Rebasing national poverty lines and development of pilot provincial poverty lines for South Africa

Statistics South Africa
9 June 2015
Poverty lines are important tools that allow for statistical reporting of poverty levels and patterns. They are therefore important tools for planning for poverty reduction in any population.
Outline

- Background
  - Policy environment
  - Pilot poverty lines
  - Rationale for rebasing exercise & rationale for pilot provincial lines

- Definition of concepts

- Data and methods
  - IES 2010/11
  - Application of Cost of basic needs approach to determine FPL, LBPL and UBPL

- Results
  - Estimates of new poverty lines
  - Implications of the rebasing exercise on:
    - poverty lines
    - poverty estimates and trend

- Conclusions
Poverty is a complex issue that manifests itself in economic, social and political ways. No single definition will ever be suitable to measure all facets and dimensions of poverty.

Stats SA applies and measures various definitions:

- Money-metric (lack of income)
- Multidimensional poverty (lack of basic services, education, etc.)
- Subjective poverty (self-perceived)
- Inequality (Gini coefficient, share of expenditure, etc.)
Government priorities on poverty and inequality

**Millennium Development Goals (MDGs)**
Halve poverty and hunger by 2015

**Medium Term Strategic Framework (MTSF)**
Halve poverty and unemployment by 2014

**National Development Plan**
Reduce the proportion of the population living below the lower bound poverty line to 0% by 2030.

Reduce inequality (Gini-coefficient) from 0.7 to 0.6 by 2030.
The Pilot Poverty Lines

Pilot poverty lines based on IES 2000

Annual updates done using CPI adjustment to pilot poverty lines 2000-2014

Lines used in 2010 & 2013 MDG country report

National Planning Commission adopted lower bound poverty line as tool for poverty eradication target
Background contd...

Pilot national poverty lines (annualised CPI adjustment)

* Unless otherwise indicated, the values are linked to January prices
Background contd...

Rationale of the study

1. **Re-benchmark national poverty lines (using IES 2010/11)**

   Why?

   - spending and consumption patterns change over time.

2. **Develop & present pilot provincial poverty lines**

   Why?

   - rebasing also allows for the calculation of poverty lines based on improved sampling frames and data collection methods

   - response to user need
Increasing demand for provincial + rural/urban poverty lines

Demand has not been met thus far
**Definition of key concepts: Poverty Lines**

**Absolute poverty line**
Establishes a minimum socially acceptable threshold for a predetermined welfare indicator to separate the poor from the non-poor.

Multiple poverty lines (as is the case with the differentiation between FPL, LBPL, and UBPL) can also be used to distinguish between different levels of poverty because the characteristics of the poor may vary for different intensities of poverty.

**Relative poverty line**
Establishes a comparative status of an individual/group relative to the position of others in society.

The poverty line is sometimes determined as a cut-off point in the welfare distribution below which a given proportion (say X percent) of the population is located.

**Subjective poverty line**
Defined based on individual perceptions of poverty status.
Data and methods
Conducted by Stats SA every five years with the primary objective of updating and reweighting the basket of goods and services required for the compilation of the CPI.
The **household income** element of the IES provides important information for **profiling relative income inequality and poverty** in the country.
IES 2010/11

Used a combination of **recall** and **diary** methods to collect data

The consumption **aggregate** derived from the dataset comprises the following expenditure categories:

- 752 different goods and services
- 329 different food items.
The 329 food items reported in IES 2010/11 imply:

1. South African population has **diverse food preferences**

2. The **minimum human energy requirement** can be satisfied using a wide range of food baskets which may vary by location and over time.

The multiplicity of possible food bundles that can be consumed by South African households to satisfy the minimum food-energy intake requirements **necessitates construction of a reference basket that is representative of overall consumption patterns** while also anchored in representative levels.
Methodology

- determining the reference food basket
- determining the poverty Lines (FPL, LBPL & UBPL)
Cost-of-basic-needs approach

This approach conceptualizes welfare as comprising consumption or fulfillment of food and non-food needs.
Data and methods: Determining the reference food basket

1. Determination of nationally common foods at household level is done by combining information on food item expenditure-shares and information about the numbers of households reporting item expenditure.
Data and methods contd...  Determining the reference food basket

The threshold for food-expenditure share per item was set at 0.5%

from 329

To 31 stage 1 food items

The minimum number of households required to report on the item for it [food item] to be considered common was set at 10%

Within nationally representative consumption deciles 2-4

from 31

To 26 final food items
## Determining the reference food basket

<table>
<thead>
<tr>
<th>Group</th>
<th>Food Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverages</td>
<td>Aerated cold drinks</td>
</tr>
<tr>
<td></td>
<td>Fruit juices not from food service places</td>
</tr>
<tr>
<td></td>
<td>Instant coffee</td>
</tr>
<tr>
<td></td>
<td>Fresh full cream milk</td>
</tr>
<tr>
<td>Dairy products and Eggs</td>
<td>Large eggs</td>
</tr>
<tr>
<td></td>
<td>Long life Full cream milk</td>
</tr>
<tr>
<td></td>
<td>Sour milk/maas</td>
</tr>
<tr>
<td></td>
<td>Poultry (including heads and feet)</td>
</tr>
<tr>
<td></td>
<td>Beef and veal (including heads and feet)</td>
</tr>
<tr>
<td>Fish, Meat, Poultry and their products</td>
<td>Boerewors</td>
</tr>
<tr>
<td></td>
<td>Canned pilchards</td>
</tr>
<tr>
<td></td>
<td>Polony</td>
</tr>
<tr>
<td></td>
<td>Mealie meal/Maize flour</td>
</tr>
<tr>
<td></td>
<td>Brown bread</td>
</tr>
<tr>
<td></td>
<td>White bread</td>
</tr>
<tr>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td></td>
<td>Cake flour</td>
</tr>
<tr>
<td></td>
<td>Edible oils (e.g. cooking oils)</td>
</tr>
<tr>
<td>Grain products</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Oils and fats</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
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</tr>
</tbody>
</table>

### Data and methods contd...
Computation of the cost of 2,100 Kcal per person (minimum daily energy requirement) from the reference food basket = 

**Food poverty line**

Is the Rand value below which individuals are unable to purchase or consume enough food to supply them with minimum per-capita-per-day energy requirement for good health (about 2,100 calories). 

**unambiguous threshold of absolute deprivation**
Unlike food consumption, there are no universal standards for consumption of non-food basic needs.
Determined the lower & upper bound poverty lines

Key definitions and assumptions

**Lower bound poverty line**
Provides an austere threshold below which individuals have to choose between food and important non-food items

Practiced in Indonesia, Ecuador and Sri Lanka

**Upper bound poverty line**
Provides an unambiguous threshold of relative deprivation below which people cannot afford the minimum lifestyle desired by most South Africans

**Key assumption**
In cases where food expenditure is equivalent to the food line, households are considered able to meet basic foods and basic non-food needs.

Households whose total expenditure is close to the food poverty line live on ‘survival food-needs’ (Ravallion, 1998), and therefore sacrifice some basic food-needs in order to meet their non-food requirements.
Data and methods contd...  Determining the lower & upper bound poverty lines

Food Poverty Line

Average non-food expenditure of households whose total expenditure is close to the food poverty line a lower bound poverty line is obtained.

Lower Bound Poverty Line

Non-food expenditure of households where food expenditure is equivalent to the food line, an upper bound poverty line is obtained.

Upper Bound Poverty Line
Graphical presentation of how the poverty lines are derived

Traditional Poverty Line: $z = \text{FPL} + b$

Austere Poverty Line: $z = \text{FPL} + a$

Expenditure (R) vs. Consumption (Kcal)

Total Expenditure

Food Expenditure

R335

2100
Results
**Results:** Components of poverty lines derived from IES 2010/11 and those of pilot poverty lines updated to 2011 using CPI adjustments

### Rebased poverty lines using IES 2010/11

<table>
<thead>
<tr>
<th>Type of poverty line</th>
<th>Value of food component</th>
<th>Value of non-food component</th>
<th>Total value: rand per capita, per month (Feb - March 2011 prices)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPL</td>
<td>335</td>
<td>-</td>
<td>335</td>
</tr>
<tr>
<td>LBPL</td>
<td>335</td>
<td>166</td>
<td>501</td>
</tr>
<tr>
<td>UBPL</td>
<td>335</td>
<td>444</td>
<td>779</td>
</tr>
</tbody>
</table>

### Pilot poverty lines adjusted to 2011 using CPI adjustments

<table>
<thead>
<tr>
<th>Type of poverty line</th>
<th>Value of food component</th>
<th>Value of non-food component</th>
<th>Total value: rand per capita, per month (Feb - March 2011 prices)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPL</td>
<td>321</td>
<td>-</td>
<td>321</td>
</tr>
<tr>
<td>LBPL</td>
<td>321</td>
<td>122</td>
<td>443</td>
</tr>
<tr>
<td>UBPL</td>
<td>321</td>
<td>299</td>
<td>620</td>
</tr>
</tbody>
</table>
Poverty Headcount: Percentage of persons living below the poverty line

Poverty Gap: How far the poor are from the poverty line

Unless otherwise stated, the poverty lines presented are per person per month
Food poverty line head count has been revised upwards from 20.2% to 21.7%.
The poverty gap from 11.8% to 14.5%.
Lower Bound poverty line head count has been revised upwards from 32.3% to 37%
The poverty gap from 11.8% to 14.5%
Upper bound poverty line head count has been revised upwards from 45.5% to 53.8%
The poverty gap from 19.6% to 25.8%
The overall methodology remains: the only difference is that the national reference food basket was subjected to province-specific prices for food items.
**Results:** Provincial Perspective: Food Poverty Line (in 2011 prices)

- **Northern Cape** shows the lowest food poverty line at R310.
- WC (R352) and KZN (R354) have the highest provincial food poverty lines.
Results:

Provincial Perspective: Lower Bound Poverty Line (in 2011 prices)

Northern Cape continues to have lowest line (R457) however more variability amongst provinces.

Western Cape’s lower bound poverty line is R545.
Results:

Provincial Perspective: Upper Bound Poverty Line (in 2011 prices)

Limpopo has the lowest Upper Bound poverty line at R627.

Mpumalanga shows the highest Upper Bound Poverty Line at R974 followed by Gauteng at R963.
Results: Conversion of the rebased poverty lines into purchasing power parity (PPP) equivalents (per person per day) in 2011

The World Bank (2015) shows that the PPP exchange rate for South Africa in 2011 (at US$=1) was 4,774.
Impact of rebasing on:

(1) national poverty lines,
(2) estimates of poverty levels
(3) trend in poverty levels
Results: Impact of rebasing on national poverty lines

Comparison of annual CPI adjusted poverty lines based on IES 2000 with those based on IES 2010/11
Results: Impact of rebasing on poverty estimates

Impact of rebased poverty lines on the levels and trend of poverty head count in South Africa, 2006–2011

The graph shows the impact of rebasing on poverty estimates from 2006 to 2011. The data is presented for two CPI adjusted poverty line series based on IES 2000 and IES 2010/11. The graph includes three poverty lines: food poverty line, lower bound poverty line, and upper bound poverty line.

- **CPI adjusted poverty line series based on IES 2000**:
  - Food poverty line: 26.6% in 2006, 32.3% in 2009, 20.2% in 2011.
  - Lower bound poverty line: 42.6% in 2006, 44.6% in 2009, 45.5% in 2011.
  - Upper bound poverty line: 57.2% in 2006, 56.8% in 2009, 55.6% in 2011.

- **CPI adjusted poverty line series based on IES 2010/11**:
  - Food poverty line: 28.4% in 2006, 38.8% in 2009, 37.0% in 2011.
  - Lower bound poverty line: 51.0% in 2006, 52.9% in 2009, 53.8% in 2011.
  - Upper bound poverty line: 66.6% in 2006, 66.3% in 2009, 53.8% in 2011.
Impact of rebased poverty lines on the level and trend of poverty gap in South Africa, 2006–2011

- Food poverty line
- Lower bound poverty line
- Upper bound poverty line
Conclusion
Poverty lines are important tools that allow for statistical reporting of poverty levels and patterns. They are therefore important tools for planning for poverty reduction in any population.
The rebasing exercise updates the existing set of national poverty lines, benefiting from improvements in survey methodology while also taking into account changes in living conditions and the introduction of new commodities and services which become essential in a rapidly changing South African society.

There are minor differences in the poverty lines that result, and this will require careful attention when computing poverty dynamics.

Looking towards the United Nations’ post-2015 development agenda — SDGs— it is clear that poverty lines will continue playing an integral role in:

• statistical reporting
• policy development and planning
It is however important to note that:

These poverty lines are designed for use alongside existing administrative poverty measures implemented by government departments and other public sector agencies. These include social grants, means-tested financial assistance, and access to no-fee government services..... They do not replace or affect existing criteria for other poverty alleviation programmes, nor can they be used to determine wages or remuneration of any kind.
Thank you