Effectiveness of Education Public Expenditure in Bangladesh: A Survey Study on Fifty Primary Schools in Four Administrative Districts

Mohammad Imran Hossain, Ph.D.[1], Ahmed S. Ishtiaque[2], Abdul Baten[3]

[1,2,3] Assistant Professor, School of Business, University of Liberal Arts Bangladesh
[1]imran.hossain1@ulab.edu.bd, [2] ahmed.ishtiaque@ulab.edu.bd, [3]abdul.baten@ulab.edu.bd

ABSTRACT

Public expenditure in the primary education sector of Bangladesh is not meeting itspredesigned goalsfor many reasons. To realize some impediments, in this study, a Public Expenditure Tracking Survey (PETS) was conducted taking the primary education sub-sector as a test case. To understand the levels of accountability and transparency in expenditure, a Quantitative Service Delivery Survey (QSDS) was performed along with the PETS study. Primary data was gathered with the help of the above surveys.The findings of the studyindicated that the level of effectiveness of government expenditure in the said sector is low.

Introduction

National budget data for the last two to three decades indicates that along with a rise in quantity, the pattern of public expenditure in Bangladesh education sector has undergone through various changes. The government has allocatedsubstantial amount ofresources toprovide education for all people (Osmani et al, 2006). However, two important issues regarding education public expenditure should not be ignored. First, the quality and effectiveness should be considered as more important than higher allocationif the aim is to translate resources intosocial development(Reinikka&Svenesson, 2004). Second, although Bangladesh's performance in poverty reduction,economic growth and social development in the last few yearsisimpressive, a review of the policies and programs related to public expenditure in the country's education sector highlights several inefficiencies and structural issues which, if not addressed,will impede further progress.In other words, allocating more resources does not confirm that Bangladesh's public expenditure in the said sector is effective in nature. Ensuring that people especially the poor segment of the populationget their proper shareis more important than an increase in amount.

Figure 1 below showsresource allocation for the education sector of Bangladesh. The proportional share of expenditure has been increased continuously throughout the past three decadesin absolute amount. Share of expenditure increased rapidly and has almost doubledfrom 8 percent of the budget to 15 percent during the period from 1980 to 2010.However, the overall expenditure in this sector has gone down since then. Expenditure as a proportion of GDP has also risen,although the share of the education sector budget both as percentage of GDP and the percentage of total budgethas been declining in recent years(Rahman, Khan &Sabbih, 2016).

Figure 1: Government Expenditure in the Education Sector of Bangladesh
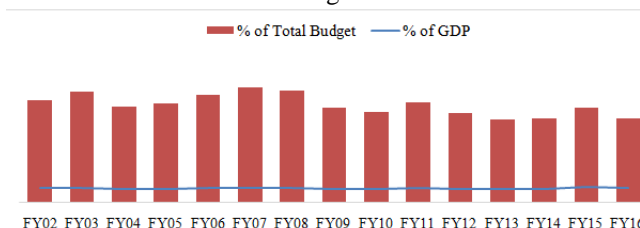
Source: Rahman, Khan &Sabbih(2016)

On the other hand, expenditure on primary education (percentage of total government expenditure on education) in Bangladesh was 43.50 percent as of 2016. Expenditure in this sectordid not fluctuate much since 1980 when 40.27 percent of the total education expenditure was spent in primary education. Its highest value over the past 37 years was 53.74 percent in 1993, while its lowest value was 38.43 percent in 1979. The next figure shows some information regarding government primary education expenditure in the country.

Figure 2: Expenditure on Primary Education (Percentage of Total Expenditure on Education)
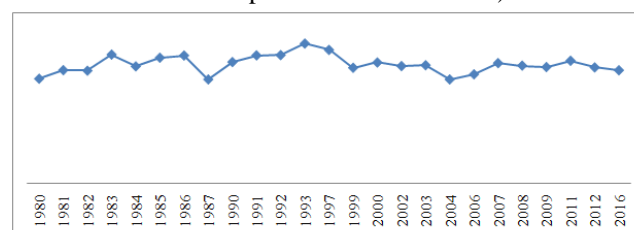
Source: UNESCO Institute for Statistics

1.2 research hypothesis

Only official record of allocating more resources does not imply that the originally allocated funds finally reach to the frontline service providers and the final recipients. The present study intended to examine the following hypothesis:

H1: Effectiveness of public expenditure in the primary education sector of Bangladesh is low

H2: The major impediments arewidespread corruption, lack of accountability & transparency in fund management, and leakage of public fund

1.3 Research Question

To check the hypotheses this study tries to answer the Research Question:

Why has public expenditure in the education sector of Bangladesh been of littleimpact andwhat are the potential factors behind the failure of primary education public expenditure in the country?

1.4 Research Objectives

The main objective of this study was to perform a quantitative explanation that was based upon the findings of a joint Public Expenditure Tracking and Quantitative Service Delivery Survey (PETS-QSDS) conducted considering the primary education sub-sector in Bangladesh as atest case. This study made effortto look for common trends and patterns and it also tried to gather evidences supporting the study's hypothesis through a variety of approaches and methods.It was done by comparing data of official budgetary allocationfrom the government for a primary school and actual amount received and spent by it.To fulfill this objective,the survey was conducted for a sample of 50 primary schools in fourdifferent districts (provinces) of Bangladesh namely Brahman Baria, Cumilla, Gazipur and Dhaka. The survey was conducted in August of year 2013.

The rest of the paper is organized as it follows. The immediate next section presents theoretical background of the study where the Principal-Agent Model, agency problem and moral-hazard, and the relationship among various actors in education service delivery system are described. Then theory of Public Expenditure Tracking Survey (PETS) and Quantitative Service Delivery Survey (QSDS) is briefly explained in two sub-sections. Next, rationale of the present study is justified before major methodological considerations such as methods regarding tracking resource flows, institutional assessment, sampling strategy, and survey instruments are explained. Then findings of the study are presented in a subsequent section. Here general descriptive findingsof the study andfindings regarding teachers' salaries along with other benefits, supervision, accountability, leakage of resources, reasons of fund capture and leakageare explained. In the final section, a conclusion is drawn based upon the findings of the study,followed up by some recommendations.Directions of further research have also been advanced.

Theoretical Background

Literature of Public Economics offers several models that are frequently used to analyzegovernment's service delivery

performance and efficiency. The Principal-Agent Model emphasizesthe relationship between the policy makers, frontline service providers (who are called here as the agent) and the people (who are the principals). In this model, the State acts as an intermediary agent and it creates a situation where principals cannot easily control and evaluate the roles and actions of the decentralized agents likea primary schoolin the education sector. The model's perspective is that citizens willingly elect officials and delegate the State the responsibilities to manage and provide social services. Citizens are also willing to pay taxes to cover the necessary expenses required. Policymakers design appropriate policy and budget for service provider organizationsand offer incentives for the employees who work in these organizations to fulfill the needs of the principals (World Bank, 2003). Figure below represents a schematic diagram of the model.

Figure 2: The Relationship among Various Actors in Education Service Delivery
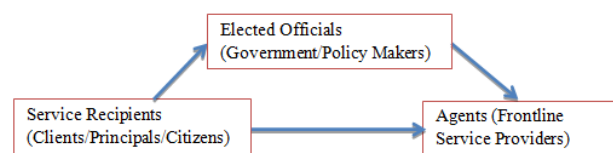
Source: World Bank (2003) andGauthier(2006)

However, agency problem and moral-hazard appear in the process. The wisdom behind the standard moral-hazard and agency problem is that the agent's compensation would link to his/herperformance. In a world with no information asymmetry, citizens would be able to evaluate theworkdone by the agents andthe government officials. However, in practice, citizens' ability to control agents'behavior is constrained by imperfect information. Therefore, objectives of various parties do not coincide eventually. This ultimately reaches to a situation of shirking and rent extractionwhere agents will devote fewer efforts than itis expected and some agentsmay divert some portion of public funds to their own benefits (Holmström, 1979).

According toDixit (2002) and Besley and Maitreesh (2003), citizens only have the chance to get information about aggregate output of the production process. Having such barriers, it is quite impossible to indicate the responsible person(s) for the situation they can observe. On the other hand, both agents and citizens cannot get access to proper information about the performance credited by a policymaker or a government official attached to a public program.

Besley and Maitreesh(2003)claimed that in the provision of public services, various actors are directly affected because the process involves the presence of multiple principals. The primary education sector of a country provides a solid example. Here the principals are: citizens, employees, school board, the officials of the related ministry and politicians. These different principals might have different views about education outcome and about agents' tasks. Dixit (2002)concluded that the principals want the agents to make more efforts in achieving goals that theyprefer more; but there are inefficiencies and incidence of failure in the case the incentive schemes are designed in such a manner

that they are not capable to maximize the combined benefits of all parties. Radner and Marschak (1972) and Holmström (1982) found a free rider problem in public service organizations which makes education public expenditure management difficult. It is becausethat multipleagents are engaged in a joint production process where a central-provincial-local authority plan is followed in most cases to share the responsibilities in decision making. As a result, in many occasionsmoral hazard appears in the hierarchy and reinforces in the team.

2.2 Public Expenditure Tracking Survey (PETS)

In some previous studiesconducted in Africa and other places showed that the leakage of fund, which is defined as the resources originally allocated to, but was not finally reached or received by the frontline service providers was found to be a big problem(Reinikka& Smith, 2004). The share of "ghost" on the payrolls and leakage of otherallowances are also very common in developing countries. According to Ye &Canagarajah (2002) and Das et al (2004),leakage is a common problem and one of the major policy concerns in a developing country context.

Public Expenditure Tracking Survey (PETS) is a method widely used to understand the flow of various public funds disbursed for development activities.It tracks the flow of resources within various government organs in order to measure how much of the originally granted funds, while passing through the service delivery units, actually reach to the targeted clients. It aims to improve the allocation criteria and impacts of various public spending. The method tries to identify weakness in the country's public expenditure management and provides information about failure of policies that are followed in resource allocation decision making. The tool is very helpful as it gathers many data from various sources simultaneously. Later these datacan act as the basis for understanding the fundamental reasons of malfunctionor causes of policy failure. The tool is especially helpful where official accounting system does not provide reliable information about efficiency and effectiveness of government expenditureof a country (Reinikka&Svensson, 2006).

A survey like PETS successfully performs as a multi-facet working tool in economic research. The first way it works is categorized as a diagnostic tool which is useful in identifying concrete facts and basic problems such as leakage of funds within the system and service provider absenteeism. But in this phase, it does not suggest any solution for these problems.

The second function of a PETS survey is that it works as an analytical tool where it diagnosesvarious problems of a sector.PETS helps to understand the underlying causes so that effective interventions can be designed.

The third functionality of PETS is that it acts as an impact evaluation technique to see the effects of a policy intervention that has been already implemented. The method compares pre- andpost-evaluation data in order to identify the changes occurred. A simple preliminary PETS survey is conducted first to discover the problems in the sector before policy intervention has been taken place. To examine changes, later another survey with a set of modified research questions is conducted and results are compared to find any improvement.

2.3 Quantitative Service Delivery Survey (QSDS)

Multi-purpose school surveys, on the other hand,have become popular recently and are frequently used in examining efficiency of various education public spending in developing countries. QSDS is one such quantitative tool that emphasizes on school related data from various dimensions: finance, incentives for staffs, behavior of service providers (teachers), input use, pricing, output gains and quality of services etc. QSDS's main concern is that even the resources have been reached to the last unit of expenditure management hierarchy, their usefulness in achieving targeted outcome is relied on how efficiently they are used in a service provider unit such as a school facility. From this point of view, a school is the main unit of observation in the data collectionphaseofa QSDS. However, in many cases a combination of PETS and QSDS is more powerful than a single tool to obtain reliable informationbecause these two tools can complement each other and their combination helps to evaluate wider institutional and resource flow problems. A combined survey is also useful in detecting the impact of institutional and resource flow problems on the performance of frontline service providers (Dehn, Reinikka&Svensson, 2003).

2.4 Rationale of the Study

First, Bangladesh's low literacy rate forces the nation to recognize education as a priority sector by all subsequent governments since Independence.Especially primary education receives significant attention in the country (Mujeri, 2010). Successive governments of Bangladesh have been taking many initiatives to fulfill the aim of education for all people. As a starting point, the Compulsory Primary Education Act of 1993, which made the primary education free for all, is regarded as one of the most notable achievements. Later, education for girls up to eighth grade was declared completely free to encourage female education given that the proportion of illiterate women in the country was much higher than that of men at that time (Kalene et al, 2005).

Second, to fulfill the education MillenniumDevelopment Goal (MDG) and to achieve education for all citizens by 2021, every year the government spends a big amount of money from the budget(GOB, 2010). Therefore, official education expenditure of the government in both primary and secondary levels is increasinggradually in the country.

Third, although the enrolment rate in primary level iscomparatively satisfactory in the country,completionratio is still poor because many of the enrolled students leave school before completing their primary education.It was reported that the drop-out rate of students in primary level dramatically reduced from 50.5 to18.6 percentwithin a 15 year period between 2005 to 2022(BANBEIS, 2018).

Table 1: Primary School Dropout Rate (from 2005 to 2015)

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dropout Rate(%)	47.2	50.5	50.5	49.3	45.1	39.8	29.7	26.2	21.4	20.9	20.4	19.2	18.8	18.6

Source: BANBEIS (2018)

Enrolment as well as completion rates in secondary and higher secondary schools also remainedlow in the country.

According to BANBEIS (2016), in 2015 the secondary net enrolment rate was 67 percent while completion rate was about 60 percent. It was indicative that about 80 percent of the students pass primary school final grade andonly one out of 2students can complete secondary schooling in Bangladesh, which implies that only about 50 percent of students who ever went to a primary school can pass secondary level education. Bangladesh's low rate of completion is obviously a serious concern for achieving universal primary education.Poor enrolment and completion ratio in secondary and higher secondary level education also implies that thereexists a terrible indictment in the educational system of the country (Osmani, 2010).

Table 2: Gross and Net Enrolment Rates in Secondary Education in 2015

Indicators	Enrolment rate (%)		
	Boys	Girls	All
Gross enrolment rate	67.75	77.84	72.78
Net enrolment rate	62.16	71.85	67.00
Adjusted net enrolment rate	63.92	73.62	68.76

Source: BANBEIS (2016)

Research Methodology

Methodological approaches used in PETS and QSDS have significant consequences on their ability to achieve pre-designed research objectives. Designing and implementing them for this study thus followed various options related to the choice of proper data collection strategies.

3.2 Tracking Resource Flows

In a developing country context there are possibilities of leakages in public resources as well as non-wage funds when they pass through the service supply chain. Following Das et al. (2004a), this study chose to track both wage and non-wage cash flows that were coming from the government as well as donorsat various levels. The attention was focused on two key issues:
(1) Primary school received its allocated amount or share in lump-sum payment
(2) Fundswere utilized properlyin confirming targeted levels of efficiency.

3.3 Institutional Assessment

The second methodological approach became helpful to identify the institutional hierarchy through which necessary resources from the government were allocated and sent to differentprimary schools. This attempt helped us to achieve research objectives related to institutional assessment. Quality of data and their consistency was also justified by this tool. Following Gauthier (2006), this study collected information only at the service provider level. Such strategies helpedto measure resources available to spend by a primary school and know the actual amount that was allocated for it beforehand.

3.4 Sampling Strategy

In a PETS-QSDS survey, various approaches can be followed to form the sample. But stratification by levels or categories and random selection sampling are frequently utilized in developing countries (Reinikka and Smith,2004). In this study, however, informal and random selection sampling based upon convenience of access or ease of interviewingwas followed. This is because of insufficientfinancial resources for this researchand shortage of time. But in the survey, we preferred to interview a greater number of same facilities (primary schools) in four districts of Bangladesh to get a more reliable result.Among the surveyed schools, there were 36 fully government subsidized, 10 non-government registered and 4 privately funded primary schools. Most of the schools were selected from rural areas where there were very limited alternatives for the village people to send their children for education. There were two reasons for such a sampling choice. Firstly, in Bangladesh majority of the people (about 70 percent) live in rural areas and most of them live with poverty (World Bank, 2014). Therefore, government education expenses have a big impact on these people and their lives. The second reason is the easy access of the school facilities for interviewing purposes.

3.5 Survey Instruments

Following standardPETS-QSDS survey tools of Reinikka& Smith (2004) published by International Institute for Educational Planning of World Bank, a questionnaire was utilized. The questionnaire included eleven general sections.We consulted with the head teachersof several schoolsas primary respondents for this study. Other teachers also took part in the survey by supporting the head teachers with access to relevant information and various school records.

The first section was about identification of the school facilities. In this section various information such as name and type of schools, location and address, year of establishment and contact detailswere recorded.In the second section, number of students in different grades was tracked from the school records. At the same time, the number and percentage of female students were also recorded. The third section was collected various information includingname, gender, educational qualification and years of experience of the head teacher. It was done through checking data records kept by the school.In section four, information about other teachers working in the surveyed primary schools were gathered in consultation with the head teacher.Information about "ghost" teachers was also trackeddown in this section.Section five dealt with various facilities provided by the primary schools. This was also done in consultation with the head teacher.In section six information such as location and distance of the surveyed schools from other surrounding schools along with school choices by the villagers were obtained.Section seven was used to obtain information about organization and governance related records such as the activities and roles of Board of Members (BOM) and Parent Teacher Association (PTA).In section eight, data about supervision and accountability was gathered where information about frequency of inspection by outside government officials was obtained.Section nine of the questionnaire tracked information about various sources of funding of a primary school. This was also completed in consultation with the head teacher and access to school

records.Section ten was used to gather data regarding various sectors where expenditure of the school had taken place in the previous two years. Finally, in section eleven data sheet to calculate the value ofin-kind support was used to get information about supports in-kind from various bodies including the central and local governments.

In the original questionnaire there was another section twelve where information about quality of school records was surveyed. However, this study discarded this section because it was irrelevant for primary schools that were considered in this survey. Among the surveyed schools, very few of themused to keep detail records of activities andthey rarelycollect proper receipts ofmoney spending for documentation purpose.

Research Findings

In the following sub-sectionsthe findings of the study are discussed below. At first, the descriptive findings such as types of primary education institutions,number and types of teachers and studentsaffiliated are mentioned. Laterthe survey findings from the viewpoint of public expenditure related variables such as school features, schooling outcomes in terms of primary education completion rate, infrastructural facilities provided by a school, school's

sources of funding, teachers' salary and other benefits, school's spending of money, value of in-kind support received by a school, fund capture and leakage of various funds, causes of leakage and fund captured,and supervision and accountability are discussed in further details.

5.2General Descriptive Findings

The primary education system in Bangladesh incorporates from grade one to grade five and according to 2015 data,the nation has nineteen million studentsin some 122,176 primary schools spread out all throughout the country. At the time the survey was done, among the total number of institutions, over 65 percentwere government led while the rest were registered non-governmental primary schools. However,these schools are heavily assisted by the Stateas well asprivately funded bodies. These registered primary schools were nationalized at a later stage and became government led organizations contributing to the national education system. Privately owned primary school facilities in the country werein most parts low in numbers compared to their public counterparts. The following table presents some basic information regarding different types of primary schools, number of students and number of teachers etc. in Bangladesh for the year 2015.

Table 3: Different Types of Primary Education Institutions, Teachers and Students in 2015

| School type	No. of schools	No. of teachers			No. of students		
		Male	Female	Total	Boys	Girls	Total
Govt. primary schools	38,306	75,724	149,935	225,659	4,607,712	4,970,976	9,578,688
Newly nationalized Govt. primary schools	25,240	47,466	49,362	96,828	2,057,888	2,157,077	4,214,965
Registered non-Govt. primary schools	112	189	331	520	10,255	11,177	21,432
Non-registered non-Govt. primary schools	1,926	2,090	5,050	7,140	136,523	135,574	272,097
Experimental schools	55	35	244	279	5,530	5,259	10,789
Ebtadayee madrasa	2,877	8,975	2,323	11,298	200,878	190,070	390,948
Kindergarten	18,318	48,552	69,614	118,166	899,631	882,571	1,782,202
NGO schools other than BRAC	2,680	1,698	4,259	5,957	105,285	114,683	219,968
Community schools	106	84	257	341	7,137	7,705	14,842
Primary schools attached to high madrasa	5,599	19,350	3,313	22,663	429,952	400,781	830,733
Primary sections of high schools	1,554	4,892	6,209	11,101	268,801	291,720	560,521
BRAC schools	13,522	504	13,382	13,886	14,3110	189,585	332,695
ROSC schools	6,258	1,140	5,187	6,327	92,744	91,419	184,163
Shishu kallyan primary schools	152	135	302	437	7,175	8,130	15,305
Others	5,471	2,665	4,531	7,196	396,458	241,955	638,413
Total	122,176	213,499	314,299	527,798	9,369,079	9,698,682	19,067,761

Source: DPE (2015)

The overall management responsibilities of primary education amongthe government led schoolsare borne by the Bangladesh Ministry of Primary and Mass Education. Although non-government registered primary schools are not funded fully by the government, they receive various supports from the State (DPE, 2015). Since education in Bangladesh is basically financedby public funds, the entire

costs of government led primary schools are borne by the State. The government paysfor the teachers' salaries, distributes free books for all students and bears all other education expenses. At the time the study was conducted, there were government registered primary schools that were also funded by the government and the Statewas payingmost expenses of these primary schools. 90 percent of basic salaries for teachers ofnon-government registered primary schoolswerepaid by the State. Currently the government

pays the full salary and allother allowances such as house rent and medical allowances for these school teachers.

Among the surveyed schools, most were government run primary schools (72%) and the rest were government run registered primary schools (20%) and privately owned primary schools (8%). In most of the government funded primary schools,teacher to student ratiowas very low; which indicates a situation of insufficient teachers to ensure quality education in these schools.

**Figure 3:**Type of School (Percentage of Total 50 Primary Schools in Four Districts)
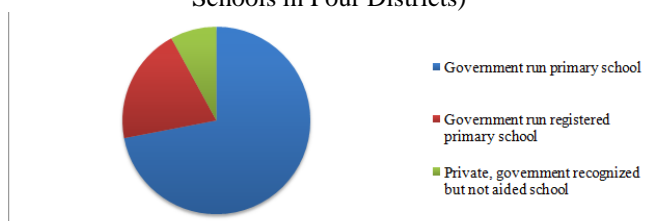
The study looks further into the average number of students in a class whichranged from 56 in class one to 44 in class five.This is another indication that a lot of these students had left before they completed their fifth grade. The average number of total students in a primary school was 300plus. On the flip side we find that on average there were only 4 teachers per school. Ratio of male tofemale students in all grades was about 1:1 which indicated that female student enrolment in primary schools has improved substantially in the country when compared to the previous decades. Table 4 below provides information about the average number of students in different grades.

Table 4:Average Size of School

Number of students in class (1-5)	
Number of students in class 1	56
Number of students in class 2	66
Number of students in class 3	70
Number of students in class 4	56
Number of students in class 5	44
Percent of female students	
Percent of female students in class 1	52%
Percent of female students in class 2	44%
Percent of female students in class 3	49%
Percent of female students in Class 4	57%
Percent of female students in class 5	51%
Ave. number of teachers per school	4
Ave. number of students per school	301
Average student to teacher ratio	75:1

According to the survey findings, at the time the survey was conducted, about 93 percent of the total students who had appeared for the Primary School Completion Examination had passed the course. The study also finds that for female candidates the rate of passing was slightly higher (96 percent)than the average. Figure 4 shows data about schooling outcome in terms of primary school completion examination pass rate.

Figure 4: Schooling Outcomes
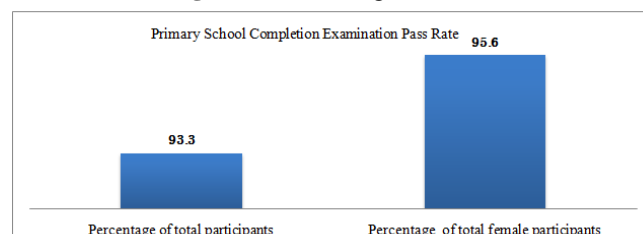
Next, majority of the government resources transferred to the primary schoolswere mainly for paying salaries of the teachers (over 95 percent of total spending). Very few of the public funds were used for the purpose of "goods and services" or administrative expenses etc. surprisingly only a few respondents believed that a primary school has administrative expenses. For expenses in "Goods", a category whose basic items are namely brooms, chalk, pensand binding papers,most of the primary schools received a fixed amount of money in a yearly basis. Government led primary schools receivedBangladesh Taka (BDT)8400 which was equivalent to about US Dollar (USD) 100.Also, non-government registered primary schools got BDT 4600 which was equivalent to USD 55 and private schools got no fund at all from the government for"Goods" expenses.

Most of the donations and support came mainly from the local governments, alumni students and local community support. These assistances included both monetary gifts and in-kind supports with text books, tables, chairs, black boards and ceiling fans.The next table (Table 5) shows the results about sources of fund including salary of teachers received by a primary school and the following figure(Figure 5) shows survey results about percentage of school facilities that received any kind of fund that excluded teachers' salary. It was indicativethat only a few schools received fund for spendingother than salary expenses and even than this type of funds were exceptionally insufficient.

Table 5: School's Sources of Funding (Including Funds Related to Teachers' Salary)

National government capitation grants	>94%
Other national government programs (like the Food for Education Program)	<1%
Local govt. support	<1%
Parents Teacher Association (PTA) fees	0%
Donations (in-kind support)	<2%
NGOs	<2%

[Note: Capitation grants imply allocation on the basis of children enrolled. The practice is just number of teachers on govt. list for the school plus a lump sum for other expenses which are decided on an ad hoc basis and change incrementally from time to time, based on lobbying.]

Figure 5: Schools Receiving Funds (Percentage of Total Surveyed Primary Schools)
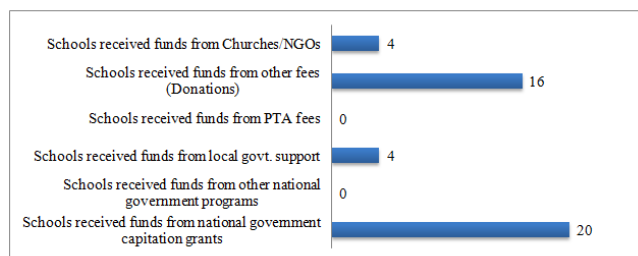
[Note: Here fund implies funds for other expenses rather than salary.]

It was found that poor infrastructure and shortage of teachers were the two major problems that every head teacher identified from his/her school. According to the findings, student teacher ratio was 75:1 which indicates a serious shortage of teachers at the primary level.More than 80 percentrespondents reported that their primary schools suffer from lack of essential funds which the schools desperately need to repair old class rooms, get electricity connection and build sufficient of toilets for the students. The following figure (figure 6) shows findings regarding infrastructure facilities provided by a primary school.Almost all the head teachers responded that supply shortages and inadequacy of public funds sometimes led the school authorities to raise funds through charities, local community support and other local government organizations like union parishad orupazilla councils.

Figure 6: Infrastructure FacilitiesProvided by a Primary School (Percentage of Total Sample)
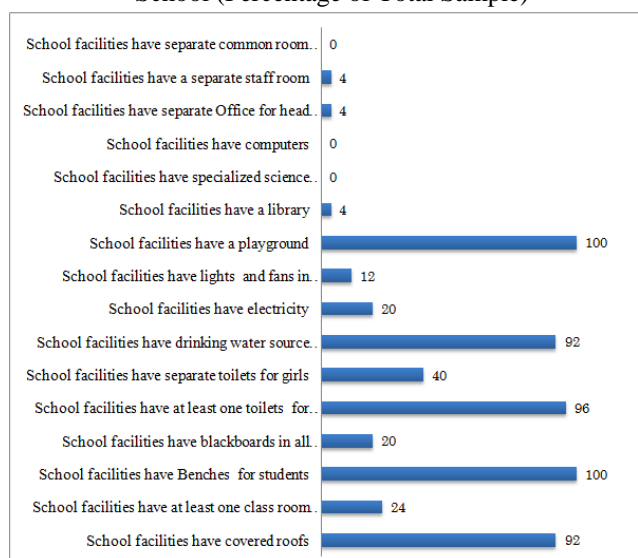
5.3 Teachers' Salaries and Other Benefits

It was found that teachers' salaries and benefits constitute more than 95 percent of total expenditures of schools. The studyalso indicates that teachers' salaries and other job benefits were not adequate to the task. Almost all the respondents (more than 98 percent) mentioned that the amount of salarythat they are granted is insufficient to cover theirdaily necessities. Table 6 presents survey results regarding breakdown of various expenses including salary expenses of a primary school.

Table 6: Breakdown of Yearly School Expenditures (Average in Bangladesh Taka)

Administrative cost	*0*
Staff-related expenses	
Total expenses on teachers' salary	418,508
Average salary expense for one teacher (considering 4 teachers per school)	104,627
Total expenses on teachers' bonus	43,227
Average bonus expense for one teacher (considering 4 teachers per school)	10,807
Total expenses on teachers' training	0
Average training expense for one teacher (considering 4 teachers per school)	0
Facilities Related Expenses	
Expenses on rent of property	0
Total expenses for scholastic materials (goods and services etc.)	3,966

5.4 Leakage of Resources and Non-Wage Development Funds

The survey indicates that there is a leakage of non-wage funds and this was estimated from the reporting of primary schools within the sample that received at least some amount of money towards non-wage activities. Considering the entire sample,it was found that only a few number of schools received non-wage funds (only 10 schools out of 50) and among them majority were registered non-government primary schools. It was revealed that 80 percent of the schools receiving funds were non-government registered primary schools. The reason was that registered primary schools were newly built and they needed more funds to help develop their infrastructure facilities, such as school buildings and class rooms. Among the 10 fund-receiving school units, there were only two (20 percent) that got the entire amount disbursed from the district education officer. Other eight replied that they received only a partial amount. It was found that on an average only 38 percent of the total fund that was allocated from the government finally reachedthe school authority and the remaining 62 percent was leaked.It is true that fundsnot reaching the schools does not necessarily mean leakage of fund because most allocated non-salary funds are not actually disbursed.However,for this

study, it was the difference between funds actually disbursed from the district level and funds received by the schools
.

5.5 Leakage of Resources and Rule-Based versus Discretionary Funds

It was found that discretionary fundssuch as sudden repaircost of school facilities composedof more than 60 percent of the disbursed amount.The leaked funds were more like rule-based fundssuch as scholarships for female students which were coming from the central government. One probable reason for this might be a greater discretionary power granted to politicians and local public administration without having adequate supervision and proper incentive programs to back up the fund disbursement process (Das et al, 2004a).

5.6 Leakage of Resources and Salary versusNon-SalaryExpenditure

The survey results indicated that non-wage resources which are channeled through inter-governmental transfer suffered from higher levels of leakage and capture compared to wage related resources.Problems between local politicians and school authorities aroseregarding the process of non-wage resource channeling because government officials and local politicians coulduse their access to information to their advantageand reduce the amount of disbursed funds significantly. In contrast, salaries and other wage resources were paid through direct bank transfers from the relevant ministry to a certain worker or teacher of the primary school. Rules and regulations that govern wage funds were well structured, which also contributed in reducing leakage and capture of such funds.

5.7 Fund Disbursement Hierarchy and Causes of Fund Capture &Leakage

The following diagramdescribes the disbursement channels of government funds regardingtheeducation sector of Bangladesh.In this diagram, dotted lines indicate non-financial in-kind funds and solid lines indicate financial or monetary support from various sources.

**Figure 7**: Primary Education Fund Disbursement Hierarchy in Bangladesh
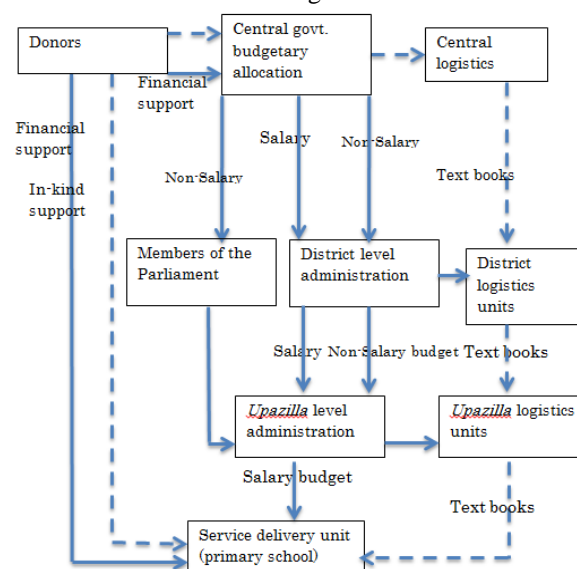
Source: Author's Observation

The study observations revealed that most funds were granted from the central government.In the case of most funds, except for the tertiary level education, initially the districts received the fundsand were supposed to pass them on to the school facilities through the upazilla administration. Local members of the parliament also received development funds directly granted from the central government.These funds were for development purposesat the community level, but under the parliament members' discretion. In this study most of the head teachers responded thatwith the lack of proper oversight by the central government, local politicians as well as district and upazilla officials maintaineda degree of discretion over these resources. They also had better information about the amount of money (which was varying from school to school) that was supposed to be transferred for each school facility. On the other hand, school authorities facedinformation asymmetry on disbursement of the capitation grant due to higher costs associated with obtaining such information from the central government. The ultimate consequence was thatpreviously allocated fundsor part of the fundsnever reachedthe schools they were meant for.

5.8 Supervision and Accountability

It was found that most of the schoolsdid have a Parent Teacher Association (PTA) and only 4 percent of the total sample either did not have a PTA or did not arrange any PTA meetings at all in the previous two years. Majority had a PTA meeting at least 6 times a year and 88 percent of the surveyed schools arranged at least 3 PTA meetings a year. On top of that, inspection records by externalgovernment officials wereextremely insufficient as only 20 percent of the primary schools reported that they were visited 12 times or more in a year. On an average, 72 percent schools mentioned that they were visited by externalgovernment officials more than 6, but less than 12 times a year. The next figurehighlights findings about supervision and accountability.

Figure 8: Recordsabout Supervision and Accountability
(percentage of total sample)
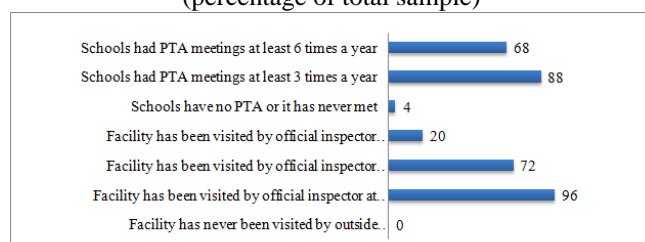
Discussions

The studytried to verifyits hypothesis by the findings of the PETS-QSDS survey. It was revealed that asymmetry of information, corruption in resource management,tradition of insufficient fund allocation, leakage of funds, culture of inter-government fund channeling, greater discretionary power granted to politicians and local public administration,lack of proper supervision, shortage of teachers, and inadequate supervisionof primary schools by external government officials were identified as the major impediments in the primary education sector of Bangladesh. Possibly these problems significantly lowered the welfare effects of public expenditure in this sector. The situation goes completely against the favor of frontline service providers and the school authorities. Very few schools got their allocated funds that were originally sanctioned by the central or local government. Local politicians have an intention to control and interfere in everything related to monetary decisions of theeducation sector.School authorities had no power at all regarding budget allocation and other important expense decisions.The study suggests the following recommendations.

In Bangladesh,public expenditure in the education sector is extremely centralized. Decentralized financing directly to schools can potentially lead to less fund capture and smaller leakage, thus, may improve effectiveness and efficiency in resource management practice. However, if corruption is also high even in the lower levels, the school authoritiesmust be monitored and supervised by stronger accountable management bodiesnot arbitrarily formed by the government, but rather through bilateral stakeholders.

6.2 Recommendations

Overall quality of education and greater access to schooling, especially at the primary stage, requires higher allocation of public funds. It can besuggested that demand-side interventions such as incentives to attend school, reduction in the cost of education, provision of subsidized meals and even school-based health programs are necessary to reduce the dropout rates. At the same time, more fundamental institutional arrangements and reforms, offering higher incentives for teachers, and implementing school-based management programsmay improve the overall situation.On the other hand, the equity goal of the State should not be ignored either. Government's ongoing funding norms should be reviewed to provide more equity of public expenditure in the education sector. In this regard, similar incentive programs should be offered to all teachers in boththe government and non-government primary school levels.

To improve the overall efficiency levelthe management system within the education sector must be reformed and strengthened. The level of transparency and accountability needs to be drastically increased,supported by proper monitoring and evaluation functionsthat are carried out by government officials. Better planning and execution of budgets should be maintained through superior staffing, proper documentation and digitization. Leadership and governance should be improved by more involvement of front-line service providers such as the school teachers. The involvement of the teachers in the budgetary planning process and school related expendituresshould be encouraged. They should be granted at least minimal discretionary power and freedom of monetary decisions of the schools. This is importantbecause they are the frontline service providers and a well-motivated group of teachers could determine the level of management effectiveness as well as overall school performance for the sector.

The studyalso wanted to highlight about the rate of "ghost" workers who did not workfor the surveyed primary school,but also received salaries. All head teachers were unwilling or ashamed of giving such information out right. School authorities did not like to give proper data regarding "ghost" workers because such issues were sensitive in nature and could be detrimental to their carriers. One reason might be thatusually school authorities never disclose such information to the public. The study also found that the central government was unwilling to share the payroll rosters. During the time the survey was conducted these were very sensitive issues;primarily because a nationwide movement demanding increment in salaries by non-government registered primary school teachers were been held.However, this study suggests that theseproblems appear to be a continuing phenomenon. Alternate techniques other than asking headmasters/teachersmaybe used in future researches to uncover existence of "ghost" or "proxy" teachers in a primary school

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