

# Increases in poverty in South Africa, 1999–2002

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*Analysis of the results in the 1999 October Household Survey and the 2002 Labour Force Survey suggests that the number of people in the bottom two expenditure classes (R0–R399 and R400–R799 per household per month) increased by about 4,2 million over the period. As the boundaries of these expenditure classes remained constant in nominal terms, there is a likelihood that the number of people in poverty will have increased as well. This article attempts to discover whether this is indeed the case. The possible increase in the number of people in poverty is not equal to the increase in the number of people in these two expenditure categories. Rather, it is equal to the difference between the numbers of people in poverty in the two years. Our first crude estimate of the maximum potential number of ‘new’ poor suggests that it could be as high as 4,5 million. This estimate, which excludes any adjustments for possible underreporting of expenditure, child cost economies and household economies of scale, and the ‘social wage’, is whittled down as we attempt to make the relevant allowances. Responding to claims that poverty is increasing in the country, the government has pointed to a failure to consider the contribution of the social wage to the alleviation of poverty. Accordingly, we have also attempted to estimate the impact of the social wage.*

## 1. INTRODUCTION

As the governing party, the African National Congress (ANC) knows full well that combating poverty is its most important task. Not surprisingly, the government and party spokespeople are extremely sensitive to suggestions that poverty in South Africa is worsening. Briefing Parliament’s communications committee on the work of the Government Communication and Information System (GCIS) in advance of a debate in the house earlier this year on ‘whether conditions in South Africa had improved since the democratic elections in 1994’, its CEO, Joel Netshitenzhe, said that the GCIS ‘had to correct mistaken views that the poor were worse off than they were during apartheid years’ (Business Day, 2003). He is quoted as saying that:

... the tide had turned on the unemployment front as the economy was beginning to create jobs. A ‘social wage’ had also been introduced, reflecting government’s efforts to deal with poverty. This had contributed to an improved quality of life. The social wage included social grants, tax relief, the provision of free basic services. In addition, the acquisition of human rights had also improved the quality of people’s lives. While partial data and focus on single points in time may attract shallow claims of no delivery and increasing poverty, a contrary conclusion follows from a

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rounded picture of trends including the social wage, tax relief and social grants over and above cash income from employment.

If by tax relief, Netshitenzhe means the reductions in income tax rates made over the last several years, then these are of limited relevance to the people with this study is concerned. None of the households from which they come pay income tax. If tax reductions have had some impact on the wellbeing of poor households, it is most likely to have been via remittances. Given the relatively small number of remittances received, the effect is unlikely to have been very large. This is a matter that requires further research.

By about 2000, analyses of poverty and income inequality based on, or linked to, the 1996 Population Census and the 1995 Income and Expenditure Survey (IES) had reached the end of the road – further developments awaited the publication of the IES results for 2000. Taking the analyses as far as they would go, most commentators seemed to agree that between-group inequalities have fallen, while within-group inequalities have risen. Having concluded thus, the examination of South Africa's changing income distribution in the period 1991–6 by Whiteford & Van Seventer (2000:28) argues that:

... the rise in inequality within population groups and within society as a whole is driven, on the one hand, by rising employment of well-paid, highly-skilled persons and, on the other hand, declining employment of lower-paid, less-skilled persons who are forced into poorly remunerated informal sector employment or into unemployment.

Posing the question of whether the trends they have detected 'which occurred in all population groups' (*ibid.*, 25) are likely to continue into the future the answer, they insist, has to be in the affirmative. Their analysis of labour market processes, and projections that one of the authors made in another study, has led them to predict that (*ibid.*, 28):

... the employment of highly skilled persons will continue to rise while the employment of less skilled persons will decline, resulting in rising unemployment. Unless there is a fundamental shift in the path along which the economy is moving, there is little hope for a reduction in inequality and income poverty.

Up to the mid-1990s, most households (72 per cent of all households and 64 per cent of African households) contained no unemployed people. By 1999, these proportions had fallen to 64 and 57 per cent, respectively. They fell still further, reaching 58 and 52 per cent, respectively, by 2002. Research (Leibbrandt *et al.*, 2001:48) suggests that:

... most household-level inequality [inequality between households] is driven by income dynamics within households with no unemployed members because most households do not have unemployed members and households with unemployed members tend to be crowded below the poverty line at the lower end of the household income distribution.

This conclusion no longer holds. Rising unemployment in the period since 1996 makes it likely that Whiteford & Van Seventer's prediction on poverty and inequality would have been fulfilled. Not only has the required fundamental shift not taken place – the numbers of unemployed have climbed to record levels, almost doubling between 1995 and 2002. With some large proportion of the unemployed located in the lowest

expenditure categories (we discuss the numbers below), it seems almost inevitable that poverty would have worsened.

Unfortunately, the statistical basis on which reliable judgements about poverty and inequality in the period after 1996 were to be based – the 2000 IES (StatsSA, 2000b) – turned out to be deeply flawed. An analysis of its results, presented in *Earning and spending in South Africa* (StatsSA, 2002), which shows an increase in poverty and inequality over the period 1995–2000, was dismissed by the government.

This article uses a variant of the headcount method to attempt to discover what happened to the numbers of people in poverty between 1999 and 2002. There is an excellent discussion of the advantages and limitations of the various estimates of poverty that can be made in Woolard & Leibbrandt (2001). By comparison with that work, the estimates presented in this study are crude in the extreme. We make no apology for this – our intention is to measure the extent of poverty between two well-defined groups in society, not its intensity. We are also aware of the difficulties of using expenditure estimates. The way in which we deal with this difficulty will become clear below. We could, in addition, have performed a consistency test on our results by attempting to estimate the incomes of the households whose results we are working with in the study.

The usual technique for conducting a headcount is to establish a poverty line (PL) and then to count the number of individuals whose expenditure or income falls below this level. In order to do so, data on the distribution of households by expenditure level are required, as are data on the age distribution of individuals within households. The latter are used to adjust the size of those households containing children to lower costs (i.e. estimate adult equivalents), and to make allowance for economies of scale in those households containing more than one individual. The number of people in poverty is the total number of people in those households below the PL. Rather obviously, to measure changes in poverty, one estimates and compares the numbers below the PL at the beginning and end of the period in which one is interested or for which one has the relevant data.

Each study will have peculiarities imposed upon it by both the nature of the inquiry undertaken and by the availability of data. In the case of the present study, a major feature is the allowance to be made for in-kind consumption (the social wage). Another feature of this study is that rather than attempting to measure changes in poverty in the nation as a whole, it aims to count the total number of people in poverty in the two bottom expenditure categories, i.e. those in households where expenditure lies between R0–R399 and R400–R799 per month, respectively.

As far as data constraints are concerned, although detailed information is available on household composition from the relevant surveys, the Labour Force Survey (LFS) for September 2002 (StatsSA, 2003) and the October Household Survey (OHS) for 1999 (StatsSA, 2000a), nothing is known about the distribution of households by expenditure level. In order to overcome this hurdle, it has been necessary to construct the relevant distributions by assumption. This is a less hazardous process than may be thought – estimates of the number of poor appear to be relatively insensitive to quite wide variations in the assumed distributions of expenditure. This is tested by allowing mean expenditure in the lowest category (R0–R399 per month) to vary.

The investigation was conducted in stages:

1. An estimate was made of the change in the number of poor between 1999–2002, using the data extracted from the two data sets.
2. Allowing for child costs and for household economies of scale, an estimate of maximum potential consumption levels for different types of household was made. Estimates were made of daily maximum potential consumption levels of people living in households containing adults and children, in the bottom two expenditure categories, while allowing for underreporting of expenditure. The social wage was still excluded.
3. An attempt was made to value the social wage. Maximum potential consumption levels were established, allowing for child costs and household economies of scale, including the social wage but not allowing for underreporting errors.
4. Estimates of changes in the numbers of the poor, taking the social wage into account, were made. The estimates show the effects of underreporting of household expenditure on the likely numbers of ‘new poor’.

Our results, the basic data from which they were generated and the simple devices used to perform operations such as adult equivalence calculations, social wage valuation and expenditure underestimation corrections, are contained in four linked spreadsheets called ‘Poverty-0.xls’, ‘Poverty-50.xls’, ‘Poverty-100.xls’ and ‘Poverty-150.xls’. Using these spreadsheets, a large number of simulations that deliver estimates of the numbers in poverty may be performed. These make use of a wide variety of assumptions about some of the variables about which our knowledge is hazy. The spreadsheets are available on the website of the School of Development Studies at the University of Natal. Using them, a person can make any changes to the assumptions that we have made. By this means, one can test the sensitivity of our results to variations in those assumptions.

## **2. MOVEMENT INTO THE LOWEST EXPENDITURE CATEGORIES**

Unless it can be shown that the September 2002 LFS and the 1999 OHS suffer from the same weighting defects as the 2000 IES, then it must be concluded that the number of people in the lowest expenditure categories rose substantially over the period 1999–2002. (See Meth, 2003, for a discussion of some of the more obvious problems with the IES results. Statistics South Africa is in the process of reweighting the survey results to the 2001 Census.) As noted above, this does not automatically translate into an increase in the number of poor. To estimate changes in the numbers of poor, a poverty line is required.

There is little need to engage in any lengthy argument here about the business of the selection of an appropriate PL – most of what needs to be said about this topic may be found in Woolard & Leibbrandt (2001), from which the PLs used in this article were taken. We take to heart all the warnings they sound, and follow them in using the household subsistence level (HSL)-based figure of R293 per month (in constant 1995 prices) to identify workers in poverty in 1995 – inflated using the Consumer Price Index (CPI) to give 1999 and 2002 values – and the World Bank’s US\$1 a day (which, in 2002 prices, translates into R292 per month per adult equivalent) to identify the ultra-poor. In 1999 prices, the HSL-based PL would amount to about R384 and, in 2002 prices, to roughly R467. These have been inflated using the CPI in series KBP7032J on the South African Reserve Bank’s (SARB) website. Woolard & Leibbrandt’s (2001: 49) rationale for using two PLs to create a ‘poverty critical range

in place of a single poverty line' (bounded in this case by the HSL and World Bank PLs), is to be found in the wide divergence in possible poverty lines they examine.

We commence our argument with a record of the changes that have taken place in the numbers of individuals and households in the two lowest expenditure categories (R0–R399 and R400–R799 per month per household) between 1999 and 2002. These are shown in Table 1.

We identified three different types of household. The first of these includes workers, the unemployed, the not economically active, pensioners and children, i.e. all the people in the respective expenditure categories. The second group is workerless households. Pensioners are excluded from the third type of household, which contains unemployed, not economically active adults and children. The intention was to explore varying degrees of vulnerability among households. We have abandoned that goal for the present version of the paper – no category of households is singled out for special attention here. In the table, we did not attempt to look at those ghastly phenomena, the 'child-headed households', or the 'households' consisting only of a single child. A small error in the estimates of single adult households revealed about 22 000 households containing only one person (in 2002, up from 12 000 in 1999), that person not being an adult.

In the lowest expenditure category the numbers of people grew by about 2,9 million, an increase of roughly 31 per cent. The next expenditure category, R400–R799 per month, contained almost 1,4 million more people in 2002 than it did in 1999, an increase of slightly over 11 per cent. All told, in 2002, there were about 4,2 million more people in these expenditure categories than there were in 1999. Table 1 divides households into those containing only adults and those containing adults and children. A quick estimate suggests that in the expenditure category R0–R399 per month, only those households containing a single individual are likely to be spending in excess of the most modest of PLs. Most of the others will have potential maximum consumption levels well below this – how many of them is the central question posed by this article.

On the basis of the figures in Table 1, a first guess at the total number likely to be in poverty in 2002 would be in the region of 22 million (i.e. the people in households containing adults and children, and in the multiple-adult households). Average monthly per capita consumption in households (containing about 5,4 people on average) in the bottom category containing adults and children might not have been much more than about R70. There were 2,4 million more such people in 2002 than there were in 1999. Although, at this point, we cannot attach a precise number to the increase in the number of people in poverty in the two expenditure categories, we suspect that it could be in excess of 3 million.

In the bottom expenditure category, about 4,3 million people lived in 1,3 million households that contained adults, none of whom worked or received a pension. The main sources of income in these workerless households are grants and remittances. There is also a small amount of agricultural output for own (subsistence) consumption. Considering the relatively small numbers of people reportedly engaged in such activity, the omission of this output from measures of consumption (as is done below) is unlikely to be serious.

Proportional growth in numbers is much larger in the bottom, than the second expenditure category. Proportional increases in the numbers of the four different household types identified (single adult; two adults; more than two adults, and adults

**Table 1 : Changes in the numbers of people in the poorest households, 1999–2002**

All households	R0–R399		Change	1999		R400–R799		Change
	1999	2002		1999	2002	1999	2002	
Total number of households by expenditure category	2 611 439	3 347 390	735 951	28,2	2 714 924	2 859 258	144 334	5,3
Total number of people	9 216 928	12 090 072	2 873 144	31,2	12 245 962	13 617 194	1 371 232	11,2
Number of people in households containing only one individual	813 381	1 058 104	244 723	30,1	467 862	557 378	89 516	19,1
Number of people in households containing two adults	554 620	707 266	152 646	27,5	655 884	580 078	-75 806	-11,6
Number of people in households containing more than two adults	363 049	484 685	121 636	33,5	615 460	578 692	-36 768	-6,0
Number of households containing more than two adults	98 268	127 455	29 187		157 193	142 544	-14 649	
Number of people in households containing adults and children	7 485 878	9 840 017	2 354 139	31,4	10 506 756	11 901 046	1 394 290	13,3
Number of households	1 422 480	1 808 198	385 718		1 761 927	1 869 297	107 370	
Average number of people per household (unadjusted)	5,3	5,4			6,0	6,4		
Number of adults per household	2,4	2,5			2,9	3,1		
Number of children seven years or younger per household	1,0	1,3			1,1	1,5		
Number of children 15 years or younger per household	2,3	2,5			2,6	2,8		
Number of unemployed people per household	0,9	1,1			0,8	1,2		

and children) in the lowest expenditure category are roughly the same. This is not the case in the second expenditure category, where the number of single-adult households grows fastest, followed by adult-and-child households. A tentative conclusion to be drawn from these results is that poverty among adult households containing only a single individual does not appear to be on the increase.

The breakdown of the adult-and-child households by numbers of each present shows why a child support grant paid for eligible children under the age of seven years is such a weak instrument for addressing poverty. It cannot be denied that among those who qualify the benefit will be eagerly received. However, given widespread benefit dilution (Waddell, 2002), the poverty-alleviating effects are limited. Raising the age limit will help, but not as much as would a basic income grant.

It is probably useful to point out at this stage that the upper and lower limits of the expenditure categories are in the prices ruling in the years in which the surveys were undertaken. If these were adjusted to take account of inflation the upper boundary of the lowest expenditure category would be about R485, and that of the next category roughly R971. Raising the boundary of the lowest group would increase still further the number of people who had moved into the class of the poor. As we know neither means nor distributions within these expenditure categories, we cannot say how many people would be involved; suffice to say that, at first glance, the estimate above of about 3 million new candidates for poverty seems reasonable.

When considering the results in this study it is very important, as we noted above, to bear in mind that they are maxima. This is because we have not ‘guesstimated’ means. It is conventional, when doing so, to place the mean for the bottom class at about two-thirds of the upper bound. For the next category, use is made sometimes of the arithmetic, and sometimes of the geometric means. Using either would paint a far less optimistic picture of consumption levels.

Given the distribution of the unemployed, this result accords with our expectations. Of the 7,9 million unemployed people in South Africa in September 2002, 5,3 million (67 per cent) were located in the expenditure categories R0–R399 and R400–R799. In 1999, using the expanded definition, there were 5,8 million people unemployed. Of them, 1,78 million were in the lowest expenditure category (R0–R399) and 1,83 in the category above (R400–R799). In total, 61 per cent of the unemployed were located in the bottom two expenditure categories. The increase in the number of unemployed between October 1999 and September 2002 was a little over two million. As the largest proportion of the total number of births in South Africa occurs among the poorer paid (or unemployed), we would expect the increase in the number of poor to exceed the increase in the number of unemployed. Rather obviously, we would also expect the increase in the number of poor to exceed the increase in the size of the population. The South African population probably increased in size by roughly 800 000 per annum over the period under study. This means that the number of new poor is larger (possibly by a million or so) than the population increase over the period.

Now that we have a sense of the distribution of people in the bottom two expenditure categories, and some of the changes that have taken place since 1999, we can speculate as to what their maximum potential consumption levels might have been.

**Table 2 : Maximum potential consumption levels, 1999 and 2002 (2002 prices)**

Expenditure range (R/month)	Years and expenditure ranges			
	1999	2002	0	400
	0	486	0	400
	486	972	400	800
<i>Maximum potential per capita expenditure, excluding the CSG and the social wage</i>				
Single adult	486,18	972,38	399,99	799,99
Two adults	260,54	521,09	214,35	428,70
More than two adults	149,97	284,67	120,21	226,69
Adults and children	144,93	255,94	116,04	197,78
<i>Households containing adults and children, maximum potential per capita expenditure including the CSG (or BIG) but excluding the social wage</i>				
Including CSG for children under the age of seven years			150,07	230,00
Including CSG for children under the age of 15 years			180,82	259,11
Per capita expenditure with BIG (R/month)			216,04	297,78
<i>Per capita value of the CSG or BIG in households containing adults and children</i>				
<i>Child support grants</i>				
Child support grant (children under seven years of age), R/month			34,03	32,22
Child support grant (children under 15 years of age), R/month			64,78	61,33
BIG (per capita)			100,00	100,00

### 3. MAXIMUM CONSUMPTION POTENTIAL BEFORE THE SOCIAL WAGE

The government, when pressed on the issue of poverty, invariably responds by referring to the failure of poverty estimators to take account of the social wage. This is not unfair comment – the LFS and OHS data exclude most of the elements of the social wage, many of which take the form either of public goods, or of heavily subsidised (or free) public utilities. To examine changes in the conditions of the poor between 1999 and 2002, we first examine their consumption possibilities without any social wage component. Thereafter, we look at the impact of social grants on their living standards.

Table 2 shows maximum potential per capita monthly expenditure in 2002 and 1999 for the four household types isolated in the previous section of the article: adult households containing a single adult; those with two adults; those with more than two adults, and those containing adults and children. The figures for maximum potential per capita expenditure for those households containing children are arrived at by applying a child–cost ratio of 0,5 and an economies of scale parameter of 0,9 to the raw family composition data (the ‘unadjusted’ figures in Table 2). Households containing more than one adult have the economies of scale factor of 0,9 applied to them. In this we follow Woolard & Leibbrandt (2001: 54), who in turn make use of the ‘widely accepted’ scales (May *et al.*, 1995).

The equivalence scale is of the standard form  $E = (A + \alpha K)^\theta$ , where  $E$  = the number of adult equivalents,  $A$  = the number of adults,  $\alpha$  = the child–cost ratio,  $K$  = the number of children and  $\theta$  the household economies of scale factor (Leibbrandt *et al.*, 2001: 40). Children in our calculations are treated as those under the age of 18 years. If older



children consume more than half the adult consumption level, the effect of the assumption we use will be to slightly understate the number of poor. Woolard & Leibbrandt (2001: 52) show that estimates of the incidence of poverty are insensitive to variation of the equivalence scales.

Consumption levels in Table 2 are in 2002 prices. To render the expenditure levels in 2002 and 1999 comparable, the inflation procedure referred to above is carried out on the 1999 class boundaries. Rather obviously, a 1999 rand buys more than its 2002 counterpart. In constant 2002 prices, the 1999 upper bounds of the two expenditure categories rise to R486 and R972.

From the first panel of the table (labelled 'Maximum potential per capita expenditure – excluding the CSG and the social wage') we may see, as our quick calculation above suggested, that in the lowest expenditure category only those households consisting of single individuals had any chance of consuming at somewhere near even the 'ultra-poverty' PL. If private consumption were the measure of wellbeing, nearly everyone else in that category was likely to be in poverty. In 1999, the members of the 'average' household containing adults and children could not on average have consumed more than R144,93 each (in 2002 prices). By 2002 this had fallen to R116,04 per person, having been eroded by inflation and by slightly increasing numbers per household.

In the next expenditure category, the 1999 maximum was R255,94, while the 2002 figure was a mere R197,78. The September 2002 LFS reports that some 353 575 households (about 19 per cent of households in this expenditure category) received the CSG. Some households are therefore in this category, rather than in the lower category by virtue of receipt of the grant income. For the purposes of the exercise carried out here, we ignore this, treating all households as though they had not received the CSG. This assumption is conservative, i.e. it will understate actual poverty levels.

Because the data are collected by expenditure category, means and distributions, as we noted above, cannot be ascertained. It is possible that the 1999 means were lower than the 2002 means; it is also possible that they were not. Nevertheless it is clear, using potential maximum expenditure excluding the child support grant (CSG) and other components of the social wage as a gauge, that by the most modest of all imaginable PLs, all those households containing adults and children would have been classified as being in poverty in 1999 and 2002. It is also clear that most adults in the lowest expenditure category were very poor; so, too, were most people in households containing adults and children in the expenditure category R400–R799 per month.

Our next task was to see how consumption is affected by the CSG. After a slow start, coverage of the CSG increased rapidly. In 2002, children under the age of seven years were eligible for the grant. This is being extended over a three-year period to include children under the age of 15 years. The grant's current value is R160 per month; in 2002 it was R140 per month. The state reports that some 3,4 million children now receive the grant. It appears from the September 2002 LFS figures that there were about 2,4 million children under the age of seven years in the lowest expenditure category, and about 2,8 million in the next category. Coverage levels are not known. If the LFS estimates of the numbers of children in these expenditure categories are correct, then possibly about two-thirds of the eligible children are now covered. For the purposes of estimating maximum possible consumption levels we ignore coverage levels, assuming that everyone eligible receives the grant. We also assume that no one received the CSG in 1999.

There is evidence, as we observed above, that significant benefit dilution occurs (Waddell, 2002). In Table 2 we assume that the CSG is equally divided among all household members. If that were the case, those in the lowest expenditure category would each receive an additional R34,03. In the slightly more populous households in the next expenditure category, each individual would receive an extra R32,22. The CSG would thus raise consumption levels to R150,07 and R230,00, respectively, in these two categories. The net increase in maximum possible expenditure over the period 1999–2002 in the lowest expenditure category (if all eligible children received the CSG) would thus be R5,14. In the next expenditure category, the possible maximum falls by R25,94 even after the CSG has been paid, because of the combined effect of inflation and increasing household size.

If the CSG had been extended to children aged less than 15 years, consumption levels would have been R180,82 and R259,11, respectively. If a basic income grant (BIG) of R100 (in 2002 prices) were paid, and the CSG abandoned, it would leave the average individual in households containing children considerably better off (with R216,04 and R297,78, respectively). This would nudge the adult-and-child household over the World Bank's 'ultra-poor' PL. One reason for preferring the BIG, despite the fact that it cannot eradicate poverty, is obvious from the table – there are too few children in the average household to affect consumption levels significantly.

To make it easier to grasp just how small is the amount on which poor people have to subsist, the maximum potential monthly consumption levels for the 'average' household containing adults and children have been converted to daily totals. These are given in Table 3. Consumption levels are in 2002 prices and household 'income' includes the CSG. To illustrate how these consumption possibilities would be affected by underreporting of expenditure, estimates adjusted to three 'error' levels (50, 100 and 150 per cent) are also presented in the table. Expenditure has been split between food and all other items. It has been assumed that 60 per cent of daily expenditure in the category R0–R399 per month is on food, while 45 per cent goes to food in the R400–R799 category. The 2000 IES (StatsSA, 2000b: 52) shows that households in its bottom expenditure category (R0–R8 070 per annum) spent R2 337 of an estimated total expenditure of R4 823 on food.

We should find shocking the very idea that someone has to exist (i.e. purchase everything except those few items provided by the state) on R4,93 daily. This figure, it must be emphasised, is a maximum. If expenditure is not underreported in the surveys, the consumption of most individuals in the bottom expenditure category will be lower than this. Even if expenditure is underreported by more than 100 per cent, people in the bottom expenditure category in households containing adults and children are in dire straits.

As a background paper for the Committee of Inquiry into a Comprehensive System of Social Security for South Africa (the Taylor Committee), the National Institute for Economic Policy (NIEP) carried out some work on the determination of an appropriate poverty line (Mlambo, 2001). The NIEP document refers to a study in 2000 aimed at measuring food insufficiency in South Africa. NIEP's estimate of the minimum that an individual (presumably an adult) needs to spend each day on food to meet recommended dietary requirements was R9,55 (Mlambo, 2001: 13). In 2002 prices this would be about R11,02. R11,02 per day is equivalent to R335,17 per month. This figure is not far from the 1993 estimate by the Project for Statistics on Living Standards and Development (PSLSD) of R149,50 per month in 1993 (cited in Woolard & Leibbrandt,

**Table 3 : Monthly and daily expenditure, 2002**

Expenditure category	R0–R399			
	Underreporting of expenditure (%)			
	0	50	100	150
Monthly expenditure in 2002 prices	150,07	208,09	266,11	324,13
Total daily expenditure	4,93	6,84	8,75	10,66
Daily expenditure on food	2,96	4,10	5,25	6,39
Daily expenditure on all other items	1,97	2,74	3,50	4,26
Expenditure category	R400–R799			
	0	50	100	150
Monthly expenditure in 2002 prices	230,00	328,89	427,78	526,67
Total daily expenditure	7,56	10,81	14,06	17,32
Daily expenditure on food	3,40	4,87	6,33	7,79
Daily expenditure on all other items	4,16	5,95	7,74	9,52

*Notes:* These figures are obtained by adjusting household size for child cost savings and for household economies of scale (adult equivalents). To the figure thus obtained is added the share of the CSG going to each individual in the household. (The CSG is assumed to be equally divided among all members of the household). It is assumed that households in the bottom expenditure category spend 60 per cent of their available income on food. Those in the next category are assumed to spend 45 per cent on food. Income available for expenditure excludes all social wage items.

2001: 49). Raising the 1993 figure to 2002 prices using the SARB's Food Inflation Index (series KBP7024J) yields an estimate of R314,54.

As may be seen in Table 3, maximum potential *total* daily expenditure does not reach this level in the bottom expenditure category until expenditure is underreported by something in excess of 150 per cent. In the second expenditure category, expenditure would have to be underreported by a touch more than 50 per cent to reach the level at which individuals could meet minimum dietary requirements by devoting all of their income to the consumption of food.

South Africa's President and its Minister of Finance are both on record as having expressed doubts about the difference a BIG of R100 would make to the lives of the poor. Of the two, the President's statement (coming after the July 2003 Cabinet *lekgotla*) was the less acceptable. He was reported to have said the following (Mail and Guardian, 2003: 6):

If you give everybody R100 a month it will not make a difference. The notion that one single intervention will help is wrong. To introduce a system which indiscriminately gives R100 to a millionaire and a pensioner does not work.

The Minister of Finance, facing a lively audience at the University of the Western Cape, is reported as saying that 'someone had to explain how R100 a person would make a difference to the lives of the poor' (Business Report, 2003: 12). Using Table 3, it is a simple matter to show what difference R100 per month would indeed make to the poor.

#### 4. VALUING THE SOCIAL WAGE

That the social wage has not been taken into account in previous studies of poverty in South Africa is hardly cause for surprise – doing so is very difficult. Woolard & Leibbrandt (2001: 42–3), for example, steer clear of the social wage. They note that for measuring wellbeing:

... a person's standard of living is generally taken to depend only on the consumption of market goods. While the limitations of this approach are well documented... the problems involved in valuing access to public goods are enormous. It is thus to a large extent for pragmatic reasons that current consumption or current income is used as the indicator of well-being... The choice of private consumption expenditure (PCE) per adult equivalent as an appropriate welfare measure has a strong theoretical as well as intuitive appeal.

Estimates of the value of the social wage, whatever their pedigree, are thus bound to be contentious – the estimates below are no exception. For the purposes of this study, the social wage is assumed to consist of electricity, water, health, housing, sanitation, education and transport. Other social grants such as the state old-age pension and the disability grant are taken into account in the first assessment of potential consumption levels. For many people these grants, especially the former, are what make survival possible. Omitted from the list are welfare services, whose use is probably biased heavily towards the poor. Given the importance of the social wage element in the debate about poverty, it is a little surprising that the government has not commissioned research to establish the value of the social wage. The citation of statistics showing the number of houses built, social grants paid or electrical connections made is not a sufficient response to the claim that poverty is increasing.

The public finance literature, having drawn a distinction between pure public and pure private goods by the criteria of excludability and rivalry in consumption, distinguishes between production and provision of these goods. In the list of goods proposed above as making up the social wage in South Africa, none is a pure public good. Indeed, it would not be reasonable for the government to claim any poverty-alleviating qualities for pure public goods. This is because these goods, if provided, are consumed in equal amounts by everyone in the country. It is difficult to think of examples of such goods, apart from justice and security, neither of which are equally distributed in South Africa.

All the goods in the list (with the possible exception of education and mass sanitation) can be, and in many cases are, both privately produced and provided. Partial failures (the presence of large positive externalities) in the market for education have made it customary for states to engage in both its production and provision. Whether or not this leads to the optimal supply of education is a moot question. See, for example, the discussion in Rosen (1995) on the merits of compulsory education.

To some extent, prior to the government pumping up the 'social wage', the poor will have spent whatever meagre amounts they could spare to purchase the goods and services (or substitutes for them) mentioned above. Assessing the impact of the social wage on poverty therefore requires that one should measure the extent to which the social wage reduces private expenditure while, at the same time, hopefully improving the quality of people's lives. The assumption is that electric light is superior to candlelight, and a Reconstruction and Development Programme (RDP) house to a squatter shack.

Implicitly, the discussion assumes that values of the elements of the social wage can be agreed upon. With the possible exception of water and electricity, valuation of the items will present extreme difficulties, some of them seemingly insuperable. Conventional economics arrives at the value of any commodity by taking into account both its cost of production and its subjective value, or utility, to consumers. In short, the value of an element of the social wage is not merely its production cost to the government. To measure the improvement in wellbeing to which government expenditure should give rise, the subjective valuation of the benefits provided must be known. As Sefton (2002: 1–2) notes:

The social wage is a measure of how much better off individuals are with the provision of publicly funded welfare services than they would be without these ‘in kind’ benefits (i.e. if they had to pay the full cost of these services). But, adding the social wage to people’s cash incomes will not produce a better measure of people’s standard of living... To measure the impact on people’s living standards, you would also need to adjust for differences in needs between individuals, which is beyond the scope of this article.

Sefton is limited, therefore, to estimating the distributional outcomes of government expenditure in the United Kingdom on four items: health, education, housing and personal social services. In the South African case this simply will not do, especially not for two of the large ticket items, health and education. We will have to try to be a little more creative.

#### **4.1 Elements of the social wage**

With these strictures as a guide, we turn to the elements of the social wage.

##### **4.1.1 Water**

Prior to the public provision of water, communities would have provided their own, often from polluted sources, and often at considerable cost in terms of the amount of work required to collect it. Laundry is sometimes carried to water sources because of the sheer difficulty of collecting sufficient water in which to do the washing. It is possible that because of an absence of income-generating alternatives, the opportunity cost for many households of the time required to fetch and carry water could well have been zero. Under such conditions, attaching a monetary value to water supplied becomes very difficult. Probably the most important effects result from the improvement in the quality of water and in the increase of leisure time, both of which are difficult to measure. Woolard & Leibbrandt (2001: 69) comment that the large amount of time spent by the poor, especially women, collecting water would be better spent in child care or income-generating activities. Much of the water (and firewood) collection is also carried out by children.

##### **4.1.2 Electricity**

Electricity is somewhat less problematic. The primary services provided by electricity – lighting, cooking, space heating and water heating – would all previously have been furnished by substitutes such as candles, paraffin and/or wood and coal. The amount of electricity supplied free by the state would not be sufficient to meet all domestic needs. By analogy, if households depended on wood gathering for fuel, then the

possibility of zero opportunity costs arises once more. The only direct reduction in necessary household expenditure would be for that spent on lighting (typically, candles). Such an argument would probably only apply in rural or semi-rural areas, and possibly with decreasing validity as wood supplies come under increasing strain.

For the purposes of this study, we assume that every poor household receives a full quota of free electricity, valued at R50 per household, in 2002 prices, and water, valued at R28 per household, in 2002 prices (Sunday Times, 2003).<sup>2</sup> This is distributed among the household members, to give individual consumption figures proportional to household size. This assumption will almost certainly cause poverty to be understated. The ability of the state to supply the poorest of the poor with these utilities has been questioned (Bond, 2002).

The questions raised by Bond are likely to give rise to offence in government circles. Chapter 5 of the work (Bond, 2002: 263), for example, linking water pricing policy and cholera, concludes that:

What is evident from the review of the first period of ANC rule, is that water and especially sanitation services to the majority of South African consumers deteriorated in relative terms. Notwithstanding publicity to the contrary, that last chapter showed that it is quite possible, maybe even quite likely, that a *lower* percentage of South Africans enjoyed access to affordable water in their homes or yards in 1999 than in 1994, given population growth in excess of 2% and low water-system installation rates [emphasis in the original].

When the data from Census 2001 become available, it should be possible to begin addressing questions of this sort.

### 4.1.3 Health care

Despite the more frequent complaints about health problems among the better off, morbidity rates are much worse among the poor, and even more so among the ultra-poor (Woolard & Leibbrandt, 2001: 67, Table 2.13). Free health care is thus an important element of the social wage. Valuing health by its cost of production has been ruled out as being unsatisfactory. Utilisation of health services is also problematic. As Sefton (2002: 1) has pointed out, ‘the fact that an 85-year-old is making intensive use of the NHS does not make him or her better off than a younger person who does not require as much health care’; to which one could, of course, respond by pointing out that in the absence of the service, the 85-year-old would be much worse off.

Employing ‘use of the health services’ is a candidate – sketchy data are available on the numbers of consultations with private and public sector practitioners, by race group – six and four, respectively, for private and public practitioners for the African population as a whole in 1999 (Hunter, 2003). Using these data, we could possibly infer a value of state-provided health services to each person, which could be considered an example of revealed preference. Instead, we take as our starting point the

<sup>2</sup>The newspaper article in question, which dismisses free water as a ‘sham’, is based on a recent Master’s dissertation. The researcher found that although municipalities had water tariff structures that allowed poor households six kilolitres free of charge, in practice, municipalities such as eThekweni still charged for the first six kilolitres (R27,41). Commenting on this, Msunduzi’s manager of water and sanitation said ‘most municipalities could not afford to implement the government’s free water policy’.

average amount spent by households in the top expenditure category (R55 160 and more per annum) in the 2000 IES. This amounted to R6 683 (StatsSA, 2000b: 52). Taking account of the fact that this amount would have been spent on (subsidised) high-quality private care, as opposed to the often inferior service received by the poor, we scale the amount spent (arbitrarily) by a factor of 2,5 to yield a value of the health services provided by the state. The results are not sensitive to quite substantial variation in the scaling factor. Despite the provision of ‘free’ medical care for the poor, households at the bottom level still spent a small sum (an average of R40 per annum) on health, some of it on private care. This suggests that some poor people are willing to sacrifice very scarce income for what is probably seen to be a better service. Although treatment in some parts of some public hospitals may be equal to, if not superior to that in the private sector, complaints about lengthy waiting periods, indifferent service, overcrowded facilities and shortages of critical supplies are legion.

#### **4.1.4 Housing**

Prior to receiving state assistance with housing, most people would have been accommodated either in traditional dwellings in rural areas or in an ‘informal’ dwelling in one of the many settlements that have sprung up in recent years. The increase in utility caused by the movement from a self-constructed dwelling to an ‘RDP’ house cannot readily be ascertained. Anecdotally, one of the important advantages of moving from the former to the latter appears to be the increased security levels afforded by formal housing. Improved protection against the elements is obviously also important. In the absence of (knowledge of) markets for both types of dwelling, we can but guess at the extent to which people’s wellbeing is improved by virtue of their access to formal housing. In the case of housing, the cost-of-production approach is somewhat less problematic than it is in, say, health or education.

Although the relevant markets do not exist (or are not visible), we can guess at the difference between value of a subsidised house built from blocks under asbestos, and the value of the ‘sweat’ equity and materials embodied in a self-built house. This is how we propose to tackle the problem. There are some differences of opinion as to the value of a house and a subsidy – we take the value given by the Department of Housing (n.d.), namely R25 579, most of which is covered by a subsidy of R23 100 for the people with whom we are concerned. At a current lending rate of about 13,5 per cent the monthly repayment on a housing loan of the subsidy amount would be approximately R279. This is the gross value of the housing benefit. The imputed rent of a single-roomed shack is guesstimated at R50 per month, which yields a net benefit of R229 per month per household. Regardless of its composition, a household, if it receives the benefit, is assumed to receive a benefit of this magnitude.

This brings us to the next problem – how to distribute the benefit among a large population. Between April 1994 and March 2001, 1,35 million subsidies were granted (Department of Housing, n.d.). For argument’s sake, we increase that to 1,7 million to bring the figure up to September 2002. In 2002, there were 3,3 million households in the expenditure category R0–R399 and a further 2,9 million in the category R400–R799. Of the total 6,2 million households in these two categories, only about 28 per cent can be regarded as enjoying the housing benefit component of the social wage. For the purposes of this study, we estimate the actual figure at 40 per cent. In the simulation model we assume first that every household receives the housing benefit. In a separate worksheet, we remove the housing benefit completely. By subtracting the numbers of

poor in each case, we obtain a crude estimate of the number of households the housing benefit would lift from poverty. We remain mindful of Sefton's (2002) warning about the dangers of merely adding the social wage to private consumption expenditure to judge how much better off people are. In the absence of any better measure, however, this one will have to do.

#### **4.1.5 Sanitation**

Sanitation, apart from the increase in convenience that it brings, is also important for public health. It has been assigned a value of R10 per individual, once more on fairly arbitrary grounds. R10 per household member, spent over four years (about R2 600), would probably pay for a ventilated improved pit (VIP) latrine. The external benefits of proper sewerage are even more difficult to value and are obviously substantial.

#### **4.1.6 Education**

Education is the most difficult item of all to evaluate. The problem would normally be treated as one of estimating the returns to investment in human capital, using tried but not trusted techniques. As most school leavers appear to be joining the ranks of the unemployed, the value of education as an investment good – at least in the medium term – may well be negative. What we need, and do not have, is a theory of the value of investment in human capital under conditions of mass unemployment. Instead of taking it for granted that there would be returns to investment in education in the form of income, such a model would have built into it estimates of the probability of employment. It would also have to take account of the depreciation of human capital during lengthy periods of unemployment.

We are in excellent company in not being able to solve the problem of the value of education. As Barr (1998: 322) points out, 'measuring costs... presents no insuperable problems'. When it comes to the measurement of benefits, however, he observes that we face 'intractable problems', even when there is full employment. Under conditions of mass unemployment, they become even more difficult to solve. With increasing unemployment, it is clear that for many people the investment benefits of education in the medium term are zero or negative. It is likely that for many poor South Africans, desperate to give their children a chance in life, the cost of education (school fees and school uniforms) could exceed the benefits. Education as a consumption good is valuable in its own right, and therefore has to have a value assigned to it. What this should be is anybody's guess.

The approach we adopt for education is similar to that which we used for housing. We assume that as a result of schooling, at least one member of some proportion of the households in our sample will find employment in the informal sector at the mean wage for the year. A mean wage of R255 per month is assumed.<sup>3</sup> As we did in the case of housing, we first assume (counterfactually) that every household has one such worker. In a separate worksheet we reduce the benefit to zero. The difference between the numbers falling into poverty gives us a crude estimate of the number of households lifted out of poverty by the presence of a worker. We can then scale that result in accordance with our suspicions about how many people this could involve.

<sup>3</sup>The figure comes from work conducted on the informal sector by a colleague in the School of Economics at the University of Natal, Colette Muller, to whom our thanks are due.



#### **4.1.7 Transport**

It is well known that the geography of apartheid had located communities far from work opportunities, to the extent that these existed. Transport is thus a major item of expenditure for poor households. According to the 2000 IES, poor households spent R155 per annum on transport. We have assumed, arbitrarily, that the value of the state subsidy to each poor individual (including children) is R10. Note that, according to the 2000 IES, however, transport accounts for about 3 per cent of the total expenditure of poor people, and about 12 per cent for the better off. The difference is probably accounted for by the large amounts spent on expensive motor vehicles by the latter (see StatsSA, 2000b: 52).

#### **4.2 Maximum potential consumption including the social wage**

It is time to begin assembling the points above into a package called the ‘social wage’. Table 4 gives the value of the social wage to the four different household types with which we have worked, and shows the value of the social wage when either the housing or the education component is omitted. The table also gives the value of the social wage for each of the variants. As may be seen from this more comprehensive view of total consumption, only households containing one or two adults rise above the standard PL (R467 per month). This holds for both expenditure categories. The assumed level of underreporting of expenditure in this table is zero. The value of R344 per month for a household receiving all components of the social wage is R122 lower than the PL. The estimate of maximum potential consumption of R150,07 (including the CSG) would thus need to be underreported by 81 per cent to start lifting people in the bottom expenditure category out of poverty. The required error in the second expenditure category is less exuberant (17 per cent), but it must be borne in mind that the value of the social wage used here gives everyone all components of it, something which we know to be untrue.

The main lesson drawn from these results is that unless some drastic errors have been made in the reporting of expenditure for all plausible assumptions about the social wage, the people in households with more than two adults, and in households containing adults and children, will be existing at levels well below the higher of the two PLs. Some substantial proportion of the people in the bottom expenditure category will fall below the World Bank’s ‘ultra-poor’ PL.

Harking back to Sefton’s (2002) warning that ‘adding the social wage to people’s cash incomes will not produce a better measure of people’s standard of living’, we observe that the implied proportional allocations of expenditure among the various items needed by households seem lopsided, particularly in the bottom expenditure category. This is illustrated in Table 5. This table takes maximum potential per capita in Table 3 (calling it PCE, or private consumption expenditure) and adds to it the full social wage. It does the same with the PCE for different levels of underreporting of expenditure, then expresses the major ‘expenditure’ items as a percentage of the PCE plus the social wage.

To produce the table, the assumed proportion of the PCE devoted to food in the second expenditure category (set at 45 per cent in Table 3) was reset to 60 per cent. Even after this adjustment, proportional expenditure on food only climbs above 40 per cent if PCE is underreported by 100 per cent. At the 50 per cent underreporting level it should be

**Table 4 : Maximum potential consumption levels, 2002 (2002 prices)**

Expenditure range (R/month)	Years and expenditure ranges	
	2002	
	0	400
	400	800
<i>Including the CSG (or BIG) and all elements of the social wage</i>		
Single adult	1 053,16	1 453,16
Two adults	586,52	800,87
More than two adults	359,17	456,29
Adults and children		
Including CSG for children under the age of seven years	344,51	426,82
Including CSG for children under the age of 15 years	375,26	455,93
Excluding the CSG but including the BIG	410,48	494,60
Per capita value of the social wage		
Single adult	653,17	653,17
Two adults	372,17	372,17
More than two adults	238,95	229,60
Adults and children	194,44	196,82
<i>Including the CSG (or BIG) and all elements of the social wage except housing</i>		
Single adult	824,16	1224,16
Two adults	472,02	686,37
More than two adults	298,95	399,88
Adults and children		
Including CSG for children under the age of seven years	302,43	384,74
Including CSG for children under the age of 15 years	333,18	413,85
Excluding the CSG but including the BIG	368,40	452,52
Per capita value of the social wage		
Single adult	424,17	424,17
Two adults	257,67	257,67
More than two adults	178,73	173,19
Adults and children	152,36	154,74
<i>Including the CSG (or BIG) and all elements of the social wage except education</i>		
Single adult	798,16	1198,16
Two adults	459,02	673,37
More than two adults	292,11	393,48
Adults and children		
Including CSG for children under the age of seven years	297,65	378,14
Including CSG for children under the age of 15 years	328,40	407,25
Excluding the CSG but including the BIG	363,62	445,92
Per capita value of the social wage		
Single adult	398,17	398,17
Two adults	244,67	244,67
More than two adults	171,90	166,79
Adults and children	147,58	148,14
Percentage by which expenditure is assumed to be underreported	0	

**Table 5 : Implied proportional allocations of expenditure in PCE plus social wage (%)**

Expenditure range R0–R399				
Underreporting (%)	0	50	100	150
Food	26	31	35	38
Health	21	18	15	14
Housing	12	10	9	8
Education	14	12	10	9
Social wage + PCE	100	100	100	100
Social wage + PCE (rand/month, 2002 prices)	345	403	461	519
Expenditure range R0–R399				
Food	24	28	31	33
Health	17	14	11	10
Housing	10	8	7	6
Education	11	9	8	6
Social wage + PCE	100	100	100	100
Social wage + PCE (rand/month, 2002 prices)	424	523	622	721

noted that the household is still only R56 above the PL of R467, which is a long way from the additional 50 per cent of the PL it should have to meet all basic needs.

It is unlikely that households with budgets of the size shown here would choose to allocate them in the manner illustrated in Table 5. Raising consumption levels of the poor by providing the goods and services that make up the social wage, rather than giving them income transfers of equivalent size and allowing them to choose how to allocate the income (both of which are redistributive policies), is a policy choice based on a particular stance towards what are known as ‘merit goods’. Hotly debated (e.g. Cullis & Jones, 1992; Rosen, 1995; Barr, 1998), the choice made in South Africa and in many other countries implies that a substantial number of people may live in ‘respectable’ houses, but suffer from malnutrition. There may be free health-care services available to them to which they cannot gain access because they lack the wherewithal to pay for transport. In fairness, it should also be pointed out that a social grant in the wrong hands can easily be converted into economic ‘bads’, such as alcohol. Social policy offers few easy choices. There is a need to maintain a critical stance towards claims that either form of redistribution unambiguously increases welfare.

So much for consumption and choice – there remains the difficult question of the extent to which social wage addresses income poverty. The major items involved are housing and health. To answer the question of the impact of the provision of housing on income poverty, one would need to know on a national basis what the recipients had previously spent on rent and service charges. Although it is known that some people in the bottom expenditure categories pay rent, they are unlikely to be those people who have benefited from the housing subsidy scheme. Accordingly, it is assumed here that housing provision does not free up income for use on other items of consumption. The HSL poverty line of R467 per month excludes all but the bare necessities of daily life (Mlambo, 2001: 9). There is no allowance for any medical expenses. As the compilers of the HSL point out: ‘When total income reaches the level of the hypothetical HSL one third of basic need remains unsatisfied’ (Potgieter, 1997: 6). Accordingly, it is

assumed that the provision of free health services has no direct positive effect on the income (and hence private consumption expenditure) of the majority of the poor.

When significant numbers of households are being serviced with water and electricity, the income position could be improved by some small amount. For each individual in an adult-and-child household, the assumed monthly values of water and electricity consumed were equal to R5,15 and R9,19, respectively, in the expenditure classes R0–R399. In the expenditure class R400–R799 the values were R5,35 and R9,55, respectively. It is doubtful whether households would have spent this much on these two services (or, in the case of electricity, on its substitutes) before the free provision. These values are somewhat higher than the figure of R3,00 per person given in the HSL for September 1997. When inflated to 2002 prices, this figure comes to about R4,00 (Potgieter, 1997: Tables 25–48). According to the 2000 IES, households in its lowest expenditure category (R0–R8 070 per annum) spent R255 (or R3,90 per person in the adult-and-child households) of an average total expenditure of R4 823 on fuel and power.

While the supply of water and electricity constitutes an important welfare improvement for those households that receive them, the amount of income freed for use on other important items of consumption is probably less than the value of water and electricity supplied. Nonetheless, we will run a simulation in which the value of the PL is reduced from R467 to R452 per month.

If all households in the lowest expenditure categories are assumed to have received the relevant components of the social wage, poverty among them could be ‘eradicating’ by assuming sufficiently high values for these components. While there is room for disagreement with our figures, we would regard assumptions that cause the poor to ‘disappear’ as intellectually suspect. To prevent this happening we stress the importance of examining the potential levels of consumption excluding the social wage, as was employed in Table 3.

Monitoring the effects, especially the poverty-alleviating impact of public programmes of all sorts, is in its infancy in South Africa. Until such time as the many initiatives currently under development begin to bear fruit, careful and critical use of the available data must be made to prevent fragile inferences from becoming the received wisdom. As we shall see in the Conclusion, the government asserts that there is ‘overwhelming evidence’ that it has met most of its ‘immediate RDP objectives’. If so, those objectives must be exceedingly modest. The evidence presented so far in this article suggests that while those elements of the social wage that have been put in place have brought about improvements in the lives of many of the poor, these have not been sufficient to bring households anywhere near to an acceptable standard of living.

## **5. COUNTING THE POOR**

Most of what we need to make estimates of the way in which the numbers of poor changed over the period 1999–2002, we now have – that which we do not will have to be manufactured. Amongst the things to be created are distributions of households by expenditure level and household size within the two expenditure categories. Fabricating distributions and then testing them for sensitivity is the only way around this particular obstacle. Missing also is a set of reliable estimates of expenditure. Official statistics duly report numbers of households in the various expenditure categories. However, as we have noted above, these are widely believed to understate

true expenditure levels, especially at the bottom end of the distribution. We therefore experiment with various error levels (i.e. degrees to which expenditure may have been underreported) to gauge the impact this could have on the estimates of the numbers of the poor. Finally, there is the vexed question of the poverty line. Estimates of the numbers of poor are sensitive to variations in the PL – a defensible PL is, therefore, a prime requirement for an exercise such as that contemplated here. As we point out above, the HSL-based PL we are using is modest in the extreme which, if attained, always leaves one-third of basic needs unmet.

### **5.1 Baseline estimates of changes in the numbers of the poor**

Table 6 shows the maximum values that the numbers of ‘new poor’ could possibly attain – all plausible estimates must be lower than these values. To construct Table 6, the assumed consumption expenditure levels are those that obtain before those households eligible for the CSG received it. There is no provision for the social wage and underreporting of expenditure is assumed to be zero. The poverty line used is the HSL-based PL of R467.

Expenditure distribution within the two expenditure categories is assumed to be linear, i.e. there is only one individual who spends the maximum possible amount in each expenditure category, and one who spends the minimum. Everyone else’s expenditure level lies on the straight line joining these two points. The value of the lower bound of the bottom expenditure category is variously assumed to lie between 25 and 75 per cent of the upper bound. These values yield implicit mean expenditure levels of between 57 and 71 per cent of maximum potential expenditure in adult-and-child households in the bottom expenditure category. (Corresponding figures for the second expenditure category are 60 and 80 per cent.) As may be seen, estimates of the number of poor are not overly sensitive to changes in the assumed value of mean income – the maximum possible number of new poor (using the HSL PL) lies in the region of 4,4-4,5 million. These numbers fall slightly (to between 4,1 and 4,4 million) if the World Bank PL is used.

### **5.2 Probable changes in the number of poor after allowing for the social wage**

Surveys have a reputation for underreporting income and expenditure. For instance, in the case of both the 1996 Population Census and the 2000 IES, the two instruments are estimated to have captured only about 60 per cent of the income that the national accounts would lead us to expect to find (Simkins, 2003). To counter the injustice such underreporting might do to government efforts to address poverty, we present our estimates of the probable changes in the number of poor, taking into account the social wage, with expenditure underreporting errors of 0, 50, 100 and 150 per cent. In the simulation model, assumed underreporting errors can be set to different levels for 1999 and 2002. There is, however, little reason to suppose that bias in data collection would operate in different directions or be of different magnitudes in different years. Accordingly, we set the errors to the same magnitude in each year. As before, simple linear distributions are assumed. It is also assumed that reported expenditure of everyone in a particular expenditure category understates actual expenditure by the same proportion. Using the assumption that the lower bound of the bottom expenditure category equals 50 per cent of the upper bound, and assuming that the HSL PL of R467 per adult equivalent is appropriate, we obtain the set of results presented in Table 7.

**Table 6 : Maximum possible numbers of new poor**

Changes in the numbers of the poor	Expenditure category		Totals
	Bottom	Second	
Assumption 1 (lower bound of bottom category = 25% of upper bound)	2 916 489	1 511 513	4 428 001
Assumption 2 (lower bound of bottom category = 50% of upper bound)	2 938 161	1 511 513	4 449 674
Assumption 3 (lower bound of bottom category = 75% of upper bound)	3 003 178	1 511 513	4 514 691
PL = HSL			
Excludes social wage and social grants (CSG or BIG)			
Household sizes adjusted for economies of scale and child costs			
Value of underestimate of expenditure used in simulation (%)	0		

For zero underreporting error, the total increase in the number of the poor between 1999 and 2002 would have been about 2,4 million. Removing the housing component of the social wage would have added about 400 000 to the total. Slightly more would have been added by the removal of the education component (to just under 500 000).

Regardless of how much the underreporting error rises, the number of poor in the bottom expenditure category rises. A 50 per cent error would, however, raise almost 5 million people in the second expenditure category out of poverty; a 100 per cent error 8,3 million; and a 150 per cent error 4,1 million. Counterintuitive changes such as this (i.e. a larger error associated first with a larger change and then with a smaller) can only be understood by looking at the detailed figures. The figures in the table are the net effect of changes in the number of the poor in 1999 and 2002. Changing the error level affects the numbers of the poor in each year in different ways.

Once again, removing components of the social wage serves to reduce the effect of changes in the second expenditure category. We know that not everyone has received a housing subsidy (we assumed that about 40 per cent of those eligible may have done so). We also know that rising unemployment has made it unlikely that education can legitimately be claimed to make a large positive contribution to most people's welfare.

Without much more detailed digging into the housing, education and health questions (the major components of the social wage), there is little more we can say. Our feeling is that the social wage might have stabilised the number of poor in the second expenditure category. The number of poor in the bottom expenditure category probably rose by something in excess of 2 million.

If we reduce the HSL PL to make allowance for the 'free' electricity and water provided by the state, the zero-error condition remains the same. For the 50 per cent error, the numbers of second category folk freed from poverty are larger. The numbers of bottom category poor (the truly ultra-poor) carry on increasing as before.

If we use the World Bank 'ultra-poor' PL, the numbers of new poor drop in every category except the zero-error, bottom expenditure category with either housing or education removed. The fact that even a substantial dollop of 'social wage' is unable to lift millions out of ultra-poverty is an indication of the severity of South Africa's poverty problem.

It remains but to demonstrate that the increase in the number of the poor between 1999 and 2002 is statistically significant. To do so we referred, in the first instance, to the tables and the chart published with the LFS meta-data.<sup>4</sup> The numbers of potential new poor in the relevant expenditure categories are large. (Within these categories, more than 88 per cent of the new poor come from households containing adults and children.) Confidence intervals, therefore, are relatively small. Assuming that the estimated value of the number of potentially poor is equal to 3 833 297 (all the new entrants to the two bottom expenditure categories except those in two-adult and single-adult households), then by our calculation the true value lies between 2,86 and 4,80 million. In both expenditure categories, the increases are statistically significant.

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<sup>4</sup>To estimate standard errors, we used the routine produced by Charles Simkins at the behest of the Statistics Council and the HSRC Employment Dynamics Committee.





## 6. CONCLUSION

Headcount poverty measures are crude devices. Poverty analyses that do not delve into the intensity of poverty are themselves poor. Comparing what we have undertaken in this article with the sophistication of, for instance, Woolard & Leibbrandt (2001), provides a sense of just how much work remains to be conducted. Nonetheless, the findings in this study are highly significant and, apparently, quite robust. What they tell us is that the state's best efforts notwithstanding, the number of people falling below a parsimonious poverty line has increased between 1999 and 2002, probably by at least 2 million. For many of them the intensity of poverty has decreased because of the provision of a social wage. They remain, however, deeply mired in poverty, a situation exacerbated by the continuing failure of the economy to generate jobs. Research to increase the precision of the findings made here is urgently required. The impetus for such research should come from the state – the results, however, are unlikely to please the politicians.

Announcing the results of Cabinet's deliberations at the July 2003 *lekgotla*, *ANC Today* (2003) reported as follows:

Massive progress has been made in building a democratic state, tackling poverty and neglect, setting the economy on a sustainable growth path, entrenching safety and security, and placing South Africa at the forefront of Africa's development and equitable global relations, Cabinet said at its mid-year *lekgotla*, held last week. Briefing the media after the *lekgotla*, President Thabo Mbeki said the overwhelming evidence is that government has met most [of] its immediate objectives as set out in the Reconstruction and Development Programme, the ANC's policy for transformation adopted in 1994.

There is substance to government claims about the contribution of the social wage to people's wellbeing. In absolute terms the numbers of houses built, clinics constructed, water and electrical connections made, VIP latrines provided and roads upgraded are very large. Even after account has been taken of this contribution (and there is room for extensive argument over the valuation of the components of the social wage), those households in the bottom two expenditure categories are still badly off. With the possible exception of the CSG, the social wage, which the government insists has done much to ameliorate the sufferings of the poor, has but little impact on the spending power of the poor. 'Massive progress' would thus have to be understood in a very particular way, if the results presented in this article are correct. In the face of the rise in human misery associated with the increase in the number of people living in poverty, the government's claims to have made 'massive progress in tackling... poverty and neglect' look more than a little weak. Although the government's achievements in the field of social provision are significant, the large increase in numbers of those requiring assistance goes a long way towards nullifying those achievements.

Some of the people in poverty are now better off than they were in 1999, but in the bottom expenditure category there were many more people in 2002 than there were in 1999. The debate about whether they are worse off now than they were under apartheid is pointless – no sensible counterfactual could see the former National Party delivering what the ANC has. Nevertheless, the government's energetic attempts to persuade the public that it is winning the war against poverty are misguided. Unless every statistic produced, including the latest Census figures, can be shown to be incorrect, there are now more unemployed people and very poor people than ever before. Given the

location of these people in the distribution of income, an inevitable consequence is the increasing poverty that the government is so keen to deny.

Speaking of the many millions of families in poverty in the United States, Schiller (2001: 28) drew his readers' attention to a warning given by Michael Harrington in 1962, to the effect that 'statistical quibbling' should not be allowed 'to obscure the huge, enormous, and intolerable fact of poverty in America'.

Similar advice could be given for South Africa and the government would do well to heed it. It would be more profitable for the poor – the constituency whose interests the government claims with the greatest fervour to represent – if the government made a more critical and dispassionate assessment of the available evidence. If the findings in this article are correct, existing and planned poverty reduction and alleviation policies urgently need to be rethought.

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