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The Policies for Reducing Income Inequality and Poverty in South Africa

by
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The Policies for Reducing Income Inequality and Poverty in South Africa

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Abstract

Trends in inequality, poverty, and redistribution in post-apartheid South Africa have received intense attention especially in terms of measuring inequality and poverty levels and the proximate causes of these levels. We review this literature and find a set of established trends. Inequality levels have increased but the face of inequality has changed with present-day inequality displaying a lessened racial make-up than under apartheid. In contrast, poverty has decreased but is still bears the strong racial makers of apartheid. The labour market continues to drive inequality. A related literature has concentrated on fiscal redistribution in South Africa after the transition, arguing that social policies are well targeted towards the poor with social grants being central in lifting people out of poverty. At the same time, these policies have not succeeded in reversing inequality trends and in providing equal opportunities for all South Africans.

To bulk of paper probes this further. We use fiscal incidence analysis to show that redistribution increased slightly since 1993, that this redistribution is higher than in Latin America but far below European levels. Second, looking at spending for all social services we find a mixed picture. There has been an increase in spending since the end of apartheid on social policy and for a number of social policy items in the progressivity of this spending. At the same time, spending has not increased as a percentage of GDP and has become less progressive for social grants. Finally, we examine education policy in more detail. We find that the importance of tertiary education, as a predictor of income has increased considerably whereas individuals with low or incomplete secondary education were worse off in 2008, compared to 1993. Second, we find that state spending on education has increased since the early 1990s. The spending gap between rich and poor provinces has become much narrower but spending equality has not been reached. The academic achievements of students display high inequality, compared to international standards and there is also evidence that the capabilities of students have decreased, rather than increased, suggesting that increased spending has not translated into an increase in the quality of education provision.

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1. Introduction

Trends in inequality, poverty, and redistribution in post-apartheid South Africa have received large attention. Research efforts have concentrated on measuring inequality levels and on the proximate causes of these levels on the basis of inequality decompositions. Generally, they find that inequality levels have increased but that the face of inequality has changed with present-day inequality displaying a lessened racial make-up than under apartheid. In contrast, poverty has decreased but is still bears the strong racial makers of apartheid. A related literature has concentrated on fiscal redistribution in South Africa after the transition, arguing that social policies are well targeted towards the poor. Government policies – especially social grants - have also been central in lifting people out of poverty. At the same time, these policies have not succeeded in reversing inequality trends and in providing equal opportunities for all South Africans.

This paper brings together trends of inequality and redistribution since South Africa's transition to democracy in the mid-1990s. It discusses redistribution levels and trends in the light of the high inequality inherited from apartheid. We study aggregate redistribution figures in comparative perspective and focus in slightly more detail on education policy as a policy particularly relevant for income inequality.

We begin with a summary of key trends of inequality and poverty in South Africa since the transition. Besides rising levels of inequality and increasing intra-racial inequality, another key finding is that the labour market is a key driver of inequality. Poverty levels have decreased but remained racially defined with the poor being 90% African and 10% Coloured. Additionally, there is the phenomenon of the working poor.

A second section discusses redistributive policies since the end of apartheid. We first perform a fiscal incidence analysis for 1993 and 2008. Different from van der Berg (2005, 2009), we exclude social services provision such as healthcare and education. This has the advantage of being more comparable to findings from studies on other countries. We find that redistribution increased slightly since 1993. This redistribution is higher than in Latin America but far below European levels. Second, we include spending figures and data on the progressivity of spending for all social services from van der Berg (2005, 2009). We find a mixed picture. There has been an increase in spending since the end of apartheid and for a number of social policy items in progressivity. At the same time, spending has not increased as a percentage of GDP and has become less progressive for social grants.

Attempting to take on board the difficulties of redistribution in the context of a very unequal starting position at the end of apartheid and the political context of a negotiated transition, we examine education policy in more detail. We begin with studying the relationship between education and income in 1993 and 2008. We find that the importance of tertiary education, as a predictor of income has increased considerably; in contrast, individuals with low or incomplete secondary education were more likely to be worse off in 2008, compared to 1993. Second, we examine the spending patterns regarding education. Overall spending has increased since the early 1990s. The spending gap between rich and poor provinces has become much narrower but spending equality has not been reached, thus making it difficult for poorer provinces and schools to catch up. For Gauteng and especially for the Western Cape, there is also evidence that richer schools receive more public funding than poorer schools. The academic achievements of students display high inequality, compared to international standards. There is also evidence that the capabilities of students have

decreased, rather than increased, suggesting that increased spending has not translated into an increase in the quality of education provision. We end with a discussion of a number of constraints behind the education policy choices of post-apartheid government.

2. Post-apartheid inequality and poverty trends[4]

Census-based analyses reaching as far back as 1917 indicate that average real incomes have been increasing steadily for all population groups (Leibbrandt *et al*, 2001). According to evidence from national household surveys, this trend has persisted over the last 15 years (Leibbrandt, Woolard, Finn, and Argent 2010); Bhorat and van der Westhuizen (2009)) with further backing coming from work carried out on national accounts data and an annual marketing survey (van der Berg *et* al, (2008). Income growth however, has not resulted in a decline in South Africa's historically high inequality. In fact aggregate inequality measures have shown an increase in inequality over the post-apartheid years. The rising aggregate Gini coefficients for 1993, 2000, 2005 and 2008 presented in Table 1 illustrate this point and the evidence reviewed in Leibbrandt *et al. (*2009) shows the same trend using alternate data sets for other years. Analyses of income deciles show that income has become increasingly concentrated in the top income deciles at the expense of all other deciles.

Table 1: Gini coefficients of per capita income, aggregate and by race

	Aggregate	African	Coloured	Indian	White
1993	0.67	0.55	0.43	0.46	0.42
2000	0.67	0.61	0.53	0.50	0.47
2005	0.72	0.62	0.60	0.58	0.51
2008	0.70	0.62	0.54	0.61	0.50
Change 1993-2008 (in %)	4.5	12.7	25.6	32.6	19.1

Source: PSLSD (1993), IES (2000, 2005) and NIDS (2008)

Labour market developments have played a major role in this situation. Labour market statistics back up this household-level analysis. First, labour force participation rates are highest in the top income deciles, which also have the highest labour absorption rates. This translates directly into far higher employment rates among those located in the top income deciles. Unemployment rates have fallen in the top deciles since 1993, especially after 2000. However, overall unemployment rates have trended upwardly since 1993 due to sharply rising unemployment rates of those in the bottom four deciles. Income source decompositions identify the labour market as the leading factor driving inequality. For example, Leibbrandt, Finn and Woolard (2010) show that labour market income was "responsible for" 83 per cent of income inequality in 1993 and 85 per cent in 2008.

While these decompositions confirm the importance of rising unemployment as a key driver of inequality, they also emphasise the importance of the rising inequality of earnings for those households with access to labour market earnings. Earnings for those in the bottom deciles have not

[4] In the main, this section is drawn from Leibbrandt, Woolard, McEwen, and Koep (2010), Leibbrandt, Woolard, Finn, and Argent (2010), and Leibbrandt, Finn and Woolard (2010).

risen in real terms over the post-apartheid period and have fallen markedly relative to those in the higher deciles. Thus, having an earner with unskilled employment is no guarantee that a household will rise out of the lower deciles of the household income distribution.

Given South Africa's history of racial discrimination, it is expected that the large and increasing income disparities outlined above bear a strong racial footprint and there is a tendency to attribute the country's unusually high aggregate inequality measures to strong between race income disparities. While it is true that the between race component of inequality remains very high, when considering inequality between racial groups as a percentage of the maximum possible level as proposed by Elbers et al (2008), this measure declined by 21% from 1993 to 2008, with the largest decline occurring before the year 2000. As can be seen from the Gini coefficients for each racial group presented in Table 1, within-race inequality has increased markedly for all racial groups.[5] By 2008 the most populous racial group, the African group, made up 80% of the population and had the highest inequality of the four major racial groups. The Gini coefficient for Africans was 0.12 points higher than the same measure for Whites. Thus, within racial group dynamics have become more important and within African dynamics have become especially important in driving aggregate changes in inequality.

In addition to the racial inequality, in South Africa inequality by geotype (urban versus rural) has proven to be a leading theme in inequality studies. This bears a strong link to racial inequality, as zoning policies under the country's apartheid government forced Africans, and thus predominantly poor people to live in allocated rural "homelands". Leibbrandt, Finn and Woolard (2010) reveal that urban inequality has in fact increased since 1993, whereas rural inequality seems to have fallen. This is generally linked to the prolific migration of rural dwellers to urban centres, thus increasing urban income discrepancies.

Leibbrandt and Levinsohn (2011) conduct a series of semi-parametric decompositions in order to understand the role of endowments and changes in the returns to these endowments in driving these observed changes in the income distribution. This analysis draws attention to the positive role played by changes in endowments such as access to education and social services over the period. If these endowment changes were all that changed in South Africa over the post-apartheid period, we would have seen a rightward shift of the distribution of per capita real incomes. As we have seen above, this did not happen and Leibbrandt and Levinsohn go on to provide evidence that this sobering outcome is a net effect of two counterbalancing trends. On the plus side is a strong positive change, operating through increased support to children driven by the implementation of a new child support grant. We will have more to say about this later in the paper. Counterbalancing this is a strong negative change in returns to endowments. This is primarily based on a skills-twist driven change in returns to education in the labour market as described by Lam et al (2010). It is this skills twist that undergirds the importance, noted earlier in this section, of both unemployment and the inequality of labour market earnings in driving household inequality.

Moving on to the poverty trends, Table 2 presents evidence on poverty trends over the last 15 years using two poverty lines. The headcount ratio for two poverty lines is shown to have fallen over time,

[5] Leibbrandt et al (2009) provide standard errors and inequality dominance analysis to show that the increases in inequality in aggregate and within all racial groups are robust and are not sensitive to choice of the Gini coefficient as the index of inequality.

which is in line with a substantial literature (For example, Bhorat and van der Westhuizen (2009), van der Berg *et al* (2008)). As shown by Leibbrandt, Woolard, McEwen, Koep (2010) and Leibbrandt, Woolard, Finn, and Argent (2010) this decline in poverty is more pronounced if measures of poverty (such as the poverty gap ratio) that are sensitive to the depth of poverty are used. There is some contention over the timing of the poverty declines. For example, Hoogeveen and Özler (2006) seem to indicate an improvement in poverty levels only after 2000. However, there is no disagreement about the long-run trend. In addition, as illustrated by Bhorat *et* al (2006) and Bhorat *et* al (2009) there is no such contention with regard to changes in non money-metric well-being. In all analyses, access to services, formal dwellings and private assets are shown to improve in the period from 1996 to 2001 and then on through to 2008.

All literature shows that African poverty incidence was and remains a lot higher than Coloured, which in turn is a lot higher than Indians/Asians and lastly Whites. Combining this relative incidence with population shares, Africans account for more than 90% of the country's poverty share, with Coloureds making up the remaining share, with some nuances. In line with declining national poverty rates, African poverty decreases over time. However, Coloured poverty incidence is actually shown to increase over the same period. Then, in accordance with the change in urban/rural Gini coefficients pointed out earlier, rural poverty incidence barely changed over the last 15 years, whereas an increase in poverty was seen in urban centres. Unfortunately youth unemployment has increased over time and remains an important characteristic of the South African poverty scenario. Furthermore, the stubbornly high poverty incidence of one worker households highlights the notion that not only are employment levels a fundamental concern, but the quality of support coming from employment has been identified as another factor putting pressure on the high incidence of poverty and inequality.

Table 2: Poverty headcount ratios

	Total Population	$1.25 per day	$2 per day
1993	40,002,316	20.7	33.9
2000	45,134,247	18.2	30.8
2005	46,971, 312	16.7	31.2
2008	48,687,036	17.7	30.0
Change 1993-2008 (in%)	21.7	-14.5	11.5

Source: PSLSD (1993), IES (2000, 2005), NIDS (2008).

Poverty remains prevalent in households headed by persons with an education level of grades 10-12. This is an indication of a decrease in the demand for workers with this level of qualification. Leibbrandt, Woolard, Finn, and Argent (2010) show that, despite an increased unemployment risk for household heads, these households have not become poorer over time. This highlights the presence of some alternative form of income, namely, social grants. In contrast to the major income source of wealthy households, the labour market, studies have shown that poor households receive most of their income from government grants. In addition, as one moves down the income deciles, the proportion of multiple worker households decreases, and the proportion of no-worker households increases monotonically. This emphasizes the increased reliance of poor households on state assistance.

Furthermore, the effectiveness of such assistance is revealed by the substantial decline in poverty incidence in two of the oldest age cohorts examined, those who are no longer considered a part of the labour market. In this case, the state old age pension is shown to play an important role in poverty alleviation. Finally childless households, as opposed to households with children, have become poorer over time. This signifies that the government's child grant programme has been instrumental in lifting households with children out of poverty. State transfers have been shown to have a neutral effect on aggregate inequality levels because they provide sufficient support to households to move out of the bottom two deciles, clustering transfer recipients nearer the middle of the income distribution. Therefore, households at the bottom of the income distribution are those without access to income from the labour market or to grant income.

3. Redistributive Policies

The previous section highlighted the high and increasing levels of inequality since the transition. Given the democratic transition and the coming to power of a series of governments whose declared aim was to redress the injustice of the past, these trends raise the question what actions the government has taken in the realm of redistribution.

This section examines levels and trends in fiscal redistribution in South Africa since the end of apartheid. South Africa has a progressive income tax, a number of direct transfers, most importantly the Old Age Pension and the Child Support grant, and public healthcare and education. In the following, we will first study fiscal redistribution in South Africa in comparative perspective. As the available cross-national data are on taxes and direct transfers, we restrict the analysis first to these items. Subsequently, we discuss the trends and progressivity levels of different types of social policies since the 1990s, including healthcare and education.

3.1 Fiscal redistribution in comparative perspective

Large state redistribution through taxes and transfers is uncommon in developing countries. For Latin American countries, a study of redistributive effects of taxes and transfers finds that the impact of state redistribution on the market income Gini coefficient is negligible (Goñi et al (2008). For South Africa, van der Berg (2005, 2009) has carried out a number of fiscal incidence analyses that consider the whole set of social policies, including healthcare and education. However, in order to provide evidence comparable to international studies, we exclude the latter and only examine the redistributive effects of direct taxes and social grants.

In order to gain a clearer understanding of how the state's redistributive effectiveness has changed over the years, we proceed along the lines of Goñi et al (2008) whereby we compare the measured level of household per capita income inequality for market income and disposable income.[6] The former is defined as the household's income before taxes are deducted and government grants are

[6] Goñi et al (2008) compare the redistributive effects of taxes and government grants for a set of Latin American countries versus a set of European countries. They find that the effectiveness of fiscal redistribution on overall inequality is far stronger in Europe than in Latin America. Their study uses total household income as the basis of inequality measurement, while in this paper we use total household income per capita in order to take household size effects into account.

added, while the latter is simply household income after direct taxes have been deducted and government grants received. By comparing the difference in the level of inequality between the two measures, we should be able to identify how effective the redistributive regime is in reducing inequality. It must be noted that in this paper we attempt to measure the redistributive effects of direct taxation and government grants only. We do not attempt to account for the redistributive consequences of indirect taxation (for example value added tax), which is generally regressive in nature. Thus, by ignoring the presence of indirect taxes, it is likely that we exaggerate the level of state redistribution when comparing the distributions of market and disposable income. We also do not take broader welfare measures into account, for example the extent to which poor households gain increasing access to state-supplied healthcare facilities and schools over time.

The data for this study come from the 1993 Project for Statistics on Living Standards and Development (PSLSD) and the first wave of the National Income Dynamics Study (NIDS) from 2008. Given that the scale of government spending on social assistance and the level of efficient tax collection increased significantly over the period in question (Ajam and Aron 2009), we are able to assess the changing impact of these factors on inequality reduction over time.

In order to facilitate a meaningful comparison of the effectiveness of redistributive policies across time, it is necessary to align the construction of income in both datasets as closely as possible. Methodological differences in variable construction that are likely to confound our attempted comparison are found in the measures of household imputed rent and household income from agricultural sources (Argent 2009, Leibbrandt, Finn and Woolard 2010). For this reason, both components are subtracted from total household income before analysis takes place.

In order to capture how much direct tax a household pays, we subtracted household total net wages from household total gross wages. For the 2008 data, this meant that some imputation needed to take place, as approximately 22% of the wage-earning adults in the sample gave a figure for net wages but could not give a figure for gross wages. A single imputation procedure was used to calculate the predicted value of gross wages for these individuals with a wide variety of controls for individual and household characteristics. With regard to secondary occupation, 59 adult respondents reported having a second job for which they were paid a wage. This immediately rules out possible imputations for missing gross wages for secondary occupation due to small sample size constraints. Therefore, missing values were not imputed for this component of market income.

Table 3, below, summarises the findings for market income versus disposable income for 1993 and 2008. Both market income inequality and disposable income inequality increased in the period under study. The difference between the two increased from 4 percentage points in 1993 to 6 percentage points in 2008. The latter finding provides some evidence of the increasing effectiveness of the state's redistributive actions, despite the fact that the overall measure of inequality continues to rise. It is, however, noteworthy that these figures lie only slightly above the low levels of redistribution in Latin America, where the average is a decrease of 2 percentage points for Argentina, Brazil, Chile, Columbia, and Mexico (Goñi et al. 2008). In contrast, in Europe the figure is close to 20 (ibid.).

Table3: Gini Coefficients for Market and Disposable Income 1993 and 2008

	Market Gini	Disposable Gini	Difference
1993	0.70	0.66	-5.04%
2008	0.75	0.69	-8.35%

Source: PSLSD (1993) and NIDS (2008). Own calculations.

3.2 Progressivity of Social Policies

Besides taxation, redistributive policies consist of, on the one hand, direct social transfers (such as pensions), and on the other, social services provision (such as education). Direct transfers include both social insurance and social assistance. The South African social insurance pillar, essentially the unemployment insurance, is restricted in both its reach and duration. In 2009, it covered only around 10% of the unemployed.[7] The maximum claim period is 238 days. Far more developed is the social assistance pillar, providing basic resources to those who are unable to work either because of their age (Old Age Pension) or because of disabilities (Disability Grant), or who require supplementary income to support children (Child Support Grant). Between 1997 and 2009, the number of beneficiaries increased for all grants, most dramatically for those receiving the Child Support Grant (see table 4). In this period, the number of beneficiaries for the most important social grants rose from less than three million to more than 12.5 million, more than a quarter of South Africans. At the same time, while government spending on social assistance increased, it remained stable as a proportion of GDP, 3.2% in 1995, compared to 3.1% in 2009 (Van der Berg and Siebrits 2010). On all accounts, these grants have not only played an important role in lifting people out of poverty but also affected other outcomes such as school enrolment (Leibbrandt, Woolard, Finn, and Argent 2010).

As can be seen in table 5 - showing the concentration ratios for different types of social spending in 1995, 2000, and 2006, respectively – government grants have concentration ratios that are closest to -1 and are therefore seen to be the most progressive social policies in South Africa.[8] This is to be expected as these grants are means tested. Concerning trends, it is noteworthy that the degree of progressivity for social grants has not increased since 1995.

Table 4: Beneficiaries of Social Grants in 1997 and 2009

Grant	Number of beneficiaries	
	1997	2009
Old Age Grant	1 737 682	2 4141 83
Disability Grant	737 322	1 281 556
Child support Grant	362 631	8 825 824
Total	2 837 635	12 521 563

Based on Van der Berg and Siebrits 2010.

[7] The summary of social policies draws on Leibbrandt, Woolard, McEwen, and Koep (2010).

[8] A concentration ratio is a measure of how a given income stream is distributed across the income distribution. A value of 1 is fully regressive, of -1 fully progressive.

The second kind of social policies that impact redistribution are social service provisions, most importantly healthcare and education. In view of the highly unequal standards of healthcare and education for whites as compared to the African population at the end of apartheid, these two policies have been considered key priorities for post-transition governments. As a proportion of GDP, spending on healthcare has remained stable since 1995- slightly above 3 %; education decreased from 7.0 to around 5.5 from 1995 - 2007 (Van der Berg and Siebrits 2010). Spending on social services was generally progressive in the 2000s, with the exception of tertiary education and housing. For tertiary education, regressive spending is to be expected as richer individuals typically attend universities more than the poor. Health spending appears generally more progressive than education spending, most importantly for the category of public hospitals, probably the result of the rich opting for private health insurance. Regarding trends since 1995, spending on healthcare and school education has become unambiguously more progressive whereas it has become substantially more regressive for tertiary education.

Table 5: Concentration Ratios for Social Spending

Spending Category		**Year**			
		1995[i]	**2000**[i]	**2000**[ii]	**2006**[ii]
Social Grants		-0.434	-0.431	-0.371	-0.359
	Child Support			-0.247	-0.318
	Disability			-0.291	-0.288
	Old Age Pension			-0.412	-0.436
Education					
	School	-0.016	-0.104	-0.121	-0.128
	Tertiary	0.235	0.497	0.528	0.641
Health		-0.045	-0.082	-0.118	-0.137
	Public Clinics	-0.103	-0.132	-0.177	-0.257
	Public Hospitals	-0.014	-0.057	-0.105	-0.103
Housing		-0.018	0.007	0.16	0.07
Total across services		-0.057	-0.12	-0.112	-0.152

[i] Based on Van der Berg 2005 [ii] Based on Van der Berg 2009

In summary, direct taxation and social policies in post-apartheid South Africa contribute to a decrease in inequality levels. For taxes and direct social transfers, progressivity has been increasing since 1993. Similarly, overall social spending has become more progressive since 1995. However, the contribution of taxes and transfers to a decrease of the market Gini coefficient is only slightly above Latin American levels and substantially below European levels. Moreover, for some items of social spending progressivity has stagnated or decreased.

4. Education provision in post-apartheid South Africa: policy and policy constraints

This section considers education policy in post-apartheid South Africa. As will be discussed below, education plays an important role in predicting an individual's position in the income distribution. First, we examine the changing relationship between education levels and inequality between 1993 and 2008. We then describe the patterns of education spending since the end of apartheid and educational attainments of South African students. We conclude with a discussion of a number of factors impacting on the choice of education policy after the end of apartheid.

4.1 Education and inequality

This section examines the changing relationship between education levels and inequality between 1993 and 2008. Education is the key variable in determining a) whether an individual finds a job in the first place and b) the nature of the employment and the level of remuneration. The previous section was concerned with the changing measures of inequality at the household per capita income level. This section undertakes a deeper analysis in order to interrogate the changing relationship between educational attainment and inequality.

The data for this undertaking come, once again, from the PSLSD (1993) and the first wave of the NIDS (2008) with household income per capita serving as the unit of comparison, with 8663 and 7168 households forming the comparison groups respectively. Three different types of analysis are discussed and these are a) a comparison of the unconditional income distributions by education between 1993 and 2008, b) a comparison of the conditional distributions of income by education between 1993 and 2008 and c) unconditional versus conditional distributions within each year.

The unconditional distributions are constructed by dividing up household per capita income into quintiles and then assessing the probability that an individual with education level x falls into income quintile y. As we are investigating inequality as measured by household income per capita, we use the household head's level of education as the unit of analysis.[9]

The conditional distributions are the end product of an ordered probit model that was run with the five income quintiles as the dependent variable. The right hand side of the regression equation included controls for household size, province, geo type (urban, rural), a dummy for whether at least one household member was employed, the household head's age, race, gender and level of education. All ordered probit regressions are weighted using census-raised weights (1993) and post-stratification weights (2008), and all standard errors are robust.

The initial results of the ordered probit model are somewhat cumbersome to interpret, and it is easier to move to an analysis of the probability of a household being in a particular income quintile, given the level of education of the household head and the full range of controls. To this end, we construct a measure of the predicted probabilities of being in each income quintile by head's

[9] As a robustness check of our findings we ran both the unconditional and conditional analyses using "highest level of educational attainment for *anyone* in the household" and compared this to the case when "household head's level of education" is used. The patterns that emerge using both measures are very similar (particularly for 1993), and are especially stable for matric and tertiary levels of education.

education level. This is predicted on the basis of the ordered probit results while holding all other control variables constant at their means.

Let us start with a comparison of the unconditional 1993 situation versus the unconditional 2008 situation as reflected in Table 6 and Table 7. A feature of this comparison is how stable the unconditional probability of being in each respective quintile is for those households headed by an individual with tertiary education. There has been a significant drop in the probability of a matric-headed household being in the top quintile, and a correspondingly large increase in the probability of being in quintiles 1 or 2, between 1993 and 2008. Households headed by an individual with incomplete secondary education became increasingly concentrated in the lower quintiles.

With this unconditional comparison as the benchmark, we now compare the Conditional 1993 situation to the conditional 2008 situation as reflected in Table 8 and Table 9. By far the most prominent feature of the "conditional versus conditional" comparison is the change in probabilities for households headed by an individual with tertiary education. There was huge "probability migration" out of quintiles 1 to 4 into 5 between 1993 and 2008 for this group. In fact, the probability of a tertiary-headed household being in the richest quintile jumped from 17.51% to 40.59%. For no education, primary and incomplete secondary households, the general trend was towards greater concentration in the lower quintiles. For matric-headed households, the middle and the top quintiles were stable, while the probability of being in quintile 1 or 2 increased.

By comparing Table 6 and Table 8 we compare the unconditional and conditional situations in 1993. For no education and primary education-headed households, there is a greater concentration in the middle of the income distribution, once other factors are controlled for. The same goes for incomplete secondary households, where those at the top of the unconditional distribution are largely shifted downwards in the conditional distribution. For tertiary households, there was a very large movement out of the highest quintile from the unconditional distribution (76%) to the conditional distribution (18%).

Finally by comparing Tables 7 and 9 we undertake the same unconditional versus conditional comparison but for 2008. One overall comment is that there is much less shifting between unconditional and conditional distributions in 2008 than in 1993. However, there is still a great deal of movement that takes place. For no education and primary education-headed households, there is much less movement than in 1993, and the distributions are relatively stable. There is a lot of shifting in both directions for those households headed by an individual with an incomplete secondary education. Matric households see shifts out of the top quintile and into the 3rd and 4th quintiles. Tertiary-headed households once again see a huge drop off in the conditional probability of being in the top quintile, but the drop is much less that it is in the 1993 data (33% versus 58% drop).

The most significant trend to come out of the data is that those households headed by individuals with tertiary education have become increasingly more likely to be in the top quintile. For all other education groups, the likelihood of being in one of the lower income quintiles increased in the period between 1993 and 2008, with matric-headed households experiencing a particularly sharp decline. Even after controlling for a wide range of individual and household characteristics, the same strong patterns emerge.

Table 6: 1993 Unconditional Probabilities

Quintile	1	2	3	4	5	Prop.
Noedu	37.49	30.76	18.46	9.08	4.21	22.01%
Primary	26.05	26.53	22.50	18.35	6.58	29.99%
Inc Sec	12.20	15.59	25.63	29.45	17.13	28.23%
Matric	3.60	4.63	13.11	26.28	52.39	10.21%
Tertiary	2.10	0.79	4.89	16.54	75.67	9.56%

Source: PSLSD 1993 data. Number of households=8663. Own calculations.

Table 7: 2008 Unconditional Probabilities

Quintile	1	2	3	4	5	Prop.
Noedu	31.58	34.75	24.19	7.81	1.67	13.82%
Primary	28.53	29.95	24.08	13.24	4.20	23.44%
Inc Sec	21.07	17.69	23.91	24.77	12.57	31.65%
Matric	9.02	11.34	14.67	29.73	35.24	20.60%
Tertiary	2.50	1.61	4.71	17.31	73.86	10.50%

Source: NIDS 2008 data. Number of households=7168. Own calculations.

Table 8: 1993 Conditional Probabilities from Ordered Probit

Quintile	1	2	3	4	5
Noedu	14.51	34.65	34.36	14.95	1.53
Primary	10.39	30.79	36.84	19.48	2.5
Inc Sec	6.22	24.63	38.14	26.39	4.62
Matric	1.86	12.91	33.21	39.23	12.79
Tertiary	1.11	9.47	29.43	42.48	17.51

Source: PSLSD 1993 data. Own calculations.

Table 9: 2008 Conditional Probabilities from Ordered Probit

Quintile	1	2	3	4	5
Noedu	21.46	32.53	29.38	14.41	2.22
Primary	20.59	32.20	29.82	15.01	2.38
Inc Sec	14.84	29.10	32.37	19.75	3.93
Matric	5.27	18.04	32.27	32.57	11.86
Tertiary	0.52	4.20	16.36	38.34	40.59

Source: NIDS 2008 data. Own calculations.

4.2 Education Spending and Outcomes[10]

Spending on education has seen significant growth, from R31.1 Billion in 1995 to R165 billion in 2010/11, with real growth of 49% from 1994-2005 (OECD 2008). This amounts to a yearly average of around 5.5% of South Africa's GDP which is "respectable" (OECD 2008) for a middle income country. Despite this, there is wide recognition, including by the South African government, that the quality of education provision is relatively low (Department of Basic Education 2010). The country's students perform badly in international tests, such as Trends in International Mathematics and Science Study (TIMMS) or Progress in International Reading Literacy Study (PIRLS) (Department of Education 2008). As a recent OECD report on education in South Africa put it, physical access to education has increased but not necessarily meaningful access. In other words, enrolment figures in primary and secondary education have increased but the quality of the provided education is such that it does not provide South Africans with the necessary skills.

The progressivity of public spending on schooling can be examined in three ways. First, as illustrated earlier, through the use of concentration ratios. According to van der Berg (2009) the concentration ratio for school education was -0.016 in 1995, -0.121 in 2000 and -0.128 in 2006, suggesting that not only is spending on school education progressive, but its progressivity is increasing over time. However, this measure does not reflect the quality of the attended school which is likely to be worse for the poor. Indeed, much larger proportions of African students experience very basic problems of education provision, such as lack of text books or schools facilities that are in bad condition (Department of Education 2006).[11] Second, progressivity is typically discussed when considering spending across provinces. In this regard, spending on education has moved closer to equity over the last 15 years. Whereas rich provinces (Gauteng, Western Cape) were spending almost 50% more per capita on education than the national average in 1995, the figure has decreased to less than 20 % in 2003; poor provinces (Eastern Cape, KwaZulu-Natal, Mpumalanga and Limpopo) have almost caught up with the national average in the same time period (Wildemann 2008). Thirdly, an assessment of progressivity needs to take into account funding for different types of schools within the same province. Fiske and Ladd (2005) analyse public education spending in the Western Cape, grouping schools by former education department - African (DET), Coloured (HOR), Indian (HOD), White (HOA)- as these generally capture the degree of resources for schools in the apartheid period, with most resources for HOA and least for DET schools.[12] They find that, in 2001, in both primary and secondary schools, former HOA schools received not only the largest amount of publicly provided resources per learner concerning personnel expenses but also generally larger amounts of public funds than former DET schools. Only one program "norms and standards" that is directly targeted to benefit poor schools was progressive. This programme, however, disburses rather small funds compared to the total (in DET R187 per learner, compared to R3002 total public funding per learner in primary schools, in HOA R72, compared to R3594 total, in secondary schools, the figures were R209/R3402 for DET and R82/R4419 for HOA) (Fiske and Ladd 2005).[13] A similar analysis of

[10] This section mainly focuses on school education which accounts for around 65% of the education budget. Higher education is around 12.5%. (National Treasury 2009).

[11] In the Western Cape, schools serving poorer students also have less qualified teachers (Fiske and Ladd 2005).

[12] This is still correlated with the level of affluence of the enrolled students (Fiske and Ladd 2005).

[13] These funding inequalities get exacerbated by the fact that the schools serving South Africa's wealthier population can raise unlimited amounts of school fees, for example to hire more and better teachers.

education spending in Gauteng shows a slightly more complicated picture - with "winners" and "losers" in all school categories. Yet, overall, state per capita expenditure was still higher in former HOA schools in 2002. A key difference was, however, that in Gauteng this was followed by DET schools while former HOD and HOR schools were worst off (cf. Motala 2006).

The inequality of educational attainments is substantial. The performance of South Africans in TIMMS is very unequal with a distribution that is highly skewed to the right. Additionally, an analysis of the 1999 and 2003 TIMMS performance according to whether students were enrolled in former DET or HOA schools shows large differences in maths and science command. Students of former DET schools score an average of 227 in 2003 in mathematics compared to 468 for students of former HOA.[14] Moreover, the score for DET schools had decreased from 238 in 1999 whereas it had increased for HOA from 442. HOA schools also almost reach the international average of 488 in 2003 (see Reddy 2006). In a similar vein, van der Berg (2007) observes important differences in the senior certificate pass rates of schools classified by 'race', with an average of 97.3% for white schools and of 43.3% for black schools.[15] Evaluations performed by the department of education also show large provincial differences, with the Eastern Cape and Limpopo being consistently below the national average (Department of Education 2005). The same applies to pass rates in the senior certificate. In 2009, for instance, 75.7 % of students in the Western Cape passed their senior certificate exam but only 48.9% in Limpopo (Department of Basic Education 2010).

In summary, the significant amounts South Africa spends on education provision have not yielded quality education for the whole population. While the trend has been towards equalizing spending across provinces, equity of spending has not been reached. In the Western Cape and Gauteng, it is moreover regressive across schools in the sense that formerly privileged schools continue to receive more state funding than schools starting off from a worse position. The outcomes of education as measured in the performance of students are still highly unequal.

4.3 Discussion

This section discusses some of the possible reasons why government education spending has not been more explicitly in favour of schools serving disadvantaged populations.[16] We consider a number of factors that have worked as constraints on education spending and its transformation into education quality.

First, the apartheid legacy in terms of education has been a formidable challenge to those seeking to redress it. Education policy in the apartheid era consisted of the sub-standard education of the non-white population while providing high quality education and facilities for the white population. Africans had substantially worse schools and worse paid teachers with lower qualifications. For a government committed to equalizing conditions in education provision the extreme differences of educational infrastructure constituted a large burden. Additionally, education was not the only

[14] The scores for former HOR (Coloured) and HOD (Indian) schools lie in-between these two, with HOR closer to DET, and HOD closer to the performance of DET.

[15] Van der Berg 2007 classifies a school as belonging to a certain "race-type" if more than 70% of its students are of that race.

[16] Whether the observed differences in educational outcomes are directly attributable to differences in spending patterns is a debated question which we do not seek to address here.

sector that needed redressing and other social transfers and policies have weighted heavily in the budget.

Second, the context of South Africa's negotiated transition to democracy provided constraints and limitations as to how education policy could be designed and implemented from the point of view of the national government. One key constraint resulting from the transition settlement was a considerable degree of decentralization of South African political institutions with large prerogatives attributed to the nine provinces regarding education spending and implementation. Lack of central control over provincial spending implies, among other things, that provincial governments can decide which share of their budget they allocate for education. Indeed, the National Treasury has uttered its "concern" regarding the decline in share of education expenditure in provincial budgets, from 44.7% in 2005/06 to 40.8% in 2008/09 (National Treasury 2009). The scope for more control over spending and implementation is limited: the constitution prohibits centralization and it would be a politically very sensitive step, bound to be interpreted as the ANC's reneging of the transition agreements. Another constraint arising from South Africa's transition context was that the ANC's aim to keep the white population inside the public school system so that they would support education spending. In practice, this meant that large autonomy was given to so-called section 21 schools regarding the raising of fees and the pay and amount of teachers (Fiske and Ladd 2005, OECD 2008, Rensburg 2001), thus potentially contributing to the inequality of educational outcomes. Consensus oriented policies towards the white population also meant that the target had to be to upgrade African schooling rather than to take funding away from schools serving the white population making it more difficult to reach equality.

Finally, the fact that teachers were an important part of the anti-apartheid struggle and of the ANC's constituency (Jansen 2001) proved to be "costly" as symbolically, the equalization of salaries was important. As a result, teacher salaries accounted for more than 90% of education expenditure at the beginning (this declined to below 80% in 2006/2007), thus leaving little space for polices targeted to the poor (Fiske and Ladd 2005, OECD 2008).

Thus, there have been considerable constraints on education spending. That said, a critical inspection of the figures and spending choices raises two questions. The first is to what extent education has, in fact, been a top priority. As several reports point out, although education spending is considerable, it is below the UNESCO target of 6% of GDP and given the backlog due to apartheid policies it could be considered not sufficient (OECD 2008, Fiske and Ladd 2005). Moreover, while expenditure on education increased considerably, it declined as share of government expenditure, from 19.2 in 1996 to 18% in 2007, and as share of GDP from 5.7 to 5.4% in the same period (OECD 2008). Education also has the slowest growth rate, compared to other social expenditures (OECD 2008).

The second is whether redistribution - to an extent that it would bridge the gap between schools serving poor students and those serving richer ones - has been attempted. Indeed, "affirmative action" has mostly been absent in education spending. Equity of spending across provinces has yet to be reached but it seems attainable even if it is not clear to what extent it is actually a policy goal.[17] The degree of inequality of education provision at the end of apartheid would, however, require disproportionate amounts of funding for poorer schools in order to provide their students with

[17] There is no official policy document that defines such convergence as a goal (Wildemann 2008).

opportunities similar to those of the better equipped schools. Currently, there are some components of education policy that are equality promoting, such as the no-fee schools and the norms and standards programme, but funding for these appears too small to bridge the gap. Additionally, the within-province patterns of education spending observed by Fiske and Ladd (2005) in the Western Cape, and Motala (2006) in Gauteng where disproportionate amounts of education funding go into privileged schools shows that spending equity across provinces will not necessarily improve schools serving disadvantaged students.

5. Conclusion

Reducing inequality and poverty levels inherited from apartheid was a formidable challenge for post-transition governments. There has been some success with reducing poverty levels since 1993 but none with decreasing inequality which has even increased since South Africa's transition to democracy.

A possible reason for this is that tackling inequality is more complicated and politically contentious than tackling poverty, as the former implies a "rearrangement" of the positions of the poor *and* the rich in the income distribution whereas the latter only involves the socio-economic conditions of the poor. Redistribution levels are a highly political issue in any country and even more so in the context of a negotiated transition to democracy where former elites need to be accommodated. Indeed, as discussed, while fiscal redistribution is progressive in South Africa, its level is relatively low. Similarly, the progressivity of social policies in general – while present – has only seen a slight increase since 1995.

A good example of a focus on "poverty" – rather than "inequality" - reduction is education policy. Education spending has concentrated on improving the situation of poor provinces and, to some extent, poor schools, while keeping relatively high levels of funding for the formerly privileged schools. Given the high disparities in the quality of these schools at the moment of the transition, such policies that are directed only at the poor will take a long time to bridge the gap between schools. The same might be true for inequality in general.

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southern africa labour and development research unit

The Southern Africa Labour and Development Research Unit (SALDRU) conducts research directed at improving the well-being of South Africa's poor. It was established in 1975. Over the next two decades the unit's research played a central role in documenting the human costs of apartheid. Key projects from this period included the Farm Labour Conference (1976), the Economics of Health Care Conference (1978), and the Second Carnegie Enquiry into Poverty and Development in South Africa (1983-86). At the urging of the African National Congress, from 1992-1994 SALDRU and the World Bank coordinated the Project for Statistics on Living Standards and Development (PSLSD). This project provide baseline data for the implementation of post-apartheid socio-economic policies through South Africa's first non-racial national sample survey.

In the post-apartheid period, SALDRU has continued to gather data and conduct research directed at informing and assessing anti-poverty policy. In line with its historical contribution, SALDRU's researchers continue to conduct research detailing changing patterns of well-being in South Africa and assessing the impact of government policy on the poor. Current research work falls into the following research themes: post-apartheid poverty; employment and migration dynamics; family support structures in an era of rapid social change; public works and public infrastructure programmes, financial strategies of the poor; common property resources and the poor. Key survey projects include the Langeberg Integrated Family Survey (1999), the Khayelitsha/Mitchell's Plain Survey (2000), the ongoing Cape Area Panel Study (2001-) and the Financial Diaries Project.

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