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Education for All? Measuring Pro-Poor Educational Outcomes in Developing Countries

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Education for All?

Measuring Pro-Poor Educational Outcomes in Developing Countries

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Abstract

Achieving progress in education is of fundamental importance for human development. Low levels of access to the education system and in educational outcomes in developing countries are often accompanied by high inequality between countries and within countries between population subgroups. This paper analyzes differences in improvements in the access to the education system and in educational outcomes across the welfare distribution between and within countries, and also by gender and regions for a sample of 37 developing countries using Demographic and Health Surveys (DHS). For the analysis, the toolbox of the growth incidence curves is applied to several educational indicators. We found an overall positive development in education. However, we do not identify a clear pro-poor trend in progress in education between and within countries. We do find strong differences in education between males and females and between rural and urban areas. While gender inequality tends to decrease slightly, large differences by region tend to persist over time.

Key words: Pro-Poor Growth, Education, Growth Incidence Curve

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1 Introduction

At the beginning of the new century, shortcomings in education persist in many regions of the developing world, hampering economic growth and human development. Moreover, low levels of access to the education system and in educational outcomes are often accompanied by high levels of inequality between countries, and within countries between population subgroups. Therefore, the success in addressing the challenge of progress in education requires national and multinational response.

In 1990, the World Conference on Education for All adopted the World Declaration on Education for All, which stated that everyone has a right to education. Because of insufficient progress in access to education and educational outcomes in the developing world, in Dakar in the year 2000, the World Education Forum adopted a new framework for Action containing six Education for All (EFA) goals to be reached until the year 2015 to overcome the persisting shortcomings in education.¹ In addition, two of the eight Millennium Development Goals (MDG) committed by the United Nations (UN) in the year 2000 (in particular MDG 2 - achieve universal primary education - and MDG 3 - promote gender equality and empower women) directly emphasize the importance of education for human development.² The explicit inclusion of education among the MDGs reflects that these indicators are fundamental dimensions of human well-being.

Achieving progress in education is of fundamental importance for human development. A large body of literature shows that education accelerates economic growth, national productivity, political stability, and social cohesion (see, e.g. Chabott and Ramirez, 2000; Le Vine et al., 2004; Milligan et al., 2003). Education also has a direct impact on other dimensions of human well-

¹The six EFA goals adopted in the years 2000 to be reached until the years 2015 are: the expansion of early childhood care and education, the achievement of universal primary education, the development of learning opportunities for youth and adults, the spread of literacy, the achievement of gender parity and gender equality in education and improvements in education quality.

²In particular, goal 1 is to eradicate extreme poverty and hunger, goal 2 is to achieve universal primary education, goal 3 is to promote gender equality and empower women, goal 4 is to reduce child mortality, goal 5 is to improve maternal health, goal 6 is to combat HIV/AIDS, malaria and other diseases, goal 7 is to ensure environmental sustainability and goal 8 is to develop a global partnership for development. Each of the eight goals breaks down to 18 quantifiable targets (UN, 2005).

being (i.e. the other MDGs) such as child health and nutrition (see, e.g. Duflo and Breierova, 2000 and Schultz, 2002). In addition, there also exists a strong relationship between education, poverty and inequality. On the one hand, education reduces poverty and inequality. Sustained economic growth and poverty reduction result in higher levels of household resources allowing higher investments in their children's education because parents are less dependent on their children's labor. On the other hand, existing poverty and inequality may be worsened through poor education. Many researchers have shown that poverty significantly reduces the likelihood of school participation (see, e.g. Smith et al., 2007).

Today, more than half of the time period to reach the EFA goals and the MDGs has passed. During the last decade, many regions, particular in East and South Asia, have made significant progress towards the achievement of the goals by 2015 and many households and individuals have raised their levels of education. The latest EFA Global Monitoring Report provides a comprehensive mid-term overview of progress towards the Education for all goals set at Dakar in 2000. It shows that the world has made significant progress towards EFA since Dakar. For example, in developing countries, the net attendance rate in primary education has increased from 79 percent in 1991 to 86 percent in 2005. And concerning differences between the pre- and post-Dakar period, significant differences can be observed in the pace of progress. Faster progress has been made between 1999 and 2005 than between 1991 and 1999. For example, participation in primary education increased in Sub-Saharan Africa from 54 percent in 1991 to 57 percent in 1999 and 70 percent in 2005 (UNESCO 2008).

However, some regions and countries have lagged behind and some EFA goals or some aspects of them have been neglected. The regions that lag especially behind the goals are the Arab states, Sub-Saharan Africa, West and South Asia (UNESCO 2008). Although Sub-Sahara Africa has been made significant progress over the last years, it still lags behind other developing regions (UN, 2007, UNESCO, 2007). In addition, whereas countries in South Asia and Latin America have made a lot of progress towards the goal of reducing the share of people suffering from hunger, many other regions and countries remain

well short of the targets, particularly in Sub-Saharan Africa, where many countries are still stuck in a poverty trap. And besides improvements towards the goal of universal primary education, there are still large shortcomings in many countries and a slow progress in primary completion rates remain a great concern in many regions. The same holds for adult education.

Furthermore, the progress towards the goals has also been uneven within countries. Wide disparities in progress remain between population subgroups, e.g. between males and females and rich and poor. There also exist significant within country differences in access to education and in educational outcomes especially between urban and rural areas (see, e.g. Lopez et al., 2007). For example, the 2008 EFA Report also indicates that progress in access to and participation in education has not benefited all children within countries and has led, in some cases, to greater sub-national disparities. Indeed, deeply entrenched disparities in opportunities for education based on income, gender, locality and other markers for disadvantage continue to represent a powerful obstacle to the realization of EFA. Hence, the question of the distribution and convergence in access and level of education of welfare sub-groups between countries and within countries, and in particular the question, of how progress in education is distributed across the population, is central to achieve the EFA goals.

In recent years, a fast growing field of literature in developing economics emerged that is concerned with the question of ‘pro poor growth’, i.e. how economic growth is distributed over the population. In particular, the question is whether the poor benefit from economic growth and social progress and if yes, to what extent (see e.g. Klasen, 2004 and Grosse et al. 2008), which is of particular policy relevance for achieving EFA goals and for reaching the MDGs.

The aim of the paper is to identify and understand, which parts of the population have benefited most or have not benefited from the improvements in the access to the education system and educational outcomes and to highlight the differences in the progress, if any, between the pre- and post-Dakar periods.³ The question whether the poor can benefit from progress in access

³The post-Dakar period indicates the years after 1999, this latter year being the end year

to the education system and educational outcomes is of considerable importance because growth in monetary indicators of well-being does not necessarily lead to improvements in education. The analysis will provide a synthesis of the distribution, and changes over-time, of attendance rates and educational attainment in developing countries by income and other background characteristics like gender and urban versus rural areas. In particular, the following research topics will be analyzed: Which regions and countries have made the most progress towards the EFA goals and which regions still lack behind? Have inequalities both across and within countries been reduced? How do trends observed since the Dakar declaration differ from those that are observed in the period from 1991 and 1999?

The rest of the paper is organized as follows. Chapter 2 provides a short introduction in the concept of pro-poor growth and how one can introduce this concept to analyze pro-poor educational outcomes. Chapter 3 describes the methodology of the analysis and describes the data used. Chapter 4 presents the results. Finally, Chapter 5 concludes.

2 Assessing Pro-Poor Educational Outcomes

2.1 Concept and Definition of Pro-Poor Growth

Pro-poor growth is often defined as economic growth that benefits the poor (e.g. UN, 2000; OECD, 2001, 2006). However, what remains to be specified using this broad definition is, first, if economic growth benefits the poor and, second, if yes to what extent. For example, Klasen (2004) provides more explicit requirements that a definition of pro-poor growth needs to satisfy. The first requirement is that the measure differentiates between growth that benefits the poor and other forms of economic growth, and it has to answer the question by how much the poor benefited. The second requirement is that the poor have benefited disproportionately more than the non-poor. The third requirement is that the assessment is sensitive to the distribution of incomes among the poor. The fourth requirement is that the measure allows an overall judgement of economic growth and not focuses only on the gains of the poor.

of the EFA 2000 assessment that was presented in Dakar in 2000. As for the pre-Dakar period, it covers years circa 1999.

Besides this approach there exist several other attempts conceptualizing pro-poor growth.⁴

In this paper, we use two broad definitions of pro-poor growth, namely absolute and relative pro-poor growth (see also Klasen, 2008). Pro-poor growth in the weak absolute sense means that the growth rates are, on average, above 0 for the poor. Pro-poor growth in the relative sense means that the income growth rates of the poor are higher than the average growth rates, thus that relative inequality falls.

2.2 Multidimensionality of Pro-Poor Growth

The most glaring shortcoming of all attempts to define and measure pro-poor growth is that they rely exclusively on one single indicator, which is income. This means that they are only focussed on MDG1 but leave out the multidimensionality of poverty, which is taken into account in the other MDGs.

Income enables households and/or individuals to obtain functionings. This means, income serves to expand peoples' choice sets (capabilities) (Sen, 1987, 1988) and is, therefore, an indirect measure of poverty. In contrast, certain non-income indicators measure the functionings of households and individuals directly. Measuring poverty only with income assumes that income growth is accompanied by non-income growth. However, the problem of focussing only on MDG1 is that an improving income situation of households need not automatically imply an improving non-income situation, thus, reaching the other MDGs is not automatically guaranteed (for example, as shown in Klasen (2000) or Grimm et al. (2002)). While non-income indicators have recently received more and more attention in the concept and measurement of poverty⁵ there exists only some attempts to apply the concept of pro-poor growth to non-income indicators, such as education.

Grosse et al. (2008) introduce non-income indicators in the pro-poor growth

⁴For a detailed review on the different definitions and measures of pro-poor growth, see, for example, Son (2003). Other approaches to define pro-poor growth are provided, for example, by White and Anderson (2000), Ravallion and Datt (2002), Klasen (2004), Hanmer and Booth (2001).

⁵Examples for recent studies examining the multidimensional casual relationship between economic growth and poverty reduction are Bourguignon and Chakravarty (2003), Mukherjee (2001) and Summer (2003). Also international organizations point to the importance of the direct outcomes of poverty reduction such as health and education (see e.g. World Bank, 2000; UN, 2000; UN, 2000a).

measurement by calculating the growth incidence curves for several non-income indicators, such as education, nutrition, and health outcomes and apply this approach to Bolivia. The authors found an overall pro-poor development of all non-income indicators in Bolivia between 1989 and 1998. However, comparing the pro poor outcomes of the non-income indicators with the pro-poorness of income, the authors show that there exist no perfect correlation between the income and non-income dimension of poverty.

3 Methodology

3.1 Distribution of Educational Outcomes

To separate the population into welfare groups (i.e. percentiles, vintiles and/or quintiles) and in order to assess the access to and output of education in a country and over time, one typically uses information on income or expenditure. As we do not have information on income or expenditure in the DHS data sets that we rely on for all of our analysis, we consider an alternative approach to define the socio-economic status of a household, which we use as a proxy for income or expenditure. In particular, we use an asset-based approach in defining well-being proposed by Filmer and Pritchett (2001) and Sahn and Stifel (2001). Although income or expenditure data is preferable, Sahn and Stifel (2001) show that such an asset index is an accurate indicator of long-term well-being if neither income nor expenditure are available. The main idea of this approach is to construct an aggregated uni-dimensional index over the range of different dichotomous variables of household assets capturing housing durables and information on the housing quality that indicate the material status (welfare) of the household:

$$A_i = \hat{\gamma}_1 a_{i1} + \dots + \hat{\gamma}_n a_{in} \quad (1)$$

where A_i is the asset index, the a_{in} 's refer to the respective asset of the household i recorded as dichotomous variables in the DHS data sets and the $\hat{\gamma}$ are the respective weights for each asset that are to be estimated.

For the estimation of the weights and for the aggregation of the index, we

use a principal component analysis proposed by Filmer and Pritchett (2001).⁶ In particular, as the components for the asset index, we include dichotomous variables whether the following assets in a household exist or not: radio, TV, refrigerator, bike, motorized transport, capturing household durables and type of floor material, type of wall material, type of toilet, and type drinking water capturing the housing quality.

The use of the asset index approach to derive a welfare distribution faces some critical issues that should be mentioned when using this approach as a proxy for income. The asset index can be biased, because it might not reflect correctly differences in income between rural and urban areas, due to usually huge differences in prices and the supply of such assets as well as differences in preferences for assets between both areas. For example, urban households possess demand other assets than rural households. To deal with this issue, for the analysis of differences in access to education and in educational outcomes between rural and urban areas, therefore, we calculate the asset index separately for urban and rural areas.

After having derived the aggregated index, one can derive the welfare distribution and classify population welfare subgroups p . For example, using quintiles as the segmentation dimension, quintile 1 would correspond to the poorest population subgroup and quintile 5 to richest, respectively. Using this welfare distribution, we analyze the access to the education system and educational outcomes, measured by several indicators that are described below, by welfare groups within countries for several periods and also over time to show trends in progress towards the EFA goals and differences in the progress made between the pre- and post-Dakar period.

3.2 The Non-Income Growth Incidence Curve

A often used tool for answering the question of whether and, if yes, to what extent growth was pro poor is the GIC (Ravallion and Chen, 2003), which shows the mean growth rate g_t in income y at each percentile p of the distribution between two points in time, $t-1$ and t . The GIC links the growth rates

⁶An alternative way to estimate the weights for the assets to derive the aggregated index is a factor analysis employed, for example, by Sahn and Stifel (2001). However, the two estimation methods show very similar results.

of different percentiles and is given by

$$GIC : g_t(p) = \frac{y_t(p)}{y_{t-1}(p)} - 1, \forall p = 1, 2, \dots, 100. \quad (2)$$

By comparing the two periods, the GIC plots the population percentiles (from 1–100 ranked by income) on the horizontal axis against the annual per capita growth rate in income of the respective centile. If the GIC is above 0 for all percentiles ($g_t(p) > 0$ for all p), then it indicates absolute pro-poor growth. If the GIC is negatively sloped it indicates relative pro-poor growth. It is important to note that we assume anonymity throughout, i.e. we consider the growth rates of percentiles, even though they contain different households or individuals in the two periods.⁷

To calculate the non-income growth incidence curves to measure the pro-pooriness of improvements in education, we follow the approach of Grosse et al. (2008). The calculation of the non-income growth incidence curves (NIGIC) broadly follows the concept of the GIC. Instead of income (y), we apply Equations (2) to selected education indicators to measure pro-poor progress in education directly via outcome-based welfare indicators over time.

In general, the growth incidence curve for education indicators can be calculated in two different ways. The first way, we call conditional NIGIC in which the individuals are sorted by income and calculate based on this income ranking the population percentiles of the education variables. With the conditional NIGIC, one can address the question whether and, if yes, to what extent the income poor population subgroup have benefited from improvements in education compared to the income richer population subgroups. In addition, one can capture the problem that the assignment of the households to income percentiles on the one hand (GIC) and to non-income percentiles on the other hand (unconditional NIGIC) might not be the same. For example, the income-poorest group might not be the education-poorest group at the same time. This means that, in the conditional NIGIC, the percentiles are income percentiles, thus that the ‘poorest’ percentile is the one with lowest income, but that the

⁷One should be cautious when deducing policy implications from the GIC when assuming anonymity. In particular, the GIC allows not to show if, for example, specific policy measures were beneficial to those who were poor in the initial period, but can show if the poor in both periods have benefited more from the measures than the non-poor. For a discussion of this and results when the anonymity axiom is lifted, see Grimm (2007).

growth rates are non-income growth rates, thus, are calculated for, e.g. years of schooling of the income percentiles.

The second way is to rank the individuals by each respective education indicator and generate the population percentiles based on this ranking. Based on distribution one can then calculate growth rates for each respective educational indicator along the educational distribution. In other words, one asks whether the education poor population have benefited more from improvements in education than the education richer population subgroups. This, we call the unconditional NIGIC. For example, using average years of schooling of adult household members, the ‘poorest’ percentile is now not the income-poorest percentile but the one with the lowest average household educational attainment.

Both ways of calculating the NIGIC are of particular relevance for policy making. The conditional NIGIC provides a tool to investigate how the progress in non-income dimensions of poverty was distributed over the income distribution. This means that it allows to interplay between education and poverty. This is also of relevance when evaluating distributional impacts of aid and public spending. Standard benefit incidence studies, for example, analyze the impact of public spending by calculating shares of the total spending to each percentile and comparing the shares of the income poorest with the income richest centile (see e.g. Van de Walle, 1998; Van de Walle, 1995; Lanjouw and Ravallion, 1998; Roberts, 2003). But the share of public spending for the poor serves only as a proxy for a real welfare impact in terms of non-income achievements. With the conditional NIGIC, it is then possible to analyze the actual improvements in the particular social indicator over the income distribution. For example, it provides an instrument to assess if public social spending programs have reached the targeted income-poorest population groups and if the public resources are effectively allocated and used. For example, Berthélemy (2005) shows that education policies in Sub-Saharan Africa are biased against the poor. On average, policies favor the non-poor because they are concentrated on improvements in secondary and tertiary education and only little attention is paid to improvements in primary education completion, i.e. to the poor population. In this respect, the conditional NIGIC might be a useful

tool in the pro-poor spending analysis to understand who benefits from public spending and to what extent. The unconditional NIGIC mirrors the development of the social indicators that are relevant for human welfare. Thus, it can monitor how the non-income MDGs (especially MDGs 2-6) have developed over time for different points of the non-income distribution. In order to reach the MDGs, improvements will be particularly important for those at the lower end of the non-income achievements and the NIGIC allows such an assessment.

Whereas the growth incidence curve is calculated based on percentiles ($p = 1, 2, \dots, 100$), in this paper, we calculate the growth rates, both for the conditional and unconditional distribution, based on vintiles ($p = 1, 2, \dots, 20$). The reason for using vintiles instead of percentiles is to get a higher number of observations for each group when individuals are ranked by income. For example, if a percentile contains only 50 individuals (ranked by income) and if we assign to these percentiles the respective mean years of education, then it is possible to obtain huge variations within each percentile, which results in very wide confidence intervals between the growth in the two periods, and we will not be able to make precise statements about the income gradient.

4 Data

For the analysis of the improvements in education along the welfare distribution of populations and over time in developing countries, we use national representative Demographic and Health Surveys (DHS) for several countries and years. Besides information about household socio-economic characteristics, health, nutrition and infrastructure, the DHS data sets include also several indicators on education both for children and adults. Table 1 provides an overview about the countries and periods for which we use the DHS data sets for the analysis. In sum, we analyze the distribution of access to the education system and educational outcomes for 37 developing countries covering regions in Latin America, Africa and South East Asia. For 24 countries, we have data sets for 3 periods. This allows not only to capture changes in the access to the education system and in educational outcomes over time, but also to examine and analyze differences in these changes between the pre- and post-Dakar periods in the distribution of access and outcomes of education by welfare groups

as well as by the other background characteristics such as urban and rural areas and/or by gender. For 13 countries we still have two periods allowing to examine and analyze changes over time. In sum, we analyze the access to education and educational outcomes using 98 DHS data sets.

For the access to the education system, we use two indicators, the net attendance rates for primary and secondary education based on the respective country specific age structures.⁸ The means that, for example, the net attendance rate to primary education in Bangladesh is calculated by dividing all children in the age group of 6-11 years that are enrolled in school by the total number of children of this age. To analyze the progress towards the goals of universal primary education, the attendance status is the most obvious indicator to use since it is the most basic element of school participation.

The net attendance rate of primary and secondary education considers only those children as enrolled who are in the official country specific age range (e.g. 6-11 and 11-17). Children of other ages, even if they are enrolled, are not taken into account. As the net attendance rate covers only the children in the official age range that is associated with a given level of education, the net attendance rate is also an indicator of the functional capability of the educational system, because a high net attendance rate is only possible if the education system has the capacity to educate entire cohorts and allow them to make progress according to their age.

To assess the educational attainment in each country and across the welfare distribution within countries, we use two different indicators for two different age groups. First, we use average years of schooling completed and, second, the completion rates of primary, secondary or higher education. As the two age groups of adults, we use the age group aged between 17 and 22 and between 23 and 27. Age plays an important role when analyzing changes in non-income indicators, especially for education. In particular, not much improvements in education can be expected among the adult population (for example the education of 30-40 year olds in the first period should not be very different from the education of the 40-50 year olds in the second period ten years later).

⁸Since our analysis is based on household survey data, we use attendance rates instead of enrolment rates as presented in the UNESCO reports based on aggregated macro data. The respective country specific official age ranges are shown in Table A1.

To avoid misleading conclusion from potential low improvements, we, therefore, restrict the sample to these two cohorts of young adults as these age groups are likely to have experienced a change in their educational achievement.

For all education indicators we calculate their distribution across the welfare distribution based on the asset index for each country and period. In addition, we provide also a pro-poor progress analysis of changes in the indicators over time. For the countries, where three periods are available, we provide two non-income growth incidence curves, separately for two time periods to capture differences over time and also between the pre and post-Dakar period. For the countries, where only two periods are available, we provide one non-income growth incidence curve. In addition to this analysis, we also provide an examination of the distribution and changes in access to the education system and in educational outcomes separately by urban and rural areas and by gender.

5 Results

5.1 Between Country and Region Educational Inequality

In the sample of countries we analyze in this paper, a large heterogeneity in terms of their level of human development is observable. Table 2 shows an overview of selected indicators of human development for the latest survey year for each country. Table 2 shows large country specific differences in the level of per capita GDP and poverty rates. The level of GDP per capita ranges from 646 USD PPP in Malawi (2004) to 7304 USD PPP in Colombia (2005). On average, low levels of GDP per capita correlate strongly to high rates of poverty. In addition, low levels of GDP per capita and high poverty rates are strongly related to a low level of human development measured by the Human Development Index (HDI). The values of the HDI show that no country in our sample belongs to the group of high human development ($HDI \geq 0.8$). In contrast, from the 37 countries in the sample, 16 countries are considered as countries with low human development showing a HDI of < 0.5 .⁹ All these countries are in Sub Sahara Africa. The other six Sub-Saharan African coun-

⁹In particular, these countries are: Benin, Burkina Faso, Chad, Cote d' Ivoire, Ethiopia, Guinea, Kenya, Malawi, Mali, Mozambique, Nigeria, Niger, Tanzania, Rwanda, Senegal, and Zambia.

tries exhibit an HDI value of around 0.5. The next group of similar human development with HDI values of slightly above the 0.5 threshold of low human development covers countries from Sub-Saharan Africa, Latin America, South Asia, and the Caribbean.¹⁰ No country in Sub-Sahara Africa has a HDI value of more than 0.610 (Namibia). The third group is characterized by HDI values that range between 0.6 and 0.75 showing the highest human development in our sample.¹¹ All these countries are from Latin America or South Asia. Among all countries, Burkina Faso shows the lowest HDI of only 0.317, whereas Colombia shows the highest value of the HDI with 0.791. The heterogeneity of the countries is also reflected by the HDI ranks of the countries. The position varies from 75 (Colombia) to 175 (Burkina Faso) from 177 listed countries in the Human Development Reports.

After showing the large differences in the level of human development between countries, we now analyze the between and within country differences in the access to the education system and in outcomes of education. Figure 1 provides an overview of the between and within country distribution of net attendance of primary education for the children in the respective official age range by asset index quintiles as well as the mean value for each country.¹²

First, looking at between country and region specific differences, Figure 1 shows large disparities in net attendance rates between countries and regions in the developing world. Some countries show a mean net attendance rate of more than 90 percent (i.e. Brazil, Vietnam, Indonesia, Colombia, Peru, Philippines). These high levels of access to the educational system confirm the relatively high levels of human development of these countries. One exception is Brazil. Although Brazil has a relatively low HDI value of 0.531 it shows the highest mean net attendance rate in primary education in our sample. In contrast, the countries with the lowest levels of human development also show the lowest attendance rates for primary education. For example, Burkina Faso, the country with the lowest HDI value, also exhibits the lowest level

¹⁰In particular, these countries are: Bangladesh, Brazil, Cameroon, Ghana, Haiti, Madagascar, Uganda, and Zimbabwe.

¹¹In particular, these countries are: Colombia, Dominican Republic, Guatemala, Indonesia, Nicaragua, Peru, Philippines, and Vietnam

¹²For the official age ranges for primary and secondary education, see again Table A1 in the Appendix.

of net attendance in primary education. The group of Sub-Saharan African countries that were identified as countries with an HDI value of less than 0.5 also have the lowest net attendance rates in primary education. Whereas the richer countries show attendance rates of more than 90 percent, these countries have attendance rates of under 50 percent, reflecting large between country differences. This is also shown in Table 3, which shows the respective numbers to Figure 1, i.e. the net attendance rates in primary education by asset index quintiles and the mean value. Looking at the latest available survey year, one can also see the high between country differences by comparing the mean values between countries of different levels of human development. Colombia (2005) exhibits a mean net attendance rate of 94 percent, whereas Burkina Faso (2003) exhibits a rate of only 35 percent which is more than 2.5 times less than in Colombia. Furthermore, large differences in net attendance are also found between countries that are otherwise in a similar stage of human development. For example, Figure 1 and Table 3 show that although Kenya is at the same level of human development as Nigeria, Kenya has a significantly higher level of net attendance (0.884 compared to 0.689 in 2003). The same holds also, for example, for Bolivia and Vietnam. Besides the large country specific differences, one can clearly observe region specific differences in the level of access to the education system. Countries in Latin America and Asia exhibit an overall higher level of attendance rates than countries in Africa.

To confirm the result that the level of access to education is related to level of human development, Figure 2 shows the correlation between the net attendance rates in primary education and the HDI value for the latest available survey year for the countries in the sample. The figure shows a quite close relationship between the level of human development measured by the HDI and the access to the education system of children in the respective age cohort.

Similar between country and regions specific differences can also be observed when looking at the educational outcomes of adults. Figure 3 shows the percentage of primary education completion of adults aged between 23 and 27 by asset index quintiles as well as the country mean values for the respective latest available survey years for each country. Overall, Figure 3 conforms the results of Figure 1. Again, the countries with the lowest levels of human devel-

opment, i.e. the region of Sub-Saharan Africa, also show the lowest educational outcomes. Again countries from Latin America and Asia have, on average, a higher level of educational outcomes than countries from Africa. Interesting to note is that between country differences with respect to primary education completion rates are even higher than those with respect to net attendance rates. In fact, rates of primary education completion range from 89 percent in Indonesia (20003) to 12 percent in Mali (2001).¹³

Comparing the different indicators of access to education and educational outcomes with each other, Figure 4 presents the correlation between selected educational indicators by countries for the respective latest available survey year. Figure 4 shows a quite close relationship between educational indicators both for adults and children. For example, with increasing net attendance rates in primary education the years of education of adults also increase.

Tables 4-5 and Tables A2-A8 in the Appendix present the respective numbers of all other educational indicators by asset index quintiles as well as the means for the latest available survey year, i.e. net attendance rates for secondary education, average years of education for the agegroup 17-22 and 23-27, primary education completion rates (agegroup 17-22 and 23-27), secondary education completion rates (agegroup 17-22 and 23-27), and higher education completion rates (agegroup 17-22 and 23-27). All tables confirm the foregoing results of between country and region inequality in education.

5.2 Within Country Educational Inequality

One strong advantage of the use of household data in contrast to aggregated data sets for countries is the possibility to analyze differences within countries between certain subgroups. In fact, our results point to very significant inequalities in education within most countries. This is for example demonstrated by Figure 1, which illustrates the disparities in net attendance rates in primary education between the richest and the poorest asset index quintile. Figure 2 shows that in many countries, there seem to be different worlds with respect to the distribution of access to education between welfare subgroups. Overall, within country inequality in access to education exhibits a similar

¹³See also Table A5 in Appendix for the respective numbers.

pattern to between country inequality. First, countries with lower levels of human development show the highest inequalities in net attendance rates in primary education, whereas in richer countries the inequality is significantly lower. Again, countries from Sub-Saharan Africa show higher levels of inequality than countries from Latin America and Asia. Second, what is interesting to see is that educational inequality increases with lower average levels of net attendance rates.

Table 3 concretizes the within country differences. Besides the distribution of net attendance rate over asset index quintiles, Table 3 also provides the ratio of the fifth to the first quintile as a direct indicator of inequality between the richest and the poorest population subgroup. Starting with the first country in Table 3, Bangladesh, it is shown that inequality in net attendance rates is quite low in Bangladesh. In the 2004, 80.8 percent of all children in the official primary education age range were enrolled in school in the poorest quintile, whereas 89 percent were enrolled in the richest quintile leading to a five to one ratio of 1.103. This result confirms the picture of Figure 3. However, when looking, for example, at the five to one ratio in net attendance in Niger in the year 2006, the result is very different. Here, the net attendance rate for the richest population quintile is more than three times higher than the net attendance rate of the poorest quintile (3.139).

Figure 3 and Tables 4 and 5 show the results for rates of primary education completion (agegroup 23-27), average years of education (agegroup 17-22) and secondary education completion (agegroup 17-22), respectively. Figure 3 shows that the within country inequalities for the indicators of educational outcomes are even higher than for net attendance rates as an indicator for the access to the education system. Again, inequality seems to increase with lower levels of educational attainment. But even countries with a relatively high level of primary education completion exhibit considerable within country disparities. The respective numbers for each quintile and the five to one ratios are shown in Table A5. For example, whereas the five to one ratio in Indonesia is 1.314 in the year 2003, the ratio in Ethiopia is 10.571 meaning that in Ethiopia the richest population quintile has a rate of primary education completion that is more than ten times higher than the rate for the poorest quintile. In addition, this

results also show that inequality in primary education completion between the poor and rich is about nine times higher in Ethiopia than in Indonesia. Table 4 also confirms the high differences in educational outcomes within countries and also the large between country differences in the level of educational inequality. For example, individuals in the richest quintile in Burkina Faso in the year 2003 aged between 17 and 22 have, on average, 6.712 times the years of education than those among the poorest population quintile (0.840 compared to 5.639). In addition, Table 4 again illustrates the between country differences in the outcomes of education. Even if inequality within the country is nearly at the same level like in Colombia (2005) and Malawi (2001), there remains a significant difference in the mean educational outcomes, which is almost a difference of three years.

The differences in the level of educational outcomes and in the level of inequality within countries is even higher when it comes to higher levels of education. Looking at differences in secondary education completion between population welfare subgroups, which are presented in Table 5 for the agegroup 17-22 and in Table A6 for the agegroup 23-27, we also find dramatic disparities between the poorest and the richest quintile in nearly all countries. For example, whereas the ratio between the poorest and the richest quintile in primary education completion in Uganda (2006) was 3.323 (Table A3) it was 9.443 in the same year for secondary education completion among the individuals ages between 17 and 22 (Table 5). Table 5 also shows that in many countries the poorest quintile show rates of secondary education completion of the agegroup 17-22 that are below 1 percent or even zero (like in Chad (2004)). And even more extreme inequalities are found when looking at the levels of higher educational outcomes, which are shown in Tables A7-A8. Higher education completion still remains a privilege for individuals living in countries with an overall higher development. Almost all African countries show levels of higher education below 1 percent among the first to third welfare quintile for both agegroups. As a result, many countries show ratios of the fifth to the first quintile of more than 10 (see Table A7 and A8).

To get a closer view on the distribution of access to education and educational outcomes, Figure 4 plots the distribution of net attendance rates,

years of education, and rate of primary education completion for Indonesia (for the years 1991, 1997, and 2003) and Burkina Faso (for the years 1993, 1998, and 2003). Figure 4 shows two main results: First, looking at the educational distribution of both countries, one can see a clear bias against the poor. For all indicators, the curves show a positive slope indicating that richer population subgroups have better access to education and higher educational outcomes than poorer population subgroups. Especially the first three quintiles are bypassed by access to education and educational outcomes. Then, all curves began to rise sharply illustrating the high disparities between the richest and the poorest welfare groups, which is particularly high in Burkina Faso. Second, looking at the differences between countries, Figure 4 illustrates again the large differences in access to educational and educational outcomes between countries. For all educational indicators, Indonesia shows a higher level than Burkina Faso in all periods. What is also interesting to note is that whereas significant differences in the levels of net attendance rates of primary and secondary education are found for both countries, the differences are much smaller when comparing educational outcomes of the two agegroups. The two countries are chosen as examples, because they illustrate the overall trend that we have found for the other countries in the sample, for which Figures A1a-A37a show the respective graphs by country and year in the Appendix. Also these Figures not only show the huge inequalities within countries but also huge disparities in inequality between countries and region, and not only in mean values as found in the previous section.

To show the relationship between the educational indicators within countries, Figure 5 shows the correlations between several indicators by country for the latest available survey year. Overall, Figure 5 confirms the finding of a close relationship between educational indicators. For example, looking at the correlation between the net attendance rate of primary education and years of education, Figure 5 shows a quite clear relationship over the countries in the sample. In addition to the overall close relationship between educational indicators across countries, Figure 6 illustrates the relationship between the level of education and the level of within country inequality by showing the correlation between the net attendance rate of primary education completion

and between the net attendance rate of the poorest quintile, the richest quintile and the five to one ratio. Also Figure 6 confirms the foregoing results. In countries with high levels of attendance, also the poorest quintile show higher levels of attendance. However, Figure 6 also shows that countries with higher overall net attendance rate have also higher levels of inequality measured by the five to one ratio.

5.3 Pro-Poor Educational Progress?

We now analyze the trends in improvements of access to education and in educational outcomes over time and turn to the research question if and to what extent the progress in educational indicators have been pro-poor or not. For this, Figure 7 shows the non-income growth incidence curves (NIGIC) for the rates of net attendance in primary and secondary education, for years of education and primary and secondary education completion for the agegroups 17-22 and 23-27 for Indonesia (for the periods 1991-1997 and 1997-2003) and for Malawi (for the periods 1992-2000 and 2000-2004). For all other countries in the sample, the graphs are presented in Figures A1b-A38b in the Appendix. For the countries in the sample for which three surveys are available two NIGIC are presented, one for the pre-Dakar period and one for the post-Dakar period.¹⁴ For the other countries, one NIGIC is presented for the time between between the respective two periods. Starting with Malawi (1992-2000), the NIGIC for net attendance in primary and secondary education show an overall pro-poor progress. Both curves are above zero along the whole distribution indicating an overall improvement in the net attendance rates in primary and secondary education. Both curves are also negatively sloped meaning that the growth rate in net attendance rates are higher for the poor than for the non-poor population subgroups. The same holds also, but to a lesser extent, for Indonesia (1991-1997). Also here, both curves are above zero and slightly negatively sloped. What is interesting to note here is that the very poor do not have made improvements in the net attendance in secondary education at all and that highest improvements have been made by the middle population quintiles. Looking at the post-Dakar period, the picture only slightly differs from

¹⁴Since most surveys do were not available exactly for 1991, 1999 and later, we try to the two periods as close as possible to pre 1999 and post 1999.

the pre-Dakar period. Improvements in net attendance rates have been more equally distributed across the welfare distribution both in Malawi (2000-2004) and Indonesia (1997-2003). And although both NIGIC for Malawi are slightly negatively sloped, for some population subgroups, the situation has even been worsening especially middle of the welfare distribution.

Looking at the pre- and post-Dakar trends in changes in average years of education, Figure 7 shows a similar picture for educational outcomes of adults as for access to education. Although much more volatile than in the pre-Dakar period, for Malawi, both NIGIC show a pro-poor progress in the years of education in both periods for both agegroups. However, as already observed for Indonesia, also the very poor in Malawi have been bypassed by improvements in years of education in the post-Dakar period. And concerning adult education, it is interesting to see that improvements in Malawi in the post-Dakar are slightly higher for the agegroup 23-27, whereas in Indonesia it is slightly higher for the agegroup 17-22.

The next four curves present the NIGIC for rates of primary and secondary education completion for both agegroups and countries. Looking at the development of primary and secondary education completion in Mali during the pre-Dakar period, Figure 7 shows an overall positive and pro poor progress in primary education completion. Here, the highest growth rates are found for the very poor population subgroups. However, from the NIGIC for secondary education completion it is not possible to draw any conclusions about the pro-poorness of the changes. For the first 7 vintiles, no growth rates are computable. The reason for this is that the population subgroups at the lower end of the distribution had no secondary education completion in 1992 resulting in uncomputable growth rates, which is confirmed when looking at the first and second quintile for Malawi in Table 5. Table 5 also shows that even in 2000 very poor have almost no secondary education completion indicating an progress that was no pro-poor at all. For Indonesia (1991-1997), Figure 7 shows a slightly pro poor development for primary education completion, whereas no clear trend is observable for secondary education. During the post-Dakar period both countries show improvements in primary and secondary education completion, which are almost equally distributed across the

welfare groups. Thus, no clear evidence can be observed indicating pro-poor progress. Whereas highest rates of growth are found for the poorer welfare in Malawi (2001-2004), in Indonesia, again the middle of the distribution have benefited most from improvements. Also Table 5 confirms that improvements in both country are very low in secondary education completion.

The last four curves of Figure 7 show the development of years of education based on the unconditional ranking of individuals in the surveys. This means that the individuals are ranked by the years of education. The unconditional NIGIC, therefore, shows how the improvements in education are distributed over the education distribution, i.e. whether the education poor have been benefited overproportionally more from progress in education than the education richer groups. For the pre-Dakar period, Figure 7 shows only a very low progress at all. Very interesting to note is that the first five vintiles in Mali do not show any growth rates. This is because these population groups have had no education in the base year resulting in uncomputable growth rates. This finding is confirmed for almost all Sub-Saharan African countries.¹⁵ This holds also for the very poor subgroups in Indonesia, but to a lesser extent. Progress in educational outcomes was higher during the post-Dakar period. However, for Mali no real trend is observable that the education poor have been made higher progress than the non-poor. This is a very interesting result, because a slightly pro-poor development in the years of education was found for the conditional NIGIC, which shows the differences in both rankings and indicates that there is not a perfect correlation between education and welfare. In contrast, Indonesia show a more clear pro-poor development in educational outcomes.

When looking at the NIGIC of the other countries in the sample in the Appendix, no clear trend is observable concerning the pro-poorness of changes in access to education and in the educational outcomes. Overall, we find that Sub-saharan Africa is making progress but still lacks behind. For some countries such as Cameroon, Colombia, and India, a pro-poor progress is observed for some indicators, whereas some countries like Ghana and Zambia even show an anti-poor development in education. For other countries the progress is

¹⁵See the respective Figures in the Appendix.

more or less equally distributed over the population such as in Cote D'Ivoire, Dominican, Republic, Kenya, Nepal and Philippines. Moreover, there is also no clear common trend across the indicators we have analyzed within countries, nor between regions. For example, whereas in Niger a pro-poor development is found for the net attendance rate, an anti-poor development is found when looking at educational outcomes like years of education (see Figure A18b).

Concerning the research question about the differences in pro-poor progress between the pre-Dakar and post Dakar periods, we use Table 4, Table 3 and Table 5 to show the overall development in the mean values in access to education and in educational outcome. The mean development already provide some interesting findings. For most countries, an overall positive development in education is observed. However, for some countries (among those for which we have three surveys) we observe a decrease in access to education during the pre-Dakar periods and then a rise in the post-Dakar period that is not high enough to compensate the foregoing decline. For example, whereas the mean in years of education in Burkina Faso decreased from 2.524 in 1992 to 1.849 in 1998, it increased to 2.234 in 2003 that is a lower mean level than in 1998.

Figure 8 provides an overview about the differences in the direction and extent of changes in net attendance rate five to one ratio for all countries between the pre-Dakar and post-Dakar period. Also here, no clear trend is observable. For example, in Benin inequality in net attendance rate has been falling in both periods, and to a higher extent in the post-Dakar period. Starting from the vertical line to the arrow marked by 'pre' shows the change during the pre-Dakar period, which shows a decrease in inequality. From the 'pre' arrow to the 'post' arrow captures the changes during the post-Dakar period, which shows also a decrease that is higher than during the pre-Dakar period. Countries, in which inequality has decreased in both periods are Dominican Republic, Colombia, Cameroon, Burkina Faso, Benin, Bangladesh, Zimbabwe, Philippines, Nigeria, Malawi. Countries, in which the reduction in inequality is higher for the post-Dakar periods are Cameroon and Nigeria. For some countries, inequality have been risen during the first period and fallen during the second period and vice versa (e.g. Haiti and Rwanda). Overall, Figure 8 confirms the foregoing result that no clear country specific, region specific

or period specific trends are observed in the pro-poorness of the changes in education.

5.4 Inequality in Education by Gender and Areas

After having analyzed the pro-poor progress in access to education and in educational outcomes between countries and within countries across welfare groups, we now turn to the analysis of differences on pro-poor progress in education by gender and by rural and urban areas.

Table 6 and Figure 9 show the differences in the educational indicators by gender exemplarily for India. For all indicators and periods, three glaring findings emerge. First, the level of access to education and of educational outcomes are considerably higher for boys than for girls, not only on average but also for every single asset index quintile. For example, whereas the net attendance rate in secondary education of the boys in the poorest quintile was 65 percent in 2003 it was only 51 percent for the girls. A boy of the poorest quintile have had almost twice as much years of education than girls in 2003 (5.651 compared to 3.284). The gender bias in education is worse for higher education. Girls of poorer welfare subgroups in India are almost perfectly bypassed by access to higher education completion resulting in very low rates higher educational outcomes.

Second, gender specific inequality in education is higher for the poor than for the non-poor. This is illustrated by Figure 9, which shows not only the differences in the level of education between boys and girls but also an increasing convergence of the curves with increasing welfare. Especially when looking on adult education, gender specific inequality in education is first of all a problem for the poor. In richer welfare groups, the one who can afford the costs of education for all children, a gender bias in education diminishes.

Third, inequality between welfare groups is higher for girls education than for boys education. The five to the one ratio is significantly higher for girls than for boys for all indicators and periods in India.

To analyze the pro-poor progress separately for males and females, Figure 10 shows the NIGIC by gender for India. Overall, we found that improvements in the access to education and in educational outcomes were pro-poor in India

in the pre-Dakar period as well as in the post-Dakar period. For all indicators, there is also a pro-poor development for boys and for girls. Interesting to observe is that for net attendance rates in primary education, years of schooling and primary education completion, the growth rates for girls are higher than for boys, especially at the lower end of the distribution. This is a very promising results, indicating a decrease in gender inequality in education. This is also confirmed by Table 6, which shows that the absolute differences between girls and boys decreases over the years. The low growth rates at the upper end of the distribution indicates that these welfare groups have had already a high level of education so that remains only limited potential for further improvements. For education of adults, Figure 10 shows that again, the poor are bypassed by improvements in education. In the pre-Dakar period, especially the middle of the distribution have been benefited from improvements, whereas the progress was very small and slightly anti-poor during the post-Dakar period.

However, overall, we found that gender differences in education are characteristic for countries with low overall attendance. Besides the positive development in India, underparticipation in education of girls is a persisting concern in Sub-saharan African countries. This regions show no real progress in achieving gender parity.

Table 7 and Figure 11 show the differences in access to education and in educational outcomes between rural and urban areas in Burkina Faso, which mirrors the overall trend across the countries in the sample. As expected, access to education and educational outcomes are much higher in urban areas than in rural areas. Children from rural households are less likely to be attended than children living in urban areas. This is illustrated in Figure 11 for the year 2003. Although the curves show a similar pattern across the distribution, one can see the large difference in the level of access to education between rural and urban areas.

Table 7 shows that whereas the mean years of education in 2003 was 5.503 years for the agegroup 17-22 in urban areas, it was only 1.248 in rural areas. In addition, higher levels of educational outcomes are very low in rural areas. The same trend is found for all other education indicators.

Looking at the difference between urban and rural areas across the welfare

distribution, two main findings emerge. First, inequality in education is higher in rural areas than in urban areas. For example, whereas the five to one ratio for primary education completion in 2003 is 1.799 in urban areas, it was 4.299 in rural areas. Second, differences in education between urban and rural areas are higher for the poor than for the non-poor. For example, the urban rural ratio in years of education in 2003 was 7 for the poorest asset index quintile, for the richest quintile it was 2.9.

Figure 12 shows the pro-poor progress in education in Burkina Faso by urban and rural areas. Besides an overall increase in the access to education and also in educational outcomes, subnational disparities remain between urban and rural areas in both periods. For the post-Dakar period, growth rates are slightly higher for rural areas indicating a small decrease in inequality between rural and urban areas. However, the unconditional NIGIC shows that the education poor in rural areas have not benefitted more from improvements in education than the education poor in urban areas. These results are also confirmed by the other countries in the sample. The improvements that have been made are more or less equally distributed across welfare groups and also across regions. This means that, as also found for gender parity in education, large differences in education between rural and urban areas remain.

6 Concluding Remarks

The question whether the poor can benefit from progress in access to the education system and educational outcomes is of considerable importance with respect the achievements of the EFA goals until 2015. The aim of the paper was to identify and understand which parts of the population have benefited most or have not benefited from the improvements in the access to the education system and in educational outcomes and to highlight the differences in the progress, if any, between the pre- and post-Dakar periods.

In this paper we provided a synthesis of the distribution, and changes in access to education and in education outcomes over-time by welfare, gender and urban and rural areas for 37 developing countries. In particular, we calculated the distribution of net attendance rates in primary and secondary education, years of schooling and rates of primary, secondary and higher education com-

pletion across the welfare distribution based on the asset index for each country and period, and provided also a pro-poor progress analysis of changes in the indicators over time.

Overall, our findings confirm that the level of access to education is related to level of human development. The countries with the lowest levels of human development, i.e. the region of Sub-Saharan Africa, also shows the lowest educational outcomes. We also find considerable region specific differences in the access to education and in educational outcomes. Countries from Latin America and Asia have, on average, a higher level of educational outcomes than countries from Africa.

Concerning within country differences in education by welfare, our results point to very significant inequalities in education within most countries. Richer population subgroups have better access to education and higher educational outcomes than poorer population subgroups. Within country inequality in access to education exhibits a similar pattern to between country inequality. First, countries with lower levels off human development show the highest inequalities in education, whereas in richer countries, the inequality is significantly lower. In addition, educational inequality increases with lower average levels of education, while we find a close relationship between educational indicators. Furthermore, the differences in the level of educational outcomes and in the level of inequality within countries are even higher when it comes to higher levels of education.

Concerning the question if and to what extent the progress in educational indicators have been pro-poor or not and concerning the research question about the differences in pro-poor progress between the pre-Dakar and post Dakar periods, we find that although positive average improvements have been made, in all countries over time, no clear country specific, region specific or period specific trend is observed in the pro-poorness of the changes in education. One alarming common finding is that although Sub-saharan Africa is making progress, it still lacks far behind other regions and behind the goals. Even more worrying is that the very poor population subgroups are often bypassed by improvements in education.

Concerning gender specific and region specific differences in education within

countries we find that, first, the level of access to education and of educational outcomes are considerably higher for boys than for girls and higher in urban than in rural areas. Second, gender specific and region specific inequality in education is higher for the poor than for the non-poor. Third, inequality between welfare groups is higher for girls education than for boys education and also higher in rural than in urban areas. In addition, gender bias in education and regional differences are worse for higher education. Overall, we found that gender and region specific differences in education are characteristic for countries with low overall attendance. Besides overall positive development, underparticipation in education of girls is a persisting concern in Sub-saharan African countries. This region shows no real progress in achieving gender parity. Large differences in education also remain between rural and urban areas.

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Tables and Figures

Table 1: Demographic and Health Surveys by Country and Years

Country	Years	Country	Year
Bangladesh	1993, 1999, 2004	Brazil	1991, 1996
Benin	1996, 2001, 2006	Cambodia	2000, 2005
Bolivia	1994, 1998, 2003	Chad	1996, 2004
Burkina Faso	1992, 1998, 2003	Ethiopia	1998, 2005
Cameroon	1991, 1998, 2004	Guatemala	1995, 1999
Colombia	1995, 2000, 2005	Guinea	1999, 2005
Cote d'Ivoire	1994, 1999, 2004	Mali	1996, 2001
Dominican Republic	1991, 1996, 2002	Mozambique	1997, 2003
Ghana	1993, 1998, 2003	Namibia	1992, 2000
Haiti	1994, 2000, 2005	Nicaragua	1997, 2001
India	1992, 1999, 2005	Nigeria	1999, 2003
Indonesia	1991, 1997, 2003	Senegal	1992, 2005
Kenya	1993, 1998, 2003	Vietnam	1997, 2002
Madagascar	1992, 1997, 2004		
Malawi	1992, 2000, 2004		
Nepal	1996, 2001, 2006		
Niger	1992, 1998, 2006		
Peru	1992, 1996, 2000		
Philippines	1993, 1998, 2003		
Tanzania	1992, 1996, 2004		
Rwanda	1992, 2000, 2005		
Uganda	1995, 2000, 2006		
Zambia	1992, 1996, 2001		
Zimbabwe	1994, 1999, 2006		

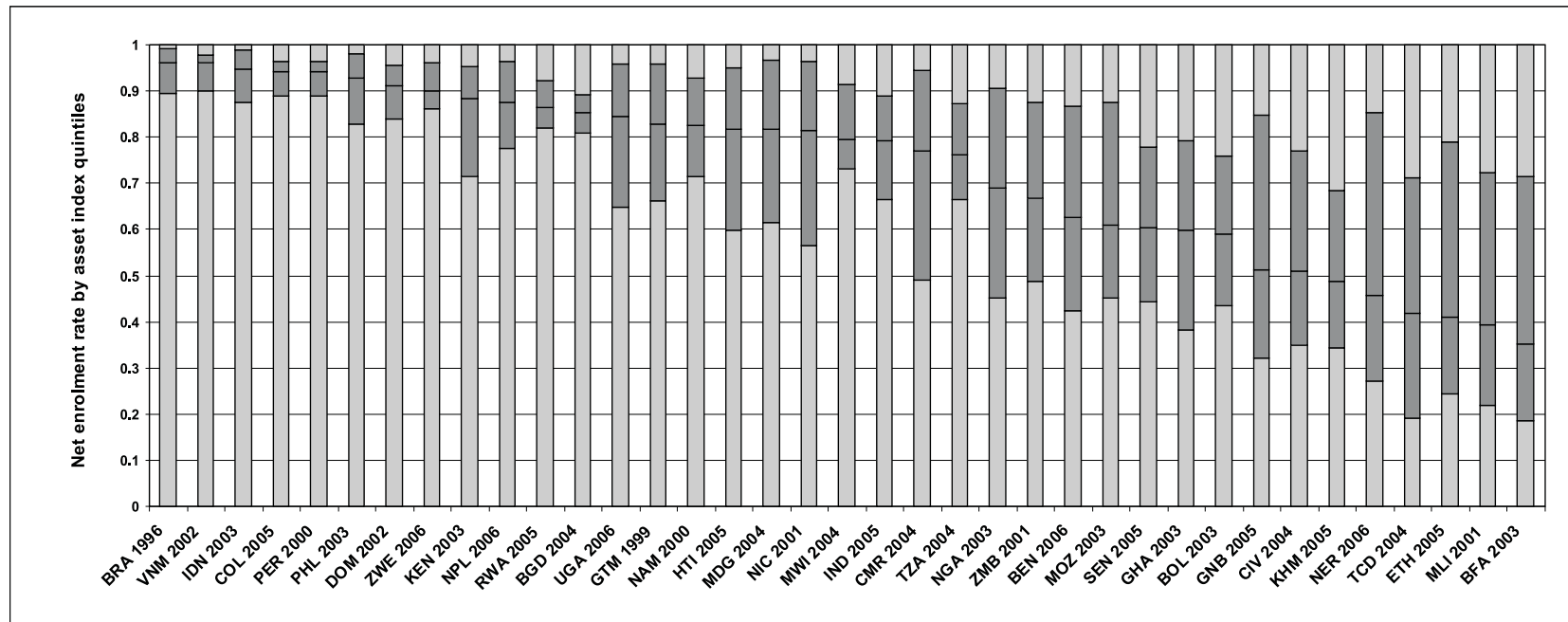
Source: Illustration by the authors.

Table 2: Country Overview

Country	Per Capita USD PPP	Poverty Headcount (1\$)	HDI	HDI Rank
Bangladesh (2004)	1870	41.30	0.530	137
Benin (2006)	1141	30.90	0.437	163
Bolivia (2006)	2819	23.20	0.695	117
Brazil (1996)	2038	56.12	0.513	151
Burkina Faso (2003)	1174	27.19	0.317	175
Cambodia (2005)	2727	34.08	0.598	131
Cameroon (2004)	2174	17.10	0.506	144
Chad (2004)	2090	n.a.	0.368	171
Colombia (2005)	7304	7.03	0.791	75
Cote d'Ivoire (2006)	1551	14.78	0.421	164
D. Republic (2002)	6640	2.78	0.738	98
Ethiopia (2005)	1055	22.98	0.406	169
Ghana (2003)	2238	44.8	0.520	138
Guatemala (1999)	3674	13.46	0.626	108
Guinea (2005)	2316	n.a.	0.456	160
Haiti (2005)	1663	53.89	0.529	146
India (2005)	3452	34.33	0.619	128
Indonesia (2003)	3361	7.51	0.697	110
Kenya (2003)	1037	22.81	0.474	154
Madagascar (2004)	857	61.03	0.509	143
Malawi (2004)	646	20.76	0.400	166
Mali (2001)	810	36.14	0.337	172
Mozambique (2003)	1117	36.18	0.379	168
Namibia (2000)	6431	n.a.	0.610	122
Nicaragua (2001)	2450	45.12	0.643	121
Nigeria (2003)	1050	70.82	0.453	158
Nepal (2006)	1550	24.10	0.534	142
Niger (2006)	781	60.60	0.374	174
Peru (2000)	4799	10.53	0.747	82
Philippines (2003)	4321	14.78	0.758	84
Tanzania (2004)	674	57.82	0.430	162
Rwanda (2005)	1206	60.29	0.452	161
Senegal (2005)	1792	17.01	0.499	156
Uganda (2006)	1454	n.a.	0.505	154
Vietnam (2002)	2300	n.a.	0.691	112
Zambia (2001)	780	63.80	0.386	163
Zimbabwe (2006)	2038	56.12	0.513	151

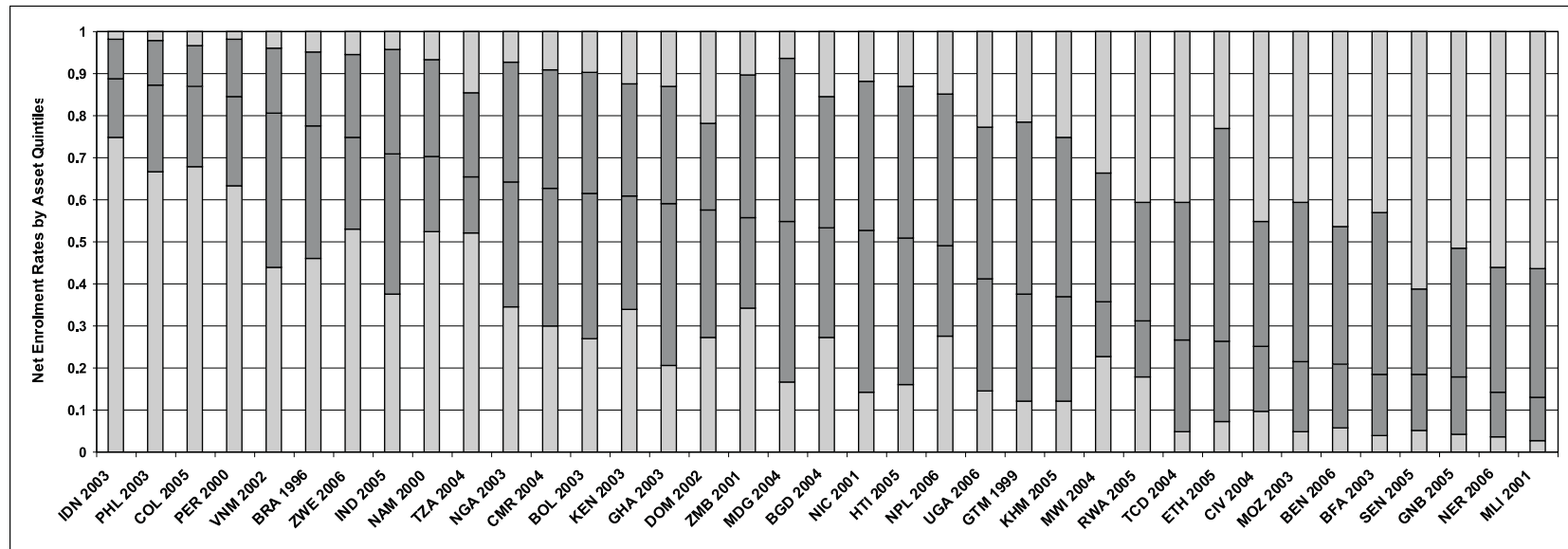
Source: World Development Indicators (2007), Human Development Reports. *Note:* For some countries, the information in the poverty headcount were not available for the respective year. In this case, the values of the years nearest to the actual year was used.

Figure 1
Same country different world: Net attendance rates for primary education by asset index quintiles



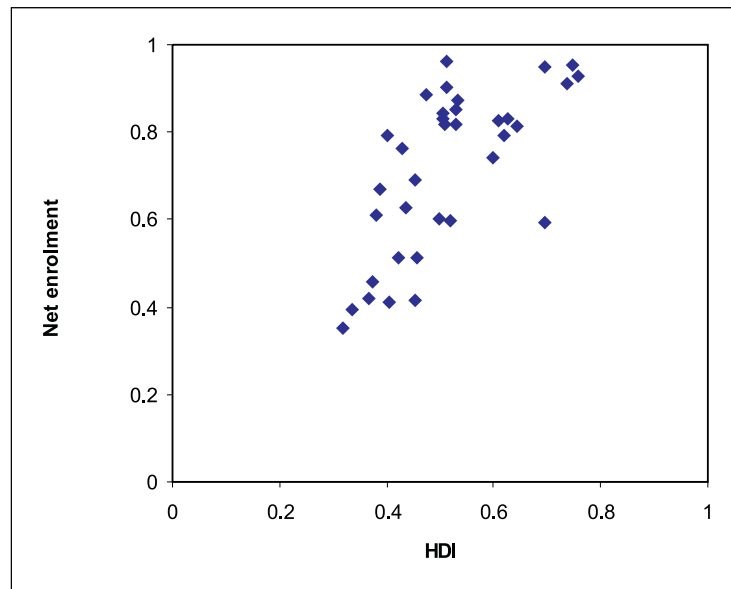
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 3
Same country different world: Primary education of adults (23-27) by asset index quintiles



Source: Demographic and Health Surveys (DHS); own calculations.

Figure 2
Correlation between net attendance rates and the HDI



Source: Demographic and Health Surveys (DHS); own calculations.

Table 3: Net Attendance Rates by Asset Index Quintiles
(Primary Education)

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Bangladesh	1993	0.595	0.727	0.747	0.833	0.828	0.746	1.392
	1999	0.711	0.759	0.847	0.859	0.855	0.806	1.203
	2004	0.808	0.802	0.869	0.890	0.891	0.852	1.103
Benin	1996	0.184	0.291	0.398	0.507	0.721	0.420	3.917
	2001	0.327	0.418	0.545	0.681	0.788	0.552	2.410
	2006	0.423	0.483	0.610	0.748	0.867	0.626	2.046
Bolivia	1994	0.837	0.884	0.927	0.942	0.970	0.912	1.160
	1998	0.885	0.927	0.961	0.973	0.987	0.947	1.115
	2003	0.436	0.459	0.579	0.724	0.758	0.591	1.740
Brazil	1991	0.191	0.288	0.454	0.617	0.637	0.437	3.331
	1996	0.894	0.952	0.986	0.985	0.993	0.962	1.110
Burkina Faso	1992	0.155	0.195	0.336	0.620	0.806	0.422	5.186
	1998	0.156	0.182	0.240	0.352	0.733	0.333	4.711
	2003	0.185	0.202	0.269	0.383	0.715	0.351	3.855
Cambodia	2000	0.455	0.589	0.625	0.695	0.861	0.645	1.891
	2005	0.583	0.669	0.746	0.818	0.885	0.740	1.519
Cameroon	1991	0.443	0.588	0.755	0.864	0.940	0.718	2.122
	1998	0.490	0.669	0.837	0.909	0.945	0.770	1.929
	2004	0.655	0.780	0.827	0.928	0.966	0.831	1.473
Chad	1996	0.195	0.223	0.293	0.433	0.603	0.349	3.098
	2004	0.192	0.262	0.393	0.531	0.713	0.418	3.715
Colombia	1995	0.820	0.902	0.950	0.963	0.984	0.924	1.200
	2000	0.845	0.911	0.943	0.960	0.946	0.921	1.119
	2005	0.890	0.940	0.955	0.958	0.964	0.941	1.084
Cote d'Ivoire	1994	0.300	0.396	0.468	0.588	0.740	0.499	2.472
	1999	0.383	0.437	0.589	0.711	0.788	0.581	2.060
	2004	0.348	0.418	0.459	0.560	0.769	0.511	2.210
Dominican Republic	1991	0.341	0.450	0.598	0.675	0.768	0.566	2.254
	1996	0.820	0.924	0.958	0.969	0.979	0.930	1.195
	2002	0.839	0.897	0.923	0.942	0.955	0.911	1.138
Ethiopia	1998	0.175	0.164	0.161	0.324	0.806	0.326	4.619
	2005	0.243	0.268	0.290	0.454	0.798	0.411	3.287
Ghana	1993	0.541	0.719	0.780	0.878	0.928	0.769	1.716
	1998	0.424	0.588	0.801	0.846	0.910	0.714	2.144
	2003	0.382	0.494	0.626	0.694	0.792	0.597	2.072
Guatemala	1995	0.472	0.588	0.687	0.802	0.894	0.689	1.895
	1999	0.663	0.775	0.828	0.920	0.959	0.829	1.447
Guinea	1999	0.122	0.164	0.236	0.346	0.548	0.283	4.507
	2005	0.321	0.362	0.423	0.610	0.848	0.513	2.646
Haiti	1994	0.384	0.656	0.809	0.870	0.920	0.728	2.397
	2000	0.635	0.799	0.804	0.801	0.511	0.710	0.805
	2005	0.598	0.754	0.851	0.933	0.950	0.817	1.589
India	1992	0.490	0.657	0.784	0.883	0.956	0.754	1.953
	1999	0.677	0.805	0.889	0.939	0.976	0.857	1.442
	2005	0.665	0.748	0.806	0.851	0.890	0.792	1.338
Indonesia	1991	0.720	0.815	0.874	0.931	0.967	0.861	1.344
	1997	0.846	0.925	0.949	0.967	0.988	0.935	1.168
	2003	0.876	0.936	0.960	0.976	0.988	0.947	1.127
Kenya	1993	0.657	0.741	0.725	0.803	0.808	0.747	1.231
	1998	0.772	0.889	0.875	0.869	0.928	0.866	1.202
	2003	0.716	0.859	0.937	0.955	0.952	0.884	1.329

Table continues on next page.

Table 3 - continued

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Madagascar	1992	0.391	0.484	0.535	0.703	0.900	0.603	2.303
	1997	0.401	0.499	0.509	0.721	0.958	0.618	2.393
	2004	0.616	0.744	0.812	0.940	0.967	0.816	1.571
Malawi	1992	0.459	0.497	0.625	0.689	0.882	0.630	1.921
	2000	0.645	0.701	0.763	0.800	0.910	0.764	1.411
	2004	0.730	0.758	0.781	0.786	0.914	0.794	1.252
Mali	1996	0.111	0.159	0.241	0.353	0.702	0.314	6.299
	2001	0.218	0.282	0.348	0.391	0.724	0.393	3.324
Mozambique	1997	0.374	0.396	0.490	0.657	0.845	0.553	2.257
	2003	0.452	0.446	0.542	0.732	0.876	0.610	1.936
Namibia	1992	0.808	0.869	0.826	0.820	0.898	0.844	1.110
	2000	0.714	0.820	0.795	0.871	0.927	0.825	1.298
Nepal	1996	0.428	0.416	0.471	0.591	0.743	0.530	1.736
	2001	0.486	0.598	0.667	0.782	0.920	0.691	1.893
	2006	0.775	0.826	0.877	0.932	0.964	0.875	1.243
Nicaragua	1997	0.572	0.760	0.846	0.909	0.951	0.808	1.662
	2001	0.565	0.762	0.870	0.915	0.964	0.815	1.704
Niger	1992	0.117	0.125	0.143	0.384	0.658	0.286	5.613
	1998	0.135	0.138	0.185	0.343	0.722	0.305	5.346
	2006	0.271	0.309	0.343	0.513	0.852	0.458	3.139
Nigeria	1999	0.386	0.423	0.668	0.777	0.875	0.626	2.267
	2003	0.451	0.594	0.673	0.824	0.905	0.689	2.005
Peru	1992	0.801	0.868	0.921	0.926	0.897	0.883	1.121
	1996	0.839	0.879	0.908	0.923	0.930	0.896	1.108
	2000	0.909	0.941	0.965	0.979	0.982	0.955	1.079
Philippines	1993	0.592	0.686	0.740	0.749	0.801	0.714	1.354
	1998	0.690	0.822	0.863	0.910	0.939	0.845	1.361
	2003	0.829	0.907	0.947	0.972	0.981	0.927	1.183
Rwanda	1992	0.529	0.579	0.668	0.652	0.793	0.644	1.500
	2000	0.457	0.423	0.414	0.378	0.407	0.416	0.891
	2005	0.821	0.853	0.853	0.871	0.922	0.864	1.124
Senegal	1992	0.106	0.203	0.312	0.495	0.740	0.372	6.958
	2005	0.443	0.534	0.569	0.694	0.779	0.604	1.758
Tanzania	1992	0.431	0.422	0.459	0.525	0.673	0.502	1.561
	1996	0.425	0.479	0.453	0.562	0.698	0.523	1.643
	2004	0.666	0.736	0.734	0.802	0.872	0.762	1.308
Uganda	1995	0.554	0.624	0.717	0.767	0.863	0.705	1.558
	2000	0.754	0.779	0.859	0.858	0.942	0.839	1.249
	2006	0.647	0.850	0.870	0.892	0.958	0.844	1.479
Vietnam	1997	0.712	0.831	0.886	0.909	0.919	0.851	1.291
	2002	0.900	0.963	0.991	0.980	0.979	0.962	1.088
Zambia	1992	0.587	0.618	0.777	0.863	0.952	0.760	1.622
	1996	0.505	0.569	0.608	0.734	0.904	0.664	1.790
	2001	0.488	0.605	0.665	0.709	0.875	0.668	1.793
Zimbabwe	1994	0.791	0.846	0.854	0.839	0.930	0.852	1.176
	1999	0.810	0.848	0.882	0.878	0.948	0.873	1.171
	2006	0.862	0.882	0.899	0.900	0.961	0.901	1.114

Source: Demographic and Health Surveys (DHS); own calculations.

Table 4: Average Years of Education by Asset Index Quintiles
(Agegroup 17-22)

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Bangladesh	1993	1.537	2.938	3.285	5.138	7.504	4.080	4.883
	1999	2.959	3.724	5.382	6.563	8.591	5.444	2.904
	2004	3.677	4.480	5.507	6.706	8.120	5.698	2.208
Benin	1996	0.635	1.080	1.637	2.763	5.108	2.245	8.048
	2001	1.081	1.657	2.326	3.665	6.451	3.036	5.968
	2006	2.207	2.475	3.483	4.731	7.659	4.111	3.470
Bolivia	1994	4.758	6.314	8.431	9.833	10.626	7.992	2.233
	1998	4.934	6.682	8.778	9.869	10.212	8.095	2.070
	2003	6.411	8.299	9.755	10.505	11.264	9.247	1.757
Brazil	1991	1.918	3.128	5.144	6.373	7.455	4.803	3.888
	1996	3.610	5.426	7.236	7.346	8.786	6.481	2.434
Burkina Faso	1992	0.389	0.674	1.880	3.708	5.971	2.524	15.332
	1998	0.600	0.516	0.871	1.758	5.498	1.849	9.158
	2003	0.840	0.821	1.422	2.446	5.639	2.234	6.712
Cambodia	2000	2.437	3.249	3.546	4.909	7.213	4.271	2.960
	2005	3.158	3.928	4.900	6.212	8.285	5.297	2.623
Cameroon	1991	3.601	4.189	5.987	7.315	8.577	5.934	2.382
	1998	3.382	5.119	7.105	8.238	9.318	6.632	2.755
	2004	3.752	4.874	5.818	7.533	8.769	6.149	2.337
Chad	1996	1.046	1.177	1.902	3.417	0.887	2.486	4.671
	2004	0.983	1.375	3.097	4.156	6.819	3.286	6.937
Colombia	1995	4.286	6.499	8.016	9.050	9.536	7.477	2.225
	2000	5.543	7.599	9.256	9.730	9.922	8.410	1.790
	2005	6.590	8.137	9.281	9.889	10.692	8.918	1.622
Cote d'Ivoire	1994	2.082	2.925	3.777	4.562	6.164	3.902	2.961
	1999	2.229	3.132	4.520	5.894	7.229	4.601	3.243
	2004	1.988	2.620	3.457	4.300	6.255	3.724	3.147
Dominican Republic	1991	4.354	6.126	7.736	8.402	9.269	7.177	2.129
	1996	3.792	6.256	7.436	8.863	9.497	7.169	2.504
	2002	5.347	7.530	8.796	9.577	10.221	8.294	1.911
Ethiopia	1998	1.171	1.005	1.085	2.226	7.099	2.517	6.064
	2005	1.623	1.776	2.286	3.681	7.372	3.348	4.541
Ghana	1993	3.469	5.626	6.221	7.426	9.028	6.354	2.603
	1998	3.128	5.197	7.142	7.846	9.823	6.627	3.141
	2003	3.222	5.230	6.270	7.715	9.167	6.321	2.845
Guatemala	1995	1.837	2.448	3.633	5.529	8.117	4.313	4.418
	1999	1.888	2.873	4.119	6.147	8.255	4.657	4.372
Guinea	1999	0.706	0.774	1.480	3.084	5.696	2.348	8.066
	2005	1.059	1.849	2.273	4.049	6.004	3.047	5.667
Haiti	1994	1.744	3.214	4.889	5.978	7.839	4.733	4.495
	2000	2.820	3.760	4.227	5.961	7.647	4.883	2.711
	2005	3.302	4.398	5.587	6.872	8.345	5.701	2.527
India	1992	2.800	4.175	5.656	7.375	10.043	6.010	3.587
	1999	3.476	4.908	6.409	8.050	10.374	6.643	2.984
	2005	4.398	6.245	7.781	9.178	11.081	7.736	2.520
Indonesia	1991	5.531	6.548	7.665	9.205	10.335	7.857	1.868
	1997	5.743	7.084	8.099	9.286	10.616	8.166	1.848
	2003	6.496	7.871	9.087	10.088	11.159	8.940	1.718
Kenya	1993	6.207	7.087	7.311	7.437	8.605	7.329	1.386
	1998	6.275	7.240	7.584	7.786	8.945	7.566	1.426
	2003	4.942	6.416	7.104	8.151	9.502	7.223	1.923

Table continues on next page.

Table 4 - continued

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Madagascar	1992	0.103	0.161	0.229	0.441	1.000	0.387	9.729
	1997	1.880	2.302	2.293	4.065	7.643	3.637	4.065
	2004	1.606	2.936	4.809	8.515	10.134	5.600	6.310
Malawi	1992	3.192	3.561	4.349	5.324	7.044	4.694	2.207
	2000	4.378	4.602	5.256	5.756	8.011	5.601	1.830
	2004	4.857	5.291	5.444	5.696	8.506	5.959	1.751
Mali	1996	0.296	0.567	0.937	1.644	3.659	1.421	12.359
	2001	0.369	0.697	0.874	1.446	4.825	1.642	13.069
Mozambique	1997	1.815	2.118	2.743	4.070	5.733	3.296	3.159
	2003	1.898	2.202	2.869	3.926	5.014	3.182	2.641
Namibia	1992	5.263	5.324	5.603	6.329	8.258	6.156	1.569
	2000	5.934	6.729	6.880	8.554	9.739	7.567	1.641
Nepal	1996	2.731	2.610	3.087	4.450	7.014	3.978	2.569
	2001	2.322	3.283	4.141	4.955	7.683	4.477	3.308
	2006	3.321	4.117	5.220	6.612	8.866	5.627	2.669
Nicaragua	1997	2.727	3.928	6.068	7.632	9.070	5.885	3.327
	2001	2.461	4.056	6.151	7.566	9.242	5.895	3.755
Niger	1992	0.678	0.599	0.989	2.715	4.859	1.968	7.165
	1998	0.811	0.730	0.958	2.339	4.783	1.924	5.899
	2006	0.519	0.590	0.964	2.265	5.782	2.024	11.135
Nigeria	1999	4.125	4.941	7.094	8.127	9.944	6.846	2.410
	2003	3.940	5.353	6.292	8.203	9.909	6.739	2.515
Peru	1992	5.558	7.340	8.829	9.756	9.941	8.285	1.789
	1996	5.043	6.490	8.357	9.413	9.845	7.830	1.952
	2000	6.481	7.637	9.410	10.494	11.083	9.021	1.710
Philippines	1993	6.209	7.758	8.994	9.911	10.656	8.706	1.716
	1998	6.007	7.631	9.093	10.033	10.495	8.652	1.747
	2003	6.334	8.226	9.456	10.407	10.998	9.084	1.736
Rwanda	1992	3.824	4.143	5.223	5.179	6.809	5.036	1.781
	2000	3.426	3.387	3.732	4.465	6.200	4.242	1.810
	2005	2.938	3.394	3.435	3.777	5.541	3.817	1.886
Senegal	1992	0.592	1.230	1.901	3.364	6.038	2.625	10.205
	2005	1.359	1.810	2.340	3.923	5.059	2.898	3.722
Tanzania	1992	4.993	5.135	5.504	6.018	7.175	5.765	1.437
	1996	4.750	5.197	5.296	5.648	7.126	5.603	1.500
	2004	3.946	4.815	5.038	6.215	8.119	5.627	2.057
Uganda	1995	3.611	4.185	4.785	5.898	7.814	5.258	2.164
	2000	3.882	4.810	6.097	6.719	8.947	6.091	2.305
	2006	3.813	5.710	6.043	6.683	8.745	6.199	2.293
Vietnam	1997	4.107	6.666	7.597	8.711	9.936	7.403	2.419
	2002	5.212	7.798	8.653	9.431	10.385	8.296	1.992
Zambia	1992	4.385	4.495	5.713	6.849	7.930	5.874	1.809
	1996	4.260	4.868	5.310	6.685	8.457	5.916	1.985
	2001	4.033	4.748	5.523	6.728	8.979	6.002	2.226
Zimbabwe	1994	6.960	7.799	8.030	8.427	9.707	8.185	1.395
	1999	7.391	7.897	8.293	8.962	10.355	8.579	1.401
	2006	6.956	7.855	8.252	8.898	9.951	8.382	1.430

Source: Demographic and Health Surveys (DHS); own calculations.

Table 5: Educational Attainment by Asset Index Quintiles
(Secondary Education Completion - Agegroup 17-22)

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Bangladesh	1993	0.012	0.053	0.071	0.143	0.365	0.129	30.831
	1999	0.038	0.055	0.133	0.237	0.503	0.193	13.318
	2004	0.036	0.078	0.116	0.179	0.390	0.160	10.734
Benin	1996	0.011	0.004	0.008	0.005	0.026	0.011	2.448
	2001	0.002	0.004	0.002	0.020	0.056	0.017	29.124
	2006	0.011	0.014	0.014	0.029	0.119	0.037	10.590
Bolivia	1994	0.044	0.063	0.240	0.398	0.529	0.255	11.974
	1998	0.061	0.106	0.347	0.510	0.559	0.317	9.165
	2003	0.082	0.184	0.349	0.446	0.567	0.326	6.934
Brazil	1991	0.007	0.006	0.020	0.023	0.065	0.024	9.317
	1996	0.024	0.085	0.196	0.212	0.346	0.173	14.299
Burkina Faso	1992	0.003	0.006	0.007	0.019	0.061	0.019	17.317
	1998	0.004	0.005	0.003	0.019	0.030	0.012	8.350
	2003	0.001	0.000	0.003	0.010	0.045	0.012	52.139
Cambodia	2000	0.004	0.003	0.004	0.013	0.116	0.028	32.907
	2005	0.007	0.006	0.013	0.037	0.162	0.045	22.022
Cameroon	1991	0.005	0.010	0.012	0.025	0.075	0.025	14.776
	1998	0.014	0.006	0.011	0.048	0.061	0.028	4.363
	2004	0.003	0.004	0.005	0.036	0.056	0.021	18.295
Chad	1996	0.007	0.001	0.006	0.004	0.014	0.006	2.012
	2004	0.000	0.000	0.014	0.018	0.104	0.027	n.d.
Colombia	1995	0.044	0.160	0.290	0.403	0.476	0.275	10.695
	2000	0.122	0.283	0.503	0.572	0.589	0.414	4.851
	2005	0.190	0.340	0.494	0.591	0.719	0.467	3.790
Cote d'Ivoire	1994	0.006	0.008	0.019	0.018	0.041	0.018	7.172
	1999	0.022	0.013	0.037	0.088	0.147	0.061	6.744
	2004	0.010	0.008	0.010	0.021	0.054	0.021	5.393
Dominican Republic	1991	0.038	0.085	0.209	0.256	0.311	0.180	8.091
	1996	0.041	0.097	0.160	0.287	0.350	0.187	8.459
	2002	0.070	0.147	0.258	0.344	0.412	0.246	5.848
Ethiopia	1998	0.006	0.002	0.005	0.015	0.176	0.041	27.564
	2005	0.004	0.006	0.006	0.021	0.158	0.039	41.881
Ghana	1993	0.006	0.005	0.015	0.029	0.156	0.042	25.060
	1998	0.010	0.007	0.012	0.024	0.082	0.027	7.939
	2003	0.033	0.016	0.031	0.108	0.294	0.097	8.813
Guatemala	1995	0.008	0.008	0.016	0.063	0.231	0.065	28.282
	1999	0.010	0.009	0.028	0.081	0.234	0.072	23.856
Guinea	1999	0.018	0.013	0.012	0.018	0.044	0.021	2.441
	2005	0.002	0.004	0.007	0.009	0.029	0.010	14.926
Haiti	1994	0.042	0.019	0.027	0.043	0.090	0.044	2.162
	2000	0.007	0.002	0.001	0.005	0.030	0.009	4.309
	2005	0.003	0.002	0.005	0.024	0.079	0.023	30.668
India	1992	0.033	0.051	0.076	0.139	0.378	0.135	11.539
	1999	0.098	0.162	0.263	0.405	0.684	0.322	6.990
	2005	0.038	0.084	0.165	0.279	0.507	0.214	13.469
Indonesia	1991	0.056	0.107	0.162	0.303	0.455	0.217	8.065
	1997	0.054	0.104	0.184	0.315	0.474	0.226	8.720
	2003	0.076	0.172	0.302	0.430	0.584	0.313	7.708
Kenya	1993	0.004	0.010	0.004	0.013	0.024	0.011	5.462
	1998	0.057	0.086	0.136	0.163	0.325	0.154	5.668
	2003	0.037	0.070	0.097	0.189	0.422	0.163	11.314

Table continues on next page.

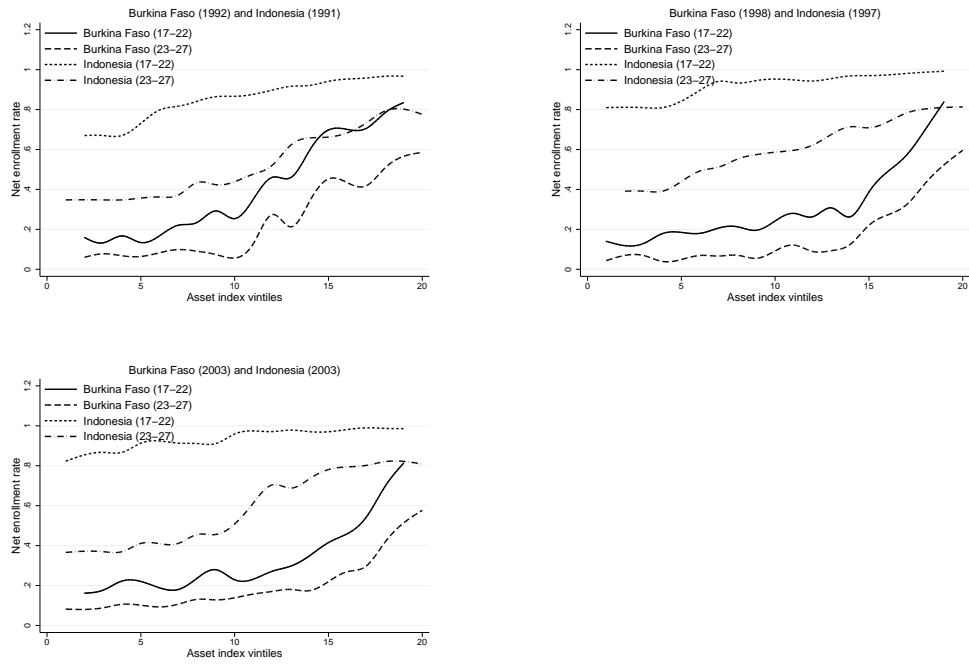
Table 5 - continued

Country	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Madagascar	1992	0.021	0.033	0.027	0.027	0.121	0.046	5.642
	1997	0.001	0.008	0.008	0.018	0.113	0.030	92.457
	2004	0.010	0.004	0.017	0.113	0.236	0.076	23.882
Malawi	1992	0.000	0.006	0.013	0.028	0.089	0.027	n.d.
	2000	0.006	0.005	0.020	0.025	0.150	0.041	24.980
	2004	0.011	0.031	0.027	0.033	0.233	0.067	20.338
Mali	1996	0.004	0.004	0.006	0.005	0.014	0.007	3.440
	2001	0.005	0.011	0.008	0.010	0.037	0.014	7.317
Mozambique	1997	0.018	0.017	0.011	0.014	0.052	0.022	2.833
	2003	0.002	0.003	0.002	0.002	0.030	0.008	15.508
Namibia	1992	0.011	0.005	0.011	0.016	0.123	0.033	11.624
	2000	0.027	0.047	0.057	0.174	0.318	0.124	11.811
Nepal	1996	0.038	0.044	0.054	0.096	0.274	0.101	7.228
	2001	0.027	0.056	0.074	0.125	0.395	0.135	14.860
	2006	0.045	0.058	0.096	0.211	0.499	0.182	11.057
Nicaragua	1997	0.018	0.029	0.109	0.238	0.399	0.159	21.639
	2001	0.013	0.031	0.111	0.205	0.420	0.156	31.329
Niger	1992	0.002	0.015	0.005	0.013	0.020	0.011	11.494
	1998	0.011	0.006	0.007	0.010	0.006	0.008	0.546
	2006	0.006	0.004	0.004	0.010	0.025	0.010	4.121
Nigeria	1999	0.141	0.136	0.204	0.267	0.409	0.231	2.910
	2003	0.064	0.091	0.150	0.292	0.482	0.216	7.523
Peru	1992	0.117	0.279	0.521	0.706	0.739	0.472	6.319
	1996	0.097	0.224	0.447	0.649	0.732	0.430	7.587
	2000	0.131	0.231	0.473	0.660	0.779	0.454	5.954
Philippines	1993	0.206	0.363	0.562	0.705	0.787	0.525	3.810
	1998	0.067	0.127	0.238	0.400	0.499	0.266	7.497
	2003	0.196	0.422	0.612	0.752	0.829	0.562	4.234
Rwanda	1992	0.010	0.002	0.013	0.017	0.048	0.018	4.770
	2000	0.003	0.002	0.004	0.009	0.060	0.016	18.476
	2005	0.004	0.006	0.010	0.012	0.080	0.022	21.126
Senegal	1992	0.007	0.019	0.021	0.028	0.088	0.032	12.806
	2005	0.009	0.009	0.011	0.037	0.055	0.024	6.043
Tanzania	1992	0.000	0.002	0.003	0.001	0.007	0.003	n.d.
	1996	0.003	0.006	0.006	0.004	0.017	0.007	6.109
	2004	0.002	0.002	0.001	0.004	0.031	0.008	15.055
Uganda	1995	0.023	0.036	0.044	0.101	0.274	0.096	11.726
	2000	0.006	0.018	0.032	0.054	0.151	0.052	24.049
	2006	0.016	0.027	0.027	0.039	0.149	0.051	9.443
Vietnam	1997	0.015	0.064	0.115	0.234	0.429	0.171	27.792
	2002	0.032	0.132	0.184	0.330	0.508	0.237	15.956
Zambia	1992	0.007	0.009	0.029	0.053	0.153	0.050	20.488
	1996	0.002	0.003	0.000	0.006	0.023	0.007	9.615
	2001	0.003	0.016	0.035	0.051	0.213	0.063	82.996
Zimbabwe	1994	0.000	0.005	0.010	0.014	0.043	0.014	n.d.
	1999	0.124	0.186	0.260	0.383	0.637	0.318	5.147
	2006	0.005	0.013	0.020	0.045	0.149	0.046	30.544

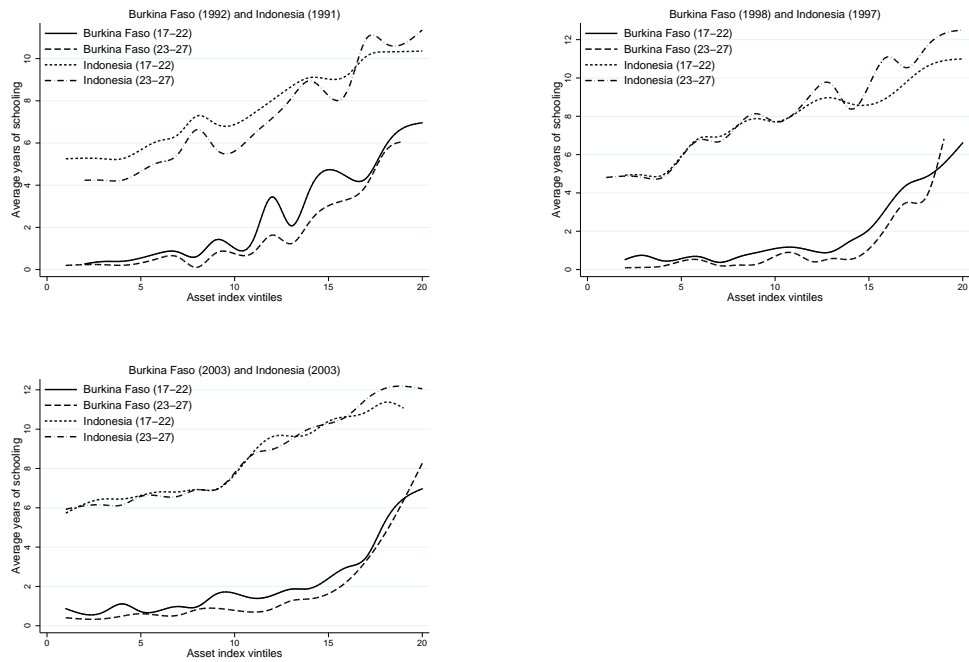
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 4
Educational Distribution in Burkina Faso and Indonesia

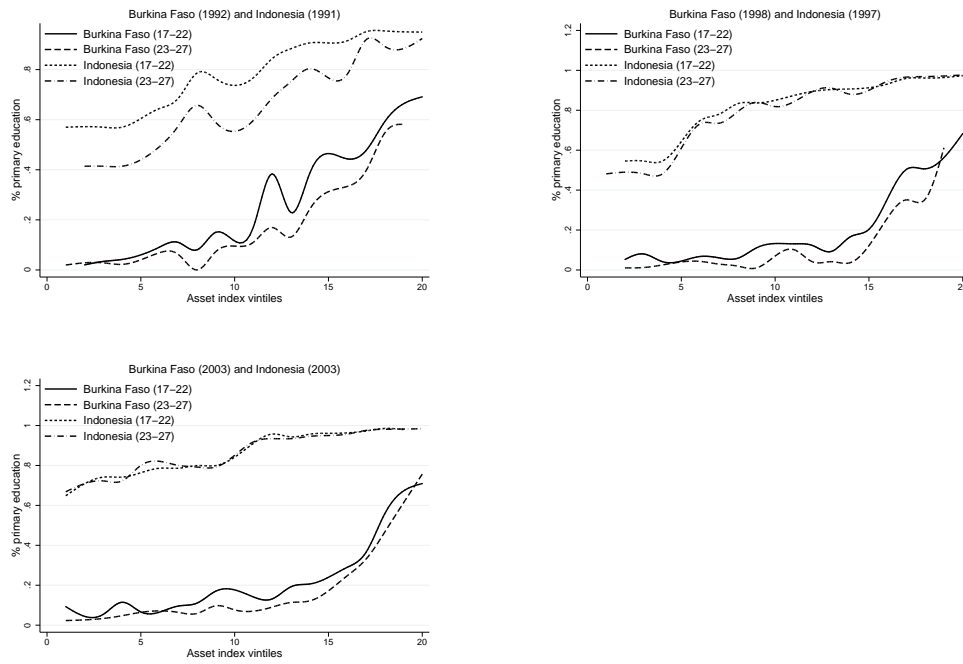
Net attendance rate



Years of Education

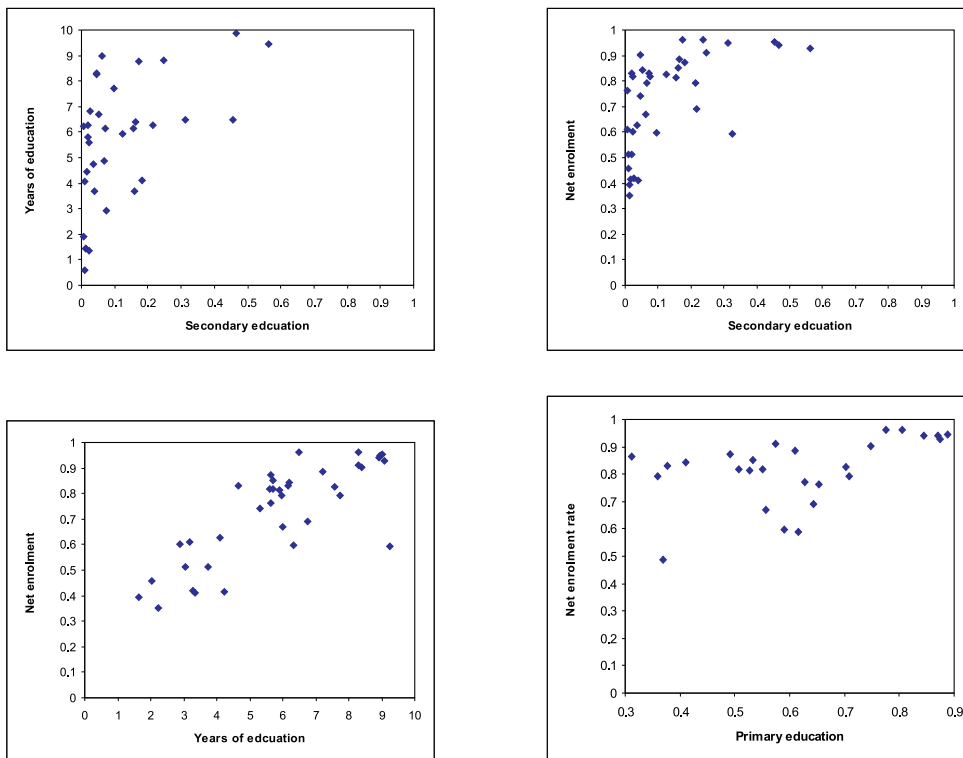


Educational attainment



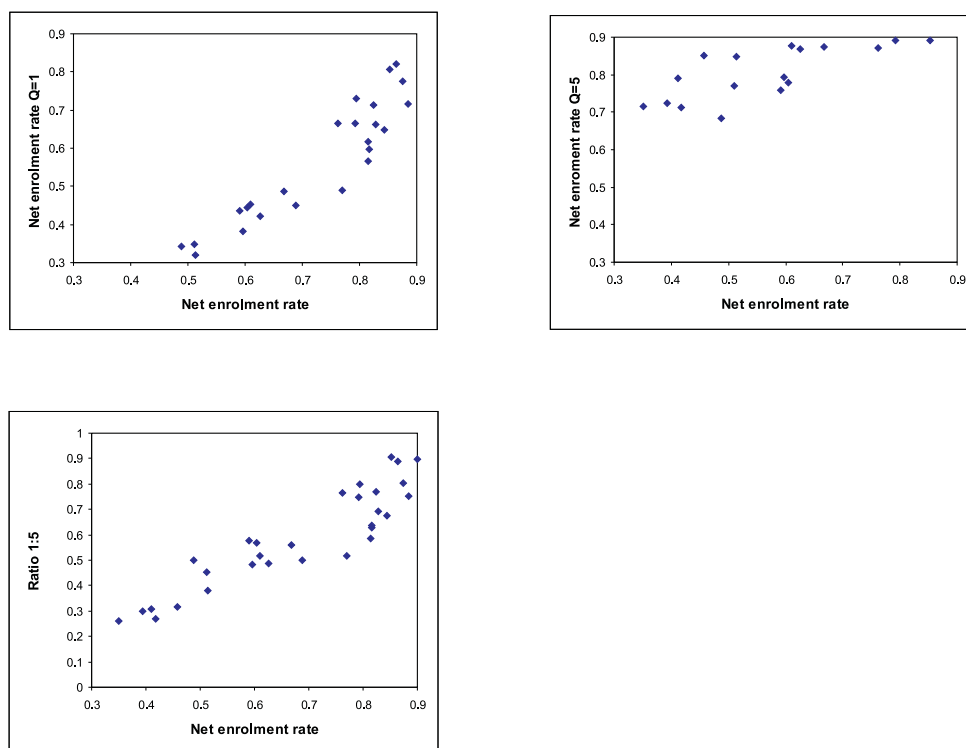
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 5
Correlation between educational indicators



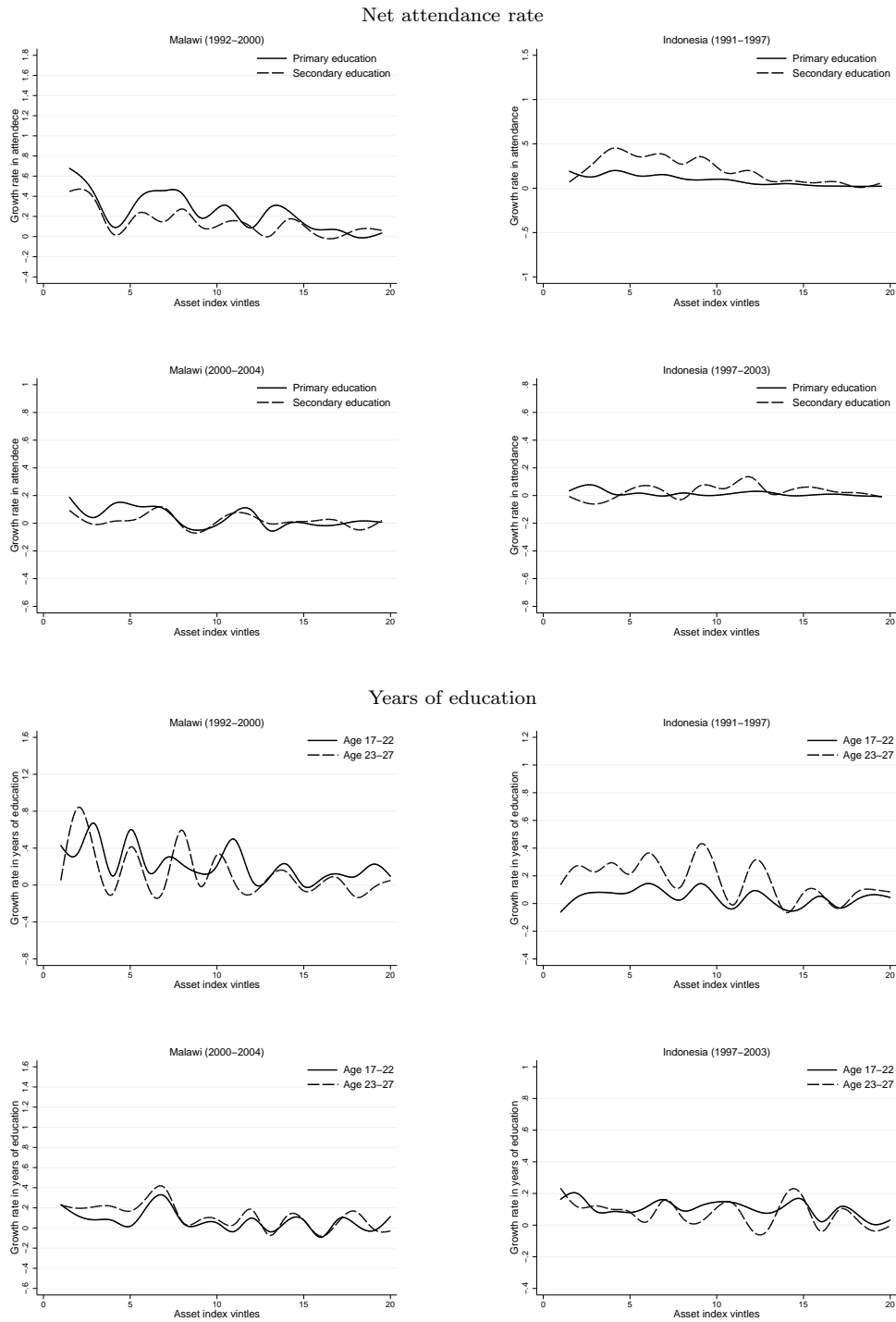
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 6
Correlation between the overall net attendance rate and between the net attendance rate of poorest quintile, the richest quintile, and the ratio for the richest and the poorest quintile

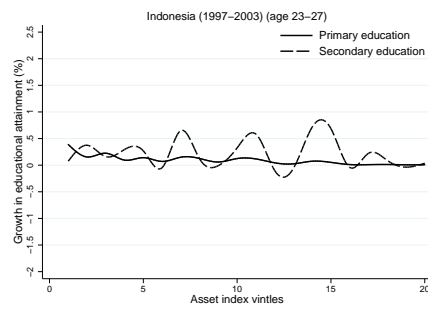
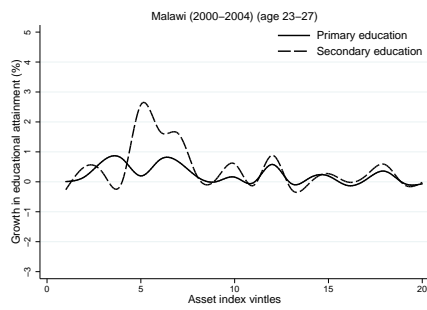
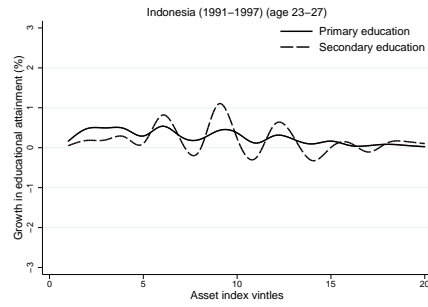
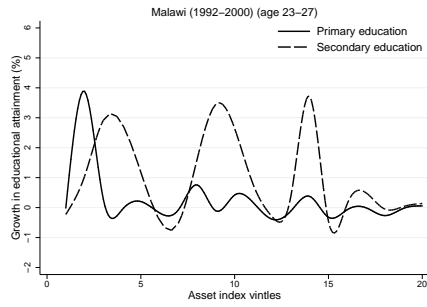
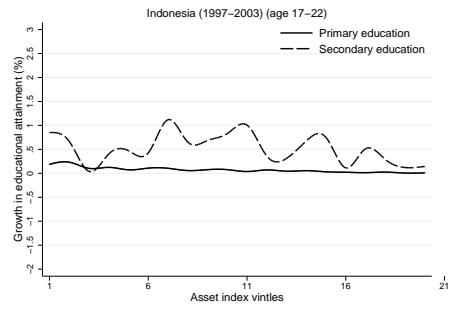
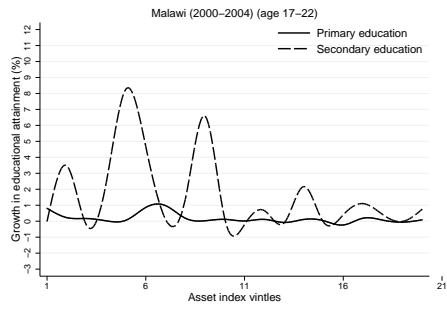
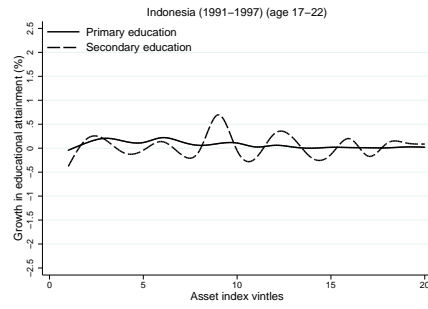
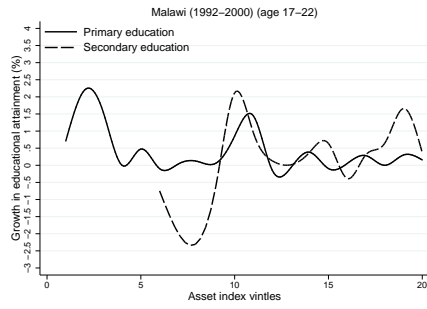


Source: Demographic and Health Surveys (DHS); own calculations.

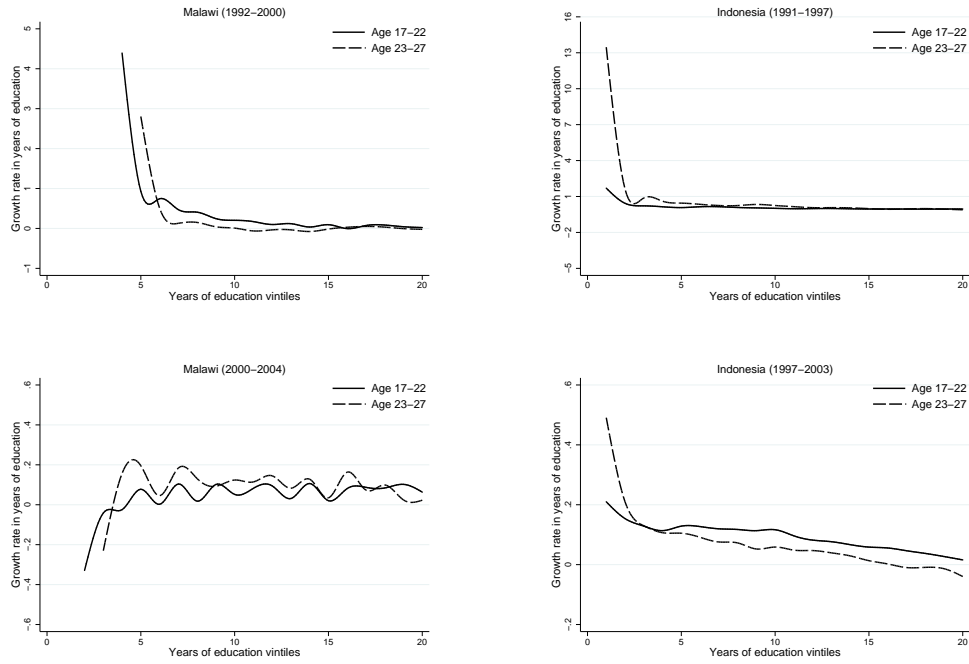
Figure 7
Pro Poor Growth in Education in Malawi and Indonesia



Educational attainment

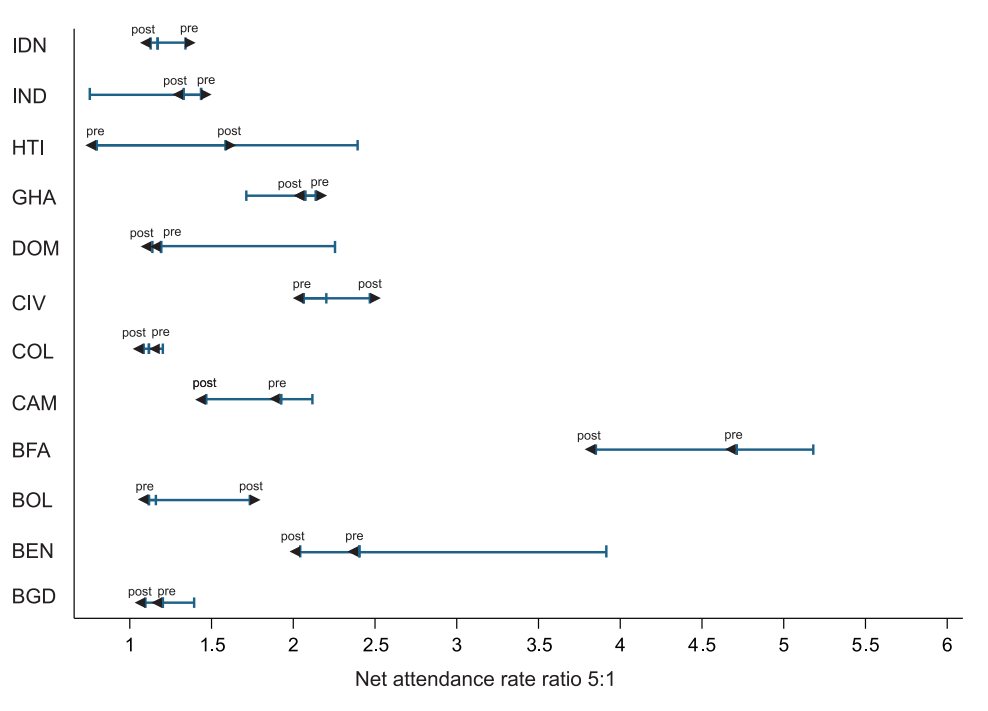


Years of education (unconditional)



Source: Demographic and Health Surveys (DHS); own calculations.

Figure 8
Differences in Progress in Net Attendance in Primary Education between the Pre and Post Dakar
Period
(a)



(b)

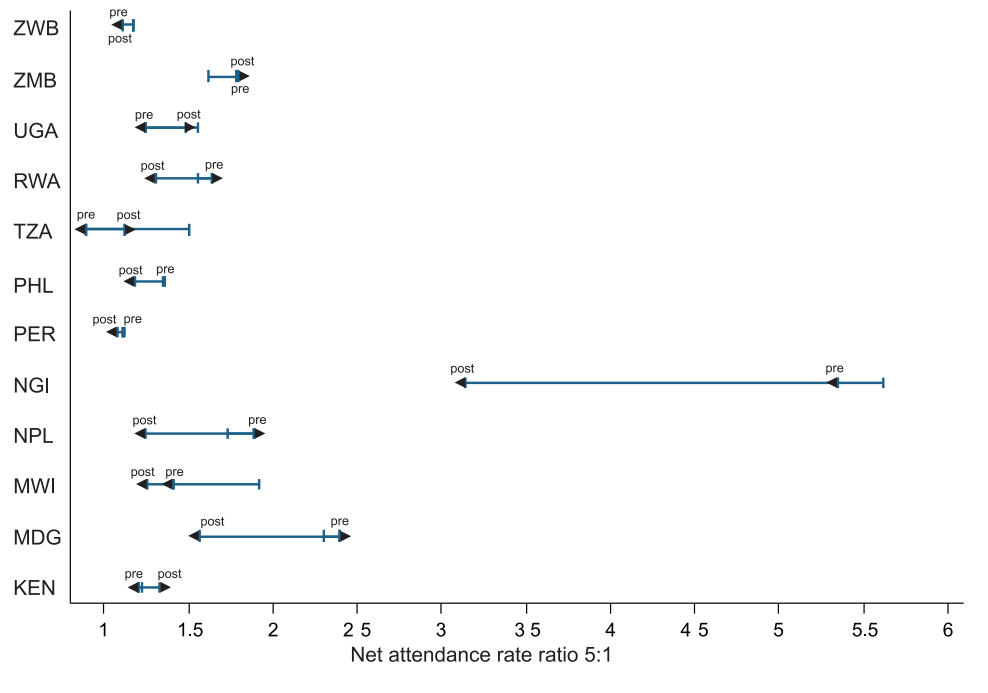
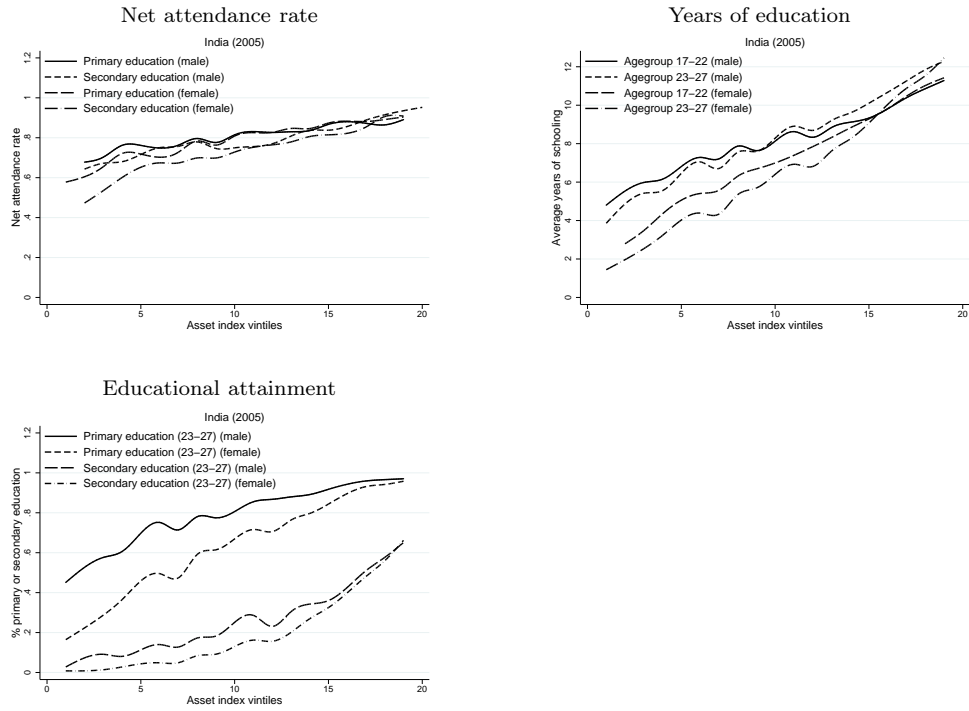


Table 6: Gender Differentials in Education in India

Year		Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Net attendance (primary education)								
1992	Male	0.588	0.741	0.824	0.905	0.965	0.805	1.641
	Female	0.382	0.568	0.740	0.860	0.946	0.699	2.474
1998	Male	0.746	0.843	0.909	0.949	0.979	0.885	1.312
	Female	0.602	0.764	0.867	0.928	0.971	0.826	1.614
2003	Male	0.692	0.760	0.806	0.845	0.885	0.797	1.278
	Female	0.639	0.734	0.804	0.857	0.896	0.786	1.403
Net attendance (secondary education)								
1992	Male	0.372	0.450	0.497	0.514	0.553	0.477	1.487
	Female	0.184	0.283	0.385	0.468	0.530	0.370	2.888
1998	Male	0.598	0.674	0.743	0.818	0.904	0.747	1.512
	Female	0.348	0.486	0.619	0.740	0.874	0.613	2.516
2003	Male	0.651	0.745	0.770	0.836	0.919	0.784	1.412
	Female	0.513	0.652	0.743	0.812	0.896	0.723	1.746
Average years of education (Agegroup 17-22)								
1992	Male	4.434	5.929	7.142	8.199	10.260	7.193	2.314
	Female	1.427	2.650	4.207	6.575	9.837	4.939	6.894
1998	Male	5.167	6.324	7.478	8.719	10.493	7.636	2.031
	Female	1.993	3.578	5.363	7.415	10.240	5.718	5.139
2003	Male	5.651	7.225	8.157	9.275	10.999	8.261	1.946
	Female	3.284	5.377	7.360	9.050	11.167	7.248	3.401
Primary education completion (Agegroup 17-22)								
1992	Male	0.383	0.530	0.651	0.751	0.906	0.645	2.365
	Female	0.109	0.217	0.369	0.596	0.852	0.428	7.841
1998	Male	0.581	0.697	0.800	0.889	0.954	0.784	1.643
	Female	0.231	0.408	0.601	0.775	0.925	0.588	4.007
2003	Male	0.632	0.785	0.851	0.910	0.971	0.830	1.537
	Female	0.384	0.614	0.788	0.885	0.959	0.726	2.498
Secondary education completion (agegroup 17-22)								
1992	Male	0.054	0.085	0.112	0.171	0.379	0.160	7.065
	Female	0.013	0.025	0.041	0.107	0.377	0.112	30.124
1998	Male	0.164	0.230	0.328	0.452	0.695	0.374	4.239
	Female	0.039	0.100	0.197	0.361	0.671	0.274	16.996
2003	Male	0.055	0.112	0.177	0.273	0.480	0.220	8.748
	Female	0.022	0.061	0.148	0.286	0.532	0.210	23.786
Higher education completion (agegroup 17-22)								
1992	Male	0.023	0.034	0.046	0.077	0.197	0.076	8.608
	Female	0.008	0.011	0.015	0.047	0.214	0.059	27.074
1998	Male	0.083	0.122	0.185	0.291	0.522	0.241	6.282
	Female	0.014	0.045	0.094	0.214	0.512	0.176	36.611
2003	Male	0.021	0.041	0.081	0.133	0.267	0.109	12.910
	Female	0.009	0.022	0.060	0.131	0.321	0.109	34.352

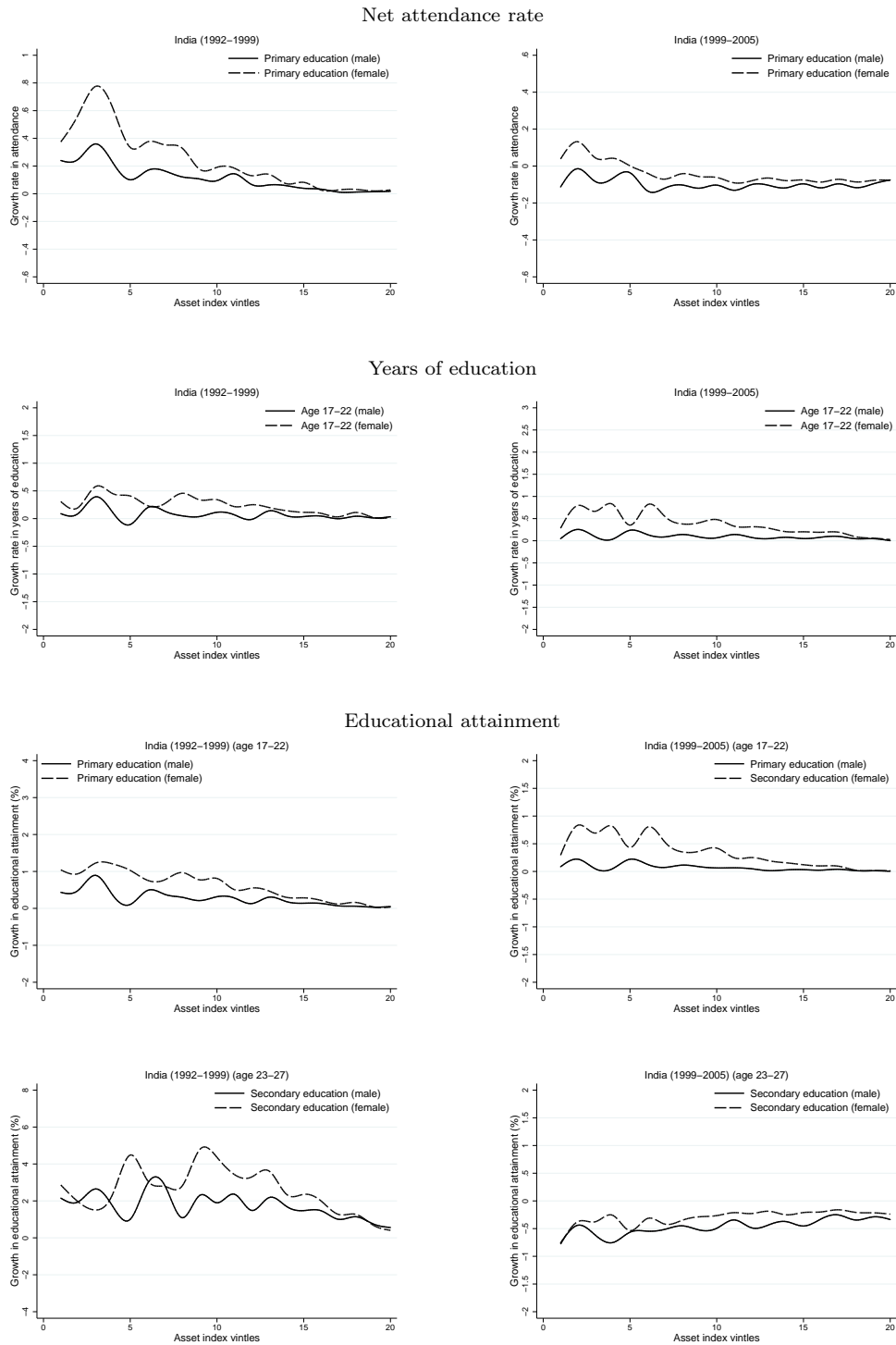
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 9
Educational Distribution in India by Gender



Source: Demographic and Health Surveys (DHS); own calculations.

Figure 10
Pro-Poor Growth in Education in India by Gender



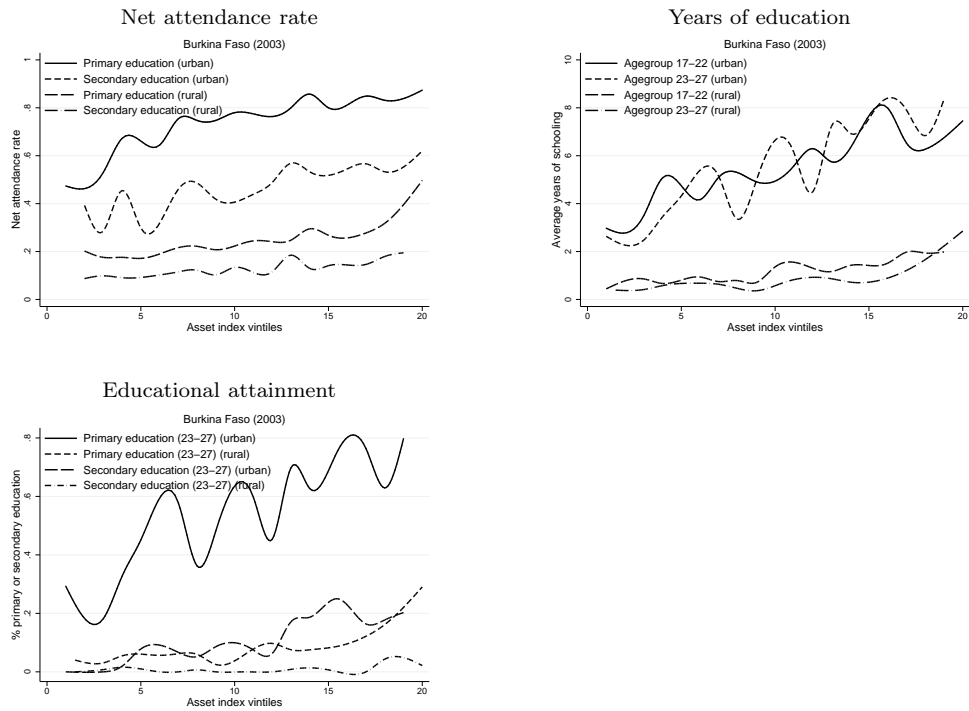
Source: Demographic and Health Surveys (DHS); own calculations.

Table 7: Regional Differentials in Education in Burkina Faso

Country/ Indicator	Year	Quintiles					Mean	Ratio 5:1
		1	2	3	4	5		
Net attendance (primary education)								
1992	Urban	0.574	0.659	0.773	0.770	0.893	0.734	1.554
	Rural	0.133	0.153	0.195	0.247	0.415	0.229	3.121
1998	Urban	0.619	0.742	0.741	0.880	0.848	0.766	1.370
	Rural	0.136	0.170	0.210	0.244	0.312	0.214	2.287
2003	Urban	0.567	0.698	0.773	0.844	0.860	0.748	1.515
	Rural	0.173	0.193	0.239	0.277	0.369	0.250	2.137
Net attendance (secondary education)								
1992	Urban	0.306	0.416	0.475	0.455	0.592	0.449	1.937
	Rural	0.056	0.064	0.064	0.082	0.202	0.094	3.642
1998	Urban	0.322	0.405	0.418	0.543	0.602	0.458	1.869
	Rural	0.054	0.046	0.070	0.090	0.147	0.082	2.716
2003	Urban	0.355	0.413	0.442	0.559	0.581	0.470	1.639
	Rural	0.088	0.107	0.122	0.151	0.197	0.133	2.252
Average years of education (Agegroup 17-22)								
1992	Urban	3.152	4.560	4.515	5.422	6.929	4.916	2.199
	Rural	0.454	0.276	0.629	0.975	1.956	0.858	4.305
1998	Urban	3.564	5.046	5.433	5.976	6.658	5.335	1.868
	Rural	0.540	0.540	0.598	0.841	1.375	0.779	2.545
2003	Urban	3.801	4.606	5.536	6.619	6.956	5.503	1.830
	Rural	0.641	0.851	1.158	1.352	2.237	1.248	3.492
Primary education completion (Agegroup 17-22)								
1992	Urban	0.347	0.474	0.485	0.557	0.711	0.515	2.046
	Rural	0.050	0.030	0.078	0.106	0.237	0.100	4.781
1998	Urban	0.371	0.546	0.595	0.587	0.695	0.559	1.871
	Rural	0.051	0.048	0.072	0.098	0.152	0.084	2.968
2003	Urban	0.394	0.465	0.569	0.676	0.709	0.562	1.799
	Rural	0.056	0.084	0.124	0.130	0.242	0.127	4.299
Secondary education completion (agegroup 17-22)								
1992	Urban	0.009	0.033	0.028	0.048	0.079	0.039	8.765
	Rural	0.000	0.003	0.012	0.003	0.007	0.005	n.d.
1998	Urban	0.046	0.023	0.032	0.029	0.050	0.036	1.098
	Rural	0.005	0.000	0.004	0.004	0.006	0.004	1.263
2003	Urban	0.017	0.019	0.034	0.054	0.087	0.042	5.264
	Rural	0.000	0.000	0.000	0.003	0.008	0.002	n.d.
Higher education completion (agegroup 17-22)								
1992	Urban	0.009	0.014	0.008	0.025	0.047	0.021	5.211
	Rural	0.000	0.003	0.012	0.003	0.007	0.005	n.d.
1998	Urban	0.034	0.009	0.000	0.014	0.015	0.015	0.450
	Rural	0.005	0.000	0.004	0.002	0.006	0.003	1.263
2003	Urban	0.000	0.000	0.002	0.007	0.030	0.009	n.d.
	Rural	0.000	0.000	0.000	0.000	0.005	0.001	n.d.

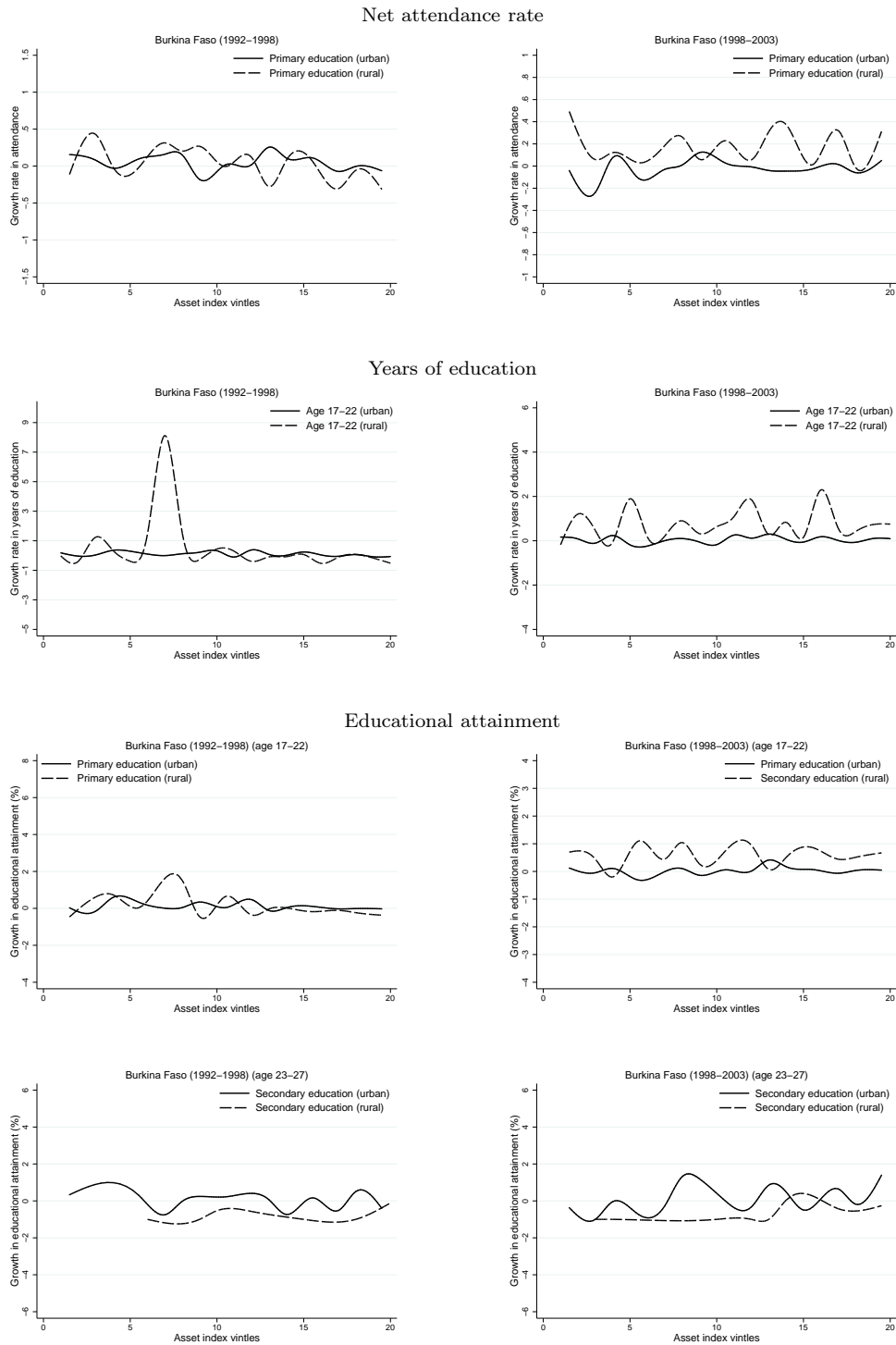
Source: Demographic and Health Surveys (DHS); own calculations.

Figure 11
Educational Distribution in Burkina Faso by Region



Source: Demographic and Health Surveys (DHS); own calculations.

Figure 12
Pro-Poor Growth in Education in Burkina Faso by Region



Source: Demographic and Health Surveys (DHS); own calculations.