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Poverty levels in Zambia

Poverty levels in Zambia, as in many other countries, have been at the centre of national debates, with statistics and results contested by various factions of society. The objective of this section is to examine variations in poverty across two dimensions.

1. Analysing poverty changes over time, focusing on 1991 to 2006, indicates whether Zambia is likely to attain Millennium Development Goal 1 of halving poverty and hunger by 2015.
2. Changes in the standard of living and in poverty across sections of the Zambian population are measured mainly across geographical regions.

Both of these dimensions are important for economic and social policy in Zambia, and both are important to the accurate measurement of urban poverty.

Table 1: Incidence of overall and extreme poverty in Zambia, 1991–2006

	1991	1993	1996	1998	2004	2006
Incidence of poverty						
All Zambia	70	74	69	73	68	64
Rural	88	92	82	83	78	80
Urban	49	45	46	56	53	34
Incidence of extreme poverty						
All Zambia	58	61	53	58	53	51
Rural	81	84	68	71	53	67
Urban	32	24	27	36	34	20

Source: reconstructed from the 2006 LCMS draft (CSO 2006).⁵

As shown in Table 1, the overall trend in poverty in Zambia in the 1990s was mixed. The incidence of overall poverty (consisting of people who can afford to meet the basic minimum food requirements but cannot afford non-food needs) increased from 70% of the total population in 1991 to 74% in 1993, it then decreased to 69% in 1996 and increased by four percentage points to 73% in 1998. Similarly, extreme poverty (defined as those whose standard of living is insufficient to meet their basic nutritional requirements even if they devoted their entire consumption budget to food) followed the same up-and-down pattern. Of major concern from the data provided in the table is that over 50% of Zambians in the 1990s were unable to meet food needs to ensure mere physical efficiency.

Using the same period of analysis, disaggregated data indicate that rural areas had a higher incidence of both overall and extreme poverty. However, while rural areas showed a decline in overall poverty from 88% in 1991 to 83% in 1998, urban poverty trends behaved differently. Poverty levels in urban areas increased from 49% in 1991 to 56% in 1998. The same pattern occurs for extreme poverty.

One explanation for these results could be that the decline in Zambia's economic performance in the period following the Structural Adjustment Programme (SAP) in the early 1990s adversely affected urban more than rural areas. This is because urban areas in Zambia are monetarized and residents are dependent on income to purchase both food and non-food items. By contrast, people in rural areas largely depend on their own production.

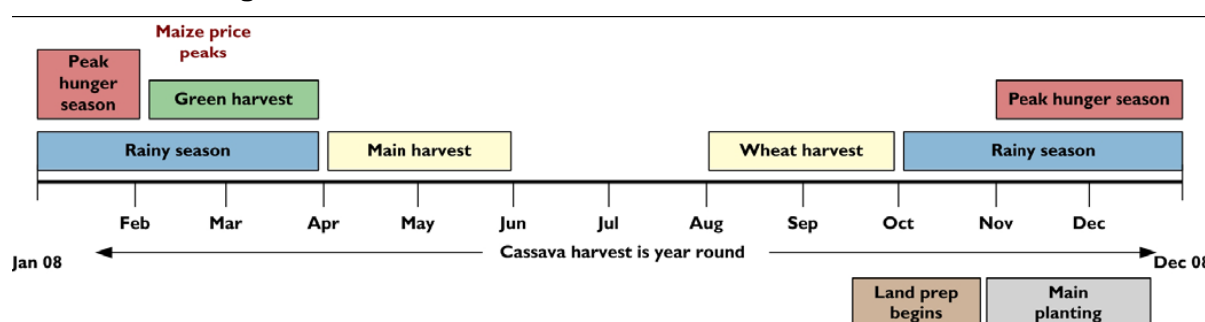
⁵ This table has been simplified from its original form in the 2006 LCMS where aspects of poverty (overall poverty and extreme poverty) are presented in two separate tables. The original versions of these tables also include a breakdown of poverty by province.

Between 1980 and 1990, formal-sector employment in Zambia decreased from 24% to 10% of the labour force. At the same time, inflation rapidly increased from 55% in 1985 to 110% in 1990.⁶ As a result, consumer prices increased while earnings in real terms declined, making it difficult for most families to afford basic household needs (Nsemukila, 2001). In these circumstances, urban poverty would be expected to increase.

The longitudinal LCMS of 2002/03 showed an overall poverty rate of 67%, with 46% of the population being extremely poor and unable to afford even the minimum basic food requirements. According to the 2002/03 LCMS, poverty was highest in the fourth quarter, considered to be the lean (peak hunger) period. Figure 1 shows a typical seasonal calendar and critical events timeline. In light of this seasonal aspect of poverty, the CSO conducts cross-sectional surveys in the fourth quarter of the year. The aim is to capture the highest poverty levels in the year, if the 2002/03 results are taken to be the norm.

While food availability in rural areas may affect food affordability in urban areas (Chibuye, 2009), there may be a lag in price changes in comparison to changes in supply in rural areas. For instance, the JCTR has observed through its monthly cost-of-living surveys that, over the years, food prices in urban areas in Zambia are highest in the first quarter of the year. Therefore, levels of seasonal vulnerability in rural areas are likely to differ from those in urban areas because of the lag in price changes.

Figure 1: Seasonal calendar and timeline of critical events



Source: Fewsnets (2008, 2).

Critics of the CSO survey methodology have argued that measurements should be differentiated between rural and urban areas to take account of these price changes. That is, adjusting for cost-of-living differences may be important to ensure equal treatment of urban and rural dwellers. However, CSO uses the same bundle of food needs and the same approximated nominal cost of food without weighting it to reflect realistic costs of food and non-food items in different regions. For instance, the 2006 CSO food poverty line was valued at 295,696 Zambian Kwacha (K), which is the average national price at which the CSO bundle of food items reaches the pre-determined mean food energy requirement of 2100 calories per person per day.

This paper argues that using an average national amount does not make sense in the Zambian context considering the significant disparity between costs of food in rural and urban areas. This disparity is largely driven by the methods of accessing food items: urban dwellers typically purchase food items, while rural people mainly consume self-produced foods at lower cost. For instance, in the 2009/10 agriculture production seasons, it was estimated that smallholder farmers planned to sell 43% of their maize production and retain 57% (MACO/CSO and ACF/FSRP, 2010, 5). This in comparison to large-scale farms which planned to sell 92% and retain 8% of their total maize production. Therefore, using an

⁶ See Appendix 1 for annual changes in the inflation rate from 1990 to 2009.

average amount of money under-estimates urban poverty and is likely to over-estimate rural poverty. This thread of the argument will be returned to below.

Controversial findings on reduced poverty levels

According to the last two LCMSs, 2004 and 2006, overall poverty levels fell from 68% to 64% respectively. Extreme poverty also fell from 53% to 51% in the same period.⁷ However, there is a major difference in trends between rural and urban areas. While rural poverty increased from 78% to 80%, urban poverty fell significantly – from 53% to 34%. The unprecedented reduction (19 percentage points) in urban poverty between 2004 and 2006 has raised controversy. No clear explanations have been offered as to why poverty is shown to have fallen so dramatically within a two-year period, when measured using the same methodology.

Debates about methods of poverty measurement became more acute after these controversial findings, and questions were raised about the comparability of the surveys, the methodologies used in analyzing the data, and their consistency with other poverty data. This is not surprising, as anecdotal evidence and international measurements also paint a less optimistic picture. They indicate that Zambia is not making progress on various welfare measures. For example, according to United Nations estimates, life expectancy at birth in Zambia is the fifth lowest in the world. Life expectancy for those born in 2000–2005 was just 37.4 years, a drop of 14.3 years from 25 years earlier (World Bank, 2005, 43). This decline was especially large because Zambians enjoyed a life expectancy at birth of 50 years, one of the longest in the region, during its period of relative prosperity in the early 1970s.

The decline in life expectancy at birth is largely an effect of HIV/AIDS. Zambia is one of just ten countries worldwide, all in sub-Saharan Africa, with double-digit HIV prevalence rates (World Bank, 2005). Similarly, the 2010 *Human Development Report* reports that, of the 135 countries in its sample for 1970 to 2010, only Zambia, the Democratic Republic of Congo and Zimbabwe had a lower Human Development Index (HDI) in 2010 than in 1970 (UNDP, 2010, 3). According to that report, one of the major contributing factors for Zambia has been the worsening health situation as measured by life expectancy, which according to the report is now at 47.3 years.

Perhaps most importantly, only about 10% of the entire Zambian labour force is in formal employment, which is an important measure of welfare due to the associated security of income. Therefore, any recorded reduction in poverty, without corresponding improvements in other welfare indicators, seems doubtful.

Revisions of poverty figures: official statistics?

These debates prompted CSO to engage external experts to analyse the micro data on household expenditure and conduct an ex-post revision of the 1996, 1998, 2004 and 2006 LCMS poverty lines. According to information from the CSO *Monthly Bulletin* of December 2009 (CSO, 2009b), the revisions that took place were in tune with the changes in international methodologies and standards on the measurement of poverty which are periodically updated.

In support of such exercises, the Rio Group (2006) has stated that poverty lines can be adjusted either by keeping the quantities of the baskets fixed and updating their market prices or by setting up new baskets. Baskets assembled by observing consumption habits are normally based on income and expenditure surveys, which are collected every five or ten

⁷ Extreme poverty in Zambia reduced by only 7%, rather than the expected 29%, between 1991 and 2006. With only four years to the 2015 MDG deadline, Zambia is unlikely to meet this target.

years in most developing countries. Unless poverty is measured exclusively in those years, it will be necessary to update the value of the line to the year in which income information is collected, to maintain consistency between them. Price indices are usually employed, disaggregated in as many items as necessary and possible.

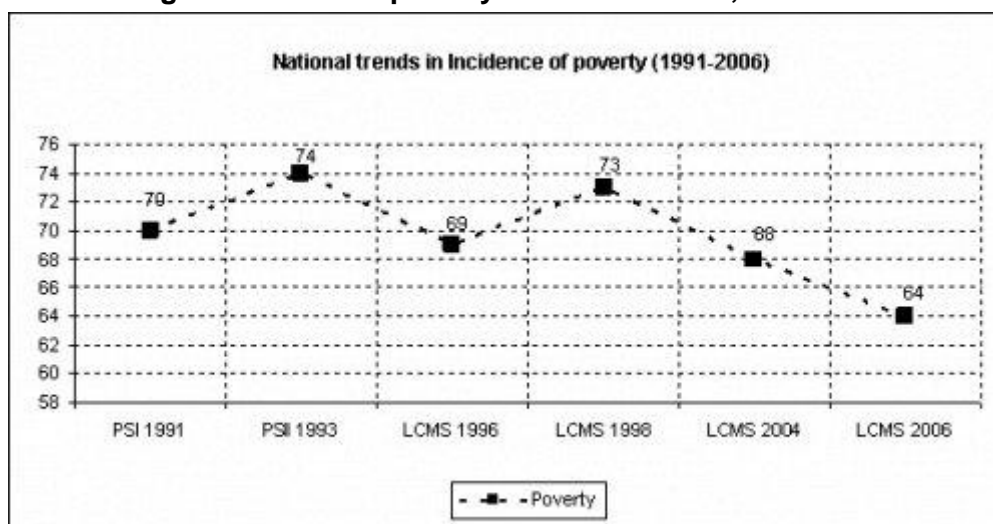
In most cases, the total value of the food basket is updated according to the variation of the food price index, and a similar criterion is sometimes applied to the cost of the rest of the items. How often the basket itself should be modified depends not only on data availability, but also on the importance of changes in consumption patterns. The contents of baskets may experience considerable modifications when a long period has elapsed since the last poverty line was calculated, or when a significant economic change has taken place. Normative baskets developed by experts should be suitable for longer periods, as they are not so closely related to consumption habits.

The ex-post revision of the poverty statistics in Zambia by the group of experts was therefore in line with recommendations by the Rio Group. After standardizing the measurement of poverty using the micro data from the LCMSs, the findings of this exercise showed reductions in both overall and extreme poverty (although the reduction in urban poverty between 2004 and 2006 was not as dramatic). The revised trends show that poverty in Zambia declined from 68.1% in 1996 to 59.3% in 2006. They further show that extreme poverty declined from 44.5% in 1996 to 36.5% in 2006, meaning that 36.5% of the population in Zambia was extremely poor in 2006.

Analysis of poverty trends produced by CSO (2009a) by rural/urban disaggregation shows that in rural areas, the revised levels of poverty declined from 84.2% in 1996 to 76.8% in 2006. These figures mean that in 2006, 76.8% of the population residing in rural areas were poor. This translates to about 5.9 million persons being poor in rural areas in 2006, out of the total rural population of about 7.6 million persons. In urban areas, the revised levels of poverty declined from 40.5% in 1996 to 26.7% in 2006. This means that about 1.1 million persons in urban areas were poor in 2006.

While these trends were disseminated to the public through the *CSO Monthly Bulletin*, key informant interviews with the CSO reveal that the revised trends are not considered to be official CSO statistics. The revision is regarded as an exercise conducted by independent external experts to give an independent view only. What was misleading therefore was the lack of a disclaimer in the December 2009 *CSO Monthly Bulletin*. For the purpose of this paper, the official CSO statistics used will be the data extracted from the 2006 LCMS (as shown in Table 1 above, and in Figure 2), and not the unofficial revision provided by external experts in 2009.

Figure 2: National poverty levels in Zambia, 1991–2006



Source: CSO website.

The dissemination of the ex-post revised poverty data is currently confusing for the end users and may mislead policy makers. As discussed above, the definition of poverty is as important as its measurement. Therefore, clear explanation of information relating to such measurements is necessary to avoid misinterpretation of data and analysis. There are strong indications of trends in poverty in Zambia, but the lack of clarity surrounding the nature and purpose of the external experts revising poverty levels makes an unambiguous interpretation much more difficult. This raises important questions about the robustness of the data. In particular, would a different methodology have delivered substantially different results? This question applies both to the observed pattern of poverty, and to the observed trends.

To improve the reliability and robustness of data, poverty surveys and empirical poverty analysis should take potential data errors more seriously. Current practice in poverty analysis typically ignores the statistical imprecision of the measures used. Yet, standard errors for the usual (additive) poverty measures would be easy to calculate and to take into consideration for simple random samples (Kakwani, 2002). This would be not much more difficult for the more complex sample designs found in practice – provided of course that the design is known (Ravallion, 1996).

One trend that remains uncontested throughout all surveys is the geographic pattern of extreme poverty in Zambia: it is more concentrated in rural areas and less so in urban areas. The following sections explore the robustness of the poverty measures to consider the likely accuracy of urban poverty estimates. The discussion begins with a more detailed examination of the measurement of the poverty line in Zambia.

Calculation and measurement of poverty lines

How poverty is measured by the CSO poverty lines

In Zambia, poverty estimates have been made on the basis of the cost of a “minimum food basket”. The Prices and Incomes Commission (PIC) and the National Food and Nutrition Commission (NFNC) composed this minimum food basket in 1992, based on nutritional needs for an average family of six, consisting of two adults and four children with ages ranged between one and twelve years. The average calorie intake was 2094 per household member for a family of six. These requirements appear to be based on a FAO/WHO/UNU