A national poverty line for South Africa

Statistics South Africa
National Treasury

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Background

As a signatory to the Millennium Development Goals, South Africa is committed to halving poverty by 2015 as one amongst eight global objectives. Indeed, South Africa's poverty reduction commitment was articulated well before the international millennium targets were set, and was at the centre of the Reconstruction and Development Programme commitment to "meeting basic needs" that informed the democratic government's policy framework from 1994.

Measuring the extent of poverty by reference to an explicit and consistent standard, has of course a longer historical legacy, and there is an extensive literature on which to draw in considering options for the design of a poverty measure. The recommendations that follow draw in part on a review of methodological issues undertaken on behalf of National Treasury, and an introductory analysis prepared by Statistics South Africa. [1]

In keeping with practice in many other countries, an official poverty line has been proposed for South Africa to assist in measuring the extent of household poverty and monitoring progress in poverty reduction. In the second half of 2007, Statistics South Africa will release a national poverty line on a trial basis, for public discussion.

This document introduces the main features of a poverty line and invites public consideration and comment of the proposed approach. It is a consultation document, aimed at encouraging debate and seeking public

[1] Leibbrandt and Woolard (2006) *Towards a poverty line for South Africa: A background note*, South AfrIcan Labour and Development Research Unit, University of Cape Town; Statistics South Africa (2006) *Constructing Comparable 1995 and 2000 Survey data for the Analysis of Poverty in South Africa*, a discussion note. These and other selected papers are available on the "poverty line discussion forum" on www.treasury.gov.za,

consensus on some of the options available for the design of a national poverty line.

Questions to be considered include the following:

- Should a single poverty line be adopted or would several reference lines better capture different degrees of poverty and deprivation?
- Should a poverty line represent an “absolute” level of household requirements, or should it be a “relative” index that adapts to rising general living standards and income?
- How should household size be taken into account?
- Should different measures for urban and rural areas, or for different geographic areas be adopted?
- How regularly should the basket of goods used for calculating the poverty line be reviewed? How can we assure that a poverty line remains relevant and accurate over time?

These are some of the issues that need to be considered. Views and comments should be submitted to ***povertyline@treasury.gov.za*** or Poverty Line Discussion Forum, National Treasury, Box X115, Pretoria 0001.

Why do we need an official poverty line?

The nature of poverty, vulnerability and income inequality, and their shifts in response to economic trends and policy, need to be better understood if poverty reduction and social development programmes are to be well-designed and effective. An appropriate index to assist in measuring and tracking poverty over time is therefore a useful statistical instrument for research and analysis. It can also serve as a reference measure for various policy purposes, such as the allocation of resources for poverty-focused spending programmes or the assessment of social and development needs.

In the absence of a consistent and agreed national poverty measure, analysts have developed various incongruent indices, each based on particular assumptions and leading to sometimes confusing or contradictory conclusions. While there is some advantage in a diversity of research tools, most observers are persuaded that progressive social dialogue and policy analysis would be well-served by an official poverty index, as a common standard against which progress could be measured over time.

The idea of a poverty line is not that household vulnerability can be satisfactorily reduced for analytical purposes to a single index, but rather that a consistent measure, while imperfect as a gauge of household needs, can nonetheless serve as a useful comparative index of trends over time and of relative wellbeing across the social landscape.

The proposed approach

It is proposed that the official poverty line should be constructed as *a measure of the money income required to attain a basic minimal standard of living* – enough to purchase a nutritionally adequate food supply and to provide for other essential requirements.

There is no exact definition of a poverty line, and it is no surprise to find that approaches to its construction vary from one country to another, and there are divergent views on what the “minimum consumption bundle” should comprise.

Partly for this reason, many countries publish two or more poverty lines – a primary measure of minimum requirements for subsistence, for example, and a somewhat higher standard that includes moderate provision for basic, but less essential, goods and services.

Once the components of a poverty line have been agreed, it is important that it should be consistently measured from one year to the next, taking into account adjustments in prices. Over time, however, as national income and wealth increase, a society’s understanding of basic household needs may be expected to change. If a poverty line is to remain useful over long periods of time, it needs to be revised or supplemented with additional measures from time to time.

A poverty line is useful partly because it is simple and can be widely understood. But it is no more than a crude and simplified index of a living standard, and it is no substitute for more detailed statistics and analysis of poverty and household welfare.

In addition to the proposed introduction of an official poverty line, therefore, consideration is being given to the design and possible content of a broader “poverty barometer,” which would bring together a range of complementary social and economic indicators of household wellbeing.

A National Poverty Barometer

A poverty line is only one of several poverty measurements that can be used to develop a better understanding of poverty and to begin to eradicate it in all its dimensions. The Programme of Action adopted in response to the country review of South African under the African Peer Review Mechanism commits government to design a “national poverty barometer” as part of the official statistics system and to contribute to improved identification and targeting of vulnerable and marginalized groups. Statistics South Africa is studying best practice in other countries in this regard with a view towards developing a more comprehensive statistical instrument to measure poverty in all its dimensions on a regular basis. It is expected that this broader review would be piloted in 2008.

International experience

The exercise of adopting national poverty lines has a long history. Official poverty lines in a country such as India date back to the 1930s. As household survey data has become more common, especially in developing countries, over the past two decades, there has been a trend towards standardised official poverty lines, and indeed cross-national comparative measures have also become more common. Added impetus has been given by the Millennium Declaration goals relating to poverty reduction.

Despite widening international experience, there is no agreed best practice on how to design a national poverty line. Processes and experiences differ widely from country to country as do the actual design and content of poverty lines that have been adopted. Most countries have a single poverty line, while others have two or more. Some countries have different poverty lines for rural and urban households, and others make a distinction between different kinds of household.

A general conclusion from international experience is that while there is considerable variation in practice and the design of poverty lines has often been the subject of controversy, there is broad acceptance that a consistently applied poverty line is a useful social index.

Commitment to halve poverty

In 2000, South Africa became a signatory to the United Nation’s Millennium Declaration, thereby undertaking to work with other countries to halve, between 1990 and 2015, both the proportion of people whose income is less than US$ 1 a day and the proportion of people who suffer from hunger.

Source: United Nations, Millennium Declaration, 2000

‘Direct’ or ‘income’ approach

Many approaches to identifying the poor begin with the specification of a set of basic needs. An adequate level of nutrition, for example, can be expressed as a minimum food requirement, leading to a specific poverty measure defined by reference to household food consumption. But individual preferences and household needs vary, so there is no satisfactory way of aggregating measures of “food-poverty” with complementary measures of other needs – such as shelter, energy or clothing. This “direct” approach to measuring wellbeing is a useful part of a more detailed assessment of household living conditions, but it is impractical as a standardised overall index of poverty.

A poverty line is therefore typically constructed as a measure of “income” adequacy, expressed in money terms. It comprises an aggregate cost of a minimum basket of goods, and therefore indicates a required level of household expenditure, but not the actual composition of individual household consumption. While the direct approach identifies those individuals or households who *fail* to meet a specified standard of nutrition, shelter, education or health care, for example, the income approach identifies those that are *unable* to afford an adequate consumption basket. This approach gives recognition to individual choice and to the fact that households can meet their needs in various ways, but it does not provide a comprehensive check-list that household requirements are all met.

The "US dollar a day" per person poverty line

International comparisons of poverty levels commonly make use of a basic income poverty standard constructed by the World Bank. It uses national poverty lines for 33 countries, with the international line derived as the median of the 10 lowest poverty lines. That line is equal to $1.08 a day per person in 1993 purchasing power parity (PPP) terms and has been coined the "US$1 a day" standard. An upper poverty line, set at twice this level (referred to as "$2 a day") is also widely used, and broadly corresponds with poverty lines used in lower-middle-income countries.
The $1 and $2 a day poverty estimates are mainly useful as indicators of global progress in poverty reduction and for cross-country comparison, but may not be appropriate measures for any specific country.

Source: World Development Report, 2000

Absolute or relative poverty lines

The literature distinguishes between *absolute* and *relative* poverty lines. An absolute poverty line is calculated by reference to a fixed basket of goods, and so it does not take into account shifts in the average standard of living in society. It is a fixed money value that is only updated to take account of inflation. "Poverty" refers to the absence of sufficient resources to meet a specified quantum of basic requirements.

A relative poverty line, in contrast, is set in relation to changing standards of living. It could be calculated as a set proportion of the average, or the median level of household incomes or expenditure, or it could be defined by a specified share of the income distribution, like the poorest 10, 20 or 40 percent of the population. A relative poverty line is comparatively simple to calculate and takes into account that standards of "adequate" household wellbeing shift with rising prosperity, over time. But if the underlying intent is to measure progress in meeting basic needs, or reducing poverty and vulnerability, then a relative measure is not appropriate.

Adjusting for family size and composition

Households differ in size and make-up and a straightforward comparison of household consumption is therefore not a sensible measure of wellbeing. It is therefore standard practice to use some form of "normalization".

The simplest normalisation is to divide household consumption by the number of people living in the household and then to compare households on the basis of per capita consumption. More complex adjustments involve calculations of consumption per "adult equivalent", where children are given a weight that reflects the proportion of household expenditure that is attributable to them.

Preliminary research done in preparing options for a South African poverty line suggests that expenses attributable to children and adults in poor households are of similar magnitude. By estimating the cost of an additional male/female of various ages when "added" to a baseline household of two adults, it can be shown that the cost of a child in South Africa is roughly the same as the additional cost of an adult. This suggests that the additional complexity of “adult equivalence” calculations may be unnecessary.

A related issue concerns what economists call ‘economies of scale’. This refers to the advantage of pooling resources and consumption within the household – less money income is required if five people share a home than if they live in separate houses. This cost-advantage can be represented as a “scaling factor” that indicates the proportional reduction in cost when an additional member shares resources with other household members. Calculating an appropriate scaling factor is not straightforward, however, and preliminary research suggests that it does not significantly affect the resulting measures of poverty.

It is therefore concluded that it is possible to use a simple measure of household per capita expenditure as the basis for a poverty index, without relying on more complex normalisations.

Adjusting for price changes over time

In order to track changes in the extent of poverty over time, the nominal value of a poverty line must be adjusted for changes in the prices of those items on which the poor spend their income.

In practice, the adjustment can be based on changes in the overall price level, such as the consumer price index, or it can take particular account of the mix of goods and services that comprise the consumption basket of poor households.

For example, in South Africa’s recent past the price of staple foods has sometimes increased faster than CPI, and sometimes more slowly. A poverty line adjusted by the CPI would then have either under-estimated or exaggerated the money income required for a given poverty standard, leading to corresponding under-estimates or over-estimates of the number of people below the poverty line.

As the CPI itself is constructed out of a series of specific goods and services, it is possible for the poverty line to be calculated and adjusted by reference to price trends in a specific basket of goods. Practical options will be examined by Statistics South Africa in preparing more detailed proposals for a South African poverty line.

Adjusting for variations across the spatial landscape

Some countries publish separate urban and rural poverty lines, or separate indices for different cities or regions. In principle, doing so reflects differences in costs and basic living conditions across the spatial landscape.

This is a different question from whether poverty is higher or lower in different regions. Living costs, particularly housing-related expenses, may be lower in rural areas, but poverty may nonetheless be higher. In practice, it is difficult to ensure that separate poverty lines represent a similar standard of living:

research suggests that urban households spend more per calorie than do rural households with similar real incomes, but consume a more varied and nourishing diet. Urban poverty lines are typically set in a way that recognizes the higher prices paid, but ignores the better quality obtained. As a result, urban households are counter as poorer than they really are, relative to rural households.

Setting separate poverty lines requires that a satisfactory statistical distinction be drawn between urban and rural areas, whereas the reality is generally less clear-cut.

In the South African context, it is recognized that there may be interest in separate measures of poverty by province, between urban and rural areas and for major towns and cities. However, the statistical utility of calculating separate poverty lines is dependent on the adequacy of the relevant survey designs and their geographic coverage. Statistics South Africa has only recently started to include rural areas in the survey work for the consumer price index and a sharp distinction between urban and rural areas is no longer made for planning and municipal purposes.

At this stage a single national poverty line is proposed, while further work is done on the scope for developing separate measures for urban and rural areas, provinces and major towns and cities.

A proposed poverty line

When calculating national poverty lines as a statistical measure, the most common approach is to estimate the cost of a minimum basket of goods that would satisfy the necessary daily energy requirement per person over a period of a month. The daily energy requirement, as recommended by the South African Medical Research Council (MRC), is 2261 kilocalories per person.

Using the 2000 Income and Expenditure Survey data, Statistics South Africa has estimated that when consuming the kinds of foodstuff commonly available to low-income South Africans, it costs R 211 per person every month (in 2000 prices) to satisfy a daily energy requirement of 2261 kilocalories. In other words, R211 is the amount necessary to purchase enough food to meet the basic daily food-energy requirements for the average person over one month.

But households also need other goods and services beyond food to meet basic needs. This includes accommodation, electricity, clothing, schooling for children, transport and medical services, amongst other things. In some countries, poor households spend most of their monies on food and the food poverty line is therefore adopted as a national poverty line. Other countries have made a rough estimate of the non-food component as one-third of the food component, which is then added on top of the food poverty line to derive at a national poverty line.

Alternative poverty lines for South Africa

Several poverty lines have been published in South Africa in the past, dating back to the 1940s, and used mainly for purposes of wage determination. The first such measure was the Poverty Datum Line (PDL) which was a minimal subsistence line based on seven household items: food, clothing, cleaning materials, fuel and light, accommodation, transport of workers and taxation.

The PDL was replaced in the 1970s with the Minimum Living Level (MLL), which also made provision for the cost of education and replacement of household equipment. At about the same time, a number of alternative lines emerged too: The Institute for Planning Research at the University of Port Elizabeth developed the Human Subsistence Level (HSL) for African and Coloured population groups separately, while the Bureau for Market Research at UNISA, in addition to the MLL, also constructed a somewhat higher Supplementary Living Level (SLL) standard.

None of these measures are produced and in use today. Since 1994, other lines have come and gone too. They have emerged both from academic research (such as the proposal that emerged from the South African Living Standards Project to use the 40th and 20th percentiles of the population expenditure distribution as measures of poverty and extreme poverty, respectively) and from public administration purposes (for example, the measures associated with the means tests in use within the social grant system and the “indigence” measures in use by municipalities). A report compiled for Statistics South Africa, based on a basic household consumption basket, proposes a “lower” and “upper” bound for consideration as an official poverty line.

A selection of available measures and thresholds is summarised in the table below. These measures vary significantly, reflecting both the complexity of poverty and inequality and the various purposes that a poverty measure can serve.

Rand values and poverty incidence: alternative “poverty lines”

	Poverty line in 2000 Rands*	% of individuals below the poverty line (2000 IES)
Poverty line set at per capita expenditure of the 40th percentile of *households*	R346 per capita	54.9%
Poverty line set at 50% of mean national per capita expenditure	R538 per capita	68.1%
Statistics SA – lower bound	R322 per capita	52.6%
Statistics SA – upper bound	R593 per capita	70.4%
“Dollar a day” - International poverty line of US$370 (1985 prices) per capita per annum	R81 per capita	8.1%
“Two dollars a day” - International poverty line of US$370 (1985 prices) per capita per annum	R162 per capita	27.0%
“Poverty line” implied by the Old Age Pension means test for married persons, assuming a household of 5 persons and no non-elderly income earners	R454 per capita	63.4%
“Indigence” line of R800 per household per month (in 2006 prices)	R573 per household	11.7%
“Indigence” line of R2400 per household per month (in 2006 prices)	R1720 per household	55.1%

Source: Leibbrandt and Woolard, 2006 and Magasela (2005) *Constructing an Official Poverty Line in South Africa,* http://www.naledi.org.za/docs/povertylineW2.pdf

Statistics South Africa has attempted to estimate the non-food component of a poverty line. This can be done based on the assumption that those non-food items typically purchased by household that spend about R211 per capita per month on food can be regarded as essential, as such households forego spending on food to acquire these non-food items. The cost of such essential non-food items amounts to R111 per capita per month. Adding these figures together (R 211 and R111) gives an estimate of the minimum cost of essential food and non-food consumption per capita per month. It gives a poverty line of R 322 per capita per month in 2000-prices. This yields a poverty line of R 431 per person in 2006 prices.

Additional thresholds

Research on poverty in post-1994 South Africa has emphasised the vulnerability of households to changing circumstances, and the role of social mobility as a determinant of opportunities to escape from poverty. Considerable movement into and out of poverty has been observed for households around the poverty line, while on the other hand some households experience persistent chronic or severe deprivation.

This suggests that information about households at both higher and lower levels than the basic poverty line is an important contribution to monitoring poverty. One way of doing this is to monitor developments at a lower and an upper threshold in addition to the poverty line.

The lower threshold would seek to capture the extent of extreme poverty, and movements over time in the circumstances of households in extreme poverty. As households in extreme poverty subsist in varying ways, it is difficult to construct a "scientific" basis for a lower poverty threshold. In the absence of such a measure, and in recognition of the advantages of international comparability, the US$ 2 a day measure has sometimes been used in the literature in South Africa to identify people in extreme poverty. In 2000-prices, the US$ 2 a day line amounts to R 162 per capita per month, or about half the value of the poverty line.

An upper threshold can be estimated. The proposed approach follows the method summarised above for the poverty line, but relies on survey evidence of the average spending on non-food items of households with food expenditures in the area of R 211 per capita per month. In 2000-prices, these households spent on average R 382 on non-food items per capita per month in addition to the R 211 on food per capita per month. This approach yields an upper threshold of R 593 per capita per month, in 2000-prices.

Living standards and the poverty line

IA poverty line is not a measure of living standards, and an income above the poverty line is not an assurance that household members have access to an adequate consumption bundle. The poverty line indicates, rather, what is required for a household to be able to sustain a basic livelihood comprising minimum food requirements and other essential non-food items.

The poverty line will not replace existing means tests in use in government policies and programmes. A process is underway to review and, if necessary, improve existing means tests to take account of lessons learned since their introduction.

Living conditions of households also depend importantly and directly on how households spend their resources and the extent to which all members of the household share in the resources of the household. If a household spends its money on poor nutritional food or consumption items that only benefit one or a few household members, other members suffer adversely.

Conclusion

While recognising its limitations, it is widely agreed that a poverty line is a useful index for social research and monitoring trends in living standards.

Preliminary estimates prepared for Statistics South Africa using the methodology outlined above put the poverty line at R322 per person per month, in 2000-prices (equivalent to about R430 in 2006 prices). Based on household expenditure reported in the 2000 Income and Expenditure Survey (IES), this results in an estimated poverty rate of 53 per cent in 2000.

However, the IES is not primarily designed as a poverty survey, and comparisons with other sources indicate that household expenditure tends to be under-reported. Alongside the introduction of a poverty line, steps need to be taken to improve the quality and reliability of statistics on poverty,

Government proposes to pilot a poverty line for an initial period to allow for public comments and consultations before its design is finalised. Statistics South Africa will launch the series before the end of 2007. In summary, the proposal is:

- A single national poverty line based on minimum food needs for daily energy requirements, plus essential non-food items, calculated on a simple per capita basis;

- Two additional thresholds below and above the poverty line as indicators of extreme poverty and of a broader level of household income adequacy;

- Publication by Statistics South Africa of an annually updated poverty line and the lower and upper thresholds to take account of price changes, using a basket of goods from the CPI, subject to review every five years to ensure that the poverty line and thresholds remain relevant and accurate;

- Further consideration to be given to the scope for separate poverty lines for rural and urban areas, provinces and major towns and cities, taking into account the adequacy of available statistical data.