

**Shifts in Non-Income Welfare in South Africa  
1993-2004**

**DPRU Policy Brief Series**

**Development Policy Research unit  
School of Economics  
University of Cape Town  
Upper Campus**

June 2006

ISBN: 1-920055-30-4

© Copyright University of Cape Town 2006

In the decade that has elapsed since the birth of South Africa's democracy, the country has undergone many profound and exciting changes as the government dedicated itself to vast social and economic reform. The provision of free basic services including piped water, electricity, formal housing and sanitation being among the main policy objectives laid down by the country's first democratically elected government in 1994.

Now that we have celebrated over 10 years of democracy, it is pertinent to ask whether government has indeed succeeded in increasing non-income welfare during this period; specifically with regard to improving access to household services and assets; and if so, to what extent.

This policy document is designed to answer this question by:

- Providing a descriptive overview of shifts in access to services and assets between 1993 and 2004.
- Assessing whether growth in access to services and assets has been pro-poor in nature.
- Including information on shifts in the headcount asset poverty rates and poverty gap rates, thereby identifying which portions of the population experienced the greatest increase in non-income welfare and which portions remain most asset poor
- Measuring inequalities in non-income welfare.

Having gained a comprehensive overview of non-income shifts in Post-Apartheid South Africa, we are thus able to pinpoint some possible problems that may impede the delivery of assets and services, and identify where an intensified effort needs to be made with regard to specific population groups.

## Understanding the Data and Methodology used in this Analysis

The study drew on data from:

- **The 1993 South African Integrated Household Survey** from the Project for Statistics on Living Standards and Development, conducted by the South African Labour Development Research Unit (SALDRU) at the University of Cape Town's School of Economics. This survey includes information on numerous aspects of living standards and data was re-weighted with weights from the 1991 Census weights.
- **The 1999 October Household Survey** conducted by Statistics South Africa on people in 30 000 households across the country and including a wide range of poverty and development indicators. Data has been weighted using the 1996 Census weights.
- **The 2004 General Household Survey** conducted by Statistics South Africa on 26 345 households. This survey captures information on living conditions of households and includes data on access to assets and services. The dataset has been benchmarked to mid-year population estimated released in 2005.

Datasets were cleaned and aligned to enable accurate comparisons between the 3 years, variables were renamed to ensure uniformity, and variables not used in this analysis were removed from the datasets.

With regard to the methodology used to extrapolate the core information required to understand the nature and extent of the shifts in non-income welfare, we employed a process known as factor analysis on the 3 pooled data sets to derive a metric of these shifts, which, by their nature are not easily amenable to a common metric.

## **Describing the Shifts in Access to Services and Assets from 1993 to 2004**

In this section we present a descriptive overview of how access to services and assets has increased over the Post-Apartheid decade. We also look at whether the growth has been pro-poor in nature, with “poor” households being those falling into the bottom four per capita household expenditure deciles. Finally, we consider the number of households still without access to basic services.

### **Findings Indicate an Overall Positive Shift in Household Access to Services**

#### **Access to formal housing:**

- **Increased by 8 per cent on average** across all South African households.
- **Grew by 42 per cent** on average in the country's poorest decile, 34 per cent in the second poorest decile, 21 per cent in the third poorest and 16 per cent in the fourth poorest decile.

#### **Access to piped water:**

- **Increased by 14 per cent on average** across all South African households.
- **Grew by 187 per cent** on average in the country's poorest decile, 76 per cent in the second poorest decile, 41 per cent in the third poorest and 31 per cent in the fourth poorest.

#### **Use of electricity:**

- **For lighting increased by 55 per cent on average** across all South African households.

- **For lighting grew by 300 per cent** across the bottom four deciles.
- **For cooking increased by 31 per cent** across all South African households, which is lower than the percentage used for lighting, possibly because many families prefer alternative sources of energy for cooking or do not own electric cooking appliances.

**Access to flush or chemical toilet:**

- **Increased by 9 per cent** across all South African households.
- **Grew by an average of 112 per cent** across the bottom four deciles.

**Growth in Access to all Four Asset or Service Groups has been Extremely Pro-Poor**

This is evident in the massive increases experienced in the bottom 4 deciles as compared to growth across all South African household expenditure deciles. The poor have therefore benefited greatly in an absolute and relative sense from increased government service delivery. Note that in comparison to the delivery of formal housing, the rate of delivery of piped-water had been extremely rapid. This indicates that the government was able to address these backlogs in a relatively short space of time and strongly reflects the effectiveness of the relevant department to translate expenditure into outcomes.

When factor analysis was performed on the pooled datasets, the results confirmed the findings of the descriptive overview:

- The average family became less asset poor between 1993 and 2004 as indicated by the increase in the mean values of the asset index between 1993 and 1999 and between 1999 and 2004. In other words, their access to services and assets increased.

- In conjunction with this, the proportion of households with relatively high asset wealth increased over this period.
- When looking at the distribution of households according to Asset Index value there is clustering at the bottom and the top. This indicated that government has been successful in improving access to assets and services at the bottom end of distribution, however, the nature of the economic growth over the period was possibly disproportionately beneficial to households at the top end.

### **A Vast Number of Poor Households are still without Basic Services**

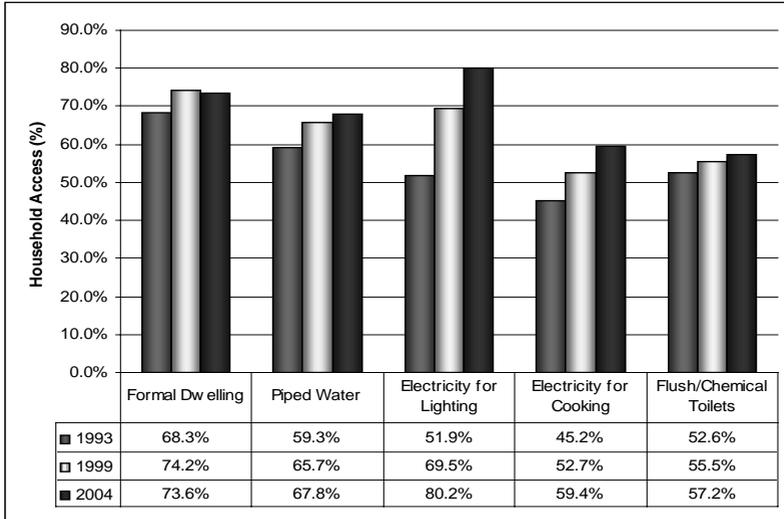
Of all the households in the bottom per capita household expenditure decile, in 2004 almost 80 per cent did not have access to a flush/chemical toilet, more than 60 per cent did not have access to piped water, almost 50 per cent did not have formal housing and more than 40 per cent did not use electricity for lighting.

### **Non-Linearity in the Growth of Service Delivery**

Having ascertained that there has in fact been a tremendous increase in access to services, this brief now contrasts the pace of service delivery over the 1993-1999 period with that of the 1999-2004 period.

Evidence suggests a non-linear growth pattern, with access to household services growing at a much faster rate between 1993 and 1999 than between 1999 and 2004, as indicated in Figure 1. This suggests that the rate of delivery slowed down between 1999 and 2004.

**Figure 1: Household Access to Services, 1993-1999-2004**



**Source:** PSLSD 1993 (SALDRU), OHS 1999 (Statistics SA), GHS 2004 (Statistics SA); Own Calculations

There are a number of factors that may have contributed to this non-linearity:

- **The rising backlog in providing formal housing** may be related to a higher-than-anticipated rise in the number of households in the country, driven by the decline in the average household size.
- **Growth in access to services started from a low base**, leading to a relatively rapid initial impact.
- **The ongoing capacity and efficiency problems** at provincial and local government level, where the responsibility for housing and basic service delivery lies.
- **Deep rural areas may be difficult to reach** and as a result backlogs continue to exist in these areas.

## Analysing Changing Patterns of Non-Income Poverty

Here follows an evaluation of the extent to which households' non-income poverty have changed in the Post-Apartheid decade, calculated by applying standard poverty measures to the Asset Index values in 1993, 1999 and 2004.

Following the derivation of two different poverty lines (simply the values at the 20<sup>th</sup> and 40<sup>th</sup> percentiles of the asset index distribution in 1993, respectively) we utilised the general class of poverty measures first proposed by Foster, Greer and Thorbecke (1984) to calculate the changes in national poverty levels as measured by the Headcount Index and the Poverty Gap between 1993, 1999 and 2004.

These findings again point to a positive shift in non-income welfare:

- o **Asset poverty almost halved between 1993 and 2004**, from 40 per cent to 21.6 per cent, according to the 40<sup>th</sup> percentile headcount rate. The headcount rate decline was even greater according to the 20<sup>th</sup> percentile poverty line, dropping from 20.3 per cent to 9.7 per cent.
- o **Poverty gap figures dropped**, indicating that there was a decrease in the depth of non-income poverty among the poor. Whereas the average poor household according to the 40<sup>th</sup> percentile poverty line was 18.2 per cent below the poverty line in 1993, in 2004 they were only 9.5 per cent below the poverty line. Measured according to the 20<sup>th</sup> percentile line, the poverty gap declined from 6.2 per cent below the poverty line to 4 per cent below the poverty line.

By presenting changes in poverty levels according to race, location and gender, we begin to form a picture, not only of the shifts that have occurred, but of which groups remain most vulnerable in terms of non-income poverty.

**When measuring poverty by race:**

- **Asset poverty remains concentrated largely amongst African households.** In 1993 more than 99 per cent of asset poor households according to the 40<sup>th</sup> percentile poverty line were African, and by 2004 this figure only declined marginally to 98 per cent.
- **African households benefited considerably from the decrease in asset poverty.** The asset headcount rate for Africans according to the 40<sup>th</sup> percentile asset poverty line dropped from 55.6 per cent in 1993 to 27.7 per cent in 2004.
- **Poor African households enjoyed a decrease in the poverty gap,** from 26 per cent below the poverty line in 1993 (according to the 40<sup>th</sup> percentile) to 12,2 per cent in 2004.

**When measuring poverty by location:**

- **Asset poverty remains far more severe in rural areas.** Of rural households, 72.7 per cent were asset poor in 1993 according to the 40<sup>th</sup> percentile poverty line, although this number declined to 43.2 per cent in 2004. Despite the decline the extreme vulnerability of this group is evident in the fact that by 2004, the headcount asset poverty rate for these households was still higher than the aggregate headcount rate in 1993.
- **The asset poverty gap for rural households decreased** from 34.2 per cent in 1993 (according to the 40<sup>th</sup> percentile poverty line) to just below 20 per cent in 2004.

- **Non-income poverty decreased in rural households** irrespective of the poverty line used, as evident when Cumulative Distribution Functions (CDFs)<sup>1</sup> are graphed.

**When measuring poverty by gender of the household head:**

- **Households headed by females have higher asset poverty rates** than those headed by males. However, both household groups experienced a drop of almost 50 per cent in non-income poverty from 1993 to 2004, as measured according to the 40<sup>th</sup> percentile poverty line.
- **The poverty gap is greater for female-headed households** although they experienced a decrease in the poverty gap ratio from 23 per cent below the poverty line in 1993 to 13 per cent below in 2004, according to the 40<sup>th</sup> percentile poverty line. For male-headed households the figures improved from 16.3 per cent below to 7.3 per cent below the 40<sup>th</sup> percentile poverty line.
- **Asset poverty has decreased in these households** irrespective of any specific poverty line, as indicated when CDFs are graphed.
- **The proportion of poor female-headed households has risen.** In 1993 they accounted for 35.4 per cent of asset poor households (according to the 40<sup>th</sup> percentile poverty line), and by 2004 the figure had risen to 49.6 per cent.

---

<sup>1</sup> When changing patterns of asset poverty are measured and graphed using Cumulative Distribution Functions (CDF), we are able to compare changes in poverty between two time periods independent of feasible poverty lines.

- o **The share of female-headed households has increased** from 28.3 per cent of the total number of households in 1993 to 37.1 per cent in 2004.

*It therefore becomes apparent that, with regards to non-income poverty, the most vulnerable groups are African, rural and female-headed households.*

When poverty measures are applied to households falling into more than one of these vulnerable groups, their situation becomes even bleaker:

- o **Asset poverty is greater among rural African households.** In 1993 more than 75 per cent of these households were asset poor according to the 40<sup>th</sup> percentile poverty line. By 2004 almost 46 per cent of these households were still asset poor, which is more than double the aggregate headcount poverty rate according to the 40<sup>th</sup> percentile in 2004.
- o **Asset poverty decreased in rural African households**, but (as CDF graphs indicate) households at the bottom end of the distribution did not experience a large decrease, with the 10<sup>th</sup> percentile headcount rate declining from 22 per cent in 1993 to 16 per cent in 2004.
- o **Female-headed, rural African households are extremely asset poor** with almost 90 per cent of these households asset poor according to the 40<sup>th</sup> percentile poverty line in 1993, and more than half still being asset poor in 2004. This is more than double the aggregate headcount rate according to the 40<sup>th</sup> percentile poverty line in 2004.
- o **Asset poverty decreased in female-headed, rural African households**, even though these levels remain high in comparison with aggregate asset poverty rates.

Once again, the greatest decrease in non-income poverty took place in the 5 years spanning 1993-1999.

## Measuring Asset Inequality

It is vital to analyse not only the changes in non-income poverty, but also the changes in the distribution of assets and services. When measuring these non-income inequalities (by calculating Gini coefficients using our Asset Index values) we observe that asset inequality:

- **Was lower than estimated income inequality** by more than half (estimated) in the 1990s.
- **Declined in the first decade of democracy** in contrast to reported increase in income inequality. Findings are confirmed when using Lorenz Curves to measure the shifts in the distribution of asset indices.
- **Inequality among African households has driven aggregate asset inequality in South Africa.** Although it declined by 25 per cent between 1993 and 1999, the Gini coefficients for Africans remained well above the national Gini estimates for all three years under consideration. When using Lorenz curves we gain further insight. For example, in 2004, 60 per cent of White households had access to or owned over 60 per cent of the total pool of assets or service in the hands of White households, compared to a cumulative 60 per cent of African households who only had access to or owned 40 per cent of the total pool of assets and services in the hands of African households.
- **Rural inequality is higher than urban inequality** – it remains more than double.
- **Inequality decreased for both male and female headed households.**
- **Male households experienced a larger decline** in estimated inequality than female households.

Although inequality *between* racial groups has always been a strong driver of aggregate inequality (as seen above), inequality *with-in* racial groups has become increasingly important in determining aggregate inequality. When overall inequality is decomposed into the contribution from with-in group inequality and the contribution due to between-group inequality using the Theil index, we observe that inequality with-in subgroups (race, location and gender of household head) has become increasingly important in determining aggregate inequality. The share of intra-African inequality in driving overall inequality has become extraordinarily high and may be a reflection of African households at the upper end of the distribution benefiting relatively more from economic growth in the Post-Apartheid period than their counterparts at the bottom.

## **Concluding on Shifts in Non-Income Welfare from 1993-2004**

Here follows a brief analysis of the shifts that have occurred in non-income welfare in the first decade Post-Apartheid:

- There has been a decrease in non-income poverty, as measured by the Asset Index.
- Government service delivery was relatively and absolutely pro-poor, and delivery was heavily biased toward those at the bottom-end of the expenditure distribution.
- Increase in electricity delivery was by far the fastest, followed by piped water.
- Access rates increased much faster between 1993 and 1999 than between 1999 and 2004, possibly reflecting the inability of government to reach core households at the bottom of the distribution or to spend allocated funds.
- Despite growth, large proportions of poor households still do not have access to basic services.
- Headcount poverty rates and poverty gap rates declined across all covariates and according to both the 20<sup>th</sup> percentile and 40<sup>th</sup> percentile poverty lines.
- Rural African households headed by females remain most vulnerable, indicating the continued marginalisation of poor African women living in rural areas.

- Asset inequality also decreased, and did so at a faster rate than reported income inequality, suggesting a relatively more equal distribution of assets and services.
- With-in group inequality has increased in importance in determining aggregate inequality, with the share of intra-African inequality being extremely high.

In conclusion, although non-income welfare has increased significantly, if we are to fully evaluate welfare changes in the Post-Apartheid period, a welfare measure needs to be constructed that will include both non-income and income variables.