School Fee Abolition and its Effects on Education Indicators

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Abstract

The international community has declared that fee abolition is an important part of achieving Universal Primary Education (UPE) and that fee abolition reduces differentials in enrollment and attainment by gender and wealth. I use DHS data to examine the impact of fee abolition on the Net Enrollment Rate (NER) and on the Primary School Completion Rate (PSCR). The effect of fee abolition on the NER is much greater than its effect on the PSCR. Moreover, although after fee abolition gender and wealth differentials in the NER are reduced, in the PSCR these differentials often remain about the same, or may actually increase. I show that these conflicting results are found across a range of countries and explain the reasons for this differential effect.

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Introduction / Literature Review

The Education Millennium Development Goal (MDG-goal 2) of Universal Primary Education (UPE), a reformulation of the second Dakar Education for All (EFA) goal (UNESCO 2000), states that "by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling" (UN Statistics Division 2008; see also UNESCO 2007: 41). The gender equality MDG (goal 3) mandates elimination of "gender disparity in primary and secondary education, preferably by 2005" (UN Statistics Division 2008). The School Fee Abolition Initiative (SFAI) has been advanced as a key factor in spurring progress toward UPE and increasing educational equity (World Bank 2009).

The 2008 EFA Global Monitoring Report (GMR)[1] uses the Net Enrollment Rate (NER) as the critical indicator in "a systematic assessment of progress towards EFA since Dakar" (UNESCO 2007: 32). The GMR states that "A country's distance from UPE *appears most clearly* in terms of the net enrolment ratio (NER), the share of children of official primary school age who are actually enrolled in primary schools" (UNESCO 2007: 42 – emphasis added). Over time, the NER, together with the proportion of pupils starting grade 1 who reach the last grade of primary (the primary school "survival rate"), have come to be the main indicators of progress toward the education MDG (UN Statistics Division 2008). The gender parity index (GPI) is officially measured by the ratio of gender-specific Gross Enrollment Ratios (GER) (UNESCO 2007:200), though some researchers focus on

1 The World Education Forum gave UNESCO the responsibility to "co-ordinate the global efforts to achieve" and "monitor progress toward" EFA (UNESCO n.d.:6). The United Nations and the World Bank also issue annual reports on the MDGs in general, including basic information about the education MDG. EFA GMRs can be found here:
http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/efareport/
The most recent UN MDG monitoring report can be found here:
http://unstats.un.org/unsd/mdg/Resources/Static/Products/Progress2012/English2012.pdf
The most recent World Bank MDG monitoring report is here:
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/04/25/000386194_20110425025358/Rendered/PDF/613110PUB0impr187000109780821387009.pdf

NERs to assess gender equity (al-Samarrai and Zaman 2007; Deininger 2003).. A GPI between 0.97 and 1.03 is considered parity.

Early in the new millennium the international community suggested an alternative indicator for measuring progress toward UPE – the Grade Four Completion Rate (UNESCO 2002b). Given the focus of UPE on *primary school completion*, an early report urged that "Primary school completion rates ... should be the criterion for evaluating progress toward the goal of EFA." (UNESCO 2001b:42; see also Bruns, Mingat and Rakotomalala 2003; Carr-Hill 2009; Kane 2004; UNESCO 2003; 2007; 2010). In this paper, in addition to the NER, I will use a primary school completion rate (PSCR) closely related to the grade-4 and grade-5 completion rates used in earlier work (Filmer 2005; Lloyd and Blanc 1996; Lloyd, Kaufman and Hewett 2000). The PSCR is the outcome measure of the proximate determinants of educational attainment framework (Langsten forthcoming). The proximate determinants are: ever-enrollment, retention, and timely progress. They are defined so as to completely determine the PSCR (Langsten forthcoming).

Since 1990, several sub-Sahara African (SSA) countries, along with a few other countries, have eliminated primary school fees (UNESCO 2007:113 Map 3.2; see also Horn, Wright and Prouty 2009; Tomasevski 2003). Studies examining the impact of fee abolition in SSA countries report not just increased enrollment, but also greater socioeconomic and gender equity following elimination of fees (al-Samarrai and Zaman 2007; Deininger 2003; World Bank 2009). As long ago as 2007 some observers argued that several African countries were "on track to reach the MDG of universal completion" by 2015 (Filmer 2007:166). More recently there has been a growing trend in the development community to declare that "By 2015, the universal primary education … MDG will be met in nearly all countries" (Beatty and Pritchett 2012:i; also World Bank 2012:12).

Beyond this impact on overall educational achievement, fee elimination has been described as a "pro-poor strategy" (Nishimura, Yamano and Sasaoka 2008; World Bank 2009a). Others, however, maintain that, in the developing world particularly, schooling underpins the advantages of society's elites who seek to perpetuate their advantages as education expands (Carnoy 1974) whether in response to elimination of fees or other policy changes. Indeed, studies in developed countries, considering other levels of education, have consistently found that elimination of fees does not increase educational equity (Halsey, Heath and Ridge 1980; Raftery and Hout 1993).

In this paper I will examine wealth and gender equity in primary education in the context of fee abolition. I will show that the size of between group differentials, and in some cases even the direction of change, can differ depending the educational outcome measure used. I will argue that these inconsistent results occur largely because of the way that the NER, the GER, and the PSCR respond to timely progress of children through school, one of the proximate determinants of education attainment.

Data and Methods

Although the NER is usually computed from service statistics, there are survey based equivalents[2]. The PSCR is a survey based indicator. Often, even in the EFA Global Monitoring Reports (GMRs), analyses by gender and especially wealth are carried out using survey data—usually data from Demographic and Health Surveys (DHS) or Multiple Indicator Cluster Surveys. In this work I will use data from two SSA countries – Malawi and Uganda – that eliminated school fees during the 1990s, as well as from Cambodia which eliminated fees

2 The survey based equivalent is technically called the "net attendance ratio" (NAR). Throughout this paper, I will use the abbreviation NER when I am referring to GMR-reported, administrative-statistic-based figures, and NAR when discussing survey-based results.

in 2000. In Malawi and Uganda there was one DHS before the elimination of fees. In Cambodia, the first DHS took place in the same year that fees were eliminated – 2000. All of these countries have at least three surveys with the most recent survey taking place around 2010 and being 10 or more years after fee abolition.

DHS provide all the data necessary to compute the outcome indicators (NAR, GAR and PSCR) and the survey-based proximate determinants. They also provide two key indirect determinants of enrollment and attainment: gender and wealth.

In assessing changes in equity we will use very simple numbers. When considering wealth, we will look at the change in the absolute difference between wealth groups. For gender we will use the GPI, that is the male to female ratio of the indicator in question.

Results

Overall Educational Attainment

By way of background I first consider change over time in educational indicators – the GMR reported NERs, NARs based on DHS, and the PSCR. For Malawi and Uganda I also include NARs reported by others who have assessed the impact of fee abolition in those countries using other data sets (Malawi – al-Samarrai and Zaman 2007; Uganda – Deininger 2003). I report two PSCRs: 1) a standard PSCR for an age group slightly older than the normal age of completing primary (see Langsten Forthcoming); and 2) a "cohort" or completed PSCR. This latter measure estimates the PSCR for the same cohort used in one DHS, aged to the following DHS. For example: consider the cohort PSCR for the 2010 Malawi DHS (41%). This is based on children aged 22-23 in 2010. That is the same cohort that was ages 16-17 in 2004, six years earlier. Similarly the cohort PSCR in 2004 (41%) is for children aged 20-21; that is children who were 16-17 years old, four years earlier

in the 2000 DHS. The cohort PSCR is useful because in most SSA countries, large numbers of children are greatly delayed in their progress through school and in completing primary education. Low standard PSCRs reflect this delay. By the age of the cohort PSCR almost all children in the age group have either completed primary school or dropped out. Thus the cohort PSCR can be thought of as the "completed" PSCR for that age group.

These educational indicators are shown in Tables 1-3 for Malawi, Uganda and Cambodia, respectively. In general all the NERs and NARs are low during the early 1990s. In the late 1990s, and especially following fee abolition all the NERs & NARs increase – often substantially. However, post-2000, after fee abolition, the DHS NAR is always lower than the GMR-reported NER by at least 10 percentage points. (This tendency is confirmed by an analysis of 21 sub-Saharan African nations. Overwhelmingly, the post-2000, and where applicable the post-fee-abolition, DHS NARs are lower than, and often substantially lower than, the GMR-reported NERs. [Data not shown.])

The PSCRs are lower, often very much lower, than even the DHS-NARs. This is true even of the cohort PSCRs. In Malawi, post-2000, the NAR-PSCR differences are on the order of 40-50 percentage points. In Uganda and Cambodia these differences are smaller, but in the range of 15 to 30 percentage points for the NAR – cohort PSCR divide.

The reason for these large differentials can be found in the different way in which the NAR and PSCR respond to the proximate determinants of educational attainment (ever-enrollment, retention, timely-progress). These effects have been explained in detail elsewhere (Langsten Forthcoming). Briefly, the main cause of the differential is the low level of timely progress that characterizes these three, and many other, developing countries. Delayed progress through the years of primary education is not captured in the NER/NAR. Extreme delay, such as is seen in Malawi, results in high NARs but very low PSCRs. Many

children remain in school in the age group used for the standard PSCR without having yet completed primary education. In subsequent years these delayed children have relatively high dropout rates. Though many delayed children do complete primary, even the cohort PSCR is low, as noted above. As a general rule of thumb: the more that pre-completion dropout is delayed , the greater will be the difference between the NER/NAR and the PSCR.

Wealth

Fee abolition, especially in the context of educational expansion has been seen as "pro-poor" (Nishimura, Yamano and Sasaoka 2008; World Bank 2009a). In Malawi and Uganda research has examined absolute differences in NARs by wealth quintile before and after fee abolition (al-Samarrai and Zaman 2007; Deininger 2003). Following fee abolition, levels of attendance among the less well-off and the poor converge on the attendance level of children from the wealthiest families (Tables 4 & 5 – Columns 5 & 6). These results are replicated using DHS data. As an example, in Malawi in 1992, the absolute difference between the NAR of the rich (R – 82%) and that of the middle wealth group (M – 56%) is 26 percentage points, while this difference between the rich and the poor (R-P) is 42 percentage points. In Malawi, fees were eliminated in 1994 (Al-Samarrai and Zaman 2007; Inoue and Oketch 2008). In the three DHS in 2000 and later, these R-M and R-P differences are much smaller.

Because the standard PSCR in Malawi is based on children 16-17 years of age, the full effects of fee elimination may not be seen until 2004. However, it is precisely in this year that the R-M and R-P differences are the largest (42 and 47 percentage points respectively). While there is some convergence between 2004 and 2010, still in 2010 the wealth differentials are substantially larger than they were in 1992 before fee abolition.

In addition, the wealth differentials tend to grow as the cohort ages. That is, among children 16-17 years of age from rich families in 2000, 44% had completed primary education. By 2004, among this rich cohort, now aged 20-21 years old, 76% had completed primary, an increase of 32 percentage points in primary completion over the 4 years between surveys. By contrast, children from the middle wealth group increased their level of primary completion by just 4 percentage points while children from poor families increased their completion by 17 percentage points. When considering the cohort aged 16-17 years in 2004 and comparing their primary completion with that same cohort aged 22-23 in 2010, we see a slight convergence in the R-M difference (42 percentage points declining to 38 percentage points), but the R-P difference continues to grow (47 to 54 percentage points).

Uganda shows similar, if less dramatic results. As in Malawi, whether using the NARs reported by Deininger (2003) or those based on DHS data, the wealth differentials in the pre-fee-abolition NARs are relatively large. Following fee abolition in 1996 all of the wealth differentials shown in columns 5 and 6 of Table 5 are considerably smaller. Also, as in Malawi, the pattern for the PSCRs is the inverse. Following fee abolition, the wealth differentials are larger than before fee abolition. And the rich – poor cohort PSCR differentials are as large as, or larger than the differentials for the standard PSCRs. Only in the case of the rich – middle comparisons do the differentials shrink as the cohort ages.

In Cambodia (Table 6), fees were eliminated in 2000, the same year as the first DHS. As in the other countries, the DHS NARs are relatively high in 2000 and substantially lower in the two subsequent surveys. And, as before, the PSCR differences, at least between children from rich and poor families, are very large in 2000, and remain, at least as large in the two later surveys. In Cambodia, the rich – middle differentials do converge. This is likely the result of ceiling effects, with children of the wealthy having very high completion

rates by 2010, and trickle down of educational advantages. For the poor, even for the cohort PSCR the gap with the rich remains large, despite ceiling effects. Trickle down has not yet reached the poor.

As with the overall differences between the NARs and PSCRs shown in Tables 1-3, these differences in the patterns of convergence/divergence in the wealth-specific PSCRs over time are largely driven by differentials and trends in the rate of timely progress. In all these countries the rate of timely progress is very low – especially in the early surveys. Perhaps surprisingly, the rate of ever-enrollment is relatively high – ranging from 78% to 90% even in the first survey in the series, increasing to 96% - 97% in all three countries in the most recent surveys (2010 – 2011). The level of retention tends to fall between these other two indicators. Wealth differentials in the proximate determinants tend to follow a similar pattern – relatively small for ever-enrollment, very large for timely-progress, in the middle for retention. All the differentials shrink over time, but the rich – poor differentials in timely progress are particularly resistant to change – thus accounting for the persistence of the rich – poor gaps in completion. And because children of the poor have lower rates of retention in the ages following the age of the standard PSCR, the rich poor gap tends to persist, or even increase, as a cohort ages from one survey to the next.

Gender

Change over time in gender differences in various educational indicators is particularly interesting. They again illustrate the effects of timely progress. According the GMRs the gender parity index is the ratio of the gender-specific *gross* enrollment ratios (UNESCO 2007:200). However, research on gender parity yields contradictory results depending on the indicator used to measure the GPI (al-Samarrai and Zaman 2007; Bennell, Bulwani and

Musikanga 2008). It has long been recognized that the NER is more likely to show a female advantage in attendance than does the GER (UNESCO 2003:49). The NARs and GARs in Tables 7-9 are consistent with this view. In every survey, in all three countries, the NAR shows a lesser female disadvantage or greater female advantage than does the GAR. Also in all three countries there is a tendency for the NAR to move over time from a male advantage to a female advantage, or at least to gender equality, in attendance. In the case of the GAR too, there is a shift over time to a smaller male advantage. But in all three countries, a strong male GAR advantage remains in the most recent data. The primary reason for this inconsistency is that males have lower levels of timely progress than females. Thus males whose progress through school has been delayed, and who are over the normal age of primary attendance will contribute to the apparent male advantage in the GAR, but will be excluded from the NAR, allowing female attendance to be assessed on a more equal basis.

The effects of delay are more clearly illustrated by the PSCR and cohort-PSCR. In Malawi the PSCR shifts from a large male advantage in 1992 to a strong female advantage in all subsequent years. However, as the cohorts age, the male advantage in 1992 grows, while the female advantages in the 2000 and 2004 surveys disappear and become strong male advantages in the respective cohort PSCR. While the size of the male advantage in the cohort PSCR declines over time, it remains very large in the 2010 survey.

Results for Uganda and Cambodia are similar, except that there is female equality or a substantial female advantage in the PSCR in all surveys. As in Malawi there is a shift toward a strong male advantage, or at least male skewed equality, as each cohort ages. As in Malawi the size of the male advantage in the cohort PSCR declines over time.

These gender effects of fee abolition are particularly interesting, because in the case of gender it is the favored group (males) who have lower levels of timely progress. It

appears that fee abolition allows males to remain in school because it reduces the costs of repeating grades. And, as a favored group, these males are more likely to remain in school until they are able complete primary education.

Discussion and Conclusions

The results found in these three countries are typical of results for many of the countries of sub-Saharan Africa, whether or not they have abolished school fees, because many of these SSA countries suffer from low to very low levels of timely progress. In this paper I have used very simple indicators that confound shifting marginals with the true changes in differentials in the likelihood of making transitions into and through primary education. These simple indicators are biased toward showing convergence between gender and wealth groups (Mare 1981).

Ceiling effects and saturation of demand among the wealthy groups in society suggest that continued expansion in these societies must be taking place among the poorer groups. That is, there will be some trickle down of educational opportunities and convergence in these simple numbers. When researchers use the NER to measure progress toward achieving the education MDGs they tend to find convergence in the enrollment levels of wealth groups and improvement in the GPI for countries that have eliminated fees (Al-Samarrai and Zaman 2007; Deininger 2003). Results using the PSCR are very different, however. In all three of the countries studied here the PSCR is always consistently lower than the NER or NAR. Previous research has shown that this is a common result in SSA countries, particularly among those countries seen as being on-track to achieve the education MDGs (Langsten Forthcoming). In this paper I have shown that in countries that have abolished fees, wealth differentials in the PSCR are less likely to converge than are those differentials in the NER. In Malawi and

Uganda, many years after fee abolition all wealth differentials remain greater than were the wealth differentials before fee abolition (Tables 4 & 5). Even in Cambodia, where students from families in the wealthiest quintile are approaching saturation of primary school completion only the gap between the rich and middle quintiles is shrinking. The rich – poor differential remains largely unchanged. Moreover, wealth differentials tend to increase as each cohort ages and all members of the cohort either complete primary education or drop out of school.

Gender parity is a more complex issue. Whether using the NER or the standard PSCR, the gender parity index tends to show gender equity or a female education advantage following fee abolition. However, when using the GER and the cohort PSCR there is almost always a male advantage, even if tending toward parity over time.

The primary driving force of all these measurement inconsistencies is low levels of timely progress in moving through primary education in these countries. In all surveys, in all three countries studied, delay is the main cause of the failure to complete primary schooling. And the level of delay tends to increase following fee abolition. The level of timely progress tends to decline with each poorer quintile. Those who are delayed contribute to the numerator of the NER even though they do not complete primary in a timely fashion, indeed, even though they may never complete primary. The NER and other measures commonly used by the GMRs have no way of accounting for delay in moving through education. The PSCR and proximate determinant framework explicitly measure the contribution of delay in the failure to complete primary education (Langsten Forthcoming).

Wealth differentials are inconsistent and tend to grow as cohorts age because at the age of the standard PSCR, though the poor are more likely to be in school without having completed primary, they are more likely to drop out in the following years, while the delayed rich are more likely to complete primary.

In the case of gender, males are more likely to be delayed than females. Delayed males, even if long delayed will contribute more to the GER/GAR than to the NER/NAR, and if long delayed will not add to the PSCR. However, as a culturally favored group in almost all the countries studied, delayed males tend to stay in school and complete primary even as they age out of the primary school years and the numerator of the NER. In this way delay contributes to the inconsistencies between the NER, GER, and standard PSCR, and to the inversion of the gender advantage as cohorts age to the time when all students have either completed primary or dropped out.

I have shown elsewhere (Langsten, Forthcoming) that in a country with very high levels of timely progress (Egypt) these inconsistencies and inversions do not occur. While I do not believe there is an exact mathematical relationship between delay and inconsistencies in measures, in general, the lower the level of timely progress, the greater will be the inconsistencies between results based on the NER/GER and those based on the PSCR/cohort PSCR. Since timely progress tends to be low in almost all SSA, and many other developing, countries, claims that these countries are on-track to achieve the education MDGs, or that fee abolition has reduced or eliminated wealth and gender disparities tend to be misleading, at best.

These results also lead to an important substantive conclusion. General programs that expand access to education and eliminate fees, while perhaps necessary, are not sufficient to increase equity in educational attainment. This should come as no surprise. Classic studies based on different methods in very different settings have shown this. In England and Wales: "Secondary education was made free in order to enable the poor to take more advantage of it, but the paradoxical consequence was to increase subsidies to the affluent" (Halsey, Heath and Ridge 1980:210). In Ireland: "… instead of improving access to education for the less advantaged, state funding of tuition was largely a 'windfall' for families whose children would

have entered and continued in secondary education in any event …" (Raftery and Hout 1993:59). The PSCR results for the three countries studied in this work are entirely consistent with these earlier results. The lesson is: if the goal is educational equity as is maintained by those supporting UPE (World Bank 2009), then programs must be targeted specifically on the poor and other disadvantaged groups. In the rush to declare success in achieving the education MDGs, the poor and disadvantaged who still have not managed to complete primary should not be forgotten.

In addition: those who claim that the world is on-track to achieve universal primary education generally seek to emphasize the need to focus on better quality education. Though these researchers are wrong in declaring victory in achieving MDG2, they are certainly correct in highlighting the importance of completing a "primary education *of good quality*" (UNESCO 2000:?????). However the focus on quality education must only supplement a continued effort to be ensure that all children have access to and complete primary education – even if a high quality education remains to be achieved.

Table 1. Indicators of Educational Attainment – Malawi.

	GMR NER	DHS NAR	Al-Samarrai and Zaman 2007 – NAR	Age 16-17 PSCR	Cohort PSCR
(1)	(2)	(3)	(4)	(5)	(6)
1990/91			51%		
1991	49%				
1992		58%		13%	
…					
1997/98			77%		
1999	98%				
2000		77%		22%	33%
…					
2004	95%	81%		30%	41%
2005	95%				
…					
2010	97%	85%		35%	41%

Table 2. Indicators of Educational Attainment – Uganda.

				PSCR	
	UNESCO NER	DHS NAR	Deininger 2003 - NAR	Age 15-16	Cohort
(1)	(2)	(3)	(4)	(5)	(6)
1991	51%				
1992			62%		
…					
1995		68%		18%	
…					
1997			84%		
…					
1999			84%		
2000		75%		28%	43%
…					
2006		80%		25%	49%
…					
2010	91%				
2011		77%		22%	56%

Table 3. Indicators of Educational Attainment – Cambodia.

			PSCR	
	UNESCO NER	DHS NAR	Age 14-15	Cohort
(1)	(2)	(3)	(4)	(5)
1991	72%			
…				
1999	83%			
2000		62%	23%	
…				
2005	(99%)	73%	51%	56%
…				
2007	89%			
…				
2010	96%	86%	63%	71%

Table 4. Indicators of Educational Attainment by Wealth – Malawi.

		NAR					PSCR – Age 16-17				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(A)	Al-Samarria and Zaman 2007	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(B)	1990/91	75%	55%	33%	20	42					
(C)	1997/98	80%	75%	76%	5	4					
(D)	DHS	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(E)	1992	82%	56%	40%	26	42	28%	12%	2%	16	26
(F)	2000	89%	82%	64%	7	25	44%	22%	7%	22	37
(G)	2004	94%	81%	72%	13	22	61%	19%	14%	42	47
(H)	2010	95%	86%	77%	9	18	56%	29%	21%	27	35
							PSCR - Cohort				
(J)	DHS	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(K)	2000						57%	32%	11%	25	46
(L)	2004						76%	26%	24%	50	52
(M)	2010						73%	35%	19%	38	54

Table 5. Indicators of Educational Attainment by Wealth – Uganda.

		NAR					PSCR - Age 15-16				
	(1)	(2)	(3)	(4)	(5)	(6)	(12)	(13)	(14)	(15)	(16)
(A)	Deininger 2003	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(B)	1992	82%	64%	46%	18	36					
(C)	1997	89%	86%	78%	3	11					
	1999	89%	87%	75%	2	14					
(D)	DHS	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(E)	1995	84%	68%	56%	16	28	42%	16%	4%	26	38
(F)	2000	78%	76%	68%	2	10	57%	16%	7%	41	50
(G)	2006	84%	79%	72%	5	12	57%	17%	7%	40	50
(H)	2011	82%	79%	71%	3	11	49%	13%	5%	36	44
							PSCR – Cohort				
(J)	DHS	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Cohort Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(K)	2000						73%	32%	20%	41	53
(L)	2006						78%	43%	29%	35	49
(M)	2011						80%	54%	26%	26	54

Table 6. Indicators of Educational Attainment by Wealth – Cambodia.

		NAR					PSCR – Age 14-15				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(A)	DHS	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(C)	2000	78%	64%	46%	14	32	57%	14%	6%	43	51
(D)	2005	81%	76%	61%	5	20	78%	45%	23%	33	55
(E)	2010	91%	87%	78%	4	13	86%	62%	34%	24	52
							PSCR – Cohort				
(J)		Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P	Rich	Middle	Poor	Abs Diff R-M	Abs Diff R-P
(L)	2005						80%	48%	23%	32	57
(M)	2010						89%	76%	41%	16	48

Table 7. Indicators of Educational Attainment by Gender – Malawi.

		NAR			GAR			PSCR		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(A)	Al-Samarria and Zaman 2007	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(B)	1990/91	52%	50%	104	86%	75%	115			
(C)	1997/98	76%	78%	97	128%	113%	113			
(D)	DHS Age 16-17	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(E)	1992	58%	58%	100	86%	75%	115	15%	12%	129
(F)	2000	76%	78%	97	107%	100%	107	21%	24%	89
(G)	2004	80%	83%	97	107%	102%	105	28%	31%	91
(H)	2010	85%	86%	98	111%	105%	106	33%	38%	86
(I)	DHS Cohort	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(K)	2000							45%	23%	198
(L)	2004							49%	35%	140
(M)	2010							47%	36%	130

Table 8. Indicators of Educational Attainment by Gender – Uganda.

		NAR			GAR			PSCR		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(A)	Deininger 2003	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(B)	1992	64	60	107						
(C)	1997	85	83	102						
	1999	84	83	101						
(D)	DHS Age 15-16	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(E)	1995	70%	67%	104	103%	86%	119	16%	21%	79
(F)	2000	74%	76%	98	114%	107%	106	27%	29%	93
(G)	2006	80%	79%	101	119%	115%	104	23%	28%	83
(H)	2011	77%	77%	100	118%	115%	105	17%	28%	61
(I)	DHS Cohort	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(K)	2000							52%	35%	148
(L)	2006							60%	41%	146
(M)	2011							60%	53%	112

Table 9. Indicators of Educational Attainment by Gender – Cambodia.

(A)		NAR			GAR			PSCR		
	DHS Age 14-15	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(B)	2000	62%	61%	102	108%	96%	113	23%	23%	100
(C)	2005	72%	74%	97	120%	113%	106	49%	52%	93
(D)	2010	85%	86%	99	122%	115%	106	59%	67%	88
(E)	DHS Cohort	Male	Female	GPI M/F	Male	Female	GPI M/F	Male	Female	GPI M/F
(F)	2005							63%	48%	133
(G)	2010							72%	67%	103

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(The bibliography doesn't include all citations, and includes some citations not used in this abstract. This will be corrected in the complete paper.)

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