

INCOME

Changes in Income Poverty over the Post-apartheid Period: An analysis Based on the 2008 National Income Dynamics Wave 1 Dataset

POVERTY
DATA
ANALYSIS

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Acronyms

ABSTRACT

ABSTRACT

This paper compares the level and distribution of income poverty in the 2008 National Income Dynamics Study (NIDS) to that measured in the 1993 Project for Statistics on Living Standards and Development (PSLSD). Attempts are made to make the income variable as comparable as possible across the two surveys. This requires agricultural income and implied rental income from owner-occupied housing to be excluded from the measure of income. The potential

bias resulting from these exclusions is also discussed. The paper finds that aggregate poverty fell between 1993 and 2008 and that this result is robust for a wide range of poverty lines. The poverty profile has changed over time, however. Urban poverty has increased significantly, driven largely by increased migration from rural to urban areas. The share of poverty in households where the household head has incomplete secondary education has also increased markedly.

1 The authors acknowledge financial support for this paper from the Programme to Support Pro-poor Policy Development in the South African Presidency and from the Social Policy Division of the OECD. Murray Leibbrandt acknowledges the Research Chairs Initiative of the Department of Science and Technology and National Research Foundation for funding his work as the Research Chair in Poverty and Inequality. We are particularly grateful to Michael Förster of the OECD Social Policy Division, to Charles Meth of SALDRU for detailed written comments and to seminar participants in an OECD Experts Seminar and a SALDRU Seminar for comments.

INTRODUCTION

1 INTRODUCTION

This paper uses income data from the 2008 first wave of the National Income Dynamics Study (NIDS) to measure money-metric poverty in contemporary South Africa. It then goes on to compare changes in poverty over the post-apartheid period by benchmarking this 2008 situation with the situation as it was in 1993 (as measured by data from the Project for Statistics on Living Standards and Development (PSLSD) for 1993). Finally, it looks at possible drivers of the changes in poverty.¹

Section 2 of the paper interrogates the data and spells out the assumptions that were made to ensure comparability over time. Section 3 provides an

analysis of aggregate changes in poverty between 1993 and 2008. Section 4 then explores the extent to which this aggregate picture is generalisable across key demographic and labour market categories. The analysis explores breakdowns by race and gender, geo-type (urban/rural), education of the household head, the age profile of individuals and the labour market status of their households. Section 5 concludes.

The key finding is that aggregate money-metric poverty has unambiguously decreased over the 1993 to 2008 period. But this aggregate decrease is the net effect of some contradictory changes for the sub-groups.

¹ The paper draws heavily on the discussion paper (Argent *et al*, 2009) for the 2008 situation and the working paper (Leibbrandt, *et al*, 2010) for the comparisons over time between 1993 and 2008.

2 DATA ISSUES

The money-metric measurement of poverty levels and the changes in these levels over time is only useful if the data used in the measurement of poverty is reliable and comparable. In this section we spend some time describing these data and, in particular, the income variable that forms the basis of our measurement and comparisons.

The sampling, fieldwork and processing of NIDS Wave 1 data are described in detail in Leibbrandt et. al. (2009) and also Woolard, (2010). The construction of the 2008 household income variable used in this paper is detailed in Argent (2009). When attempting to compare changes over time through the lens of separate cross-sectional datasets, there will be differences in methodology that partially confound comparison. Here we focus specifically on the differences in measurement of income, which is the variable upon which the analysis of poverty rests.

There are many minor differences in measurement methodology across the two sources of data. While some of these have only a small impact, others are more serious sources of bias. Some of the more influential problems with comparison of the income aggregates are discussed below. A complete table listing all of the variables included in the income aggregates is available in Appendix A.3.1 of Leibbrandt et. al. (2010). Inspection of these tables (and the actual questionnaires to which they are linked) shows clearly the extent to which these instruments differ. Leibbrandt et. al. (2010) compares three data sets: the 1993 PSLSD data, Statistics South Africa's 2000 Income and Expenditure Survey (IES) and the 2008 NIDS data. As the 2000 IES data differ in a number of significant ways from the PSLSD and the NIDS data, this data set is omitted from the comparisons in this paper.² Importantly, the differences between the questions used to measure income in 1993 and 2008 are much smaller than those between these

instruments and that of 2000. However, there is one major methodological disparity between the 1993 and 2008 instruments. In 1993, one respondent answered a questionnaire for the entire household.³ In contrast, the 2008 survey had questionnaires for all of the members of the household.³ Clearly; the 2008 data will be less prone to measurement error on income. It is not entirely clear how the bias from this type of questioning will be manifested in the data.

Another major decision is that of how to treat the value of housing which, in this paper we call implied rental income. People who do not pay rent for the homes they inhabit derive welfare from living in these dwellings. Implied rental income aims to measure this flow of welfare so that income figures do not understate the income of people who own the homes they live in. Unfortunately, there are differences in the treatment of implied rental income between the 1993 and 2008 data and these have the potential to distort comparisons over time. The 1993 dataset includes an implied rental income figure which is calculated from house prices. This method applied a set rate of return which is problematic in details of the distribution, where there are likely to be non-linearities in the relationship. The 2008 implied rental income data, in contrast, is far more nuanced, based on several variables that attempt to measure the opportunity cost of living in one's own home.

The net effect of these differences is that the distributions of the implied rental income variables from the two datasets are very different and their inclusion for the purposes of comparison is likely to create large disparities that are driven by measurement error rather than by real changes. This is further magnified by the fact that the housing market in South Africa has experienced substantial growth over the past 15 years and this dynamic is excluded from the analysis.

2 For example, all of the income variables in the 2000 data are annual, whereas the 1993 and 2008 data focus mostly on the last 30 days. The latter methodology aims to mitigate recall bias at the expense of creating some lumpiness, due to incomes that are received over longer time periods than months (for example a remittance payment that is received every 2 months). It is difficult to tell exactly what effect this will have. In 1993 and 2008, questions on remittances were asked in both annual and monthly format. Comparing the results of these two, we get substantially lower estimates from the annual figures (converted to monthly), which tells us that at least in some cases it makes a difference.

3 Individual level income questions were asked, but one person in the household provided all of this information for the rest.

However, it is not clear whether the massive changes in housing prices really reflect a growth in welfare of the inhabitants to the same extent. This is not a trivial question, and it is quite possible that even if we had comparable data, we might have to exclude implied rentals owing to the distortionary effect they may have on our figures.

Nonetheless, there is a big picture finding that is worth noting. By excluding implied rental income, it seems likely that we are understating 2008 incomes relative to 1993 and therefore understating improvements in money-metric well-being over time. The point of the above discussion is to acknowledge that we cannot say anything more precise than this about the comparison of implied rentals over time and are therefore excluding it from our comparisons in the rest of the paper.

Another potential source of distortions in comparisons over time is differences in the measurement of agricultural income. There are some significant differences in the measurement of agricultural income between 1993 and 2008 and these make comparing the two data sets more difficult. It is for this reason that

agricultural income has been excluded from aggregate household income in this paper. However, agricultural incomes do have some ramifications for our overall results and we briefly describe the differences in the data from 1993 and 2008 before we move on to the measurement of poverty.

The 1993 agriculture data have a few very high values which clearly belong to commercial farmers. Commercial farmers were excluded from the module on agricultural income in the 2008 survey. The result is that the mean per capita household agricultural income in 1993 is inflated and not comparable to the mean from 2008. The median is much less affected by these outliers and median per capita household agriculture (among those who received agricultural income) in 1993 was measured at around R14 compared to about R2 in 2008 (both in 2008 Rand). Including agricultural income in the 2008 data has almost no impact on poverty counts at all. In contrast, in 1993, poverty incidence rates fall by around 1% when agricultural income is included. So, certainly, the exclusion of this from both datasets does result in a slightly overstated change in poverty over the period.

3 AGGREGATE CHANGES IN POVERTY BETWEEN 1993 AND 2008

In the rest of the paper our measure of money-metric well-being is household income per capita in 1993 and in 2008. In all cases this variable is given in real terms with 2008 as the base year. The income variable is the sum of all labour market earnings, remittances received, income of a capital nature, government grants, and all “other” income. As discussed above, implied rent and income from subsistence agriculture have been omitted from both years. The per capita figures of household income were constructed by dividing the final derived figures for total income by the number of people living in the household. All of the analysis below makes use of post-stratified sampling weights in order to make the results reflective of the South African population, rather than the PSLSD or NIDS samples.

Before embarking on an analysis of poverty dynamics in South Africa for the 1993 to 2008 period, it is informative

to discuss the composition of household income itself. In Figures 1a and 1b, the overall distribution of household income is broken down into deciles and the relative importance of each component of household income is shown for each year respectively. The figures illustrate the changing importance of these components over the 15-year period. As expected, labour market earnings constitute the bulk of total household income for those at the upper end of the distribution, while poor households are particularly reliant on government grants. It is interesting to note the increasing importance of government grants for these households. For example, for the bottom decile, the share of government grants in total income rose from 15% to 73%, thus reflecting the state’s extensive roll-out of grants over the relevant period. The contribution of remittances to total income declined for the lower deciles and has given way to increased government grants.

Figure 1a: Income components by decile, 1993

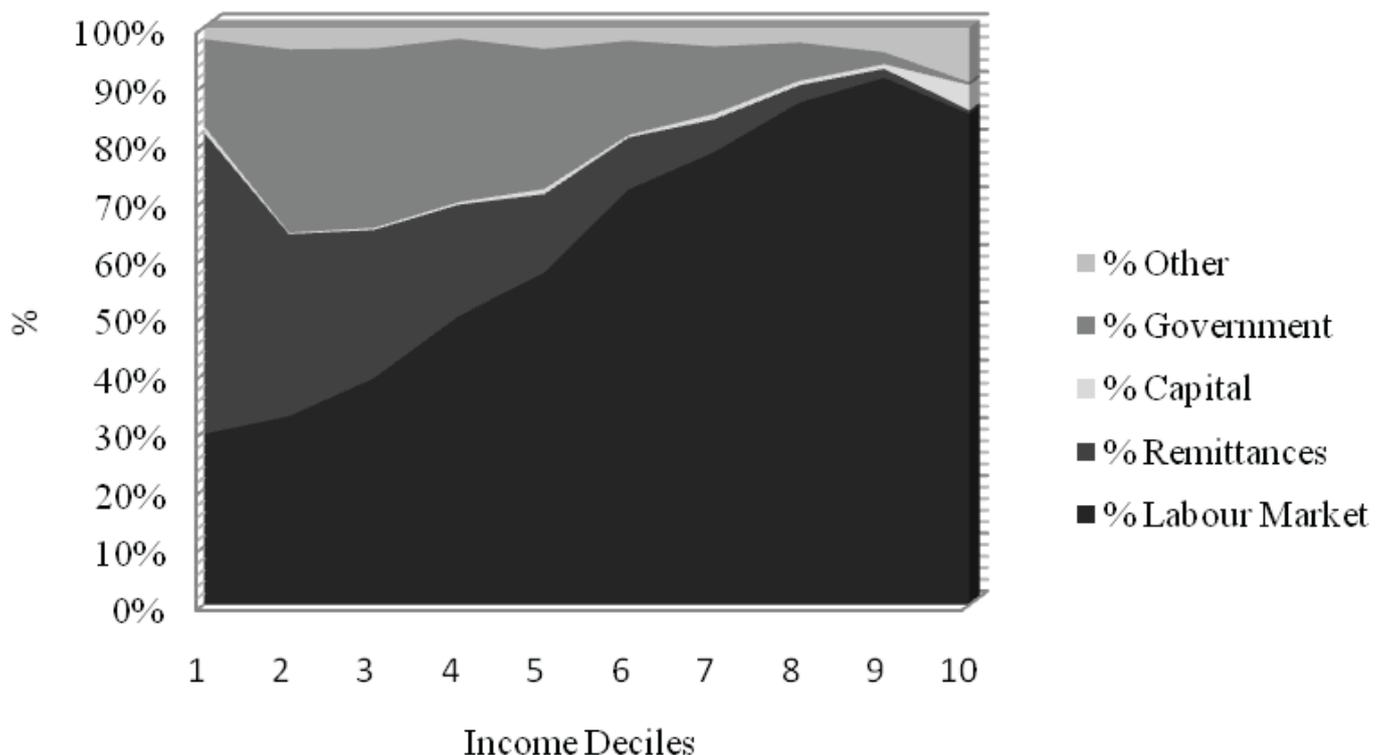


Figure 1b: Income components by decile, 2008

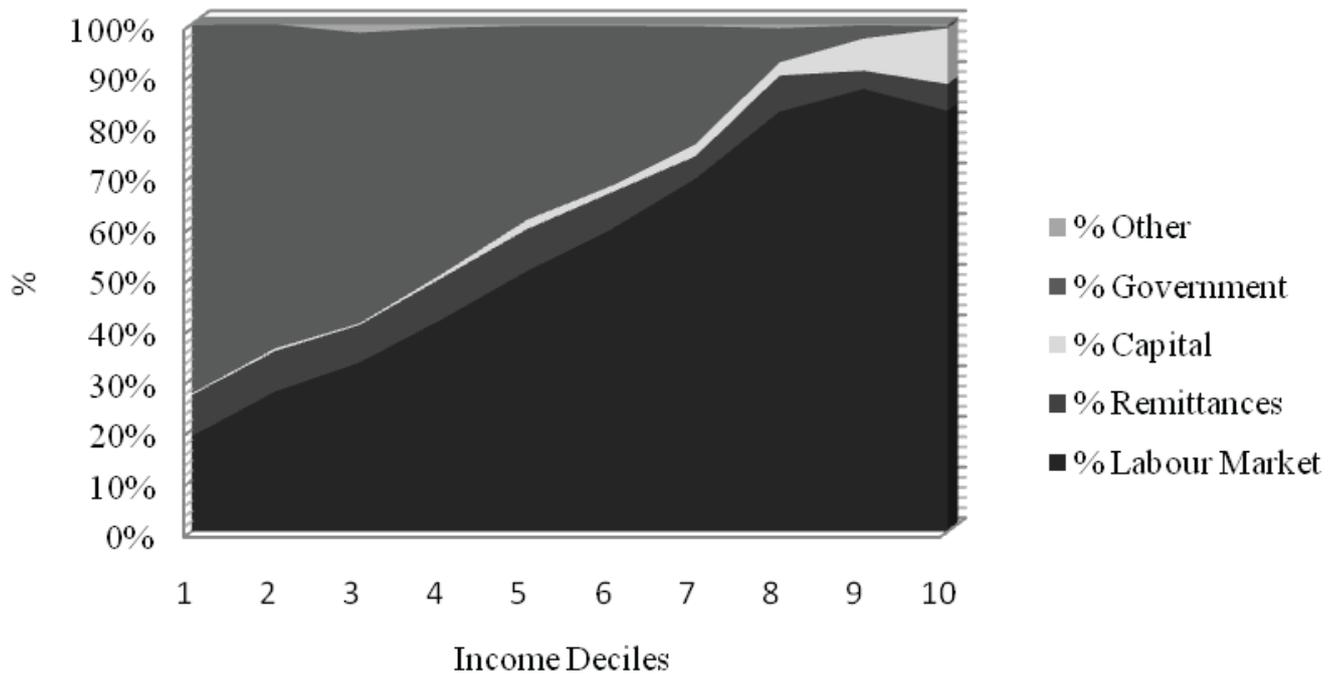
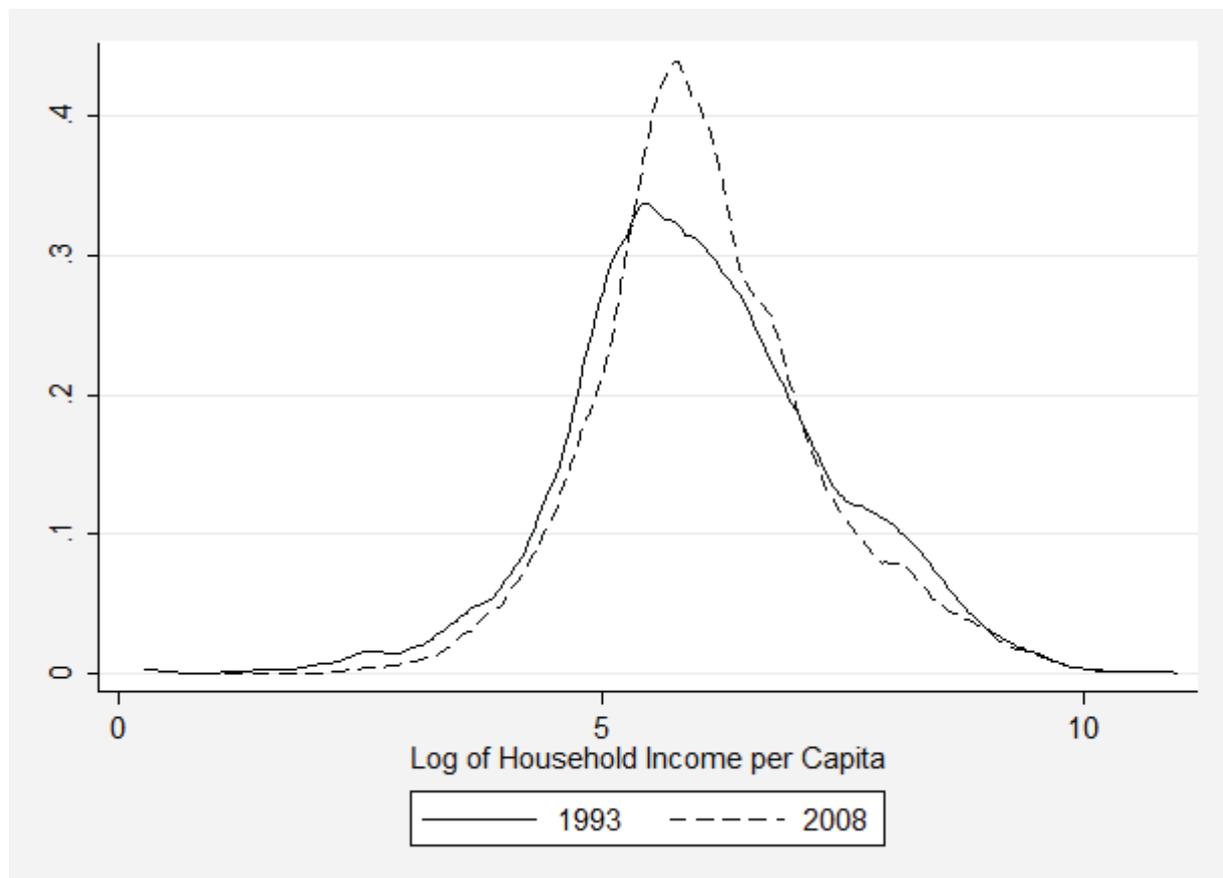


Figure 2 below uses density plots of log per capita income to provide a representation of the full distributions of household income per capita in 1993 and 2008. The most striking feature of the figure is the fact that there has been very little shifting in the overall distribution of income. There has been some to the right movement at the lower and upper extremes of the distributions between 1993 and 2008, but the kernel densities are very similar overall.

Figure 2: Overlaid kernel densities of log per capita real household income in 1993 and 2008



Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

One way to move from this picture of the entire income distribution to an analysis of absolute poverty involves drawing a poverty line and concerning ourselves with the welfare of those only who fall below the line. Obviously this understanding of poverty renders analyses sensitive to the choice of poverty line, and the welfare measure. We can work around the former problem by considering a broad range of poverty lines rather than a single one. In this paper we make use of lower-and upper-bound poverty lines, as recommended by Hoogeveen and Özler (2006), using a lower bound line of R322 and an upper bound line of R593,⁴ income per capita per month in 2000 prices. After inflating these forward to 2008 prices by using the CPI, we obtain lower-and upper-bound poverty lines of R515 and R949 respectively. However, we assess sensitivity to this choice of lines by using a fairly standard set of international (absolute and relative) poverty lines, namely the \$1/day class, 40% median per capita income and 50% median per capita income. In the Appendix (Table A.1) we present a set of poverty tables across a whole set of poverty lines for 2008. Of course, the decision to normalise household income by household size needs to be recognised as another choice that has been inserted into the analysis. There is extensive literature on the choice

of equivalence scales in poverty measurement. This literature is reviewed in Woolard and Leibbrandt (2005). We did some rudimentary sensitivity analysis by dividing household income by the square root of household size, rather than the unadjusted household size. These tables are available but are not discussed in the text.⁵

Having chosen two poverty lines, we now look at poverty through the lens of the Foster-Greer-Thorbecke (FGT) poverty indices.⁶ Of the three FGT poverty indices, the one that is easiest to interpret is the P_0 measure, which is simply the headcount ratio. That is, it gives the percentage of people in a population who fall under a given poverty line. The P_1 measure is generally interpreted as the “poverty gap ratio” and this figure, when multiplied by the poverty line, indicates how much money needs to be taken from every person in the economy and then given to the poor in order for every person to be above the poverty line. Given its focus on the poverty gap, it adds to the analysis of the headcount by giving explicit attention (weight) to the depth of poverty. The P_2 measure is known as the “squared poverty gap ratio” and is not as easily

4 These lines were drawn up using a “cost of basic needs” approach. For more information on different kinds of poverty lines see Woolard and Leibbrandt (2005).

5 In this analysis we divided household income by the square root of household size, rather than the unadjusted household size. This will obviously have the effect of increasing the size of the welfare measure for larger households relative to smaller households. Given that household size generally results in a decrease in income, the adjustment will result in an increase (on average) of the welfare of poorer households relative to wealthier households. However, as this is true both in 1993 and 2008, it does not impact significantly on our analysis of changes over time.

6 These are also known as the P_α class of poverty measures. See Foster et al (1984).

interpreted as the two previous measures. However, it clear that by, our squaring the poverty gap we are weighting the poorest of the poor more heavily in the calculation. In other words, it presents a picture of changes over time that gives particular weight to changes for the poorest of the poor. Thus, the three measures taken together provide a rich set of poverty indices.

Table 1 shows the FGT poverty indices for the upper and lower-bound poverty lines previously mentioned across the two data sets. Looking at the headcount ratio for both poverty lines, it seems clear that poverty has fallen slightly over the 15-year period. The changes in the poverty gap ratio and the squared poverty gap ratio suggest that when taking the depth and severity of poverty into account, the gains over the period have been slightly higher than indicated by the headcount ratio. Thus, the improvement is more pronounced for the poorest of the poor relative to those who fell just below the poverty line. These conclusions are consistent with previous work done on poverty in South Africa (for example, see Aron et al, 2009).

A cumulative distribution function (CDF) which plots the poverty headcount ratio against household per capita income allows us to generalise poverty incidence to all possible poverty lines. By considering a broad interval of possible poverty lines we present a more general analysis and avoid pinning our conclusions on an arbitrary choice of poverty line. Using CDFs to compare poverty over time allows us a more robust statement about poverty rankings.⁷ It is particularly useful to note that, when the CDFs do not cross, this implies first order poverty dominance. This means that our analysis has a clear and robust conclusion about the comparison of the poverty situation in 1993 in 2008, and all of our three FGT measures will tell the same story at any poverty line. When the CDFs do cross, the crossing-point highlights a per capita income threshold around which there is a switch in the poverty picture from improvement to worsening or *vice versa*. Such thresholds are worthy of special interrogation. Conclusions are no longer unambiguous and the three FGT measures may yield different results as to whether or not poverty levels have increased. Recourse needs to be made to second order and third order poverty dominance analysis in search of conclusive statements about the rankings of poverty.

Table 1: Poverty measures from 1993–2008

| | Population | Poverty line = R949 | | | Poverty line = R515 | | |
|-------------|------------|---------------------|-------|-------|---------------------|-------|-------|
| | | p_0 | p_1 | p_2 | p_0 | p_1 | p_2 |
| 1993 | 40 147 932 | 0.72 | 0.47 | 0.36 | 0.56 | 0.32 | 0.22 |
| 2008 | 48 687 000 | 0.70 | 0.44 | 0.32 | 0.54 | 0.28 | 0.19 |

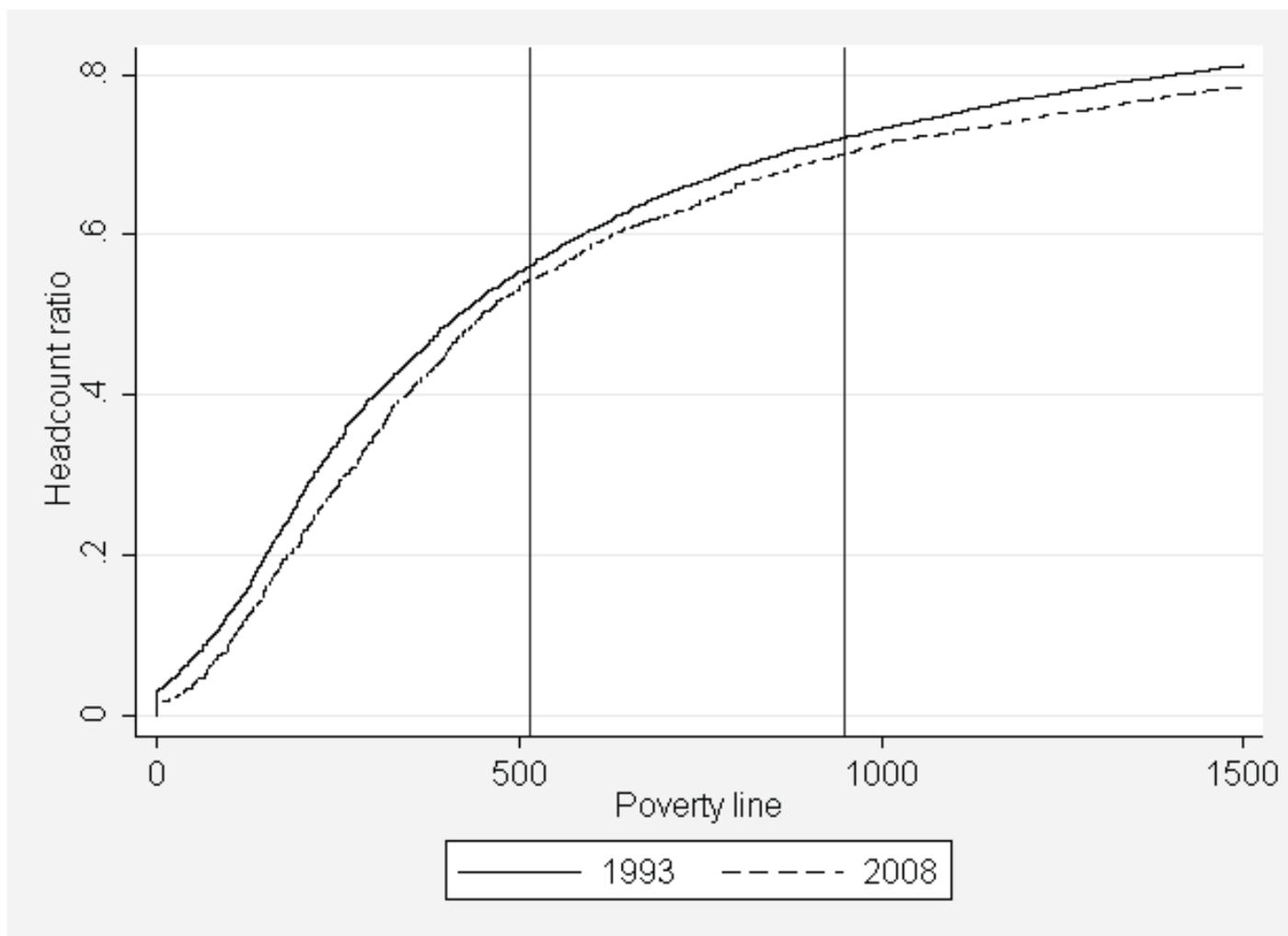
Source: Own calculations using data from PSLSD 1993 and NIDS 2008.

7 See Ravallion (1992) for a full explanation of the CDF and its role in poverty dominance analysis.

Figure 3 below shows the CDFs of household per capita incomes across the two data sets from 1993 to 2008. The influence of zero incomes can be clearly seen in the bottom left corner. Excluding zeros does not substantially alter this graph.⁸ We can see that for all poverty lines below R1 500 per capita per month,⁹ there is clear first order poverty dominance of 1993 over 2008.

Poverty has unambiguously fallen. Given this, we know that it will be shown to have fallen using any of the three FGT poverty measures at any poverty line less than R1 500 per person per month.

Figure 3: CDFs for 1993 and 2008



Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

Figure 4 plots a graph of the difference between the CDFs for 1993 and 2008. The fact that this difference is negative (below 0) is merely a restatement of the fact that the CDFs do not cross and we have first order poverty dominance. However, the presentation of the differences in this plot makes it easier to identify the percentiles at which the improvements are more marked. Thus, the plot makes it clear that there is a notable fall in the proportion of the population with real income less than or equal to R500 per capita per month in 2008 compared to 1993. In Figure 4, the

line of difference contains a 95% confidence interval shading around it. The confidence interval reflects the fact that both the 1993 and 2008 CDFs (and the difference between these CDFs) are estimates of the true population CDFs based on the respective sample surveys. There is some error associated with these estimates, and this error is reflected in associated standard errors and confidence intervals.¹⁰ The fact that the 95% confidence interval lies entirely below 0 at all points implies that we can be confident that the true difference between the 1993 and 2008 CDFs is

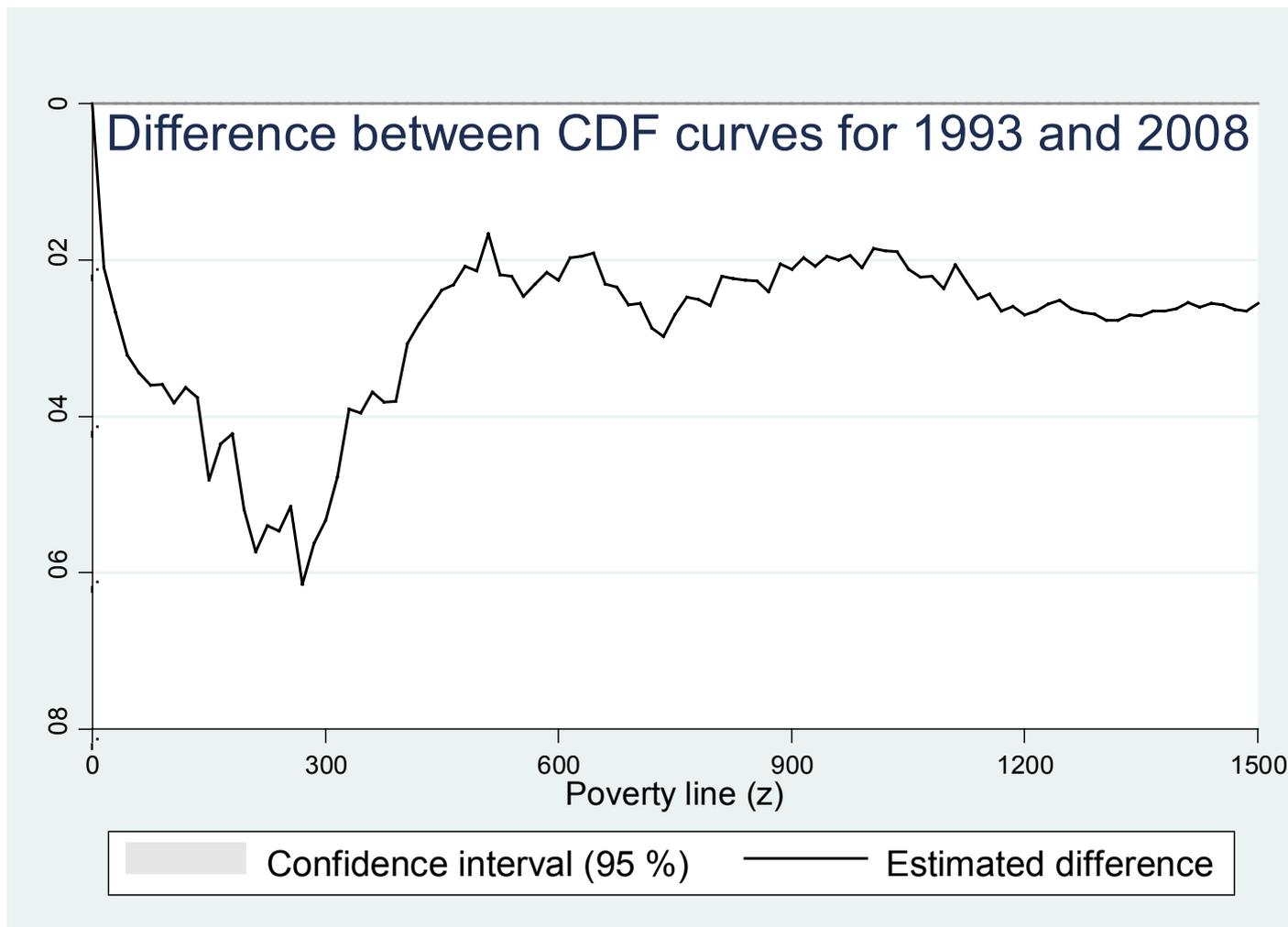
⁸ Leibbrandt et al (2010) include a version excluding zeros in the Appendix as Figure A.3.2.

⁹ It should be kept in mind that 81%, 80% and 78% of the 1993, 2000 and 2008 household per capita incomes are below this respectively.

¹⁰ The details are contained in Duclos and Araar (2006).

negative. In sum then, the aggregate picture evidences a clear decline in poverty over the post-apartheid period. We now move on to ascertain whether this picture is true across all races and the genders and across the rural/urban divide and different household types.

Figure 4: The difference between the CDFs for 1993 and 2008, with a 95% confidence interval



Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

POVERTY

LABOUR

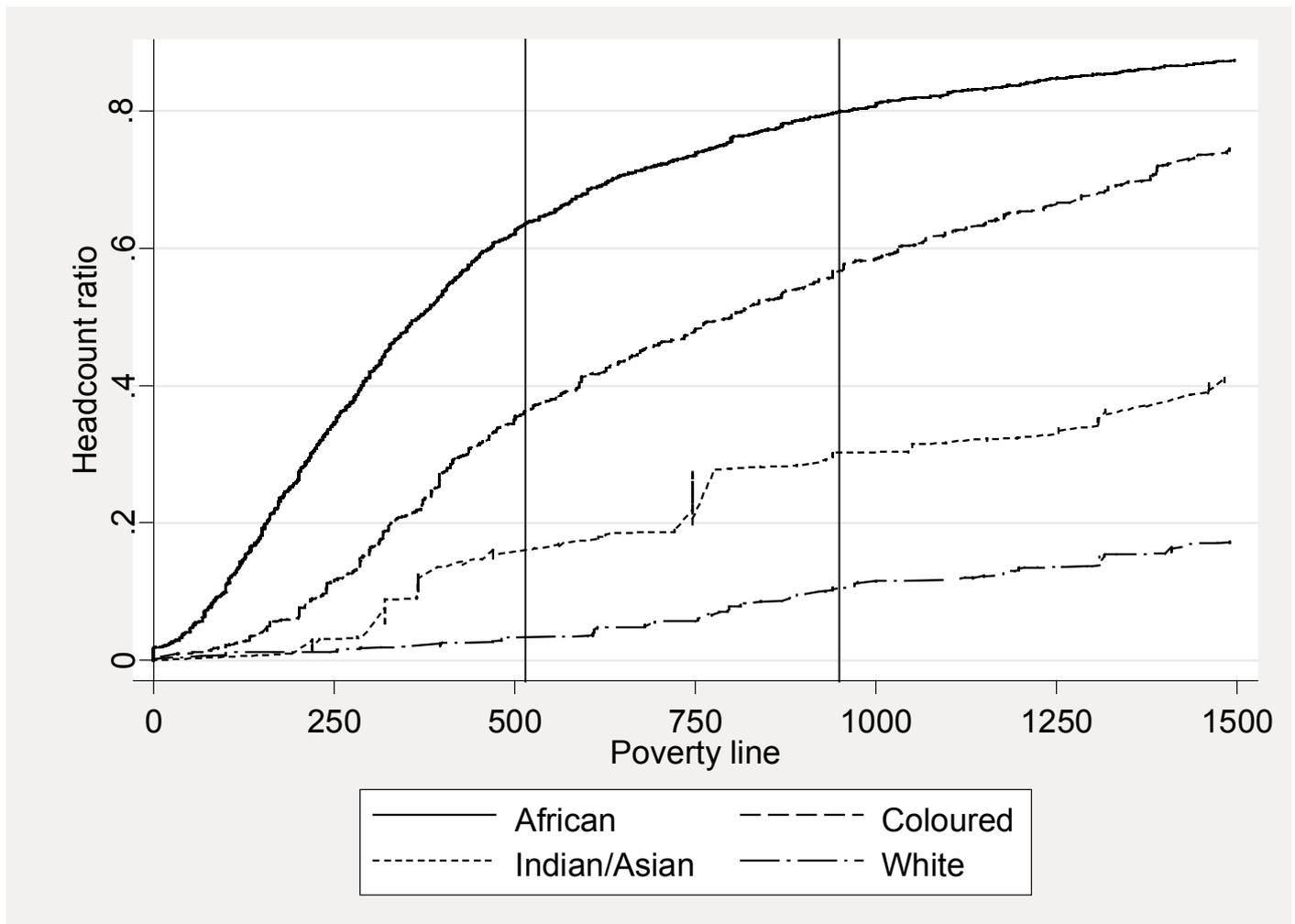
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CHANGES IN POVERTY BETWEEN 1993 AND 2008 BY DEMOGRAPHIC AND LABOUR MARKET CATEGORIES

We begin by presenting poverty changes by race and gender. Figure 5 illustrates the restricted CDFs of South Africa across racial groups in 2008 with per capita incomes restricted to below R1 500 per month. A similar figure for 1993 can be found in the Appendix (Figure A.1). This is not shown here because there are no changes in poverty ranking across the two figures. The two vertical lines mark the South African lower- and upper-bound poverty lines from left to right respectively. The far left end of the CDF (left of the lower bound line) is distorted by the effect of zeros in the data sets,

particularly the 1993 data, as mentioned previously, and results from poverty lines that are much lower than the lower-bound line should thus be treated with caution. Across the rest of the x-axis, the poverty ranking of the racial groups is very clear. We see clear poverty dominance across population groups in the order of African, coloured, Indian/Asian and white. Figure A.1 shows that this was the picture in 1993 and the above shows that this legacy of apartheid is strongly persistent even in 2008.

Figure 5: CDFs across racial groups in 2008



Source: Own calculations using the NIDS 2008 data set

We report poverty headcount ratios and the associated poverty shares by race and gender in Table 2 using the lower-bound poverty line. We can see very clearly from the table that the decline in South Africa's aggregate poverty incidence is made up mostly of the decline in poverty incidence among the African population, particularly males. However, the increase in the population share of the African group together with only muted changes in poverty among the other groups, results in a mere 1% change in poverty share, upwards for African women, and downwards for African men. Coloured poverty incidence, both male and female, actually increases over the period; although this does

not have a large effect on overall poverty due to their combined shares of the population being only about 9 per cent. Nonetheless, if one adds the 93% of the aggregate poverty share that is African in both 1993 and 2008 to the 4% and 6% coloured share in 1993 and 2008 respectively, it is very clear that post-apartheid poverty has largely been a problem for members of these two racial groups only. The improvement in the African poverty rates has driven the improvements in the aggregate situation. This has masked some worsening of the poverty situation within the coloured group.

Table 2: Individual level poverty by race and gender (poverty line R515 per capita per month)

| | Population (Percentage) | | Head count (Percentage poor) | | Poverty share (Percentage of poverty) | |
|----------------------------|-------------------------|------|------------------------------|------|---------------------------------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| African female | 0.40 | 0.42 | 0.72 | 0.68 | 0.51 | 0.52 |
| African male | 0.36 | 0.38 | 0.66 | 0.6 | 0.42 | 0.41 |
| Coloured female | 0.04 | 0.05 | 0.32 | 0.36 | 0.02 | 0.03 |
| Coloured male | 0.04 | 0.04 | 0.29 | 0.35 | 0.02 | 0.03 |
| Indian/Asian female | 0.01 | 0.01 | 0.12 | 0.11 | 0.00 | 0.00 |
| Indian/Asian male | 0.01 | 0.01 | 0.12 | 0.19 | 0.00 | 0.00 |
| White female | 0.06 | 0.05 | 0.05 | 0.04 | 0.01 | 0.00 |
| White male | 0.06 | 0.04 | 0.06 | 0.03 | 0.01 | 0.00 |

Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

Extending the analysis of poverty to urban versus rural areas, (termed “geotypes” for the remainder of this paper) is complicated by the large demographic shifts that took place between 1993 and 2008. As shown in Table 3, in 1993 51 per cent of the population lived in rural areas but by 2008 this had dropped to 40 per cent. The rapid urbanisation that took place during the 15-year period left the rural poverty head count unchanged, while the corresponding figure increased for urban areas. The cumulative result of this increased urban

headcount as well as the increased urban population share is a substantial increase in the share of the poverty that is urban. It rises from 30% in 1993 to 43% in 2008. However, although we do not show these results, if one uses the poverty gap ratio and squared poverty gap ratio to calculate these shares, this change is more muted, indicating that most of the poorest of the poor are still located in rural areas.

Table 3: Individual level poverty by geotype (poverty line R515 per capita per month)

| | Population | | Head count | | Poverty share | |
|--------------|------------|------|------------|------|---------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| Rural | 0.51 | 0.40 | 0.77 | 0.77 | 0.70 | 0.57 |
| Urban | 0.49 | 0.60 | 0.34 | 0.39 | 0.30 | 0.43 |

Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

Table 4 begins to look more closely at some key demographic factors by focusing on poverty breakdowns by the highest level of education attained by the head of the household. There was a fall in the share of individuals living in households headed by individuals with no schooling. This was counterbalanced by an increase in the share of individuals with grades 10–12 living with household heads. There was very little movement in the share of individuals with tertiary education living with household heads. On the poverty side, the incidence of poverty increased between 1993 and 2008 for individuals living in households headed by someone with low levels of education (below grade 10). However, as the population share of categories decreased substantially in size, their share of poverty also fell. Poverty incidence increased among individuals in households headed by an individual with a grade 10–12 level of education. However, when this is combined with the sharply rising population share of this group, the

poverty share rises from 8 to 21% between 1993 and 2008. As the mean grade attainment within this group actually increased over the 15-year period, it would appear that there was a fall in labour market demand for individuals with this level of education over this period.

Turning our attention to poverty levels and household structure, it is clear that changes in poverty track changes in household structure closely, as summarised in Table 5. There was a substantial increase in the number of individuals living in single person households (from 10% to 16%) and the changes in poverty shares mirrors this exactly. The same mirror effect holds true for individuals living in households containing two or more adults, except that the shift is now in the opposite direction. Thus, in this instance, the changes in poverty shares were driven by changes in population shares rather than changes in poverty incidence.

Table 4: Poverty by education of household head (poverty line R515 per capita per month)

| | Population | | Head count | | Poverty share | |
|---|------------|------|------------|------|---------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| No schooling | 0.26 | 0.18 | 0.81 | 0.80 | 0.38 | 0.27 |
| Grades 1–3 | 0.06 | 0.06 | 0.77 | 0.77 | 0.09 | 0.09 |
| Grades 4–6 | 0.17 | 0.14 | 0.69 | 0.75 | 0.21 | 0.19 |
| Grades 7–9 | 0.22 | 0.19 | 0.53 | 0.59 | 0.21 | 0.21 |
| Grades 10–12 | 0.19 | 0.31 | 0.25 | 0.37 | 0.08 | 0.21 |
| Diploma or certificate, without Grade 12 | 0.01 | 0.01 | 0.05 | 0.11 | 0.00 | 0.00 |
| Diploma or certificate, with Grade 12 | 0.05 | 0.05 | 0.07 | 0.05 | 0.01 | 0.01 |
| Degree | 0.02 | 0.03 | 0.04 | 0.02 | 0.00 | 0.00 |
| Other/Missing | 0.01 | 0.02 | 0.56 | 0.55 | 0.02 | 0.02 |

Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

Table 5: Individual level of poverty by household structure (poverty line R515 per capita per month)

| | Population | | Head count | | Poverty share | |
|-----------------------------|------------|------|------------|------|---------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| Single adult | 0.10 | 0.16 | 0.56 | 0.53 | 0.10 | 0.16 |
| Two or more adults | 0.90 | 0.84 | 0.56 | 0.55 | 0.90 | 0.84 |
| No children | 0.15 | 0.21 | 0.18 | 0.25 | 0.05 | 0.09 |
| One or more children | 0.85 | 0.79 | 0.63 | 0.62 | 0.95 | 0.91 |

Source: Own calculations using data from SALDRU 1993 and NIDS 2008 data sets

When comparing poverty among individuals living in childless households to those living with one or more children, the vast majority of the share of overall poverty is found in the latter category. This is hardly surprising, given that about 80% of individuals live in households with children.¹¹ Nevertheless, the poverty shares of this group outweigh the population share and in 1993 the contribution of individual poverty of people living in households with children in overall poverty stood at 95%.

In order to get an idea of the age-poverty profile, Table 6 breaks down the population into seven age cohorts. These cohorts were chosen in order to highlight changes in poverty levels amongst children, those of a working age and the aged. The population shares of the cohorts remained relatively constant over the 15-year period, with the 31 to 59 year old age cohort increasing its share by about 3%. Given this population share stability, any changes in poverty shares will be driven by changes in poverty prevalence within the various cohorts.

Poverty incidence is generally higher at the upper and lower ends of the age distribution, even though the two oldest cohorts experienced significant declines in head

count poverty levels during the 15-year period. Given that these cohorts fall outside the ambit of the labour market, there is some evidence of the increasing support that these oldest groups are receiving through the state old age pension. Although government grants have reduced poverty levels for the aged, the result is not mirrored for younger cohorts by the child support grant that was rolled out post-2000. It is disappointing to note that child poverty levels declined only marginally over the relevant period. Turning our attention to the working-age cohorts reveals that poverty in the 21–30 cohort is higher than the 31–59 cohort. This provides some evidence of the importance of youth unemployment and the continuing difficulty that young people have in integrating into the labour market.

The important link between the labour market and poverty is explored in Table 7. The share of households without any workers grew from 28% to 31%. The poverty incidence of this group is very high at over 80% and far outweighs its share of the population. However, this incidence declined somewhat from 89% in 1993 to 81% in 2008. This is another possible indication of the increased support in poor households from social grants.

Table 6: Individual level of poverty by age structure (poverty line R515 per capita per month)

| Age Cohorts | Population | | Head count | | Poverty Share | |
|-------------|------------|------|------------|------|---------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| 0 to 10 | 0.25 | 0.23 | 0.68 | 0.67 | 0.31 | 0.29 |
| 11 to 15 | 0.12 | 0.11 | 0.66 | 0.67 | 0.14 | 0.13 |
| 16 to 20 | 0.11 | 0.11 | 0.64 | 0.63 | 0.13 | 0.13 |
| 21 to 30 | 0.17 | 0.18 | 0.49 | 0.49 | 0.15 | 0.16 |
| 31 to 59 | 0.27 | 0.3 | 0.42 | 0.41 | 0.2 | 0.23 |
| 60 to 70 | 0.05 | 0.05 | 0.51 | 0.42 | 0.05 | 0.04 |
| 71+ | 0.02 | 0.02 | 0.51 | 0.46 | 0.02 | 0.02 |
| Overall | 1 | 1 | 0.56 | 0.54 | 1 | 1 |

Source: Own calculations using data from SALDRU 1993, IES 2000 and NIDS 2008 data sets

¹¹ This is consistent with the finding of Hall and Wright (in this volume) that 57% of households contain at least one child.

Table 7: Individual level of poverty by household labour market status (Poverty line R515 per capita per month)

| | Population | | Poverty incidence (head count ratio) | | Poverty share | |
|----------------------------|------------|------|--------------------------------------|------|---------------|------|
| | 1993 | 2008 | 1993 | 2008 | 1993 | 2008 |
| No workers | 0.28 | 0.31 | 0.89 | 0.81 | 0.44 | 0.46 |
| One worker | 0.38 | 0.41 | 0.54 | 0.48 | 0.36 | 0.36 |
| Two or more workers | 0.34 | 0.28 | 0.32 | 0.34 | 0.20 | 0.17 |

Source: Own calculations using data from SALDRU 1993, IES 2000 and NIDS 2008 data sets

Individuals living in single-worker households made up an increasing share of the population from 1993 to 2008. The poverty incidence of this group declined from 54% to 48% over the 15-year period. However, the incidence is still high and reflects the fact that having an employed household member is not a guaranteed path out of poverty. Indeed, approximately one third of households containing two or more workers were classified as poor in both time periods. This provides support for the assertion that the quality of employment and the quality of support coming from the labour market are important poverty issues alongside the central issues

of unemployment itself. Even though households with multiple workers are better off than those with one or no workers, the fact that the population share of this group dropped markedly between 1993 and 2008 is worrying, as it indicates an increased vulnerability to job losses over time. Unfortunately, differences in the data sets preclude a more nuanced discussion of the impact of the changing sectoral composition of employment and the quality of employment over time.

CONCLUSION

5 Conclusion

The comparison of money-metric poverty over time is useful only if it is based on accurate and comparable data. Both the 1993 PSLSD survey and the 2008 NIDS survey were explicitly designed to give detailed attention to money-metric well-being and there is much about these surveys that encourages their use for money-metric comparisons. Nonetheless, this paper began by spelling out two areas that required attention to increase the comparability of these data sets. Income from agricultural own-production and implied housing rental were omitted from both data sets.

Having defined the data, the next section of the paper focused diligently on measuring the changes in aggregate income poverty between 1993 and 2008. A robust finding emerges. There is clear evidence that poverty declined from 1993 to 2008. This is seen to be true at two poverty lines that have been widely used in South Africa and, indeed, at any poverty line up to a very high potential line of R1 500 per person per month in 2008 Rand. There were particularly strong declines in the proportion of the population with very low incomes, in other words, the poorest of the poor. This accords with the findings of Borat and van der Westhuizen (2009) showing that, although growth between 1995 and 2005 was pro-poor on aggregate, it is the bottom decile that benefited and is drove. The rest of the poor did not benefit strongly from the strong economic growth of the period.

The remainder of the paper explores the extent to which this aggregate picture is true of a set of relevant sub-groups, beginning with a breakdown by race. The poor in South Africa are almost exclusively African or coloured. This was true in 1993 and remained true in 2008. The aggregate decrease in poverty over time was driven by the decreases in poverty for both African

males and African females. This African decrease is slightly stronger than the aggregate decrease as the aggregate figure incorporates an off-setting increase in poverty for both coloured males and females.

We measure a sizeable increase in the share of urban poverty urban. Part of this increased share is driven by the increase in the incidence of urban poverty and part by the sharply rising share of the population living in urban areas over the post-apartheid period. There is also an increased share of poverty attributable to those households where the head has an upper secondary level of education (from Grade 10 to Grade 12). This increased share is attributable to both the increased share of the population that falls in this educational band and the increased incidence of poverty for this group. Increased years of schooling have pushed many more South Africans into this Grade 10 to Grade 12 education band. While this is a favourable development, it seems that it has not reduced the chances of being poor. This situation draws attention to the weak rates of employment for those emerging from the school system.

While the incidence of poverty is very high for those with no schooling or with very low levels of schooling, it has not increased over time. Indeed, the descriptive statistics outlined in this paper suggest that those individuals with very low levels of education and those who live in households where nobody is working have the highest poverty incidence, but such households have not become poorer over time. The same is true of those who are older than 60. Indeed, in the later two cases, poverty had decreased somewhat by 2008. This suggests that South Africa's extensive social grants are reaching these vulnerable groups and highlights their importance in a milieu in which the labour market has not, in general, been a reliable source of income growth for the poor.

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APPENDIX

Table A.1 Poverty under different poverty lines using the NIDS 2008 income data

| Poverty line = Upper (R949/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
|--|------|----------------|----------------|----------------|----------------------|----------------------|----------------------|
| African | 0.79 | 0.80 | 0.52 | 0.38 | 0.90 | 0.92 | 0.93 |
| Coloured | 0.09 | 0.57 | 0.30 | 0.19 | 0.07 | 0.06 | 0.05 |
| Indian/Asian | 0.03 | 0.31 | 0.14 | 0.09 | 0.01 | 0.01 | 0.01 |
| White | 0.09 | 0.10 | 0.04 | 0.02 | 0.01 | 0.01 | 0.01 |
| TOTAL | | 0.70 | 0.44 | 0.32 | | | |
| Poverty line = Lower (R515/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.64 | 0.34 | 0.22 | 0.93 | 0.94 | 0.95 |
| Coloured | 0.09 | 0.37 | 0.15 | 0.08 | 0.06 | 0.05 | 0.04 |
| Indian/Asian | 0.03 | 0.17 | 0.07 | 0.03 | 0.01 | 0.01 | 0.00 |
| White | 0.09 | 0.03 | 0.02 | 0.01 | 0.01 | 0.00 | 0.01 |
| TOTAL | | 0.54 | 0.28 | 0.19 | | | |
| Poverty line = \$1/day (R130/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.16 | 0.07 | 0.05 | 0.97 | 0.96 | 0.95 |
| Coloured | 0.09 | 0.03 | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 |
| Indian/Asian | 0.03 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| White | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| TOTAL | | 0.13 | 0.06 | 0.04 | | | |
| Poverty line = \$1.25/day (R163/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.21 | 0.09 | 0.06 | 0.96 | 0.96 | 0.96 |
| Coloured | 0.09 | 0.06 | 0.02 | 0.01 | 0.03 | 0.02 | 0.03 |
| Indian/Asian | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| White | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| TOTAL | | 0.18 | 0.08 | 0.05 | | | |
| Poverty line = \$2/day (R260/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.36 | 0.17 | 0.10 | 0.95 | 0.96 | 0.96 |
| Coloured | 0.09 | 0.12 | 0.04 | 0.03 | 0.04 | 0.03 | 0.03 |
| Indian/Asian | 0.03 | 0.05 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 |
| White | 0.09 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| TOTAL | | 0.30 | 0.14 | 0.08 | | | |
| Poverty line = \$2.5/day (R325/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.45 | 0.21 | 0.13 | 0.94 | 0.96 | 0.96 |
| Coloured | 0.09 | 0.20 | 0.07 | 0.04 | 0.05 | 0.03 | 0.03 |
| Indian/Asian | 0.03 | 0.11 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 |
| White | 0.09 | 0.02 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| TOTAL | | 0.38 | 0.18 | 0.11 | | | |
| Poverty line = 50% median pcy (R233/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.32 | 0.15 | 0.09 | 0.96 | 0.96 | 0.96 |
| Coloured | 0.09 | 0.10 | 0.04 | 0.02 | 0.03 | 0.03 | 0.03 |
| Indian/Asian | 0.03 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| White | 0.09 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| TOTAL | | 0.27 | 0.12 | 0.07 | | | |
| Poverty line = 40% median pcy (R154/month) | pop | p ₀ | p ₁ | p ₂ | p ₀ share | p ₁ share | p ₂ share |
| African | 0.79 | 0.20 | 0.09 | 0.05 | 0.97 | 0.96 | 0.96 |
| Coloured | 0.09 | 0.04 | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 |
| Indian/Asian | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| White | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| TOTAL | | 0.16 | 0.07 | 0.05 | | | |

Source: Own calculations using data from NIDS 2008 data set

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