a bank transfer.

The majority (90 percent) resource transfers, however, only happened during the last three months of 2006, when MOFEP transferred GH¢188.8 billion to NHIA. It was apparent that NHIA was operating almost entirely on funds from the previous year up to August 2006. Only then, MOFEP transferred significant amount resources to NHIA.

The reimbursement of NHIA to district health schemes appeared to be low, based on the survey of 48 districts. Preliminary assessment suggests that 48 districts should have been reimbursed about one third of total national scheme funds, but in reality the districts received only 16 percent of total national health scheme money. Such differences do not constitute inefficiencies due to other NHIA's obligations, such as retaining legal reserves. Further verification is needed on the percentage of funds which should be reimbursed by NHIA to district health schemes.

In summary, delays in resource transfers, mainly from MOFEP, is the main inefficiency identified by the PETS. To insure uninterrupted services to be provided by NHIA, timely transfers are necessary. The inefficiencies outlined by this PETS suggest that further investigation would be of great benefit possibly an NHIS-focused PETS to further identify bottlenecks of administering NHIS.

With respect to PETS on medical supplies, the challenges were far more complex given the various dimensions of data limitations (completeness, missing information on quantities, units, values etc.) Analytical work at this time was not possible.

Summary of Policy Recommendations

Based on the above findings, based on expenditures tracked in both education and health sectors, a few common themes have emerged on improving financial management transparency and efficiency. The PETS makes the following recommendations to financial management in general.

1) Significantly reduce delays in public expenditure releases from central ministries and agencies. This is critical since delays at the centre have repercussive effects on the whole system and delays are as important as leakages contributing to inefficient resource utilization, especially for time sensitive spending;

2) Improve resource management transparency by developing a reporting system that can easily trace the amount, the quantity and the unit of resource flows, whether it is financial or material, as well as the dates of financial transitions;

3) Identify the reasons behind the budget implementation bottlenecks at the ministerial level and enforce on-schedule release of budget to line ministries

by MOFEP. Follow-up discussions among stakeholders could be beneficial to identify measures that can strengthen the budget implementations;

4) Identify the bottlenecks responsible for delays at district level and recommend measures to improve efficiency at bottlenecks. For example, why suppliers did not give sufficient lead time for DEOs to distribute books to schools? Was it due to delays in budget processing or due to delays in procurement?[1]

5) Evaluate the capacities of district offices against their mandates. Based on the findings, the government should systematically plan and implement district level capacity building strategies. It may be necessary to develop enhanced strategies for poor regions;

6) Review the resource distribution procedures and evaluate whether there are ways to simplify procedures in order to improve efficiency; and

7) Enforce resource flow transparency and downward accountability by regularly disseminating and displaying critical information in public domains.

We propose developing a conceptual framework to delineate a generic set of policy options that may be implemented to reduce delays and eliminate leakages in the system. Our focus is to suggest interventions that create compatible incentives to influence behavior of employees within upper level of government, the districts and the facilities. We also propose budgetary policies that may improve the flow of funds. With more effective budget implementations and strong capacity at all levels of administrative points in all regions, the equity issue of resource distributions across regions should also be resolved.

In closing, an important effort has been done to track public spending flows at each administrative node for several important expenditures in education and health sectors. The structure and components of the PETS survey offer \information for rich analyses of the flow of funds within the public system. The findings of this PETS confirm a number of important trends and patterns that need to be changed to improve the efficiency in the allocation and utilization of public resources for further improvement of Ghana public service provisions.

[1] Based on discussion with staff from MFEP, this was due to the fact that the procurement was slow in the early days of implementing the new procurement law.

CHAPTER 1

OBJECTIVES AND METHODOLOGY OF THE GHANA PUBLIC EXPENDITURE TRACKING SURVEY

1.1 Motivation and Objectives of the First PETS in Ghana

As part of measures in taking forward the findings of the External Review of Public Financial Management (ERPFM) in 2006, Government launched Public Expenditure Tracking Surveys (PETS) in the education and health sectors. This was to support Government's efforts in streamlining public spending and improving related outcomes in education and health sectors.

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1.2 Methodology

The general methodology of a PETS is intuitively simple, consisting of charting budget flows and release mechanisms (funds and materials) from the centre to service providers such as schools, clinics and hospitals. The in- and out-financial and material flows are compared (ideally reconciled) at each of the consecutive nodes of the observed spending channels that correspond to the specific resource distribution mechanisms. This is often referred to as **vertical tracking**.

In practice, a PETS is inherently complicated and cumbersome to implement due to the complexity of the financial management system and depends heavily on the quality and availability of data. When a vertical tracking is not possible due to lack of information, an alternative approach which relies less on detailed data, by simply comparing the per capita resource flows at each administrative node is employed. This approach is often referred to as **horizontal tracking.** The Ghana PETS uses both tracking methods wherever applicable.

Given that adequate information is available, a PETS can only reveal discrepancies of resource flows between any two consecutive administrative nodes, but cannot identify their causes, except possibly during dissemination. This is the case since the findings are only available after the survey is completed and the reconciliation exercise is done. As such, a PETS is not an audit, rather the real value of a PETS is to identify where the bottlenecks, resource shortfalls and delays occur in the distribution channels and, whenever possible, make recommendations on how to improve the systems to reduce these inefficiencies.

There are three types of inefficiencies that are most relevant to financial management. First is the quality of record keeping, which is crucial to enhance the transparency of resource flows. Second are delays in resource deliveries, which in fact, are as bad as resource leakages, since both inefficiencies result in denying access to the necessary resources at the service provider level. Third are discrepancies that occur in the resource distribution process. The following summary of the findings are organized around these three types of inefficiencies for each expenditure item tracked.

1.3 Sampling Design and Sampling Method

Introduction

To achieve the objectives of tracking expenditures in the Education and Health sectors, surveys were carried out that entailed the selection of a nationally representative sample of district nodes of the resource distribution channels, service providers, facilities and pupil/patients exit polls. Central/national and regional nodes in the budgetary flows and release mechanism were included in the survey sample with certainty because of the limited number of these nodes and their immense strategic importance in the expenditure distribution channels.

Sampling Frame and Sampling Units

For the purpose of the PETS, the list of schools from the 2006/07 EMIS data of the Ministry of Education was used as the sampling frame for the Education Sector, while the list of the 2006 health facilities of the Ministry of Health constituted the Health sector sampling frame. All the education (schools) and health facilities had unique identification codes, with district and region information. The primary sampling units (PSUs) were the administrative districts (metropolitan, municipal and district assemblies – MMDAs), which constitute well-defined basic administrative and geographical units for which education and health service facilities data are readily available. Schools and health facilities within the districts constituted the secondary sampling units (SSUs).

Stratification

The PETS sampling frame was stratified into homogeneous groups on the basis of administrative region and type of facility, in order to increase precision and

reliability of the estimates. The first level of stratification corresponded to the ten administrative regions (and their corresponding districts). Within each region, the facilities were further stratified by type. The sampling was carried out independently within each regional stratum.

Stratification ensures that the sample is well spread out among the relevant sub-groups (eg; region, type of school or type of health service facility). Since sampling is carried out separately within each stratum, it is possible to ensure that there are sufficient sampling units in each subgroup to allow meaningful analysis.

Sample Size and Allocation

The number and allocation of sample districts and facilities for the survey depended on the type of estimates to be obtained and the corresponding precision required as well as the availability of resources, time and operational constraints.

Sampling errors and non-sampling errors were taken into account. For purposes of quality assurance there is the need for the sample size to be operationally manageable for all survey activities.

Thus, a sample size of 48 districts (out of the total 138) was deemed adequate to ensure that there are sufficient sampling units available for meaningful analysis and inferences about public expenditure, at regional and national levels within a margin of error of plus or minus 2.5 percent, with a confidence interval of 95 percent.

Sample Selection

The PETS was based on a two-stage stratified nationally representative sample design. At the first stage of sampling, 48 districts (PSUs) were selected using systematic random sampling with probability proportional to size (PPS) method. Determination of the sampling rates by size strata used proportional allocation based on each region's share of the 2006/2007 number of public primary schools in the country.

Table 1.1: 2006/2007 Primary Schools of Ghana by Region

REGION	PRIMARY SCHOOLS	PROPORTION
ALL	**12,993**	**100.0**
Western	1,399	10.8
Central	1,246	9.6
Greater Accra	761	5.9
Volta	1,435	11.0
Eastern	1,771	13.6
Ashanti	2,115	16.3
Brong Ahafo	1,532	11.8
Northern	1,720	13.2
Upper East	551	4.2
Upper West	463	3.6

Source: Ministry of Education- EMIS Data, 2007

Table 1.2: Distribution of 2006/2007 Primary Schools and Allocation of PSUs by Region

Region	No. of primary schools	Share of Primary schs	Allocation of PSUs (districts)
Western	1399	10.8	5
Central	1246	9.6	5
Grt Accra	761	5.9	3
Volta	1435	11.0	5
Eastern	1771	13.6	7
Ashanti	2115	16.3	8
Brong Ahafo	1532	11.8	6
Northern	1720	13.2	6
Upper East	551	4.2	2
Upper West	463	3.6	2
Total	**12993**	**100.0**	**48**

The selection of districts (PSUs) was accomplished by carrying out the sampling operation independently within each stratum (region). The selection procedure for PSUs within each stratum was achieved by ordering the complete list of districts with their sizes (number of primary schools) serially. The size column was then cumulated down the list of districts for the stratum. Sample districts were selected systematically, using a random start and fixed interval.

At the second stage, for education facilities: 15 primary schools, 10 Junior High schools and one Senior High school were selected randomly for each district that had been selected earlier to produce a total of 720 primary schools, 480 JHS and 48 SHS. Additionally, 10 teacher training colleges and seven technical /vocational schools were randomly selected for the entire country. It is worth noting that there are only 38 Teacher Training Colleges and 24 technical/vocational schools in Ghana. For health facilities: seven health facilities (government and mission – hospitals, clinics, CHPS etc), including the district hospital were randomly selected in each of the 48 selected districts. Also, all teaching hospitals and the 10 regional hospitals were included with certainty in the survey.

Furthermore, regional offices of the education and health sectors were covered, as well as the district offices and district assemblies of all the selected districts to obtain a clear picture of fund flow from upstream to downstream.

The above methodology was applied to arrive at the following numbers in the education and health sectors as depicted in table 1.3 below.

Table 1.3: Distribution of sample by institutions

Name of identities	Number of Sampled Identities	Out of total population	Number of questionnaires returned	Response rate (%)
Education Sector				
Regional Education Offices	10	10	9	90
District Education Offices	48	138	48	100
District Assemblies	48	138	48	100
Primary schools	720	12,993	694	96.4
JHS	480	7,130	480	100
SHS	48	495	44	91.7
Teacher training colleges	10	38	9	90
Technical/vocational schools	7	25	6	85.7
Health Sector				
Regional Health Offices	10	10	9	90
Regional Medical Stores	10	10	10	100
District Health Offices	48	138	48	100
CHPS/Health Centres & Clinics/Mission	336		317	94.3
District Hospitals	48	138	36	75
Regional Hospitals	10	10	9	90
Teaching Hospitals	3	3	3	100

Source: Ghana Public Expenditure Tracking Survey, 2007

Exit Poll

Ten students/pupils or patients were randomly polled from each selected primary school, JHS or health facility (hospital, clinic, CHPS) as part of the survey.

1.4 Implementation of PETS

The Government of Ghana established an inter-government PETS Steering Committee to implement PETS, with representatives from Ministry of Finance and Economic Planning (MOFEP), Ghana Statistical Service (GSS), Ministry of Education (MOE), and Ministry of Health. DFID Trust Fund provided financing for the survey and analytical work and World Bank provided technical assistance.

SC presented the concept of PETS and the criteria for selecting expenditures for tracking to relevant counterparts. The selection criteria were twofold: (i) the spending chain should be sufficiently important in terms of the proportion of the budget; and (ii) the chain should be sufficiently representative of the distribution mechanisms to warrant tracking. More precisely, **the PETS tracks selected resource flows, both financial and materials, that account for a significant proportion of the sectors' recurrent non-salary spending or that go through expenditure execution procedures/agencies which are prone to leakages, waste and delays**.

Based on the above criteria and after extensive consultations with Ministry of Education, Ministry of Health, Ghana Education Service, Ghana Health Service and Development Partners (DFID, DANIDA, GTZ , Netherlands Embassy, UNICEF), a few expenditures were selected. In the education sector, selected expenditures were: capitation grants, textbooks, Item 3 public expenditure (service activities), and investment expenditures in basic education. In the health sector, selected expenditures comprised: selected medications and medical supplies, Item 2 public expenditure (Administration Costs), Item 3 public expenditure (Service Activity Expenditure), and National Health Insurance Scheme. The survey was designed to be national and regionally representative.

The Steering Committee worked closely with the experts from the Ministries and Agencies, as well as, the senior staff from the GSS, to design 29 sets of questionnaires to track public resource flows through each spending channel node down to facility levels. All questionnaires are attached in the Appendix.

Ten teams were formed for the PETS fieldwork which was conducted throughout the country from May 23 to July 18, 2007. Each team comprised a supervisor (1), 4 interviewers (5 in some cases, where the workload is heavier) and a driver.

Generally each team was assigned one region, except Ashanti which had 2 teams and Upper East and Upper West that were assigned to one team.

Each team had at its disposal one 4x4 cross country vehicle/pick-up, which were hired for the exercise.

As quality control measure, scheduled and random field monitoring/supervisory visits were made by experienced and senior personnel from the GSS, Education and Health Sectors to check on the logistics, quality and progress of the data collection exercise.

The field returns were checked and edited manually before data entry. Data capture/processing and cleaning was carried out from mid August 2007 to March 2008. The data were then analyzed by matching and comparing budget allocated, credit released, resources distributed and received. As stated earlier, whenever such a detailed comparison was not possible due to the scarcity of data, average amounts were compared between each node. Thus, all resource flows were reconciled in and out of each spending channels node.

The rest of the report is organized as follows: for the education sector, Chapter 2 presents the analysis of flows for capitation grants, Chapter 3 for textbooks, Chapter 4 for District Assembly Common Fund, and Chapter 5 for Item 3 public expenditure (service activities). For the health sector, Chapter 6 describes specificities of the health sector, Chapter 7 presents analysis of Item 3 expenditure, Chapter 8 for National Health Insurance Scheme, and Chapter 9 for patient exit poll analysis. There is a section on concluding remarks for each chapter that summarize the findings for that specific chapter, except for Chapter 9. Overall policy recommendations are presented in Chapter 10.

PART I - EDUCATION SECTOR - PETS

CHAPTER 2
TRACKING CAPITATION GRANTS

2.1 Distribution Channels of Capitation Grants

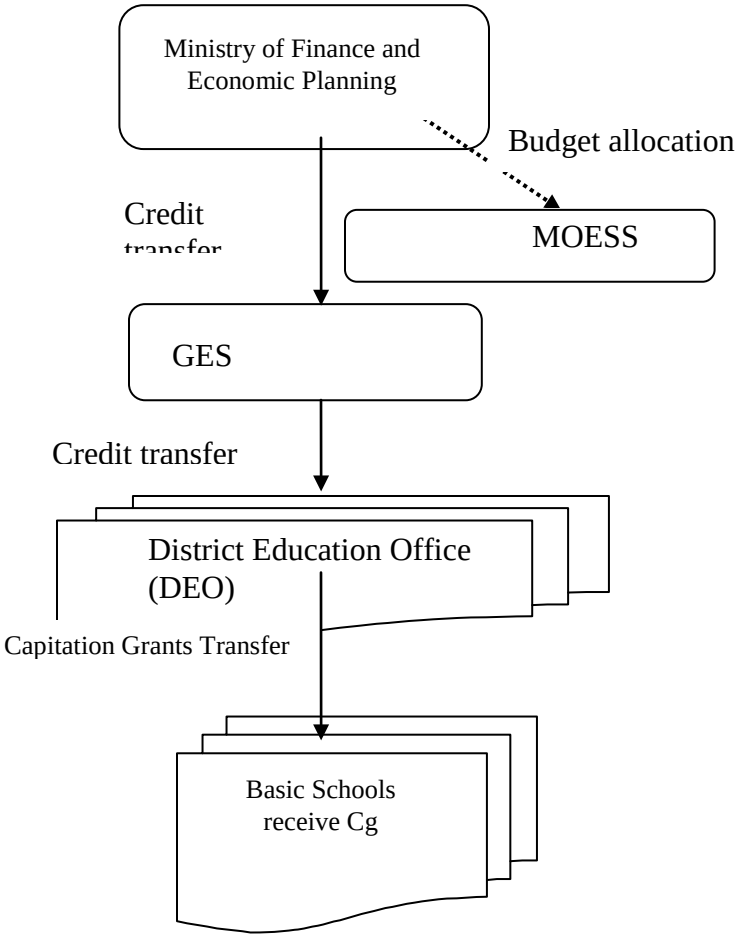
Despite the policy of fee-free tuition in basic schools, many districts charged levies as a means of raising funds, for example, for school repairs and cultural and sporting activities. These levies had the effect of deterring many families particularly the poorest from sending their children to school. The Ministry of Education introduced the Capitation Grant Scheme for public primary and junior secondary schools in 2005/06 academic year at the level of 30,000 cedis per student per academic year. The Capitation Grant (Cg) was designed to empower schools to effectively use financial resources to plan and carry out school quality improvement activities. The Grant is for all registered public schools with the Ghana Education Service in all districts. .

By the guidelines issued, schools are to receive the full amount of the capitation grants from district education offices (DEO) and then reimburse DEO for the sports and cultural activities held at district and regional level, as needed. Schools are supposed to use the Capitation Grants in place of sports and cultural levies and other school projects such as minor repairs.

The amount of Cg released is based on the projected estimate of enrolment levels in each school at the beginning of the academic year. This estimate is the basis for the transfer of 50 percent of the funds to the school, at the beginning of the first term. Subsequent transfers for the first term are dependent on the submission of adequate returns on the actual enrolment for the school in the course of the term. For the second and third terms based on the enrolment levels as established in the first term, funds are transferred to schools at the beginning of the term.

Figure 2.1 provides flows of Capitation Grants (Cg) from MOFEP to schools. The dotted lines indicate budget allocation with no credit transfers while solid lines indicate credit transfers. The PETS track only solid lines when there were credit transfers.

Figure 2.1: Tracking Capitation Grants for Basic Schools



2.2 Capitation Grants Transfers between MOFEP and GES

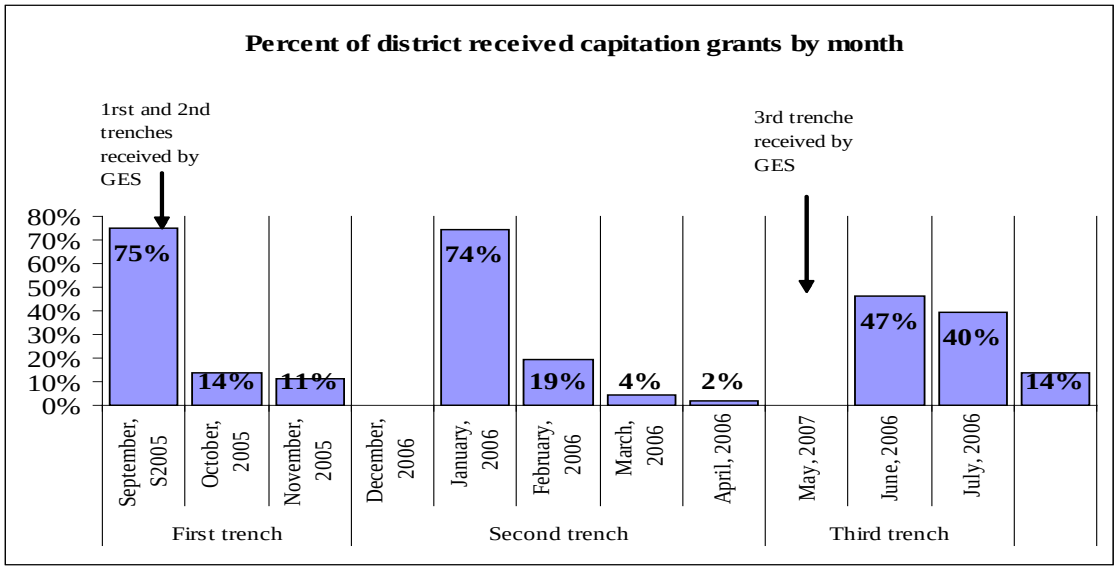
In PETS analysis, Leakage is defined as the difference between resources transferred at higher level and resources received at the subsequent level. This variable is measured at all levels of government (central, regional and district). Delay is evaluated as the difference between the date the resources were disbursed and the date the funds were received. It is measured at central, regional and district levels.

MOFEP transferred two tranches of Capitation Grants (Cg) in September 2005 and one tranche in May 2006 to Ghana Education Services (GES) for the total amount of 129.45 billion cedis. GES reported to have received the full amount in the same day from MOFEP. **The financial transactions between MOFEP and GES are well recorded and accounted for.**

2.3 Capitation Grants transfers between GES and District Education Offices

According to the PETS, some delays of transferring funds occurred between GES and DEOs, especially for the third tranche**.** Cg is supposed to be transferred to basic schools three times a year, coinciding with school trimesters, in September, January and May. GES received two tranches of Cg in September. It distributed 75 percent of first tranche in September and 74 percent for the second tranche in January. For some districts there were one to two months of delays. However, establishment of new districts could have contributed to such delays. For the third tranche, however, there was some delay, with Cg being transferred to DEOs in May and July (Figure 2.2). Subsequent enquiries from the GES however indicate that the entire first tranche of Cg was released to DEOs in September 2005, while the second and third tranches were released in January and June 2006 respectively.

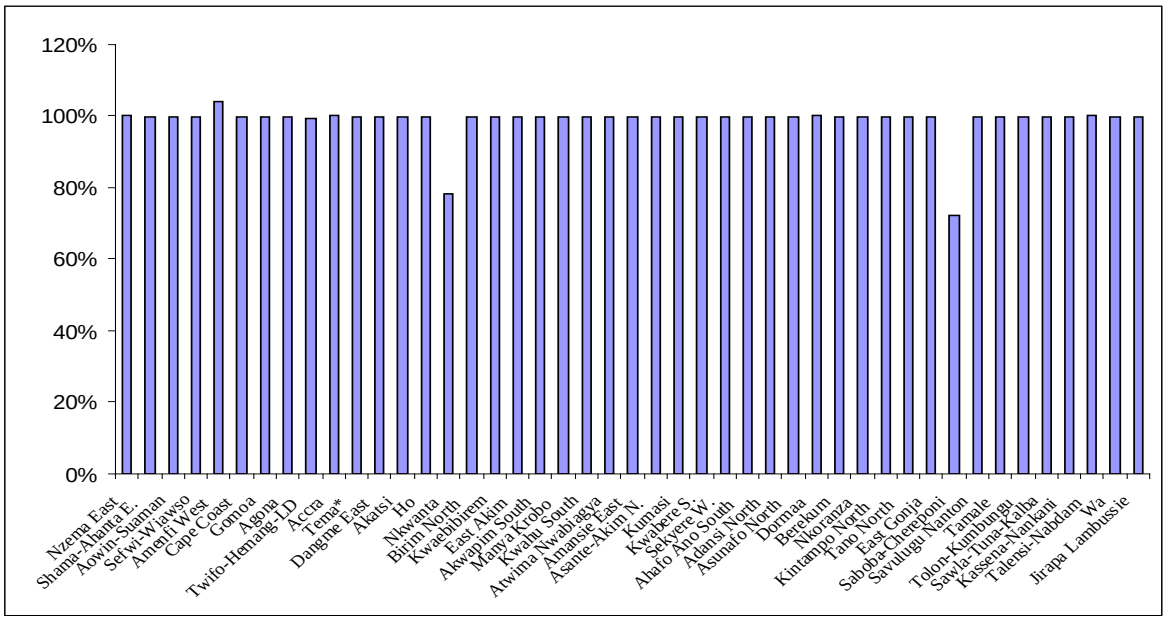
Figure 2.2: Monthly receipts of Cg by DEO, (Percent)



Source: Ghana PETS

Further analysis demonstrates that the amount of Cg reported to have been received by DEOs are consistent with that distributed by GES in 43 out of 46 districts (Figure 2.3). This indicates very efficient financial resource management between GES and DEOs, including consistent record keeping procedures between the two agencies that provide data for easy monitoring of resource flows. The PETS reveals no leakages between GES and DEOs for Cg transfers.

Figure 2.3: The amount of Cg received by DEOs as percent of transfers by GES

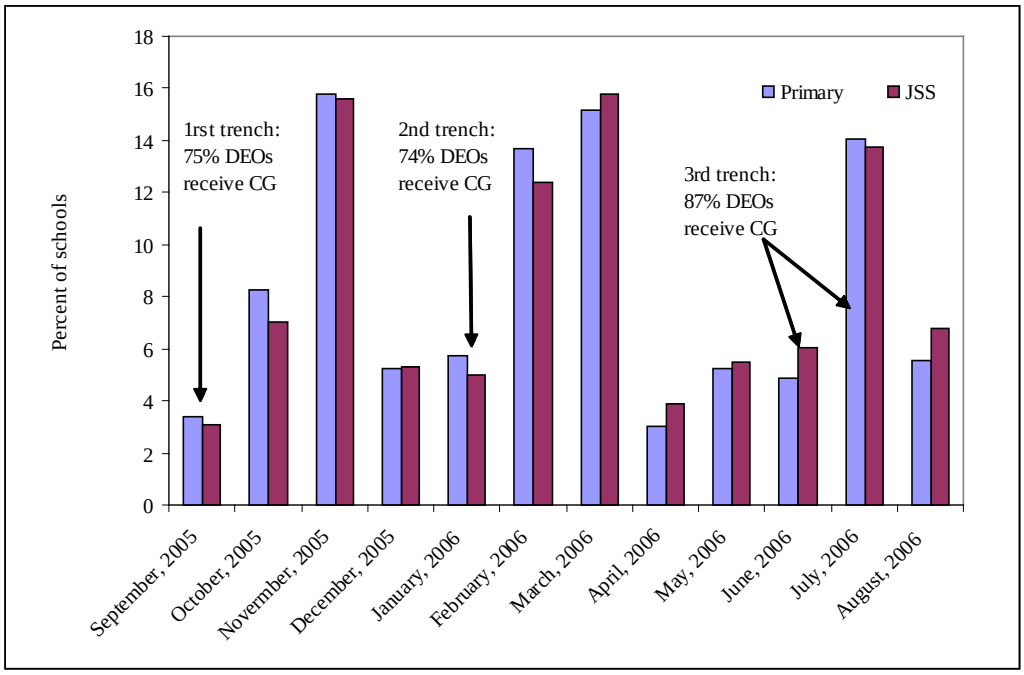


Source: Ghana PETS 2007

2.4 Capitation Grants transfers between DEOs and Basic Schools

Delays in transferring funds from DEOs to schools were apparent. Although most of DEOs received their Cg in September and January for the first two tranches of Cg, a large proportion of schools only received their Cg in October and November, and February and March, respectively. For the last tranche, DEOs distributed the Cg to schools mostly in July and August, when the third term was almost over. (Figure 2.4)

Figure 2.4: Cg transfers from DEOs to basic schools



Source: Ghana PETS 2007.

The PETS reveals that the record keeping for Capitation grants (Cg) was of high quality from MoFEP to GES and from GES to DEOs. In addition, the amount of Cg distributed by GES and received by DEOs are largely consistent with no indication of significant leakages. The MoFEP distributed first and second tranche Cgs to GES promptly in September and the third tranche in May. GES distributed about 75 percent of Cg on time to DEOs for the first and second tranches, but the third tranche transfers did not take place until June and July, constituting a delay of one to two months.

Although records at DEOs on receipts of Cg from GES were mostly complete and reconcilable with the GES records as demonstrated above, their records on transfers of Cg to schools were mostly incomplete. Of 1,194 schools surveyed, DEOs could only provide records on a little over a half of schools. Central and Upper West regions had records on only about 30 percent of schools surveyed. (Table 2.1)

Table 2.1: Record keeping on DEO Cg transfers to basic schools

	DEOs have reasonable records on # of surveyed schools	Total # of schools surveyed	As % of surveyed schools
Western	82	125	65.6
Central	37	124	29.8
Great Accra	48	103	46.6
Volta	90	140	64.3
Eastern	140	180	77.8
Ashanti	94	171	55.0
Brong Ahafo	70	153	45.8
Northern	35	84	41.7
Upper East	19	50	38.0
Upper West	17	64	26.6
Ghana	**632**	**1194**	**52.9**

Source: Ghana PETS 2007.

Using these 632 schools that we could find records both at DEOs and at schools, 10 percent or more of discrepancies occurred in Western, Great Accra, Northern, and Upper East (Table 2.2). By tracking the exact amount of the Cg distributed by DEOs and received by schools, the PETS revealed that for Upper East and Upper West regions the DEOs reported Cg transfers are 20 percent higher than the school reported Cg receipts. The short falls also existed for Western, Great Accra, Eastern, Brong Ahafo and Northern regions, but to a lesser extent. Schools in Central and Ashanti regions, on the other hand, reported to have received significantly higher amounts than that distributed by DEOs.

Table 2.2: Amount of Cg and number of students reported by schools and by DEOs

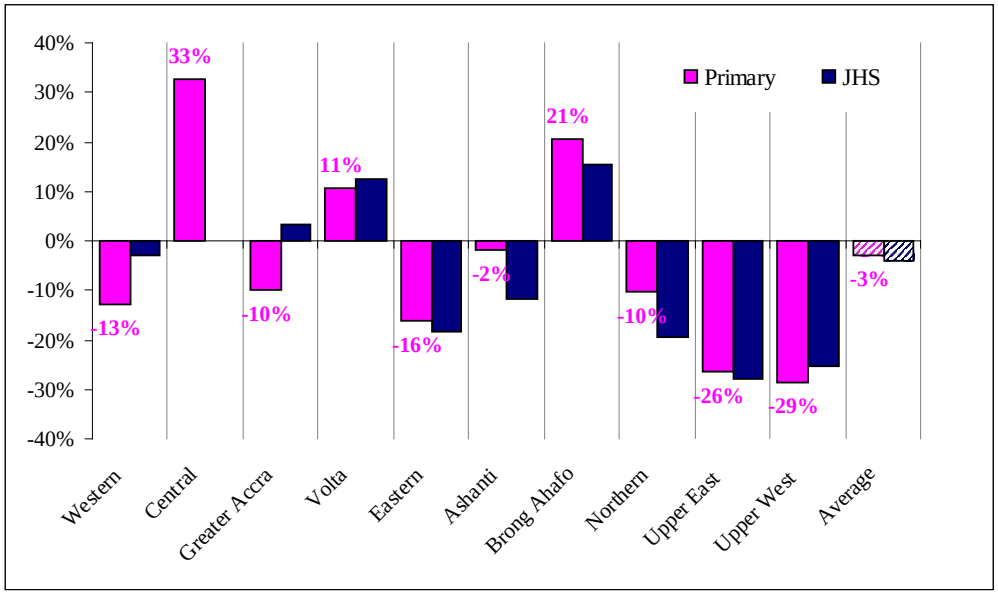
	CG received by schools as % of distributed by DEOs	Number of students reported by schools as % of number of students reported by DEOs
Western	89.5	102.6
Central	98.9	55.6
Great Accra	90.5	N/A
Volta	84.9	73.0
Eastern	89.8	99.4
Ashanti	101.1	102.5
Brong Ahafo	114.4	93.4
Northern	91.3	110.6
Upper East	61.2	75.7
Upper West	96.4	104.7
Ghana	93.3	95.4

Source: Ghana PETS 2007.

In addition, there were discrepancies between number of students reported by schools and by DEOs. Since allocation of Cg is based on enrollment, the efficiency of Cg distribution is based on the accuracy of two indicators: the total Cg distributed and the number of enrollment. PETS reveals that in Central, Volta, and Upper East regions the school reported enrollment is significantly lower than that reported by DEOs, while in Northern region, schools reported 10 percent higher enrollment than that reported by the DEOs. This means that the schools with over-estimated enrollment by DEOs will get higher than average Cg per student while the schools with under-estimated enrollment by DEOs would receive less than average Cg per student.

Without detailed distribution data one could also compare Cg per student transferred by DEOs and received by schools. This is called horizontal tracking, involving comparing average amounts at two different levels. Interestingly enough, the horizontal tracking showed much more severe inefficiencies than those found from the vertical tracking when records were matched between DEOs and schools. Figure 2.5 shows that on average the discrepancy between DEO transfers and the amount received by schools were significant for Western, Greater Accra, Eastern and the three northern regions. **This further demonstrates that when records were well kept and easily reconcilable, efficiency of resource transfers tended to be higher. Lack of distribution data indicates a lack of downward accountability by DEOs to schools. Without DEOs' accountability to schools, it is very difficult to reinforce the DEOs obligations on timely and efficient transfers of Cg to schools.**

Figure 2.5: Average discrepancies between Cg per students reported by schools and by DEOs

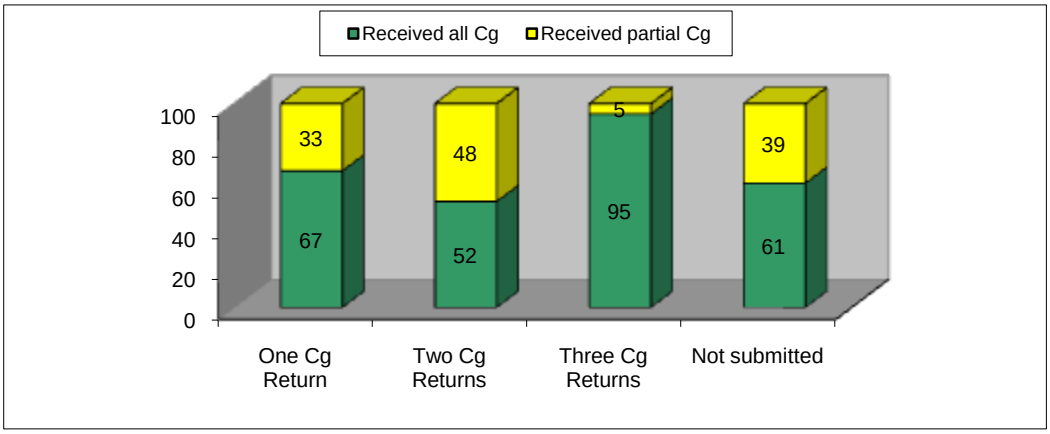


Source: Ghana PETS 2007.

Several possible factors could have contributed to the shortfalls between DEOs and schools. First, there was confusion on how to record District Sports and Culture Levies and examination fees that should be paid by schools to DEOs. Under the guidelines on the use of Cg, DEOs should transfer the full amount Cg of 30,000 cedis to schools. Schools then should reimburse DEOs their levies. In reality, DEOs occasionally withheld Sports and Culture levies from the Cg due to schools, resulting in over recording at DEOs and under recording by schools. Second, DEOs underestimated the school enrollment, resulting in a higher amount of per student Cg reported by DEOs than the amount reported by schools. Third, DEOs complained that schools frequently did not comply with the requirement of filing expenditure returns on Cg with DEOs, which could result in withholding Cg transfers. And fourth, after having taken into consideration the above contributing factors, leakages may still have occurred between DEOs and schools, but further verification is needed to establish this point.

This requirement for schools to file Cg expenditure returns with DEOs, however, was not consistently enforced. A significant proportion of schools received full Cg with partial or no filing of expenditure returns (Figure 2.6). Further analysis demonstrated that withholding Cg from schools was not an effective way to encourage schools to file the Cg returns. For school heads who did not file the Cg returns, 40 percent said because they did not know such a requirement existed even though it was clearly written in the Cg booklet distributed by GES.

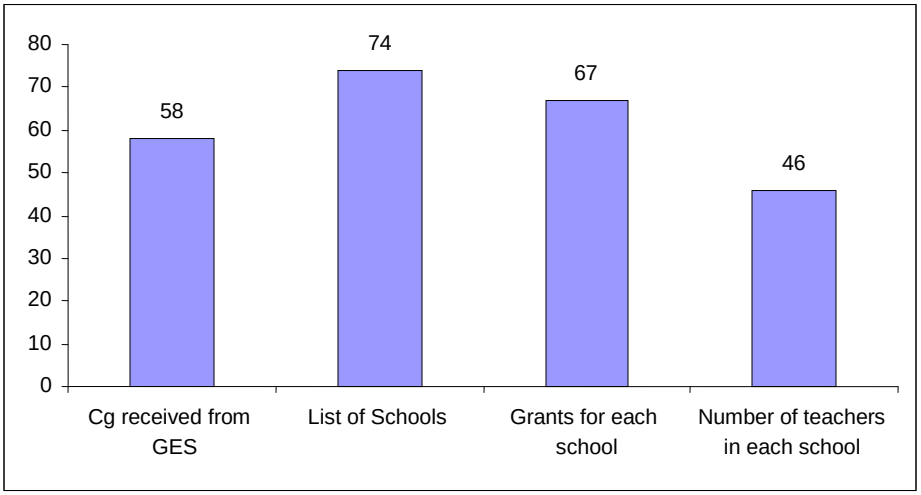
Figure 2.6: Percent of schools reported to have received full Cg by status of Cg expenditure return filing



Source: Ghana PETS 2007.

Ghana PETS also found that a significant percentage of DEOs did not display Cg information publicly (Figure 2.7)**.** Interestingly, the most frequently displayed information was the list of schools managed by DEOs, and the least frequently displayed information was number of teachers in each school, Cg received and funds due to schools. This seems to indicate that DEOs were more reluctant to display sensitive information such as number of teachers in each school, even though it should be readily available statistics.

Figure 2.7: Percent of schools displayed financial and education statistics

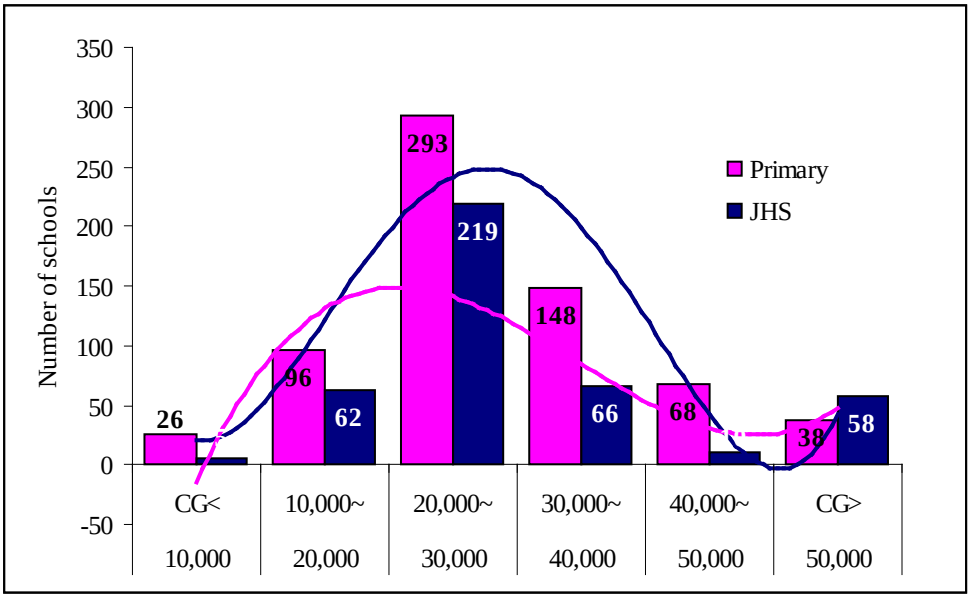


Source: Ghana PETS 2007

2.5 Equity and usage of Capitation Grants at school level

At school level, significant variations exist in Cg per student received, ranging from less than 10,000 cedis to more than 50,000 cedis (Figure 2.5). After having taken into account the discrepancy in enrollment records between the DEOs and schools, the variations represent significant inefficiency although PETS could not reveal the reasons behind the large variations.

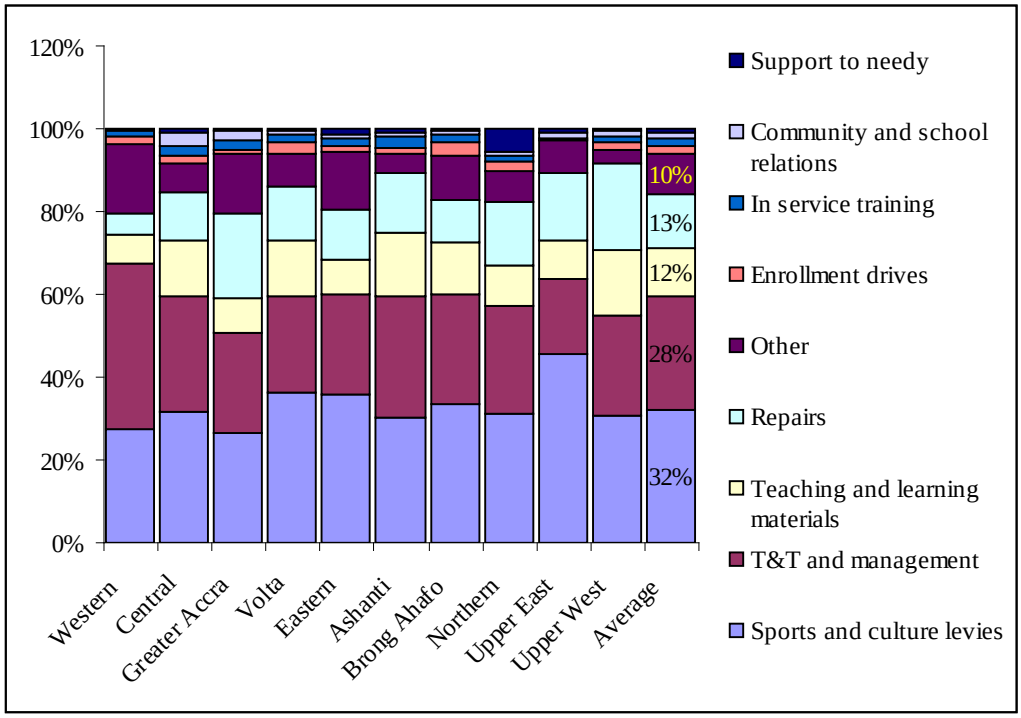
Figure 2.8: Frequency of Cg per student at school level



Source: Ghana PETS. 2007

On average, schools reported to have spent one third of the Cg on District Sports and Culture levies. This seems to be high compared to what was intended by GES. **There are very little discernable regional variations in terms of Cg spending patterns among basic schools although different regions might have different priorities** (Figure 2.9)**.** For example enrollment ratios were low in the three northern regions. However, these regions spent very small portion of Cg on enrollment drives just like other regions where enrollment ratios were not a problem. Support for needy students accounted for a negligible amount of Cg for all regions except for Northern region, even though Upper West and Upper East regions should have higher proportion of poor students than Accra and Ashanti. It is possible that after Sports and Cultural Levies, T&T and management, Teaching and Learning Materials and repairs, which were essential items and accounted for 85 percent of Cg, there was little left to support students directly.

Figure 2.9: Patterns of Cg spending by schools

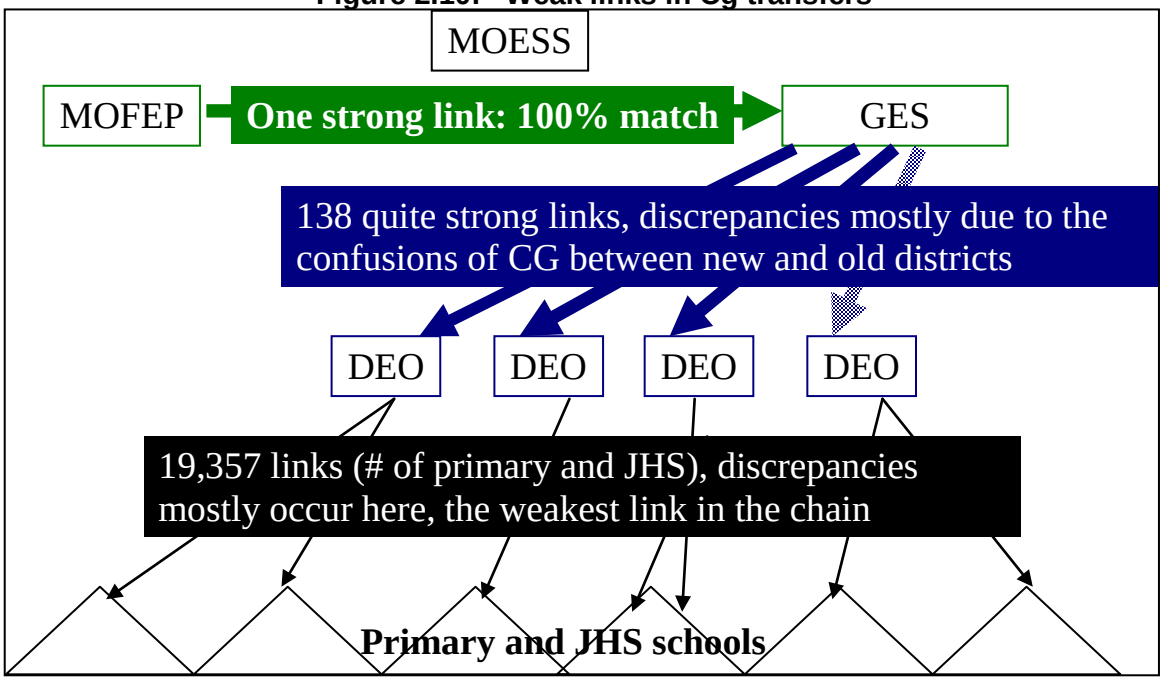


Source: Ghana PETS 2007.

2.6 Concluding Remarks

In summary, Cg distribution is relatively efficient between MOFEP and GES, and between GES and DEOs. However, the Cg did not reach schools at the 30,000 cedis per student as intended by GES. DEOs appeared to be the weakest link for effective Cg distributions (Figure 2.10). This is to be expected. At central level, the GES only needs to input less than 200 computer records on each district office. The transfers are relatively straight forward, 30,000 cedis per student. At district level, each DEO on average needs to deal with about same number of records as GES, but transfers are much harder to follow due to school levies and examination fees. In addition, the human capacity is much higher and equipment is better at the centre than at DEOs. However, when there were sufficient records at DEOs, the efficiency of Cg transfers was improved significantly.

Figure 2.10: Weak links in Cg transfers



Based on the above diagnostics, several recommendations can be articulated. First, there is a need to re-evaluate the policy that DEOs should transfer all Cg to schools and schools in turn will reimburse the DEOs for Culture and Sports levies and for fees for examinations organized by district education offices. This policy was meant to give schools the power to hold DEOs accountable. However PETS revealed that schools were often reluctant to transfer the due amount to DEOs, and DEOs in fact had the power to retain the fees without the approvals from schools. This indicates the ineffectiveness of using school Cg to enforce the DEOs accountability.

In addition, confusions on how to record Sports and Culture levies create loopholes in the Cg transfer recording system, making it a time consuming and tedious task to follow Cg flows. Based on these findings, it is recommended that the GES gives, say 5,000 cedis, to DEOs for their expenses, and give schools 25,000 cedis for their exclusive use. This will greatly facilitate the ease of recording Cg flows and thus, enhance transparency. Other accountability enforcing options may be designed and applied.

The second recommendation is to **enforce Cg flow transparency by developing a consistent reporting system that makes reconciliation of information between district offices and schools an easy and routine task.** This should include the amount of Cg distributed, the date of disbursement, and the receiving schools. This system must be computerized at the district office level.

Third, is to **ensure that District Education Offices' are accountable to schools** by publicly displaying Cg distribution information at DEOs, as well as at schools in

a standard format. At the school level, the amount of Cg received and the uses of the Cg by schools should also be displayed publicly to enforce the school's accountability to students and parents.

Fourth, there is the need to evaluate the equal distribution of 30,000 cedis per student. The Cg formula may be revised to reflect regional differences, especially special needs for schools in remote and poor regions.

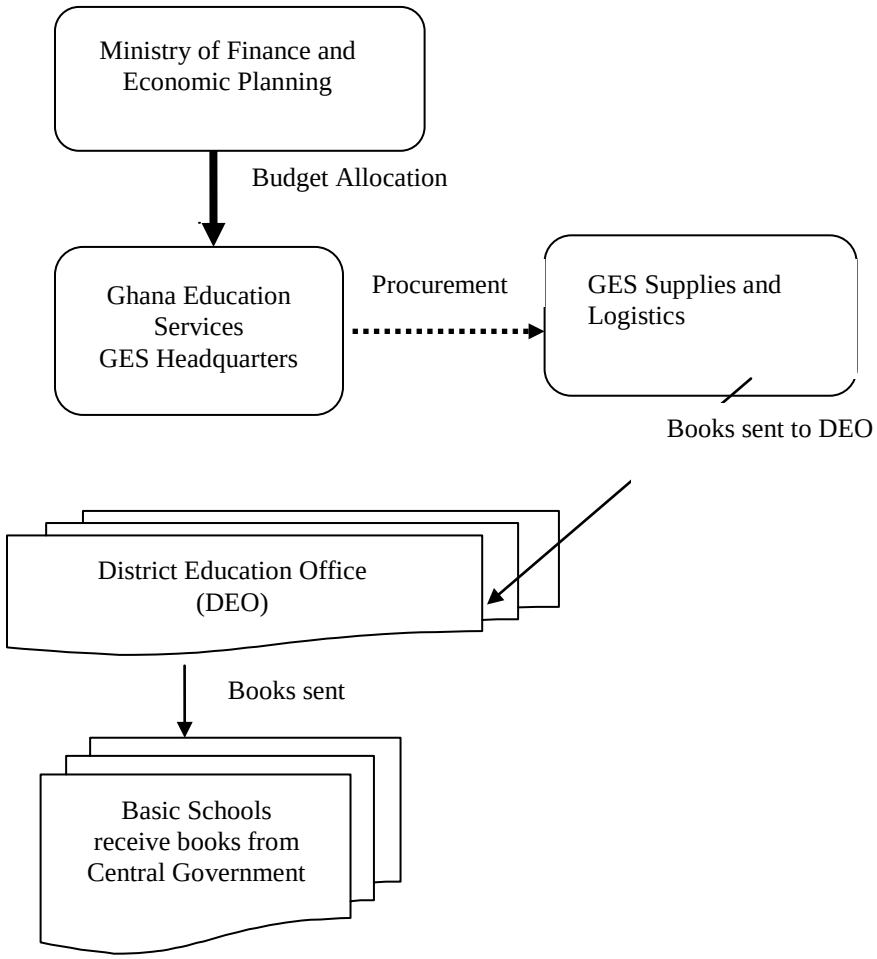
Last, but not least, the spending pattern of Cg needs to be evaluated by education experts, to ascertain whether it is conducive to improving education outcomes.

CHAPTER 3
TRACKING TEXTBOOKS FOR BASIC SCHOOLS

3.1 Distribution Channels of Textbooks

The GES' book policy for basic education is to distribute a new textbook per subject per student every year, including students who attend private schools. If this policy is effectively implemented, each student should have all the textbooks that he or she needs and textbooks would have no resale value on the open market.

Figure 3.1: Tracking textbook distributions



3.2 Distribution of textbooks from GES to DEOs

The PETS reveals that the records on number of books distributed by suppliers are complete and were well presented in a clear format in one book. The consistent format and the easy reference for all textbooks distributed to DEOs facilitated greatly the transparency of textbook flows. Indeed, the number of books distributed by suppliers and that received by DEOs were largely consistent, however, delays were apparent. For academic year 2005/06, most books were delivered to DEOs after November 2005, and as late as January or February 2006.

3.3 Distribution of textbooks from DEOs to Schools

During the textbook matching exercise, the following were identified as the main challenges worth considering in interpreting the findings:

- Some districts did not provide data in the prescribed format.
- Some districts reported combined figures for stream schools (e.g. Abom Primary 'A' & Abom Primary 'B' were not reported separately).
- Some districts provided the information hand written and not in a systematic manner to facilitated data collation.
- Others just photocopied pages from store ledger books and did not separate dispatches to primary and JHS.
- Additionally, supplies of English, Mathematics, Science and Social Studies books from DEOs were not presented in a consistent manner.

The DEO authorities were asked during the interview to give the total number of the various textbooks they had received and dispatched. The schools were also asked for the type and number of textbooks they received from the DEO. These records were then manually matched to the schools. The number of textbooks dispatched and those received were recorded. The analysis and findings are presented and discussed below.

DEOs that reported dispatches with their corresponding receipts by schools were isolated. This is referred to as vertical analysis and is illustrated in Table 3.1. Further analysis based on districts that have data on both district dispatches and school receipts of textbooks presents a clearer picture in textbook flows/distribution. Generally, the District Education Offices supplied more core textbooks to schools, than the primary schools reported as receiving. English textbooks for P1 and Science textbooks for P3, however, show higher receipts than dispatches. It is possible the excess textbooks could be receipts from philanthropists, donors and/or NGOs (World Bank, USAID, GTZ etc) operating in selected schools in some districts to improve literacy and science education. This is uncertain and only further discussions and investigations beyond this analysis can provide the answer.

Table 3.2: Matching of Primary Textbooks – vertical tracking

Level in Primary	# of Textbooks Received by school	# of Textbooks Dispatched by DEO	% Variance	# of DEO
Matching of English Textbooks				
Primary 1	15068	14821	1.67	24
Primary 2	12798	12857	-0.46	24
Primary 3	12154	12369	-1.74	25
Primary 4	11346	11596	-2.16	25
Primary 5	10604	10802	-1.83	25
Primary 6	9561	9559	0.02	25
Total	**71531**	**72004**	**-0.66**	
Matching of Science Textbooks				
Primary 1	0	0	-	-
Primary 2	0	0	-	-
Primary 3	15	15	0.00	1
Primary 4	346	324	6.79	23
Primary 5	9678	10022	-3.43	23
Primary 6	8673	9016	-3.80	23
Total	**18712**	**19377**	**-3.43**	
Matching of Mathematics Textbooks				
Primary 1	13501	13998	-3.55	24
Primary 2	12154	12419	-2.13	24
Primary 3	11145	11490	-3.00	24
Primary 4	10725	10894	-1.55	24
Primary 5	10148	10395	-2.38	24
Primary 6	8956	9052	-1.06	24
Total	**66629**	**68248**	**-2.37**	

NOTE: % Variance = # of textbooks received by school - # of textbooks dispatched by DEO divided by # of textbooks received by school and expressed as a percentage. Where receipts and dispatches match the % variance = 0; % variance is positive where textbooks received exceeds the quantity dispatched. A negative % variance means dispatches from the DEOs to schools exceeded what the schools received.

Again, Table 3.2 reveals shortfalls in school textbook receipts in the magnitude of 473 for English (0.7%), 665 for Science (3.4%) and 1,619 for Mathematics (2.4%) for roughly 24 districts. In effect, the disparities or leakages amount to 20 English textbooks, 28 Science textbooks and 67 Mathematics textbooks per District. Thus on average, 2.2% of primary school textbooks reportedly dispatched by the DEOs do not get to the intended target schools.

If the above results representing nearly one-half (24) of the districts surveyed (48), is anything to go by, then the observed disparities in school textbook receipts and district education office dispatches is worrying, particularly so in the case of mathematics and science textbooks. Taking it a step further, it implies that some students, who should have textbooks, have been denied access to this critical input in teaching and learning.

3.4 Concluding Remarks

The PETS reveals that the records on number of books distributed by suppliers are complete and were well presented in a clear format in one book. The consistent format and the easy reference for all textbooks distributed to DEOs facilitate greatly the transparency of textbook flows. Indeed, the number of books distributed by suppliers and those received by DEOs are largely consistent. However, delays were prevalent. For academic year 2005/06, most books were delivered to DEOs after November 2005, and as late as January or February 2006.

The quality of record keeping of textbooks distributed by DEOs to schools is poor. There were many data gaps and only 50 percent of DEOs could provide book distribution records. When there were data, they were not recorded in a consistent format and were preserved by different means such as photocopies and hand written notes. Such confusion created loopholes in the distribution channels. Even if there were no incentive to divert textbooks for resale, the efficiency of distributing right number of textbooks to schools is greatly questionable.

Vertical tracking analysis was carried out between DEOs and schools using the limited data available. It showed that the level of inefficiency occurring between DEOs and schools was 2.3 percent. Although the discrepancy was not large, the shortfall was based on only DEOs that had distribution data. As illustrated for Cg tracking, when there were good records the discrepancy between DEOs and schools tended to be small. For DEOs that could not provide good records, the actual percentage of books that did not reach schools could be higher. In addition, great inefficiencies in textbooks distributions manifested in two to three month delays. The impact of textbook delays on education quality is almost the same as the impact of leakages since in both cases students do not have access to textbooks. Delays may be slightly better than leakages since the students would eventually have access to textbooks. Based on these findings, several strategies could be devised to improve efficiency in terms of timely distribution of textbooks.

First, it may be proposed that procurement of textbooks should be based on the previous year's budget rather than the current year budget. It appeared that the main bottleneck hindering the on-time delivery of textbooks was delays in the release of budget to GES for textbook procurement. By using the previous year budget release, the GES will have sufficient time to procure and distribute textbooks at the beginning of an academic year.

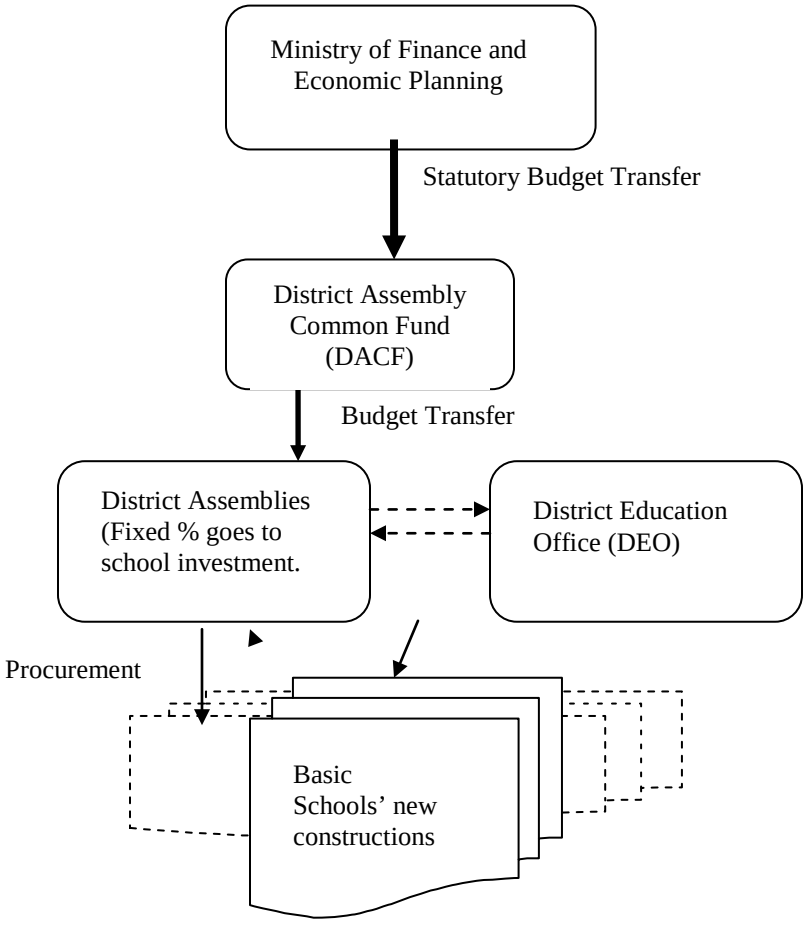
Second, a standard format should be designed for DEOs to record the date, type and quantity of books received and distributed, as well as, the destination of the books. The record system must be computerized since it is impossible to keep such large amount of information accurately on paper. This could facilitate the timely delivery of textbooks to schools.

CHAPTER 4
INVESTMENT BY DISTRICT ASSEMBLIES FOR INFRASTRUCTURAL DEVELOPMENT

4.1 Distribution Channels of District Assemble Common Funds

With the increased importance of district assemblies in local government administration, and their role as initiators and implementers of development projects, the PETS elicited information from district assemblies on new projects completed, types of projects undertaken, sources of funding and whether they were executed on schedule. Figure 4.1 shows how District Assembly Common Fund is transferred from the central government to District Assembly.

Figure 4.1: Tracking Investment Expenditure in Basic Education



4.2 Investment by District Assemblies for Infrastructural Development

The District Assemblies' Common Fund (DACF) is a pool of resources created under section 252 of the 1992 constitution of Ghana. It is a minimum of five percent [2] of the national revenue set aside to be shared among all District Assemblies in Ghana with a formula approved by Parliament. The fund is a Development Fund which enables the use of the nation's wealth throughout Ghana to the benefit of all citizens. The manager of the DACF is the Administrator of the District Assemblies' Common Fund according to Section 252 of the 1992 constitution. In 2006, 75 percent of the year's allocation was planned to be shared among District Assemblies.

The PETS analysis is based on data from 44 districts out of the 48 surveyed. It is worthy of note that the respondents were mostly high-ranking and knowledgeable officials in the district assemblies as shown in Table 4.1. The Accountants, Budget and Planning officers accounted for 70%.

Table 4.1: District Assembly Respondents by Job Title

Job Title of Respondent	Number	% Distribution
District Coordinating director	5	11.4
Deputy Coordinating director	2	4.6
Accountant	11	25.0
District Budget Officer	5	11.4
District Planning Officer	11	34.0
Other	6	13.6
Total	**44**	**100.0**

Source: Ghana PETS, 2007.

[2] This has been increased in 2008 to 7.5%

4.3 District Assemble receipts from DACF

Generally the DAs received about 406 billion cedis from the DACF over the two year period (2005-2006). Table 4.2 to a large extent does not show any significant variation in yearly allocations to the DAs by the DACF, implying consistency in disbursement of funds. However, data was not available to determine whether these funds were also released in a timely manner, since delays could impact development negatively.

Table 4.2: Amount received by DAs from DACF, 2005-2006

Quarter	# of Districts	Total Amount Received from DACF	Percent of Total
Q1_2005	44	56,187,024,059	28
Q2_2005	44	44,012,478,943	22
Q3_2005	44	50,446,181,185	25
Q4_2005	42	53,378,828,168	26
Total		**204,024,512,355**	**100**
Q1_2006	43	57,617,123,830	29
Q2_2006	43	44,937,009,806	22
Q3_2006	44	52,551,974,112	26
Q4_2006	40	46,612,552,999	23
Total		**201,718,660,747**	**100**

Source: Ghana PETS 2007.

4.4 DA allocation of funds for investment in basic schools -2005/2006

The 2007 PETS also looked at support received by district assemblies from the DACF for investments in basic education. Table 4.3 shows that, 45 District Assemblies received nearly 406 billion cedis within the two year period, 2005-2006.

The question on the amount of funds allocated for basic educational development received low response. Overall, 24 DAs indicated the percentage allocation for educational investments in basic schools. Using these percentages, investment in basic schools amounted to a little over 23 billion cedis representing only 11% of their total funds received from the DACF. Taking all surveyed DAs in consideration this represents only 6% of funds received. Whereas it is recognized and appreciated that DAs need to meet their other competing development needs it cannot be overemphasized that less than 10% allocation of development funds received from the DACF seems to be inadequate and should be reviewed. It could not be confirmed whether there was any investments in the remaining DAs as they did not indicate their percentage allocations of funds for basic school investments.

Table 4.3: DA allocation of funds for basic schools investment -2005/2006

Region	District	Total amount received from DACF	Amount allocated for basic school investment	% allocated for Basic school investment
GREATER ACCRA	AMA	16,441,161,138	0	0.0
CENTRAL	AGONA	11,713,872,106	554,783,643	4.7
ASHANTI	ASANTE AKIM NORTH	8,990,545,264	2,461,228,808	27.4
NORTHERN	EAST GONJA	8,489,753,414	0	0.0
ASHANTI	SEKYERE WEST	2,352,122,092	728,674,427	31.0
VOLTA REGION	KETA	8,903,732,373	0	0.0
BRONG AHAFO	BEREKUM	8,099,741,195	638,205,062	7.9
NORTHERN	SEVELUGU-NANTON	9,531,647,453	649,474,044	6.8
WESTERN	SEFWI WIAWSO	8,050,981,415	1,076,598,906	13.4
VOLTA	NKWANTA	10,000,212,103	1,491,315,779	14.9
CENTRAL	ASSIN SOUTH	7,432,965,236	319,264,308	4.3
CENTRAL	GOMOA	13,914,756,532	303,082,944	2.2
ASHANTI	K.M.A	17,338,347,036	0	0.0
ASHANTI	ADANSI NORTH	5,806,375,440	788,808,437	13.6
WESTERN	AMENFI WEST	9,540,302,874	344,859,687	3.6
NORTHERN	SAWLA TUNA KALBA	9,572,915,975	1,209,090,561	12.6
GREATER ACCRA	TEMA	11,281,064,334	0	0.0
NORTHERN	TAMALE	8,179,869,047	0	0.0
EASTERN	EAST AKIM	8,051,042,462	0	0.0
UPPER EAST	KASSENA NANKANA	7,929,175,626	2,141,444,516	27.0
UPPER WEST	WA CENTRAL	8,174,646,907	0	0.0
NORTHERN	SABOBA CHEREPONI	0	0	0.0
ASHANTI	KWABRE	8,746,028,049	0	0.0
VOLTA	HO MUNICIPAL ASSEM.	9,246,714,355	748,263,778	8.1
ASHANTI	AHAFO ANO SOUTH	9,150,113,330	0	0.0
BRONG AHAFO	NKORANZA	8,334,124,756	946,431,355	11.4
UPPER EAST	TALENSI NABDAM	9,720,349,980	0	0.0
WESTERN	SHAMA AHANTA EAST	11,756,189,728	160,064,079	1.4
EASTERN	BIRIM NORTH	9,302,668,979	0	0.0
NORTHERN	TOLON-KUMBUNGU	13,154,098,883	285,271,857	2.2
BRONG AHAFO	DORMAA	4,383,539,132	0	0.0
CENTRAL	CAPE COAST	10,071,703,287	1,960,171,816	19.5
WESTERN	NZEMA EAST	9,595,354,646	0	0.0
EASTERN	KWAEBIBIREM	8,602,358,219	0	0.0
EASTERN REGION	MANYA KROBO	7,229,257,811	847,427,705	11.7
UPPER WEST	JIRAPA/LUMBUSSIE	11,052,212,622	1,733,131,062	15.7
BRONG AHAFO	KINTAMPO NORTH	8,896,424,805	0	0.0
EASTERN	AKWAPIM SOUTH	7,333,687,317	0	0.0
BRONG AHAFO	ASUNAFO NORTH	8,558,985,575	0	0.0
BRONG AHAFO	TANO NORTH	6,538,086,519	1,221,578,497	18.7
ASHANTI	ATWIMA NWABIAGYA	7,505,834,433	738,683,015	9.8
WESTERN	AOWIN SUAMAN	12,682,718,492	1,215,011,941	9.6

Region	District	Total amount received from DACF	Amount allocated for basic school investment	% allocated for Basic school investment
EASTERN REGION	KWAHU SOUTH DIST	7,713,279,154	0	0.0
ASHANTI	AMANSIE EAST	7,114,653,064	1,332,136,456	18.7
VOLTA	ADAKLU ANYIGBE	9,259,559,944	0	0.0
	Overall Total	**405,743,173,102**	**23,895,002,681**	**5.9**
Of those who reported share for education		**217,621,207,261**	**23,144,049,106**	**10.6**

Source: Ghana PETS 2007.

4.5 Educational Projects executed by DAs in 2005/2006

In both 2005 and 2006 the district assemblies executed new projects even though the numbers declined from 150 in 2005 to 123 in 2006. According to Table 4.4, about 40 percent of the investment went into the construction of classrooms for primary schools and between 13 percent and 17 percent was spent on the construction of new primary schools in the districts in 2005 and 2006 respectively. The data also show that the bulk of infrastructural development in the education sector is undertaken by the District Assemblies.

Table 4.4: Distribution of DA Investment by type of Project and year

Type of Project	2005		2006		Both Years	
	Number	percent	Number	percent	Number	percent
New Primary school	19	12.7	20	15.6	39	14.0
New JHS	17	11.3	5	3.9	22	7.9
Classroom for existing primary school	59	39.3	52	40.6	111	39.9
Classroom for existing JHS	23	15.3	6	4.7	29	10.4
District Education Office	-	0.0	1	0.8	1	0.4
Teachers bungalow	12	8.0	4	3.1	16	5.8
Urinal	-	0.0	2	1.6	2	0.7
Toilet facility	8	5.3	16	12.5	24	8.6
Library	1	0.7		0.0	1	0.4
Other	11	7.3	22	17.2	33	11.9
All	**150**	**100.0**	**128**	**100.0**	**278**	**100.0**

Source: Ghana PETS 2007.

4.6 DA Project Start and Completion schedules

The PETS also elicited information on start and completion dates of new projects. About 30 percent of the districts surveyed failed to provide dates for projects undertaken in 2005 compared to 32 percent in 2006. Nonetheless, the available data indicate that nearly 30 percent of newly constructed projects were completed behind schedule (Table 4.5). The authorities did not assign reasons for these responses.

Table 4.5: Distribution of Project Completion Dates as a measure of Delays

Cost of Projects	2005		2006		Both years	
	No. of Projects	%	No. of Projects	%	No. of Projects	%
District Assembly did not report dates	54	30.2	49	31.8	103	30.9
Early completion of projects	39	21.8	34	22.1	73	21.9
Late completion of projects	53	29.6	45	29.2	98	29.4
Projects completed on schedule	33	18.4	26	16.9	59	17.7
All	**179**	**100.0**	**154**	**100.0**	**333**	**100.0**

Source: Ghana PETS 2007.

Table 4.6 illustrates two critical developments. First, the proportion of new projects on which districts spent less than the estimated budget increased from 27 percent in 2005 to 47 percent in 2006. Second, the percentage of projects that experienced budget overruns declined by 7 percentage points over the period. Similarly, the proportion of projects where districts failed to provide costs declined from 12 percent to five percent. These are positive and healthy developments in terms of prudent financial management and accountability, openness and transparency.

Table 4.6: Distribution of District Assembly Project dates and costs by year

Cost of Projects	2005		2006		Both years	
	No. of Projects	%	No. of Projects	%	No. of Projects	%
District Assembly did not report amounts	21	11.7	8	5.2	29	8.7
District Assembly spent exactly project approved budget amount	74	41.3	53	34.4	127	38.1
District Assembly spent less than project approved budget amount	48	26.8	73	47.4	121	36.3

District Assembly spent more than approved project budget amount	36	20.1	20	13.0	56	16.8
All	**179**	**100.0**	**154**	**100.0**	**333**	**100.0**

Source: Ghana PETS 2007.

4.7 Source of DA Project funding

The 2007 PETS also collected information on the first three major[3] sources of funding for construction projects undertaken by the District Assemblies. In 2005 the District Assemblies received 494.9 million cedis on average for construction purposes. The bulk of the funds came from 'Other Sources' not specified in the questionnaire (Table 5.7). It must be noted that the question on source of funding was intended to solicit multiple responses hence the occurrence of one source at more than one stage is expected. It means for example whereas some DAs considered DACF as their first source others considered it as second or third source of funding.

The second major source of funding for District Assembly construction projects came from development partners, and the third from NGOs as shown in Table 4.7.

As observed in 2005, District Assemblies funded their construction projects mostly with funds from 'Other sources' (Table 4.7). These may be funds probably generated from within. Again, the relevance of development partners and NGOs in district assembly project construction is evident.

Table 4.7: Distribution of source of funds received by District Assemblies - 2005

Source of funding for DA project -2005	Mean Amount	# of districts
First source of funding		
Central Government	282,022,753	42
District Assembly Common Fund (DACF)	234,041,499	46
Development partners	152,014,499	48
Other sources	2,121,456,424	23
All	**494,975,085**	
Second source of funding		
Community	3,981,442	10
DACF	60,603,859	25
Development partners	284,196,201	6
Other sources	212,300,000	1
All	**82,675,907**	
Third source of funding		
DACF	103,585,000	7
NGO	459,716,650	1
Other sources	150,000,000	2
All	**148,481,165**	

Source: Ghana PETS 2007.

[3] Major in terms of the quantum of funds received from the source.

In 2006, the private sector was the major provider of funds to the DAs for construction projects. As in 2005, "Other Sources" of funding contributed most for DA developments projects. For the second major source of funding it was mostly from NGOs and Development partners (Table 4.8). A similar pattern is noticed regarding the third major source of funding in 2006.

Further examination of the results showed that over the two years, there had been a considerable drop in allocations from the DACF to the DAs for construction projects. Indeed, DACF average allocations to the DAs in 2006 amounted to less than half (41percent) of what was allocated in 2005. This inference is consistent with figures reported in Table 4.2 above. By contrast, the average allocation of funds by the Central Government to the DAs went up by 34 percent from 282 million cedis in 2005 to 379 million in 2006.

Table 4.8: Distribution of source of funds received by District Assemblies- 2006

Source of funding for DA project -2006	Mean Amount	# of districts
First source of funding		
Central Government	379,134,757	8
District Assembly Common Fund (DACF)	131,404,962	41
Development partners	278,144,197	25
Other sources	1,470,414,446	8
Philanthropist	650,000,000	1
All	**334,790,385**	
Second source of funding		
District Assembly Common Fund (DACF)	39,719,688	16
Development partners	433,457,388	3
NGO	459,716,650	1
Other sources	176,800,000	1
All	**122,495,420**	
Third source of funding		
District Assembly Common Fund (DACF)	3,402,500	6
Development partners	271,300,445	6
All	**137,351,473**	

Source: Ghana PETS 2007.

4.8 DACF Total receipts and Transfers in 2005 and 2006

Data on DACF was collected through interviews with the Deputy Administrator and also through records provided on diskettes. Both sources of information and the results are presented and discussed below. There were huge discrepancies in the figures reported which again goes to reiterate the issue of poor financial record keeping particularly at the District level.

Funds received from MOFEP and transferred by DACF to DAs

The responses obtained from the DACF during the interview are shown in Table 4.9. [4]Non-response was a significant factor in this section of the data collection, and should be considered in interpreting the results.

Between 2005 and 2006 the DACF received 2.8 billion cedis from the MoFEP and transferred 1.6 billion to the DAs. This represented only 58 percent of the total amount received thus leaving nearly 42 percent for other DACF activities. Giving that the primary objective of the DACF is to fund DA activities, the allocation of only 52 percent of funds received from MoFEP to the DAs is worrisome and though some of the funds might have gone into administrative and other relevant costs 42 percent share is quite a sizeable proportion of the funds and the conjecture is that some leakage might have occurred. If the questionnaire was structured to ask more probing questions then the actual impact of the leakage would have been established. Unfortunately, that was not the case and so a definitive amount of leakage or wastage cannot be provided.

Further analysis shows that 42.4 percent of the amount allocated to the DAs was earmarked for basic educational construction projects.

Table 4.9: Funds received and Transferred by the DACF (response from Questionnaire)

Quarter	Amount received from MOFEP	Amount transferred to Das	Allocation to education
Q1_2005	2,578,350,000	1,632,023,834	620,169,057
Q2_2005			
Q3_2005			
Q4_2005			
Q1_2006	32,500,001		29,575,001
Q2_2006	90,000,000		34,200,000
Q3_2006	56,100,000		8,415,000
Q4_2006	61,377,000		61,377
Total	**2,818,327,001**	**1,632,023,835**	**692,420,435**
		% allocation to education	*42.4%*
Leakage	**1,186,303,166**	**-42.1%**	

Source: Ghana PETS 2007.

The second batch of data obtained on diskette from the DACF on funds transferred to the DAs is illustrated in Table 4.10 below. The summary analysis for all 48 DAs

[4] It is presumed that the respondent gave spontaneous answers. With regard to amount transferred respondent was also asked for the percentage allocated for basic educational development projects. We then calculated the amount allocated for education from the percentages.

surveyed shows that approximately 1.6billion cedis was transferred by DACF to district assemblies in both 2005 and 2006. Transfers in 2006 were slightly higher than the previous year. Assuming that the data provided on diskette is more reliable then comparing with the receipts indicated in Table 4.9, it can be established that transfers by DACF were short by (2.8bil – 1.6bil) cedis, giving a conservative leakage of 43% of total funds received. Another point worthy of note is the fact that two districts assemblies and one Municipal Assembly did not receive any funds from the DACF in 2005 and 2006 respectively.

Table 4.10: Funds transferred by DACF (response from diskette)

NO	DISTRICT ASSEMBLY	Transfers in 2005	Transfers in 2006	TOTAL
1	ADAKLU ANYIGBE	16,666,102		16,666,102
2	ADANSI NORTH	24,246,461	13,699,442	37,945,903
3	AGONA	22,648,257	18,445,456	41,093,713
4	AKATSI	18,747,044	10,990,561	29,737,605
5	AMA	23,001,566	54,279,256	77,280,822
6	AMENFI WEST	18,740,907	24,474,705	43,215,612
7	ASSIN SOUTH	19,407,821	17,543,027	36,950,848
8	ASUNAFO NORTH	9,478,433	15,469,477	24,947,910
9	ATWIMA NWABIAGYA	12,097,072	12,916,703	25,013,775
10	BEREKUM	9,932,342	9,599,386	19,531,728
11	BIRIM NORTH	19,713,109	24,745,642	44,458,751
12	DORMAA	9,380,944	12,479,547	21,860,491
13	EAST AKIM	18,754,029	19,067,071	37,821,100
14	EAST GONJA	11,778,631	10,899,773	22,678,404
15	GOMOA	29,223,515	27,060,154	56,283,669
16	HO MUNICIPAL	16,456,396	19,841,979	36,298,375
17	KASSENA NANKANA	19,324,346	20,907,436	40,231,782
18	KETA	17,443,965	10,712,164	28,156,129
19	KINTAMPO NORTH	11,817,238	10,096,938	21,914,176
20	KWAHU SOUTH	18,868,360	16,419,684	35,288,044
21	MANYA KROBO	19,637,404	15,450,650	35,088,054
22	NKORANZA	10,761,453	8,899,852	19,661,305
23	NKWANTA	26,150,303	9,465,654	35,615,957
24	NZEMA EAST	19,495,319	18,692,310	38,187,629
25	SAVELUGU/NANTON	11,682,720	8,889,817	20,572,537
26	SEFWI WIAWSO	19,732,453	20,285,610	40,018,063
27	SEKYERE WEST	7,480,596	8,693,264	16,173,860
28	TALENSI NABDAM	22,228,650	18,343,143	40,571,793
29	TANO NORTH	9,906,823	8,162,116	18,068,940
30	AHAFO ANO SOUTH	11,822,170	14,067,807	25,889,977
31	AKWAPIM SOUTH	17,739,700	20,268,868	38,008,568
32	AMANSIE EAST	27,619,825	12,207,915	39,827,740
33	AOWIN-SUAMAN	28,686,358	21,727,800	50,414,158
34	ASANTE-AKIM NORTH	10,018,492	11,940,542	21,959,034
35	CAPE COAST MUNICIPAL	18,414,733	19,322,377	37,737,110

NO	DISTRICT ASSEMBLY	Transfers in 2005	Transfers in 2006	TOTAL
36	DANGBE EAST	20,365,230	21,054,045	41,419,275
37	JIRAPA		13,048,560	13,048,560
38	KUMASI METROPOLITAN A.	14,319,257	31,123,557	45,442,814
39	KWABRE	10,887,493	13,183,967	24,071,460
40	KWAEBIBRIM	20,257,282	11,398,351	31,655,633
41	SABOBA/CHEREPONI	17,016,296	15,425,899	32,442,195
42	SAWLA/TUNA-KALBA	12,338,626	9,887,352	22,225,978
43	SHAMA AHANTA E. MET	19,485,974	25,925,055	45,411,029
44	TAMALE METRO	8,178,485	10,168,572	18,347,057
45	TEMA MUNICIPAL	25,006,828	30,472,871	55,479,699
46	TOLON-KUMBUNGU	13,003,752	12,207,012	25,210,764
47	TWIFO-HEM. LOW DEN.	21,962,392	23,828,363	45,790,755
48	WA MUNICIPAL		11,415,816	11,415,816
	TOTAL	**791,925,153**	**795,205,547**	**1,587,130,700**

Source: Ghana PETS 2007.

Funds received from the DACF as reported by the DAs are not consistent with those reportedly transferred by the DACF to the DAs. Whereas, the DACF reported having transferred funds in the region of 3 billion (Table 4.9), the total receipts reported by the DAs from the DACF is over 400billion cedis (Table 4.10). Again, this goes to emphasis the challenges posed by vertical analysis of the PETS data. In this case, we are unable to assign reasons for the huge discrepancy and it is open for further investigations.

4.9 School Constructions

Apart from academic responsibilities, heads of educational institutions also have the mandate to provide the enabling environment and conditions for learning. Consequently, budget allocations are usually approved for development and infrastructural projects. The PETS solicited information from the DEOs regarding construction projects that were being undertaken or were completed during the period under review. It is important to note that data reported on this issue were scanty as such interpretation may not have much statistical significance.

New construction projects in 2005

The 2007 PETS also solicited information on new constructions undertaken in all districts covered. The questions centred on the project location, description of the project, number of structures, date the budget was approved, budget amount, date the contract was awarded, expected completion date and actual amount expended.

Of the 48 Districts surveyed, only three (i.e. 6 percent) reported undertaking new constructions during the period under review. The rest did not respond to the question or reported that they did not undertake any new constructions in 2005. A

study of the Table A5 shows that the investments were mainly in the construction of classrooms for primary schools and teachers' bungalows. A total of 36 new structures were completed in year 2005. Overall they were either completed on exactly the approved budget or less than such budgets. An amount of ¢4.05bn was spent out of a budget of ¢4.48bn**.** The summary details are presented for the three beneficiary districts in Table 4.11.

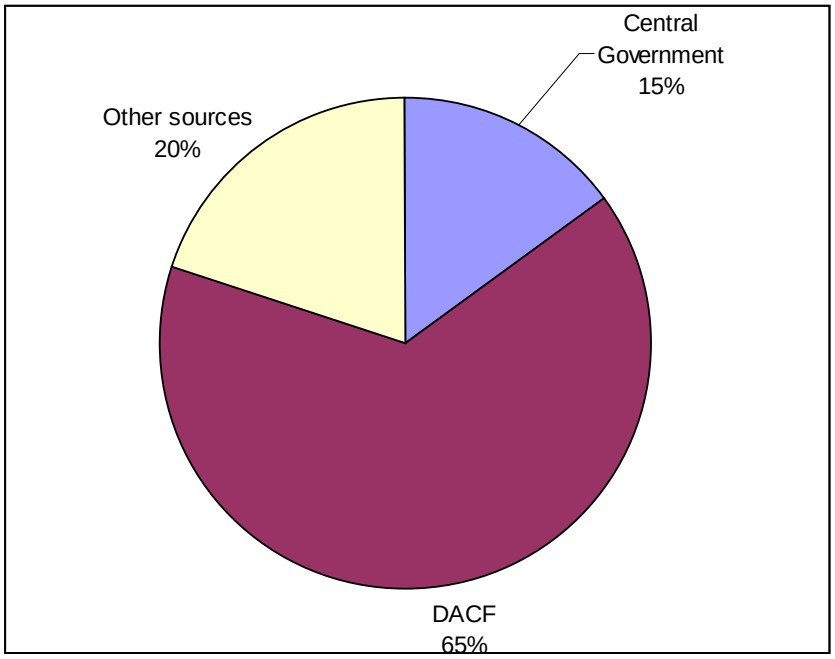
Table 4.11: Cost of new Constructions Projects by DEO in 2005

DEO	Total budget ¢	Total actual cost ¢	Cost difference (Budgeted-Actual) ¢
Kwaebibirem	1,388,914,147	965,538,499	423,375,648
Savelugu/Nanton	1,416,127,373	1,416,127,373	0
Tolon/Kumbungu	1,681,417,155	1,674,152,655	7,264,500
Total	**4,486,458,675**	**4,055,818,527**	**430,640,148**

Source: Ghana PETS 2007.

Analysis of the data showed that all of the funds for construction projects in 2005 came from three main sources namely, DACF, Central Government and "Other Sources" not specified. The distribution of their contributions is illustrated in Figure 4.2 below.

Figure 4.2: Source of funding for construction projects in 2005



Source: Ghana PETS 2007.

New construction projects in 2006

In 2006, only 3 districts in then PETS sample undertook new construction projects. These are Savelugu/Nanton, Tolon/Kumbungu and Sefwi Wiaso (Table 4.12).

Though there were constructions in Dormaa district, the DEO could not provide figures on budgets and costs.

A total of 23 new structures were constructed in year 2006. These consisted of mainly new Primary and JHS schools as well as new teachers' bungalows. Over all, they were either completed on exactly the approved budgets or less than the budgeted cost.

The information in Table 4.12 suggests that Savelugu/Nanton, and Tolon/Kumbungu were project beneficiaries in both 2005 and 2006. Only Savelugu/Nanton reported the source of funds for construction projects in 2006, and the data shows that most of the funds used for the constructions either came from the District Assembly Common Fund (DACF) or "Other Sources" not specified. Indeed, it is believed that most of the DEO capital funds are controlled by the District Assemblies are in charge of implementation and monitoring of such projects.

Table 4.12: Cost of new constructions by DEO in 2006

DEO	Total budget ¢	Total actual cost ¢	Cost difference (Budgeted-Actual) ¢
Savelugu/Nanton	2,063,907,620	1,431,039,858	632,867,762
Sewfi Wiaso	1,417,292,219	1,291,377,431	125,914,788
Tolon/Kumbungu	826,018,137	799,278,468	26,739,669
Total	**4,307,217,976**	**3,521,695,757**	**785,522,219**

Source: Ghana PETS 2007.

4.10 Concluding Remarks

DACF submitted their records of fund distribution to DAs on diskette to PETS in a good format. The DACF's records, however, were grossly inconsistent with the records reported by DAs. In fact, DAs reported to have received much higher amount than that the DACF indicated to have distributed to DAs. Given this caveat, the analysis of DACF focused on the use of the funding at district level.

Based on DACF's account, it retained 42 percent of DACF at the centre. This seems to be a large proportion to be retained at the centre given that the purpose of the DACF is to empower districts to with more financial resources for local projects. This point, however, is beyond the scope of this PETS and needs to be verified with DACF and MOFEP. DACF have allocated about 40 percent of DAs' funding to primary school constructions. This allocation, however, was not enforced. Based on DAs' report, only 11 percent of the total funding received was used for primary school infrastructure projects.

Based on the above findings, transparency appears to be an important issue in allocating and distributing DACF at both the centre and the district level. It is critical to put DACF under public scrutiny because financial resources are much more fungible than materials such as textbooks.

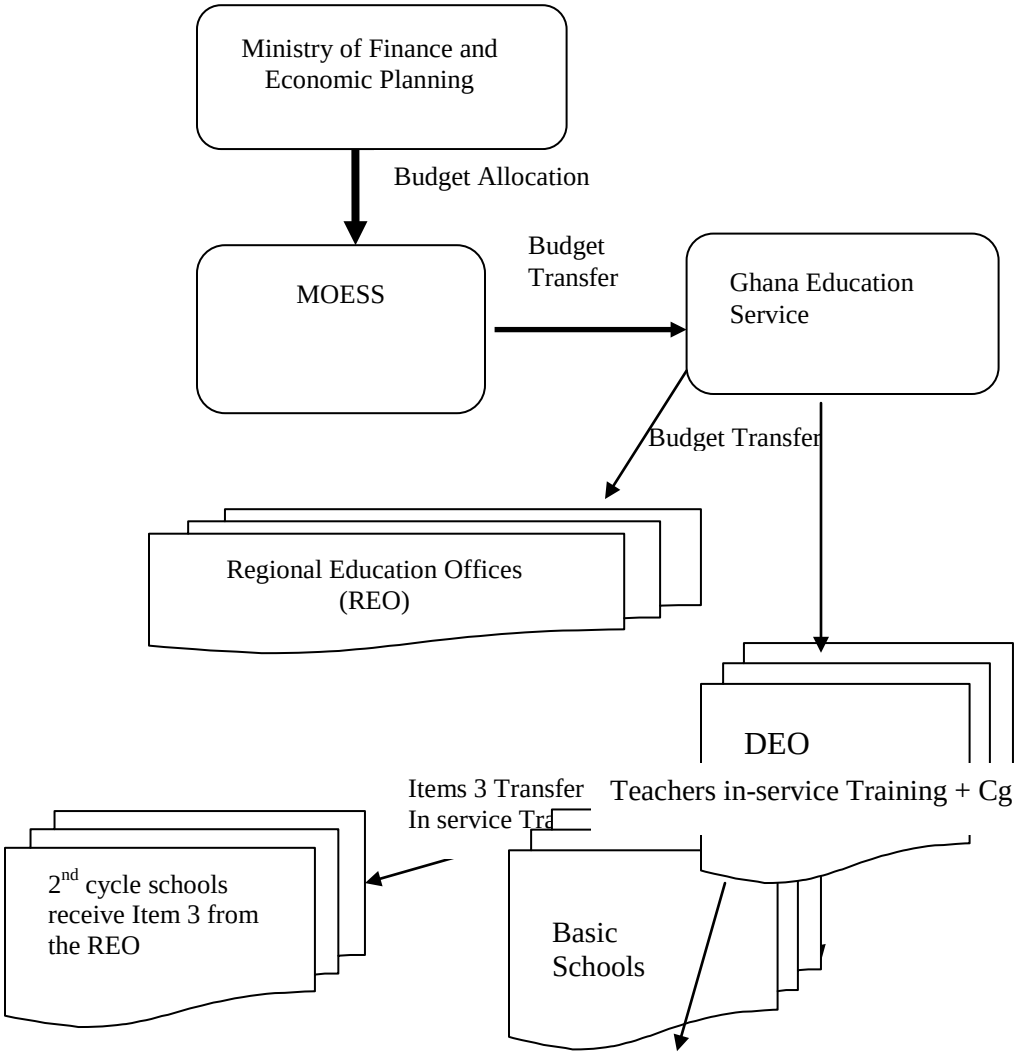
Two recommendations are made to improve transparency of DACF management. First, DACF should inform regularly all districts, not only DAs, but also DEOs and DHOs, the total amount of budget received by the DACF, the proportion of funding it intends to releases to DAs, the approximate sectoral allocation at district level, and the intended use of the funds retained at centre. Second, within each district, DAs should publicly display the total funding received and allocation of funding. These two measures will increase the transparency of the DACF flows and ensure the downward accountability of DACF and DAs.

CHAPTER 5
ITEMS 3 EXPENDITURE: SERVICE ACTIVITIES

5.1 Items 3 Financial Resource Distribution Channels

Item 3 public spending is financial resources provided to lower administrative offices and agencies to pay for their service activities. It is worth noting that Item 3 is a financial resources that channeled directly by GES to its subordinate agencies and offices as demonstrated in Figure 5.1.

Figure 5.1: Tracking Items 3 Service Activities Flows



5.2 Item 3 Resource Transfers between Central Ministries and Agencies

No questionnaire was filled for the MOFEP as the understanding was that the data required was only available at the Controller and Accountant General's Department.

The results indicate that MOESS disbursed all capitation grants, and funds for textbooks and teaching materials as expected, but disbursed only 55.2% of all receipts of Item 3 funds. Overall, 13.3% of the total funds received by MOESS were not accounted for as shown in Table 5.1 below. According to the GES however, the amount was not meant only for GES; rather these funds were also to cater for other agencies of the MOESS such as National Council for Tertiary Education, the Sports Division, Council for Scientific and Industrial Research and the Atomic Energy Commission among others.

Table 5.1: Distribution of funds by MOESS-2005/06

FUNDS	Total amount	Variance	% Shortfall or Overrun
Item 3 Funds			
Amount of item 3 funds received by MOESS from MOFEP	61,200,000,000		
Amount of Item 3 funds transferred by MOESS to GES	33,775,635,000	27,424,365,000	-44.8
Capitation Grant			
Amount of capitation grant received by MOESS from MOFEP	129,446,619,000		
Amount of capitation grant transferred by MOES to GES	129,446,619,000	0	0.0
Textbooks			
Amount received from MOFEP for textbooks and teaching materials	15,525,000,000	0	0.0
Amount transferred by MOESS to GES for textbooks and teaching materials	15,525,000,000		
Overall Total Received	206,171,619,000	27,424365,000	**-13.3**
Overall Total Transferred	**178,747,254,000**		

Source: Ghana Public Expenditure Tracking Survey, 2007

For Item 3 expenditure, GES indicated that it transferred more than it received by almost 100 percent. It is possible that funding from previous year (2005) was delayed and only transferred to lower level administration in 2006. Further investigation is needed to verify this discrepancy and reasons behind it.

Table 5.2 Funds received and transferred by GES

FUNDS	Total amount	Variance	% Shortfall or Overrun
Item 3 Funds			
Amount of item 3 funds received by GES	23,943,573,089	23,248,309,937	97.1
Amount of Item 3 funds transferred by GES	47,191,883,026		(Item 3 funds releases are over and above amounts received by 97%)
HIPC Funds			
Amount of HIPC funds received by GES	117,178,317,000	1,075,299,000	-0.9 (amount released is almost 1.0% less than receipts

Source: Ghana Public Expenditure Tracking Survey, 2007

5.3 The Patterns of Receipts and Spending of Item 3 by Regional Education Offices

The PETS collected information on Regional Education Offices relating to income receipts and expenditure on 3 components, namely Item 3 (Service Activity), sports and culture levies from both basic and second cycle schools. Regional Education Offices data on item 3 receipts from Eastern and Volta regions were inconsistent with other values and were considered as outliers and consequently deleted from the computations. On average the 7 regional offices surveyed received ¢137.8 million for service activities but spent only ¢46.3 million, indicating that 66% of the Item 3 funds were not accounted for in the expenditure returns (Table 5.3).

Table 5.3: Regional Education Office item 3 receipts and expenditure, 2005/06

REGION	Total Item 3 Amount received	Total Item 3 Expenditure returns
ASHANTI	111,061,342	93,007,104
CENTRAL	12,167,205	12,167,205
GREATER ACCRA	54,164,207	43,610,200
NORTHERN	638,863,761[5]	47,732,974
UPPER EAST	45,819,517	42,130,200
UPPER WEST	16,336,211	5,080,000
WESTERN	86,489,869	80,230,880
Total	**964,902,112**	**323,958,563**
Mean	**137,843,159**	**46,279,795**
Variance		**-66.4%**

Source: Ghana Public Expenditure Tracking Survey, 2007

[5] Figure for Northern Region receipts appear inconsistent with other values, suggesting that leakage may be over estimated.

REOs were also found to have retained substantial amounts of sports and cultural levies received from both basic and second cycle schools. Measured leakages for basic and second cycle schools stood at 52 percent (Table 5.4) and 48 percent respectively.

Table 5.4: Regional Education Office basic schools sports, culture levies/fees receipts and expenses, 2005/06

Region	Basic schools SCLF amount received	Basic schools SCLF amount expenditure items
Ashanti	1,544,061,997	974,379,490
Central		
Eastern	957,104,746	44,876,316
Greater Accra		
Northern	788,163,800	158,510,000
Upper East	173,428,502	103,616,217
Upper West	330,439,745	306,854,348
Volta	619,447,991	545,657,000
Western*		
Total	**4,412,646,781**	**2,133,893,371**
Mean	**1,260,756,233**	**609,683,820**
Variance		**-51.6%**

**There were no figures reported for Central and Gt. Accra but the expenditure for Western region was rather high and as such was deleted.*

Source: Ghana Public Expenditure Tracking Survey, 2007

A study of the expenditure pattern of Item 3 at the REO shows that 46 percent of the total expense goes to support T&T and night allowance for official travels, and a third on maintenance and running cost of official vehicles (Table 5.5). The expenditure pattern also reveals very little allocation accorded to training of non-teaching staff at the REOs. There were no expenses incurred on enrolment drives and support to needy students as these are probably better handled by the DEO, District Assembly and at the school levels.

Table 5.5: REO Item 3 expenditure, 2005/2006

Expenditure Item	Item 3 Total expenditure	Percentage share of expenditure (%)	Average expenditure on item per region	Sample REO
Community and school relations	6,000,000	1.0	666,667	9
Enrollment Drive		0.0		9
In-service Training for non-teaching staff	2,352,000	0.4	261,333	9
In-service Training for teaching staff	33,135,000	5.7	3,681,667	9
Maintenance and running cost of official vehicles	179,873,708	30.8	19,985,968	9
Minor repairs	30,589,455	5.2	3,398,828	9
Provision of Office stationery	63,947,600	11.0	7,105,289	9
Support to needy students		0.0	-	9
T and T and night allowance for official	267,405,923	45.8	29,711,769	9

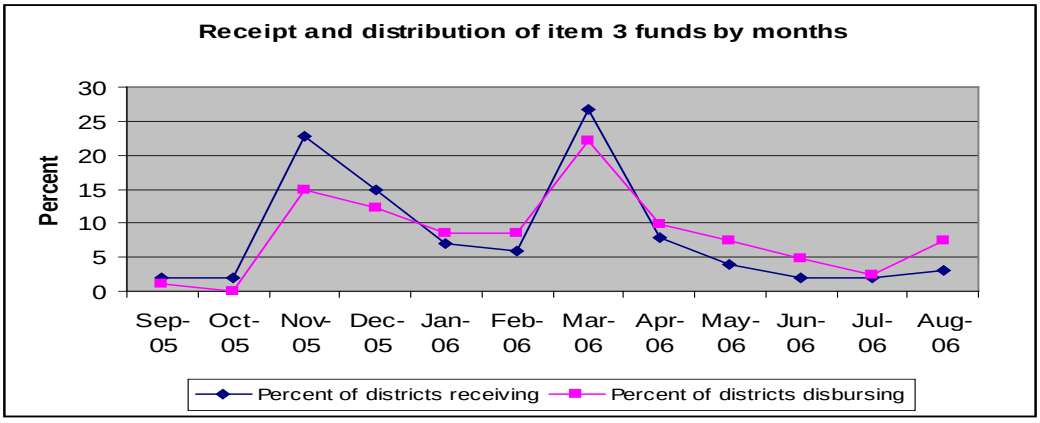
travels		
Total	**583,303,686**	**100.0**

Source: Ghana Public Expenditure Tracking Survey, 2007

5.4 The Patterns of Receipts and Spending of Item 3 by District Education Offices

Information on Item 3 receipts and expenditure returns are discussed below. DEO were more willing to report Item 3 receipts (N=47) and expenditure returns (N=42) than Item 3 disbursement to schools (N=11). Figure 5.2 shows that receipts and disbursement appear to follow the same pattern. The peaks and lows generally suggest shorter delays in the release of Item 3 funds by DEOs, though further analysis is necessary to determine the exact duration of delays in the system.

Figure 5.2: Percent of DEOs receipts and disbursement of item 3 funds by month



Source: Ghana Public Expenditure Tracking Survey, 2007

A critical scrutiny of expenditure made on various components of Item 3, indicates two- thirds (66%) of the total amount was spent on vehicle maintenance, Other Service Activities (where probably allowable use of discretion is maximized) and T&T and night allowance for official travels. Office stationery purchases also accounts for approximately 13.0% of total. In-service training accounted for a little under 11%. DEOs assistance to needy students, together with community and school relations attracted the least expenses, 1.3 % in total (Table 5.6)

Table 5.6: DEOs Item 3 expenditure returns by component and amount

Expenditure item	Amount spent	Percent share of total amount (%)	Expenditure Ratings	Number of sampled DEO
Community and school relations	53,325,500	1.0	9	8
Enrollment drives	155,254,374	2.9	7	11
In-service training, non-teaching	72,777,095	1.4	8	13
In-service training, teaching	509,469,900	9.5	5	26
Minor repairs	345,695,091	6.5	6	30
Office stationery	686,127,547	12.8	4	35
Other service activities	1,170,467,389	21.8	2	38
Support to needy students	17,893,383	0.3	10	4
T&T and night allowances	1,044,635,140	19.5	3	39

Vehicle maintenance	1,302,865,664	24.3	1	39
Total	**5,358,511,083**	**100.0**		**48**

Source: Ghana Public Expenditure Tracking Survey, 2007

Looking at the mean values, it was observed that the DEOs received roughly ¢218 million per district and disbursed about ¢150 million, indicating a shortfall of 31%. This means that on average 31% of Item 3 funds received by DEOs were neither released to schools or spent on the selected administrative expenditure Items (Table 5.7)

Table 5.7: Total and mean of Item 3 funds received and disbursed by DEOs

Indicator	Total Item3 Amount Received	Item 3 Amount disbursed to schools	Item 3 Amount Spent on Expenditure Items	Overall Total Item 3 Amount Disbursed	Variance
Overall Total	10,249,039,772	1,265,820,332	5,358,511,083	6,624,331,415	-35.4%
Average per District	218,064,676	115,074,576	127,583,597	150,552,987	-31.0%
Sample DEOs	47	11	42	44	

Source: Ghana Public Expenditure Tracking Survey, 2007

5.5 Concluding Remarks

Based on the analysis of the data available it was observed that there were various degrees of shortfalls between funds received and funds disbursed at almost all levels of the educational institutions. The data did not allow for vertical comparison but horizontally we observed some quite serious leakage. In most instances, average rather than total value was used in reporting leakages.

On average the 7 regional education offices surveyed received ¢137.8 million for service activities but spent only ¢46.3 million, indicating that 66% of the Item 3 funds were not accounted for in the expenditure returns.

The REOs were also found to have retained substantial amounts of sports and cultural levies received from both basic and second cycle schools. Observed leakages for basic and second cycle schools stood at 52% and 48% respectively

Finally, the 2007 PETS study revealed that it cannot be over emphasized that the issue of leakage is serious and an impediment on the path to achieving the educational Millennium goals in Ghana. Again, the emphasis is that the leakages observed in this analysis do not in any way suggest official corruption, but suffice to say that it is worrisome.

Based on the analysis and interpretation of the PETS data we recommend that;

1. A pragmatic, consistent and transparent approach be adopted by the ministries and public institutions towards financial record keeping.

2. Establish efficient monitoring, supervisory and auditing system to enforce complete and total compliance with guidelines for the use of funds.

3. Educational institutions should be more transparent with information by displaying financial records on school notice boards rather than in staff offices.

4. Guidelines for the use of Item 3 funds in particular should be made available to all managers and it's usage enforced. It is noted that greater proportion of the leakage observed in this analysis occurred under Item 3 funds.

5. Regular evaluation of the implementation and the impact of the capitation grant initiative be conducted to ensure efficient management of the grant.

6. T&T and night allowance for official travels be re-examined as expenditure item for Item 3 funds, because in some instances over half of expenditure is attributable to this category. It could be that only a few officials undertake these travels (to the detriment of qualified colleagues) just for the sake of the allowances. Perhaps it is time for some restrictions to be put in place to regulate such travels.

PART II - HEALTH SECTOR PETS

CHAPTER 6
HEALTH SECTOR PETS INTROCUTION

6.1 General Public Spending in Health Sector

A snapshot of the Ghana health care sector suggests that annual total expenditures in 2004[6] comprised 4.5% of the GDP, which translates into a per capita expenditure of US$98. Life expectancy at birth was 58 years for females and 56 for males. General government participation in the health sector amounts to 32%. Total public health expenditures accounted for 16.2% of the total public allocations. Health sector represents the third most important area of public spending after education comprising 28.1% and infrastructure of 17.3%. The share in the public finance is slightly higher than the ones observed in most developing countries.

In 2006, the total expenditures of the MOH amounted to ¢5,020 billion or US$546 million (US$25 per capita). Although most of these resources come from Government (51.7%), each source of funding (SOF) contributes in different proportions to each type of expenditure. For instance, GOG finances 97.6% of total personnel expenses (item 1) while it only covers 8.4% of service expenses (item 3). Table 6.1 shows the sources and uses of health resources.

Table 6.1: Health expenditures distribution by SOP group, report for the year ended 12/2006, Billion of cedis

Sources/Use	Item 1	Item 2	Item 3	Item 4	Total
GOG	2,296.0	71.0	109.0	118.0	2,594.0
IGF	56.0	141.0	353.0	24.0	574.0
DPF	-	62.0	191.0	113.0	366.0
Program	-		562.0		562.0
HIPC	-			250.0	250.0
Fin. Credit	-			418.0	418.0
NHIS	-		85.0	171.0	256.0
Total	2,352.0	274.0	1,300.0	1,094.0	5,020.0

Source: MOH Financial Statement for 2006

As shown in the previous table, forty seven percent (47%) of the total public health expenditures were allocated to pay for salaries. Most of these resources come from GOG. The total amount allocated in item 3 was 1,300 billion of cedis. Although item 3 represents a lower amount (26%), these expenses are a fundamental contribution to the efficient functioning of all health facilities. The main source of financing for item 3 was the MOH programme (43.2%), followed by IGF (27.2%). This distribution clearly reflects that funding outside the GOG is

[6] See Ghana Health Sector Review Report for 2004.

crucial to cover item 3 expenses. Most of the MOH funds for item 3 was provided by donors (DPF& IGF).

Public sector reform in Ghana conceives improving government spending as a necessary step to implement effective public policies. To support this effort, PETS has been launched. The main insight of the PETS is to capture leakages and delays in the flow of funds. This analysis uses 2006 data. In order to carry out the evaluation, information from PETS was complemented with other sources of data. Vertical analysis was conducted to validate the findings. In addition, the PETS information was triangulated with publicly audited figures in order to conduct external checks of the findings.

In this report, the findings are first presented based on PETS figures. Then, further exploratory analysis based on external information was conducted to explain the discrepancies and delays found in PETS. The key aim of this PETS therefore was to capture the imbalance between funds released and funds received at the upper and lower levels of government. In addition, it aims to measure delays in the disbursement of funds from the central level to the facilities. The report also includes an analysis of the flow of funds within the NHIS. Once the leakages are identified, a regression analysis was undertaken to evaluate the determinants of leakage at the district level and the impact of leakage on health services provision. In a third phase of the PETS, a Data Envelope Analysis (DEA) was implemented to assess the performance of health facilities, and to correlate the facility's performance with level of item 3 expenses.

6.2 Measurement of relevant variables

In this report, six relevant indicators of the flow of funds within the system were studied. Leakage is defined as the difference between resources transferred at higher level and resources received at the subsequent level. This variable is measured at all levels of government (central, regional and district). Delay is evaluated as the difference between the date the resources were disbursed and the date the funds were received. It is measured at central, regional and district levels. Source of revenues is defined as the revenue composition between two sources IGF and NHIS.

The report captures distribution of revenues at the facility level. The distribution of expenses is measured as the composition of annual service expenses by item: training and conference cost, consultancy, materials and consumables, printing and publications, and rent and Travel and Transport (T&T). The report captures this variable at the GHS, district level and facility level. Expenditure return describes the expenditures at the facility level according to the following categories: personal salaries, personal allowances, staff bonus, T&T, Drugs, office consumables, maintenance and repairs, utility bills, fuel bills, in-service training, accommodation, cleaning, other. Lastly, the report has an analysis of the patient

information. This includes information about health insurance coverage, total expenditures, payment by sources, and perception of quality.

6.3 External validation of the PETS findings

Once the analysis of the PETS information was concluded, investigations were conducted into the causes of discrepancies and delays found in PETS. Audited figures recently available were reviewed. Table 2 displays these figures for item 3 expenses. These figures were used to conduct external validation of the figures in PETS.

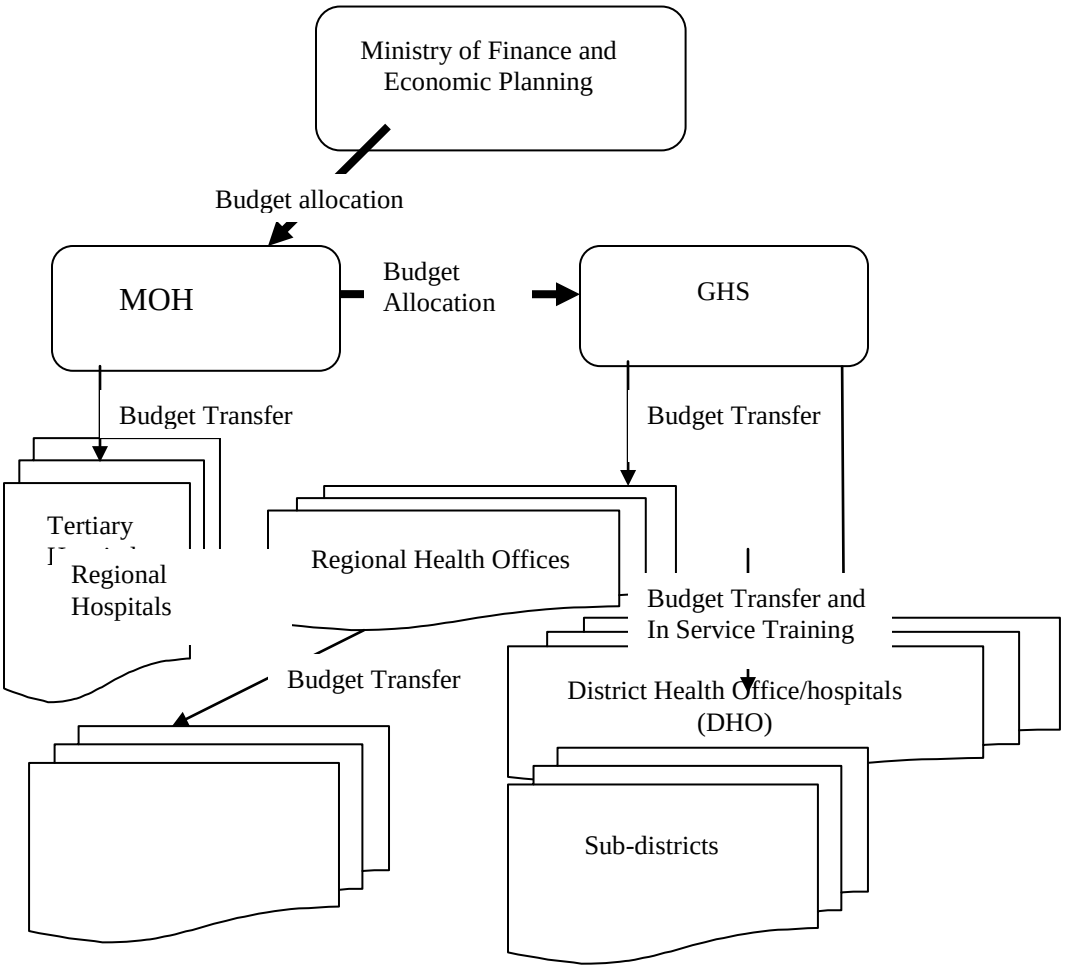
In 2006, the MOH allocated ¢45.7 billion as item 3. Out of this total, the MOH spent at the central level ¢12.8 billion (28%). MOH transferred to tertiary hospitals ¢1.13 billion. The rest of the amount (¢31.8 billion) was disbursed to GHS, regional and district health services. In general, this information confirmed PETS findings at central level and lower level of government.

CHAPTER 7
TRACKING ITEM 3 IN HEALTH SECTOR

7.1 Distribution Channels of Items in Health Sector

Item 3 is essential for health facilities to be able to provide services as it pays for essential expenditures to run daily activities, including minor repairs, utility and fuel bills, and keep vehicles in running condition. It also pays for health workers to attend training to keep their knowledge updated. Figure 7.1 shows funds flows for Item 3 in health sector.

Figure 7.1: Distribution channels of Item 3 in health sector

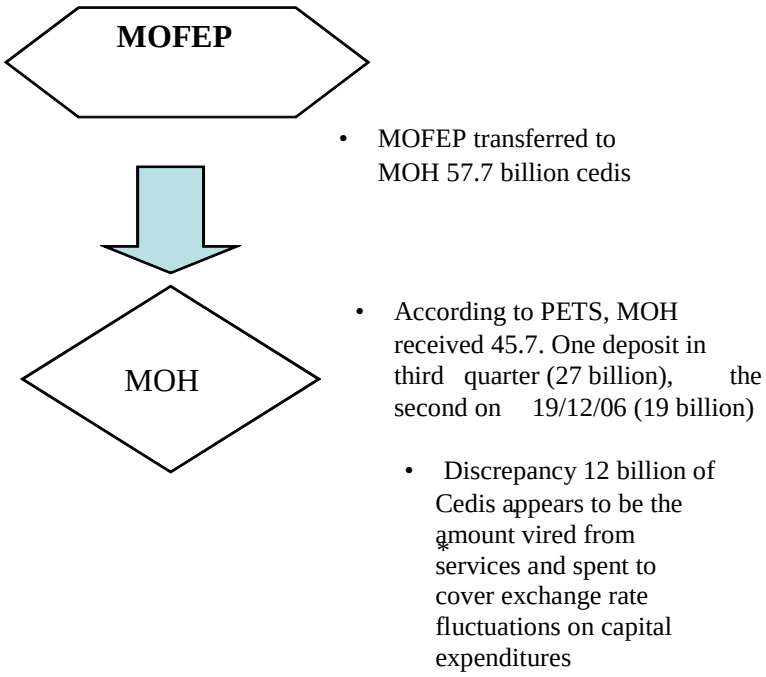


7.2 Item 3 Transfers and Receipts between Central Ministries, Agencies and Tertiary Hospitals

In the following sections, the description of the flow of funds is divided between upper and lower levels of government. Results are presented in this way to elicit the reduction in funding between different levels of government so that problems in the flow of funds could be resolved in the future. In addition, this structure helps to identify the origin of the delays in the flow of funds

The analysis of the MOFEP questionnaire indicated that the total amount released from the MOFEP to MOH was 57.7 billion of cedis. According to the 2006 PETS, the MOFEP released funds to MOH on the following dates: 31st March; 25th July and 19th December From the data reported by the MOH, out of this amount, the MOH received 45.7 billion of cedis. This implies a 21% reduction in funding at this level. Additional investigation indicates that a ¢12 billion difference appears to be the amount applied for by MOH to MOFEP to be used to cover exchange rate fluctuations on capital expenditure. Figure 7.2 displays the resources released from MOFEP and received by the MOH.

Figure 7.2: Transfer of funds from MOFEP to MOH for item 3, PETS 2007 Cedis



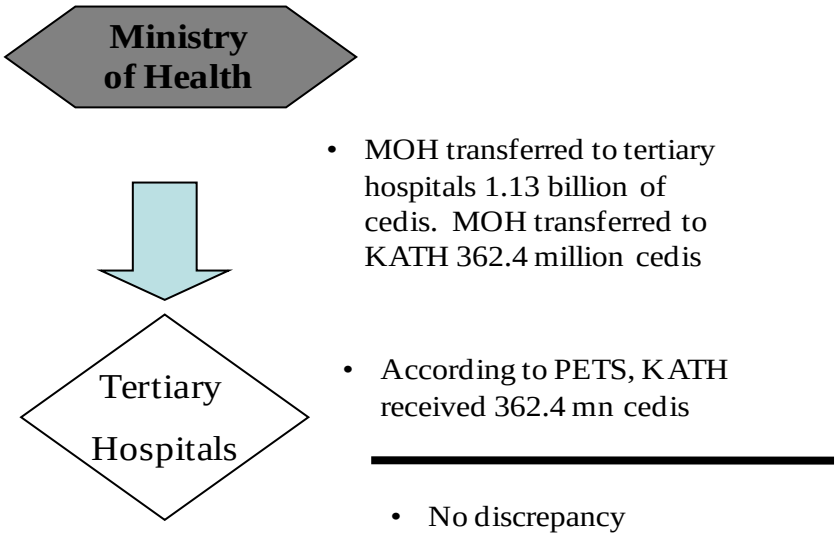
Source: Ghana Public Expenditure Tracking Survey, 2007

Most of the funds were received by MOH with delays of almost 6 months. Given the available information in PETS, it is not possible to sort out if the delays are due to problems in the disbursement of resources from the MOFEP; or if they are due

to problems in the requisition of the funds from the MOH to MOFEP. Further analysis needs to be done in order to pin point the true causes of these delays.

Out of the total amount received by MOH (¢45.7 billion), ¢1.13 billion (2.5%) were transferred to tertiary hospitals. Figure 7.3 reveals the resources transferred to tertiary hospitals and the resources spent at KATH. PETS results are consistent with external sources of information.

Figure 7.3: Transfer of funds from MOH to Tertiary Hospitals for item 3



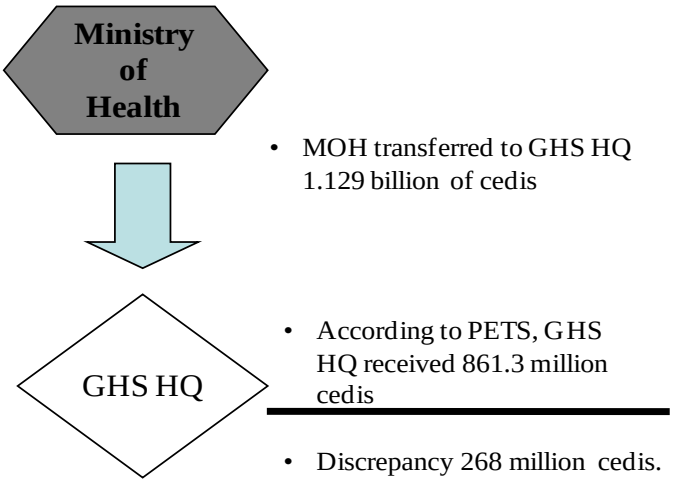
Source: Ghana Public Expenditure Tracking Survey, 2007

KATH only received resources for item 3 in March and after September 2006. The hospital had to deal with the delay and, after March, plan their cash flow accordingly to cover previous and future expenses. The hospital generated ¢75.4 billion in internal revenues from patients. Out this amount, 1¢3.5 billion came from the National Health Insurance Scheme Lastly, in the distribution of expenses within the hospital, material and consumables are the largest expenses in item 3.

The analysis of the flow of funds from MOH to GHS indicates that the MOH released to the GHS 31.8 billion of cedis. All the resources were transferred during the fourth quarter. This figure represents 69% of the total resources received by the MOH, which means that MOH retained 31% of the funding.

In 2006, MOH records that it disbursed ¢1.129 billion to GHS Headquarters (HQ) and Psychiatric Hospitals. . According to PETS, of this amount, GHS HQ received ¢861.3 million (see Figure 7.4). All resources were received during the month of August. This uneven distribution reflects delay in the disbursement of funds. An additional tranche, which was part of 2006 budget, reported by MOH to have been transferred in January 2007, was not included in PETS since the PETS only covered funding flows and activities in 2006.

Figure 7.4: Transfer of funds from MOH to GHS for item 3



Source: Ghana Public Expenditure Tracking Survey, 2007

GHS HQ allocated most of the item 3 expenses to Training and Conferences Cost (53.65%) (see Table 7.1). The amount may indicate room for discretionary allocations in the distribution of item 3 expenses. This amount corresponds to the expenses of the resources deposited in August 2006. Because expenses are planned on a yearly basis, one cannot extrapolate that the allocation of the second deposit (January) would have the same expenditure structure.

Table 7.1: Distribution of item 3 expenses, GHS PETS 2007, Billions of cedis

GHS Expenditure: Item 3		Percent
Training & Conference Cost	433,818,212.00	53.65
Consultancy	0	0
Material and Consumables	3,427,000.00	0.42
Printing & Publications	244,007,900.00	30.18
Rent of Plan & Equipment	50,867,000.00	6.29
T & T	76,470,000.00	9.46
Total	808,590,100.00	100.00

Source: Ghana Public Expenditure Tracking Survey, 2007

7.3 Transfers and Receipts of Item 3 between GHS, RHS and Regional Hospitals

Moving down the PETS revealed that Regional Health Services (RHS) received ¢1.3 billion. This figure differs from the total amount reported at the central level (audited figures, see Table 7.2) because PETS only captures the resources received by August 2006.

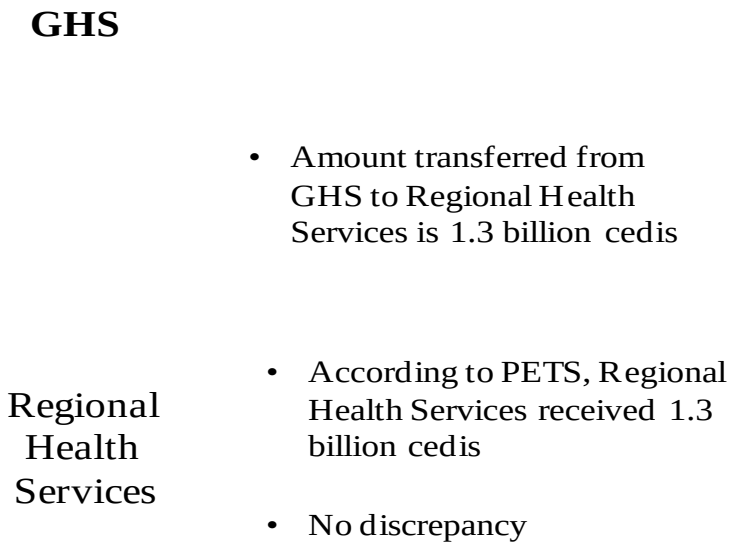
Table 7.2: MOH's audited records. Billions of cedis

Disbursements	Rec. Aug. (2006)	Rec. Jan (2007)	Total	%
Ministry of Health				
MOH Headquarters	0.657	1.6	2.3	
Central Procurement	-	3.00	3.0	
Felowship	4.2	-	4.2	
Subvented Organizations	1.7	1.6	3.3	
Sub-total	6.6	6.2	12.8	28.0%
Teaching Hospitals				
KBTH	0.560	-	0.560	
KATH	0.362	-	0.362	
Tamale Th	0.207	-	0.207	
Sub-total	1.1	-	1.1	2.5%
GHS HQ				
Ghana Health Service HQ	0.861	1.3	2.1	
Psychiatry Hospitals	0.606	2.1	2.7	
Sub-total	1.5	3.3	4.8	10.5%
Regional Health Services				
Office of Regional Director	0.183	0.294	0.477	
Regional Support Services	0.194	0.313	0.507	
Regional Hospitals	0.263	0.690	0.953	
Regional Public Health Care Unit	0.129	0.423	0.552	
Regional Clinical Care Unit	0.565	0.208	0.773	
Sub-total	1.3	2	3.3	7.1%
District Health Services				
District Health Administration	4.4	2.7	7.1	
District Hospitals	6.3	0.0	6.3	
Sub_districts	4.6	4.0	8.6	
Sub-Total	15.3	6.7	22.0	48.1%
Other Institutions				
Christian Health Association of Ghana	0.498	-	0.498	
Training Institutions	0.41	0.79	1.2	
Sub-Total	0.908	0.8	1.7	3.7%
TOTAL DISBURSEMENT 2006	**26.7**	**19.0**	**45.7**	**100.0%**

Source: MOH Audited Accounts for 2006

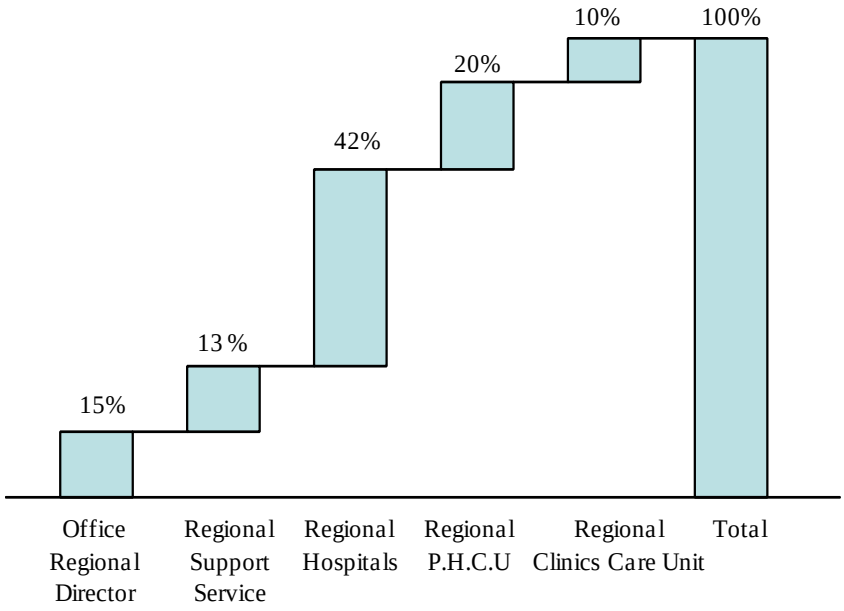
Of this total, Regional hospitals and Regional Public Health Care Units received 62% of the funds disbursed from RHS for item 3. The rest of the funds (38%) were allocated at the administrative units. Figure 7.5 shows the funds received by the Regional Health Services; while Figure 7.6 shows the RHS allocation of funds.

Figure 7.5: Items 3 transfers between GHS and RHS



Source: Ghana Public Expenditure Tracking Survey, 2007

Figure 7.6: Spending pattern of Items 3 at RHS



Source: Ghana Public Expenditure Tracking Survey, 2007

In addition, it was indicated that each Regional Health Administration (RHAs) received funds for item 3 either during the first quarter (51%) or third quarter (49%) of 2006. This uneven distribution of resources to cover service expenses could negatively impact the normal functioning of the facilities located in the regions with delays. The figures reported in PETS are consistent with the figures reported by MOH as well as GHS. Table 7.3 shows the distribution of funds released by region. The database indicates that the Northern region received the highest amount of

resources (16%), all received during the first quarter. Since MOH received the first tranche in August 2006, this information in PETS seems inconsistent. Yet, it is possible that the amount released to RHAs during the first quarter corresponds to resources received during 2005. Unfortunately, PETS does not provide enough information to clarify this issue.

Table 7.3: Funds release from item 3 by Region, PETS 2007, Cedis

Regions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	Percent
Western	-	-	1,626,200,715.00	-	1,626,200,715.00	11.9
Central	1,418,977,486.00	-	-	-	1,418,977,486.00	10.4
Greater Accra	-	-	1,137,229,123.00	-	1,137,229,123.00	8.3
Volta	-	-	1,493,945,129.00	-	1,493,945,129.00	10.9
Eastern	1,660,844,872.00	-	-	-	1,660,844,872.00	12.1
Ashanti	36,683,983.00	-	217,520,000.00	-	254,203,983.00	1.9
Brong Ahafo	1,675,196,908.00	-	-	-	1,675,196,908.00	12.2
Northern	2,128,632,913.00	-	-	-	2,128,632,913.00	15.5
Upper East	-	-	1,206,239,952.00	-	1,206,239,952.00	8.8
Upper West	-	-	1,103,208,822.00	-	1,103,208,822.00	8.0
Total	6,920,336,162.00	-	6,784,343,741.00	-	13,704,679,903.00	100.0
Percent	50.5	-	49.5		100.0	

Source: Ghana Public Expenditure Tracking Survey, 2007

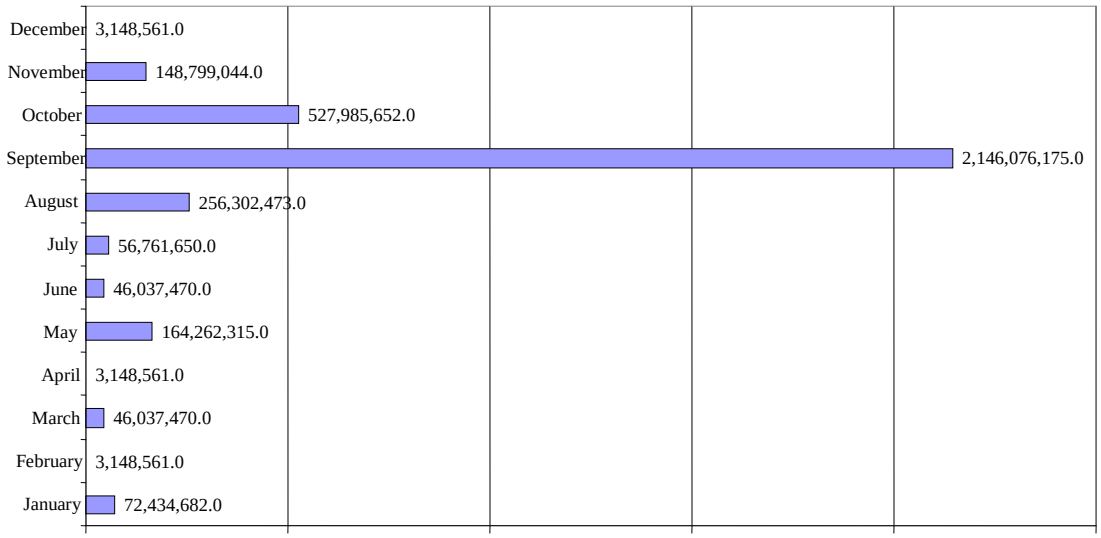
In sum, although the analysis does not identify significant leakages in the flow of funds at the upper level, **delays found in the flows of funds are important sources of inefficiencies in the delivery of health services. These delays started at the upper level of government and were carried out downstream to the facilities.** Given the available information, it is not possible to sort out the causes for these delays. In addition, the analysis indicates that one tranche of money did not reach the MOH.

7.4 Transfers and Receipts of Item 3 between GHS and Districts

At this point, we focus on the flow of funds at the lower level of Government. In particular, this section tracks the flow of funds from GHS to districts. The PETS collected a rich amount of information regarding supply indicators of health services at the district level. This information suggests that controlling for district population there are differences between public and private availability of services. Indicators show the relevance of public providers at districts with low population.

Moving closer to look at the flow of funds indicates that districts received 3.4 billion cedis for item 3. A monthly tracking of the funds revealed that districts received funds with some delays. For instance, before September, the districts received less than 20% of the funds (648.1 million cedis); and 77% during September and October. Figure 7.7 shows the distribution of resources received at the district level.

Figure 7.7: Funds received by districts for item 3, PETS 2006, Cedis



Source: Ghana Public Expenditure Tracking Survey, 2007

Districts were allocated most of the item 3 expenses in Materials and Consumables (32%) and Training & Conferences Cost (29%). Unlike the distribution at the GHS, at the district level, Training & Conferences represents a lower percentage of the total allocations for item 3. In the disbursement of funds from districts to sub-districts, DHOs spent ¢2.85 million on item 3. This amount plus ¢1.15 billion disbursed to sub-districts results in a total of ¢4 billion which is higher than the amount of ¢3.4 billion received by DHOs. This difference could be the result of funds brought forward from previous years. Yet, because of problems with the quality of the data (significant level of missing information), this result should be interpreted with caution. Additionally, the discrepancy could be the result of some expenses not included in the financial statement at the district and sub-district level. Table 7.4 shows the monthly patterns of disbursement from districts to sub-districts.

Table 7.4: Disbursement of item 3 to sub-districts, PETS 2006, Cedis

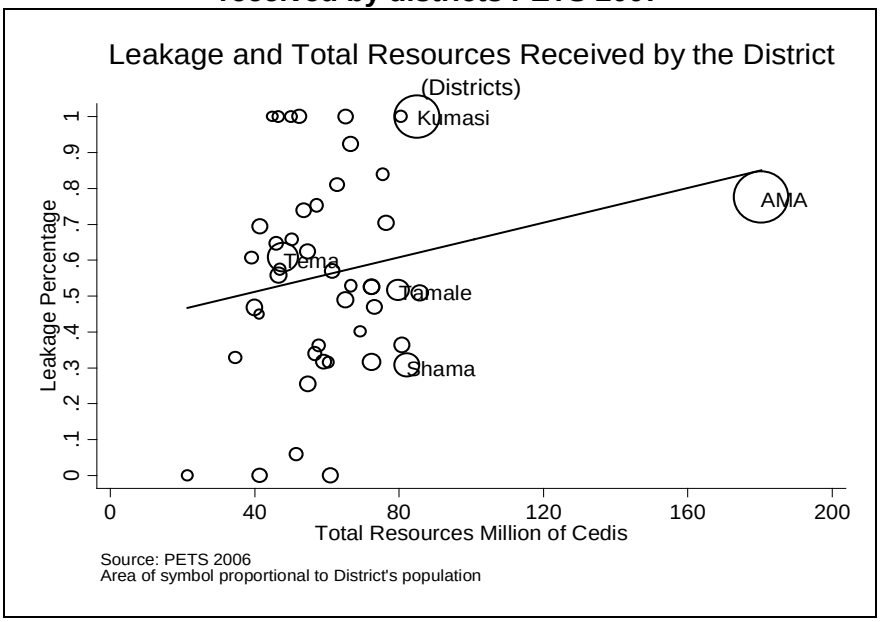
	Release of Item 3	Disbursement of Item 3	
Months	**Amount (1)**	**Amount (2)**	**Difference (1)-(2)**
January	72,434,682.00	101,399,904.00	28,965,222.00)
February	3,148,561.00	53,789,729.00	(50,641,168.00)
March	46,037,470.00	76,382,179.00	(30,344,709.00)
April	3,148,561.00	10,332,216.00	(7,183,655.00)
May	164,262,315.00	12,047,070.00	152,215,245.00
June	46,037,470.00	31,897,930.00	14,139,540.00
July	56,761,650.00	1,936,465.00	54,825,185.00
August	256,302,473.00	100,483,448.00	155,819,025.00
September	2,146,076,175.00	396,152,499.00	1,749,923,676.00
October	527,985,652.00	210,956,581.70	317,029,070.30
November	148,799,044.00	97,907,842.00	50,891,202.00
December	3,148,561.00	51,747,710.00	(48,599,149.00)
Total	3,474,142,614.00	1,145,033,573.70	2,329,109,040.30

Source: Ghana Public Expenditure Tracking Survey, 2007

In this part of the report, the possible determinants of the observed variability in leakage (variability in the rate of disbursement to sub-districts) at the district level are explored. In particular, the association between leakage and three relevant variables: amount of resources at the district level, volume of patients, and share of public supply out of total supply of health services were evaluated. Three hypotheses are tested: (i) Leakage is higher in districts with higher amount of resources; (ii) Leakage is lower in districts with higher volume of patients; and (iii) Leakage is lower in districts with lower share of public services.

Regarding the first hypothesis, the analysis indicates that after controlling for population size, districts that receive a larger amount of resources tend to channel a lower proportion of these resources to sub-districts (See Figure 7.8). This finding may suggest that increasing the level of resources released to districts without enhancing administrative capacity may not eliminate inefficiencies in the flow of resources. However, the results must be interpreted with caution due to two reasons. Since the sample size is small, the results may be influenced by an outlier such as AMA. In addition, district may spend money on behalf of sub-districts.

Figure 7.8: OLS estimates. Relationship between leakage and total resources received by districts PETS 2007



Source: Ghana Public Expenditure Tracking Survey, 2007

The second hypothesis evaluates whether leakage will be negatively correlated to the level of demand (volume of patients) in the district. One may expect that districts with higher demand over their resources will have lower levels of leakages. It was not possible to reject the null hypothesis in this case. Lastly, regarding the last hypothesis, the data set suggests that districts with larger private participation (i.e., lower public share) do not report lower leakages. In other words, districts where public providers face higher competitions do not report lower level of leakage.

In sum, data at the district level suggest that there are important differences in the level of disbursement from districts to sub-districts. The analysis indicates that larger districts are able to release a higher share of funds to sub-districts. Interestingly, we found that leakage is positively related to resources received at the districts. Important delays are also identified in the analysis. One important implication of the findings is that increasing level of resources at the district level without improving administrative capacity could create further opportunities for leakage and inefficiencies.

7.5 Receipts of Item 3 by Sub-Districts and Facilities

As indicated previously, the survey included 327 facilities: 186 Health Centres; 57 Health Clinics; 30 CHPS; 39 District Hospitals; 10 Regional Hospitals; and 5 Polyclinics.

The pattern of allocations mimics the schedule observed at the district level. In fact, most of the funds at the facility level were released during September. Of the total amount of funds released for Item 3 (¢3.7 billion), 85% of these funds were allocated between regional and district hospitals. Table 7.5 summarizes how funds were allocated by facility type.

Table 7.5: Funds released for item 3 by facility type

Facilities	Amount	%
Regional Hospitals (n=10)		
Central Regional Hospital	347,412,160.0	9.5
KDUA Central Hospital	244,658,080.0	6.7
Tamale Regional Hospital	207,546,864.0	5.7
Effiankwanta	69,261,728.0	1.9
Berekum Regional Hospital	60,299,248.0	1.6
Votal Regional Hospital	58,144,976.0	1.6
Bolga Regional Hospital	52,980,000.0	1.4
WA Regional Hospital	49,657,240.0	1.4
Kumasi South	40,764,000.0	1.1
Ridge Hospital	64,500.0	0.0
Sub-total	1,130,788,828.0	30.8
Polyclinics (n=5)		
Adabraka	49,954,168.0	1.4
Kaneshie	41,075,148.0	1.1
M.C.N.N	26,264,540.0	0.7
Maamobi	23,823,788.0	0.6
St. John of God Hospital	16,972,000.0	0.5
Sub-total	158,089,644.0	4.3
District Hospitals (n=39)	1,997,292,160.0	54.4
CHPS (n=30)	16,226,900.0	0.4
Health Clinics (n=57)	161,492,480.0	4.4
Health Centres (n=186)	204,980,000.0	5.6
Total (n=327)	**3,668,870,012.0**	**100.0**

Source: Ghana Public Expenditure Tracking Survey, 2007

In general, larger facilities (according to number of beds) received a higher proportion of funds. The data set shows a strong linear relationship between a facility's size and funds released for item 3 until a facility's size reaches around 100 beds. After this scale, the release of funds for item 3 follows a pattern that is not predicted by scale of the facility nor the catchment area. This implies that efficiency gains in the allocation of funds could be achieved if benchmark criteria are applied in the case of regional hospitals.

Second, there is a strong linear relationship between number of out-patients and funds released for item 3 until an operational level of 50,000 out-patients. As before, for regional hospitals, availability of funds for item 3 is not related to facility's operation level when it is measured by number of outpatients. Lastly, the number of in-patients served as another proxy for operational level and its link to funds released for item 3. As in the two previous indicators, for regional hospitals, there is no a strong relationship between level of in-patients and item 3 expenses.

7.6 Does Leakage Impact Health Service Provision at the District Level?

The pattern in the data suggests significant delays in the allocations of funds at both lower and upper levels of government. Yet, it is difficult to explain these discrepancies. At a lower level, the tracking survey shows that 96% districts received one tranche of Item 3, and 77 percent of them received the funds in or after September. Most of sub-districts also received their item 3 in September.

The study also explored possible factors that explain the variability of reimbursement from district to sub-districts. The analysis shows that leakage is higher in districts that received larger amount of resources. One implication of this finding is that increasing resources at district levels without enhancing administrative capacity may not eliminate inefficiencies in the flow of resources. At the district level, leakages are not correlated with demand for resources (volume of patients) nor are they correlated with the level of private providers in the market (level of competition). Lastly, at the facility level, the analysis reveals that the release of funds for item 3 follows patterns that are not predicted by scale of the facility nor the catchment area. Moreover, significant variability was reported regarding regional hospital in terms of service expenses.

In this section, an attempt is made to explore the level of leakage (i.e., variability in amounts received by districts and proportion that are subsequently channeled to sub-districts) reported in the previous sections influences the coverage of preventive services at the district level. A value-added model approach was used where the production of preventive services depends on the availability of public and private resources, and where the level of leakage negatively affects the productivity of the public inputs. Several OLS regressions were run to test if the PETS data fit our conceptual framework. The empirical model that we estimated is as follows:

$$\mathbf{y} = \beta o + \boldsymbol{\beta 1}\alpha + \boldsymbol{\beta 2}\mathbf{z} + \beta 3X + \beta 4W + \varepsilon \qquad (1)$$

Where Y is preventive services coverage, α is the level of leakage at the district level, z is the district's population; X is a vector of variables that captures the amount of private inputs, W is a vector of variables that captures the level of public inputs, and ε is the error term. According to this model, a negative sign in the $\beta 1$ coefficient may suggest that leakage reduces the capacity of the districts to provide

services. Yet, given the cross sectional nature of the data, the results should be interpreted with caution.

The number of immunizations (BCG, measles, DPT, OPV, yellow fever) provided, and the numbers of supervised deliveries were used as dependent variables. The level of leakage was measured as follows: [1- (total resources reimbursed to sub-districts/total resources at the district)]. Additional covariates were used to capture the availability of public and private resources. Table 7.6 shows the descriptive statistics for the variables used in the analysis.

Table 7.6: Description of the data, Link between leakage and services,

Variables	Mean	Std. Err	N
Dependent			
BCG	105.6	(19.9)	47
Penta3	89.7	(18.8)	47
OPV 3	89.1	(18.5)	47
Measles	90.9	(20.8)	47
Yellow Fever	89.0	(20.9)	47
Supervised Deliveries	41.4	(18.2)	47
Independent variable			
Leakage	0.6	(0.3)	47
Control variables			
District's population	236,002.3	(352,784.6)	47
Availability of private resources			
Number of private facilities	5.1	(3.6)	47
Number of private facilities with national grid electricity	5.3	(7.4)	47
Number of doctors in private facilities	4.8	(11.3)	47
Number of nurses in private facilities	26.9	(72.3)	47
Total number of private in-patients	3,369.6	(5,912.0)	47
Total number of private out-patients	30,445.6	(41,665.5)	47
Availability of public resources			
Number of public facilities	13.2	(6.5)	47
Number of public facilities with national grid electricity	8.6	(4.9)	47
Number of doctors in public facilities	6.2	(11.2)	47
Number of nurses in public facilities	84.2	(132.1)	47
Total number of public in-patients	4,571.2	(3,453.7)	47
Total number of public out-patients	60,118.1	(80,321.2)	47

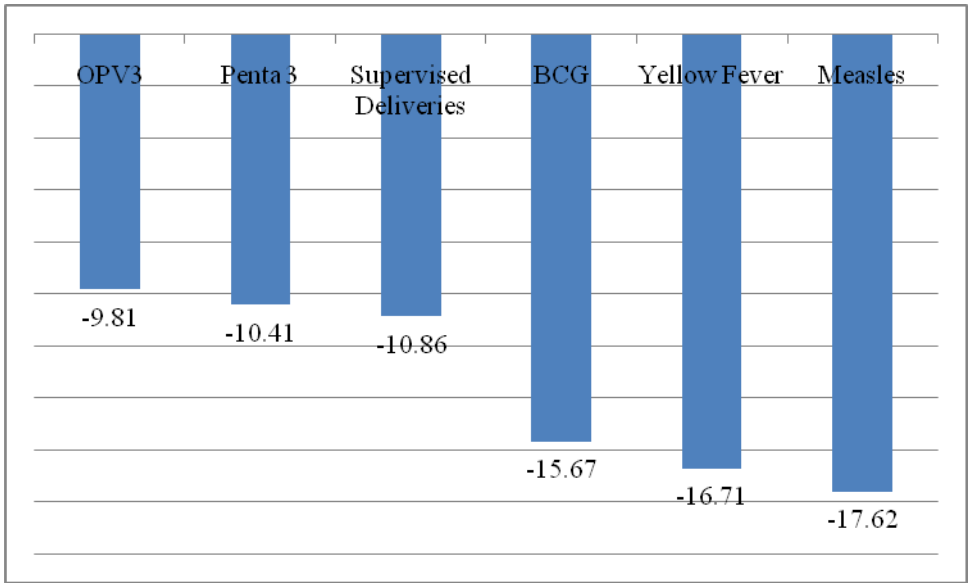
Source: Ghana Public Expenditure Tracking Survey, 2007

To empirically test this hypothesis, OLS regressions were first estimated for each dependent variable where only population at the district level is added as a control variable. The additional vectors of control variables were then added in the estimation of the full model.

Figure 7.9 contains the OLS coefficients of the regression between preventive health services and leakage after controlling for district's population. The results indicate that for all types of services, leakage reduces the capacity of the district to provide preventive services. The findings are statistically significant in the case of

BCG, measles and supervised deliveries. **Although the aggregate negative effect of leakage on the provision of preventive services at the district level seems to be strong, one needs to keep in mind that the observed variability in the provision of services at the district level could be due to unmeasured factors not included in the analysis.**

Figure 7.9: OLS coefficients. Single models. Link between leakage and preventive health services



Source: Ghana Public Expenditure Tracking Survey, 2007

In the estimations of the full models, due to high correlation between the independent variables, and the small sample size, we implement the OLS analysis using a sub-set of the independent variables. As shown in Table 7.7, in the full model, leakage still has a negative effect on the provision of health services. The results are still significant in the case of BCG, measles and supervised deliveries. These findings may suggest that improving the flow of funds within the public health sector may have important health benefits. However, these findings should be taken as preliminary, and further research needs to be done in this area using panel data in order to control for possible endogeneity problems in the variables of interest.

Table 7.7: OLS coefficients. Link between leakage and preventive health services, Full Model

Models	BCG		Penta 3		OPV3		Measles		Yellow Fever		Supervised Deliveries	
Leakage	**-16.4**	**(6.8)**	-10.82	(9.4)	-10.24	(9.2)	**-18.03**	**(5.3)**	-17.2	(10.5)	**-10.87**	**(3.2)**
Population	-0.00005	(0.0)	-4E-05	(0.0)	-3E-05	(0.0)	-0.00006	(0.0)	-0.00005	(0.0)	-5.93E-06	(0.0)
Population Square	1.84E-11	(0.0)	1.38E-11	(0.0)	1.68-E11	0.0	2.14E-11	0.0	-1.78E-11	(0.0)	4.97E-12	0.0
N. of private facilities	-0.49	(1.0)	-0.43	(1.0)	-0.27	(0.9)	-0.085	(1.0)	-0.34	(1.1)	1.001	(1.0)
N. of public facilities	-0.14	(0.5)	0.07	(0.4)	0.093	(0.4)	0.18	(0.5)	-0.05	(0.5)	-0.235	(0.5)
Constant	**128.5**	**(10.4)**	**104.8**	**(10.1)**	**104.1**	**(9.8)**	**109.6**	**(11.0)**	108.7	(11.2)	**46.2**	**(10.3)**
R square	0.23		0.19		0.19		0.21		0.18		0.09	
F-test	**2.49**		1.91		2.03		**2.24**		1.88		0.77	
Sample size	47		47		47		47		47		47	

Note: Bold coefficients are significant at p<0.05

Source: Ghana Public Expenditure Tracking Survey, 2007

In sum, the OLS estimations reveal that leakage in service expenses at the district level reduces the capacity of the district to provide necessary health services. This suggests that improving the flow of funds within the public sector may have important health benefits. Further research needs to be done to fully address this issue.

7.7 Efficiency of Providing Services at Facility Level

In this section, Data Envelope Analysis [7] (DEA) was used to assess the performance of health facilities included in PETS in order to identify the units with low and high efficiency scores. DEA is a non-parametric technique frequently used to assess the operational efficiency of health organizations. Each type of facility was evaluated separately. Due to a low number of observations, we did not include Polyclinics.

The facilities in this report differs from the facilities included in Jehu-Appiah et al 2008; and all the input and output information in this report are based on the PETS database. Therefore, it is important to keep in mind that the results of this analysis are not directly comparable to the Jehu-Appiah et al. 2008 findings.

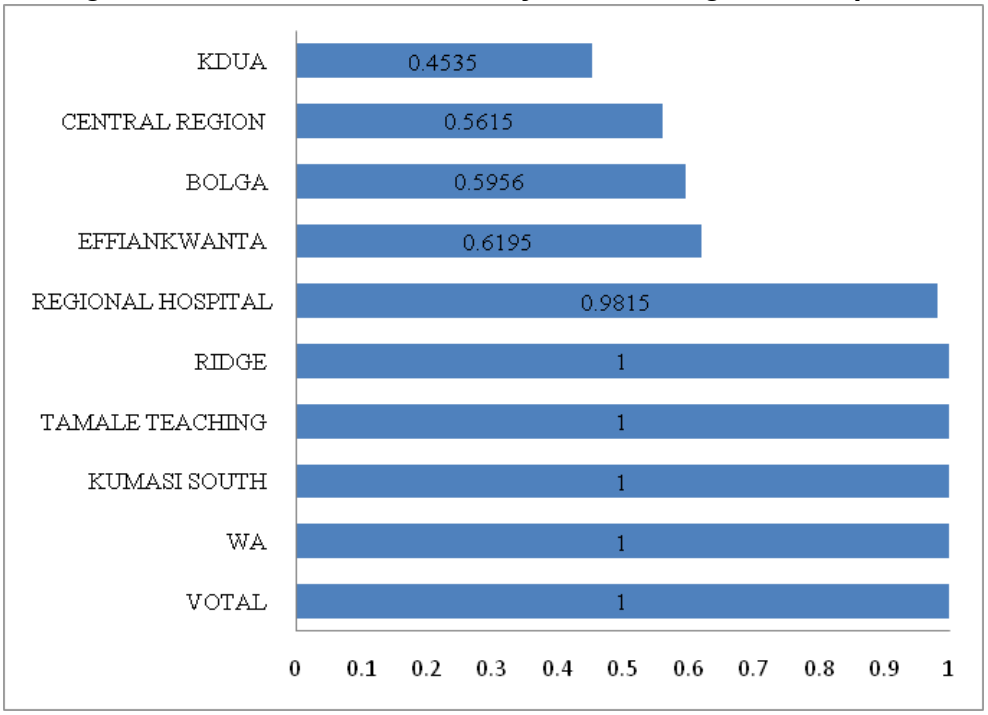
Basically, in this analysis, a look at how facilities employ different inputs and service expenses to produce a mix set of outputs was undertaken based on the the information reported in PETS 2007. Inputs included the following variables: physicians, medical assistants, nurses, medical technicians, rooms, beds and total service expenses (item 3). The vector of output includes the following: out-patient visits, in-patient visits, family planning services, immunization services (BCG, Measles, DPT3/PENTA3, Polio, Yellow Fever) and other health services. The

[7] For a review of the literature see Cooper et al. 2006. Jehu-Appiah et al. (2008) has done a previous analysis of efficiency indicators of health facilities in Ghana. This work provides full explanation of the DEA methodology.

DEA-Solver Pro Software was used to conduct the analysis. In the empirical estimations, it was assumed that prices of inputs and outputs were the same across regions. It was also assumed a constant return to scale (CRS models) for the inputs, and the efficiency assessment was conducted only using facilities within the PETS sample[8].

Regional hospitals in Ghana report an average efficiency score of 0.82 (highest score 1) and standard deviation of 0.21. Figure 7.10 reveals the estimated efficiency score for each unit in the sample. Koforidua Central Hospital shows the lowest efficiency score (0.45). The input-output analysis reflects an excess of doctors and operational expenses in hospitals with low efficiency. Given the quality and the limitation of the data, these results should be interpreted with caution. However, we believe that these findings may be used as a starting point to further investigate the differences between low and high performers in the sample.

Figure 7.10: Production efficiency scores.- Regional Hospitals



Source: Ghana Public Expenditure Tracking Survey, 2007

There was a high variability in efficiency production scores among the 39 district hospitals included in PETS. The average efficiency score was 0.84 with stdv 0.21. The three facilities with the lowest scores were Akatsi, Takoradi and Atibie. The

[8] The appendix section shows the full results of this analysis (see slides 39-44). Below are discussed the main results regarding efficiency scores, and highlight the high performers and the low performers for each type of facilities. The excess in inputs and the shortage of outputs estimated for each unit in the analysis are discussed in the ensuing sections.

shortage in outputs in these units mainly happened in family planning and immunization services.

A look at CHPS data show high variability in production efficiency among CHPS. The average score is 0.64 with a deviation of 0.28. The CHPS with the lowest scores are: Nkwateng, Bomso, and Subinman

Due to missing information, seven observations in the analysis of clinics were omitted. The average score among clinics is 0.57 with a deviation of 0.28. The following clinics reported the lowest efficiency scores: Adjabeng, Anyaboni, and Billaw.

Lastly, the analysis of the health centres indicates that the average efficiency score for the sample was 0.63 with a deviation of 0.27. The input-output analysis reflects inefficiencies in the provision of immunization and family planning services among centres with similar inputs. Centres with low performance score report an excess of item 3 expenses. The three centres with the lowest performance are: Lahagu, Asadame and Pediatorkope. Due to missing information in a large number of centres, analysis was restricted to 50 centres who reported all the variables that we used in the analysis.

In sum, the input/output analysis shows excess of physicians, nurses, and service expenses in facilities with low efficiency scores. Low efficiency performance at the facility level may also indicate that part of the problem associated with leakages is absorbed by patients in the form of higher out-of-pocket health expenditures. Further research is needed to explore the link between inefficiencies at the facility level and price of health services.

7.8 Concluding Remarks

PETS revealed that delays of transferring item 3 expenditure were prevalent at all levels of administration. Delays at the upper level were continued through to the lower level of government. In fact, the tracking survey shows that 96% of districts received only one tranche of Item 3, and 77% of them received the funds in or after September. Most of the sub-districts also received their item 3 allocations in September. In addition, at the lower level of government, the analysis shows that resources for item 3 at the upper level were also spent on expenses on behalf of districts and facilities. Transfers of these funds at the district and facility level were consistent with the process of decentralization in the health sector.

In sum, the analysis identifies discrepancies and delays in the flow of funds which together are important sources of inefficiencies in the delivery of health services. The findings of this report suggest that it is essential to identify the causes of the delays in the flow of funds from the MOFEP to the MOH. It is equally important to identify whether these delays are also

happening in other areas of the public sector such as education, transport, and infrastructure. In particular, specific-sector delays in requesting the money from the MOFEP could be a possible explanation for the observed delays in the flow of funds.

Controlling for population size, the analysis shows that leakages were higher in districts that received larger amounts of resources. One implication of this finding is that increasing resources at district levels without enhancing administrative capacity may not eliminate inefficiencies in the flow of resources. At the district level, leakages are not correlated with demand for resources (volume of patients) nor are they correlated with the level of private providers in the market (level of competition)

The Ordinary Least Square (OLS) estimations also reveal that leakages in service expenses at the district level reduce the capacity of the district to provide necessary health services. This suggests that improving the flow of funds within the public sector may have important health benefits. Further research needs to be done to fully address this issue.

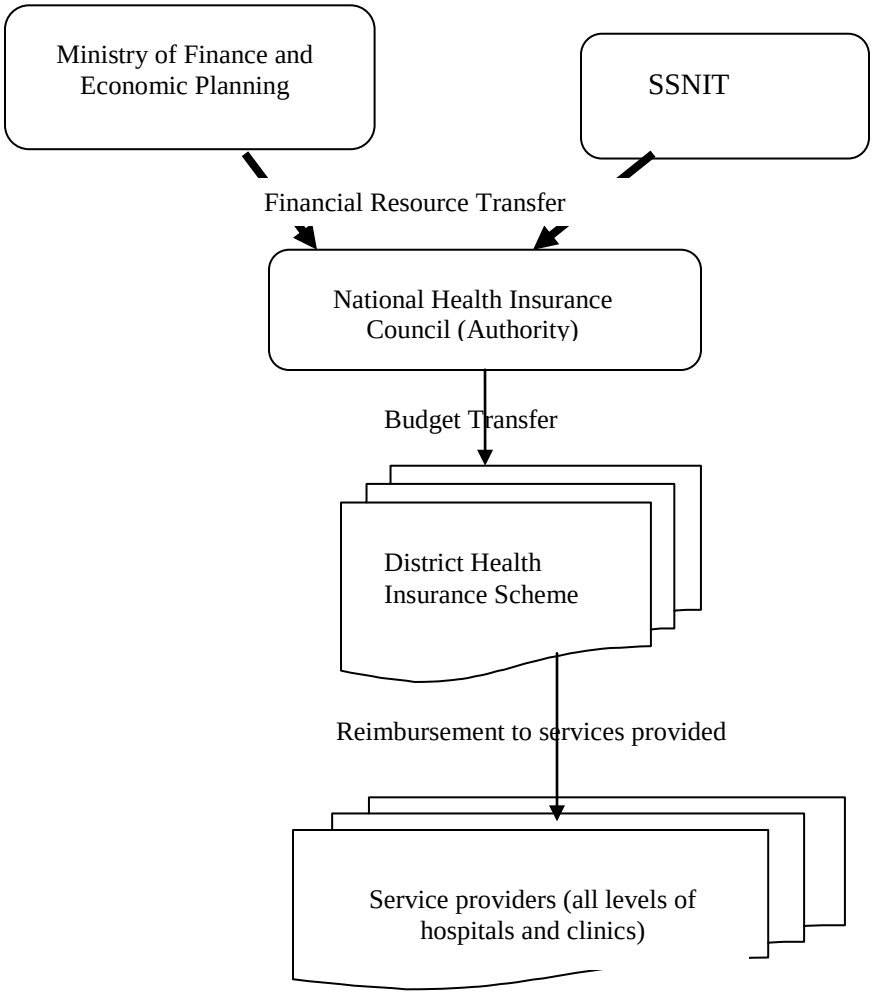
Using Data Envelope Analysis, the report identifies the facilities with high and low efficiency scores. The result follows. ***Regional Hospitals.-*** Low performers: Koforidua and Cape Coast. High performers: Ridge and Kumasi South. ***District Hospitals.-*** Low performers: Akatsi, Takoradi and Atibie. High performers: Goaso, Asankragwa and Tafo. ***CHPS.-*** Low performers: Subinman, Bomso and Nkwateng. High performers: Akartng, Takyiman and Otumi. ***Clinics.-*** Adjabeng, Anyaboni and Billaw. High performers: Ayomso, Kunsu and Asumura.. **Health Centres.-** Low performers: Lahagu, Asadame and Pediatorkope. High performers: Abuakwa, Ashaiman and New Abirem. These findings suggest that efficiency gains could be achieved if benchmark criteria according to DEA efficiency scores are applied.

CHAPTER 8
TRACKING NATIONAL HEALTH INSURANCE SCHEME FUNDS

8.1 Flows of National Health Insurance Scheme funds

The aim of this section is to analyze the flow of funds within the National Health Insurance Scheme. Since the PETS information was collected during the first years of operation of the NHIS, the results of this analysis should be received with caution. Dynamic adjustments may still be happening within the insurance scheme that could not be captured in a cross sectional description of the system. As previously stated, the funds from MOFEP and SSNIT were tracked to the National Health Insurance Council (now National Health Insurance Authority (NHIA). In addition, funds disbursed from the NHIA to district health insurance schemes and providers were also tracked. Figure 8.1 provides the channels of fund flows.

Figure 8.1: Flows of NHIS funds



8.2 NHIS Funds Transfers between the Central Level Agencies and Districts

During 2006, the NHIA stated that they received ¢189.0 billion from the SSNIT and ¢1,887.7 billion from MOFEP. Resources from the MOFEP were received during the last three months of the year while transfers from the SSNIT were received during May and August. In both cases, the flow of funds indicates an uneven allocation of resources during the year.

The SSNIT indicated that they released ¢212.9 billion to NHIA. Resources were released during May, August and December. This schedule may reflect delays in the allocation of resources. There is a difference of ¢23.9 billion between the amount of money released from the SSNIT and the amount received by NHIA. This difference could be due to accounting practice in the newly developed system. The NHIA confirmed the figures reported in PETS.

Moving down to districts, the data reveal that the 48 districts included in the sample received 14% of the total resources available at the NHIA. When one includes all the schemes in the system, the amount of resources received from the NHIA increases to 16%. This gap could be due to multiple factors: accounting practice; surplus in premium collection; legal reserve among others. In addition, the districts also relied on premiums collected from their members. Therefore, all the funds at the NHIS are not necessarily transferred to the districts. Given the available data, it is not possible to establish the level of leakage in the system. On the other hand, delays seem to be less relevant.

8.3 NHIS Funds to Transfers Facilities

Lastly, tracking the funds to facilities reveals important differences in the flow of resources. In fact, during 2006, the District Mutual Health Insurance Schemes reimbursed providers 62% of the total resources received from the NHIA. This is equivalent to 9% of the total resources available at NHIA. However, given the data, we could not establish the level of leakage or delays in the system. There was no information regarding providers request for reimbursement during 2006.

Table 8.1 describes each step in the flow of funds within the health insurance scheme. Once again, it is important to keep in mind that these results should be taken with caution since the NHIS had been few months in operation when this information was collected.

Table 8.1: Track of funds in the National Health Insurance Scheme (Billion of cedis)

1) At the NHIA Level	
A. NHIA received from SSNIT	189,011.1
B. NHIA received from MOFEP	1,887,703.2[9]
C. Total funds received at the NHIA	2,076,714.36
2) At the District Scheme (included in the sample)	
D. Districts received from NHIA	285,441.7
% of total funds received at NHIA	14%
3) Reimbursed to Providers	
E. Districts reimbursed to providers	176,571.5
% of total funds received at NHIA	9%
% of total funds received at NHIS	62%

Source: Ghana Public Expenditure Tracking Survey, 2007

In the case of NHIS, characteristics of the districts were analysed to help explain the variability in the reimbursement rate to providers. The analysis reveals that larger and smaller districts (based on resources received from NHIA) are equally likely to reimburse a low percentage of these funds to providers. The correlation between both variables although positive is close to zero.

8.4 Further analysis of the NHIS using additional information to the PETS

The main objectives of using information outside the PETS were twofold. First, was to explore the factors at the district level that explain the variability in subsidy allocations. Second, was to gain a better understanding of the observed variability in the transfers for administrative expenses. In principle, since the subsidy transfers were to cover the expected medical expenses of the exempt population, a strong relationship between number of exempt enrollees and subsidy was to be expected. Administrative support is allocated to finance the operation of the schemes, and although there was a fixed cost in the operation of these entities, a substantial part of these transfers should vary according to their level of operation.

In order to test these two hypotheses, information on the following district variables was collected for the year 2006: subsidy to the schemes, transfers to the schemes for administrative expenses, number of registered individuals, number of exempt enrollees (SSNIT contributors, SSNIT pensioners, children under 18, elderly above 70, and indigent), and number of individuals with insurance card. Table 8.2 summarizes by region the variables used in this analysis. Interestingly, a first look at the data using descriptive statistics indicates that subsidy allocations are not linked to number of exempt enrollees. In addition, the regional variability in administrative expenses is much lower and has no link to the level of registered

[9] NHIA provided documentation on the NHIL Account at the Bank of Ghana indicating that there were four inflows into the Account in 2006 amounting to a total of ¢1,020,260,932,773.97

individuals. Based on this initial assessment, further analysis was conducted to understand the observed pattern in the data.

Table 8.2: Financial Variables NHIA Descriptive Statistics by Region, 2006
Audited figures NHIA. Million of cedis

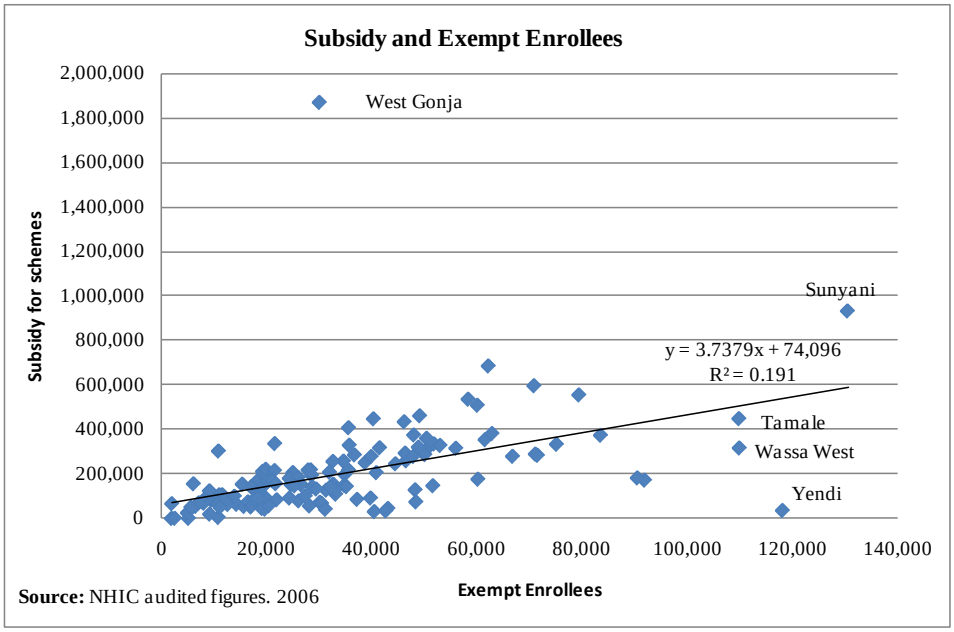
Region	Obs	Mean	Standard Deviation	Region	Obs	Mean	Standard Deviation
Ashanti				**Northern**			
Total Subsidy	23	186,744	95,920	Total Subsidy	14	263,271	479,231
Administrative Support	23	37,414	8,663	Administrative Support	14	103,808	240,157
Total Exempt Enrollees	23	39,651	24,169	Total Exempt Enrollees	14	33,163	35,487
Total Registered	23	74,912	43,481	Total Registered	14	50,897	46,081
Total Enrollees with Card	23	36,006	20,372	Total Enrollees with Card	14	23,283	29,705
Brogn Ahafo				**Upper East**			
Total Subsidy	18	322,506	239,803	Total Subsidy	6	195,519	109,060
Administrative Support	18	38,240	5,840	Administrative Support	6	39,976	237
Total Exempt Enrollees	17	41,978	31,481	Total Exempt Enrollees	6	30,200	18,212
Total Registered	18	66,185	49,339	Total Registered	6	50,767	25,262
Total Enrollees with Card	18	51,388	53,052	Total Enrollees with Card	6	26,236	14,572
Central				**Upper West**			
Total Subsidy	13	99,064	56,206	Total Subsidy	8	93,243	72,715
Administrative Support	13	37,947	7,561	Administrative Support	8	28,233	16,357
Total Exempt Enrollees	13	32,271	13,813	Total Exempt Enrollees	8	17,005	11,734
Total Registered	13	57,675	24,610	Total Registered	8	20,769	14,002
Total Enrollees with Card	13	13,921	7,211	Total Enrollees with Card	8	13,003	10,041
Eastern				**Volta**			
Total Subsidy	16	275,073	145,749	Total Subsidy	14	112,072	93,142
Administrative Support	16	36,635	8,351	Administrative Support	14	35,808	10,102
Total Exempt Enrollees	16	33,702	18,602	Total Exempt Enrollees	14	21,405	16,161
Total Registered	16	50,633	23,877	Total Registered	14	42,949	41,867
Total Enrollees with Card	16	38,125	18,305	Total Enrollees with Card	14	16,084	12,719
Greater Accra				**Western**			
Total Subsidy	10	268,511	95,332	Total Subsidy	14	119,443	84,880
Administrative Support	10	39,303	1,789	Administrative Support	14	39,017	1,687
Total Exempt Enrollees	10	46,998	21,294	Total Exempt Enrollees	14	30,814	25,018
Total Registered	10	68,874	32,976	Total Registered	14	50,963	33,226
Total Enrollees with Card	10	43,713	17,480	Total Enrollees with Card	14	21,596	11,912

Source: PETS 2007 Analysis of NHIA Audited Accounts 2006

When OLS regressions of subsidy transfers were run as a function of number of exempt enrollees; surprisingly the results indicate that exempt enrollees explain only 19% of the observed variability in subsidy allocations (see Figure 8.2). According to the data, there was a strong relationship between subsidy and number of exempt enrollees up to a scale size of 30,000 individuals. After this point, the subsidy transfers were influenced by other factors rather than number of enrollees. The observed difference between the districts of West Gonya and Sunyani illustrated this point; likewise, the differences between Tamale, Wassa

West and Yendi. These three districts had a similar number of exempt enrollees; yet, the subsidy received from NHIA varies substantially.

Figure 8.2: OLS estimates of the relationship between subsidy and exempt enrollees, Audited figures NHIA Million of cedis



Source: Ghana Public Expenditure Tracking Survey, 2007

Adding type of exempt enrollees (Sequential OLS analysis) to the model provides additional evidence to understand the allocation of resources at the scheme level. In particular, all models suggest significant variability at the regional level even after controlling for type of enrollees (please see the coefficients for the dummy variables). Furthermore, the data indicate that districts with larger number of enrollees who are elderly and children holding other variables constant were more likely to receive subsidy (please see Table 8.3 for full results). Given the provided information, it was not possible to assess the reasons behind this finding. Yet, it is striking that the variation in total number of enrollees does not explain the higher proportion of the variability in subsidy. The results do not change when one includes in the model the exempt enrollees with insurance card. We did not include these results in this report. There are available upon request from the consultant.

Table 8.3: Sequential OLS analysis, Relationship between subsidy and type of exempt enrollee, Audited figures NHIA

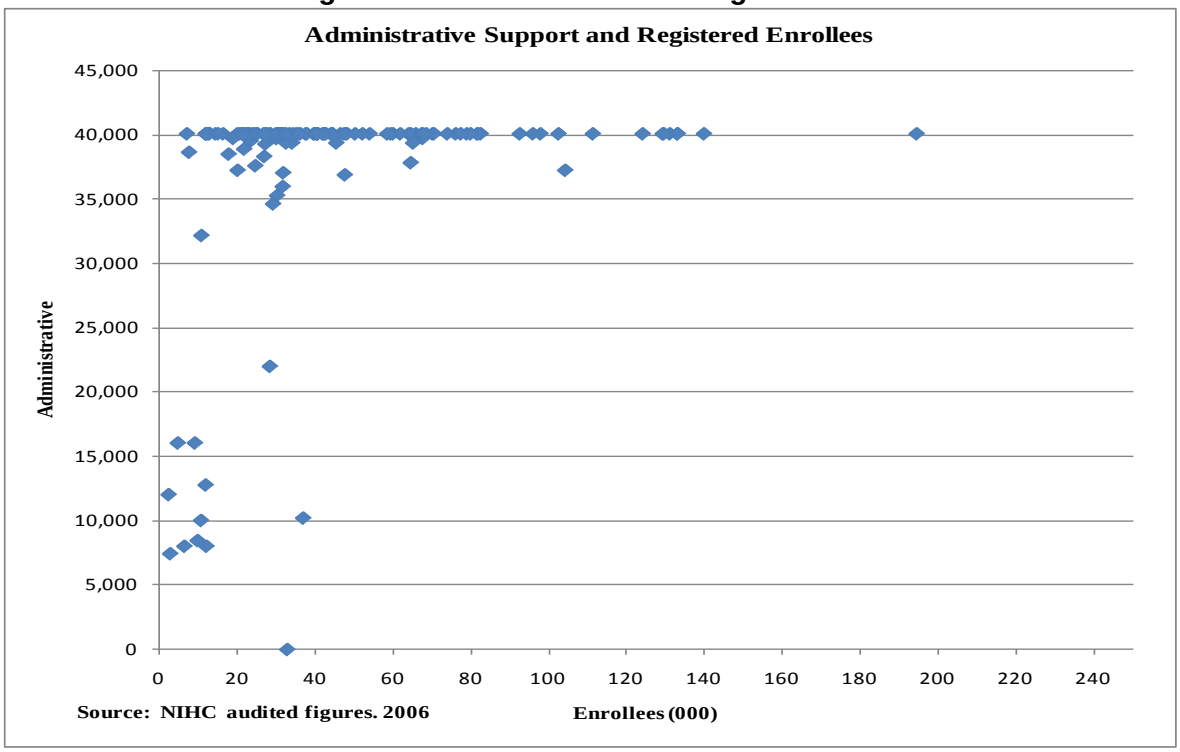
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Variables	**Coeff**	**Stdev**	**Coeff**	**Stdev**	**Coeff**	**Stdev**	**Coeff**	**Stdev**	**Coeff**	**Stdev**	**Coeff**	**Stdev**	**Coeff**	**Stdev**
Total Exempt Enrollees	**3.3**	**0.7**												
Type of Exempt Enrollees														
SSNIT contributor			**6.3**	**2.6**									-1.0	3.2
SSNIT pensioners					2.9	9.0							-14.5	9.3
Children Under 18							**5.3**	**1.0**					**5.0**	**1.2**
Elderly 70									**16.5**	**4.8**			**11.7**	**5.5**
Indigent											8.0	12.7	-6.0	12.7
Region (Ashanti=0)														
Brong Ahafo	**121,468.0**	**58,249.5**	**140,874.5**	**62,323.6**	**139,277.9**	**63,271.2**	106,499.0	56,517.9	**142,308.6**	**59,634.6**	**130,331.5**	**62,844.7**	93,300.3	59,856.2
Central	-63,117.3	63,370.5	-87,462.7	67,404.1	-85,393.3	69,084.9	-58,281.4	62,267.8	-71,112.4	65,897.3	-87,998.3	68,641.4	-59,133.8	62,490.7
Eastern	108,130.7	59,404.5	95,099.7	63,301.7	91,000.9	65,003.0	106,870.0	58,294.3	95,327.3	61,692.1	88,355.5	64,397.2	96,439.0	58,449.8
Gt.Accra	57,316.2	69,140.5	14,792.4	78,756.6	82,946.2	75,106.2	98,972.3	67,784.5	90,373.5	71,786.4	74,222.6	75,878.8	115,076.9	77,372.1
Northern	98,122.0	61,870.3	72,519.1	65,869.5	76,576.2	67,133.8	120,706.0	61,153.8	77,329.8	64,203.7	65,829.8	69,168.2	127,599.2	63,342.7
Upper East	40,232.2	83,704.4	17,575.1	89,125.5	10,159.7	90,889.2	66,233.3	82,644.1	-4,356.1	86,909.0	-11,545.2	96,238.5	60,955.5	88,313.3
Upper West	-18,130.9	76,313.6	-70,651.7	80,307.1	-89,977.0	82,021.8	-5,062.2	75,212.5	-76,061.9	77,907.8	-93,975.7	81,198.7	-17,933.9	75,240.9
Volta	-13,945.7	62,961.0	-55,200.9	66,352.1	-71,833.9	67,708.1	433.1	62,200.5	-73,826.1	64,203.7	-75,829.8	67,080.2	-19,126.7	62,564.7
Western	-37,888.5	62,006.4	-65,415.3	65,852.8	-64,106.2	67,860.7	-42,711.8	60,767.1	-27,846.0	65,223.8	-64,402.5	67,212.3	-34,249.0	61,806.2
Constant	54,777.9	46,658.1	**150,023.8**	**43,331.9**	**182,515.3**	**43,328.2**	43,298.7	45,928.0	**113,220.5**	**44,926.6**	**181,589.4**	**42,049.5**	28,836.1	46,997.9
R _square	0.28		0.19		0.02		0.31		0.23		0.16		0.34	
Observations	135		134		136		136		136		136		135	

Note: Bold coefficients are significant at p<0.05

Source: Ghana Public Expenditure Tracking Survey, 2007

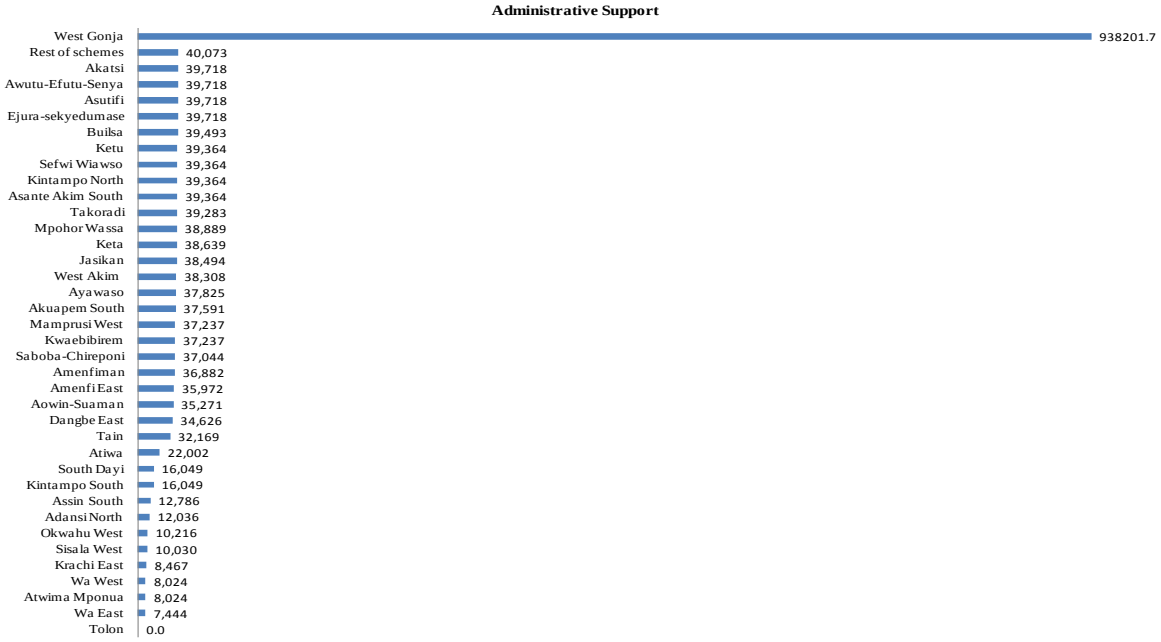
Regarding the administrative expenses, Figure 8.4 and Figure 8.5 show the patterns in the distribution of administrative expenses. Schemes with less than 20,000 registered enrollees received administrative expenses according to their operation level. After this size, every scheme received around ¢40 million for administrative expenses regardless their operation level. According to the data, West Gonja was an outlier since it received an amount much larger than the fixed amount for each scheme even though the number of registered enrollees was around 27,000. It is assumed that premium for private enrollees included the loading factor to cover the administrative expenses associated with these enrollees. Yet, when one includes private enrollees in the analysis, the results do not change.

Figure 8.4: Relationship between administrative expenses and total registered enrollees. Audited figures NHIA



Source: Ghana Public Expenditure Tracking Survey, 2007

Figure 8.5: Distribution of administrative expenses. Audited figures NHIA.



Source: Ghana Public Expenditure Tracking Survey, 2007

8.5 Concluding Remarks

In sum, the analysis of the subsidy and administrative transfers to the schemes indicate that there is room for improvement in the operation of the system. Allocating subsidy transfers according to the level of exempt enrollees would improve the performance of the schemes and optimally the delivery of health services in the district. Furthermore, allocation of administrative expenses according to level of operation at the district level rather than the use of a fixed formula will also bring economic incentives to the scheme to enhance their performance. These results need to be read with caution since they are based exclusively on 2006 information.

This report identifies important delays in funding at the upper level of government. The findings confirm a number of important trends and patterns that need to be changed to improve the efficiency in the allocation of resources in the Ghana public health care sector.

CHAPTER 9
ANALYSIS OF THE PATIENT EXIT POLL

In this section, the results of the patient exit poll included in PETS 2006are discussed. As pointed out before, data on 2,985 patients who visited the facilities included in the survey were collected. The aim of this analysis is to compare insured and uninsured patients in terms of different variables among others: proportion that paid for user fees, total medical expenditures, expenditures on drugs and patients perception of quality. When possible, differences within regions are discussed. The full results of this analysis are presented in the appendix.

The PETS survey did not include a question to verify if an insured person had received her/his insurance card. Therefore, using this information, it is not possible to differentiate between a patient who was insured and received her insurance card from a patient who was insured but had not received the insurance card. In light of this significant limitation, these results must be interpreted with caution.

The data indicate that 55% of the patients are enrolled in the NHIS. Out of all the insured patients, 13% paid for medical services. The amount paid in user fees and prescription drugs by these patients was close to the amount paid by the uninsured. The high amount paid by the insured patients could be due to the fact that these patients did not have their card. Quality perception during the visit was very similar among insured and uninsured. The top three reasons for choosing the facility were the same for patients enrolled in NHIS and uninsured patients: proximity, friendly service and better treatment. Table 9.1 compares insured and uninsured patients in terms of a patient's payment and perception of quality.

Table 9.1: Patients payment and perception of quality

	Insured (NHIS)		No Insured	
Variables	**Mean**	**Std. Error**	**Mean**	**Std. Error**
Percentage of patients	0.551	-0.057	0.449	-0.021
Percentage of patients who paid user fees	0.128	-0.035	0.869	-0.036
Average of the amount charge in total for the treatment (cedis)	46,196.80	-6,921.60	42,617.20	-7,420.70
Percentage of patients who received drugs	0.882	-0.04	0.887	-0.016
Percentage of patients who paid for drugs	0.081	-0.017	0.391	-0.098
Average of the amount charge in total for drugs (cedis)	37,783.30	-4,905.90	39,383.90	-7,838.40
Quality indicators during the visit (% who answered Yes)				
Friendly Service	0.987	-0.004	0.978	-0.005
Information about your ailment	0.817	-0.036	0.795	-0.035
Advice on how to take the medication	0.938	-0.023	0.932	-0.024
Short waiting time	0.826	-0.026	0.851	-0.024
Information about your charges	0.377	-0.045	0.662	-0.038

Source: Ghana Public Expenditure Tracking Survey, 2007

For the regions of Greater Accra, Volta and Northern, the low percentage of patients enrolled in NHIS who paid for services paid on average more than uninsured patients. Yet, the exit poll did not capture other individual differences (eg., health status, age, education, income, etc.) that may explain these gaps. Volta is the region which received the least number of insured patients and the highest proportion of these patients were paying user fees. As indicated before, in this region, insured patients were paying more than uninsured. Although less pronounced, a similar pattern was observed in Greater Accra and Northern regions.

The analysis of drug payment by insurance status shows that NHIS enrollees paid more in prescription drugs than uninsured in Volta, Eastern, Ashanti and Brong Ahafo. Yet, the difference was statistically significant ($p<0.05$) only in the Volta region. For all regions, the prescription drug payments for NHIS enrollees were high when comparing them to total user fees. In some cases (e.g., Volta and Eastern), NHIS patients prescription drug payments were higher than total user fees.

Even at the most costly facilities (district and regional hospitals, and polyclinics), NHIS enrollees who paid and uninsured patients were paying similar amounts of user fees. The difference in fees in favor of NHIS patients was only statistically significant ($p <0.05$) at the CHPS. District and Regional Hospitals were receiving a large number of patients registered with NHIS. For Regional hospitals, approximately 25% of these patients paid user fees while for District Hospitals this amount was lower, around 5%. Table 9.2 compares the user fees paid by the NHIS insured patients who paid to the fees paid by the uninsured.

Table 9.2: Differences in payment by insurance status and type of facilities

Type of Facility	Insured (NHIS)		No insured	
	Mean (cedis)	Std. Err	Mean (cedis)	Std.Err
1) Health Centre	36,642.3	(9,099.8)	33,278.1	(4,197,342.0)
2) Health Clinic	25,349.1	(4,480.2)	32,302.0	(52,109.1)
3) CHPS	14,328.3	(2,036.7)	37,834.1	(6729.1)
4) District Hospital	60,206.9	(10,003.6)	75,502.1	(8,880.9)
5) Regional Hospital	111,444.9	(16,171.4)	88,661.1	(13,717.8)
6) Polyclinics	198,071.9	150,494.4)	215,552.9	(163,992.7)

Source: Ghana Public Expenditure Tracking Survey, 2007

As expected, both insured and uninsured patients paid less in user fees and drugs in rural areas than in urban areas. Yet, once one controls for type of area (rural and urban), insured who paid (13%) and uninsured patients paid a similar amount for total treatment. The differences were statistically significant ($p < 0.05$) in favor of insured patients only in the case of drug payments in urban areas (see Table 9.3).

Table 9.3: Differences urban and rural differences in payment by insurance status

	Insured (NHIS)		Not Insured	
Type of Area	Mean (cedis)	Std. Error	Mean (cedis)	Std. Error
1) Total Payment for Treatment				
Rural	31,920.4	(8,142.6)	32,013.7	(3,775.9)
Urban	64,809.1	(13,385.6)	69,708.1	(15,539.2)
2) Total payment for drug				
Rural	2,690,439.0	(7,796.7)	24,349.6	(2,058.2)
Urban	48,863.2	(8,420.3)	62,523.3	(14,026.5)

Source: Ghana Public Expenditure Tracking Survey, 2007

In closing, the percentage of NHIS enrollees who paid for user fees and prescription drugs was low at the national level. Those insured that were charged paid a similar amount for user fees and prescription drugs as uninsured patients. This might be a factor that discouraged individuals to enroll in the NHIS. The amount paid for prescription drugs by insured patients seems to be high compared to total fees; and very close to the amount paid by uninsured patients. For the regions of Greater Accra, Volta and Northern, patients enrolled in NHIS who paid were paying more than uninsured patients. The most costly facilities received a higher percentage of NHIS enrollees out of the total number of patients. In rural areas, insured and uninsured patients were paying similar amount.

It is important to keep in mind that the PETS does not provide individual information and type of treatment received. It does not allow for exploration in further detail the availability of health insurance after controlling for relevant observable characteristics influences access to care and medical care consumption. In fact, sicker patients may be more likely to be enrolled in the system. Therefore, similar total user fees observed in the data may imply that NHIS enrollees are paying similar amount for more intense care.

CHAPTER 10
POLICY RECOMMENDATIONS

In this section, a conceptual framework to delineate a generic set of policy options that may be implemented to reduce delays and eliminate leakages in the system is presented. The focus is to suggest interventions that create compatible incentives to influence behavior of employees within higher levels of central and local government, districts and facilities. Budgetary policies that may improve the flow of funds are also proposed.

The policy framework is based on the well-known behavioral model developed by Paterson et al. 2008. The key distinctive aspect of this work is that it integrates six areas that policy actions need to address simultaneously in order to implement a successful strategy to reduce leakage in the flow of funds. Under this comprehensive policy framework, individuals, social entities, and structures will change behavior (in this particular case to reduce delay and leakage) if the proposed action is worth it or if there is motivation, and if the ability to do it exists. Figure 15 proposes a set of generic policy options that take into consideration all six areas of influence to implement successful changes in the Ghana health care system.

The first cell in the matrix suggests that policy interventions to reduce delay and leakage would fail unless they provide motivation to employees within the organization. Individuals need to desire and win from changes implemented to improve the flow of funds in the system. Motivation to employees may come in the form of higher salaries so that excessive allocations of resources for training and conferences may be ameliorated. However, additional incentives may also come from involving employees in new ways of conducting daily activities and connecting these activities and results with personal values. Personal motivation would not be enough if the employees do not have the ability to perform the new tasks. Therefore, it is imperative in a comprehensive strategy to provide training to employees responsible for record filing and keeping. The new focus should be on improving employees' ability rather than specific tasks in order to maintain motivation. This in time may improve the process of requesting funds at the central level.

At the same time, interventions are needed to create organizational motivation and enhance the social capability to sustain the changes. An integral approach should consider policies that create rewards based on output performance for the whole organization (i.e., MOH, GHS, hospitals, CHPS compounds etc). These policies may reduce the delays observed in the disbursement of funds at the central government level. The new mechanisms should allow organizations to keep part of the savings from reducing leakage and delay. Fostering cooperation among employees and increase satisfaction at work would be necessary to motivate the whole organization to produce and sustain the necessary changes.

The design of policy options should consider the institutional arrangements and their implicit set of incentives within the system to increase efficiency in the flow of funds. For instance, this analysis identified important delays in the reimbursement of funds from the MOFEP to the MOH. A review of the budgetary process should be conducted to create incentives to reduce these delays. Examples of this approach would be the introduction of a decentralized system for local accountability based on report cards rather than on central control. Another possibility is to improve and standardize systems of record keeping and filing. Lastly, a budgetary process should be implemented to allocate resources based on yardsticks indicators rather than retrospective allocation. This analysis found high variability in the allocation of resources at the district level as well in the performance of facilities. The introduction of budget guidelines based on benchmarking may improve efficiency in the flow of funds.

In this report, the proposal is for an integrated approach to reduce inefficiencies in the flow of funds within the Ghana health care sector. The most important point about this guideline for action is that a successful strategy requires a comprehensive approach that blends together individual, social and structural elements of the system. Failing to consider all these aspects will result in ineffective policy actions. Some of these policies should be implemented in a small scale selecting administrative entities and facilities based on the result of this analysis. Scientific evaluation of this effort is imperative before scaling up the implementation process.

For example, PETS allowed the tracking of the flow of funds (item 3) within the system and pinpointed where inefficiencies were taking place. Yet, it did not provide the necessary information to identify the direct causal channels that explained leakage in the system. Without this information, it is not possible to develop effective specific policy options. Further work needs to be done in order to gain a better understanding of these factors. The findings of this work should be used as a guide to further study the system. Four pilot projects that should follow up this report are recommended. Figure 10.1 explains each of them.

Figure 10.1: Guideline for policy options

	Motivation	Ability
Personal	-Involve employees in new ways to conduct daily activities - Focus on accomplishment - Connect activities and results with personal values	-Provide training to employees responsible of record filing and keeping - Focus on improving employees' ability rather than specific tasks
Social	-Create reward for the whole organization (i.e., hospital, CHPS, etc) based on output measures. - Allow organizations to keep the savings from better performance	- Increase motivation and satisfaction at work among employees - Foster cooperation among employees
Structural	-Increase individual monetary rewards (non-salary) according to performance. - Create systems for local accountability (i.e., report cards) rather than central control	- Improve and standardize systems of record keeping and filing - Change the system of distribution of resources according to a system based on yardsticks indicators (the results of this work suggest that benchmarking may improve efficiency)

In closing, an important effort has been done to complete this data collection process. The structure and components of the PETS survey offer the potential for a rich analysis of the flow of funds within the health system. This report identifies important delays in funding at the upper level of government. We believe that the findings confirm a number of important trends and patterns that need to be changed to improve the efficiency in the allocation of resources in the Ghana public health care sector.

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APPENDIX *A* CONTRIBUTORS TO THE REPORT

APPENDIX *B* LIST OF QUESTIONNAIRES