

Do private markets improve the quality or quantity of primary schooling in sub-Saharan Africa?

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Abstract

This paper examines the role of private schools in primary education in sub-Saharan Africa (SSA). All SSA countries have committed to the Millennium Development Goals (MDGs), which include gender equity in access in to schooling by 2005, and universal primary education (UPE) by 2015. Previous research suggests that private schools in countries with low supply provide low-quality alternatives to public schools. This study examines the use of private schools in primary education in Malawi, Nigeria, Uganda, and Zambia. The results indicate that the role of private schools varies more than previous theories suggest. The impact of private markets on the quality and quantity of schooling varies with context of the public education system.

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I. Theoretical Background

In 1955, Milton Friedman proposed privatizing the US public school system to jump start deteriorating schools with market competition (Friedman, 1955). Friedman's proposal spurred a number of policy innovations that promote interschool competition and private schools as an alternative to public schools. Private schools are expected to provide greater variety for selective parents, more effective use of funding, and a competitive incentive for public schools to improve (Chubb & Moe, 1990). More recently, the private school solution has been exported to developing countries where governments are seeking ways to expand education with limited resources.

In developed countries where the public education can accommodate universal enrollment, privatization policies promote a competitive alternative. Developing countries where the supply of education is still insufficient to achieve universal enrollment use private markets to expand supply, while shifting costs away from government. Bray (1996) identifies three policy dimensions along which governments can devolve costs to private producers and consumers: financing, ownership, and control. Private financing increases resources for education by collecting user fees from parents. This policy can increase revenue to enable expansion of supply and redistribution of educational opportunities through scholarships for children from poor families (Mingat & Tan, 1986). Private ownership allows or encourages the growth of private schools. This strategy shifts the costs of infrastructure to private providers, while per pupil costs can be financed through a combination of public subsidies and parents fees. Private control refers to school management. Control can be limited by regulation or facilitated by contracts with private providers to operate publicly owned schools. Private control is intended to

be more efficient than bureaucratic management by introducing competition and incentives to reduce costs.

Despite the potential benefits of privatization, relying on private markets can undermine educational equity and universal access. Private financing relies on a strong demand and ability to pay. Even minimal school fees can harm equity in countries where schooling has high opportunity costs from children's wage labor and domestic work. This effect can fall disproportionately on the poor, children from rural areas, and girls. Privatizing provision shifts authority from public officials to private firms. Private schools have an incentive to attract students with a high willingness to pay who can be educated at low cost (Gordon & Whitty, 1997). Private schools may exclude students who are poor, live in remote areas, are developmentally disabled, or are otherwise more costly to educate. The same may be true for contracted private manager, who have an incentive to weed out students who raise average costs. Thus, depending on privatization to expand educational supply may conflict with efforts to promote universal access (Bray, 1996). By devolving educational provision to private schools, governments give up some control over the parallel goal of promoting equity (Wise & Darling-Hammond, 1983; Pierson, 1988).

Research has shown that the scope and purpose of private schools varies significantly across countries (Colclough, 1996), making it difficult to assess the efficacy of privatization as generic policy tool to promote UPE. In a multi-country study, James (1993) identified two distinct approaches to private school markets. In developed countries, where public schools have the capacity to serve most of the population, private schools follow Friedman's model and address differentiated demand from parents with heterogeneous preferences for education. In developing countries where public supply is limited, private schools meet excess demand from

parents who are willing to pay for education but are excluded from public schools due to supply constraints. Bray (1996) argues that the supply of public school also influence the quality of private schools. Where public supply is low, private markets provide lower quality second-chance schools for students who cannot access selective public schools. Thus, the affect of policies that promote private schools on quality or quantity will depend on the context of the available public supply.

Many researchers have explored the role of private markets in individual developing countries, typically focusing on secondary school. The results confirm that private schools serve a variety of purposes within developing countries. In countries where public supply is lacking, research affirms James's theory of excess demand (Alderman, Orazen & Paterno, 2000, in Pakistan; Boyle, 1996, in Cameroon). Some private markets have also emerged to serve children who fail secondary entrance exams (Jimenez & Cox, 1989, in Tanzania; Glewwe & Patrinos, 1999, in Vietnam). In these countries, private school is a lower-quality alternative for students who cannot access limited public supply. In countries with a more well-developed public supply, private schools address differentiated demand, as they do in developed countries. These markets provide higher quality education for parents who are willing and able to pay for better quality than is offered in public schools (Glick & Sahn, 2006, in Madagascar; Tooley & Dixon, 2005a, in India; Jimenez & Cox, 1989, in Colombia).

These studies confirm that private markets vary based on public supply. When public school capacity can accommodate all students, private schools become competitive by offering either higher quality education or a differentiated product. When public school capacity is low, private schools fill the gap but with no competitive incentive to improve quality.

Although most previous studies examine the role of private markets at the secondary school level, the drive to achieve universal primary education creates an incentive to use private markets at the primary level. This study examines the markets for public and private primary schools in Malawi, Nigeria, Uganda, and Zambia using data from the DHS EdData surveys conducted between 2001 and 2004. During this time, all four countries were striving to achieve UPE and promote equity under liberal education policies that allow private schools to increase supply, although the history of private school market differs across countries. Private management of public schools is rare in these countries, so analysis focuses on private financing and ownership, and the effects on equity and quality. This study contributes to the literature on private schools and development by examining how private primary schools effect enrollment, school costs, and equity in countries that are using private schools as a policy strategy to achieve the Millennium Development Goals for education.

This paper is organized as follows. Section II summarizes the political and economic context of UPE policy in sub-Saharan Africa. Section III discusses the survey data and methods used for analysis. Section IV profiles public financing, public ownership, equity effects, and school quality in each of the four countries. Section V summarizes the findings from four countries and makes recommendations for policy.

II. The Context of Education in Sub-Saharan Africa

The education systems in SSA countries evolved out of a history of European colonialism. Colonial governments typically relied on Christian missionaries to provide schooling, with religious proselytizing taking priority over the development of skills and literacy. This structure also contributed to significant inequities as girls, non-Christians, and ethnic

minorities were often excluded from missionary schools. After achieving independence in the 1960s, African governments used public education to promote national unity and build human capital, while prohibiting or discouraging private schools that were outside of government control (Kitaev, 1999). In this context, public education developed under highly centralized systems where primary education was under-funded, inefficient, and often subject to government corruption.

Table 1 summarizes World Bank economic and educational statistics for the four countries in this study: Malawi, Nigeria, Uganda, and Zambia. Access to primary school can be measured by gross or net enrollment rates. The gross enrollment rate measures the number of children enrolled in primary school as a proportion of the population of children of primary school age. Gross enrollment rate can exceed 100 percent when students older than primary school age are enrolled in primary school due to grade repetition or late starts. A gross enrollment rate over 100 percent also indicates that there are at least enough school slots for all the children of school age. This is the case in Malawi and Uganda, where gross enrollment is reported at 125 percent. These countries also have high pupil to teacher ratios illustrating the trade-off between quantity and quality. Nigeria and Zambia report gross enrollment of 99 percent, suggesting at least a small shortage of school slots.

The net enrollment rate excludes overage children from enrollment counts and measures the number of primary school-aged children enrolled in public school as a proportion of the primary school-aged population. Colclough & Al-Samarria (2000) argue that net enrollment is a better measure of education access, because it illustrates how many school-age children are out of school, while gross enrollment rates obscure this effect. By this standard, none of the four countries in this study has achieved full primary enrollment. Malawi's net enrollment rate is highest at

95 percent, followed by Uganda at 87 percent, and Zambia at 80 percent. Nigeria is significantly behind with only 60 percent net enrollment.

All four countries have committed to the UN Millennium Development Goals, which include the following (UN, 2005):

- Achieve universal primary education – Ensure that all boys and girls complete a full course of primary schooling;
- Promote gender equality and empower women – Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015.

This commitment requires countries to expand primary education, while ensuring equitable access by gender. The gender parity index measures girls' primary and secondary enrollment as a proportion of boys' enrollment. A parity index of 1.0 would indicate a perfect gender balance. This balance has been achieved in Malawi and Uganda. Gender parity is 0.9 in Zambia and 0.8 in Nigeria. Not surprisingly, Zambia and Nigeria also contribute a lower proportion of GDP per capita to education than the countries that have achieved higher enrollment and gender equity.

The degree to which private schools are contributing to UPE is unclear. Based on World Bank reports, private schools make up 7 percent of the primary enrollment in Malawi, 5 percent in Nigeria, 9 percent in Uganda, and 2 percent in Zambia. However, empirical research has shown that many private schools operate outside of government awareness and regulation (Tooley & Dixon, 2005b). It is also unclear who is served by private schools and how these schools affect equity and school quality. Analysis of survey data is needed to enhance our understanding of actual use of private schools.

III. Data

The data for this study come from the Demographic Health Surveys (DHS) conducted in Malawi, Nigeria, Uganda, and Zambia between May 2001 and June 2004. The DHS is conducted periodically in over 70 developing countries to measure demographic change, health indicators, and access to health care (ORC Macro 2001, 2002a, 2002b, 2004). In these four countries, the EdData component was added as a supplemental survey for parents of school-aged children. EdData is funded by USAID and implemented by ORC Macro in partnership with a local research center in each country. This component asks parents a series of detailed questions about issues related to decision making about primary education including barriers to attendance, costs, and quality. Because similar questions were asked in each country, the surveys facilitate comparison of primary school access across countries.

For each country, the DHS begins with a geographically stratified sample of women ages 15 to 45 who complete the demographic component of the survey. For the EdData supplement, a sample of families with primary school aged children was revisited, and a parent or guardian was asked to complete a second survey that focused on household decision making about education for each child ages 6 to 14. This study focuses exclusively on primary school, so children who had advanced to secondary school were excluded, as were children with missing data about primary school. The resulting data set sizes are 3,709 for Malawi, 5,886 for Nigeria, 7,986 for Uganda, and 7,447 for Zambia. The size differences are not reflective of national population, but rather the different sample sizes selected in each country. Because the EdData survey is similar in each country, the only adjustment that needed to be made for cross-country comparison was to translate local currency into comparable values. In this study, all school costs are presented in 2005 US dollars.

IV. Private School Markets in Four Countries

Malawi

UPE Background

Malawi's education system includes eight years of compulsory primary education beginning at age six, after which students must pass a national entrance exam to gain access to public secondary school. Implementation of UPE began in 1991 with the formal elimination of school fees. In practice, parents were still responsible for "special fees" including mandatory uniforms. Free primary education (FPE) was a major issue in the country's first multi-party election in 1994, and more fees were eliminated in practice. Recognizing that the cost of school uniforms was prohibitively high for some families, Malawi also made uniforms optional.

Formally, Malawi uses the private market to meet excess demand for education and reduce government spending. This policy was initiated under pressure from the IMF and World Bank to reduce government spending (Kitaev, 1999). Private schools are not regulated or registered. At the primary level, the private market is expanding to meet demand in the context of decreasing quality in public schools (Malawi Ministry of Education, Sports and Culture, 2003). Private primary schools typically charge high user fees and cater to urban elites who are willing to pay for high quality. Private secondary schools are expanding opportunities for students who fail the admissions exam for public secondary school, but fees are typically very high (Malawi SNDP, 2005).

Figure 1 displays gross primary enrollment over time in all four countries. Malawi experienced steep growth in gross primary enrollment after UPE was implemented in 1991. Gross enrollment rates nearly doubled when fees were eliminated, far outpacing the expectations

of educational planners. FPE was supported by an increase in public expenditures from 3 percent of GDP per capita in 1990, to 6 percent in 2004. However, the unexpectedly rapid increase in enrollment resulted in severe overcrowding. Malawi still struggles with the trade-off between quality and quantity. An insufficient supply of qualified teachers contributes to the highest pupil teacher ratio of the countries in this study at 70 to 1 (Table 1). Parents are still expected to contribute to the costs of school materials before a new school can be constructed (Avenstrup *et al.*, 2004). Infrastructure has suffered as local communities do not have the resources to build and maintain schools capable of absorbing new enrollments.

Table 2 displays gross and net attendance rates calculated from the EdData Survey. Both rates are lower in the survey data than in official numbers reported in Table 1. Official enrollment data typically come from school reports of student enrollment. The EdData survey relies on parent reports of whether a child is currently attending school. Official enrollment rates can exceed parent reports of attendance if children were previously enrolled, but are not able to attend or if schools have an incentive to inflate enrollment figures. The gross attendance rate in Malawi is 100 percent, and net attendance is 82 percent. While Malawi appears to have enough primary school slots for all the children ages 6 to 12, many of these slots are occupied by older children, and many young children are not in school.

Education Markets

Table 3 displays primary school attendance and costs by sector. In Malawi, public schools serve 92 percent of primary school students. The World Bank reports a private primary sector share at 7 percent (Table 1). The survey data report a similar rate with 8 percent of students attending private schools. Private religious schools have the largest share of private

school enrollment, with 5 percent of students attending this type of school. The incentive to operate private secular schools appears to be very small, as only 3 percent of students attend this type of school. Compared to the other countries in this study, Malawi has the second highest school attendance rate and the second lowest share of primary school in the private sector.

Despite FPE policies, cost sharing is common in Malawi with 84 percent of students paying for primary education. Costs are similar at public schools and private religious schools. The annual cost of public school at the time of the survey was \$6.81 or 4 percent of income per capita. Private religious schools cost only slightly more at \$7.62 or 5 percent of income per capita. At both these types of schools, tuition and fees are very low, at less than \$1 on average, but additional costs of supplies elevate costs. Private secular schools require a significantly greater contribution from parents, with an average cost of \$30.22 or 19 percent of income per capita. Tuition alone is almost \$13 per year at private secular schools. These high costs suggest that private secular schools serve a different population of students than private religious schools. Private secular schools appear to be exclusive, while private religious schools are comparable to public schools. Free primary education can equalize opportunities for poor children. In Malawi, most students receiving free primary education attend public school where 17 percent of students attend for free. There are also some scholarships at private schools. At religious schools, 13 percent attend for free, and at secular school 11 percent attend for free.

Equity in Access

Table 4 displays disaggregated attendance data by selected household characteristics. In Malawi, 18 percent of children are out of school, and access to primary school is not equal across demographic groups. Rural children, who make up 86 percent of the sample, are twice as likely

to be out of school compared to urban children. The likelihood of attending school also increases for families in the top three wealth quintiles. Approximately 25 percent of children in the lowest two wealth quintiles are out of school, compared to only 7 percent in the richest quintile. Access is also unequal based on religion. While 15 percent of the Christian majority is out of school, 27 percent of Muslim children and 36 percent of children from other religious backgrounds (including traditional religions) are out of school. There are no apparent differences in school access by gender in Malawi.

Private religious schools, which serve 4 percent of children in the dataset, appear to have relatively equal access for boys and girls across wealth quintiles. Private religious schools are more likely to locate in urban areas where 6 percent of children attend this type of school, compared to 3 percent in rural areas. Surprisingly, private religious schools equally serve children from all three religious groups instead of exclusively serving Christian children. Thus, private religious schools in Malawi appear to provide relatively equitable access, with a small bias for locating in urban areas. Equity in access is facilitated by charging costs similar to those charged at public school.

Private secular schools appear to perform a very different function. There is a large urban bias for secular schools. This type of school serves only 1 percent of rural children, and 14 percent of urban children. The high costs of private secular schools also means that the majority of students at these schools from wealthy families. Private secular schools serve 10 percent of children in the highest wealth quintile, and only 1 percent of students in the first four wealth quintiles. Thus, private secular schools are almost exclusively for the wealthiest urban children in Malawi.

School Quality

The EdData surveys measure school quality based on parent reports of problems in five key areas: school principal, teachers, school safety, school facilities, and overcrowding. Table 5 displays parent satisfaction based on the percent of parents who reported “no problem” in each key area. There are potential problems with relying on parent reports of quality. For example, parents with the willingness and ability to pay high tuition may have higher standards and better ability to assess schools. Given this limitation, differences in parent responses across sectors do not necessarily reflect quality differences. However, parent assessments of quality are the primary driver of differentiated demand in a competitive market.

In Malawi, parent satisfaction with public and private religious schools is very similar. Parents at these schools show high satisfaction with principals, teachers, and school safety. A greater concern is the condition of school facilities and the degree of overcrowding. Given the high costs of private secular schools, we might expect these schools to provide a much higher quality of product. Parents of private secular school students are only slightly more satisfied with school safety than other parents, but are actually less likely to be satisfied with teachers and principals. These parents are also more likely to be satisfied with school facilities, but less likely to be satisfied with the level of overcrowding. Malawi’s small market of secular private schools does not appear to improve quality over the more egalitarian public and private religious schools.

Nigeria

UPE Background

Schooling in Nigeria is not compulsory but the official UPE policy provides six years of voluntary free primary education. UPE policy was implemented as early as 1976 with funding from Nigeria's oil revenues. In the 1980s, economic crisis led to the devolution of financing to communities and parents – a policy that was furthered during the structural adjustment program of the 1990s. Although officially primary school is free, high parent fees are blamed for reduced enrollments in 1980s and 1990s. The initial rise and subsequent decline in primary enrollment in Nigeria is illustrated in Figure 1.

After Nigeria's first democratic elections in 1999, the new government revived UPE as a priority but funding has not increased. Nigeria currently funds education at less than 1 percent of GDP. In 2004, the government formally outlawed school fees but did not provide additional public funds to replace private funding. Primary school remains voluntary, and approximately one-third of Nigerian children are not in school. Significant regional, religious, and gender disparities persist with low enrollment for girls, Muslims, and children in the poorer regions of northern Nigeria.

After independence, Nigeria's government favored a national public school system that would promote a national identity over ethnic and religious differences (Sunal *et al*, 1994). During structural adjustment, the cash strapped government looked to the private sector to provide primary education (Kitaev, 1999). The private market is expected to relieve public financial pressure by taking on the costs of infrastructure, while parents are already expected to take on the costs of tuition, fees, and supplies.

Education Markets

According to official enrollment statistics, only 5 percent of primary enrollment is provided by the private sector (Table 1). In the EdData survey, 12 percent of students are attending private schools (Table 3). A lack of government awareness of the size of private sector may explain why the official net enrollment rate of 60 percent is below the net attendance rate in from Ed Data of 74 percent (Table 2). This suggests that some private schools are operating outside of government regulation or awareness to meet excess demand for education.

Eight percent of Nigerian students attend private secular schools where costs average \$52.22 or 12 percent of per capita income (Table 3). Another 4 percent of Nigerian students attend private religious schools where costs average \$40.27 or 9 percent of per capita income. In Nigeria, both types of private school cost more than twice as much as public school where costs average only \$18.75 or 4 percent of income per capita. Approximately 17 percent of Nigerian students receive free primary education, including 18 percent of public school students, 18 percent of private religious school students, and 13 percent of private secular students.

Equity in Access

The demographic characteristics in Table 4 highlight significant inequalities in Nigeria in all categories. Twenty-seven percent of children in the dataset are out of school, 64 percent attend public school, 6 percent attend private secular school, and 3 percent attend private religious school. Rural children are almost twice as likely to be out of school as urban children. Unlike Malawi, Nigeria also has gender inequality in primary school access, with 32 percent of girls out of school compared to 23 percent of boys. Children in the lowest wealth quintiles are significantly disadvantaged. Of the poorest children, 44 percent are out of school. Even in the

third wealth quintile, 25 percent of children are out of school. In the wealthiest quintile, only 4 percent of children are out of school. Religious inequality is also a serious problem in Nigeria. The majority of students in the data set are Muslim, and 42 percent of Muslim children are out of school. In the Christian minority, only 7 percent of children are out of school.

Public schools in Nigeria are balanced between urban and rural areas, but public schools are more likely to serve boys than girls and more likely to serve to serve Christians than Muslims. Private secular and private religious are both costly in Nigeria, and the students come from wealthier families. Unlike Malawi, most of Nigeria's private schools are secular. These schools are significantly more likely to locate in urban areas, and more than 80 percent of students come from the top two wealth quintiles. Private religious schools in Nigeria also charge high fees, and 60 percent of these students come from the top two income quartiles. Compared to private secular schools, private religious schools provide a higher rate of free primary education, and approximately 12 percent of students come from the poorest wealth quintile, which suggests that religious schools make some attempts to improve equity through scholarships. Only 2 percent of private secular school students come from the lowest income quintile. Private schools appear to be better job at promoting gender equity, with girls and boys equally likely to attend both types of private schools. Like public schools, private schools also under serve the majority Muslim population in Nigeria.

School Quality

Unlike Malawi, Nigerian parents are more satisfaction with the quality of private schools. In Nigeria, school quality appears to be closely related to school costs. For example, at the lowest cost public schools, 84 percent of parents are satisfied with teacher quality, 61 percent are

satisfied with facilities, and 62 percent are satisfied with the level of overcrowding. At higher priced private religious schools, 86 percent of parents are satisfied with teacher quality, 72 percent with facilities, and 72 percent with overcrowding. At the highest priced private secular schools, 91 percent of parents are satisfied with teach quality, 82 percent with facilities, and 80 percent with overcrowding. Thus, it appears that cost and quality are linked in Nigeria, and those who can access private schools benefit from a higher quality of education.

Uganda

UPE Background

Unlike the other countries in this study, Uganda's transition to democracy did not begin until 2006, and UPE was implemented entirely by a one-party government. The UPE policy was written in 1987, and was strictly ceremonial for the first decade (Avenstrup *et al*, 2004). In 1997, FPE was offered in all grades for up to four children per family. If the family had daughters, at least two of the four children had to be girls. In 2003, Uganda expanded FPE to all include all children.

Like Malawi, Uganda saw an immediate increase in enrollment after implementing FPE (see Figure 1). To support the influx of students, funding for education increased to 5 percent of GDP per capita. Uganda is also experiencing problems with quality as a result of rapid expansion of supply. Teacher supply and quality have suffered, and infrastructure cannot keep up with the pace of enrollment. Uganda also faces problems of HIV/AIDS and its effect on teachers and students. Illness among students and family members contributes to a 55 percent dropout rate for primary school (Avenstrup *et al.*, 2004).

Even under FPE, parents in Uganda pay for uniforms and supplies at public schools. Private schools are believed to make more effective use of fees than government schools, so there is an opportunity for improved quality at similar costs (Kitaev, 1999). There is a high return to primary schooling in Uganda, which means that parents are willing to pay for primary school, but Uganda is also a very poor country. The quality of private schools is similar to public schools with large classes, insufficient infrastructure, and inadequate supplies.

Education Markets

Based on EdData, Uganda has reached the highest gross and net attendance rates of the four countries in this study at 112 and 91 percent respectively (Table 2). Uganda also has the highest share of private primary enrollment, with 13 percent of students in EdData attending private schools. The majority of private schools are secular with 10 percent of primary attendance, with only 3 percent attending religious schools (Table 3). Surprisingly, Uganda has achieved high attendance rates with virtually no free primary education. Only one percent of students in each sector receive free primary education. Also surprising is that the costs of education are very similar to Nigeria, where attendance rates are much lower. Uganda has a much lower average income than Nigeria, but the costs as a percent of income are very similar. Public schools in Uganda have average costs of \$11.12 or 4 percent of income per capita, private religious schools have average costs of \$20.59 or 9 percent of income per capita, and private secular schools have average costs of \$34.60 or 14 percent of income per capita.

Equity in Access

Of the children in the dataset, only 9 percent of Ugandans are out-of-school (Table 4). This is considerably lower than the other three countries in this study. Data on wealth are not available in Uganda. Given this missing data, the only apparent inequality in Uganda is by gender. Rural children are slightly more likely to be out-of-school than urban children, but this disparity is much smaller than in the other three countries. The Christian majority and Muslim minority are equally likely to be out of school. There is a degree of gender inequality, with 12 percent of girls out of school, compared to 9 percent of boys. This finding contradicts the World Bank data, which reports perfect gender parity in Uganda. Survey data may reveal obstacles to girls' attendance that are not reflected in official enrollment data if girls are able to enroll, but later dropout.

Access to private schools significantly favors children in urban areas. Private secular schools serve 26 percent of urban children, and only 3 percent of rural children. Private religious schools serve 8 percent of urban children, and only 2 percent children. Combined private schools service more than one-third of urban children. There is some indication that private schools are more likely to serve the Muslim minority than public schools. Private secular schools serve 13 percent of Muslim children, and only 8 percent of Christian children. This is an interesting finding considering the history of Christian missionary education in sub-Saharan Africa. The emergence of secular private schools that serve Muslim children may be a response to the Christian focus of public schools. Although there is a gender bias in school access, there is no gender bias in private schools. Both private secular and private religious schools serve equal numbers of girls and boys.

School Quality

Parent reports of school quality reveal that overcrowding and school facilities are problems across sectors in Uganda (Table 5). Overall, school quality appears to be lowest at low-cost public schools. Although private secular and private religious schools receive similar ratings, private secular schools enjoy slightly higher parent satisfaction in four of five areas. Like Nigeria, the quality of education in Uganda appears to be linked to the cost paid by parents.

Zambia

UPE Background

Zambia differs from the other countries in this study because it has relatively high primary enrollment since independence. Grades one to seven are compulsory, with education funded at 3 percent of GDP per capita. However, enrollment began to fall in 1990s (Figure 1), prompting several reforms aimed at UPE in the mid 1990s. The decline in enrollment is linked to economic decline with real GDP per capita falling by 18 percent in the last decade.

Historically, the education sector has been centrally managed under rigid government control. A major focus of recent reform has been “liberalization” through the development of private markets, devolution of power to communities and schools, and efforts to promote equity and equality (Zambia Ministry of Education, 2005). Compared to other SSA countries, Zambia been active for a longer period in support of a growing private sector in education. Beginning the 1980s, the government registered private schools that functioned within government guidelines, and many other private schools were allowed to function outside government regulation (Kitaev, 1999). Up until recently private primary schools were considered low quality

and substandard. More recently, elite private schools have opened to cater to wealthy families. These schools charge high fees and limit access with admissions exams at both the primary and secondary levels. Although, the Ministry of Education publicly supports the right of private organizations to establish and control schools, there are concerns that rising fees at private schools are contributing to segregation and inequality (Zambia Ministry of Education, 2005).

Education Markets

Despite an outward policy in favor of private education, only 7 percent of children attend private primary schools. This is still higher than the rate reported by the World Bank of only 2 percent. Compared to the other countries, Zambia provides the highest rate of free primary education with 21 percent of all students attending for free. Unlike other countries where FPE is most common at public schools, Zambia's private religious schools provide 32 percent of their students with free primary education. This policy has not resulted in high attendance rates overall. Zambia has the second lowest gross attendance rate at 91 percent, and the lowest net enrollment rate at only 71 percent (Table 2).

The cost of public school in Zambia is slightly lower than other countries at \$11.28 or 3 percent of income per capita (Table 3). Costs at private religious school are similar to other countries at \$26.47 or 7 percent of GNI per capita. Costs at private secular schools are very high at \$69.41 or 17 percent of GNI per capita. Thus, Zambia's education market most closely resembles Malawi with low-cost public schools, relatively low-cost religious schools, and high-cost private secular schools.

Equity in Access

In the dataset, 28 percent of Zambian children are out of school – the highest rate of the four countries in this study (Table 4). Out-of-school students are almost twice as likely to live in rural areas as urban areas. Girls are slightly more likely to attend school than boys. Family wealth is also a predictor of school access. In the poorest wealth quintile, 44 percent of children are out of school, compared to only 7 percent in the highest wealth quintile. Christians and Muslims are equally likely to be out of school, but children from the small minority of traditional religions are more likely to be excluded.

Despite a long history of official policy favoring private schools, only 2 percent of children attend private schools. Private secular schools are almost exclusively in urban areas, and serve children from the highest wealth quintile. Private religious schools are more egalitarian, serving both rural and urban students and a mix of income brackets.

School Quality

In Zambia, parents report the highest satisfaction with public schools (Table 5). Of public schools parents, 94 percent are satisfied with school safety, 76 percent with teacher quality, and 70 percent with the level of overcrowding. Private secular schools appear to have less satisfaction, particularly in the areas of teacher quality and school safety. Private religious schools also score relatively low compared to public schools in terms of teachers and school facilities. In Zambia, a low supply of public school slots appears to contribute to market for low-quality private schools that absorb excess demand.

V. Summary and Policy Implications

Previous studies of private schools in developing countries led to the conclusion that private schools improve quality in countries with a well-developed supply, while private schools only improve quantity in countries with a low supply of education. The four cases in this study suggest a more complex relationship between private markets, supply, and school quality.

Based on the EdData survey, Uganda has achieved the highest level of primary school access with the highest share of private school enrollment. Uganda has also achieved a high rate of school access in the context of significant cost-sharing with parents with virtually no free primary education. This suggests that Uganda has been able to expand primary school by using private schools to increase quantity and using parent fees to reduce government costs. However, private schools are heavily concentrated in urban areas. As predicted by theory, private schools in the well-supplied market in Uganda are higher quality than lower cost public schools.

Contrasted with Uganda, in Zambia net primary attendance is lowest at only 71 percent. Despite a history of favorable government policies, private schools are not prevalent in Zambia and serve only 2 percent of children. Private secular schools serve elite children at high costs, while private religious schools are more egalitarian and lower cost. Compared to Uganda, Zambia provides a considerable amount of free primary education, with private religious schools reporting the highest concentration of free students. In Zambia, where public supply is low, private schools are considered lower quality than public schools, particularly in the areas of teacher quality, and school safety. It appears that Zambia has a limited public supply, possibly as a result of minimal cost sharing with parents, and as a result, low quality private schools meet a small share of excess demand.

The theoretical picture is complicated when we look at the other two cases. Malawi has achieved relatively high net primary attendance with only 7 percent of children attending private schools and 17 percent receiving free primary education. Most private schools are religious and relatively low costs. A small market of private secular schools serves only the urban elite. Despite cost differences across sectors, the quality of public and private schools is very similar in Malawi. Perhaps with a moderate to high level of school access, Malawi is able to achieve a balance in the quality of public and private schools.

Nigeria presents a very different case. Net primary attendance is low at 74 percent, and the private sector is large. All private schools, both religious and secular, charge relatively high fees and serve elite urban populations. But like Uganda, where the public supply is high, the quality of private schools is better than public schools, with the most expensive private secular schools having the highest quality. This runs contrary to the theory that a small public supply results in a market of low-quality private schools. It is possible that Nigeria's public supply is low quality due to the low level of public spending on education at less than one percent of GDP. Instead of investing in a smaller quantity of higher quality public education, Nigeria simply does not invest in education. With a relatively high rate of free primary education, there are also few private funds supporting public education. It is unclear why private schools have an incentive to improve quality in this environment. It is possible that competition between private schools is the driver of quality and not competition across sectors.

These four diverse cases provide some insight how education policy can interact with education markets. First, the degree to which private markets improve the quality of education will depend on the degree of competition across schools. This competition can come from a well-developed public supply, as in Uganda, or a competitive private market, as in Nigeria. But

there is no reason to assume that private markets will necessarily improve the quality of education. Malawi's private schools are equal to public schools quality, while Zambia's private schools are inferior.

Private markets alone also cannot improve the quantity of education. First, private schools appear to concentrate in urban areas, so additional public efforts are needed to increase the supply in rural areas. Most SSA countries are predominantly rural, so a large share of the population will not benefit from policies that promote private schools. However, private schools in urban areas may free up public funds for investment in needy rural areas. Second, the emergence of private markets varies across countries. External factors such as the returns to education, parents' willingness to pay, and opportunity costs of children's time may reduce the incentive for schools to open, even if government policies are amenable. This appears to be the case both in Malawi, where total attendance is relatively high, and Zambia, total attendance is relatively low.

The use of cost-sharing in education does not appear to limit school access in all countries, nor does free primary education necessarily increase access. With the lowest rate of free primary education, Uganda has achieved the highest rate of attendance. At the same time, Zambia and Nigeria have low attendance and higher rates of free primary education. However, Uganda still contributes a higher percentage of GDP to education than either Zambia or Nigeria. It is possible that these countries would benefit from greater public and private contributions to education.

Finally, private markets do adversely affect equity, particularly if private schools are not religious. In some countries, private religious schools appear to serve an egalitarian mission – even providing scholarships to equalize access across the income distribution. In all countries,

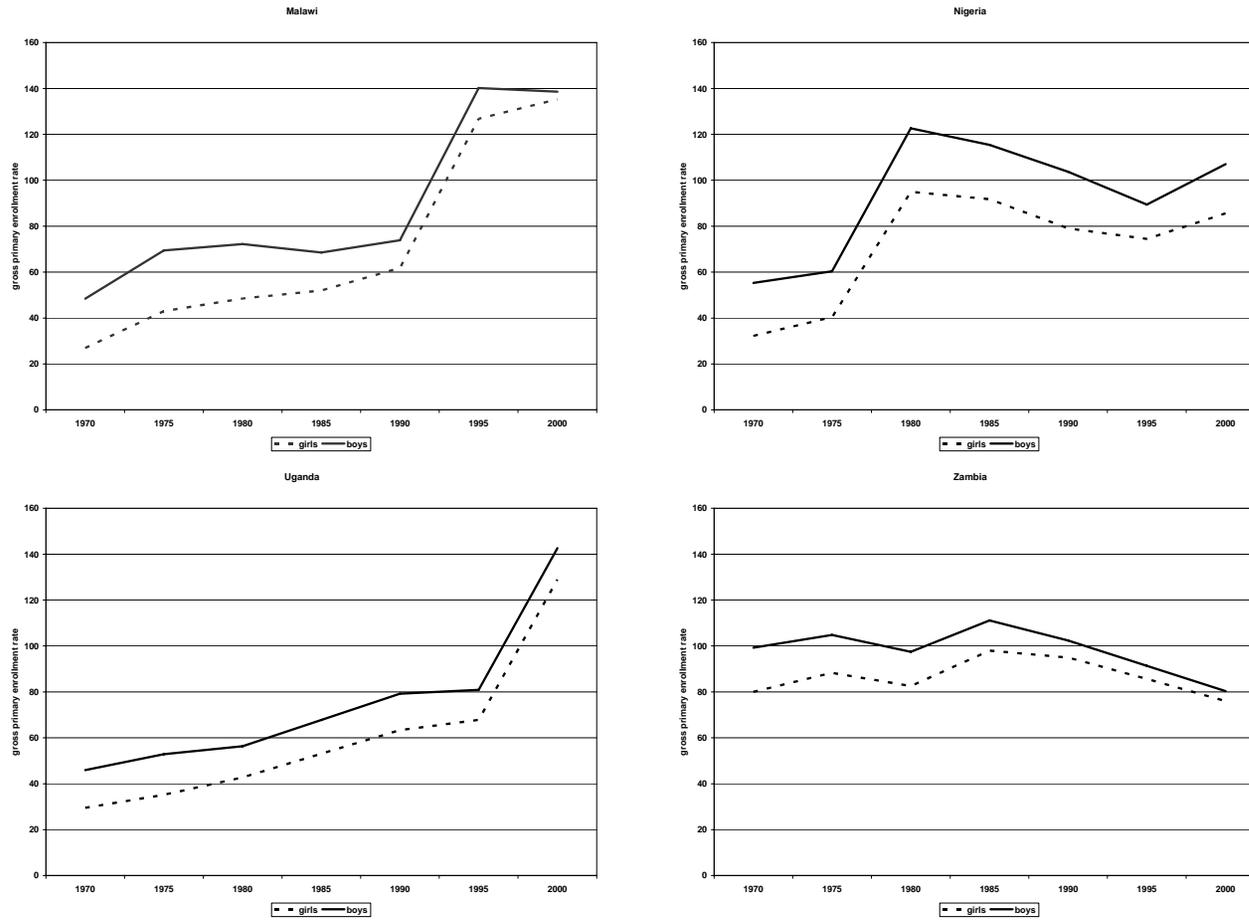
private secular schools are expensive and concentrated in urban areas. Dependence on this type of school to increase supply can limit access for the poor and middle-class children. The use of private markets should be coupled with efforts to provide public education for children from families with limited resources. This finding is particularly relevant for countries like Nigeria and Zambia where poor children are considerably more likely to be out of school.

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Figure 1. Gross Primary Enrollment 1970-2000



Source: World Development Indicators

Table 1. Country Profiles

	Malawi	Nigeria	Uganda	Zambia
Population	11 million	129 million	28 million	12 million
Year of Independence	1964	1961	1962	1964
Year of Democracy ^a	1994	1999	2006	1991
GNI per capita ^b	\$160	\$430	\$250	\$400
Gross primary enrollment ^c	125%	99%	125%	99%
Net primary enrollment ^d	95%	60%	87%	80%
Primary completion rate	59%	75%	57%	66%
Public expenditure on education (% of GDP)	6%	<1%	5%	3%
Pupil : teacher ratio in primary school	70	36	50	49
Gender parity index ^e	1.0	0.8	1.0	0.9
Private sector share of primary enrollment	7%	5%	9%	2%

^a Year of first multi-party elections.

^b GDP per capita in 2004 in US\$. Source: World Bank edstats.

^c Gross enrollment rate = (total primary enrollment)/(total primary school-aged population). Source: World Bank edstats.

^d Net enrollment rate = (primary enrollment of primary school-age children)/(total primary school-aged population). Source: World Bank edstats.

^e Gender parity index = (girls primary & secondary gross enrollment rate)/(boys primary & secondary gross enrollment rate)

Table 2. Primary School Attendance by Country

	Gross Attendance (Ages 6 to 14)	Net Attendance (Ages 6 to 12)
Malawi	100%	82%
Nigeria	85%	74%
Uganda	112%	91%
Zambia	91%	71%

Source: DHS EdData

Table 3. Primary School Enrollment and Costs by Sector

Costs expressed in 2005 US\$

	public	private secular	private religious
Malawi			
share of enrollment	92%	3%	5%
free primary education	17%	11%	13%
average tuition	0.75	12.79	0.38
average fees	0.24	0.24	0.31
average total cost	6.81	30.22	7.62
total cost as % of GNI per capita	4%	19%	5%
Nigeria			
share of enrollment	88%	8%	4%
free primary education	18%	13%	18%
average tuition	3.30	18.53	11.21
average fees	1.69	3.56	3.10
average total cost	18.75	52.22	40.27
total cost as % of GNI per capita	4%	12%	9%
Uganda			
share of enrollment	87%	10%	3%
free primary education	1%	1%	1%
average tuition	1.70	12.18	5.46
average fees	1.10	0.98	1.08
average total cost	11.12	34.60	20.59
total cost as % of GNI per capita	4%	14%	8%
Zambia			
share of enrollment	96%	2%	5%
free primary education	21%	18%	32%
average tuition	1.62	42.99	11.39
average fees	0.39	0.68	0.24
average total cost	11.28	69.41	26.47
total cost as % of GNI per capita	3%	17%	7%

Source: DHS EdData

Table 4. Enrollment Status by Demographic Characteristics

	Out of School	Public School	Private Secular	Private Religious
Malawi	n=649	n=2818	n=104	n=138
all children	18%	76%	3%	4%
residence				
urban (14%)	8%	72%	14%	6%
rural (86%)	19%	77%	1%	3%
gender				
male (49%)	18%	75%	3%	4%
female (51%)	17%	77%	2%	3%
wealth quintile				
poorest (21%)	26%	70%	1%	3%
second (19%)	25%	71%	1%	4%
third (20%)	16%	78%	1%	4%
fourth (20%)	14%	83%	1%	3%
richest (20%)	7%	77%	10%	5%
religion				
Christian (81%)	15%	78%	3%	4%
Muslim (16%)	27%	66%	3%	4%
other (3%)	36%	59%	0%	5%
	Out of School	Public School	Private Secular	Private Religious
Nigeria	n=1584	n=3776	n=335	n=191
all children	27%	64%	6%	3%
residence				
urban (36%)	18%	65%	12%	5%
rural (64%)	32%	64%	2%	2%
gender				
male (48%)	23%	68%	6%	4%
female (52%)	32%	60%	6%	3%
wealth quintile				
poorest (25%)	44%	54%	1%	2%
second (22%)	36%	62%	1%	1%
third (21%)	25%	69%	3%	3%
fourth (18%)	12%	76%	8%	4%
richest (14%)	4%	63%	24%	10%
religion				
Christian (39%)	7%	79%	9%	6%
Muslim (58%)	41%	54%	4%	1%
other (3%)	20%	67%	9%	4%

Table 4. (continued)

	Out of School	Public School	Private Secular	Private Religious
Uganda	n=737	n=6303	n=697	n=249
all children	9%	79%	9%	3%
residence				
urban (13%)	7%	59%	26%	8%
rural (77%)	10%	85%	3%	2%
gender				
male (50%)	9%	80%	9%	3%
female (50%)	12%	78%	9%	3%
wealth quintile				
poorest (%)				
second (%)				
third (%)				
fourth (%)				
richest (%)				
religion				
Christian (85%)	9%	80%	8%	3%
Muslim (14%)	8%	73%	13%	6%
other (<1%)	3%	89%	3%	6%
	Out of School	Public School	Private Secular	Private Religious
Zambia	n=2088	n=5160	n=92	n=107
all children	28%	69%	1%	1%
residence				
urban (28%)	17%	78%	4%	1%
rural (79%)	32%	66%	<1%	1%
gender				
male (51%)	29%	69%	1%	1%
female (49%)	27%	70%	1%	2%
wealth quintile				
poorest (24%)	44%	55%	<1%	1%
second (20%)	34%	63%	<1%	2%
third (22%)	29%	70%	<1%	1%
fourth (19%)	18%	79%	1%	2%
richest (16%)	7%	86%	5%	1%
religion				
Christian (97%)	28%	70%	1%	1%
Muslim (<1%)	29%	67%	4%	0%
other (3%)	36%	60%	1%	2%

Source: DHS EdData

Table 5. Parent Reports of School Quality by Sector**% parents satisfied with school quality**

	Public	Private Secular	Private Religious
Malawi			
principal	87%	85%	92%
teachers	77%	72%	77%
school safety	87%	89%	85%
school facility	49%	56%	49%
level of overcrowding	53%	48%	53%
Nigeria			
principal	90%	95%	89%
teachers	84%	91%	86%
school safety	91%	92%	92%
school facility	61%	82%	72%
level of overcrowding	62%	80%	72%
Uganda			
principal	88%	91%	88%
teachers	83%	89%	85%
school safety	92%	91%	91%
school facility	60%	68%	62%
level of overcrowding	47%	65%	61%
Zambia			
principal	83%	77%	77%
teachers	76%	58%	56%
school safety	94%	79%	84%
school facility	56%	58%	47%
level of overcrowding	70%	65%	66%

Source: DHS EdData