Literacy and Numeracy in Faith-Based and Government Schools in Sierra Leone

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CHAPTER 7

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Introduction

An emerging body of evidence suggests that private schools, including faith-based schools, may provide better education services than public schools (e.g., Allcott and Ortega 2009; Altonji et al. 2005; Asadullah et al. 2009; Cox and Jimenez 1990; Evans and Schwab 1995; González and Arévalo 2005; Hoxby 1994; Hsieh and Urquiola 2006).

In the economic literature, several reasons have been advanced to explain the gains in performance associated with private schools (Epple and Romano 1998; LaRocque and Patrinos 2006; Nechyba 2000; Savas 2000). First, private schools may introduce competition in the education sector and thereby raise overall quality. Second, private providers may have more flexibility than public providers in the management of the schools. Third, to the extent that private providers of education are competitively selected, better providers would emerge in the private as opposed to the public sphere. Fourth, risk sharing between the government and the private sector may also lead to better provision.

The explanations given above for the potentially higher quality of private schools are not likely to hold very well in the context of very poor

postconflict African countries. Indeed, most households have very few choices in regard to accessible schooling facilities, so that competition and risk sharing rarely take place. Education provision is not profitable, so that there is no competitive selection of private providers. Finally, flexibility is limited, especially when large faith-based school networks are integrated in the national education systems.

In the African context, faith-based providers are important especially in the provision of education services in conflict-affected countries in which services provided by the state have been weakened by war or strife. In this context, the potential benefit from private faith-based schools could come instead from the dedication that faith-based providers share. As argued by Reinikka and Svensson (forthcoming) in the case of health service provision in Uganda, faith-based providers are less motivated by profit or perks maximization—they seem to be "working for God."

Sierra Leone is one of the African countries in which the market share of faith-based schools is largest (the Democratic Republic of Congo is another case, as shown by Backiny-Yetna and Wodon [2009]). The country's population has suffered from a declining standard of living since the early 1970s, first as a result of poor macroeconomic management and then a civil conflict. With the start of the civil war in the early 1990s, the country plunged into instability. Today, per capita GDP is still below the level reached in the early 1990s.

As a result of the war, Sierra Leone fares poorly in most indicators related to human development and the Millennium Development Goals. For 2005 the country was ranked last in the human development index computed by the United Nations Development Program. Life expectancy at birth was reported to be only 41.8 years. Infant mortality in 2005 was estimated at 170 per 1,000 live births, and under-five mortality at 286 per 1,000. According to the 2005 MICS-III household survey, 31 percent of children under five were underweight, 40 percent stunted, and 9 percent wasted.[1] The adult literacy rate was 34.8 percent, and the combined gross enrollment rate for primary, secondary, and tertiary education was estimated at 44.6 percent.

Since the end of the civil war in 2002, the government and development partners have aimed with substantial success to complete the transition to peace and provide conditions for renewed growth. The government completed its disarmament, demobilization, and reintegration program in 2004. A full poverty reduction strategy was finalized in 2005. In December 2006, Sierra Leone reached the completion point under the Enhanced Heavily Indebted Poor Countries Initiative and

gained additional relief under the Multilateral Debt Relief Initiative. Parliamentary and presidential elections were completed in August 2007, with a presidential runoff election in September 2007. The elections, judged to be free and fair, resulted in a transfer of power to the opposition party. These developments have contributed to strong economic growth and poverty reduction in recent years.

As a result of historical factors (schools have long been established by missionaries and more recently by Muslim groups) as well as a weak state due to civil conflict, more than half of all students today attend faith-based schools. As noted by Nishimuko (2008), government schools are managed by the Ministry of Education, Sports and Technology (MEST) and often owned by the local government and district council. Government-assisted schools tend to be faith-based and benefit from essentially the same government subsidies as government schools (through teacher salaries and the provision of teaching materials). By contrast, private schools that are not faith-based do not benefit from such subsidies.

There are a number of potential advantages in having faith-based organizations (FBOs) providing education services. As noted by Belshaw (2005), FBOs have a long-term commitment to their communities and they often reach out to the poorest members of the community. Through links to sister organizations in other countries, they may benefit from outside funding and expertise. Faith-based schools often emphasize values of respect and consideration for others. In addition, religious leaders often have a moral authority that helps in mobilizing the community's resources around the schools.[2] But faith-based schools may also suffer from weaknesses, especially if they place the pursuit of their religious mandate ahead of the needs of students in regard to what they need to learn to be successful in today's world.

Two recent studies completed by the World Bank (2007, 2008) provide a basic diagnostic of the education system in Sierra Leone. The studies suggest that, because of its postconflict status, Sierra Leone stands out in comparison with other countries in a number of areas. First, there are large differences between net and gross enrollment rates because many older children have returned to school since the end of the conflict. Second, cost remains the main reason for never having gone to school or not continuing one's education. Third, satisfaction rates with the services received are low in all types of schools. The main complaints are the lack of books or supplies, the high fees that have to be paid, and the fact that facilities are in poor condition. Yet both studies provide only very limited

information on the role played by faith-based providers in education and on the comparative performance of faith-based and government schools.

In this chapter, our objective is to provide a comparative assessment of the performance of faith-based and public schools using data from the 2004 Sierra Leone Integrated Household Survey (SLIHS). According to the survey, about one-third of primary school students attend government schools. More than half of the students are in faith-based government-assisted schools. The rest of the students are mainly in private nonsubsidized schools. The SLIHS data can be used to analyze whom various types of schools serve (i.e., whether faith-based schools reach the poor more than do government schools), as well as whether children can read and write in English, whether they can compute, and whether they have repeated a grade. The data on literacy and numeracy are subjective assessments made by household heads concerning the abilities of their children and are thereby substantially less precise than test scores. But they are nevertheless useful indicators to assess the comparative performance of various types of schools.

In what follows we first provide basic statistics on the market share of faith-based providers in Sierra Leone and the measures of performance that can be obtained from the SLIHS survey. Next, we use instrumental variable econometric techniques to assess whether faith-based schools achieve better outcomes for their students than public schools, taking into account the possibility of endogenous choice of school type by parents. We do find that, as expected, faith-based schools do perform better, at least in some dimensions, than public government schools, and that the differences between the two types of schools are important. A brief conclusion follows.

Basic Statistics

As in other Anglophone countries in West Africa, Sierra Leone's education system consists of four main levels: primary schools (six years of study), junior secondary schools (three years), senior secondary schools (three years), and tertiary education. In this chapter, we focus on primary and secondary education indicators (with secondary education combining the junior and senior levels), given that the share of youths pursuing post-secondary education is very low.

Table 7.1 provides the market shares of various types of providers by quintile of per capita consumption (with the first quintile, "Q1," representing the poorest 20 percent of the population, and the top quintile, "Q5," the richest 20 percent). Given that the proportion of the population in

Table 7.1 Market Share of School Providers by Level and Quintile of Consumption

	% students in Q1	% students in Q2	% students in Q3	% students in Q4	% students in Q5	% of all students	% female students
Primary schools							
Rural							
Government	21.0	20.2	24.9	20.4	13.5	28.9	47.9
Local government	62.4	18.7	15.3	2.4	1.2	2.6	36.5
Faith-based	33.1	24.2	23.4	14.0	5.3	57.7	52.3
NGO	41.1	29.2	11.1	2.1	16.5	0.9	33.7
Private	23.3	19.6	3.6	26.8	26.6	4.4	49.2
Other	47.5	41.2	9.1	2.3	0.0	5.5	37.8
Total	30.8	23.7	21.9	15.4	8.3	100.0	49.5
Urban							
Government	11.9	13.7	16.8	28.2	29.3	38.2	47.4
Local government	8.8	23.7	26.0	22.6	18.8	8.0	51.3
Faith-based	10.5	17.5	25.9	25.2	20.9	45.6	50.7
NGO	0.0	0.0	25.2	74.8	0.0	0.3	72.2
Private	1.9	6.3	8.4	32.2	51.3	8.0	51.8
Other	0.0	40.0	0.0	60.0	0.0	0.0	0.0
Total	10.2	15.6	21.1	26.8	26.3	100.0	49.6
Secondary schools							
Rural							
Government	10.7	17.9	21.5	17.9	32.1	45.4	27.8
Local government	13.0	78.5	0.0	0.0	8.5	1.6	8.5
Faith-based	24.9	17.9	21.1	22.1	14.0	48.3	36.0
NGO	0.0	0.0	0.0	0.0	100.0	1.8	100.0
Private	0.0	0.0	0.0	15.9	84.1	3.0	84.1
Total	17.0	18.0	19.9	19.3	25.8	100.0	34.5
Urban							
Government	1.6	5.3	10.4	26.5	56.2	53.4	60.5
Local government	11.6	1.5	1.6	44.6	40.8	2.5	44.9
Faith-based	7.5	16.7	17.8	22.6	35.5	41.1	45.1
NGO	0.0	24.0	0.0	0.0	76.0	0.6	71.6
Private	0.0	0.0	1.9	20.0	78.1	2.5	27.7
Total	4.2	9.9	12.9	25.0	48.0	100.0	53.1

Source: Authors' estimation using 2003–04 SLIHS.

poverty is at about 64 percent, the first three quintiles can be considered as representing the poor. Faith-based providers account for 58 percent of all primary school students in rural areas and 46 percent in urban areas. In secondary schools, faith-based providers account for 48 percent of students in rural areas and 41 percent in urban areas. Government schools have a market share similar to that of faith-based schools at the secondary

level, but at the primary level, government schools account for only 29 percent of students in rural areas and 38 percent in urban areas.

Faith-based schools tend to serve the poor more than government schools in rural areas. For example, 33 percent of students in faith-based schools belong to the poorest quintile, versus only 5 percent to the richest quintile. For government schools, the proportions are 21 percent in the poorest quintile and 14 percent in the richest quintile. In urban areas, the distributional pattern is less clear-cut, with faith-based schools overrepresented in the middle quintile, but still overall serving the poor more than other schools. Because more than two-thirds of the population lives in rural areas, faith-based schools are especially important for the poor.

Faith-based schools also have a larger share of female students than government schools. Indeed, in primary schools in rural areas girls account for 52 percent of all students in faith-based schools (51 percent in urban areas), versus 48 percent of all students in government schools (47 percent in urban areas; this last difference is not statistically significant). At the secondary level, faith-based schools have a higher proportion of female students than government schools, but that is not the case in urban areas.

Beyond government and faith-based schools, the survey also identifies local government, NGO, private, and other schools, but their market shares are much lower than those observed for government and faith-based schools, which together account for 85 in 100 students at the primary level and an even higher proportion at the secondary level. Although this is not shown in table 7.1, the data suggest that faith-based schools do not discriminate among their students in regard to faith, as noted also by Nishimuko (2008). In what follows, we will focus on a comparison of performance indicators only for government and faith-based schools, given that private schools are not subsidized and tend to cater to a different set of students by charging higher fees.

To compare the performance of faith-based and government schools, we rely on four indicators: (1) whether students can read English, (2) whether students can write in English, (3) whether students can perform simple computations, and (4) whether students have repeated a grade. Table 7.2 provides summary statistics on these four performance indicators among all children enrolled in school. Only a small minority of the students can read or write in English in primary schools, but the proportion is very high in secondary schools. About a third of the students can perform simple computations in primary schools, and again the proportion

Table 7.2 School Performance Indicators

	% of students who can read English	*% of students who can write in English*	*% of students who can compute*	*% of students who repeat the grade*
Primary schools				
Rural				
Government	8.0	7.6	30.5	10.6
Faith-based	6.7	2.3	34.0	14.9
Total	6.9	4.2	32.5	13.5
Urban				
Government	27.8	26.5	43.0	10.7
Faith-based	12.5	10.7	22.7	16.3
Total	20.9	19.1	32.3	14.2
Secondary schools				
Rural				
Government	98.2	95.1	97.9	5.0
Faith-based	93.5	94.5	88.9	6.0
Total	95.4	94.6	93.2	5.2
Urban				
Government	97.4	94.4	94.5	8.2
Faith-based	98.8	97.6	95.3	9.6
Total	96.9	94.6	94.0	9.6

Source: Authors' estimation using 2003–04 SLIHS.

is very high in secondary schools. About one in six children has repeated a grade in primary school, and the proportion is lower in secondary than in primary schools.

Looking at the data in table 7.2, one could be led to believe that government schools perform better than faith-based schools. Indeed, for primary schools in both urban and rural areas, a higher proportion of students in government schools can read and write in English, and the repetition rate is lower in government schools. Faith-based schools seem to perform better only in regard to the share of students who can compute in rural primary schools, whereas in urban areas, the advantage enjoyed by government schools is large. At the secondary level, the differences are smaller between both types of schools, although rural students in government schools seem to perform slightly better.

However, such simple comparisons of performance between the two types of schools do not account for the fact that there are potentially important differences in the types of students that enroll in government and faith-based schools. As mentioned earlier, students enrolled

in faith-based schools tend to be from significantly poorer backgrounds than students in government schools. Essentially, this is the result of a higher concentration of faith-based schools in the poorest parts of the country, which were also severely affected by the civil conflict of the 1990s. Poorer students are likely to perform less well in school for a wide range of reasons. They may have to miss school more often or may have less time to study because of the need to contribute to household livelihood. Their parents are also less likely to be well educated and thereby to coach them. They may live farther away from schools, which makes studying and going to school harder. Just as important, they are likely to live in areas in which the quality of schooling is lower, as a result of, for example, teachers having lower qualifications and higher pupil-to-teacher ratios in the poorest districts (Wodon and Ye 2009). The key question is whether controlling for the characteristics of the students and of their geographic areas, faith-based schools perform better or worse than government schools. To answer that question, we turn in the next section to an econometric analysis of the SLIHS data.

Econometric Analysis

Our technique for assessing the variables related to performance is simple. We estimate binary outcome (probit) models on whether a child can read or write, can compute, and has repeated a grade, using as explanatory variables a large number of child, household, and geographic characteristics, including whether or not the child is in a faith-based or government school. However, the choice of school for a child (faith-based or government) can itself depend on the child's performance, which we measure here as reading, writing, and computing abilities, and repetition of a grade (see box 7.1). To avoid the potential problems induced by this two-way dependence between performance as the dependent variable and school choice as an explanatory variable, we instrument the choice of the type of school the child goes to using the leave-out mean share of the students in the child's geographic area that are going to faith-based schools. The child's geographic area is identified through the primary sampling unit to which the household belongs in the survey (each primary sampling unit includes typically between 20 and 30 households). We use the leave-out mean participation rate in faith-based school, which does not take into account whether the child, or any child in the same household, attends that type of school.

Box 7.1

Leave-out Means and Instrumental Variables

Leave-out means. Assume we want to compute the leave-out share (mean) of children attending school. We first define the way observations in a survey are to be grouped (alternatives include neighborhoods, counties, and enumeration areas, among others), and then for every group and for each observation in the group, we compute the share of children attending school in the group, excluding the observation being analyzed. The share computed as described is known as the leave-out mean. Note that each observation in the same group might have a different value for the leave-out mean. When computing the leave-out shares in this chapter, we exclude all children in the same household. This strategy of identifying the outcome regression through a leave-out mean Primary Sampling Unit (PSU)–level variable affecting the choice of an individual was used among others by Ravallion and Wodon (2001) in their work on schooling and child labor in Bangladesh and by Wodon (2000) in work on the impact of low-income energy policies on the probability of electricity disconnection in France.

Instrumental variables technique. If the dependent and at least one of the explanatory variables cause each other (known as endogeneity bias), standard linear regression models would produce estimates that are inconsistent and biased. If it is possible to find a variable that is correlated with the explanatory variable (conditioning on the other explanatory variables) that is caused by the dependent variable (endogenous regressor), and not correlated with the dependent variable, then we can use it as an instrument in the estimation to produce consistent estimates. In this chapter, we use the leave-out share of the students that attend a faith-based school in the primary sampling unit as an instrument of the school choice as an explanatory variable for student performance. We believe the leave-out share is correlated with school choice because it is an indication of the density of faith-based schools in the vicinity of the household, although it is unlikely to be correlated with learning outcomes beyond the fact that it affects the likelihood of going to a specific type of school.

Four binary outcome (probit) models have to be estimated, one for each performance measure, and the analysis is undertaken on the sample of children who are attending faith-based schools and non-faith-based schools (this includes both government and non-government schools). The results are presented in table A7.1 and A7.2 for primary schools (see annex).

The explanatory variables we use for the students' performance are (1) the type of school the child attends (this variable is instrumented as explained above to avoid endogeneity issues); (2) the grade the child is attending (with the first grade of the cycle being the reference category); (3) the time it takes for the child to go to school and the square of that time; (4) the characteristics of the child—age of the child and the age squared, sex of the child, whether the child has both parents out of his or her home, or only the mother or father not at home; (5) the geographic location of the child according to urban or rural status and the four main regions in the country (with the southern region as the reference category); (6) the religion of the child (with Muslim being the reference category); (7) the rank of the child in the household in regard to the child's age in comparison with other children; (8) the migration status of the child; (9) the household demographic variables—household size and whether the household head is male or female; (10) the education level of the father of the child (none, primary, secondary, or postsecondary) and the same variables for the mother of the child; and (11) the occupation of the father and the mother (farming is the reference category).

We concentrate now on the results for primary schools. The key variable of interest is the impact of the type of school the child attends on performance measured by literacy and numeracy. Controlling for other characteristics, attending a faith-based school increases performance, with the impact strongly statistically significant for numeracy and marginally significant for reading English. The impact is not statistically significant for writing in English and for the probability of repetition.

Having statistical significance, what matters is the magnitude of the effect. Using the results from our estimations, one can predict the increase in the probability of numeracy and ability to read English for a child obtained from shifting from a non-faith-based school to a faith-based school.[3] For numeracy, the probability of being able to compute increases from 39.1 percent to 46.6 percent. For the ability to read English, the probability increases from 20.4 percent to 24.3 percent. Thus, the econometric analysis corrects the (faulty) first impression that could have been generated by a simple look at the basic statistics in table 7.2, in which without proper controls it appeared that faith-based schools had a lower performance than government schools. The reverse is actually the case.

The results from the estimations also provide a number of other interesting findings for primary schools. As expected, if a child is in a higher grade, the likelihood of being able to read or write a letter in English and

the likelihood of being able to perform a simple computation are higher. A higher distance to the school reduces the likelihood of being able to read English. The age and gender of the child do not affect literacy and numeracy controlling for the other variables (the age is already captured indirectly by the grade the child is in). Children in the western region, which is the least poor, tend to have higher rates of literacy and numeracy; whereas in the eastern region, which is the poorest and was most affected by conflict, children have the lowest rate of numeracy controlling for other characteristics (although the East does better than the South on literacy).[4] Christians, including Catholics, tend to do better than Muslim children, perhaps because of a stronger tradition of emphasis placed on education among Christian households. When the effects of the mother's education are statistically significant, they are positive, as expected. However, the father's education is not statistically significant (in the case of writing in English, a student whose father's education is at the secondary school level fares less well than children with fathers having no education). The mother's occupation significantly affects a child's achievements in both numeracy and literacy. That is, if the mother's occupation is in nonfarming sectors, the child does better in calculation and reading and writing in English.

Very similar models were estimated for secondary school students (see table A7.2 in the annex). The regressions for secondary school students have slightly more aggregated categories for a few of the explanatory variables.[5] Fewer variables are statistically significant, which is not surprising given that the variance in achievement tends to be smaller (most children at that stage of their studies know how to read or write in English and can perform simple computations). We do however find again a statistically significant and positive impact of attending a faith-based school on numeracy and writing in English. The impact of the type of school attended on reading English was found not to be statistically significant.

Conclusion

The objective of this chapter was to provide a comparative assessment of the performance of faith-based and government school students in Sierra Leone on literacy and numeracy. Simple basic statistics suggest slightly lower performance in faith-based schools than in government schools, but faith-based schools tend to serve a much more disadvantaged population than government schools. After controlling for child

and household characteristics, and after taking into account the potential endogeneity of school choice depending on the performance of the student, we found that actually faith-based schools perform slightly better than government schools—this effect is statistically significant, especially in primary school, but its magnitude is very small. Still, given the fact that faith-based schools serve disadvantaged students with a focus on poor rural areas, have a very large market share especially at the primary level, and perform at least as well as government schools once appropriate controls are taken into account, the empirical results provided in this chapter are supportive of the financial support provided by the state to those schools.

Annex: Regression Results

Table A7.1 Correlates of Student Performance in Primary Schools—Numeracy and Literacy (Reading)

	Numeracy			*Literacy (read English)*		
	Coef.		*Std. err.*	*Coef.*		*Std. err.*
At religious school, instrumented	0.2443	***	0.0728	0.2151	**	0.1039
School grade (omit grade 1)						
Grade 2	0.3655	***	0.0677	0.1962		0.1377
Grade 3	0.7848	***	0.0727	0.8089	***	0.1332
Grade 4	0.9702	***	0.0801	1.0489	***	0.1399
Grade 5	1.2394	***	0.0874	1.5006	***	0.1439
Grade 6	1.8356	***	0.1026	2.2071	***	0.1509
Time to school, minutes	–0.0031	***	0.0012	–0.0022		0.0016
Time to school square, minutes	0.0000		0.0000	0.0000		0.0000
Age	–0.2335		0.5625	–0.2533		0.8154
Age square	0.0054		0.0096	0.0087		0.0140
Female	0.0229		0.0417	0.0233		0.0558
Rural	0.0749		0.0490	–0.0204		0.0641
Region (omit South)						
East	–0.5902	***	0.0576	0.3470	***	0.0767
North	0.2929	***	0.0505	0.0768		0.0761
West	0.2894	***	0.0783	1.3170	***	0.0970
Religious (omit Muslim)						
Catholic	0.1815	***	0.0668	–0.0008		0.0898
Other Christians	0.1303	**	0.0556	0.1809	***	0.0691
Other religious	0.2464	*	0.1482	–0.1964		0.2243
Child rank position	0.0002		0.0005	0.0002		0.0007
Child of household head	0.0878	*	0.0497	–0.0093		0.0690

(continued)

Table A7.1 Correlates of Student Performance in Primary Schools—Numeracy and Literacy (Reading) *(Continued)*

	Numeracy			*Literacy (read English)*		
	Coef.		*Std. err.*	*Coef.*		*Std. err.*
Migration (omit never move)						
Moved	–0.0291		0.1203	–0.2094	*	0.1269
Move data missing	0.1364		0.1154	0.2134		0.1301
Household size	0.0103		0.0098	0.0087		0.0128
Female household head	–0.0091		0.0161	–0.0091		0.0210
Father education (omit no education)						
Primary	–0.0710		0.0857	–0.0914		0.1180
Secondary	–0.0438		0.0864	–0.1526		0.1162
Postsecondary	0.1100		0.0856	0.1269		0.1068
Koran	–0.0390		0.0931	–0.1300		0.1355
Mother education (omit no education)						
Primary	–0.1057		0.0875	0.0652		0.1128
Secondary	0.1409		0.0927	0.2541	**	0.1099
Postsecondary	0.3105	**	0.1494	0.1361		0.1781
Koran	0.1414		0.2835	–0.2322		0.4908
Father occupation (omit farming)						
Trade	0.0583		0.1003	–0.0682		0.1308
Other	–0.0821		0.0734	0.0296		0.0906
Mother occupation (omit farming)						
Trade	0.1655	**	0.0700	0.1557	*	0.0878
Clerical	0.1303		0.3469	0.6404	*	0.3530
Construction	1.5032	**	0.6278	0.8740		0.5682
Professional	–0.2411		0.2298	–0.0489		0.2761
Other	–0.0523		0.0917	0.1184		0.1092
Constant	–1.4131		0.9590	–2.6355	*	1.3982

Source: Authors' estimation using 2003–04 SLIHS.
Note: *** indicates statistical significance at .01 percent level; ** at .05 percent level, and * at .1 percent level.

Table A7.2 Correlates of Student Performance in Primary Schools—Literacy (Writing) and Repetition

	Literacy (write in English)			*Repetition*		
	Coef.		*Std. err.*	*Coef.*		*Std. err.*
At religious school, instrumented	–0.1378		0.1151	0.1256		0.0815
School grade (omit grade 1)						
Grade 2	0.1357		0.1464	0.0418		0.0730
Grade 3	0.4293	***	0.1472	0.0430		0.0792
Grade 4	0.7340	***	0.1535	0.0441		0.0871
Grade 5	1.3707	***	0.1559	–0.0052		0.0946
Grade 6	2.1796	***	0.1624	–0.0604		0.1053
Time to school, minutes	–0.0028		0.0018	0.0007		0.0013
Time to school square, minutes	0.0000		0.0000	0.0000		0.0000
Age	–0.0869		0.8974	0.3810		0.6303
Age square	0.0031		0.0154	–0.0073		0.0108
Female	–0.0977		0.0620	0.0576		0.0456
Rural	–0.0656		0.0712	–0.1160	**	0.0530
Region (omit South)						
East	0.2048	**	0.0860	0.1919	***	0.0611
North	0.0372		0.0848	0.1340	**	0.0585
West	1.3134	***	0.1029	0.1519	*	0.0858
Religious (omit Muslim)						
Catholic	0.0176		0.0994	–0.0133		0.0742
Other Christians	0.1402	*	0.0761	0.1938	***	0.0582
Other religious	0.0937		0.2271	–0.0313		0.1611
Child rank position	0.0001		0.0008	–0.0002		0.0006
Child of household head	0.0246		0.0771	–0.0974	*	0.0544

(continued)

Table A7.2 Correlates of Student Performance in Primary Schools—Literacy (Writing) and Repetition *(Continued)*

	Literacy (write in English)			*Repetition*		
	Coef.		*Std. err.*	*Coef.*		*Std. err.*
Migration (omit never move)						
Moved	–0.2471	*	0.1333	0.0638		0.1244
Move data missing	–0.0196		0.1373	0.2090	*	0.1211
Household size	0.0059		0.0141	–0.0062		0.0110
Female household head	–0.0090		0.0231	–0.0013		0.0180
Father education (omit no education)						
Primary	–0.1629		0.1327	0.0190		0.0911
Secondary	–0.3162	**	0.1332	0.0555		0.0905
Postsecondary	0.1002		0.1157	–0.1243		0.0943
Koran	–0.2165		0.1563	–0.0518		0.1062
Mother education (omit no education)						
Primary	0.0934		0.1248	0.1941	**	0.0897
Secondary	0.3510	***	0.1159	0.0401		0.0996
Postsecondary	0.2956		0.1850	0.1387		0.1637
Koran	–0.0081		0.4803	0.4022		0.2900
Father occupation (omit farming)						
Trade	–0.2060		0.1490	0.1356		0.1063
Other	0.0436		0.0993	0.0640		0.0773
Mother occupation (omit farming)						
Trade	0.1348		0.0959	0.1328	*	0.0744
Clerical	0.7051	**	0.3534	–0.5542		0.4305
Construction	0.7081		0.6120	–		
Professional	–0.0258		0.2880	0.0820		0.2390
Other	0.1482		0.1179	–0.1659	*	0.1005
Constant	–2.5707	*	1.5376	–2.9407	***	1.0784

Source: Authors' estimation using 2003–04 SLIHS.

Note: Because of the problem of perfect prediction in the probit regression for repetition for mother's occupation in construction, the construction occupation is included in mother's occupation in other sectors. Note: *** indicates statistical significance at .01 percent level; ** at .05 percent level, and * at .1 percent level

Notes

1. Underweight refers to cases in which a child's weight is too low given the child's age, stunted refers to a child's height being too low given the child's age, and wasted refers to a child's weight being too low given the child's height.
2. As noted by Nishimuko (2008), the role of faith leaders and organizations in Sierra Leone has included among others: "1) Obtaining land for school construction; 2) Construction and rehabilitation of schools; 3) Provision of vehicles, furniture, teaching learning materials from time to time; 4) Offering scholarships to teachers for further study; 5) Offering scholarship to pupils; 6) Regularly visiting schools to monitor; 7) Recruitment of teachers; 8) Training of Arabic teachers (in Islamic schools) and offering in-service training for Religious Moral Education; 9) Producing religious literature for schools and churches or mosques; 10) Occasionally making up teachers' salaries when teachers have not been paid by the government; 11) Sensitizing parents at churches or mosques so that they send their children to schools; and 12) Establishing and disseminating a code of conduct to maintain morality in schools and communities."
3. We use results on numeracy and ability to read English as these are the outcomes for which the type of school attended has a statistically significant impact.
4. According to the World Bank (2008), the poverty head count at the national level was 66 percent. In the western region, which includes the capital of Sierra Leone, Freetown, the head count was at 29 percent. In the northern region, the head count was at 78 percent, versus 61 percent in the southern region and 84 percent in the eastern region.
5. This is to avoid perfect predictions due to the fact that the sample of students in secondary schools is smaller than that for primary schools.

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