Fee-free public or low-fee private basic education in rural Ghana: How does the cost influence the choice of the poor?

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Abstract

The paper uses data from a household survey of three rural communities, and interviews in the Mfantseman Municipality in the Southern Ghana to investigate the costs incurred by households which choose either fee-free public schools or low-fee private schools. The paper shows that both provisions impose costs which place those with lower household incomes at a disadvantage since the poorest cannot afford the costs for several children. Although fee-free public education has led to the elimination of payments such as tuition, exams and extra classes fees, other direct costs such as feeding and school uniform consumed a large part of poor household expenditure on education. The perception that low-fee private schools offer better educational outcomes coupled with their flexible fee but arguably manipulative policies encourages enrolment from across a wide spectrum of rural households. The paper concludes that fee-free public schooling still leaves households with significant amount of costs which constitute a barrier to access to children from poor households, while low-fee private schools are still not affordable to them. The findings indicate the need for governments in developing countries to come up with strategies and policies that target the poorest.

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1. Introduction

Efforts to improve equitable access to basic education in Ghana began before independence in 1957, and have since been pursued relentlessly through a number of education reform policies to achieve this goal. The formulation of the accelerated development plan (ADP) for education in 1951 which abolished tuition fees in public schools, represented the first major attempt to ensure that all children, irrespective of their socio-economic background and location had access to basic education. In 1960, an Education Act went further, and made fee free primary and middle schools a constitutional right. Both the Act and the ADP laid the foundation for rapid expansion of access and contributed to narrowing the inequalities associated with earlier patterns of access. By the mid-1970s, setbacks in Ghana's economy severely affected the education sector, and led to widening participation in education, especially between the poor and non-poor (Rolleston, 2009; World Bank, 2004). It was not until major education reforms were launched in 1987 with financial assistance from the World Bank and other bilateral organisations that the participation gap narrowed again (World Bank, 2004). However, recent education access indicators suggest that inequalities in access between poor and non-poor groups is widening (see MOESS, 2008; MOESS, 2009). Analysis of participation rates based on the latest round of household survey data (GLSS 5) suggests that the poorest households have made the least progress accessing basic education since the 1987 education reforms (Akyeampong, 2009). This has been attributed mainly to education costs to households. According to Akyeampong (2009) previous reform policies in Ghana did not do enough to considerably reduce costs associated with basic education.

In 2005, a capitation grant scheme was introduced as a strategy to eliminate all forms of fees associated with public basic education. Each public school now receives about $4.5 per child per year (MOESS, 2009). The idea behind this was to motivate demand for schooling,

narrow the access gap between poor and non-poor households, and improve quality of education provision in basic schools. As a result of this policy, participation rates improved, but quality still remained difficult to improve (MOESS, 2008). With low-fee private schools [2]becoming a feature of education in low-income countries, presumably seen as providing better quality (Akaguri, 2011), some have argued that the poor now have choice (see, Tooley and Dixon, 2007). In Ghana, questions have been asked about whether low-fee private schools offer the poor a real choice, in terms of, households being able to afford the costs. This paper argues that the poorest households in rural areas have no real choice due to their inability to afford the cost of private schooling. The paper examines this argument by addressing the following questions: (1) how much do households spend on education (2) what are the main expenses incurred in public and LFPS respectively (3) what factors are associated with household expenditure on education? and (4) how important is cost on poor household's school choice?

The rest of this paper is organised as follows. Section 2 analyses household educational expenses using national data (GLSS 5). Section 3 provides the theoretical background. Section 4 discusses study context and methods and section 5 discusses the results. Finally, section 6 provides conclusions.

2. Educational expenses by school type, level and location in Ghana

This section uses the Ghana Living Standard Survey (GLSS 5) data to examine the structure of household educational expenses by school type and location. Figure 1 shows total annual

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[2] In the context of this paper and following Srivastava (2008), LFPSs are defined as private schools targeting households in poor rural communities, entirely financed through tuition and extra class fees, and charging termly tuition fees less than 4 days' earnings of a daily wage labour at basic schooling level. The daily wage for casual labourer in agriculture in the study communities is Gh ¢3 ($3) (price of labour is in 2008 prices ie when survey data were collect from study communities).

household educational expenditure per child in 2005 Ghana prices (GSS,GLSS 5, 2005). For rural public primary school the mean total expenditure on schooling per child was about 20 cedis, while the public Junior High School (JHS) had mean household educational expenditure somewhat higher (about 40 cedis). The household educational expenditure had a total interquartile range of 5-40 cedis for primary school compared to JHS which was 15- 70 cedis.

Figure 1: Total annual expenditure per child in school on schooling by school Type (2005/6)(using probability weights) (Ghana Cedis)
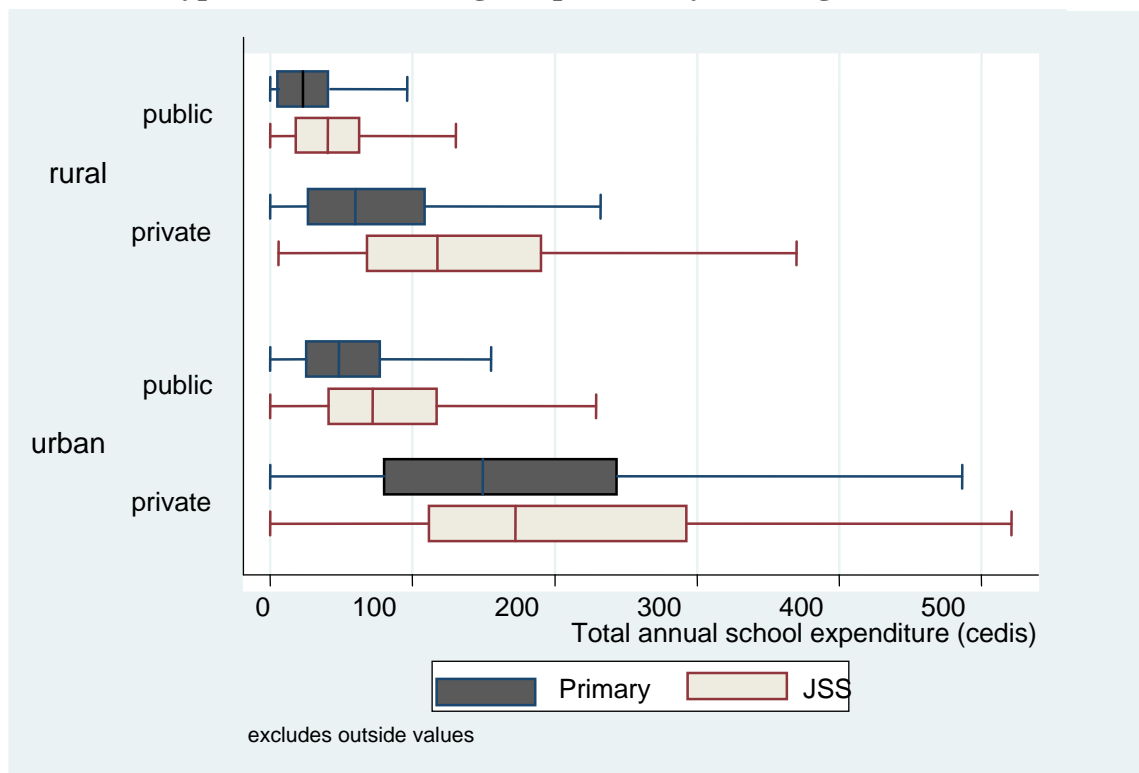
Source: Author's calculation from GLSS5.

In rural private primary and JHS levels, however, the pattern of expenditure is different. The mean education expenditure (about 65 cedis) at the primary level in private school was greater than mean expenditure (about 40 cedis) at the public JHS. For private schools, the difference in educational expenditure between primary and JHSs was much greater than in

public schools as indicated by mean expenditure of about 120 cedis in private junior high school. Also, the total interquartile range is larger than for public schools indicating greater variations in expenditure on private schooling. Rural households' educational expenditure in private school has an interquartile range of about 20 to 110 cedis at the primary level and 80 to 190 cedis at the JHS level. Similar pattern of expenditure but at higher levels in urban public and private schools is observed. What might explain the big difference in educational expenditure between public and private schools could be the effect of the fee-free capitation policy which removed the payment of some school expenditure items such as extra classes and examination fees. In addition, income could also be a major factor because spending on private education rises substantially with income (Rolleston, 2009). Figure 1 shows that total expenditure on education per child in a year in rural public school ranged between 5 – 70 cedis, compared to that of the rural private school which had total expenditure range per child of 20 – 190 cedis. This expenditure in rural private school on average is about twice the expenditure in public schools and has implications for affordability of schooling by poor households in rural areas.

To determine poor households' affordability of the cost of private schooling, the proportion of income of households in the lowest income group expended on private education is estimated. Table 1 shows the mean annual household income by quintile of Ghana in 2005 prices. Comparative analysis of rural households' total expenditure per child in private education in relation to the income of households in quintile 1 shows that, the expenditure on a child in rural private primary (65 cedis) and junior high (120 cedis) schools constituted 8.9% and 16.5% of the income of households in the lowest income group in their respective levels of schooling. The total interquartile range of expenditure of 5-140 cedis at the primary school and 20-190 cedis for JHS suggest that, the proportion of household income

expended on private schooling would increase according to the fees charged and other payments required by a particular private school. Clearly, spending about 17% of the poor income on just one child in private JHS would constitute a great burden to the household.

Table 1: Mean annual household income by quintile group in Ghana in 2005.

Quintile	Mean annual household income (Amount in cedis)
I	728
II	1,020
III	1,098
IV	1,263
V	1,544

Source: GSS, 2008.

What the evidence suggests is, that for households in the lowest income group that decide to enrol in private school, a very high proportion of household income would be spent on schooling. Therefore, the question this raises is, when the poor access low-fee private schools, how are they able to afford the costs? This is explored later in this paper.

3. Theoretical background

A household's decision to invest in education is usually influenced by perceptions of the value in relation to the investments to be incurred (Kitaev, 1999). For poor households, if sending a child to school takes up a large share of household income, then that decision could weigh heavily and potentially lead to non-attendance (Lewin, 2007; Akyeampong, et. al., 2007). Generally, other factors such as the level of household income, occupation and education of parents, number of children in the household, distance to school and school

quality have been shown to influence how the poor respond to education (Long and Toma, 1988; Al-Samarrai and Peasgood, 1998; Kitaev, 1999; Gulosino and Tooley, 2002; Colclough, et. al, 2003). Where there have been significant reductions in the direct costs of schooling, this has resulted in an increase in demand (Bray, 1996; Colclough, et. al, 2003; Watkins, 2004).

Education costs to households can either be direct or indirect. The direct costs are the explicit costs such as school fees, books, uniforms, food at school, transport and the cost of extra tuition. In contrast, the indirect costs normally referred to as the opportunity cost, is the income or the child's labour the family losses when a child is enrolled in school (Bray and Bunly, 2005). The opportunity cost of schooling is largely determined by the rewards to and availability of child labour. Also, household demand for school reflects what they consider to be the net benefit which may be linked to the quality of provision and possible future earnings (Bray and Bunly, 2005). Educational costs can create a disincentive for the poor to access schooling. Before the introduction of fee-free primary education in Zambia and Uganda, about a third of all households' expenditure was spent on education. Removal of school fees reduced the cost burden considerably and improved access significantly, especially for poor households (UNESCO, 2007).

In Ghana, direct and opportunity costs prevented many poor children from accessing basic education (Oduro, 2000; Boateng, 2005; GNECC, 2005; Sackey 2007). But even when school fees have been abolished, other costs related to books, food, uniforms and transport could pose barriers or challenges to access. In effect, school fees may not be the major obstacle to access. In Tanzania, for example, a study found that school fees constituted only a fifth of total costs of primary schooling (Mason and Khandker, 1997). Thus, in terms of

cost burden school fees may represent a relatively small element relative to other costs (see, Colclough et al., 2003). In the case of Ghana, the introduction of capitation may have lowered the cost burden, but aside school fees other factors could still influence a household's response to fee-free public and low-fee private education.

Indeed, if households have a choice between low-fee private and fee-free public schooling, a perception that the former offers better 'value for money' could quite conceivably encourage some to give the low-fee option serious consideration. Abolishing school fees in public schools could also shift the cost-benefit calculus in favour of the low-fee private option especially for those who believe that it offers better quality and improves chances in selection examinations.

5. Study Context and Methods

Data was gathered from three rural communities that hosted both public and LFPSs in the Mfantseman Municipality of Ghana. Mfantseman is located in the Central Region of Ghana which has been classified as the fourth poorest region out of twelve regions. The district has a population of 152,264 representing about 7% of the total population of the region (GSS, 2005a). About 60% of its inhabitants live below one dollar a day (MDA, 2006; GSS, 2000), indicating that many households are relatively poor. The main economic activities are farming and fishing with nearly half the adult population (49.4%) engaged in agricultural, animal keeping and forestry activities (GSS, 2005). Farming activities are rain fed and with the perennial erratic rainfall patterns and labour intensive nature of farming in the area, many farmers can only produce at the subsistence level. About a third of the population has never enrolled in school - about 17% of them between the school age of 6 to 14 years. Compared to the other districts in the Central Region, Mfantseman has the highest proportion (about a

fifth) of school-age children who have never enrolled (GSS, 2005). Notwithstanding the poverty level in the district, evidence suggests that private schooling in the district is a growing enterprise and some poor are buying into it (Akaguri, 2011).

Data was derived from a household survey of three rural communities that hosted both public and low-fee private schools. Households with children attending public and private schools were asked to respond to a self-administered questionnaire between the months of May and August 2008. Eight basic school teachers were trained in household data collection by the Consortium for Research on Educational Access Transition and Equity (CREATE). The class register of three public and four low-fee private schools located in three poor rural communities were used to generate the sampling frame. Households for the survey were identified from children in four grades – 1, 4, 6 and 7. Grades 1 (start of primary school) and 7 (transition into junior secondary) were selected because they represent entry and exit phases in basic schools, and are the stages where costs become a pressing issue for households who are either enrolling a child in school for the first time or continuing with support into junior secondary. In all, 803 children were selected. However, it was realised during the survey that some households had more than one child in school, or in different grades and/or school types. Therefore, pupils from the same family but in different schools or grades were captured under one household. Only 9 households could not be reached due to relocation. Thus, the final number of households surveyed totalled 536, made up of 279 choosing public school only, 135 private school only and 111 both public and private school. The sample represented a purposive stratified sample meant to investigate households that had their children in either private or public, or in both.

The survey instrument which was adopted from CREATE had already been validated, and included items on household roster of residents, schooling decision, social network[3]of household members, school expenses of children 4-16 years, occupation of household members, and households' income per year. Trained research assistants interviewed household heads to estimate the annual household income and daily, weekly and monthly direct school expenses per child. All data for schooling expenses were reported for all children enrolled in school in the household. In addition, enrolment and fee data were collected from three of the four LFPSs understudy. Three categories of household heads[4] and head teachers were also interviewed for in-depth understanding of their choices and operation of schools respectively. Questions focused on household's sources of income and reasons for enrolling their children in a particular type of school. The eventual dataset provided the required information for the relevant analysis.

In the analysis, the outcome variable - (the log of total educational expenditure per child in question) is regressed on explanatory variables, namely: household head characteristics, household characteristics, child characteristics; the number of children in school and household choice of (eg public or private school). Glewwe and Patrinos (1999) used standard regression analysis to explain educational expenditure using similar explanatory variables. The full list of explanatory variables is shown in Table 2.

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[3] Social network of adult member refers to the network of friends and relatives of the household that provide them with support in the form of food, clothing, and money.
[4] The three categories of household heads were those that enrolled their children in public school only, in private school only and in both public and private schools.

Table 2: Description of explanatory variables

Household Head Characteristics

Gender of household head	Indicator variable for household head's gender (female is reference category)
Age	Age in years
Education	Years of schooling
Religion	Indicator variable for religion - Christian =1, other =0

Household Characteristics

Social network	Indicator variable for household receiving support from friends and relatives (Cash and in kind=1, No support=0)
Household Assets	Indicator variable of household owning three or more household durable assets (Three or more assets=1, less three assets=0
Occupation of household	A set of indicator variables for occupation of household
	Own farm agriculture =1, 0ther =0
	Petty trader =1, other =0
	Major trader =1, other =0
Children in school	Number of children in household actually in school
Children in public school	Number of children in household in public school
Children in private school	Number of children in household in private school

School characteristics

Private	Indicator variable of public or private - with public school being the reference category.
Combined (Public and Private)	Indicator variable of public or combined with public being the reference category
Distance to school	Distance in kilometres

The methods of analysis employed in this study are in two strands. First, household income and expenditure on education was calculated using the household survey results. Total educational expenses for every child in a household attending public or private schools were estimated. For households with children in both private and public schools, the education expenses were placed under the school type the child attends. Thus the direct cost of schooling is divided into public and private. In addition, standard regression analysis was used to estimate the determinants of educational expenditure at the household level. In the second strand, three categories of household heads in the lowest income quintile who had

made the choice of sending their children to public, private or both public and private were interviewed to gain an understanding of their management and survival strategies they adopt to kept their children in school.

6. Discussion of results

Educational expenses: private and public schools

The capitation grant allocated to public schools in 2005 replaced direct charges such as tuition or examination fees levied on parents with children in public school. However, parental contribution to the operational costs of the public school was permitted with the express permission of the School Management Committee or district director. Yet, in the case of the LFPS, these charges constituted over ten per cent of average direct cost per term (Table 3).

Table 3: Average direct costs per child per term in Ghanaian cedis for LFPS and public basic school respectively (Gh¢1.43 = US$1 at 2004 rate)

Item	Low-fee private schools				Public schools		
	Shambu n=117	Shamo n=134	Holomo n=67	Fremo n=168	Medico n=450	Domino n=212	Kyoto n=257
Transport	9.80 (11.53)	10.24 (13.67)	N/A (0.00)	2.88 (5.56)	N/A (0.00)	N/A (0.00)	N/A (0.00)
School meals	38.71 (45.53)	30.45 (40.65)	25.7 (38.36)	18.7 (36.09)	16.75 (44.92)	22.57 (57.84)	22.26 (64.18)
Tuition fees	10.47 (12.31)	7.97 (10.64)	13.83 (20.64)	5.04 (9.73)	N/A (0.00)	N/A (0.00)	N/A (0.00)
PTA contribution	1.50 (1.76)	1.00 (1.33)	0.97 (1.45)	0.5 (0.96)	N/A (0.00)	2.50 (6.41)	1.41 (4.07)
Examination fees	2.12 (2.49)	1.64 (2.19)	1.58 (2.36)	1.72 (3.32)	2.28 (6.11)	N/A (0.00)	N/A (0.00)
Extra classes	7.00 (8.23)	8.37 (11.17)	6.13 (9.15)	8.13 (15.69)	N/A (0.00)	N/A (0.00)	N/A (0.00)
School uniform	6.31 (7.42)	9.66 (12.89)	12.34 (18.42)	8.01 (15.45)	10.19 (27.33)	7.07 (18.12)	7.81 (22.52)
Stationery	9.12 (10.73)	5.59 (7.46)	6.44 (9.62)	6.84 (13.20)	8.07 (21.64)	6.88 (17.63)	3.20 (9.23)
Average total cost per child	85.03 (100)	74.92 (100)	66.99 (100)	51.82 (100)	37.29 (100)	39.02 (100)	34.68 (100)

Notes: figures in parentheses are column percentages. N/A = not available and/or not applicable.
Source: The author (Field data, 2008).

Table 3 compares average direct cost per pupil per term in LFPSs and public basic schools respectively. Of the four LFPSs under study, only one did not report the cost of transport to school. Of the remaining three, two (Shambu and Shamo) indicated that such costs constituted about 12 per cent (Gh¢9.80) and 14 per cent (Gh¢10.24) of average direct costs per term, respectively. On the other hand, none of the public schools under study reported transport costs. This might be explained either by their proximity to the communities they served or the fact that there was normally a school actually located in the community with regard to those households that opted for public education.

However, in the case of the LFPSs, some head teachers indicated that they charged a fee to provide transport for pupils who had long distances to travel. This suggests that children who went to school outside their communities were enrolled in private school, an indication that the cost of transport influenced school choice decisions.

School meals constituted the most expensive single item of all the direct costs of education in both private and public schools, although households that enrolled their children in the former incurred the highest expenditure on food. The cost of LFPS meals ranged from Gh¢18.7 to Gh¢38.71 per child per term, while that at the public schools ranged from Gh¢16.75 to about Gh¢23; thus the cost of LFPS meals was on average about one and half times that of the public school. Informal interviews with parents revealed that some children refused to go to schools if they were given food rather than money for food. The relative high cost of meals in LFPS compared to that in public schools was due to the fact that it was mandatory and also cost a bit more in an LFPS than a public school.

One would expect private school tuition fees to have been much higher than the cost of school meals but this was not the case. It was found that the LFPSs either contracted local food vendors to sell food on school premises or made their own arrangements for pupils to purchase food. In contrast, the purchase of meals was not obligatory in public school, and vendors sold food to pupils on the premises without a contractual arrangement with the school. Nevertheless, in effect, tuition fees, extra classes, and expenditure on food appear to have been the principal causes of increased household education expenditure with regard to the LFPS. This pattern of expenditure is consistent with the evidence from GLSS 5 where in the rural coastal area in which the district under study is located, annual food, board and lodging costs at primary school constitute the highest average household expenditure item (26.4 per cent), while tuition and registration fees account for only five per cent of total expenditure per year (see GSS, 2008). Given that of the 279 households that chose public schooling 23 per cent fell within the lowest income group, the relative high cost of school meals could have served as a disincentive to some poor households to enrol their children in public school, especially if they considered the opportunity cost of education to be high and the quality doubtful.

As noted earlier, public schools were tuition fee-free but private schools were not. The LFPS tuition fee constituted only about a tenth of its total direct schooling costs. When this is compared with the cost of meals, extra-classes and stationery, it can be inferred that the marginal cost of paying private sector fees was not so prohibitively high so as to discourage some poor households from opting for private education. Clearly, auxiliary cost items in both public and private schools (e.g. meals, stationery and extra classes) constituted a significant proportion of the direct household cost of schooling. This kind of cost structure at the basic school level – at which auxiliary costs in terms of both public and private schools constituted

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significant proportions of average direct expenditure on education – provided an incentive for poor households, which perceived private schooling to be a better alternative, especially if they thought LFPSs offered value for money; and they were therefore willing to make sacrifices in order to help realise their aspirations. Thus, focusing simply on direct costs as the key determinant of the poor household's decision in choosing between public and private schooling could be misleading. Equally, policies solely concerned with the abolition of direct fees might not necessarily translate into a higher demand for education by the poor because costs depend on other things apart from school fees.

Principal direct household school costs

In order to understand the main direct household costs of schooling, expenditure per child per term by school type was estimated. In households in which there was one child in public school and another in LFPS, the respective cost of education was entered against the school type that the child was enrolled in.

Table 4 shows direct household education costs by school type. Even though public schools did not charge school fees, parents were still obliged to make a financial contribution to the school. For example, public school PTAs required occasional payments, the amount a household was required to contribute depended on the number of children it had in school; this averaged out at Gh¢1.3 per term, which was more than the similar average contribution made per child at LFPS (Gh¢0.99). Moreover, households that enrolled their children in public school had to pay an examination fee – Gh¢0.76 per term on average – even though the capitation grant was intended to cover such expenses.

Table 4: Direct household cost of education per child per term by school type

Cost item	Public school	Low-fee Private school	Cost differential (private minus public)	Percentage cost differential
Amount in Ghanaian cedis per term (Gh¢1.43 = US$1 at 2004 rate)				
Transport to and from school	0	4.08	4.08	13.9
School meals	17.46	25.27	7.81	26.60
Tuition fee (school fees)	0	8.10	8.10	27.60
Parental contribution (PTA)	1.3	0.99	-.031	-1.10
Examination fees	0.76	1.07	0.031	1.10
Extra classes	0	7.53	7.53	25.70
School uniform	7.17	8.02	0.85	2.90
Stationery (exercise books, textbooks, pens, etc.)	6.05	7.0	0.95	3.20
Average total cost per child per household	32.74	62.06	29.32	100

Source: The author (Field data, 2008).

Interviews with head teachers concerning household education expenditure revealed that schools levied fees in order to conduct special or 'super mock' [5] examinations for their final year JHS pupils. However, no charges were made for extra classes, following a directive from the GES to all public basic school heads instructing them not to collect any additional payment from parents for such tuition. Household heads, public school heads and teachers who were interviewed attested to the fact that no fees were charged for extra classes; although some teachers expressed the need for and willingness on their part to conduct extra classes if parents were willing to pay.

In the case of the LFPS, since attending extra classes and taking meals at school were compulsory, these costs items – along with tuition fees – remained the main direct costs of schooling. On the other hand, in terms of the public school, food, uniforms and stationery

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[5] Super mock examination is the last internal exams conducted by the school prior to their final examination conducted by West African Examinations Council.

were the main costs; even though the percentage differential of the cost of uniforms and stationery between private and public is small, as indicated in Table 4.

The evidence thus indicates that apart from LFPS tuition fees, the difference between public and private schools in the average cost of education per child lay in extra class fees (26 per cent) and school meals (27 per cent). This is a clear indication that it was not the cost of tuition that made the LFPS more expensive, but rather the auxiliary costs of schooling, especially meals.

What factors are associated with education expenditure in rural Mfantseman?

It may be argued that the differential in educational expenditure between public and private schools, as evidenced in Table 4, was due to varying household demographics and socio-economic characteristics which could have been associated with affordability of the cost of a school type. To test this, the factors associated with educational expenditure were examined using a standard regression technique (see Table 5). While the regressions unpack the factors associated with affordability of private schooling, they do not fully explain the determination of fees, which also depends on supply-side factors such as teacher salaries.

The regression result shows that the level of a household head's education is positive and statistically associated with educational expenditure, an indication that more educated heads of household spend more than less educated heads of household on education. This is hardly surprising since there is a direct correlation between number of years of education and level

of income; and the more highly educated a household head is, the more value they were likely to put on education, and hence the more they spent on it for their children (Colclough, et al., 2003; Glewwe and Patrinos, 1999).

With regard to occupation, household agricultural activities had a significant negative association with school expenses. Households whose main livelihood depended on 'own farm' agriculture spend less on education than those not in that occupation. Considering that the majority (nearly 70 per cent) of households in the sample were engaged in such small-scale farming, this is an interesting finding. It is probably explained by the subsistence nature of activities in the rural communities studied, which reduced household capacity to bear the cost of education and hence their ability to exercise school choice.

The private school variable – the dummy variable – which indicates whether the child was in public or private school, has a significant positive association with school expenses – private school attendees spent more on education than their counterparts in public school. The private school variable is intended to be a more accurate indicator of marginal costs to households that transferred their children from public to private school (Glewwe and Patrinos, 1999). Thus, the coefficient of private school choice indicates that it cost a household almost 40 per cent more when they transferred a child from the public to the private education sector (i.e.

$e^{0.326} = 1.385$). This reaffirms the fact that the LFPS was not an easy choice for the poorest households, especially those subsisting on very low and unstable sources of income.

On the other hand, the selection of the combined option had a significant negative association with educational expenditure, confirming the view that enrolling different children in both public and private schools reduced the household's financial burden in comparison to those that enrolled all their children in an LFPS. However, it is important to note that approximately half the households (48.8%) in my sample that had chosen private education had just one child in school.

Table 5: Determinants of household expenditure on education at the basic level

	ln (total direct education expenditure per child)
Constant	3.55
	(0.17)
Household head characteristics	
	0.011
Gender of household head	(0.058)
Age of household head	-0.002
	(0.002)
Educational level of household head	0.016**
	(0.007)
Religion of household head (Christian =1)	0.141*
	(0.080)
Household characteristics	
Social network	-0.039
	(0.069)
Household assets (three or more = 1)	-0.063
	(0.102)
Occupation	
Household agricultural activities	-0.107* (0.059)
Petty trade/manufacture	-0.035 (0.053)
Major trade/manufacture	-0.113 (0.085)
Children in school	
No. of children actually in school	0.261***
	(0.052)
No. of children in public school	*0.038*

	(0.050)
No. of children in private school	0.065
	(0.044)
Household school choice	
Private school only	0.326***
	(0.105)
Public and private school(combined option)	-0.325***
	(0.103)
Distance to school (km)	0.003
	(0.003)
Observations	298
R^2	0.51

Notes: *** = p. <0.01; ** = p. <0.05; * = p. <0.10. Figures in parenthesis = standard errors.
Source: The author (Field data, 2008).

In order to entice households, LFPSs adopted strategies to induce demand from households interested in private schooling. In one particular private school, the total fees that a household paid was reduced for every additional child enrolled. A fourth child enrolled paid no fees. Two of the low-fee private schools encouraged households to enrol children between the ages of three to five for free in their pre-schools. This practice ensured that they had a stock of children ready to enter the fee paying stream. Households who were able to pay fees promptly and in full received a discount of 10 per cent to 15 per cent. These practices ensured that the low-fee private schools were able to recruit from among some of the poor households. In short, the LFPS operated in a way that maximised demand from households on very low earnings but had a preference for private education. However, in spite of the fee reduction strategies, the average cost per child in private school compared to those in public school was still substantially high, as shown in Table 4. This raises the important question of how the poor were able to afford to send their children to LFPS given their relatively low income. This problem is explored in the next section.

How important is cost in determining the poor household's school choice?

The cost of education is clearly a significant factor in determining school choice. This is because choice has to do with the affordability of the various available school types (Harma, 2009). In assessing poor household's ability to afford the costs of education: firstly, the proportion of household income expended on public or private education, was compared with the mean household income by quintile. Table 6 shows mean household income by quintile.

Table 6: Mean annual household income by quintile (in Ghanaian cedis; Gh¢1.43 = US$1 at 2004 rate)

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Mean household income	208.02	355.24	518.74	875.17	1,909.04

Source: The author (Field Data, 2008).

A comparison of the average total cost per child at private – Gh¢62.06 – and at public school – Gh¢32.7 – (see Table 4) with the corresponding mean household income by quintile reveals that the enrolment of just one child in LFPS by a quintile 1 household would expend about a third (29.8 per cent) of its income. Given that in the communities under study households on average had two school-age children, if both of them were enrolled in private school, this would consume much more of their income. If a household had, for example, one child in public school and one in LFPS, the average cost would of course be lower than if they enrolled both of them in private school but this will still constitute about 45 per cent of the poorest household income. And for those with all their children in public school, the requisite proportion of household income expenditure would be much less – about 16 per cent.

In terms of quintile 2 households, the proportion of income expenditure would be 17 per cent and 9 per cent for private and public school, respectively; while for quintile 3 households, the proportions would be reduced to 12 per cent and 6 per cent for private and public school,

respectively. Those in quintile 4 could expect a further reduction to about 7 per cent for LFPS and 4 per cent for public school. The gap between the proportion of income expenditure on LFPS and public school would narrow even further to about 3 per cent and 1.7 per cent respectively for richest (quintile 5) households.

Analysis of GLSS 5 data indicates that in terms of a household in quintile 1, a much lower proportion (about 17 per cent) of its income was expended on a child in private JHS. However, based on criteria suggested by Lewin (2007) that no more than 10 per cent of the poor households' income is expended on one child's education, the analysis show that households in quintiles 1–3 in rural Mfantseman spent more than 10 per cent of their income on just one child, corroborating the assertion that, in general terms, private education is beyond the financial means of the poor (Harma, 2009). Thus, for those poor households under study that chose private schooling, huge sacrifices and cutbacks on everyday necessities would be required. Clearly, the poor in this context had no real choice given the cost of private schooling relative to their income.

However, it emerged from my interviews with 38 household heads that while the introduction of the fee-free capitation grant to schools had reduced the cost burden of public education considerably, it might have had the unintended consequence of encouraging a few households to consider the combined school option. In effect, the 'savings' from the abolition of public school fees and the attractive proposition of the perceived high quality of education offered by the LFPS created an interest in it.

Secondly, the enrolment rates and fee data for three of the four LFPSs for the academic year immediately preceding the study (2008/09) indicated that, of the total of 227 pupils enrolled

in Shamo LFPS, only 1 had dropped out and overall fee arrears as a percentage of total expected revenue constituted just 3.26 per cent. At Holomo LFPS, 34 pupils of a total enrolment of 136 were in fee arrears, accounting for an overall total revenue deficit of Gh¢231.50. This amount (Gh¢231.50) represent about 11per cent of the projected income. Finally, at Fremo LFPS, 52 of its 187 pupils were in fee arrears, amounting to a total revenue deficit of Gh¢176 about 13 per cent of the school's projected income. The difference in fee arrears in relation to the number of pupils per school whose households owed fees reflects the level of fees charged by each LFPS; for example, Holomo charged higher fees than did Fremo – fees ranged from Gh¢ 11 to Gh¢ 20 in Holomo compared to Gh¢ 6 to Gh¢ 10 charged by Fremo.

Table 7: Enrolment figures and fee revenue for three LFPSs, 2008/09 academic year (in Ghanaian cedis; Gh¢1.43 = US$1 at 2004 rate)

School	Total Enrolment	Number of pupils ever suspended pending payment of fees	Number of drop out	Amount owed by drop outs	Number in fee arrears	Expected fee revenue	Total amount in arrears	Total fee arrears as a percentage of total revenue
Shamo	227	92	1	7.50	8	2,069.50	67.50	3.26
Fremo	187	154	15	102.00	52	1,349.00	176.00	13.05
Holomo	136	40	11	28.00	34	2,120.00	231.50	10.92

Source: The author (Field data, 2010).

A plausible explanation for this differential fee level is that Holomo did not face such stiff competition compared to Fremo, which was subject to a greater degree of rivalry for pupils with other private schools in the education circuit.

As noted earlier, the fee arrears experienced by Fremo and Holomo amounted to about 13 per cent and 11 per cent of total fee revenue respectively, while the amount owed by drop out was 8 per cent of total expected fee revenue in each school, respectively. Thus, if the fees

owed by drop outs are added to the fee arrears, the total arrears as a percentage of overall expected revenue from fees was 20.16 per cent and 12.4 per cent at Fremo and Holomo respectively due to non-payment and drop out. Shamo experienced fee arrears of less than 4 per cent of its expected fee income.

A follow-up with eight of these drop-out pupils' households revealed that two had dropped out because of illness, one had transferred to another school, while the remaining five were staying away on account of owing money for such items as tuition fees, extra classes and school meals. Even though this result is drawn from a small sample, it clearly signals that not all poor households could afford to maintain the costs of private schooling, a conclusion corroborated by the fact that many pupils were suspended pending the payment of school fees (see Table 7). According to teachers and heads of LFPSs, several pupils were suspended more than four times a term. In two schools, pupils who failed to pay their fees were caned, interviewees arguing that such 'punishment' made children put pressure on their parents to pay up. In respect of the poorest households, clearly financing their children's LFPS tuition was a difficult undertaking, meaning that in the long term, it was highly probable that they would not sustain their demand for private schooling due to the high auxiliary costs enumerated in Table 4.

Finally, 12 household heads among the lowest income quintile were interviewed on their survival and management strategies, given that a substantial proportion (30 per cent on LFPS) and (16 per cent on public school) of their income was spent on education. One of the most frequently cited coping strategies was the purchase of education materials and food on credit, or the sale of personal belongings, such as clothes, in order to buy these items. Of the 12

household heads interviewed, 9 cited purchase on credit or sale of belongings. Harma (2009) also found similar practices amongst poor households in rural Uttar Pradesh, where households that could not easily afford the cost of private education had to cut back on other household necessities. Clearly, this source of education funding is not sustainable, and calls into question the continued enrolment of children from such households in private school. Some households depended on social networks of friends and relatives to provide food items or money to pay for schooling expenses. However, the household survey data shows that only about a fifth of the households under study depended on social networks for survival, leaving the vast majority with no such network. Thus, in situations in which the household was unable to obtain sufficient food, it was revealed that children went to school on empty stomachs, or else refused to go to school altogether.

7. Conclusions

The results of this study show that households in the three communities spend a good proportion of their income on education, whether it is for public or low-fee private schools. However, the fact that some poor households enrol their children in low-fee private schools is not to be taken simply as an indication that they can readily afford the costs; the schools play a big part in inducing demand through their flexible fee payment policies which is sensitive to the erratic nature of their livelihood incomes.

Evidence from this study shows that expenditure incurred on food in school, school uniforms, and other unofficial fees (PTA dues, examination fees etc.) altogether, represents significant costs to households on low incomes who use either public or low-fee private school. Hence, these auxiliary costs such as food remain potential barriers to access especially for the poorest

households. The analysis shows that wealthier households are more likely to choose private schooling. However, other factors such as household preference especially among the educated parents may influence the choice of a private school.

The affordability analysis demonstrated that the cost of education was important to the poor household's choice of schooling, finding that the LFPS was generally beyond the sustainable financial reach of the poor. The minority of poor households that did manage to enrol and keep their children in LFPS achieved it only by taking advantage of fee-reduction strategies by LFPSs and making stringent sacrifices.

Interviews with households in the lowest income quintile revealed that management and survival strategies enabling the initial enrolment of a child in LFPS failed to provide a reliable source of funding: small-scale and unreliable sources of income such as subsistence farming and fishing simply did not raise enough money to sustain a pupil's private schooling for the whole basic education cycle. Clearly, within the poorest rural areas low-fee private school provision may not be sustainable in the long term due to lack of affordability, while fee-free public provision may not necessarily induce demand among the poorest given the high direct cost of schooling faced by these households. Providing school feeding in poorest rural communities and appropriately targeting schooling needs such as uniforms and exercise books to the poorest will ensure that demand for public schools grows, especially from very poor households.

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