

SCHOOL FEES AND PRIMARY EDUCATION IN SUB-SAHARAN AFRICA,
1970-2010

by

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Submitted in partial fulfilment of the requirements
for the degree of Master of Development Economics

at

Dalhousie University
Halifax, Nova Scotia
August 2011

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DALHOUSIE UNIVERSITY
DEPARTMENT OF ECONOMICS

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Dated: August 19th, 2011

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DALHOUSIE UNIVERSITY

DATE: August 19th, 2011

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TITLE: School Fees and Primary Education in Sub-Saharan Africa, 1970-2010

DEPARTMENT OR SCHOOL: Department of Economics

DEGREE: MDE CONVOCATION: October YEAR: 2011

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I would like to thank my parents for their incredible support, throughout my life and especially during this degree. This thesis is dedicated to them, along with Pigeon, who kept me company for much of its writing.

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Abstract

Education broadens the life choices and capabilities of those who receive it, and confers external benefits to society as a whole. In sub-Saharan Africa, a major issue concerning school attendance among the poor has been the direct monetary costs represented by primary school “user” fees, which became particularly commonplace in sub-Saharan African countries during the post-colonial period. While fees have been advocated in the past as a way for impoverished governments to fund the improvement and expansion of primary education, in more recent years the position of the international development community has shifted in favour of fee abolition as a means of achieving Universal Primary Education. This thesis examines the long-term relationship between school fees and education quality and access over the past 40 years in seven sub-Saharan African countries. I find that the introduction of fees decreased primary school enrolment, primarily by keeping the poorest children out of school, without achieving significant quality improvements. A fall-off in government spending following the introduction of fees is presented as a possible explanation. I also focus on the quality impacts associated with the major increases in enrolment following fee abolition, and emphasize the importance of government commitment to making up the funding shortfall generated by this policy change.

Acknowledgements

I am extremely grateful to my supervisor, Talan Iscan, for his invaluable guidance throughout the writing process, and for the input of my readers, Daniel Rosenblum and Ian McAllister.

Chapter 1: Introduction

In the global effort to reduce extreme poverty, ensuring access to education is seen as a vitally important tool. A basic education not only broadens the capabilities and potential life choices of those who receive it, but also confers external benefits to society as a whole. High rates of school attendance are credited with a wide range of positive outcomes, including increased economic growth, lower fertility, lower infant mortality rates, improved health and sanitation, and greater democratic participation (Deininger, 2003; Kadamira & Rose, 2003; Plank, 2007). For these reasons, achieving “Universal Primary Education” throughout the developing world is the second of eight Millennium Development Goals set out by the world’s leaders at the turn of the century in order to reduce extreme poverty by 2015.

In sub-Saharan Africa, a major issue concerning school attendance among the poor has been the direct monetary costs represented by primary school “user” fees (a funding system sometimes referred to by governments as “cost-sharing”). Although there does not appear to have been a firm consensus among policy makers and economists regarding the relative merits of such fees (Bray, 1988, p. 57; Kattan & Burnett, 2004, pp. 20-21), they became particularly commonplace in sub-Saharan African countries during the post-colonial period. Their cumulative impact on families may be an important factor in explaining why a higher percentage of children remain out of school in this part of the world than in any other (*The Millennium Development Goals Report*, 2010). On the other hand, it is important to note that fees were introduced as a means for impoverished governments to bring much-needed resources

and improvements to underfunded educational systems in an efficient and effective manner, which may not otherwise have been possible (Kattan & Burnett, 2004, p. 18; Reddy & Vandemoortele, 1996, p. 11). Although governments usually continued to provide funding for teachers' salaries, schools grew dependent on fees over time to purchase textbooks, uniforms, or fund construction and repairs (World Bank, 2009, p. 7).

Fees were collected in a number of ways. Often they were paid directly to the schools as tuition charges or payments for materials, and in other cases they took the form of mandatory contributions to parent-teacher organizations and other local management bodies (Kattan & Burnett, 2004, p. 6). Similarly, the level of fees varied widely between countries and sometimes between provinces or communities. In Kenya, for example, one report states that families paid anywhere from \$20 to \$350 (USD) per year in tuition for a child to attend primary school (Kattan & Burnett, 2004, p. 61). However, the findings of a number of different surveys and studies from the period during which fees were in effect indicate that education costs represented a significant burden for households – particularly those in the lowest income brackets. For example, a 1986 study of 63 less-developed countries estimated the proportion of annual household income required to send two children to primary school for the poorest 40 percent of households. The estimate was above five percent for all but 12 of the countries, and above 10 percent for 33 of them. Of the 22 sub-Saharan African countries in the study, only one fell into the “less than five percent” category; 15 were above 10 percent, and five were above 20 percent (Reddy & Vandemoortele, 1996, p. 30).

Although these estimates include all costs, not only fees, other sources suggest that fees

represented a significant proportion of household education expenditures in sub-Saharan Africa – anywhere from one third in Ghana to one half in Ethiopia (Kattan & Burnett, 2004, p. 15).

The World Bank has never officially supported the imposition of tuition fees at the primary level (Kattan & Burnett, 2004, p. 20). However, cost sharing in other guises – for example, charging students for materials or uniforms, or relying on community fundraising to support various infrastructure projects – was encouraged by many consultants and policy makers in the mid-1980s (Bray, 1988, p. 57). The use of these types of fees also fit in well with the structural adjustment programs advocated by the International Monetary Fund (IMF) and the World Bank in response to widespread economic stagnation and decline in the 1980s and 90s. Such programs promoted the privatisation and decentralisation of many social services as a means of achieving macroeconomic stability (Reddy & Vandemoortele, 1996, p. 3; World Bank, 2009, p. xi).

In more recent years, the position of the international development community regarding primary school fees has shifted, becoming more definitively in favour of fee abolition. Many policy makers, educators and development economists have come to see “Free Primary Education” as a sound and necessary policy goal in the effort to get more children into the classroom. The prominence of the anti-fee position is exemplified in the recent documents and projects of organizations such as the World Bank and UNICEF (the latter introduced its School Fee Abolition Initiative in 2005) (World Bank, 2009). It is also evidenced by the fact that political parties in developing countries have often used school fee abolition as a campaign pledge – a trend seen in Malawi, Uganda

and Kenya (Al-Samarrai, 2003; Vos et al., 2004; World Bank, 2009). The elimination of school fees tends to be popular throughout societies, which, as Bray (1988, p. 60) points out, is not surprising; given the choice between paying fees and not paying them, most parents would naturally opt for the latter. Free Primary Education is also lent moral weight by Article 26 of the UN's 1948 Declaration of Human Rights, which states that elementary education should be free and compulsory (Bray, 1988, p. 56). But perhaps the most compelling justification for school fee abolition is the observation that the growing number of countries that have eliminated fees have all seen immediate and significant increases in enrolment rates, particularly among the poor. This response suggests strongly that fees have indeed acted as a significant cost barrier to enrolment (Kattan & Burnett, 2004, p. 8).

While opinions on school user fees have fluctuated over the years, there is little systematic empirical evidence regarding their relative merits. This thesis thus examines the long-term relationship between school fees and education quality and access over the past 40 years by focusing on seven countries in sub-Saharan Africa with relatively similar histories and socio-economic circumstances: Ethiopia, Ghana, Kenya, Malawi, Tanzania, Uganda, and Zambia. Although a large number of other countries in the region had some form of primary school fees in place during the period in question (Kattan & Burnett, 2004, pp. 31-32), these seven countries were selected primarily based on the amount of data available, and on the fact that they are fairly well-represented in the existing literature related to primary school fees.

The uniqueness of this research lies in the broadness of the time period it covers. Earlier studies have looked at the impact of *introducing* a fee-based system at the primary level (A. S. Bedi, Kimalu, Mandab, & Nafula, 2004; Bray & Lillis, 1988; Reddy & Vandemoortele, 1996), while later studies have looked at the quality and access implications of fee *abolition*, either in a single country or in a group of countries (e.g. (Bold, M. Kimenyi, Mwabu, & Sandefur, 2010; Deininger, 2003; World Bank, 2009). However, to my knowledge, this is the first study to look at the evolution of education indicators in a set of countries over a time period that (for the majority of the focus countries) extends from before fee introduction to after fee abolition. This broader window enables more informed policy recommendations pertaining to sub-Saharan Africa's effort to achieve Universal Primary Education by 2015, and provides insight into the importance of school fee elimination as a tool for achieving this goal.

It should be emphasized that the issues described above are examined from a macro perspective in this research. As such, it does not include extensive discussion on factors that influence economic decisions at the individual or household level, or attempt to chronicle changing attitudes toward education. This research also does not address the issue of gender inequality in education, which is a tremendously important area of focus on its own and one which has seen specific developments as a result of school fees (e.g., World Bank, 2009, pp. 176-7).

Overall, the experiences of the seven case study countries show that, although primary school fees were seen as a way to improve basic education systems in sub-Saharan Africa by creating a new source of funding, their introduction ultimately

decreased enrolment, primarily by keeping the poorest children out of school, without achieving significant improvements in the quality of education provided. This may have been in part because as the share of the financial burden for primary education born by households increased, governments reduced their own contributions. In more recent years, as countries reverse their fee policies and implement Free Primary Education, major increases in enrolment indicate that schooling has become much more accessible. However, these increases in enrolment represent an abrupt increase in demand for existing resources, in some cases significantly larger than expected. Consequently, the policy change has also brought about a decrease in the quality of primary education to varying degrees, and each government has had to find a way to deal with this reality.

Ultimately, I argue that charging fees at the primary level can only work to improve education quality and access if a government is strongly committed to maintaining and increasing its own investments in developing the education system, and if there is an effective way of ensuring the poorest are exempted from paying fees or subsidized through cash transfer programs. Since these conditions are not necessarily easily met, particularly in low-income countries, a system of government-funded Free Primary Education may indeed be the best option in sub-Saharan Africa. However, transitioning to this policy from a fee-based system is also dependent on commitments from governments to provide the shortfall in funding when fees are abolished. As such, this type of policy change may be more successful when undertaken gradually, and with donor assistance in the initial phase.

The remainder of the thesis is structured as follows: Chapter 2 outlines the conceptual framework surrounding primary school fees as presented in the existing literature. It explores some of the basic arguments that have been made in favour of and against both the introduction and the abolition of primary school fees. Chapter 3 provides an overview of each of the seven case study countries, both providing relevant general and education-related background information and noting how the observed trends appear to reinforce or contradict some of the theoretical claims presented in the previous chapter. Chapter 4 examines the central questions in a more formalized manner, painting an overall picture based on statistical analysis of the data available from the case study countries. Chapter 4 concludes by providing a discussion of the findings and their policy implications, and suggesting possible avenues for future research.

Chapter 2: Conceptual Framework

At first glance – especially if one is accustomed to the type of publicly funded education system found in most developed countries – the idea of charging primary school fees seems both unfair and counterproductive to the goal of enabling universal access to education. However, the issue is more complex than many assume, and in fact a review of the literature highlights how considerably attitudes toward this policy have varied over time. Initially, the implementation of school fees was justified as a system of cost sharing in developing countries (Bray, 1988, p. 59), and even today fees are sometimes advocated on the grounds that private schooling is the best way of ensuring quality education provision in developing countries (Tooley, 2005). In addition, some argue that abolishing fees on a large scale creates more problems than it solves (Plank, 2007). This chapter presents the primary conceptual arguments that have been advanced in favour of and against charging school fees at the primary level.

2.1. Advantages of Primary School Fees

2.1.1. A Source of Funding

One of the primary arguments in favour of financing primary education through user fees is that many developing country governments cannot afford to provide the necessary funding to deliver adequate education services through tax revenues alone. Tax revenues tend to be quite small when a large percentage of a population lives in poverty. There is some anecdotal evidence to support this position; Bray (1988, p. 60) notes that many African countries – including Nigeria, Ghana, and Kenya – made

attempts to abolish existing fees in the 1960s and 70s, but found these policies to be financially unsustainable.

A key proponent of primary school fees in the early 1980s was Thobani (1984), who studied the expected consequences of raising school fees in Malawi. Thobani (1984) argued that government funding alone led to mass under-provision of education in developing countries, thus depriving many of the opportunity to go to school. He suggested that such rationing of education, resulting from a fixed budget constraint, could well outweigh the negative impact caused by imposing fees. Furthermore, while little could be done about a shortage in supply, he argued that the impact of fees could be minimized through the use of price discriminating policies such as scholarships to benefit the poor (Thobani, 1984, pp. 402-3). In part based on Thobani's recommendations (in advance of publication of his research), the government of Malawi increased school fees at the primary level by 25% in 1982 (Bray, 1988, p. 59).

Birdsall and Orivel (1996) make a similar argument in the context of Mali. They propose that if revenues from fees could be used to improve both quality and access, the resulting increase in demand may actually outweigh the decrease created by the higher direct costs faced by users. In fact, the authors argue, education is so under-provided in Mali that overall household costs (including both direct and indirect costs) may actually fall with the introduction of fees (and the subsequent building of more schools), since many children would no longer have to travel long distances to attend school (Birdsall & Orivel, 1996, p. 282).

It should be noted that the recommendations made by both Thobani and Birdsall and Orivel assume that funds raised through fees will be channelled directly back into either the school where they are collected or into education systems in general. As Bray (1988, p. 61) suggests, there is a certain logic to this assumption – more so than in the case of general taxes, where revenues are in demand by many other competing sectors. Additionally, relying on school user fees to inject additional funding into education systems will only be an effective policy if the level of government funding for education remains constant, rather than falling after the fees are introduced or increased.

One of the most prominent advocates of fee-based education for the poor in recent years has been Tooley (2005), who argues that small-scale, low-cost private schools have played an important role in providing access to decent schooling for poor areas and communities overlooked by governments. Tooley bases his claims on studies conducted in poor urban areas and slums in India and sub-Saharan Africa. In all cases, Tooley finds that the majority of children surveyed were attending private schools that did not receive government funding. He also concludes that the majority of these children benefitted from lower pupil-teacher ratios, less teacher absenteeism, and performed just as well or better on standardized tests compared to children attending government schools (Tooley, 2005; Tooley, Dixon, Shamsan, & Schagen, 2010). He responds to equity concerns by pointing out that many private schools offer free places for the poorest members of the community. He also concludes that private schools for the poor are run more cheaply and efficiently than government schools, due to lower teacher salaries and bureaucratic costs (Tooley, 2005).

Despite these findings, Tooley writes that the role played by private schools in poor countries is undervalued by the development community, and that many children attending unrecognized schools are not even counted in official enrolment statistics. In fact, he argues, with the onset of Free Primary Education in countries like Kenya, part of the spike in enrolment may result from children transferring from low-fee private schools, where they were receiving a decent education, to the newly free government schools, where the standard of learning has decreased due to rapidly expanding class sizes. As a result, Tooley (2005) holds Free Primary Education initiatives partially to blame for “crowding out” the more efficient private schools in poor areas, and warns that abolishing school fees may inadvertently compromise the education of the poor as a result of the quality concerns he raises.

2.1.2. Strengthening the Public System

Another view in favour of fees (or against rapid fee abolition) argues that maintaining fees for public schooling may be the most effective way to improve or maintain quality in the public system. For example, Fiske and Ladd (2003) write that one important motivation for South Africa’s decision to implement fees in the 1990s was the desire to prevent the flight of the middle and upper classes to the private system, in the wake of the expansion of public school provision that accompanied the end of apartheid. Policy makers believed that the result of such a trend would be declining political interest and investment in the public system, since those in positions of power (and those who they relied on for much of their support) would be less motivated to

protect or advocate for the integrity of the public schools if their own children attended private ones (Fiske & Ladd, 2003, p. 9).

Along the same lines, Bold et al. (2010) find that, in the wake of Free Primary Education and the resulting influx of poorer students into the public system in Kenya, there has been a significant increase in the demand for private schooling by wealthier households. They interpret this shift as evidence of declining quality in the public system, and conclude that increasing class size in the public schools appears to be the most important factor in explaining this increased demand. They also find that those in private schools fared significantly better than those in public schools following the abolition of fees. As this research shows, fee abolition – unaccompanied by other measures such as an increase in government or donor funding – undoubtedly allows more children to attend school, but may also lead to a two-tiered situation in which the public system is inferior to the private. That being said, it should be acknowledged that fees do not in themselves prevent such a situation from developing. Even with fees being used to support a public system, a higher willingness to pay may still enable wealthier households to obtain a higher quality education (as discussed further on page 16).

2.1.3. A Sense of Ownership

Many have argued that parents who pay fees directly to their local schools feel a greater sense of ownership in how those schools are run, and that – since revenues raised by the community stays within the community – household financing at the

primary level could actually increase efficiency within schools. Additionally, Bray (1988, p. 61) argues that parents may be more willing to pay school fees than they would be equivalent taxes, since with the former they can perceive a specific and immediate benefit. Plank (2007) takes a similar stance in his assessment of the suitability of fee abolition as a means of achieving universal primary education. While acknowledging the need to ensure no child is denied access to schooling because of an inability to pay, Plank (2007, p. 5) argues that voluntary community contributions toward things such as school construction and maintenance may not only ensure that valuable school improvements are achieved quickly, but are also a means of encouraging community engagement. He points to anecdotal evidence from Malawi which suggests that the introduction of Free Primary Education resulted in a decreased willingness on the part of parents to volunteer their time and resources to the school.

On the other hand, according to Bold et al. (2010), there is increasing evidence to suggest that providing public services free of charge does *not* result in a reduced sense of ownership, or in less efficient use of that service. The authors cite recent studies which have addressed this question by examining the impact of free provision on usage of insecticide-treated anti-malarial bed nets and water purification kits in poor communities. The results of these studies reveal no negative effects on usage when all costs are removed – only increased demand. However, they acknowledge that education may not be exactly comparable to these examples, since it involves a standard of performance by the service provider (namely, the teacher) rather than simply the handing over of a good (Bold et al., 2010, pp. 3-4).

2.2. Arguments Against Primary School Fees

2.2.1. Equity

The most common argument against requiring families to pay school fees at the primary level is that those whose families can least afford to pay the fees will be denied access to a basic education. From an equity standpoint, fees are far more regressive a policy than, for example, a system in which households are taxed based on income, and the tax revenue used to finance education (World Bank, 2009, p. 15). As outlined above, pro-fee advocates argue that only fees can enable poor countries to expand and improve primary education services in such a way that the poor would be better off, even if they have to finance the improvements themselves. Klees (1984), however, questions the assumption of excess demand for higher quality primary education among the poor, implicit in the pro-fee argument. He argues that such a claim is not supported by evidence. In fact, numerous studies find repeatedly that it is the poor who drop out of school due to high costs and low expected payoffs (Klees, 1984, p. 427). The percentage of non-schooled children who come from poor families is equally striking in more recent literature; a 2005 study found that in 27 sub-Saharan African countries more than 50 percent of those out of school came from the poorest income quintile (World Bank, 2009, p. 10). Such findings make it hard to dismiss the claim that the direct costs of education have disproportionately reduced enrolment rates among the poor in this region of the world.

Reddy and Vandemoortele (1996) suggest that it is easy to underestimate the impact of even a small increase in the cost of education on poor households. They argue

that the poor have a higher price elasticity than the rich when it comes to basic social services, and that a poor household would respond to a blanket increase in fees for these services by consuming less of them (Reddy & Vandemoortele, 1996, pp. 11-12). Furthermore, those who justify asking the poor to pay directly for the services they receive suggest that the poor have exhibited a high willingness to pay for these services. Yet they also fail to make the distinction between *willingness* and *ability* to pay (Reddy & Vandemoortele, 1996, p. 8). A household may place a high value on a particular service, but nevertheless be unable to justify forgoing other, even more urgent, expenses in order to pay for it. Tooley (2005) suggests that because many poor families are already paying for private education, their ability to pay is not an issue. However, Tooley's own account reveals that when a free alternative was presented, even though there was evidence to suggest that it was of significantly lower quality, the majority of poor households chose to leave the fee-based schools (Tooley, 2005, pp. 22-24).

Even those who argue in favour of fees based on their potential to expand and improve educational resources acknowledge that equity concerns cannot always be easily dealt with. Thobani (1984), for example, alludes to the need to mitigate the effects of school fees on the poor through measures such as scholarship programs, which target the neediest families for whom the cost of schooling might prove prohibitive. However, Klees (1984) and Reddy and Vandemoortele (1996) suggest that, in practice, exemption schemes for the poor have proven difficult to implement. Reddy and Vandemoortele (1996, pp. 79-80) attribute this to a number of factors, including difficulty in accurately identifying those most in need, limited awareness of such

schemes among the poor, lack of incentives for providers to grant exemptions, and the social stigma sometimes associated with availing of exemption programs.

Ironically, equity was one of the primary considerations used to justify the *implementation* of fees in post-apartheid South Africa, where this was seen as the only way to ensure provision of the quality of education previously enjoyed only by white students. Moreover, partly due to national policies designed to minimize the impact of fees on poorer families, and partly due to the fact that fees were determined at the school level, and tended to be in line with what families were able to pay, fees did not have a significant impact on enrolment among the poor in this case. Nevertheless, Fiske and Ladd (2003) conclude that fees did little to improve the quality of the historically disadvantaged schools, since these were the schools which charged the lowest fees and had the most trouble collecting them. Consequently, the schools from traditionally richer areas continued to benefit from greater resources and a generally higher quality of schooling (Fiske & Ladd, 2003).

2.2.2. Social Benefits of Education

A fundamental argument for why basic education should be provided by the state is that education carries with it a number of social benefits, which do not necessarily enter into the private cost-benefit calculations made with regard to schooling. Consequently, private demand for education will be far lower than what would be considered socially optimal. It is for this reason that free education was declared a basic human right by the United Nations in 1948, and that “virtually all

developed economies . . . provide free education at basic levels” (Bray, 1988; Deininger, 2003, p. 292).

Owens (2004) breaks down the social benefits of education into three categories: these include spill-over effects, expanded technological possibilities, and community non-market effects. Spill-over effects refer to the fact that the education of one person can sometimes result in the increased productivity of their colleagues and peers, simply through observation or the passing on of information. Expanded technological possibilities result from the greater propensity of educated individuals for creation, invention and adaptation, leading to life-improving or productivity-enhancing discoveries and innovations in fields such as science, medicine, or industry. Community non-market effects is a somewhat broader classification, and includes characteristics such as slower population growth, better health and hygiene, reductions in crime, greater social cohesion and political participation, less harmful environmental practices, and so on (Owens, 2004, p. 4).

Not surprisingly, although many of the social benefits of education have been proclaimed, actually quantifying these benefits is difficult. Psacharopoulos and Patrinos (2004) estimate both private and social returns to investment in education by level and country. Others have attempted to determine the global link between educational attainment and the growth rate of economic output (e.g. Barro, 2000; Krueger & Lindahl, 2001). However, Owens (2004) concludes that, although the broader social benefits associated with education are not in doubt, estimation results are heavily dependent on the methodology used by the researcher.

This notwithstanding, there is a reasonable consensus regarding the fact that the social returns to education are decreasing – in other words, they are highest at the primary level (Psacharopoulos, 1995; Psacharopoulos & Patrinos, 2004; Tiongson, 2005). Furthermore, although secondary and tertiary education seem to matter more in terms of GDP growth rates (Barro, 2000; Krueger & Lindahl, 2001), this does not negate the need to ensure access to primary education, since one cannot have the former without the latter.

In general, existing evidence supports the idea that many of the benefits of primary education are not incurred directly by the individual who receives that education. This is helpful in understanding why requiring families to directly shoulder the costs of schooling will significantly lower the demand for education, particularly among the poor, to a level well below what is desirable from a societal standpoint. In addition, Reddy and Vandemoortele (1996) note that even when considering the net private benefits of education, it is the parents who bear the costs and decide whether to consume the service, while it is the children who incur the majority of the direct benefits – and only over time. Admittedly, many parents place a high value on their children's welfare, and also receive benefits during old age if education enhances their children's ability to support them. Nevertheless, this "possible divergence of interest" highlights another channel through which fees might contribute to underinvestment in schooling (Reddy & Vandemoortele, 1996, p. 40). This would be particularly true in the context of poverty, where families frequently lack the resources to invest up front in a service that

will only yield returns years down the road, and where the opportunity cost to the family of a child's forgone labour is high.

Chapter 3: The Case Study Countries – An Overview

This chapter presents evidence from the seven case study countries (Ethiopia, Ghana, Kenya, Malawi, Tanzania, Uganda and Gambia) concerning the impact of school fees on access to and quality of primary education. It provides a broad picture of the evolution of primary education in each country over the past forty years, in addition to other relevant aspects of their recent histories, and discusses the possible impact of school fees on various outcome indicators. Detailed information on sources for all figures and graphs in this and subsequent chapters is included in the appendix.

Three principle variables describe the overall state of education in each country. Primary gross enrolment rates indicate each population's level of *access* to education. *Quality* of education is measured through pupil-teacher ratios and primary completion rates.¹ The former indicator has been shown in several studies to be related to education quality, in that smaller class sizes are generally associated with higher scholastic achievement (Angrist & Lavy, 1999; Case & Deaton, 1999; Krueger, 1999). I use the primary completion rate variable for added insight, based on the premise that low school quality (translating to a lack of perceived benefit) is one of the primary reasons students do not stay in school. Undoubtedly, these variables provide an imperfect indication of quality across countries – Dobbelsteen et al. (2002), for example, contest the relationship between class size and achievement. However, they are the

¹ While both gross enrolment rates and primary completion rates are expressed as percentages, gross enrolment rates are sometimes in excess of 100, since this figure represents the total number of children who are enrolled in primary school as a percentage of the total number of primary school-aged children in the population. The percentage will be greater than 100 when children from other age groups enrol in primary school in addition to those of primary school age – a common phenomenon following fee abolition, when many older children began to attend school for the first time due to lowered costs.

best available measures in the absence of a widespread and consistent measure of educational outcomes, such as test scores (Al-Samarrai, 2003). Government spending on education is another input which might be considered a determinant of education quality. However, this variable is likely endogenous to the introduction of school fees, and is more of interest as an explanatory variable rather than a dependent variable for the purposes of this thesis.

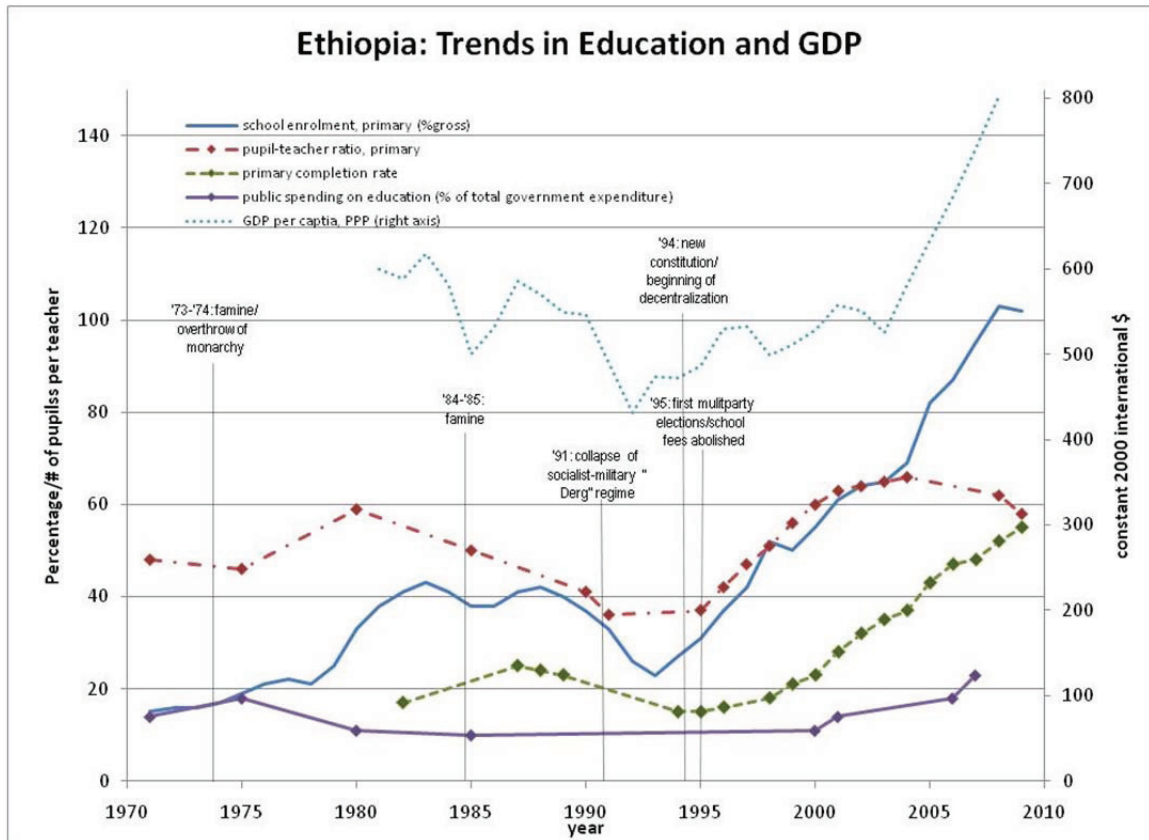
Overall, an examination of education and income trends in the seven case study countries over the last forty years suggests that their development can be divided into three distinct phases. The first phase is generally characterized by climbing enrolments and higher government spending – in some cases associated with previous attempts to introduce free primary education in the early post-colonial period. The second phase is marked by falling enrolments and falling government spending, as well as stagnant or falling levels of GDP per capita (a common trend in sub-Saharan Africa during the 1980s). In several cases (Ghana, Kenya, Malawi and Tanzania), the beginning of the second phase appears to coincide roughly with the introduction of or increase in primary school fees. The third phase begins in each case with the abolition of fees, and corresponds to rising enrolment rates, which climb more abruptly than in the first phase (although these rates of growth tend to level off or even become negative within a few years). This last phase is also characterized by increasing government spending on education and rising GDP per capita. Pupil-teacher ratios and primary completion rates follow the same general pattern as enrolment rates (although not with the same degree of consistency) in that they improve during the first and third phases and deteriorate during the second.

3.1. Ethiopia

Ethiopia is different from the other six countries in this study in that it was only colonized for a brief period, by Italy during World War 2. Before and after this episode, Ethiopia was ruled by the emperor Haile Selassie. Following a military coup in 1974, power passed to a socialist military council known as the “Derg.” system was finally overthrown in favour of federalism in 1991, with the first multi-party elections held in 1994. The country has experienced consistent poverty for most of the study period, and the hardships of its people were famously brought to the world’s attention during the severe famine in the mid-1980s (U.S. Department of State, 2011a).

Although a government-funded Western-style system of basic education was introduced in Ethiopia in the early 1900s, the 1950s saw the rise of non-government schools, funded primarily by household contributions (World Bank, 2009). During the final years of the Selassie era, the government attempted to fund schooling through a tax on arable land, but this led to resentment on the part of rural communities over the fact that they were supporting a service which was primarily benefitting those in urban areas (Roschanski, 2007). Following the coup of 1974, the Derg placed education largely in the hands of the communities, and fees became universal (although there was still a distinction between “government” and “private” schools, and fees for the former tended to be lower) (World Bank, 2009). These fees did not appear to deter enrolment, which began to climb gradually during the late 70s and early 80s (Figure 1). During this period, average class sizes also grew significantly – perhaps related to falling government spending on education. The growth in school attendance was soon

Figure 1: Ethiopia



Sources: World Bank (2009, 2011).

reversed, however, interrupted first by the severe famine in 1984, and then falling in tandem with declining per capita income throughout the late 80s.

Fee abolition came with the election of a new government in 1994, although its implementation took place somewhat gradually (as did the process of establishing replacement funding for the lost fee revenues). This can mostly be attributed to the fact that Ethiopia's new constitution has placed a strong emphasis on the decentralization of power, which made it difficult to introduce and enforce country-wide policies (World Bank, 2009). A lack of government funding may help to explain why, even as both enrolment rates and primary completion rates began to climb steadily following

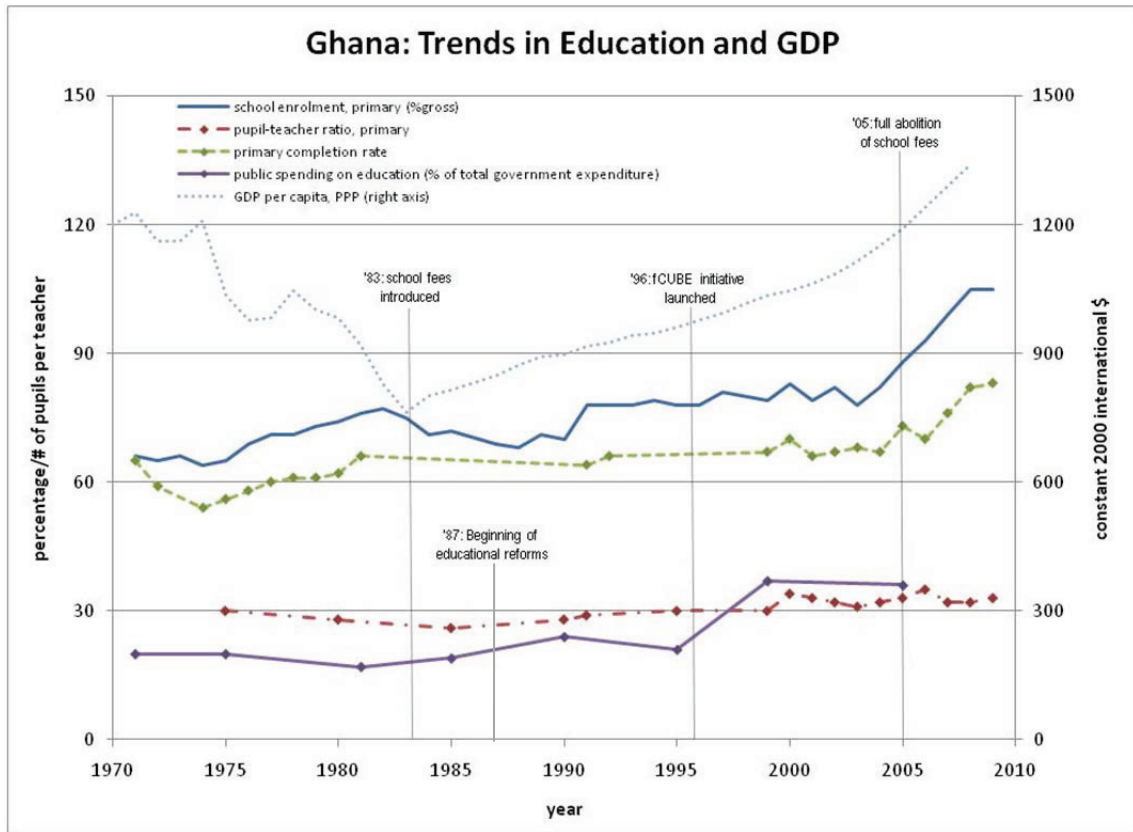
abolition, pupil-teacher ratios nearly doubled during the same period. Fortunately, the latter trend has begun to reverse in the last five years as government funding has begun to increase.

3.2. Ghana

Of the seven case study countries, Ghana exhibits the least fluctuation in its primary education indicators. Politically, however, the country has seen its share of instability. Ghana was a British colony until 1957. A weak democracy during the early years of independence soon subsided into a single party state, which was overthrown by a military coup in 1966. The following two decades saw further attempts at establishing a multi-party system, and further government coups in 1972, 1979 and 1981. The final one resulted in the establishment of the Provisional National Defense Council (PNDC) as Ghana's governing party; the PNDC would remain in power until 2000. Ghana successfully transitioned into a multiparty democracy in 1992 (U.S. Department of State, 2011b).

Ghana had initially introduced Free Primary Education in the 1960s, but the system did not succeed in boosting enrolment. Akyeampong et al. (2007, p. 33) suggest that this was partly a supply side problem: the country suffered from general economic decline in the late 70s and early 80s, accompanied by high inflation and rising debt, and many teachers left for neighbouring oil-rich Nigeria, where they could get higher wages. Ghana introduced austerity and decentralization measures in 1983, which included the formal introduction of school fees. By 1987, awareness of quality and equity issues

Figure 2: Ghana



Source: World Bank (2011).

prompted a first round of educational reforms, reflected in a small increase in government funding observable in the mid to late 1980s. Enrolment continued to stagnate, however, and this prompted the country’s leaders to renew their focus on achieving Universal Primary Education with the launch of the Free, Compulsory and Universal Basic Education (fCUBE) initiative in 1996. Its stated aim was to implement Free Primary Education by 2005 (World Bank, 2009). The lengthy period of planning for fee abolition, combined with an effective system of capitation grants to replace funding formerly provided by fees, may have helped ensure that pupil-teacher ratios remained relatively low and primary completion rates began to increase during the late 90s and

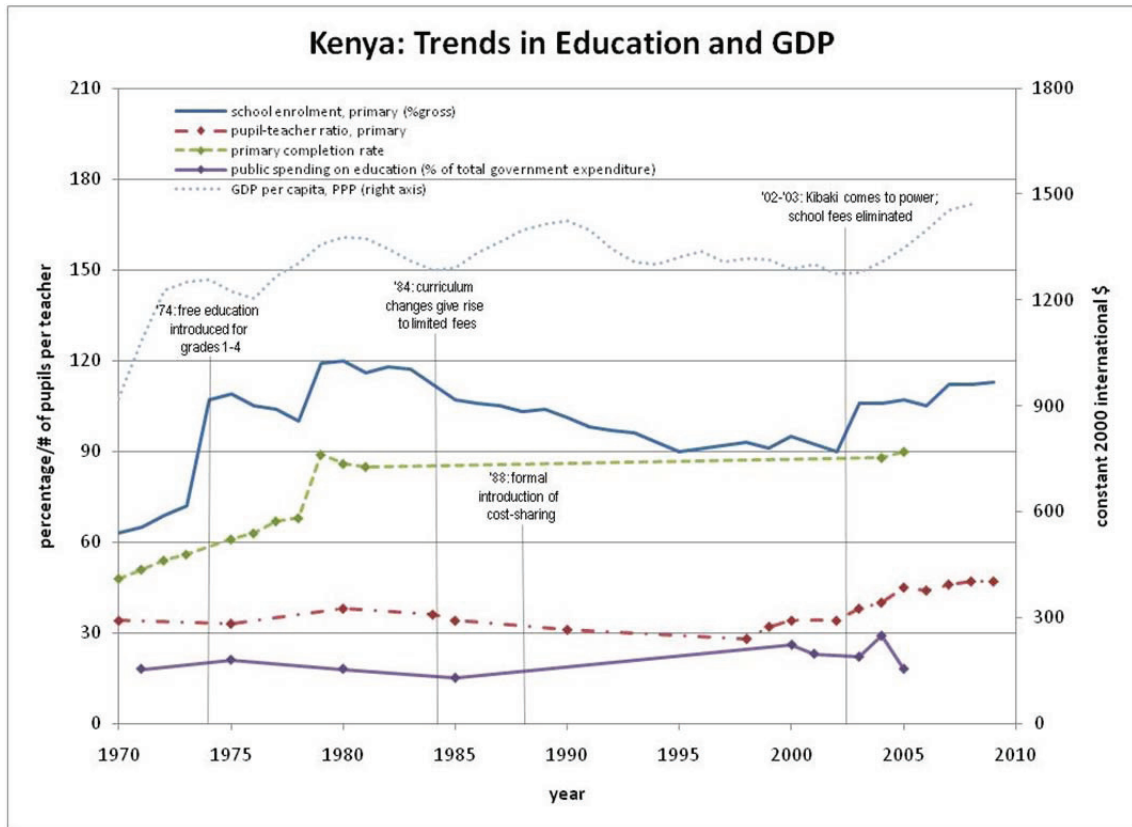
early 2000s (Figure 2) (Akyeampong et al., 2007). Gross enrolment rates increased significantly following full abolition, but not as dramatically as was the case in the other six countries, and the influx of new students was likely more manageable for the system as a result.

3.3. Kenya

Kenya, like Ghana, was a British Colony; it achieved its independence in 1963. Also like Ghana, Kenya made early efforts to establish a multi-party system, but became a single party state in 1969 and remained so until 1992. The country experienced rapid population growth and growing unemployment throughout the 1970s and 80s, as well as stagnating GDP growth and rising inflation. The government finally implemented economic austerity reforms in the early 1990s. An ongoing challenge in Kenyan society since independence has been ethnic tensions between its several major tribes. There have often been allegations of corruption and favouritism on the part of whichever tribe is in power, and these suspicions led to violence after the 2007 elections when it was alleged the election results had been rigged. The situation was later resolved and the country is now led by a coalition government (U.S. Department of State, 2011c).

Free education for grades 1 to 4 was introduced in 1974, and this likely helped bring about a spike in enrolment – although fluctuations in enrolment also tended to follow rises and falls in GDP per capita quite closely during this period (Figure 3). Changes in the national curriculum introduced in the mid 1980s placed more of the cost burden for school infrastructure and learning materials on households (Vos et al., 2004).

Figure 3: Kenya



Sources: Education Policy and Data Centre (2011); World Bank (2011).

Funds were typically collected through the traditional Kenyan practice known as “Harambee” (literally “pulling together”) – a community fundraising drive. In principle, household contributions were meant to be voluntary, but in practice, children whose parents didn’t pay were often suspended (Bold et al., 2010). The fact that enrolment rates began to fall steadily around this time (despite rising GDP per capita) is consistent with the claim that education costs were becoming a problem for the poor. Cost sharing was formalized in 1988, which meant that (in addition to Harambees) schools were now responsible for everything other than teachers’ salaries, and were authorized to collect levies (Vos et al., 2004). Falling enrolment in the ensuing years (likely exacerbated by the

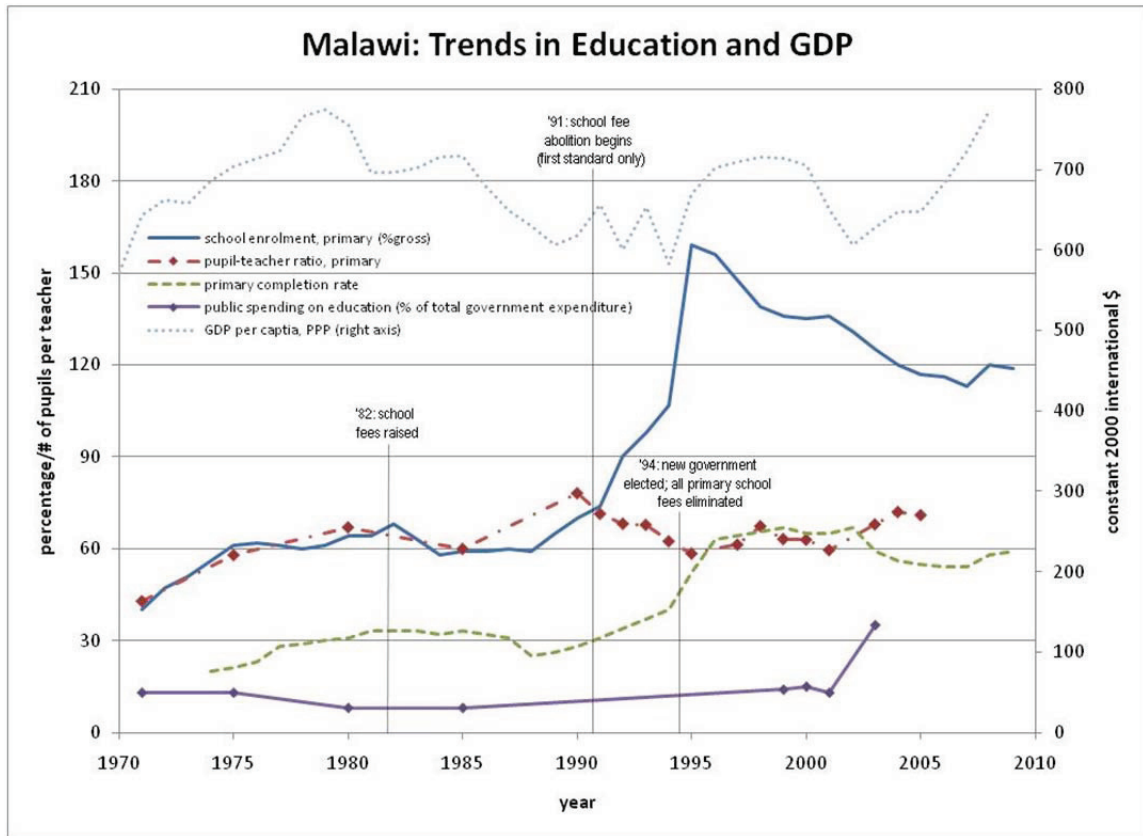
spread of HIV/AIDS) made fee abolition a popular issue in the 2002 election, and the Kibaki government followed through on its promise to introduce Free Primary Education in 2003. This resulted in an immediate increase in enrolment. However, Bold et al. (2010) write that fee abolition and the resulting overcrowding of the system also prompted significant flight of middle and upper class families from the public to the private school system. They note that this trend may have led to troubling inequalities in the system, as test scores have gone up in private schools and down in public schools.

3.4. Malawi

Another former British colony, Malawi achieved its independence in 1964, and school fees have been a part of the education system ever since. It is a landlocked country whose economy is heavily dependent on small-scale agriculture, which makes it vulnerable to terms of trade shocks and droughts – a fact reflected in the volatility of GDP per person over time (Figure 4). Structural adjustment programs were introduced in 1981 to reduce inflation and foreign debt, and these resulted in a rise in school fees in 1982. Politically, the country has been peaceful over the past 40 years (relative to some of the other case study countries), although it was also a single party state until 1994 (U.S. Department of State, 2011d; World Bank, 2009).

In the early period of independence, the education system in Malawi tended to prioritize higher levels of education. By the end of the 1980s, however, there was an increasing shift among policy makers in favour of pursuing Universal Primary Education (Al-Samarrai, 2003). Primary fee abolition was a central goal in a new education plan

Figure 4: Malawi



Sources: Education Policy and Data Centre (2011); World Bank (2009, 2011).

published mid-decade, and the process began in 1991. The intention was initially to remove fees one grade at a time, starting with the lowest levels and working upwards. However, the new government elected in 1994 abolished all remaining fees upon coming to power, following through on a campaign pledge (Kadzamira & Rose, 2003). This led to a dramatic spike in enrolment (Figure 4). The response of the Malawi population was so unexpected that the government immediately hired 18000 new teachers to cope with the new level of demand. As Kadzamira and Rose (2003, p. 510) point out, however, these teachers were largely unqualified, and only made a small dent in pupil-teacher ratios. Meanwhile, after initial spikes following fee abolition, primary

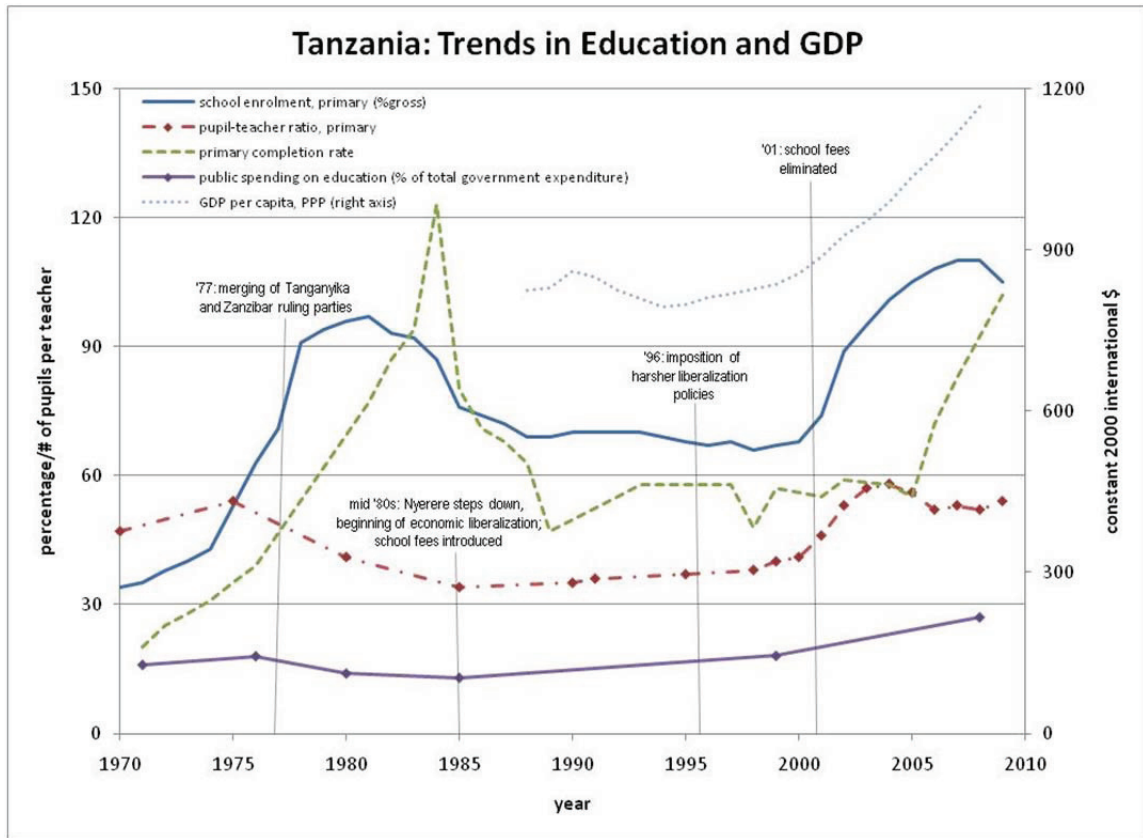
enrolment and primary completion rates have fallen off dramatically (Figure 4). These recent trends suggest concerns about the overall quality of education in Malawi in the post-fee period.

3.5. Tanzania

Mainland Tanzania – formerly known as Tanganyika – was ruled by Germany during the colonial period, while the coastal island of Zanzibar was a British protectorate. Tanganyika became a UN territory under British control following World War 1, and became the first state in East Africa to gain its independence in 1961. Zanzibar became autonomous in 1963, and the two countries became the United Republic of Tanzania in 1964 – although Zanzibar retains a degree of separateness within the republic, and has its own president and legislature. The two territories were governed by a single ruling party, the CCM or Revolutionary Party, as of 1977, and while the country has now had several multi-party elections, the CCM retains the majority of the votes (U.S. Department of State, 2011e).

Like Malawi, Tanzania is a poor country heavily dependent on agriculture. General economic decline in the 1970s and 80s prompted liberalization of the agriculture market and other reforms in 1986, with more aggressive structural policies introduced a decade later after steady growth failed to materialize (U.S. Department of State, 2011e). Primary education had been a high priority for Tanzania in the early years of the Republic, and very high rates of enrolment were achieved by the early 1980s. These rates did not last long, however, a fact which Wedgwood (2005) attributes to the

Figure 5: Tanzania



Source: World Bank (2011).

significant deterioration in quality that accompanied this initial campaign. In fact, she writes, “‘UPE’, pronounced ‘oopay’, has become a colloquial term associated with low quality education rather than with universalisation” (Wedgwood, 2005, p. 4). Funding, rather than access, became the focus of the government in the mid-1980s, and school fees became a new reality along with other market reforms.

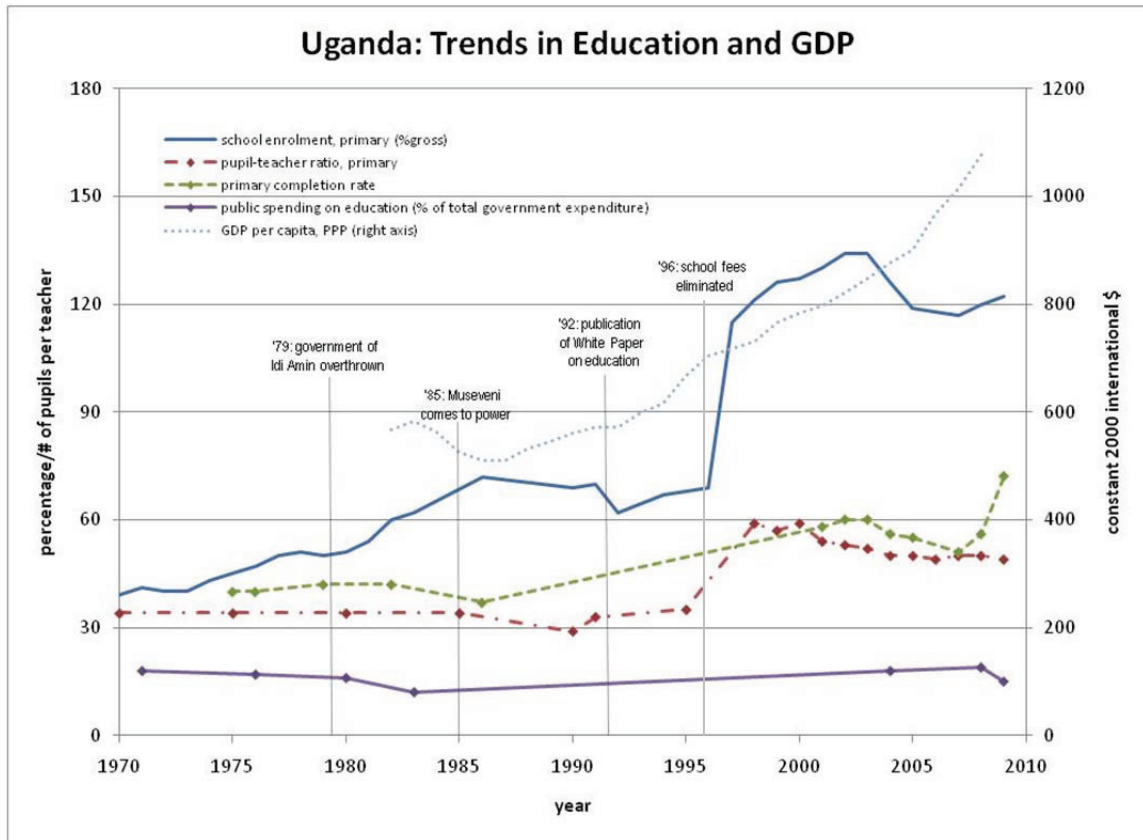
Tanzania abolished primary school fees in 2001, and an initial jump in the pupil-teacher ratio (Figure 5) underlies Wedgwood’s concerns that the education system is witnessing a repetition of the problems that arose in the early 1980s. Wedgwood (2005, p. 6) notes that the government is committing to providing in-service training for

teachers, reducing the pupil-teacher ratio, and replacing the funding formerly provided through fees in its Primary Education Development Plan (PEDP). Yet Vavrus and Moshi (2009) caution that although fees were officially eliminated, in practice, household contributions are often still expected from parents to pay for materials and infrastructure in the absence of sufficient government funding. This may help explain an initial decline in the primary completion rate following abolition, although this trend has reversed in more recent years.

3.6. Uganda

Uganda is perhaps the most politically unstable of the seven case study countries. The former British colony, which gained independence in 1962, has been plagued by almost continual violence and human rights violations by its various rulers ever since. A military coup in 1971 marked the beginning of Idi Amin's "reign of terror"; but abuses and violence continued after Amin was overthrown by the Uganda National Liberation Front in 1979. Further violence culminated in the formation of a new government led by rebel leader Yoweri Museveni in 1986, who has remained in power ever since (although multi-party elections were held in 2006 and earlier this year). As well as introducing economic stabilization policies, Museveni's government attempted to crack down on the type of human rights abuses perpetrated by earlier regimes. However, a rebel group known as the Lord's Resistance Army soon embarked on a violent crusade against the Museveni government, largely in Northern Uganda, where it was responsible for the deaths of tens of thousands of civilians and the

Figure 6: Uganda



Source: World Bank (2011).

displacement or abduction of almost two million more (including thousands of child soldiers) between 1986 and 2006 (U.S. Department of State, 2011f).

Primary schools in Uganda have been dependent on fees paid by students for much of their funding since independence. However, Museveni announced his intention to make Universal Primary Education a priority along with his other economic rehabilitation policies in the mid-80s. Some education reforms aimed at achieving this goal were put in place in the early 90s, but it was not until 1996 that fees were fully abolished. Al-Samarrai (2003) notes that the push for Universal Primary Education through fee abolition was not universally popular; parent-teacher associations, who had

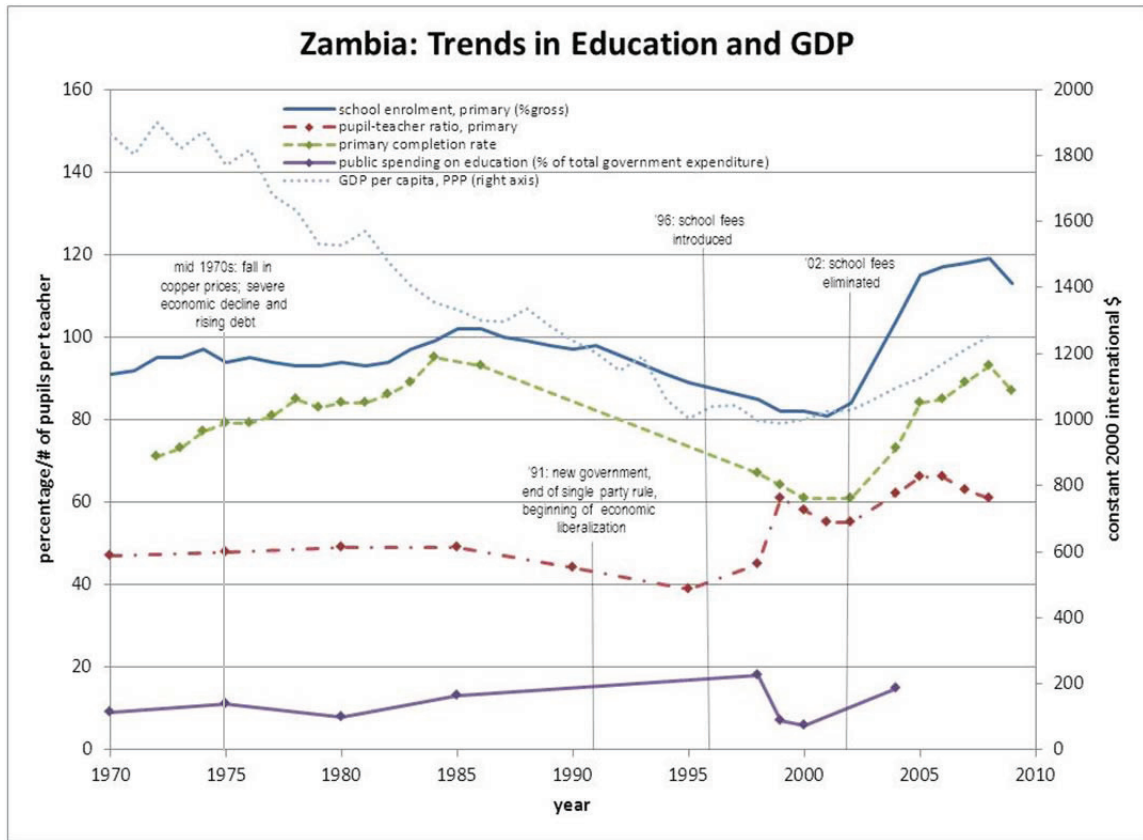
born most of the responsibility for education in previous years, saw it as a threat to their control, and teachers were also resistant when they perceived that their salaries would go down as a result. Many parents were also worried about the potential decline in quality. The government did take some steps to reduce the quality impacts of its policy, refusing to hire untrained teachers and using double-shifting as a way to try to keep pupil-teacher ratios down. However, these measures were not tremendously successful in mitigating the effects of such a large increase in enrolment (which went up by 150 percent in standard one² alone from 1996 to 1997) (Al-Samarrai, 2003, p. 42). Also of concern, as in Kenya, is the migration of large numbers of middle and upper class families to the private system (Al-Samarrai, 2003; Deininger, 2003). The quality concerns described above are evident in the rise in pupil-teacher ratios and falling completion rates (Figure 6). However, the fact that both of these trends appear to be reversing suggests that the government is having some success in dealing with them over time.

3.7. Zambia

Zambia, formerly known as Northern Rhodesia, was a British colonial protectorate until 1963, when it achieved independence and changed its name. In its early years, Zambia was a middle-income country, its economy based primarily on mining and exporting copper. However, its relative prosperity was short-lived. Instability in neighbouring countries during the 1960s and early 1970s led to the closing off of vital transportation routes, as well as an influx of refugees. The economic situation grew

² In most of the literature on sub-Saharan Africa, grades are referred to as “standards.”

Figure 7: Zambia



Source: World Bank (2011).

worse in the mid-1970s, with a sharp fall in the world price of copper. Legislation was passed in 1972 declaring Zambia a single-party state, and the government responded to the economic challenges it faced by engaging in extensive borrowing. This laid the foundations for an escalating debt crisis. By the mid 1990s, Zambia’s per-capita foreign debt was one of the highest in the world (U.S. Department of State, 2011g).

In 1991, in response to a growing movement for democracy within Zambia, the country held its first multi-party elections, and the Movement for Multiparty Democracy (MMD) party was voted into power. The new government soon began implementing economic reforms, which moved the country away from its socialist orientation. The

regime was plagued by corruption, however, and it was not until the early 2000s that the struggling economy finally began to see improvement. This turnaround was attributed primarily to a combination of higher copper prices, privatization and improved management of the state-owned mines, an influx of foreign investment, and eventual debt relief under the Heavily Indebted Poor Countries initiative. Despite these improvements, Zambia faces several ongoing challenges, including high unemployment, inflation and continued vulnerability to copper price shocks. It is also one of the countries most seriously affected by the HIV/AIDS pandemic in Africa (U.S. Department of State, 2011g).

Partly because of the socialist ideology that shaped Zambian political life, the country was one of the last to introduce school fees in 1996, doing so at a time when the tide of opinion in Africa was starting to shift in favour of fee abolition. Unofficially, however, fees had been creeping into the education system for years – as early as the 1970s (Kaluba, 1986) – due to the rise of an informal, community-run private school sector. In fact, Kaonga (2001) estimates that household contributions represented 44 percent of total education spending by 1993 – higher than Kattan and Burnett’s (2004, p. 4) estimated African average of 30 percent. Zambia’s government was opposed to private schooling in principle, but saw the establishment of the community schools as a way to avoid the formal implementation of cost-sharing and therefore did not prevent them. The fees charged by Zambia’s “community schools” were low, but the quality of education they provided was also low due to a lack of materials and trained teachers; they became popularly known as “second chance schools” (Kaluba, 1986). Nevertheless,

their presence appears to have achieved the goal of helping to meet much of the demand for primary schooling among the Zambian population at an affordable price, judging by the high enrolment levels the country was able to maintain until the 1990s (Figure 7).

Ironically, with the introduction of fees, community schools became the cheap alternative to government schools, and consequently there was a significant shift in attendance from government to community schools during the brief period in which fees were officially legislated (Kaonga, 2001). As before, the community schools represented an option that was affordable for majority of the population, and this is reflected in the fact that the introduction of fees did not result in a decline in gross enrolment rates. The majority of lower-income families simply switched over to what they could afford.

The significant jump in pupil-teacher ratios following the introduction of school fees – a response not seen in any of the other case study countries - is somewhat more puzzling. A partial explanation may lie in the fact that, of all the case study countries, government spending on education in Zambia saw the most dramatic decline following the introduction of fees. It is possible the government expected fees to provide a large injection of new funding into state-run schools, and therefore cut back significantly on its own contributions. However, as noted above, the presence of fees in government schools simply prompted an exodus from the public system, made possible because of the fact that there was an affordable alternative already in place. If this shift led to a reduction in the total number of teachers or schools (for example as a result of

government school closures), while the number of students remained relatively constant, the pupil-teacher ratio increase makes sense.

With the abolition of fees in 2001, enrolment rates and primary completion rates have risen quickly to equal or exceed their pre-fee levels. Very high pupil-teacher ratios during this period suggest that those who went over to community schools in the late 90s are now returning to the government schools in large numbers, along with those who had left the system altogether. Now that Zambia has returned to a system of free primary education, increasing the flow of funding into the system to meet the demand of its population for quality education is surely its biggest challenge.

Chapter 4: Data Analysis

The previous chapter has provided a broad overview of how the provision of primary education has evolved over time in these seven sub-Saharan African countries, and how the introduction of school fees may have influenced this development. With this information as a backdrop, I now revisit the theoretical claims presented in Chapter 2, focusing on those my evidence is able to speak to, and examining how each may be supported or refuted from a more analytical perspective.

The general patterns observed in Figures 1 through 7 suggest that primary school fees were associated with significant falls in enrolment, without major discernable improvements in quality (as represented by pupil-teacher ratios and primary completion rates). Also, declining government spending on education, as well as falling GDP per person, both coinciding with the introduction of school fees, may help to explain why introducing fees did not appear to achieve the anticipated improvements in outcomes. This chapter assesses whether or not these observations are supported by the data, and finds that – for the most part – they are. I also discuss the extent to which the evidence supports the reasons given by governments and development institutions to rationalize the initial introduction of primary school fees.

4.1. Did Primary School User Fees Provide Necessary Funding For the Expansion and Improvement of Services?

As Klees (1984, p. 425) writes, the claim that fee-generated revenues are necessary to provide the primary school services governments are unable to supply

assumes two things: a budget constraint on the part of the government, and excess demand for the service by those not currently receiving it. Finding conclusive evidence for both of these conditions in each of the case study countries is not possible. However, certain observations do offer some insight. For example, the fact that free primary education had been a stated priority for four of the countries – Ethiopia, Ghana, Kenya and Zambia – in previous decades, and all had abandoned this policy in favour of allowing schools to charge fees in the 80s and 90s, lends some support to the idea that this policy change was due to budget constraints.

On the whole, however, it is difficult to determine to what extent governments were unable to shift greater resources to primary education (either from other public sectors or from higher levels of education), and to what extent they chose not to. Statistics on the precise distribution of government spending on education by level over the years are difficult to obtain. However, Many observers have pointed out that African governments tended to prioritize subsidizing secondary and post-secondary education rather than primary in the early post-colonial era, and this is indicative of some degree of choice (Deininger, 2003; Reddy & Vandemoortele, 1996, pp. 26-27). Daniel et al. (2006, p. 18) suggest that this approach was seen as both practical and equitable, since it would allow people from all socio-economic groups to access otherwise costly higher education.

As for reallocation of resources from other sectors, there is more data on government spending on education (all levels) as a percentage of total government spending. A comparison of these data with trends observed in the rest of the world gives

Table 1: Public Spending on Education in 1975 (% of Total Government Spending)

Region	Income level
East Asia and Pacific.....16%	Lower Middle Inco.....14%
Latin America and Caribbean.....18%	Middle Income.....16%
Middle East and North Africa.....9%	High Income.....14%
World.....15%	OECD countries.....14%
Average for 7 case study countries: 16.9%	

Source: World Bank (2011).

an indication of how feasible it might have been for the case study countries to increase their funding of primary education through budget redistribution. While the percentage of total government spending devoted to education in 1975 varied considerably between the seven countries, ranging from 11% in Zambia to 21% in Kenya, the average for the seven countries was 16.9% (World Bank, 2011). This was in fact on the high end of the scale relative to other parts of the world and other income levels (Table 1). At the same time, the proportion of the population who had attended primary school in 1975 (for any amount of time) was lower on average in sub-Saharan Africa than the averages for all other regions in the world with the exception of South Asia (Table 2). These two comparisons offer some evidence to suggest that, while a relatively large percentage of the government budget was being spent on education, primary education was not a high priority among African governments. It is thus reasonable to conclude that, although transferring money to education from other sectors might have been difficult, there would have been more money available for primary education if governments had chosen to reduce subsidies and introduce more cost sharing at higher education levels.

Estimating whether or not there was excess demand for primary education is also not a straightforward matter. Nevertheless, in the early 1970s there were both high

Table 2: Educational Attainment in 1975 (Average by Region)

Region	% of 15-year-old Population With No Schooling
Europe and Central Asia	9.9%
South Asia	64.5%
East Asia and the Pacific	28.9%
Latin America and the Caribbean	23%
sub-Saharan Africa	60.4%
Middle East and North Africa	57.1%
Average for case study countries (excluding Ethiopia)	50.9%

Source: Barro and Lee (2010).

pupil-teacher ratios (suggesting a high demand for available schooling) and low overall enrolment (suggesting a shortage of supply) in several of the case study countries. This pattern, which would certainly fit in with the claim of excess demand, was notably the case in Tanzania, Malawi and Ethiopia in 1970, and to a lesser extent in Uganda, Kenya and Ghana. Zambia had the highest enrolment in 1970 at 91%, but also a very high pupil-teacher ratio at 47 (Table 3).

In summary, although it is not possible to make the claim with certainty, there is some evidence to suggest that at the beginning of the period of interest, there was both a high demand for education within each country and a limited ability on the part of the governments to produce the funding necessary to meet that demand. These circumstances, according to Thobani's (1984) criteria, in part justify funding through school user fees. Thus, the question becomes: to what extent did introducing fees result in the expansion and improvement of services in the seven case study countries?

To measure the impact of fees on education in the seven case study countries, I

Table 3: Enrolment and Pupil-Teacher Ratios early 1970s

Country	Primary Enrolment Rate (% Gross)	Pupil-Teacher Ratio, Primary
Ethiopia (1971)	15%	48
Ghana (1975)	65%	30
Kenya (1970)	63%	34
Malawi (1971)	40%	43
Tanzania (1970)	34%	47
Uganda (1970)	39%	34
Zambia (1970)	91%	47

Source: World Bank (2011).

use a linear regression model of the following form:

$$Y_{it} = \beta_0 + X_{it}\beta_1 + F_{it}\beta_2 + \varepsilon_{it} \quad (1)$$

In Equation 1, the dependent variable Y represents the value of one of the three education indicators in a country i in year t . The first indicator, gross primary enrolment as a percentage of the total population of primary school-aged children, is a measure of access to education, while pupil-teacher ratios and primary completion rates are indicators of school quality. On the right hand side of the equation, X_{it} is a vector of control variables (explained below in detail), and F_{it} is a vector of dummy variables associated with school fees (the independent variables of interest). The fees variables include primary school fees (1 where they are officially present and 0 where they are not), and – for those countries where fees were introduced or phased out over multiple years – I have also included a dummy variable for “higher fees” and/or one for “limited abolition”. Tables showing means and standard deviations for both the X and Y variables are included in the appendix (Tables 7 and 8).

The control variables capture factors independent of the direct costs represented by school fees which may also have an impact on the dependent variables of interest. The first of these is income level, represented by GDP per capita in constant 2000 international dollars. When average incomes go down, it is expected that a larger number of people will be unable to send their children to school due to household budget constraints. I have also included a dummy variable for whether or not the country was in the midst of or recovering from a famine (“famine or post famine year”), although this only applies in the case of Ethiopia, and as it turns out the impact of the famine in that case occurs primarily through the corresponding fall in GDP per capita.

Another important factor affecting education in recent years has been the spread of the HIV/AIDS epidemic. This disease affects school attendance either because the children themselves may be sick, or because of the sickness or death of their parents or caregivers. When the illness affects adult members of the household (as HIV/AIDS does in the majority of instances), children often have to forgo schooling in order to take care of household duties, or simply because household income has been reduced to the point where they can no longer afford to pay for education. The expected effect on pupil-teacher ratios is unclear, since teachers as well as children are affected by the disease. HIV/AIDS infection rates are not available for the seven countries in this study, but I capture its effect through two other variables which are related to health: death rate per 1000 and life expectancy in years. Both of these trends have undergone small reversals in some of the case study countries (Uganda, Ghana, Kenya, and Zambia) during the period in which HIV/AIDS has become prevalent. These variables should also capture

other health-related factors influencing school attendance and school provision, such as malaria, other widespread diseases, and the availability of health care.

The final control variable used in this analysis is the number of youth (classified as those aged 0-14) as a percentage of the total population, which would be expected to have a negative relationship with enrolment rates. Increasing numbers of children competing for the same resources would presumably make it less likely that families would be able to send all of their children to school, and thus a lower overall percentage of children would enrol. The effect of a growing number of youth on pupil-teacher ratios, however, would likely be positive, in that it would cause pupil-teacher ratios to increase (a negative impact in terms of quality).

Without doubt, there are many other factors that determine the number of children who attend and complete primary school, and the number of teachers available to take charge of their education. For example, the opportunity cost of a child's labour is an important consideration. If the wages a child could bring in by working rather than going to school are high, or if the family's income is so low that they requires a child's help in order to bring in sufficient food to survive, the family may be unable to send the child to school even if they place a high value on education. However, representing these opportunity costs over time would require information on child labour (both formal and informal), and wage rates for unskilled labour, and such data is not readily available for much of the period covered here.

A related matter is whether or not the expected returns to education are high for the child and their family. Psacharopoulos and Patrinos (2004) have estimated both

social and private rates of return to education by level for various countries, but their estimates are only available for individual years, and for only three of the seven countries in this study. Persistently high unemployment rates might be an indication of low expected returns, but even unemployment data are available only very sporadically and with uncertain quality.

It should also be noted that returns to primary education come not only in the form of increased earning potential, but also in the prospect of moving on to higher levels of education. In fact, Lavy (1996, p. 310) argues that in Ghana this progression is almost exclusively where the value of primary school lies, concluding based on test scores that students do not actually acquire much knowledge at the primary level. Lavy's findings indicate that if families perceive the chances of attending secondary school to be unlikely, due to distance or cost, they are less inclined to consider primary school. Roschanski (2007, p. 21) makes a similar observation with regard to rural Ethiopia. While these are important considerations, they are nevertheless based on micro-level studies, and not necessarily applicable in each country (even if data on the average distances and costs of secondary schooling were obtainable).

One final limitation in the regression analysis is the lack of data on the supply of schools. For families who do not have a school within reasonable walking distance, as is the case in many parts of rural Africa, the costs of room and board associated with sending a child away to attend school may be prohibitive regardless of the additional costs represented by tuition, uniforms and materials (Roschanski, 2007, pp. 50-51). Judging from some of the anecdotal evidence in the literature, however, it is possible

that distance is not a major issue of concern at the primary level in all the case study countries (Kaonga, 2001; Lavy, 1996). One variable which might have captured education supply to some extent would have been government spending on education. However, this indicator is correlated with fee introduction and removal and is therefore not included in the regression.

Table 4 reports the pooled regression results from the 7 countries. Standard errors are shown in brackets beneath each coefficient, and levels of significance are indicated by asterisks (one, two or three asterisks show significance at the ten, five or one percent level respectively). It should be noted that the years for which there were available observations – particularly for pupil-teacher ratios and primary completion rates – were not consistent across the seven countries, and therefore it was not possible to use a balanced panel data model. Furthermore, because some countries had more observations than others, those countries will be weighted more heavily in the pooled regression results. For a more detailed understanding of these factors, I also estimate the regression model separately for each country. The results for primary enrolment are shown in Table 5. In the case of the two other indicators, the number of observations is too small to allow for meaningful conclusions in the majority of cases. For purposes of completeness, however, these results are shown in the appendix (Tables 9 and 10), and will be referred to here for additional analysis where the number of observations is greater than 20.

Column 1 of Table 4 shows that school fees have a large and significant negative association with primary enrolment rates. This result corresponds closely to the

Table 4: Pooled Regression Results

	1. Primary Enrolment (n=213)	2. Pupil-Teacher Ratio (n=110)	3. Primary Completion Rate (n=131)
Ln Gdp Per Capita	33.07*** (3.38)	-6.86** (2.92)	49.14*** (2.36)
Death Rate	-6.90*** (.98)	1.35 (.94)	-5.67*** (.75)
Life Expectancy	-4.43*** (.70)	-.23 (.63)	-3.64*** (.54)
Famine/Post- Famine Yr.	-5.17 (8.63)	2.16 (9.06)	omitted
Youth Population	4.81*** (.52)	.84* (.42)	.73* (.40)
School Fees	-14.57*** (2.38)	-15.87*** (2.06)	.67 (1.86)
Higher School Fees	3.76 (3.17)	12.54*** (2.86)	-2.20 (2.68)
Limited Abolition	38.58*** (3.43)	8.00*** (2.56)	11.03*** (2.30)
Adj. R-Squared	0.70	0.57	0.84

individual country coefficients reported in Table 5, where all countries exhibit a negative association between enrolment and school fees. The largest coefficients on school fees (in absolute values) are those of Malawi and Uganda, and these estimates likely capture the magnitude of the increases in enrolment observed after fees were abolished in the two countries. All coefficients for school fees in Table 5 are significant with the exception of Zambia (where the impact on enrolment occurs instead through “higher school fees,” corresponding to the official introduction of fees in 1996). In Kenya and Malawi, where fees were also higher in some years than in others, it is the presence of fees rather than the magnitude of fees which is significant in reducing enrolment. Similarly, although limited abolition is shown to have a positive and significant

Table 5: Determinants of Primary Enrolment

	Ethiopia (n=28)	Ghana (n=36)	Kenya (n=36)	Malawi (n=37)	Tanzania (n=21)	Uganda (n=21)	Zambia (n=34)
Ln GDP Per Capita	62.42*** (10.64)	-23.81** (8.84)	41.11* (21.11)	52.46* (26.40)	69.35 (63.40)	-7.38 (26.58)	-13.89 (18.21)
Death Rate	-3.58* (2.02)	-.77 (1.77)	-7.15*** (2.23)	.65 (2.70)	-1.11 (3.56)	1.32 (4.43)	-7.92*** (2.66)
Life Expectancy	-.317 (1.65)	.59 (1.17)	-1.65 (1.74)	.83 (2.86)	1.75 (3.22)	.29 (2.16)	-4.15** (1.72)
Famine/Post-Famine Yr.	4.98 (3.26)	--	--	--	--	--	--
Youth Population	-8.52*** (2.38)	-3.91*** (.82)	1.22 (1.11)	-9.96** (3.80)	.42 (2.97)	3.27 (8.64)	.24 (3.35)
School Fees	-10.91** (4.05)	-12.99*** (2.21)	-19.85*** (2.96)	-56.68*** (12.24)	-8.57* (4.33)	-59.65*** (5.53)	-8.03 (6.25)
Higher School Fees	--	--	-3.45 (3.21)	12.98 (9.26)	--	--	-14.01* (6.96)
Limited Abolition	--	-.62 (2.70)	--	7.59 (9.56)	--	--	--
Adj. R-Squared	0.96	0.86	0.84	0.93	0.94	0.96	0.50

association with enrolment in the pooled regression, the coefficients in Table 5 for the two countries where it occurs (Ghana and Kenya) are not significant. Strikingly, the negative relationship between school fees and primary enrolment is more consistent across countries than is the case with any of the other associations.

Several of the control variables also show a significant association with primary enrolment in the pooled regression. GDP per capita is, as expected, positively associated with enrolment overall, and for the most part this finding is repeated at the country level; the only exception is Ghana, where the coefficient is negative and significant. The relationship between higher death rates and lower enrolment is also intuitive, and also reinforced by the results in Table 5. In Ethiopia, this relationship is likely attributable to

the famine in the early 1980s, while in Kenya and Zambia, the other two countries in which the coefficients are significant, it is driven by the more recent increase in death rates related to the HIV/AIDS epidemic. In contrast, the negative coefficient on life expectancy in the pooled regression is unexpected, but this estimate is not reinforced by significant coefficients in the country-level regressions (with the exception of Zambia). Similarly, the size of the youth population shows a positive association with enrolment in the pooled regression, which is the opposite of what was anticipated. However, at the country level, the three coefficients which are significant (Ethiopia, Ghana and Malawi) are all negative.

The association between school fees and pupil-teacher ratios in the pooled regression is negative and significant, suggesting that there is at least some evidence for the claim that fees may contribute to improved school quality. There is some ambiguity to this conclusion, however, since the sign of the coefficient on “higher school fees” is positive and also significant. It is difficult to shed light on these results with insights from the country level regressions, since the number of observations for all seven countries is below 20 and therefore too small to be considered as strong evidence (Table 9). However, evidence in Figures 1 through 7 suggests that the negative coefficient on school fees is primarily identified by the jump in pupil-teacher ratios observed after fee abolition in all seven countries, as opposed to a decrease brought about by fee introduction. In other words, the results are more indicative of the negative quality impact of abolishing fees than of a positive quality impact generated by their

introduction. This hypothesis is further supported by the fact that limited fee abolition is significantly associated with higher pupil-teacher ratios.

The results for primary completion rates show that the number of children who stay in school does not appear to be strongly associated with the presence of school fees. In the pooled regression it is limited abolition which is related to higher levels of completion; the other two fees-related coefficients are not significant. At the individual country level, only three of the countries (Ghana, Malawi and Zambia) have more than 20 observations. Malawi shows a large and significant negative association between school fees and completion rates, although this is partly countered by a smaller positive relationship with higher fees. In Zambia, the raising (or formal introduction) of school fees from 1996 to 2001 is also associated with lower completion rates. With regard to control variables, the results are similar to what was observed in the case of enrolment: GDP per capita is positively associated with higher primary completion, while death rates exhibit a negative association. Here again, the coefficient for life expectancy is unexpectedly negative, but it is small and not reflected in the individual country regressions in Table 10. Overall, these findings do not yield any evidence that introducing fees allowed or encouraged more children to complete primary school; in fact, they suggest that the opposite might be true.

What overall conclusion might one reach regarding the impact of fees on primary school quality and access based on the results discussed above? First, the statistical analysis supports some of broader tendencies outlined in Chapter 3. Fees are not only significant in reducing enrolment rates, but their impact is also greater than any other

factor considered in this study. Thus, one may conclude with confidence that school fees have resulted in a reduction, rather than an increase, in access to primary education in the seven case study countries. With regard to school quality, the results are slightly more varied and less conclusive. However, one cannot conclude that fees led to a significant increase in quality based on this analysis. It is true that fees are associated with lower pupil-teacher ratios, but as suggested above, this is mostly related to the increase in ratios generated by the enrolment spikes that followed fee abolition. Additionally, fees (or an increase in fees) actually had a negative impact on primary completion in at least two of the case study countries, while limited fee abolition was related to increased numbers of children completing primary school.

Finally, while GDP per capita shows a strong positive association with the education indicators, the regression results reveal that other factors, particularly the death rate and the size of the youth population, are associated with negative impacts in several of the countries. The HIV/AIDS epidemic of the past two decades offers a plausible explanation for these associations, since it is a contributing factor to rising death rates in sub-Saharan Africa, and possibly to the rise in the percentage of young people in the population given that the disease's primary victims have been adults (Ashford, 2006).

4.2. Did Introducing Fees Help to Strengthen Public Education Systems?

One of the reasons for introducing primary school fees is that allowing schools to charge fees to maintain a high standard of education will prevent the wealthier classes

from leaving the public system in favour of the private. This, in turn, will ensure there is an incentive for a country's key decision makers to remain committed to improving public education (Fiske & Ladd, 2003). Based on the available data, there is little indication that this is what happened in the case study countries. Instead, all seven countries saw the level of public education funding decline in the early 1980s – which was approximately simultaneous with the rise of cost-sharing in most cases. Admittedly, this trend encompasses education at all levels, rather than primary specifically; and I do not have data on the specific composition of public and private school attendance by income. However, the decline in spending combined with the decline in enrolment and lack of improvement in primary school quality during the fee era suggest that using fees as a means of ensuring broader public support is not a compelling argument in the context of the low-income countries focused on here. In the case of South Africa, Fiske and Ladd (2003) conclude that middle and upper class flight may indeed have been averted successfully when fees were introduced in the 1990s. However, they question whether or not the continued presence of the wealthier classes in the public system has led to an increase in government resources spent on education, suggesting that the South African government did not have the resources available to increase its already high education allocation.

That being said, the flight of the rich to the private system in the wake of fee abolition is an issue that governments need to be aware of. This pattern has been noted in both Kenya (Bold et al., 2010) and Uganda (Deininger, 2003), where increasing class sizes resulting from fee abolition have prompted those who can afford to do so to pay

for private schooling with qualified teachers and smaller classes. This trend raises the concern that without sufficient funding from other sources in the wake of fee abolition, a system may become entrenched in which only the rich benefit from a high quality education, and where the most powerful members of society will indeed have less of a stake in creating and maintaining a strong public system.

4.3. Did Fees Promote a Greater Sense of Ownership Within Communities?

The degree to which parents became more invested in their children's education as a result of having to pay for it directly through user fees is a question that can only be investigated through micro-level studies, and is therefore not a primary focus of this thesis. However, it is still useful to draw attention to some anecdotal evidence presented in the literature. Al-Samarrai (2003) observes that with the establishment of fees in Uganda, parent-teacher associations (which were primarily in charge of collecting the fees) attained a great deal of influence within the education system. Consequently, these organizations tended to see fee abolition as part of the government's broader efforts to reassert its own control over how schools were run. In Zambia, 80 percent of survey respondents from the Ministry of Education felt that cost-sharing had been successful in "instilling a sense of responsibility in both parents and children," and that the involvement of PTAs in the management of school resources had improved accountability and transparency (Kaonga, 2001, p. 24). However, the same officials admitted that declining government contributions after fee introduction, combined with a mass exodus of students from government to community-run schools where fees were

lower, meant that the potential improvements to the public system generated by greater community participation were negated by the impacts of declining resources.

Plank (2007, p. 5) writes that fee abolition resulted in a reduction of community support in Malawi. He reports that communities stopped generating the voluntary contributions they had previously made, even though their ability to pay or participate had not changed, because they assumed the government was now fully responsible for everything related to education. The opposite pattern was observed in Uganda by Deininger (2003, p. 300), who found that “quality of school buildings and furniture, two variables that are to a large extent affected by community- level inputs, increased considerably” when fees were abolished. The author suggests that simply being able to attend school at all had been sufficient to increase participation incentives for many families, and his example demonstrates how increased attendance might translate into at least a partial replacement of funding formerly generated by fees, due to an increase in voluntary contributions.

The picture which emerges from these examples is that making parents and communities directly responsible for financially supporting their children`s education may in fact produce an added incentive for them to become more involved in school governance, and in ensuring that certain quality standards are maintained. However, the value of such participation diminishes if large numbers of children drop out of the system completely when poor families cannot afford the fees. Ultimately, one must bear in mind that families can only feel invested in the quality of their children`s education if their children are actually in school. Thus, it might prove more productive for policy

makers to seek out alternative ways to maintain parental and community participation in education, such as allowing members of the community to have input into curriculum decisions, or encouraging schools to become involved in community-building projects.

4.4: Did Primary School Fees Hurt the Poor the Most?

The argument that primary school fees are a regressive policy that has a disproportionate impact on the poor is supported by the statistical results outlined above, which show that fees likely perpetrated low enrolment rates in all seven countries. This finding is echoed by a number of micro-level household surveys dating back to before fee abolition, which frequently found that inability to pay fees, or not wanting to be embarrassed publicly due to the inability to make payments, was a deciding factor in keeping children out of school (Kadzamira & Rose, 2003, p. 505; Kaonga, 2001, pp. 41-42).

Similarly, more recent research demonstrates that fee abolition has resulted in a reduction of inequality with regard to access to education. Speaking about Ethiopia's experience, a major World Bank report (2009) looks at enrolment by sector and finds that while everyone benefitted, rural students benefitted more than urban students, girls more than boys, and traditionally disadvantaged areas more than wealthier ones. The report concludes that "[fee abolition] is definitely a policy favouring the disadvantaged" (World Bank, 2009, p. 56). Deininger (2003, p. 297) reports that the "urban bias" of education in Uganda has been greatly reduced through fee abolition,

adding that “the percentage of children who failed to attend primary school for cost reasons dropped from 71 to 37%” after abolition.

There are, however, some important qualifications to these findings. For one thing, although fees are certainly an important constraint on school attendance, they are not the only reason children stay out of school. Indeed, other factors such as lack of schools, opportunity cost of attending school, and low expected returns to education may in some situations be more important than fees in determining enrolment (Kattan & Burnett, 2004, p. 16). Furthermore, the negative impacts of fee abolition may *also* disproportionately affect the poor, by degrading public school quality to such an extent that only those with money have access to meaningful learning through private tutoring or private schooling (Bold et al., 2010; Wedgwood, 2005). As such, the unintended consequences of fee abolition are worth considering. In any case, it is apparent that the policy of charging primary school fees in sub-Saharan Africa has kept a significant number of children from obtaining a service which is considered a basic human right, and an important stepping stone in helping them to improve their economic and social well-being.

4.5. Do the Social Benefits of Primary Education Justify Its Subsidization by the State?

Calculations of the social returns to education are highly dependent on the estimation methods used. Psacharopoulos & Patrinos (2004) provide estimates of the social returns to investment in education for Ghana, Malawi and Uganda (18%, 14% and an astonishing 66% respectively). However, it is difficult to make meaningful

comparisons even if we consider these figures to be accurate, since they are from disparate years (1967, 1982 and 1965). The regression analysis presented above showed an association between the education indicators and GDP per capita; however, it is more likely that education was impacted by GDP per capita in the short term rather than the other way around, since educational attainment would only affect output over time. Providing additional insight into the nature and extent of education's benefits to society is beyond the scope of this project. However, if one accepts that a more educated and literate population is preferable, then the finding that school fees have kept significant numbers of children out of the classroom should be highly problematic for the advocates of school fees.

Chapter 5: Discussion and Policy Recommendations

This thesis yields three key findings. First, the introduction of school fees at the primary level represented a barrier to school attendance for low income families throughout the seven case study countries, and resulted in a significant reduction in primary school enrolment. Second, although fees could in principle enable the improvement of education quality and increase access, this did not occur to any noticeable degree. Third, the manner in which fees have been eliminated in recent years has resulted in sharp and considerable increases in enrolment, which in turn may have negatively affected the quality of schooling available within the publicly funded systems, primarily because of higher pupil-teacher ratios and fewer material resources per student. These quality impacts raise certain equity concerns: if not addressed, declining quality may lead the rich to switch from public to private schools, and as such create a system in which only the well-off are able to afford a good education. Such an outcome would defeat the fundamental purpose behind the push for Universal Primary Education. This final chapter explores some of the root causes behind the emerging quality issues described above, and to discuss what policy lessons might be learned from the experiences of the seven case study countries.

In the early 1980s, whilst advocating for increased school fees in Malawi, Thobani (1984, p. 408) cautioned that “care must be taken to ensure that fees raised via increased user charges do not induce the government to reduce the subsidy level.” This statement of caution went largely unheeded, however, as governments substituted user fees for government funding. Reddy and Vandemoortele (1996, p. 61) refer to this trend

Table 6: Changes in Government Spending on Education Before and After Fees

	Changes in government spending on education (% of total government spending)	
Ethiopia*	18% (1975)	11% (1980)
Ghana	17% (1981)	19% (1985)
Kenya	18% (1980)	15% (1985)
Malawi	13% (1975)	8% (1985)
Tanzania	18% (1976)	13% (1985)
Uganda*	17% (1976)	12% (1983)
Zambia	13% (1985)	7% (1999)

Source: World Bank (2011).

Note: for countries marked with an asterisk, fee introduction took place before study period; in these cases I note changes in government spending between 1975 and 1985. Years of observation are in parentheses.

as the “danger of budgetary displacement”, and point out that it has been a particular problem for social sector spending as a whole in developing countries. This not only goes a long way toward explaining why the introduction of user fees did not have a more positive impact on education in sub-Saharan Africa, but also means that significant increases in government funding for education are required now that governments are abolishing those fees.

Data on total government spending on education is quite sporadic, and data on government spending on primary education is even more difficult to come by.

Nevertheless, Table 8 shows that the share of government resources spent on education went down in four of the seven countries (Kenya, Malawi, Tanzania and Zambia) after fees were either introduced or raised. Ethiopia and Uganda, where fees were in place from the beginning of the study period, also experienced declines in government spending on education in the late 70s and early 80s. Ghana was the only country in which government spending on education increased after fees were introduced, and it

is perhaps not a coincidence that the impact on enrolment levels was relatively small in that country.

The suggestion that government cuts had a direct impact on primary education is supported by country-specific evidence. In Zambia, for example, a lack of government support was an ongoing problem, even before the formal introduction of fees; Kaluba (1986, p. 160) describes how many community-financed education projects, which might otherwise have flourished, were instead abandoned when hoped-for government support did not materialize, or was offered but then discontinued. Also in Zambia, a household survey found that, when cost sharing *was* formally implemented, even Ministry of Education officials complained that the contributions from the government fell short of what was expected. They added that parents were losing faith in the education system because of the “empty promises” of the government (Kaonga, 2001, p. 26).

Thus, continued government support is crucial for the introduction of school fees to achieve the desired increase in resources. Similarly, when fees are abolished, the only hope of maintaining or improving education quality is through an increase in funding to replace lost revenues and accommodate increased demand. The government budget share devoted to education did, in fact, increase to some degree in all seven countries following fee abolition (although not always immediately). However, based on the quality indicators, these increases fell short of what was required. In particular, in Ethiopia, Malawi and Uganda, which were the first to eliminate fees, there were dramatic increases in enrolment, and it is conceivable that governments simply didn't

expect the policy change to have such an impact. Kadzamira and Rose (2003, p. 504) suggest that in Malawi, fee abolition was a campaign promise, and lacked proper analysis before being implemented. Al-Samarrai (2003, p. 75) observes a similar underestimation in Uganda, but notes that the Ugandan government made more of an effort to correct its response.

Two issues make the necessity of government support for both cost-sharing and fee abolition a complicated issue. First, governments face various budget constraints. Second, shifting resources away from higher levels of education is a matter of heated debate, in terms of both equality and efficiency (Kadzamira & Rose, 2003; Lavy, 1996). A pertinent policy question, therefore, is whether total fee abolition has been the best policy for achieving Universal Primary Education in the case study countries, or whether there were other options which might have enabled a less dramatic enrolment increase with fewer quality impacts. One alternative would have been to phase in fee abolition gradually, rather than all at once. In fact, this approach was considered in Malawi and Uganda. Both countries had intended to abolish fees one standard at a time, year by year, in order to allow the system to adjust over time. However, in each case this gradual approach was abandoned during election campaigns in favour of the more politically popular decision to eliminate primary fees altogether (Al-Samarrai, 2003).

Another alternative to fee abolition is the establishment of “targeted exemptions” from fees for the very poor, or “conditional cash transfer” programs which offset both the direct cost of the fee and the opportunity cost of the child’s labour. These options may be used on an ongoing basis to mitigate the effects of school fees on

low income households, or they may serve as tools for gradually phasing out fees altogether by targeting one income level at a time. Plank (2007, p. 6) argues strongly for this approach, stating that “targeting assistance to the neediest children may have equally large impacts on access, while continuing to collect revenues to support school quality from communities and more prosperous households” (p. 6). However, Reddy and Vandemoortele (1996) provide a long list of reasons why targeted exemptions are great in theory but difficult to implement in practice. For one thing, they argue, identifying the poor and establishing the administrative tools necessary to select them for exemption or cash transfers are costly undertakings. In addition, those with the greatest material need or the lowest ability to pay for education are not always the ones with the lowest reported income. Consequently, such schemes often end up using easily established criteria (ethnicity, location, profession) to identify their recipients, with the result that exemptions which actually reach those with the greatest inability to pay are rare. Furthermore, even if the neediest could easily be identified, the authors point out that they may not *want* to be identified, as there may be a stigma associated with receiving handouts (Reddy & Vandemoortele, 1996, pp. 48-50).

On the other hand, conditional cash transfer programs in Latin America, notably Mexico’s “Oportunidades” and Brazil’s “Bolsa Escola,” have received positive evaluations. Kattan and Burnett (2004, p. 18) write that Oportunidades, which provides cash transfers to poor families contingent on school attendance, has significantly increased enrolment, particularly among girls. Furthermore, many households, even very poor ones, are not opposed to paying some fees in principle, particularly if they

have confidence that the money will help to improve the quality of the education they receive. In Zambia, for example, when asked what would most help them to provide adequate schooling for their children, many households did not immediately speak of fee abolition. Instead, they expressed the desire that the government would improve the agricultural sector, increase access to credit, and work to improve employment opportunities, so that they would better be able to pay their children's school fees (Kattan & Burnett, 2004, p. 42). In contexts such as this, a successfully conducted transfer program might allow a government to achieve the desired increase in enrolment in a more gradual and controlled manner, without losing the revenues from the fees being paid by families from higher income brackets.

While each of these alternatives may be important to consider in other contexts, re-introducing fees in conjunction with targeted exemptions and cash transfers would be neither a popular nor a practical policy decision in the seven countries studied here. Hence, the governments of these countries must focus on how to address the quality issues now that so many more children are attending school. On a positive note, the fact that enrolment has increased by so much, even if quality has gone down, may create its own momentum, as the belief that basic education is a human right gradually becomes entrenched even among traditionally excluded groups. Additionally, once their children are in school, parents may be more likely to demand that governments honour their commitments to increase the number of qualified teachers, and bring about other quality improvements. They may also be likely to contribute to community initiatives aimed at financing improvements when government contributions fall short – and may

in the long term have a greater ability to do so if more education does indeed lead to greater growth. Such grassroots activism can even be encouraged by governments and NGOs; advertising and education campaigns have been shown to be effective in mobilizing interest and involvement in various contexts in sub-Saharan Africa, including successfully encouraging greater school attendance (World Bank, 2009, p. 57).

Nevertheless, governments still must find ways to maintain and increase their funding of primary education if quality improvements are to be achieved. Donor funding may help them to do so in the immediate future, but is obviously not a long term solution. Removing some of the subsidization of higher levels of education to generate additional resources at the primary level may in some cases be appropriate, but this approach runs the risk of simply transferring inequality issues from the primary level upward.

In the end, international cooperation aimed at freeing up resources for developing country governments, and helping to direct them toward key sectors such as primary education, may represent the avenue of greatest potential. This type of effort has already been proven effective; the HIPC program, for example, has resulted in as much as 40% of the funds formerly tied up by debt servicing being channelled into education budgets in countries like Ghana and Tanzania (Kattan & Burnett, 2004, p. 24; World Bank, 2009, p. 112). Identifying ways to improve efficiency, and learning from past mistakes, is also vital. Certain initiatives already tried have not worked well; Malawi's approach of hiring thousands of untrained teachers to handle the enrolment surge, and then attempting to train them on the job, was a notable failure. Others, such

as Uganda's decision to hire only trained teachers, and use double-shifting as a way to reduce class sizes in the short term, have shown a bit more promise (Al-Samarrai, 2003, pp. 52-54).

Overall, as with many development efforts, the search for improvements to primary education will likely be an ongoing challenge. However, it is one which can be overcome with a long term commitment to the desired outcomes by the international community, and a continued recognition of the social and private value of primary education for all.

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Appendix – Data Sources and Supplementary Tables

Notes on Data Used in Figures 1 through 7, and in Tables 4, 5, and 7 through 10

1. Ethiopia: pupil-teacher ratios for 1994-2004 and government spending on education as a percentage of total government expenditure obtained from World Bank (2009). All other data obtained from World Bank (2011).
2. Ghana: all data obtained from World Bank (2011). Government spending on education as a percentage of total government spending was not available after 1995, but I was able calculate it for 1999 and 2005 using information on government spending as a percentage of GDP, education spending as a percentage of GDP, and actual GDP values (expressed in constant 2000 U.S. dollars), all available in World Bank (2011).
3. Kenya: pupil-teacher ratios for 1985 and 1990 obtained from the Education Policy and Data Centre (2011). All other data obtained from World Bank (2011).
4. Malawi: all data obtained from World Bank (2011). Government spending on education for 2003 calculated using same method described for Ghana.
5. Tanzania: all data obtained from World Bank (2011). Government spending on education for 1999 calculated using same method described for Ghana.
6. Uganda: all data obtained from World Bank (2011).
7. Zambia: all data obtained from World Bank (2011).
8. For Ghana, Kenya, Malawi and Zambia: data for GDP per capita from 1970 to 1979 was only available from World Bank (2011) in constant 2000 U.S. dollars. However, for all four countries the ratio of GDP per capita in constant 2000 U.S. dollars to GDP per capita (PPP) in constant 2000 international dollars remained very stable over time from 1980 to 2009. Therefore, for each country I calculated the average ratio for this period, and then divided the U.S. dollar GDP per capita figure by the result for each of the missing years between 1970 and 1979 in order to produce estimates for GDP per capita in PPP terms for those years. The average ratios were as follows: 0.24 for Ghana, 0.32 for Kenya, 0.21 for Malawi, and 0.31 for Zambia.

9. For all countries: data from World Bank (2011) was obtained on April 22nd, 2011, except for data on GDP and GDP per capita (obtained May 18th, 2011), life expectancy and death rates (obtained July 19th, 2011) and youth population as a percentage of the total population (obtained July 25th, 2011). Data from the Education Policy and Data Centre was obtained on May 6th, 2011.

Notes on Tables 1, 2, 3 and 6

1. Table 1: data obtained April 22nd, 2011
2. Table 2: data obtained July 25th, 2011
3. Table 3: data obtained April 22nd, 2011
4. Table 6: data obtained April 22nd, 2011

Table 7: Means and Standard Deviations for Dependent Variables

Variable	Mean	Standard Deviation
primary enrolment (% gross) – Ethiopia	43.79	24.12
primary enrolment (% gross) – Ghana	77.19	10.14
primary enrolment (% gross) – Kenya	100.70	14.37
primary enrolment (% gross) – Malawi	88.92	35.05
primary enrolment (% gross) – Tanzania	75.93	20.87
primary enrolment (% gross) – Uganda	81.15	35.39
primary enrolment (% gross) – Zambia	96.91	9.85
pupil-teacher ratio – Ethiopia	51.79	10.64
pupil-teacher ratio – Ghana	31.06	2.38
pupil-teacher ratio – Kenya	37.71	6.08
pupil-teacher ratio – Malawi	64.45	7.61
pupil-teacher ratio – Tanzania	46.53	8.35
pupil-teacher ratio – Uganda	45.53	10.11
pupil-teacher ratio – Zambia	54.25	8.52
primary completion rate – Ethiopia	30.21	13.27
primary completion rate – Ghana	66.13	7.38
primary completion rate – Kenya	69.69	15.82
primary completion rate – Malawi	41.29	15.41
primary completion rate – Tanzania	61.04	24.27
primary completion rate – Uganda	51.46	10.47
primary completion rate – Zambia	80.13	9.90

Table 8: Means and Standard Deviations for Control Variables

Variable	Mean	Standard Deviation
ln GDP per capita – Ethiopia	6.32	0.14
ln GDP per capita – Ghana	6.92	0.14
ln GDP per capita – Kenya	7.18	0.08
ln GDP per capita – Malawi	6.52	0.08
ln GDP per capita – Tanzania	6.80	0.12
ln GDP per capita – Uganda	6.53	0.23
ln GDP per capita – Zambia	7.18	0.21
crude death rate (deaths per 1000) – Ethiopia	17.43	3.13
crude death rate (deaths per 1000) – Ghana	12.23	2.07
crude death rate (deaths per 1000) – Kenya	11.73	1.60
crude death rate (deaths per 1000) – Malawi	18.15	3.92
crude death rate (deaths per 1000) – Tanzania	14.85	1.73
crude death rate (deaths per 1000) – Uganda	15.83	1.24
crude death rate (deaths per 1000) – Zambia	16.50	2.12
life expectancy (years) – Ethiopia	47.68	4.10
life expectancy (years) – Ghana	55.25	3.08
life expectancy (years) – Kenya	55.98	2.86
life expectancy (years) – Malawi	47.95	3.92
life expectancy (years) – Tanzania	50.70	2.13
life expectancy (years) – Uganda	49.00	2.24
life expectancy (years) – Zambia	48.28	3.88
population aged 0-14 years (% total) – Ethiopia	45.05	0.68
population aged 0-14 years (% total) – Ghana	43.53	2.55
population aged 0-14 years (% total) – Kenya	47.35	2.86
population aged 0-14 years (% total) – Malawi	46.63	0.90
population aged 0-14 years (% total) – Tanzania	45.70	0.65
population aged 0-14 years (% total) – Uganda	48.25	0.74
population aged 0-14 years (% total) – Zambia	46.13	0.79

Table 9: Determinants of Pupil-Teacher Ratios

	Ethiopia (n=15)	Ghana (n=16)	Kenya (n=16)	Malawi (n=18)	Tanzania (n=14)	Uganda (n=15)	Zambia (n=16)
Ln GDP Per Capita	-8.06 (25.67)	9.10 (11.33)	67.31** (28.02)	-.10 (14.90)	-8.25 (72.32)	-21.20 (15.21)	2.66 (34.12)
Death Rate	-7.50 (4.09)	-.57 (1.41)	4.78*** (1.36)	-3.49* (1.64)	-2.98 (3.44)	-1.00 (2.02)	-.41 (3.56)
Life Expectancy	-2.97 (3.63)	-.21 (1.01)	.75 (1.14)	4.04** (1.65)	-.65 (3.92)	-.78 (1.05)	-2.69 (3.49)
Famine/Post-Famine Yr.	20.57* (8.96)	--	--	--	--	--	--
Youth Population	-2.98 (4.16)	.08 (.69)	-.89 (.87)	4.24* (2.05)	-1.27 (4.24)	5.69 (5.52)	8.87* (4.42)
School Fees	-10.14 (6.12)	.24 (2.11)	10.40** (4.41)	38.32*** (8.84)	-12.12** (3.77)	-23.49*** (3.37)	-.68 (13.87)
Higher School Fees	--	--	-14.24*** (2.82)	-24.96*** (7.43)	--	--	1.51 (11.37)
Limited Abolition	--	1.79 (2.38)	--	-10.46* (5.33)	--	--	--
Adj. R-Squared	0.77	0.55	0.90	0.76	0.84	0.94	0.48

Table 10: Determinants of Primary Completion Rates

	Ethiopia (n=18)	Ghana (n=22)	Kenya (n=13)	Malawi (n=33)	Tanzania (n=13)	Uganda (n=9)	Zambia (n=23)
Ln GDP Per Capita	33.31** (14.08)	15.42 (17.72)	-2.18 (34.33)	40.27** (15.95)	192.82 (159.13)	48.74 (26.84)	-23.07 (21.28)
Death Rate	-2.70 (2.00)	-2.45 (2.07)	-.65 (6.47)	-1.82 (1.65)	2.76 (7.97)	2.99 (2.50)	-7.24** (2.58)
Life Expectancy	-.174 (1.63)	-.054 (1.65)	7.17 (4.74)	-2.81 (1.98)	-4.39 (8.17)	-1.80 (1.89)	-1.12 (1.78)
Famine/Post-Famine Yr.	omitted	--	--	--	--	--	--
Youth Population	-5.51* (2.78)	-.93 (1.64)	-6.88** (2.75)	-1.88 (2.39)	3.84 (8.13)	omitted	-7.14 (6.58)
School Fees	1.58 (3.71)	-4.48 (3.08)	-1.90 (8.31)	-32.58*** (7.35)	8.11 (9.96)	4.60 (14.85)	-3.86 (5.72)
Higher School Fees	--	--	omitted	11.32* (5.57)	--	--	-17.14* (9.28)
Limited Abolition	--	-2.29 (5.68)	--	6.62 (5.55)	--	--	--
Adj. R-Squared	0.92	0.70	0.85	0.88	0.28	0.93	0.71