Measuring progress towards global poverty goals: Challenges and lessons from southern Africa

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Summary

This paper draws on the work in Lesotho and Namibia of tracking progress towards cutting poverty in half by 2015, which is the key poverty target of the Millennium Development Goals. The paper serves at least two purposes. Firstly, it outlines the steps and methodological considerations involved in selecting appropriate national indicators and targets for measuring income poverty using household surveys and poverty lines based on observed consumption patterns. Secondly, it highlights some practical lessons and challenges for policy makers in southern Africa when they attempt to access and analyse poverty data under less than ideal circumstances.

Key words

Income poverty, poverty line, household budget survey, Millennium Development Goals

Résumé

L'article se base sur le travail fait au Lesotho et en Namibie sur le suivi du progrès accompli dans la réduction de la pauvreté de moitié d'ici 2015, ce qui est l'objectif–clé de pauvreté des Objectifs du Millénaire pour le Développement. L'article est utile à plus d'un titre. Premièrement, il met en exergue les étapes et les aspects méthodologiques utilisés dans le choix des indicateurs et des objectifs nationaux appropriés pour mesurer la pauvreté monétaire en utilisant des enquêtes auprès des ménages et des seuils de pauvreté basés sur la structure de consommation. Deuxièmement, il met en exergue certaines leçons pratiques et défis dont les décideurs en Afrique australe doivent relever quand ils essaient d'évaluer et d'analyser des données de pauvreté dans des circonstances pour le moins idéales.

1: United Nations Development Programme, Private Bag 13329, Windhoek, Namibia. E-mail: sebastian.levine@undp.org. I am grateful for the insightful comments by Bjørn Wold and to Benjamin Roberts and Julian May for their many valuable contributions in Lesotho and Namibia. The views expressed in the paper are my own and not necessarily those of the United Nations Development Programme. Any errors and omissions are also mine.

Mots clés

Pauvreté monétaire, Ligne de pauvreté, Namibie, Lesotho, enquête budget auprès des ménages, Objectifs du Millénaire pour le Développement.

1. Introduction

Demand is growing for estimates of poverty that are better and more systematically collected and analysed at the sub-national, national and global levels. A key driver of this increased demand has been the advent of Poverty Reduction Strategy Papers or PRSPs. These are comprehensive and country-led strategies that set out a country's macroeconomic, structural and social policies and programs to promote growth and reduce poverty, and they are expected to include appropriate mechanisms for monitoring to ensure that progress can be measured (World Bank, 1999). A second source of increased demand for effective systems to monitor poverty has come from the global and national drive towards the Millennium Development Goals derived from the Millennium Declaration that was agreed to by all UN member states in 2000 (United Nations, 2001).[2] As part of this work a central challenge faced by countries that are reporting on the Millennium Development Goals is to define poverty indicators and tailor global goals and targets to reflect the national context (Vandemoortele, 2005).

This paper looks at the process of tailoring the Millennium Development Goal 1 and specifically the global target to "halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day." in two countries in southern Africa: Namibia and Lesotho. Both countries have recently completed national poverty reduction strategies as well as first rounds of progress reports on the Millennium Development Goals, and the two countries faced similar challenges in reporting on several of the Goals in particular the first (Government of Lesotho, 2004a; Government of Namibia, 2004).[3] The paper serves at least two purposes. Firstly, it outlines the steps and methodological considerations involved in selecting the appropriate indicators using national poverty lines and monitoring progress towards the first of the Millennium Development Goals. Secondly, it documents some practical lessons and challenges for policy makers in developing countries when they attempt to access and analyse poverty data under less than ideal circumstances.

2: The eight goals are: 1. Eradicate extreme poverty and hunger; 2. Achieve universal primary education; 3 Promote gender equality and empower women; 4. Reduce child mortality; 5. Improve maternal health; 6. Combat HIV/AIDS, malaria and other diseases; 7. Ensure environmental sustainability; 8. Develop a global partnership for development.

3: Lesotho's PRSP was finalised in 2004 (Government of Lesotho, 2004b). As a middle-income country Namibia is not eligible for concessional assistance from the World Bank and does not need to prepare a PRSP. However, poverty reduction remains a national priority within the country's National Development Plans of which the third edition is currently being prepared.

The paper is structured in the following way: Section 2 describes the two household surveys from Lesotho and Namibia and outlines the process of deriving poverty lines based on actual consumption recorded in the surveys. Section 3 presents some main results from the analysis of income poverty and inequality in Lesotho and Namibia. Section 4 looks at some implications for reporting on Millennium Development Goal 1 and the setting of poverty targets. Finally, Section 5 concludes.

2. Old Datasets and New Poverty Lines

In order to measure progress under Millennium Development Goal, 1 United Nations (2003) advises that indicators based on national poverty lines should be used. Specifically countries are advised to use the poverty headcount ratio, which is the proportion of the national population whose incomes are below the official threshold (or poverty line) set by the national government. This is instead of the original standard measure of the proportion of the population that lives on less than USD 1 per day (using purchasing power parties). The latter indicator is primarily useful for international comparisons, while the former allows for monitoring and analyzing poverty using a national standard based on the specific characteristics of the country. The initial challenge for national authorities in Lesotho and Namibia was therefore to establish national poverty lines.[4] However, even before that some data issues had to be examined.

In Lesotho a comprehensive Household Budget Survey (HBS) was conducted in 1994/95 and in Namibia a National Household Income and Expenditure Survey (NHIES) was conducted in 1993/94. In both cases, nation-wide stratified samples of more than 4000 households kept detailed diaries of income, consumption and expenditure over a full 12 month cycle, and were therefore ideal for analysis for welfare and poverty analysis. The two surveys were characterised by high levels of ambition and sophistication but had done little to inform policy making.

This is part of a general and system-wide problem. As one review of the national statistical system in Lesotho found: *"Although Lesotho also has a long track record of research and data gathering current environment is one in which data is neither trusted nor used. As a result, policy development in Lesotho shows little sign of being evidence based. In the absence of good information, choices may result in incorrect targeting, inefficient use of resources, and contradictory or less than optimal outcomes. For Lesotho, poverty monitoring is thus not simply a technical task of identi-*

4: Full detail on the methodologies and results in each country is captured in two separate studies (May, et.al. 2001b and van Rooy, et.al. 2006) funded and coordinated by UNDP in collaboration with the Central Statistics Offices in Lesotho and Namibia, and with technical assistance from the Universities of Kwa-zulu Natal, Port Elizabeth and Namibia, and the Human Sciences Research Council.

fying a bundle of indicators but must extend to rebuilding national confidence in information usage." (May, et.al, 2001a).

The 1994/95 HBS in Lesotho is a case in point, while data gathering and entering had been completed, processing and weighting of data had come to an abrupt end once the external technical assistance ran out. As a consequence the vast dataset was never analysed and accordingly, the results never officially released.[5] In order to investigate whether the dataset could be 'rescued' and used in the preparation of country's Poverty Reduction Strategy Paper and a progress report on the Millennium Development Goals half a decade later, UNDP supported a technical review of the dataset. The review process, subsequently captured in Wollard and Roberts (2001), pieced together the various data files and administrative records but found evidence of large human errors in the data entry process due to pervasive confusion between monthly and annual income among both respondents and data entry staff. Also, data on domestic consumption expenditure from own production was only captured sporadically. As a result of this technical review, the Lesotho Bureau of Statistics decided to re-enter, clean and validate the entire dataset from the original questionnaires. Obviously having to recapture the data almost a decade after the survey was conducted does not represent an ideal situation and the process introduces new elements of potential bias, but under the prevailing less than ideal circumstances there were few other options. Moreover, it was found that the older data could serve as useful baseline once a new survey scheduled for 2002/03 had been finalised.

In Namibia the situation was more straightforward. The 1993/94 survey was completed and published, although only after some delay (National Planning Commission, 1996). However, the survey results were only released in the form of basic tabulations and only a very limited analysis was conducted. Moreover, the poverty analysis used a food-ratio method as a poverty line identifying the "poor" as those whose expenses on food comprise 60 percent or more of their total expenditure. "Severely poor" were identified as those whose food expenses were 80 percent or more. This poverty line originates from "Engel's Law" which states that poor households devote a greater share of their budget to food compared to better-off households. However, using this food ratio approach is problematic. As noted by Ravallion (1992) the relationship between the food share and consumption will generally differ across households because of differences in the relative prices they face, demographic differences, or differences in preferences. Also, the income elasticity of demand for food can

5: The lack of analysis and usage was not only confined to poverty and inequality. Household surveys of this kind also provide critical information for estimating the consumption component of the National Accounts and are essential for updating the Consumer Price Index basket.

be very close to unity for poor households. Furthermore, stakeholders in Namibia expressed concern about the overly arbitrary nature of the existing poverty line.

Most countries that have official poverty lines define these in an absolute sense, interpreting them as a fixed standard of living (Lanjouw, 2001; May, 2001). Using the available data from the surveys on household incomes and consumption focus in Lesotho and Namibia focus turned to setting up an absolute poverty line based on a minimum food basket and allowing for essential non-food consumption.

Setting the poverty line

The first step in specifying the food basket of the absolute poverty line in both countries was to examine the actual food consumption patterns of a particular segment of the population. Looking only at households in the second to fifth deciles (the bottom decile of the distribution being discarded to avoid possible data errors) of the two household surveys, the average total household food expenditure for each food and beverage item was calculated. These were subsequently ranked according to the percentage of households consuming the item and the average amount spent per item. Having done this, the top 30 *purchased* items were selected for inclusion in the basket of goods to be used for calculating the poverty line. Focusing exclusively on the consumption of households in the lower deciles of the expenditure distribution ensures that expensive, luxury food items are not heavily represented in the basket. Moreover, by basing the composition of the basket on existing consumption patterns, the combination of food and beverage items included in the basket is consistent with local tastes and preferences. In addition to these items that were purchased by the household, a bundle of commonly consumed own produce food items were included. The components of the Lesotho basket are shown in table 2.

Table 2: Components of Lesotho's food basket

Thirty Food and Beverage Items from Purchases				
Beans	Chicken	Maize meal	Powdered milk	Sterilised milk
Beef	Cooking fat	Malt	Rice	Sugar
Beers	Cooking oil	Mineral water/soft drinks	Salt	Tea
Bread	Eggs	Mutton	Samp	Tinned fish
Bread flour	Fresh milk	Offal	Sorghum meal	Tomatoes
Cabbages	Home brew	Potatoes	Soups, all types	Wheat meal
Ten Food Items from Own Produce				
Maize	Pumpkin	Cabbage	Wild vegetables	Chicken
Sorghum	Radish	Beans	Wheat	Spinach

Source: May, et.al. (2001b).

Having selected the basket of items, the total expenditure per item for all households for each of the twelve months of the year was calculated. This calculation was done separately for households living in the urban areas (Maseru and Windhoek) and all other households. *Total monthly expenditure* per item was computed by summing up each of the values. This was subsequently converted into *average monthly item expenditure per household* by dividing by the number of households in either the urban sample or the other households sample and *average monthly item expenditure per capita* by dividing average household item expenditure by the mean household sizes. This calculation should ideally accommodate geographically-determined price differentials. Unfortunately, neither of the surveys in the two countries collected community-level price data. This made it difficult to factor in locality-specific price differences in determining our poverty line. As an alternative, in Lesotho consumer price data collected for urban and other areas were used as a best approximation. In Namibia, this option was constrained by the fact that the consumer price data until very recently has been exclusively urban-based. In order to accommodate rural-urban price differentials in the estimation of the Namibian poverty line, use was made of price data captured from three rural regions as part of a 1993 study on household subsistence levels (Multidisciplinary Research and Consultancy Centre, 1994). A ratio of rural to urban prices was calculated for the ten items included in the survey that coincide with the food basket. Then the cost per gram for urban prices was inflated to arrive at the cost per gram for the items in rural areas.[6]

The next step taken was to convert the average item expenditures per capita into *average number of grams per item per capita* (Ravallion, 2004). The conversion is undertaken by dividing the average item expenditure per capita by cost per gram for each of the items, yielding monthly number of grams per item per adult.

$$\text{Grams per month} = \frac{\exp}{1} \div \frac{cost}{gram}$$

With the average number of grams consumed per adult on each of the items in the basket every month calculated, this was converted into a calorific value by determining the calorie content per gram of each of the items. The product of average number of grams consumed per capita and the calorie content per gram of item gives the average number of calories obtained from each source (per capita per month).

6: More work is needed to determine spatial differences in consumption patterns which could lead to setting up regional poverty lines based on different consumption baskets (Bidani and Ravallion, 1994).

The sum of all the daily item calorific values for both urban Maseru households and all other households shows an *average per capita calorie consumption* of 989 kcal, of which 965 kcal comes from the purchased items and 24 kcal from the own produced goods. For Namibia the weighted average of the daily item calorific values for both urban and rural households shows an average per capita calorie consumption of 696 kcal, of which 454 kcal comes from the purchased items and 242 kcal from the fifteen produced goods. When setting the poverty lines, both Lesotho and Namibia settled on a minimum of 2200 kcal with reference to FAO/WHO recommended daily allowance, which is defined as the amount needed to maintain health, growth, and an appropriate level of physical activity (WHO, 1985).

Then, to set the food basket, each of the gram quantities is multiplied by (2200/average per capita calorie consumption): 2.22 (2200/989) in Lesotho and 3.16 (2200/696) in Namibia. Since it cost Maloti 23 per month to purchase the 989 kcal per capita per day in 1994/5, it would have cost Maloti 23 multiplied by (2200/989) or Maloti 51 for a household to purchase 2200 kcal per capita per day in 1994/5 in Lesotho. Similarly for Namibia where it cost Namibian $ 24 per month to purchase the 696 kcal per capita per day in 1993/4, it would have cost Namibian $ 24 multiplied by (2200/696) or Namibian $ 77 for a household to purchase 2200 kcal per capita per day in 1993/4. This way Maloti 51 and Namibian $ 77 constitutes the *food* poverty line for Lesotho and Namibia, respectively in the two years of survey.[7]

Even though having sufficient resources within the household to meet food requirements is critical in terms of determining the threshold below which households are classified as poor, there is a strong argument that states that this alone is not adequate to define the poverty line. Households that can afford to meet the food requirements of all its members but who lack the resources to purchase clothing and shelter, for example, are likely to be considered deprived in a very basic sense (Ravallion, 1994). Recognising this, non-food expenditure was included in poverty lines for Lesotho and Namibia.

As with the food expenditure component, the approach adopted to derive the non-food component of the poverty line was based on observed consumption behaviour in both countries. First the median non-food expenditure per capita was calculated for households with per capita *total* expenditure in a small interval (plus or minus one percent) around the food poverty line. Successively larger intervals were selected, a total of five times so that the largest interval was plus or minus five percent, and a

7: The two national currencies of Lesotho and Namibia, the Maloti and the Namibian $, are pegged at 1:1 to the South African Rand.

simple average was taken of the five observations of median non-food expenditure per capita around the food poverty line. The above process was followed because of possibility that none or very few of the households in the survey sample were likely to have per capita total expenditure exactly equal to the food poverty line. The amount derived from the process was then added to the food poverty line to yield the final poverty line (May, et.al. 2001b and van Rooy, et.al. 2006). In Lesotho the average of the five median values of non-food expenditure per capita came to Maloti 27. Therefore, the final poverty line was (Maloti 51 plus Maloti 27) Maloti 78 per capita per month in 1994/95 prices. Similarly for Namibia the average of the five median values of non-food expenditure per capita came to Namibian $ 30. Therefore, the final poverty line was (Namibian $ 77 plus Namibian $ 30) Namibian $ 107 per capita per month in 1993/94 prices.

It should be noted that because of database limitations the poverty lines are expressed in per capita terms. The implication is that all members of a household are assumed to have equal food and non-food requirements and that there are no economies of scale in larger families. This is clearly unrealistic and future analysis should at least test the robustness of alternative equivalence and economies of scale parameters (May and Roberts, 2005).

3. Key Results from the Household Surveys

This Section presents some of the key results from the two surveys in Lesotho and Namibia using standard measures of poverty and inequality. While focus initially centred on the poverty headcount as the share of the population under the poverty line, following Foster, Greer and Thorbecke (1984) three measures that cover the incidence, depth and severity of poverty were derived. Their values are summarised in Table 3. The first key analytical conclusion is that at the time of the surveys the vast majority of the populations in both countries lived in income poverty. For Lesotho, the *incidence of poverty*, or the poverty head count, was calculated at 58 percent for 1994/95 compared to near 65 percent in Namibia for 1993/94 using the poverty lines developed specifically based on the observed patterns of consumption in the two countries.

The second key finding is that the *depth of poverty* in Namibia in 1993/94 was 0.34 and 0.35 for Lesotho in 1994/95, which can be interpreted to mean that on average the expenditures of the poor are 34 and 35 percent, respectively, below the poverty line. Based on the poverty gap for Namibia, it was estimated that if perfect cash

transfers were possible it would have cost Namibian $ 50 million per month or Namibian $ 606 million per year in 1993/94 prices to lift all the poor individuals out of poverty.[8] Converting this into a December 2003 equivalent, the cost of raising all poor individuals above the poverty line would be Namibian $1.2 billion or about 10 percent of the national budget.

Table 3: Summary of results for income poverty in Lesotho and Namibia

	Lesotho	Namibia
Survey year	1994/95	1993/94
Food poverty line	M 51	N$ 77
Poverty line	M 78	N$ 107
Incidence	58.3 %	64.8 %
Depth	0.35	0.34
Severity	0.26	0.21

Sources: May, et.al. (2001b) and van Rooy, et.al (2006).

The *severity of poverty*, or squared poverty gap, takes inequality among the poor into account by weighting the poverty gaps of the poor so the poorer the individual the greater is their weighting. Accordingly, a transfer from a poor to an even poorer individual would reduce the severity index, whereas a transfer from a very poor to a less poor individual would increase the index. Of Lesotho's ten administrative districts, the incidence of poverty in 1994/95 was found to be highest in predominantly mountainous districts of Mokhotlong (75.4 percent), followed closely by Mohale's Hoek (74.9 percent), Quthing (72.7 percent) and Thaba Tseka (72.3 percent). The same applies to both the depth and severity of poverty. Conversely, the incidence of poverty is considerably below average in the capital district of Maseru, where only 39 percent of households are poor. The incidence, depth, and severity of poverty are also generally below the national average in the mostly lowland/foothill districts of Leribe and Berea. The higher incidence of poverty in these districts is related to the higher incidence in the mountain areas as a whole.

8: A perfect transfer of cash to the poorest to lift them above the poverty threshold is obviously fraught with both technical and political difficulties. In Namibia, however, there is growing pressure to introduce a Basic Income Grant to all citizens irrespective of age. The grant is designed to eliminate extreme poverty and is financed through an increase in the Value Added Tax (Haarmann and Haarmann, 2005).

For Namibia vast spatial differences in the distribution of the poverty is reflected in Table 4. For example, in the northern region of Ohangwena 86 percent of the population live under the poverty line compared to 24 percent in Khomas where the capital Windhoek is located. *The poverty share* shows that out of all the poor people in Namibia almost one in five live in Ohangwena and together with neighbouring regions, Oshana and Omusati, these three regions comprise almost half of the nation's poor. However, in contrast to the relative ease in interpreting the situation of the rural-urban distributions in Namibia, there may be instances where the picture becomes less clear. For example, examining the poverty incidence by region reveals that a number of the distribution functions cross within feasible choices of the poverty line. While it is clear that Ohangwena remains the poorest region and Khomas and Erongo the least poor regions for virtually all possible values of the poverty line, for the other regions it is difficult to make an unambiguous ranking. As such, the ranking of the poverty headcount or incidence by region will vary substantively depending on where the poverty line is set (van Rooy et.al, 2005).

Table 4: Namibia poverty measures disaggregated by region in 1993/94

	N	Incidence (P0)	Depth (P1)	Severity (P2)	Poverty Share
Caprivi	91434	78.79	0.44	0.29	8.00
Erongo	74395	38.35	0.16	0.08	3.17
Hardap	54206	45.39	0.24	0.16	2.73
Karas	54114	44.95	0.23	0.14	2.70
Khomas	161754	23.50	0.10	0.06	4.22
Kunene	59029	76.91	0.41	0.27	5.04
Ohangwena	190858	85.83	0.50	0.34	18.19
Kavango	125033	70.93	0.33	0.19	9.85
Omaheke	47101	68.63	0.33	0.19	3.59
Omusati	153030	75.79	0.39	0.24	12.88
Oshana	161491	75.79	0.39	0.24	13.59
Oshikoto	116134	77.36	0.43	0.28	9.98
Otjozondjupa	100438	54.36	0.28	0.18	6.06
Namibia	1389017	64.83	0.34	0.21	100.00
Urban	401325	33.94	0.15	0.08	15.13
Rural	987691	77.38	0.42	0.27	84.87

Source: van Rooy, et.al (2006).

Inter-temporal changes in poverty

One of the key objectives of poverty monitoring is to track developments over time. In Namibia poverty estimates prior to 1994/95 were based on various partial surveys, proxies and qualitative information that does not permit rigorous poverty analysis (World Bank, 1995). Consequently it is not possible to compare the results from the 1993/94 NHIES to any data in the past. A smaller Levels of Living Survey was conducted later in 1999 (Government of Namibia, 2001) but unfortunately comparability was again not possible because of differences in survey methodologies including seasonal coverage and definitions of household membership.[9] Fortunately such problems were not encountered in Lesotho where there the 1994/95 survey was

9: This survey was never formally approved by the National Planning Commission under whose authority it was carried out and appears to represent yet another example of a survey that was planned and executed but without any real or lasting policy impact.

modelled in terms of objectives and survey design explicitly on a previous survey carried out in 1986/87. As shown in Table 5 the data collected for the 1986/7 survey shows that 58.8 percent of Lesotho's population were living in poverty. The overall incidence of poverty had not changed significantly almost a decade later.

Table 5: Changes in poverty in Lesotho 1986/87-1994/95

	1986/87	1994/95
Incidence	58.8	58.3
Depth	0.33	0.35
Severity	0.23	0.26
Gini index	60	66

Sources: May, et.al. (2001).

Nevertheless, the results also revealed that the depth of poverty increased between 1986/87 and 1994/95. This implies that despite a marginal decline in the incidence of poverty over the period, those that are poor are on average further below the poverty line in 1994/95 than was the case in 1986/87. The results also indicates that the severity of poverty increased between 1986/87 and 1994/95. This, together with an increase in the depth of poverty and in the Gini index (from 60 to 66), reveals how looking at the changing incidence of poverty alone can be misleading as it misses the critical point that the poor have gotten poorer over the period.

It should be noted that the inter-temporal analysis in Lesotho is based on inflating 1986/87 expenditure values to 1994/95 prices using the CPI data and does not deal with the important question of changing consumption patterns between the surveys as a result of changes in preferences, relative prices and availability of goods. To address this future work needs to focus on updating the poverty line using CPI

Measures of inequality

The two countries are not only characterised by high levels of poverty but also by extremely high levels of inequality. Table 6 provides income distribution measures for the population based on monthly expenditure per person for Namibia. It shows that the poorest 20% of the population receives 2.45% of total income, while the top 20% receives 71 percent. An even worse picture emerges from the data in Lesotho. Here the poorest 20% of the population receives only 1.11% of income, while the top 20% receives 78% of incomes (as measured by observed consumption). The Gini indices for Lesotho and Namibia are 66 and 63, respectively. According to UNDP (2004) Scandinavian countries have Gini indices of around 25 and several countries in Latin America and in Africa have indices close to 60 but no other country recorded a higher Gini index than those found in the studies of Namibia and Lesotho indicating that these two countries are among the most unequal in the world. data and rebasing the poverty line once the new survey becomes available (Ravallion, 1998; May and Roberts, 2005).

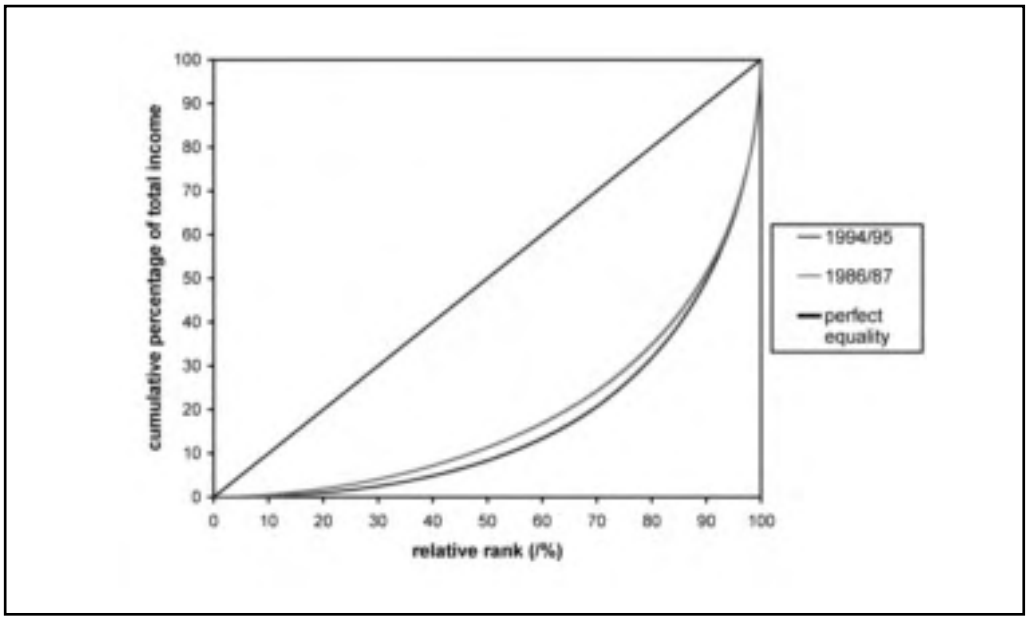
Table 6: Share of national consumption by population deciles in Namibia, 1993/94

Decile	Expenditure share	Cumulative Expenditure Share
Decile 1 (poorest 10 percent)	0.88	0.88
Decile 2	1.56	2.45
Decile 3	2.11	4.56
Decile 4	2.69	7.25
Decile 5	3.42	10.67
Decile 6	4.35	15.02
Decile 7	5.75	20.77
Decile 8	8.28	29.05
Decile 9	13.57	42.62
Decile 10 (top 10 percent)	57.38	100.00
Share of poorest 20% (quintile) in national consumption	2.45	2.45
Gini index	**63**	

Source: van Rooy, et.al (2006).

The Gini index can be seen in relation to the Lorenz curve whereby the proportion of the population ranked from poorest to richest is plotted on the *x*-axis and the percentage of income accruing to the bottom *x* percent of the population is shown on the *y*-axis. Figure 1 shows the Lorenz curve for Lesotho, using the two household surveys. Everyone is ranked according to their income, and then cumulative income is plotted against these ranks. The straight (45° degree) line is the "line of perfect equality". Thus, the higher the Lorenz curve, the lower is inequality.

Figure 1: Lorenz Curves for Lesotho



Source: May, et.al. (2001).

Decomposition of within-group inequality using the Theil measure shows that inequality is pervasive in all of the Lesotho's districts. The data indicates that there is considerable inequality within the different area-types, but also some differentiation between area-types, with 16-22 percent of inequality being accounted for by between-group inequality. Because rural areas contain a larger share of the population than of total income, the Theil-L (which is weighted by population shares) gives greater emphasis to the share of rural areas in overall inequality.

4. Reporting on Millennium Development Goal 1 and Setting Targets for Poverty Reduction

A key purpose for reanalysing the two datasets in Lesotho and Namibia was to fill a key data gap for reporting on the Millennium Development Goals, for both countries in 2004, and in the case of Lesotho, to feed into the Poverty Reduction Strategy Paper. Namibia did finalise its progress report on the Millennium Development Goals in 2004. However, the national authorities in Windhoek decided not to use the data on income poverty. The methodology for deriving the new poverty line remains widely supported from within government structures, indeed the process was led by senior officials, and the results were never questioned. The main problem was of political nature. There was fear that because the poverty head count was significantly higher using the new absolute poverty line compared to the older one based on the food ratio, releasing the poverty figures would embarrass the political leaders in an election year. However, even if the data ended up not being used for the immediate purposes of MDG reporting all is not as discouraging. The new dataset is being used for analysis for instance in the Social Accounting Matrix being developed locally. The data is also referred to in the national Poverty Monitoring Strategy and will serve as a benchmark once the results from the 2004/05 household survey are released. In Lesotho, the data found more immediate use and formed the basis for analysing linkages between economic growth and poverty reduction in the PRSP and for setting national poverty targets.

Setting targets for poverty reduction in Lesotho

The two datasets of household poverty in Lesotho made it possible to estimate the future incidence of poverty assuming certain levels of economic growth, and more specifically assess under which conditions of economic growth and inequality the country will be able to attain the Millennium Development Goals of halving poverty by 2015. Using the incidence of poverty in 1987 and 1995 and data on gross national product (GNP) per capita, a poverty elasticity of –0.12 was calculated for Lesotho (May et al, 2001). This effectively means that, for the period under consideration, a 1% increase in per capita GNP resulted in a corresponding decrease in the incidence of poverty by 0.12%. This observed reduction in poverty can be attributed to two factors, a pure growth effect of –1.37% and a pure inequality effect of 1.25% as shown in Table 7. Therefore, if inequality had not increased in Lesotho between 1987 and 1995, each 1% growth in GNP per capita would have reduced poverty by 1.37%.[10]

10: This figure can be interpreted as the opportunity costs of increased inequality on poverty and once again highlights the central challenge of making economic growth in Lesotho distinctively more pro-poor.

Table 7: Poverty and economic growth in Lesotho 1986/87-1994/95

	Poverty Incidence				Explained by	
	1986/87	1994/95	Annual % Change	**Poverty Elasticity**	Growth	Inequality
Headcount	58.8	58.3	-0.11	-0.12	-1.37	1.25

Source: May, et.al. (2001).

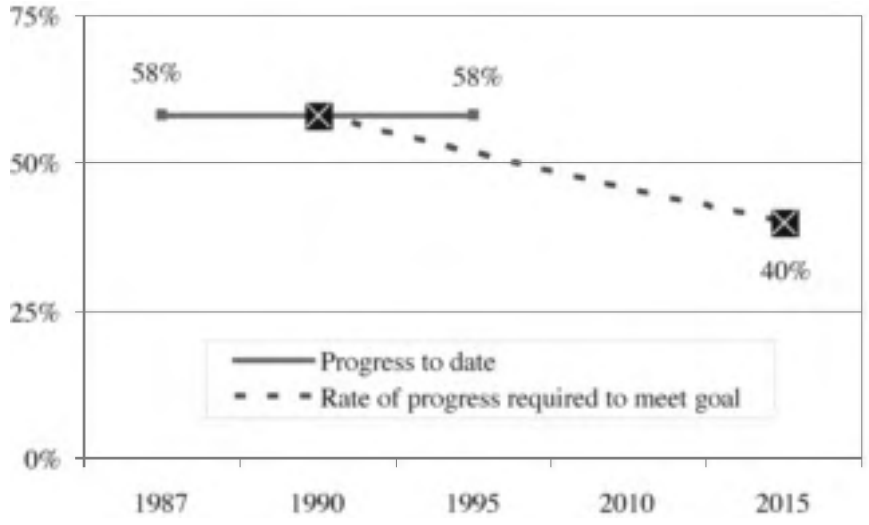
Having obtained an estimate of the poverty elasticity, it was possible to determine the effect of various scenarios on effectively reducing the high level of poverty in the country. For instance with an annual growth rate of 4% per capita GNP from 1995 onwards – a growth that is not wholly inconsistent with what was achieved between the 1980s and early 1990s – poverty would decrease from 58% in 1995 to 53% by 2015. This was still a long way short of the envisaged poverty incidence of 29% required if poverty was to be cut in half. What then would it take the country, in terms of economic growth, to meet the global target? The data revealed that, with a poverty elasticity of –0.12, no realistic growth rates would enable Lesotho to achieve the target of halving the incidence of poverty by 2015 (May et. al, 2001). This type poverty elasticity rests on at least two assumptions. First, that additional growth will be distribution neutral and thus equally benefit everyone in the population, which was not supported by the historical trends. Secondly, that the incidence of poverty in the country has not changed since 1995, which was considered unlikely in Lesotho given slow economic growth, growing levels of unemployment and a high prevalence of HIV.

Despite these assumptions the message for Lesotho's policy makers was clear. Accelerating economic growth may be a necessary but it is highly insufficient when it comes to poverty reduction. The dual challenge remains to make economic growth pro-poor in a strict sense by promoting growth as well as make this growth more biased towards the poorest. The analytical equivalent would be to raise the poverty elasticity, and using estimated levels for other high inequality counties (Hanmer et al 1999; White 1999) Lesotho decided to use a poverty elasticity of –0.5. Under this implied improved responsiveness of poverty to economic growth, an annual per capita GNP growth rate of 4% was found to substantially reduce the incidence of poverty in Lesotho from 58% in 1995 to 39% in 2015. Similarly, with a poverty elasticity to –0.5, an annual per capita GNP growth rate of 6.8% would be required to halve poverty by 2015 (May et. al, 2001). The authorities decided to use the former estimate as its main national target for reporting on the Millennium Development Goals as depicted on Figure 2.

The process of tailoring the global poverty target in Lesotho thus led to a reduction of the target, from cutting poverty in half to reducing poverty by one third. This is a controversial choice and it is symptomatic of a global reality in which Africa is slipping further and further behind the agreed global minimum standards for progress in human development (United Nations, 2005). However, such adjustments should not be viewed as surrendering on the Millennium Declaration and must not lead to complacency by the national governments and their international development partners. Instead it should be seen as part of an essential process whereby the goals and targets agreed by the international community at a global level are taking root at national level.

In Lesotho the global poverty goals now form an integral part the first PRSP (Government of Lesotho, 2005). This and subsequent strategies will need to justify the change in the target and detail measures for making the economic policy making more pro-poor as implied by the adopted poverty elasticity. The poverty data may have been outdated but at least it helped initiate this long overdue discussion.

Figure 2: Lesotho's national poverty target



Source: Government of Lesotho (2004).

The same is needed in the case of Namibia, which has also been caught in a low growth high inequality conundrum. There is only an emerging tradition for approaching economic development and poverty reduction from a quantitative and analytical perspective, and thus policy makers have been constrained in designing and prioritising economic policies according to their impact on the overall development objective of eradicating poverty. This can help explain, though hardly justify, that the extensive NHIES was not used as a basis, or at least to inform, the process of preparing the country's first National Development Plan, which was being drafted at the same time. There is a real risk that this situation is about to repeat itself as the third National Development Plan is currently being prepared in the absence of the final poverty analysis from the new household survey. Synchronising the analysis-to-policy-design cycle must be considered a key priority.

5. Conclusion

This paper has outlined the basic theory on poverty measurement with emphasis on approaches relevant for country level monitoring of income poverty, and described the process of deriving poverty lines under less than ideal circumstances based on actual consumption recorded in two household surveys in Lesotho and Namibia. Such analysis was necessary for reporting on the MDGs, and in Lesotho the data was used to establish national long term targets for the country's PRSP. In Namibia, however, the poverty analysis did not make it into the MDG progress report and has only recently been published as an academic paper (van Rooy, et.al, 2006). The reason not to officially adopt and publish the findings was taken not because authorities questioned the results or the methodology, but because the attention that the publication of poverty data would generate was deemed politically inappropriate in an election year. Once again we are reminded that poverty analysis is not just a technical issue but often also a political one.

However, new household surveys in both Lesotho and Namibia should be able to benefit from the established base lines to reveal new trends in poverty and inequality in the last decade and to guide policy makers in the direction of more pro-poor economic and social policies. Also, through the technical assistance provided to the exercises of revitalizing the data, setting up poverty lines and conducting preliminary analyses capacity strengthening have taken place for statisticians at the two Central Statistics Offices using home grown data sources. Focus in the future should be on putting the methodology to use on the datasets from the recently completed surveys and to build on the analysis to strengthen the robustness of the results especially by

ensuring that the poverty lines are updated to reflect changing consumption patterns over time, household composition and spatial differences.

The experiences in Lesotho and Namibia also point to some more profound lessons. Most importantly it is highlighted how poorly some countries are prepared to report on and set targets for global poverty goals agreed by the international community and the analytical challenges the same countries are faced with when attempting to draw up anti-poverty policies and monitoring systems. There is a general need to strengthen the culture of evidence-based policy making so that in the future policy makers take appropriate measures to ensure that data on poverty, identified as the central policy challenge, is systematically gathered, analysed and put to use.

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