

Micro-Level Estimates of Poverty in Zambia

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Executive Summary

Reducing poverty is a fundamental concern of governments, civil society organizations, and international donors. Developing effective anti-poverty policies is one necessary ingredient for reducing poverty, and effective policies depend in part on a solid base of information.

Until recently, information on poverty and living standards has been constrained by the relatively small sample sizes used for the household sample surveys that are the main source of such data. Even samples as large as 10,000 households are often representative only to the provincial or state level. These provincial-level estimates are averages that potentially obscure significant heterogeneity at lower levels, such as the district, constituency, or ward. Recent advances in econometric techniques have alleviated this information constraint. By carefully combining detailed household survey data with data from a comprehensive population census it is possible to estimate poverty for smaller administrative units, and to assess the precision of those estimates.

This report applies small-area estimation—also known as poverty mapping—techniques to recent survey and census data from Zambia. The analysis confirms that within provinces there are smaller sub-units that have poverty rates much higher, or much lower, than the provincial average. For example, the 2002–03 Living Conditions Monitoring Survey (LCMS) found that poverty was lowest in Lusaka Province, with a poverty headcount ratio of 56.3 percent. However, the poverty mapping analysis revealed that underlying this provincial average are widely varying levels of poverty at the district level, from 49.0 percent in Lusaka District to 91.6 percent below the poverty line in Luangwa District. As one disaggregates further, to the constituency level, the heterogeneity becomes even more dramatic, with the poverty headcount ratio ranging from roughly one-quarter of the population in Kawbwata and Lusaka Central constituencies to over 90 percent in Feira and Rufunsa constituencies. Unpacking the poverty estimates further to the ward level, we find that within one of the least poor districts (Lusaka District), the poverty rates at the ward level range from a low of 7.9 percent to a high of 67.7 percent.

A similar picture emerges for those provinces with high poverty rates. Even though the 2002–03 LCMS estimated that 80.5 percent of the population in Northern Province lives below the poverty line, one should not conclude that all of the province is equally poor. Within Northern Province, the district-level headcount ratios range from a high of 83.0 percent in Mungwi District to a low of 67.5 percent in Kasama District. Naturally, further disaggregation reveals greater variation in poverty levels, with poverty headcount ratios within Northern Province ranging from 61.1 to 83.0 percent at the constituency level, and from 41.4 percent to 92.3 percent. Moreover, the variability in sub-province poverty rates is even more pronounced when using higher order poverty measures such as the poverty gap and the squared poverty gap, which are better at detecting differences in the depth and severity of poverty.

It is difficult to summarize the varied and complex patterns revealed by the poverty maps, as they are made up of poverty estimates for 9 provinces, 72 districts, 150 constituencies, and well over 1,000 wards. And that is an important message of this report, whose value lies not only in the generalizable patterns that may be discerned, but also as a reference for examining

precise estimates (and confidence intervals) for small geographic areas that are sometimes almost invisible even on relatively detailed maps.

At the risk of over-simplifying a nuanced analysis, the finding that comes through most strongly is that poverty rates tend to be lower in more densely populated urban areas, while poverty in the surrounding peri-urban and rural areas is significantly higher. But there are exceptions even to this general pattern, as there is also evidence of relatively high poverty in urban areas, and relatively better off areas in rural zones.

An important complementary finding is that even though urban areas tend to have lower poverty indices, they tend to have a greater concentration of poor people. The explanation for this is twofold. The first part is simply a result of the higher population density in urban areas. Secondly, even though poverty rates are lower in urban areas, they are still extremely high. In essence, the slightly lower probability of urban dwellers to be poor is offset by the large number of urban dwellers.

Beyond confirming empirically the extremely uneven pattern of poverty in Zambia, the richly detailed set of poverty estimates provided in this report can be used to inform more effective poverty reduction policy. This includes using the results to refine geographic targeting of programs, to inform resource allocation decisions at the central and decentralized levels, and to improve poverty monitoring systems. This research also paves the way for future research into the spatial determinants of poverty, which could provide useful insights for poverty reduction interventions in the future. Users of the information are cautioned, however, that poverty maps should not be treated in isolation, but should be used to complement other sources of information to arrive at well-informed program and policy decisions.

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Chapter 1: Introduction

Although reducing poverty has always been at the core of economic development policy and research, the focus on poverty reduction has become much stronger in recent years. The establishment in the late 1990s of the Poverty Reduction Strategy Paper process by the international financial institutions has changed the way that governments of low income countries and their development partners approach economic and social policy. The well-known Millennium Development Goals, including the goal of reducing poverty rates by 50% by the year 2015 is another high-profile initiative demonstrating the primacy of poverty reduction as a measure of progress. Accordingly, there is increasing emphasis not only on reducing poverty, but on improving methods to measure poverty precisely, for improved monitoring of poverty reduction.

The past decade has also seen increasing efforts at decentralization, with central governments devolving more decision-making powers to sub-national governance units such as provinces and districts. Decentralization presents a promise of more effective development policy and implementation, because of the local authorities' greater familiarity with the nuances of the local situation. Turning this promise into reality requires greater capacity at the sub-national level, in terms of locally-relevant information systems as well as the expertise to make good use of the information.

A prominent case in point is poverty data, which is usually collected from household sample surveys. These surveys can provide a wealth of information about poverty, welfare levels, and other individual and household characteristics. Getting such detailed information is expensive, so these surveys usually have sample sizes of 4,000 to 10,000 households, and are typically carried out approximately every five years. Although thousands of households do provide a rich database, only a limited degree of disaggregation is possible with typical household living standards surveys. Usually the surveys are only representative to the first sub-national administrative level, e.g., provinces or states. Thus policymakers—whether at the national or sub-national level—do not have sufficient information to tailor policies and programs for units smaller than a province.

In recent years an analytical method has been developed to overcome this limitation of household living standards survey data (Hentschel et al., 2000; Elbers et al. 2003). The method makes use of two (or more) complementary data sources, drawing on the strengths of each. One source is the detailed household survey data that is usually used for measuring poverty. The other source is the national population census. Whereas the surveys have extremely detailed information from a small fraction of the population, censuses collect a limited amount of information from the entire population. In brief, the approach is to use the survey data to estimate a predictive model of household well-being (using a measure such as consumption or expenditure), restricting the model to those variables that are collected in both the survey and the census. The quantitative relationship that is estimated is then applied to the census data to predict levels of consumption for every household recorded in the census. The household-level predictions are then aggregated to larger groups, such as wards or districts. This econometric method has become popularly known as “poverty mapping,” because the initial applications have been to estimate poverty for small geographic areas, and are typically presented on a series of maps, because the maps give a concise overview of the distribution of poverty.

This report presents the results of such an analysis for Zambia, a country with high levels of poverty and a tremendous heterogeneity of conditions both between and within provinces. The report provides estimates of several poverty measures at the province, district, constituency, and ward levels. These are presented in both cartographic and tabular form, including the confidence intervals that apply to each point estimate. The report is organized as follows. Chapter 2 provides a brief background on previous poverty analysis in Zambia, and describes the data used in the current study. Chapter 3 describes the methodology, with the results presented in Chapter 4. Chapter 5 summarizes the analysis, and provides concluding remarks. Within the main body of the report, the results are presented using a series of maps. These are complemented with a series of annexes that present tables of the poverty estimates that underlie the maps.

Chapter 2: Background

This chapter briefly describes the context for the Zambia poverty map. It summarizes recent empirical findings on poverty in Zambia based on household surveys, and also describes the three data sources that are used to generate small-area estimates of poverty in Zambia.

2.1 Recent poverty analyses

There is widespread consensus that poverty is a severe problem in Zambia, a view that is both shaped and supported by recent empirical studies. This chapter will not attempt a thorough review of the available evidence—the interested reader may consult the recent studies outlined here and the references therein.

In the period 1991–2004 there have been six estimates of poverty in Zambia based on national household surveys. The poverty headcount ratio estimates from the five surveys that used a comparable methodology are shown in Table 1. All five surveys show high levels of consumption or income poverty, with between two-thirds and three-quarters of the population below the poverty line. The poverty lines are developed internally, and are typically less than US\$1.00 per day in nominal terms (i.e., not adjusted for purchasing power parity). There is considerable inter-provincial variability in poverty levels, as well as significant differences in poverty between rural and urban areas. Urban poverty indices are consistently lower than rural poverty estimates, although even half of the urban population is typically below the poverty line. In contrast, rural poverty headcount ratio estimates are generally around 75–90 percent. Related to this, poverty is consistently lower in the more urbanized provinces, with Lusaka Province being the least poor province, followed by Copperbelt Province.

Table 1: Poverty headcount estimates, 1991–2004

	Survey year				
	1991	1993	1996	1998	2004
All Zambia	0.70	0.74	0.69	0.73	0.68
Rural / Urban					
Rural	0.88	0.92	0.82	0.83	0.78
Urban	0.49	0.45	0.46	0.56	0.53
Province					
Central	0.70	0.81	0.74	0.77	0.76
Copperbelt	0.61	0.49	0.56	0.65	0.56
Eastern	0.85	0.91	0.82	0.79	0.70
Luapula	0.84	0.88	0.78	0.82	0.79
Lusaka	0.31	0.39	0.38	0.53	0.48
Northern	0.84	0.86	0.84	0.81	0.74
North Western	0.75	0.88	0.80	0.77	0.76
Southern	0.79	0.87	0.76	0.75	0.69
Western	0.84	0.91	0.84	0.89	0.83

Source: CSO (2005) (Table 12.8)

Table 2 presents results from the 2002–03 LCMS, including not only the poverty headcount index, but also the poverty gap and squared poverty gap indices. The 2002–03 LCMS was collected over a 12 month period, which is quite different from the surveys shown

in Table 1, which were collected over a short period between October and December, known as the “hungry season,” when food stocks are low and prices are relatively high. As such, the poverty estimates are not directly comparable between the two tables. Even so, the overall picture of poverty in Table 2 is the same as that shown by the surveys in Table 1: high overall rates of poverty, and higher poverty in rural areas than in urban areas. The main difference is in the poverty rankings of the provinces. The differences are largely attributable to different susceptibility to seasonal fluctuations in consumption, as well as differential capacity to smooth consumption over the seasons. These differences in the survey methodologies, and their influence on poverty estimates, are discussed in greater detail in the section on data sources that follows.

Table 2: Poverty estimates from 2002–03 LCMS

	Headcount ratio (P_0)	Poverty gap ratio (P_1)	Squared poverty gap ratio (P_2)
All Zambia	0.665	0.271	0.139
Rural / Urban			
Rural	0.743	0.313	0.165
Urban	0.522	0.192	0.093
Province			
Central	0.691	0.295	0.155
Copperbelt	0.588	0.231	0.116
Eastern	0.707	0.282	0.141
Luapula	0.704	0.290	0.152
Lusaka	0.563	0.216	0.109
Northern	0.805	0.377	0.211
North Western	0.719	0.300	0.155
Southern	0.629	0.236	0.115
Western	0.654	0.240	0.117

Source: CSO (2004) (Table 13.7)

2.2 Data sources

Small-area estimation is a data-intensive methodology. At a minimum, two particular types of data sets are required. One is a detailed household survey that contains a reliable measure of welfare, which is usually household consumption, but could be expenditure or income. The other main data source is a national census, containing basic information on all households in the country. In some instances, an extensive national survey with a very large sample size can be used in place of the census. The detailed household survey and the census must have at least some variables in common, that is, variables that are defined similarly and are correlated with the welfare measure. These two main pillars of small-area estimation are often supplemented by additional data sources, such as data on environmental and infrastructure characteristics. A further requirement is that it must be possible to link the data sources by geographic area. This section describes the data sources in detail.

2.2.1 2002–03 Living Conditions Monitoring Survey (LCMS)

The 2002–03 Living Conditions Monitoring Survey (LCMS) is an integrated household survey, similar in design to the World Bank’s Living Standards Measurement Study (LSMS) surveys. The 2002–03 LCMS is the third such survey to be carried out in Zambia, following

surveys undertaken in 1996 and 1998. The LCMS covered a wide range of topics, including demographics, migration, mortality, characteristics of orphans, expenditure, income, health, education, economic activities and employment, nonfarm enterprises, nutrition, dwelling conditions, access to facilities, assets, household food production, and self-assessed poverty status. In addition to the household questionnaire, the survey included a community price questionnaire.

The implementation of the 2002–03 LCMS was markedly different from the practices employed in the previous two LCMS, as well as the subsequent 2004 LCMS. In other years the LCMS was conducted over a brief period, usually over one or two months in the period between October and December, inclusive. As a result, these surveys did not capture any of the seasonal variation in well-being that is strong in many parts of Zambia, especially rural areas. Moreover, the end of the calendar year is the “hungry season,” when many households have depleted their stocks from the previous harvest and food prices are at their highest point of the year. As a result, the surveys measured household consumption at the poorest time of the year for many households, and the resultant poverty estimates can be considered as upper bounds. However, as households and regions have differing susceptibilities to seasonal variation, the relative poverty ranking of provinces and other sub-national groups becomes not only a function of the overall poverty level, but also the differential degree to which poverty varies by season. To remedy these shortcomings, the 2002–03 LCMS collected data over a 12-month period, from November 2002 through October 2003. Under this approach, households were interviewed not only in the hungry season, but also in the relatively prosperous post-harvest season. In this manner, the overall poverty and well-being estimates are averaged out over the year, and should yield more accurate estimates of poverty (even though the estimates for individual households are still influenced by the season in which the interview is conducted).

A second major departure in survey implementation also occurred in the 2002–03 LCMS. In other years the LCMS collected household expenditure data entirely using the recall method. CSO officials and others believed that this approach generated avoidable errors, especially with regard to respondents omitting expenditures because of memory lapses. In 2002–03 the LCMS issued diaries to households for them to record expenditures in-between the visits by the interviewers. Households with literate members who could complete the diaries were visited seven times over a 31 day period by interviewers. Those households that needed help completing the diaries were visited more frequently by the interviewers.

We chose to use the 2002–03 LCMS for this study for several reasons, but two of these stand out as the most important. First, it is believed that the changes in survey methodology employed in 2002–03 generated more reliable estimates of consumption and poverty than those obtained in the other years of the LCMS. Second, the small-area estimation process relies to some degree on the assumption that the quantitative relationship between poverty and its correlates estimated from the survey data is still applicable in the census year. The assumption of parameter stability over time is more tenable the closer in time the survey and the census are. For these reasons, the 2002–03 LCMS was preferred over the 1998 or 2004 surveys.

The 2002–03 LCMS used a stratified two-stage cluster sample design, using the sample frame developed from the 2000 Census of Population and Housing. In the first stage, 520 Standard Enumeration Areas (SEA) were selected, with probability proportional to estimated size. Detailed household listings were prepared for each of the 520 selected SEAs. In rural areas households were stratified by their agricultural status, and categorized as small scale,

medium scale, large scale, or non-agricultural. Urban households were implicitly stratified into low cost, medium cost, and high cost areas, using criteria developed by CSO and local authorities. In the second stage of sampling, approximately 15 rural households were selected within each SEA, selecting randomly within the first three strata to obtain seven small-scale agricultural households, 5 medium-scale agricultural households, and 3 non-agricultural households. All large-scale agricultural households in the SEA were included in the rural sample. In urban areas, 25 households were randomly selected from each SEA.

The total sample size was 9,741 households, which include 54,100 individuals. As the probability of selection is not equal for all households, probability sample weights were calculated as the inverse of the probability of selection. Thus the sample weights are specific to each SEA. These sample weights are employed in all calculations. The sample is designed to be representative at the national, provincial, and rural/urban levels.

Additional details about the design and contents of the 2002–03 LCMS are available in CSO (2004).

2.2.2 2000 Census of Population and Housing

The 2000 Census was the fourth population census conducted in Zambia since independence in 1964. Data were collected from 16 October through 15 November 2000, enumerating 9,885,591 people in 1,884,741 households. The Census collected basic demographic information on the size of the population and its distribution by age, sex, and geographic location. It also collected individual-level information on education and occupations, and household-level information on dwelling characteristics, sources of drinking water, and other items.

For the purposes of the poverty mapping analysis, only census data collected from households was used. That is, census data collected in institutional settings such as boarding schools, prisons, military barracks, hospitals, and convents were excluded. This is because the survey data was only collected from households, and it is likely that the parameter estimates would not be applicable to estimating poverty in an institutional setting.

More complete information about the 2000 Census of Population and Housing is available in CSO (2003).

2.2.3 Spatial data

Data from the 2002–03 LCMS and 2000 Census were complemented by publicly-available data on geographic and agro-climatic characteristics. These data were compiled from a number of sources, and are described in Corbett et al. (2000). As the data are geo-referenced, it is possible to combine these characteristics with the survey and census data by using geographic information system (GIS) software, which matches the characteristics with the appropriate small-area geographic unit for each household in the LCMS and census. Moreover, the spatial data are based on long-term means and medians, so it is valid to apply them to both the survey and census data.

The spatial data provides additional variables that are correlated with well-being, which helps improve the explanatory power of the regression models, thus improving the precision of the poverty estimates. In other applications it is common to estimate cluster (i.e., enumeration area) level fixed effects models, in which a set of dummy variables is used to capture systematic location-specific correlates of consumption per capita. The estimated coefficients on the dummy variables indicate to what degree consumption is higher or lower

than some reference region, controlling for other variables. However, the fixed effects approach is not available when doing small-area estimation, because it is not possible to estimate the cluster fixed effects for the large majority of the census enumeration areas, simply because they are not covered by the LCMS.

The spatial data included as candidate explanatory variables are mean and median annual rainfall, mean annual minimum and maximum temperatures, annual absolute minimum and maximum temperatures, mean and median annual evapotranspiration index, mean annual P/PE (an agroecological index), mean and median population density, and mean elevation. It is expected that these variables are correlated with well-being through various pathways, the most obvious being the agricultural potential of a given area. As these data do not follow administrative boundaries—indeed, that is a large part of their appeal—they require some additional manipulation before including them in the regressions. Using GIS software, the administrative boundaries are superimposed on the spatial characteristics data, and summary statistics (principally the mean and median) are calculated for each variable within each administrative unit. For example, the spatial data set might have 100 data points on the elevation in given administrative area, ranging from 900 to 1200 meters above sea level. The GIS software calculates the mean and median elevation from the 100 data points in that area, and it is the mean or the median that is used in the regression.

The spatial data were summarized at the constituency level. Ideally one would prefer to use a smaller geographic area, such as a ward, to capture better the specific conditions for each household. This proved not to be possible at this time, because there continue to be some consistency problems with the ward-level boundary maps. Even though the large majority of ward boundaries appear to be digitized acceptably well, the existence of problems for a small subset of wards effectively precludes summarizing the data at the ward level, so the constituency level was chosen as the next smallest administrative unit.

Chapter 3: Methodology

The basic principles of the small-area estimation methodology are straightforward. The household survey data are used to estimate the statistical relationship between the empirical variable used to measure welfare (consumption per adult equivalent, adjusted for spatial and temporal variation in prices) and a set of independent variables that are expected to be correlated with welfare. The consumption measure is identical to that used in CSO (2004). It includes cash expenditure made by the household on consumption items, plus an imputed cash value for items that the household consumes from its own production (e.g., maize produced by the household). The consumption measure also includes imputed use-values for household durable goods, and imputed rent for owner-occupied housing. Full details are provided in CSO (2004).

The set of independent variables considered for the right hand side of the regression equation is limited to those variables that appear in both the household survey and the population census. The estimated regression coefficients are then applied to the census data to produce estimates of consumption per capita for each of the households in the census. The estimates of consumption per capita are used in turn to calculate summary measures of poverty, which in this case is three indices from the Foster-Greer-Thorbecke (FGT) class of Pa poverty measures. Because consumption estimates are available for the entire population, it is possible to calculate welfare measures for small sub-groups of the population, be they geographic regions (such as sub-districts), occupational classifications (e.g., fishermen), or some other classification. This method for linking surveys with census-type data is used in geography for small-area estimation. It has been adapted for the disaggregated study of poverty and inequality, with an application to Ecuador, by Hentschel et al. (2000). Further refinements of the method are presented in Elbers et al. (2003).

More formally, the natural logarithm of per capita consumption is modeled as a function of a set of observable household and community characteristics. We estimate this relationship by a linear approximation of the form

$$(1) \quad \ln y_{ch} = X'_{ch} \beta + \eta_c + \varepsilon_{ch}$$

where y_{ch} is per capita consumption of household h residing in cluster c , X_{ch} is a ($k \times 1$) vector of observable characteristics of that household that are available in both the survey and census data sets, and β is a ($k \times 1$) coefficient vector.¹ The disturbance term has two components. The first component, η_c , applies to all households within a given cluster, while the second, ε_{ch} , is specific to the household. These two components are uncorrelated with one another and independent of the regressors. This specification of the disturbance term accommodates the possibility of spatial autocorrelation, i.e., a location-specific effect common to all households within a cluster. It also allows for heteroscedasticity of the household-specific error component.

¹ Here the term cluster refers to the survey enumeration area, the most disaggregated level at which we group the data in the analysis that follows.

The unexplained variation in equation (1) is what Elbers et al. (2003) call “idiosyncratic error,” which directly affects the precision of the small-area estimates of welfare, poverty and inequality. Thus there are gains from ensuring that the X_{ch} variables capture as much of the variation in log consumption as possible. We reduce the magnitude of the unexplained location-specific component, μ_c , by including cluster-specific variables among the regressors. These are cluster-level means of the household-level variables that exist in both the survey and the census. Because of the small sample size of the survey, these variables are calculated from the census data, and merged with the survey data for the first stage regressions. The constituency-level spatial characteristics variables that were described in Chapter 2 are also included as regressors, which also improves the quality of the regressions.

Equation (1) is estimated using generalized least squares (GLS), taking into account the heteroscedasticity of the household component of the disturbance term, ε_{ch} . The survey is not self-weighting, so regressions are estimated using the survey probability weights, which are the inverse of the probability of selection into the sample. Rather than impose an assumption of homogeneous coefficients throughout Zambia, separate regressions are estimated for each of the strata of the survey data set. The same set of candidate variables is considered for each of the models, with final variable selection determined by a stepwise procedure supplemented with extensive ex post diagnostics. The number of variables in the regressions is constrained not by the number of common variables in the survey and the census, but rather by the number of clusters in the first stage of sampling within each stratum, as the appropriate Wald test for the regression is based on an F distribution with $(k, d-k+1)$ degrees of freedom, where k is the number of terms in the model (excluding the constant) and d is the number of primary sampling units minus the number of strata (Korn & Graubard, 1990).

The resulting parameter estimates are then applied to the census data. Estimates of consumption for the census households must take into account the disturbance term, that is, the portion of the variation in consumption in the survey data that is not explained by the regressors. Otherwise, poverty estimates for the census data would be biased, with the direction of the bias depending on the position of the poverty line relative to the distribution of consumption and the poverty measure being considered. For example, if the poverty line lies below (above) of the mode of the distribution of consumption, estimates of the poverty headcount will be biased downwards (upwards).² To avoid these problems, we use simulation methods to estimate the level of consumption for each household. This is done by using the estimated regression coefficients and converting from logarithms to levels, using the expression

$$(2) \quad \hat{y}_{ch} = e^{X'_{ch}\hat{\beta} + \hat{\eta}_c + \hat{\varepsilon}_{ch}} ,$$

where the c and h now index clusters and households in the census data. Consumption estimates are obtained from 100 simulations. In each simulation a vector of simulated

² For the poverty gap and squared poverty gap the relationship is more complex, as they are determined not only by the proportion of the distribution that lies below the poverty line, but also the relative distribution of consumption among the poor. In general, the variation below the poverty line will be attenuated. When the poverty line is below the mode of the distribution of consumption, the downward bias of the headcount estimate will be reinforced. When the poverty line is above the mode of the distribution the two biases will work in opposite directions, with an indeterminate net effect.

parameters is drawn from a multivariate normal distribution with the variance-covariance matrix estimated in the consumption and heteroscedasticity regressions from the survey data. The cluster- and household-specific disturbance terms are drawn from parametric distributions. The simulated parameters and disturbances are applied to the census data to predict per capita consumption for each household in the census, and poverty measures are calculated from the simulated consumption vector. The average of the measures over 100 simulations provides the point estimates of poverty for the small area, and the standard deviations yield the estimate of the standard error.

A variety of software tools were used in the estimation procedure. The Statistical Analysis System (SAS) and Stata were used for variable creation and basic data management. The GIS package ArcView 3.2 was used to convert the geo-referenced spatial data to a tabular form that is compatible with the survey and census. Most of the analytical work was carried out using PovMap 2.0, which was specifically developed for small-area estimation. PovMap was used for comparing the distributions of the survey and census variables (stage 0), estimating regressions using the survey data (stage 1), and estimating consumption and poverty for a range of small areas (stage 2). ArcView was used for generating the maps with the results, which are presented in Chapter 4.

Chapter 4: Major Findings

In this chapter, we present the results of the poverty mapping analysis. We begin by summarizing the results of the regression analysis that used the 2002–03 LCMS data to estimate the quantitative relationship between consumption per adult equivalent and the available correlates of consumption. We then present estimates of the three poverty indices described earlier (the poverty headcount index, poverty gap index, and squared poverty gap index). This is done at several levels of geographic disaggregation, namely, the provincial, district, constituency, and ward levels. These results are presented in cartographic form in the main body of the report, and in tabular form in a series of annexes at the end of the report.

4.1 Regression results

As noted earlier, separate regressions were estimated for each of the 18 strata (separate rural and urban estimations for each of Zambia's 9 provinces). This allows the quantitative relationship between the independent and dependent variables to vary with the conditions encountered in each location. The variables to include in each model were selected by a stepwise procedure, followed by extensive ex post diagnostics. Chow tests confirmed the decision to allow for separate models, as all of the vectors of estimated parameters are statistically significantly different.

The summary regression output is presented in Annex A. Overall the fits were very good, with adjusted- R^2 values ranging from a low of 0.32 to a high of 0.72. In 12 of the 18 strata the independent variables accounted for more than one-half of the total variation in consumption per adult equivalent. The within-sample predictive power of the models was excellent: in 53 of 54 cases (18 strata times 3 poverty measures) the poverty index predicted by the model using the survey data was within the confidence interval of the poverty index calculated directly from the LCMS data. As the regression models are only models of correlation, and not causal models, one should be careful not to over-interpret the estimated coefficients. That said, the signs and magnitude of the estimated coefficients generally conformed to expectations derived from economic theory and other empirical work.

4.2 Tabular and cartographic presentation of results

Before presenting the small-area estimation results, it is worthwhile to review the advantages and disadvantages of the two methods of presentation, namely, cartographic and tabular. We believe that the two presentational approaches complement each other, and convey the information more completely and accurately than either method would in isolation. An important advantage of the cartographic style is that it displays the information on dozens or hundreds of geographic units in a single picture that is relatively easy to interpret visually. Moreover, the maps convey the spatial relationship between the geographic units in a manner that is not possible by ordinary statistical tables.

One of the disadvantages of the map presentation format is that it is necessary to present the poverty estimates by categories, using ranges of poverty estimates, much like a histogram, which groups all observations within a certain range in a single vertical bar. Thus it is not possible to discern the exact estimated poverty level in a particular geographic unit from the map. To some extent, the choice of poverty levels used to define categories is unavoidably arbitrary, and a different categorization would change the map's appearance. As much as possible, we have chosen categorizations that are robust to the delineation of categories, so that a small change in the cutoff points for the categories would not radically alter the results

conveyed by the map. A second disadvantage of presenting results as maps is that it is difficult to convey information about the precision of the poverty estimates. A third disadvantage is that, in terms of visual perception, the maps tend to overemphasize larger geographic areas, while making it impossible to see the shadings for smaller geographic areas, especially in cities.

The tabular results presented in the annexes overcome the weaknesses of the map presentations. They are able to present the exact point estimate of each poverty index for each geographic unit. Thus it is possible, for example, to see the difference between one area where the headcount ratio is 0.51 and another area where the ratio is 0.59, whereas on the map they would have the same colored shading. The tabular results also show the 95% confidence interval, which permits an assessment of whether a difference in the point estimates of two (or more) geographic units is statistically significant. In contrast to the maps, which devote more page space to areas that are geographically larger, each geographic unit is represented by one row in the tables, so it is easy to see the results for small areas, which often happen to be relatively populous. Of course, the major disadvantage of the tables is that it is impossible to see spatial patterns in poverty rates. It also requires more effort for the reader to summarize the information contained in lengthy tables.

The maps and tables with results on poverty indexes are complemented by two other sets of maps. One is a dot map that shows the distribution of poverty in Zambia, i.e., what areas have more or fewer poor people. The other is a set of maps illustrating the distribution of the total poverty gap in Zambia by geographic sub-regions. These are explained in greater detail below.

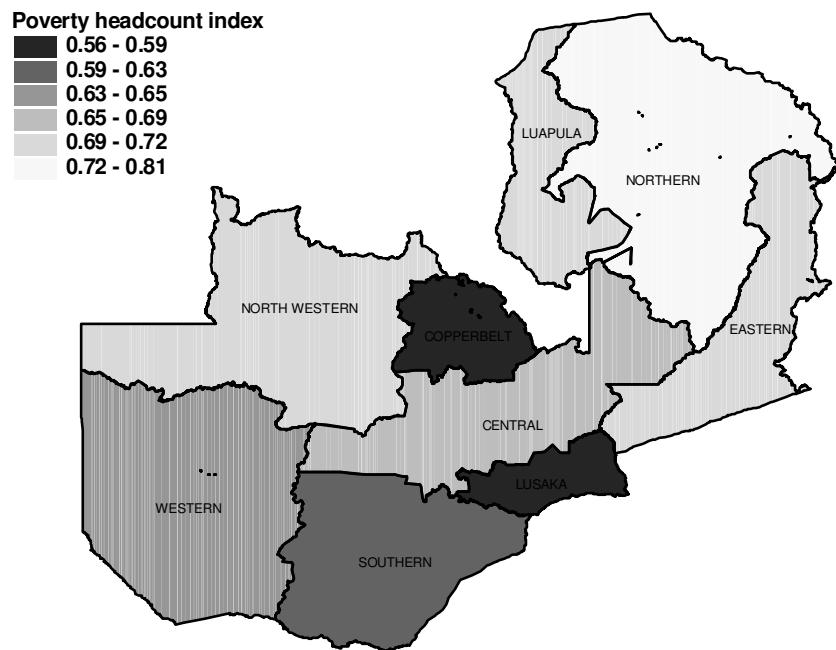
4.3 Poverty headcount ratio (P_0)

We begin the presentation of results with the simplest of poverty measures, the poverty headcount ratio, which shows the proportion of the population whose consumption per adult equivalent is less than the poverty line.

4.3.1 Poverty headcount ratio (P_0) by province

A useful starting point is the poverty map that can be drawn from the 2002–03 LCMS survey alone, without resorting to small-area estimation techniques. The survey is representative at the national and provincial levels. Figure 1 shows the poverty headcount estimates at the provincial level, calculated directly from the LCMS 2002–03 survey. As with most of the maps presented here, darker shadings indicate lower levels of poverty and lighter shadings represent higher levels of poverty.³ Consistent with CSO (2004) and Table 2, the lowest poverty rates are found in Lusaka Province and Copperbelt Province (at 56.3 and 58.8 percent, respectively), while the highest poverty headcount index is found in Northern Province, with an estimated 80.5 percent of the population below the poverty line. The province-level results, including confidence intervals, are shown in tabular form in Annex B.

Figure 1: Province-level poverty headcount index estimated directly from 2002–03 LCMS



4.3.2 Poverty headcount ratio (P_0) by district

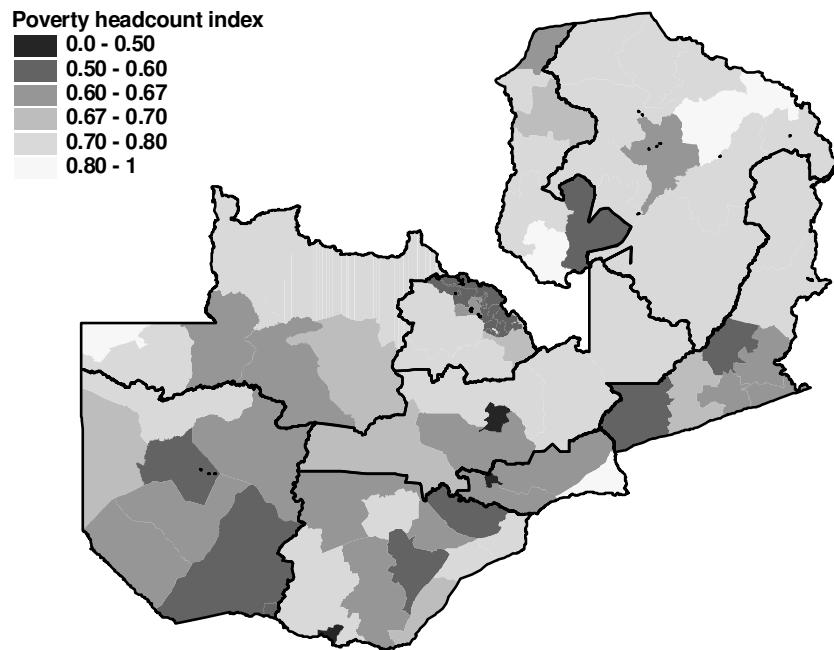
Figure 2 presents the district-level estimates of the poverty headcount index, obtained via the small-area estimation technique. As expected, we see that there is considerable heterogeneity underlying the provincial-level estimates that appear in Figure 1. One of the most notable features of the district-level estimates appears in Lusaka Province, where the

³ Note that in Figure 1 and all of the subsequent shaded area maps, the full precision of the poverty estimates was used when categorizing results for the maps. For example, in Figure 1 a province with a headcount ratio of 0.58999 would be in the first category (0.56–0.59), while a province with a slightly higher headcount ratio of 0.59001 would be in the second category (0.59–0.63).

headcount ratio ranges from less than 50 percent in Lusaka District (the small dark-shaded area containing Lusaka City in the northwest of the province) to over 80 percent in Luangwa District, which is the light-shaded area in the southeast corner of Lusaka Province. In fact, the district-level tabular results presented in Annex C show that the poverty headcount index in Luangwa District reaches 91.6 percent.

Similar, although perhaps less dramatic, high variability in inter-district poverty rates is seen in other provinces in Figure 2. For example, Copperbelt Province's relatively low poverty headcount index is composed of low poverty rates in the densely-populated eastern side of the province, along with high poverty rates in the more rural western districts of Lufwanyama and Mpongwe. In Central Province, the headcount is less than 50 percent in Kabwe District, which includes the provincial capital, but increases to over 70 percent the eastern portions of Central Province. Eastern Province is shown to be a mixture of relatively less poor areas in the southern part of the province along the Mozambican border, and higher poverty areas in the northern part of the province along the Malawian border.

Figure 2: Small-area estimates of poverty headcount index at the district level

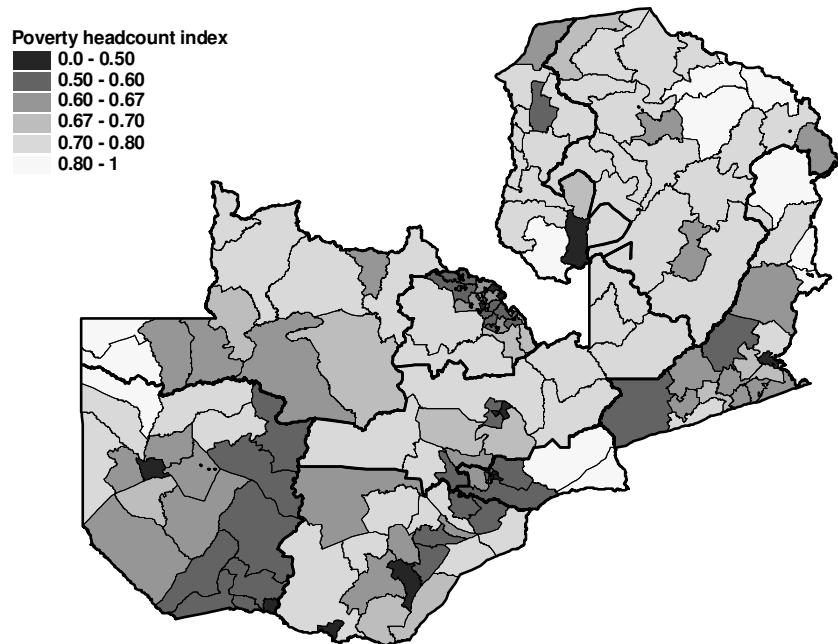


It is interesting to note that in several provinces, the least poor districts are adjacent to the poorest districts. For example, in Luapula Province, Samfya District has a headcount index of 58.2 percent, while immediately to its west the headcount in Milenge District is 83.5 percent. Similarly, in Northern Province, the poorest district (Mungwi, 83.0 percent) shares a border with the least poor district (Kasama, 67.5 percent). Turning to Southern Province, it is seen that Livingstone District (40.6 percent) is bounded on all sides (except the border with Zimbabwe) by Kazungula District, which is one of the poorer districts in the province (70.6 percent). In Western Province, Mongu District (55.5 percent) sits alongside Lukulu District, which is the poorest district in that province (78.0 percent).

4.3.3 Poverty headcount ratio (P_0) by constituency

Figure 3 disaggregates the shaded poverty headcount index maps one step further, going to the constituency level. Not surprisingly, the overall impression is an echo of the district-level findings: the poverty index at the district level is composed of sometimes disparate poverty levels at the constituency (sub-district) level. This is somewhat less striking than the change seen when comparing Figure 1 with Figure 2 simply because the disaggregation from 72 districts to 150 constituencies is a smaller “step” than the initial disaggregation from 9 provinces to 72 districts. Indeed, in some cases the district and the constituency are identical (e.g., Kasempa district/constituency in North-Western Province or Nyimba district/constituency in Eastern Province), so the step involves no additional disaggregation. Perhaps the most noticeable change when moving from the district to the constituency level concerns the more urbanized districts, such as those that contain the provincial capitals. In several cases, disaggregating to the constituency levels shows that the lower poverty rates in those districts are driven entirely or almost entirely by lower poverty levels in only one or two of the several constituencies that are contained in each of those districts. As examples, this pattern is evident in Bangweulu Constituency in Samfya District (Luapula Province), Kasama Constituency in Kasama District (Northern Province), and Chipata Constituency in Chipata District (Eastern Province). This pattern is not limited to provincial capitals, as similar examples are seen in Mumbwa District (Central Province), Kawambwa District (Luapula Province), Isoka and Mpika Districts (Northern Province), and Solwezi District (North-Western Province, among others. The tabular results at the constituency level are shown in Annex D.

Figure 3: Small-area estimates of poverty headcount index at the constituency level

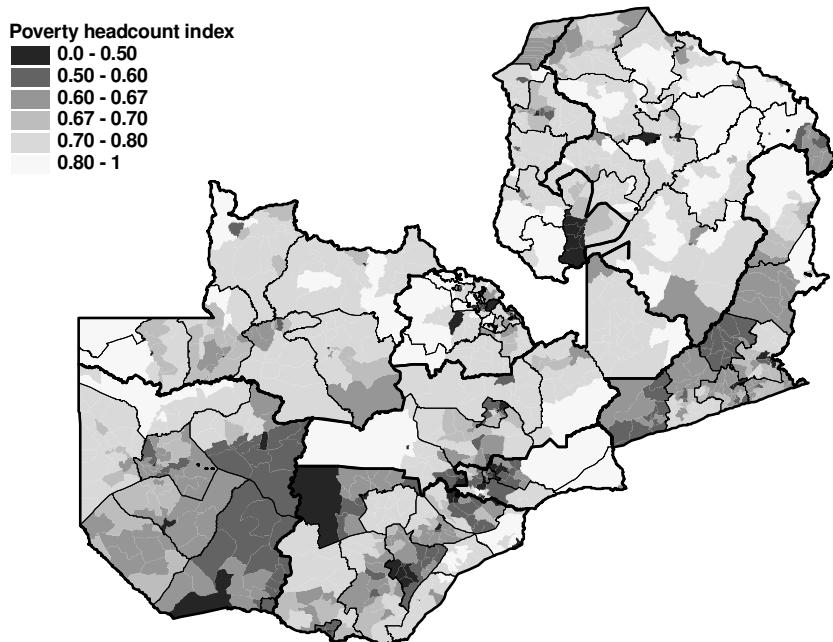


4.3.4 Poverty headcount ratio (P_0) by ward

Taking the disaggregation one step further, Figure 4 displays the poverty headcount index at the ward level. Like the disaggregation from provincial to district level estimates, this is a large step, as it goes from 150 constituencies to 1,288 wards. As a result, there is a correspondingly large change in the information shown in the map. Large areas of the map become noticeably lighter, indicating higher poverty rates, but these areas are punctuated with much smaller (but often heavily populated) dark spots of relatively low poverty. Numerous such examples can be detected in each of Zambia's nine provinces. The numerical poverty headcount index estimates, and 95 percent confidence intervals, for each of the 1,288 wards is presented in Annex E.

Although it is technically possible to estimate poverty indexes for geographic areas smaller than the ward, the ward is the smallest level we present in this report. The primary reason for this is that as the geographic area becomes increasingly smaller, so does the associated sample size on which the estimate is based. Sample size is one factor that affects the precision of the poverty estimates and the width of the confidence interval. As may be seen in Annex E, at the ward level many of the confidence intervals are already approaching the point where they are too wide to yield useful information, largely because of shrinking sample size. A second reason for not presenting estimates at the sub-ward level (e.g., Census Supervisory Area or Standard Enumeration Area) is that there is little administrative significance associated with these smaller areas, other than for the carrying out of surveys and censuses.

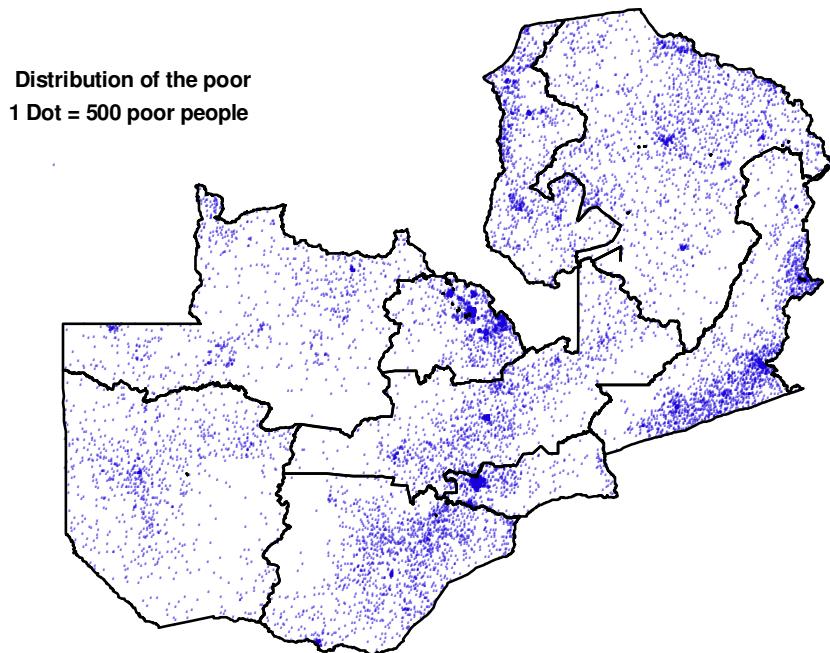
Figure 4: : Small-area estimates of poverty headcount index at the ward level



4.3.5 Distribution of the poor

The shaded maps of poverty headcount index levels in Figures 1–4 are useful for illustrating poverty *rates* (i.e., what percentage of the population in an area is below the poverty line), but they are also potentially misleading. As was alluded to earlier, the population of Zambia is not distributed uniformly across the country. Indeed, as Zambia is one of the most urbanized countries in sub-Saharan Africa, the population is distributed quite unevenly, comprising densely populated cities and sparsely populated rural areas, as well as national parks where there is almost no human population. It is therefore appropriate to complement the maps of poverty indexes with a map that displays the distribution of the poor population. Figure 5 is such a map. Each dot represents an estimated 500 persons living below the poverty line. The location of the dots is determined by the small-area estimate of the poverty headcount for each ward, multiplied times the population of that ward as enumerated by the 2000 census. When juxtaposed with the earlier maps we see the interesting result that many of the areas with high poverty headcount ratios (light-shaded areas in Figures 1–4) have very few poor people, because they are lightly populated. Conversely, some of the areas with lowest poverty headcount ratios have large concentrations of poor people, numbering in the tens of thousands at the ward level. At the constituency level the estimated number of poor exceeds 100,000 in three constituencies (Kapiri Mposhi, Chipata, and Munali). At the district level there are 19 districts in which the estimated number of poor exceeds 100,000. Most remarkable in this regard is Lusaka District, which has both the lowest poverty headcount ratio of any district (49.0 percent), but by far the largest number of poor, totaling over 500,000 people. This is almost twice as many poor people as the next highest district, which is Chipata.

Figure 5: Distribution of the poor



4.4 Poverty gap index (P_1)

The poverty headcount ratio is the most well-known poverty measure, and the popularity of its use can be attributed to the ease of interpretation. The proportion of the population below the poverty line is an exceedingly simple concept to grasp even for the most non-technical audience. Unfortunately, the poverty headcount is also an extremely insensitive and incomplete measure of poverty. In particular, it gives no indication of how far below the poverty line the poor are. In contrast, the poverty gap captures both the proportion below the poverty line, and the average shortfall of the poor (the difference between the average consumption of the poor and the poverty line, which is also known as the income gap).

The poverty gap index (P_1) is especially appealing in countries with high rates of poverty, such as Zambia. Consider, for example, a poverty reduction program that focused on the poorest of the poor, which improved the living standards of the poorest Zambians but did not get them over the poverty line. Even though the number of poor would be unchanged, one would normally say that poverty had been reduced, because the poor were now less poor. But in this example the reduction in poverty would not be captured by the poverty headcount index. It would, however, be reflected in the poverty gap index, which would decrease.

4.4.1 Poverty gap index (P_1) by district

Figure 6: Small-area estimates of poverty gap (P_1) at the district level

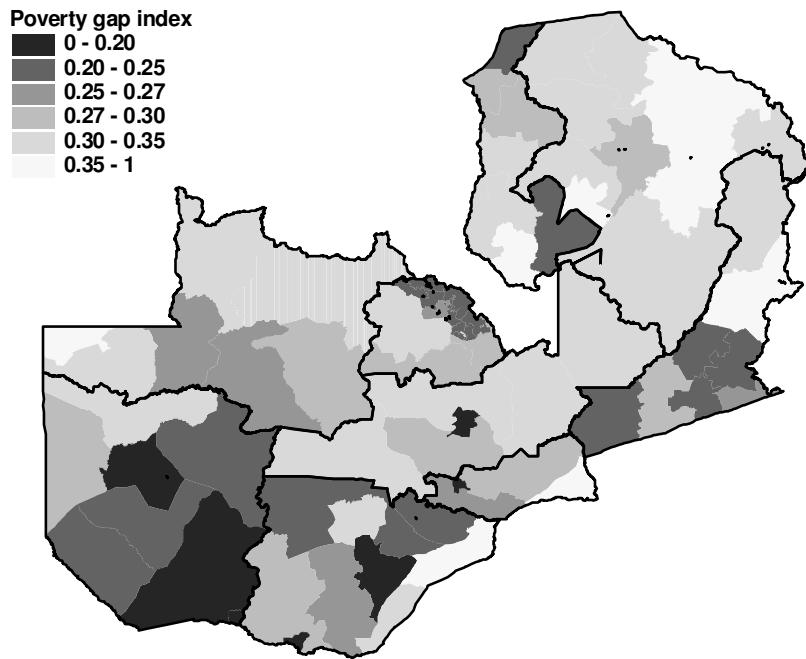


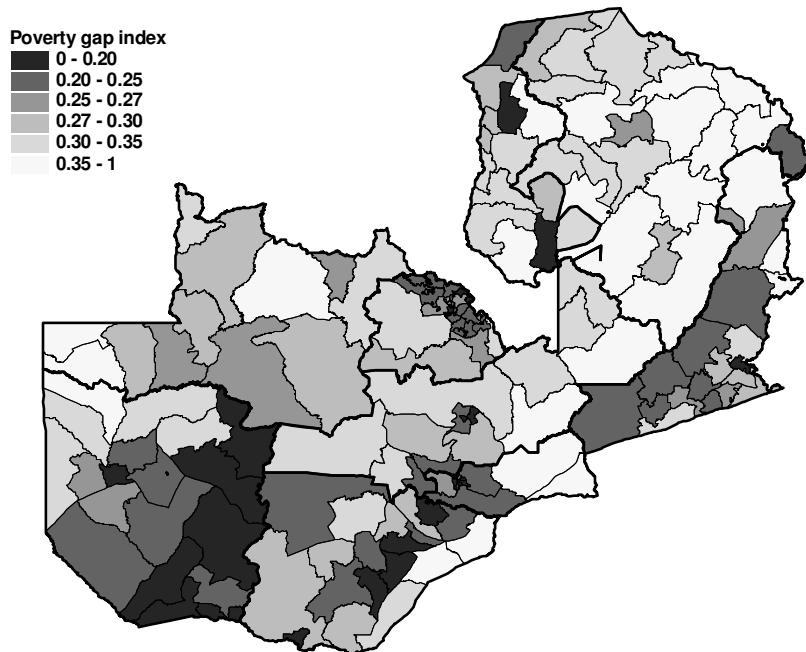
Figure 6 shows the levels of the poverty gap index at the district level. The overall pattern is qualitatively similar to that seen in Figure 2 for the district-level headcount index, although the levels and shadings do differ to some degree between the two indexes. Note that the tabular results for the poverty gap index for each district, including confidence intervals, are shown in Annex B, alongside the results for the poverty headcount index. In general, these

estimates reinforce the impression of considerable heterogeneity in poverty at the district level both within and between provinces. Nationally, the district with the lowest poverty gap index is Livingstone (0.126), followed by Kabwe and Lusaka districts (both at 0.177), Choma (0.185), and Sesheke (0.193). The districts with the highest poverty gap indexes are Luangwa (0.578), Chavuma (0.454), Siavonga (0.446), Milenge (0.428), Mungwi (0.413), and Gwembe (0.401).

4.4.2 Poverty gap index (P_1) by constituency

Figure 7 shows the levels of the poverty gap index by constituency. These also echo the findings presented earlier for the constituency level poverty headcount estimates. As seen in district-level results, at the constituency level the most noticeable difference in the spatial patterns between the poverty headcount and poverty gap indexes is the poverty gap index map's slightly darker shadings in portions of the Southern and Western Provinces. This indicates that the poor in these areas tend, on average, to be closer to the poverty line than is the case in other areas (although it is possible that this is an artifact of the choice of intervals for the categories, which does not appear to be the case here). Note that the tabular results for the poverty gap index for each constituency, including confidence intervals, are shown in Annex C, alongside the results for the poverty headcount index.

Figure 7: Small-area estimates of poverty gap (P_1) at the constituency level



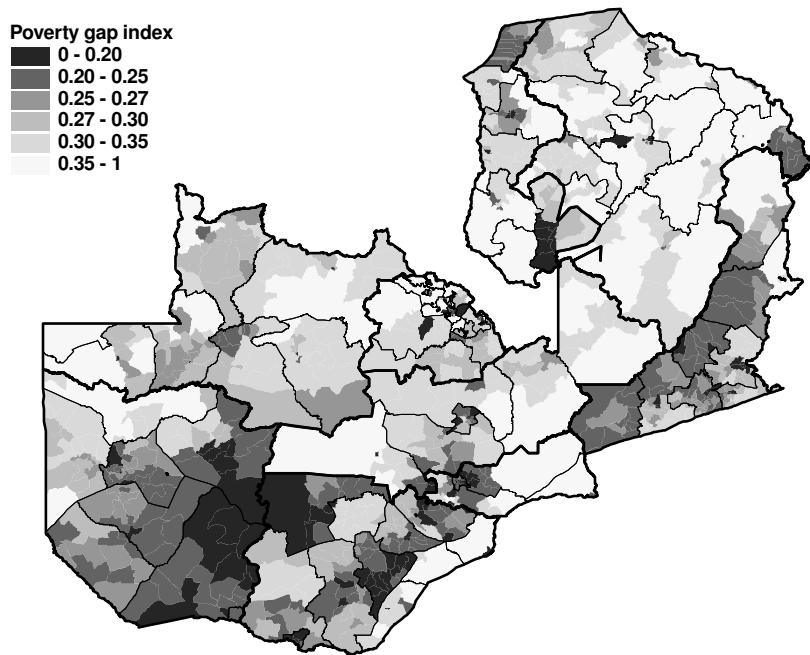
4.4.3 Poverty gap index (P_1) by ward

The ward-level estimates of the poverty gap index are shown in Figure 8. The tabular results for the poverty gap index for each ward, including confidence intervals, are shown in Annex D, alongside the results for the poverty headcount index. As expected from the preceding results, the pattern of heterogeneous poverty levels within and across

constituencies is confirmed. Likewise, it also reinforces the finding that in the Southern and Western provinces, *among those below the poverty line*, poverty tends to be slightly less severe.

Note from the annex table that these estimates are estimated with less precision than the estimates presented so far. There are two reasons for this. First, each ward-level estimate is based on many fewer observations than the district or constituency estimates. This is especially true in the small number of very lightly populated wards. Second, as one moves to higher orders of the FGT class of poverty index—that is, moving from headcount (P_0) to poverty gap (P_1) to squared poverty gap (P_2)—the size of the standard error relative to the point estimate tends to increase. Thus, comparisons of the ward-level should take careful account of the confidence intervals of each estimate, especially for P_1 and P_2 .

Figure 8: Small-area estimates of poverty gap (P_1) at the ward level



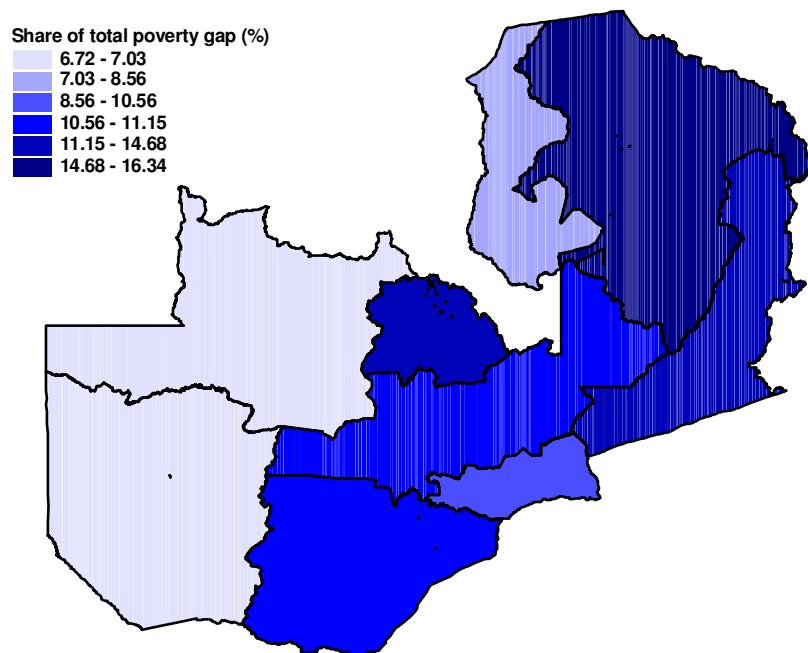
4.4.4 Distribution of the aggregate poverty gap

In addition to measuring the depth of poverty experienced by the poor, the poverty gap index has a useful interpretation, in that it measures the total amount of poverty in a country (or sub-region) in monetary terms. If one multiplies the poverty gap index by the poverty line and the total population the result is the aggregate amount of money required to bring every poor person exactly up to the poverty line, thus eradicating poverty. For example, using the national poverty gap estimate of 0.271 (from the 2002–03 LCMS), the poverty line of 90,248.36 Kwacha per month, and the 2000 Census estimate of 9.9 million people, it would

require approximately 242,000 million Kwacha per month to bring every poor Zambian up to the poverty line.⁴

Of course, to do this in practice would require perfect information, i.e., knowing exactly who is below the poverty line and precisely how far they are below the poverty line. Such perfect information is clearly unrealistic. But it is nevertheless a helpful way to look at poverty, because it shows the absolute minimum aggregate increase in consumption required to eliminate poverty. The poverty gap index also permits us to employ an important refinement to the poverty headcount dot map shown in Figure 5. The dot map shows the number of people below the poverty line and how they are distributed around the country, but it gives no indication of the degree of depth of their poverty. Figure 9 overcomes this weakness by showing the proportion of the aggregate national poverty gap attributable to each province. Dark colors represent higher shares, and range from a high of 16 percent in Northern Province (a populous province with widespread and deep poverty) to only 7 percent in Western and North-Western Provinces (lightly populated provinces with poverty levels near the national average). Corresponding maps for the district, constituency, and ward-level shares of aggregate poverty gap are presented in Figures 10–12, respectively.

Figure 9: Provincial shares of total poverty gap



⁴ The actual amount would be somewhat less than this, because the 2002–03 poverty line is expressed in adult equivalent units, whereas the population estimate counts each Zambian as one person regardless of age. As there are more people than adult equivalents, one can arrive at a closer estimate by multiplying the estimate of 242,000 million Kwacha by the average number of adult equivalent units per person. In the 2002–03 LCMS there are an average of 0.94 adult equivalents per person, so that the new estimate would be around 227,000 million Kwacha per month.

Figure 10: District shares of total poverty gap

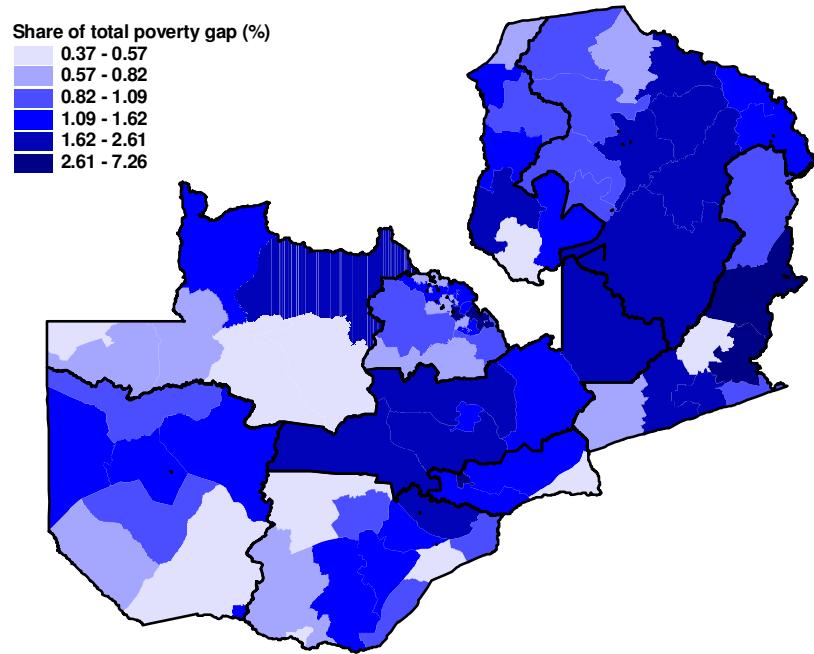


Figure 11: Constituency shares of total poverty gap

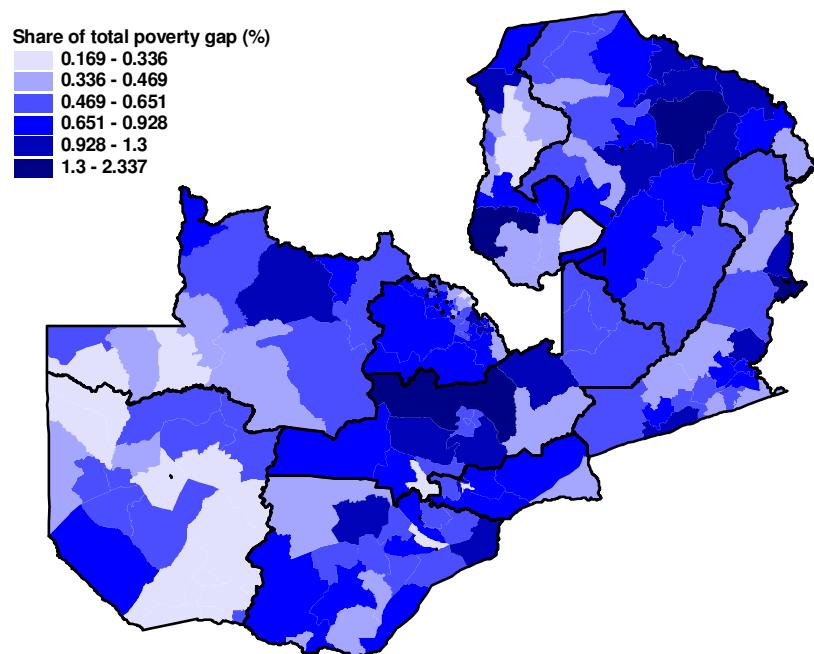
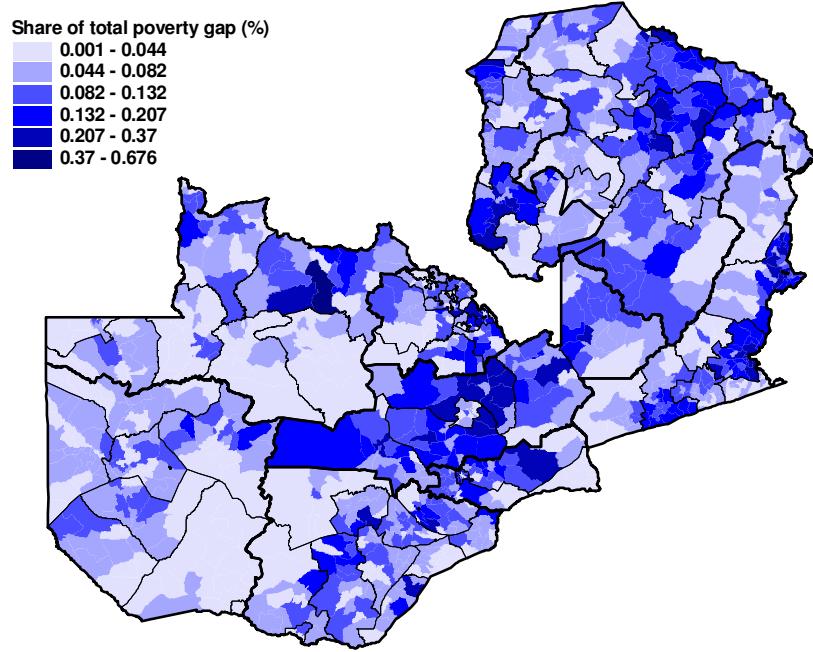


Figure 12: Ward shares of total poverty gap



4.5 Squared poverty gap index (P_2)

The poverty gap index is an improvement over the poverty headcount index because it measures the depth of poverty experienced by the poor, and is therefore sensitive to changes in well-being that occur below the poverty line. Yet the poverty gap index also has its limitations, especially if one is concerned about the poorest members of society. As the simplest example, consider a program that transfers income from Zambians who are just below the poverty line to Zambians who are at the absolute bottom of the income distribution. Furthermore, assume that this transfer is not large enough to allow any of the poorest Zambians to reach the level of the poverty line.

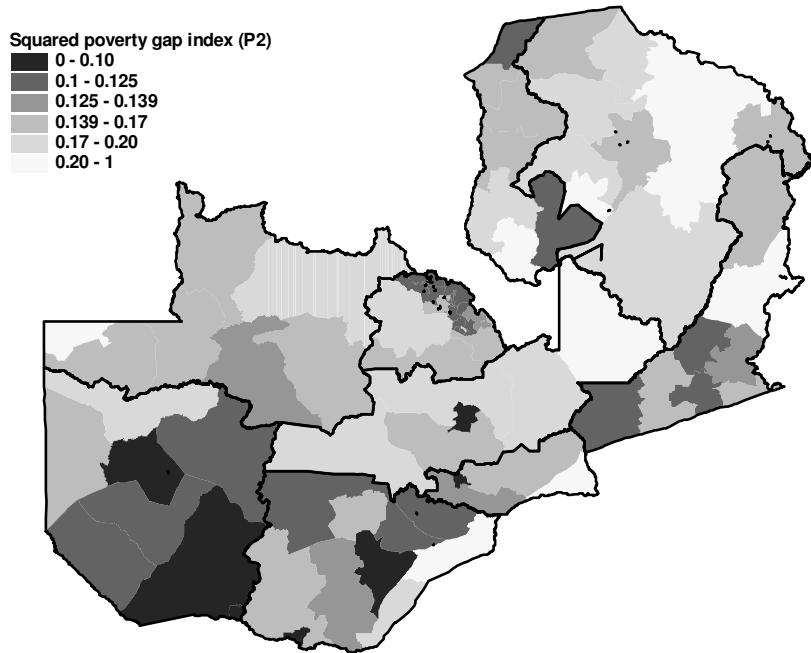
Whether or not such a transfer reduces poverty is debatable, especially because the poor are both losers and winners. However, if one gives greater weight to improving the situation of the poorest, one would conclude that the transfer does indeed reduce poverty, because the benefits to the poorest are given more weight than the losses experienced by the less poor. But in this example the proportion below the poverty line is unchanged, so the poverty headcount index would not change. Likewise, the poverty gap index would not change, because the average shortfall of the poor would be unchanged. The squared poverty gap would decline, because it is sensitive to the distribution of consumption (or income or expenditure) among those below the poverty line. A highly unequal distribution among the poor indicates severe levels of deprivation among the poorest. Other things equal, the squared poverty gap index will be lower (indicating less poverty) the more equal the distribution is below the poverty line.

4.5.1 Squared poverty gap index (P_2) by district

A shaded area map of the squared poverty gap (P_2) by district is shown in Figure 13. The patterns revealed are quite similar to those observed earlier for the poverty gap index (P_1). The districts with the lowest squared poverty gap index are Livingstone (0.054), Choma (0.083), Lusaka (0.085), Sesheke (0.088), and Mongu (0.098). Those with the highest P_2 index are Luangwa (0.405), Siavonga (0.291), Chavuma (0.273), Milenge (0.261), and Nakonde (0.259).

As mentioned earlier, as one moves to higher-order FGT poverty measures like the squared poverty gap (P_2), the precision of the estimates tends to decline, because of the well-known pattern that the standard errors of the higher order FGT measures tend to be larger relative to the point estimate. Even so, at relatively high levels of aggregation such as the district, the confidence intervals are still quite reasonable. The point estimates and 95% confidence intervals for the district-level squared poverty gap index (P_2) are presented in Annex B, next to the estimates for the poverty headcount and poverty gap indexes.

Figure 13: Small-area estimates of squared poverty gap (P_2) at district level

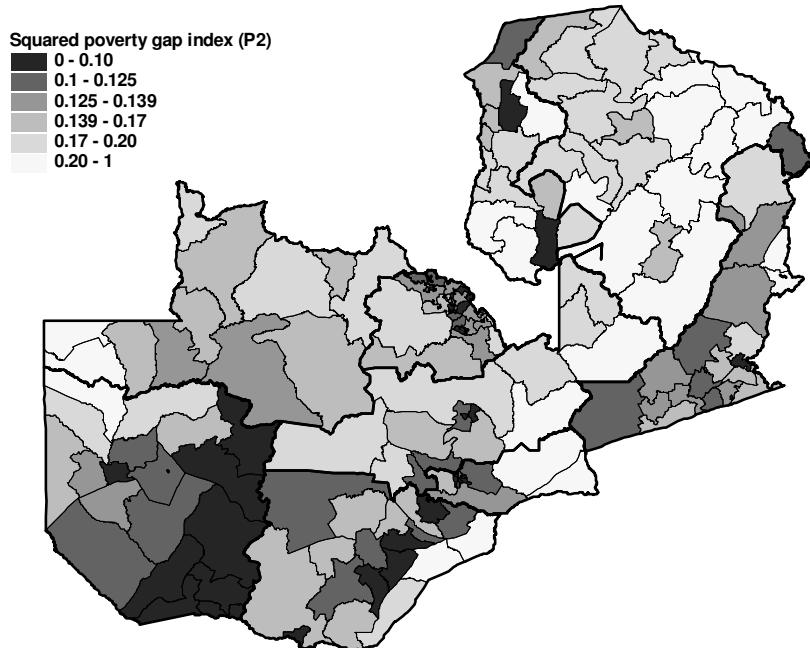


4.5.2 Squared poverty gap index (P_2) by constituency

The constituency-level estimates of the squared poverty gap index (P_2) by constituency are shown in Figure 14. These results closely parallel the findings for the poverty gap (P_1) at the constituency level. The tabular results for the squared poverty gap index for each constituency, including confidence intervals, are shown in Annex C, alongside the results for the poverty headcount and poverty gap indexes. Because the constituency level is still a fairly high level of aggregation, the confidence intervals for P_2 remain reasonably small.

The constituencies with the highest estimated squared poverty gap (P_2) index are Feira (0.405), Rufunsa (0.336), Siavonga (0.291), Mansa (0.261), and Nakonde (0.259). The constituencies with the lowest squared poverty gap (P_2) index are Kabwata (0.033), Lusaka Central (0.042), Livingstone (0.054), Bangwelu and Matero (0.068), Chipata (0.072), and Kantanshi (0.075).

Figure 14: Small-area estimates of squared poverty gap (P_2) at constituency level

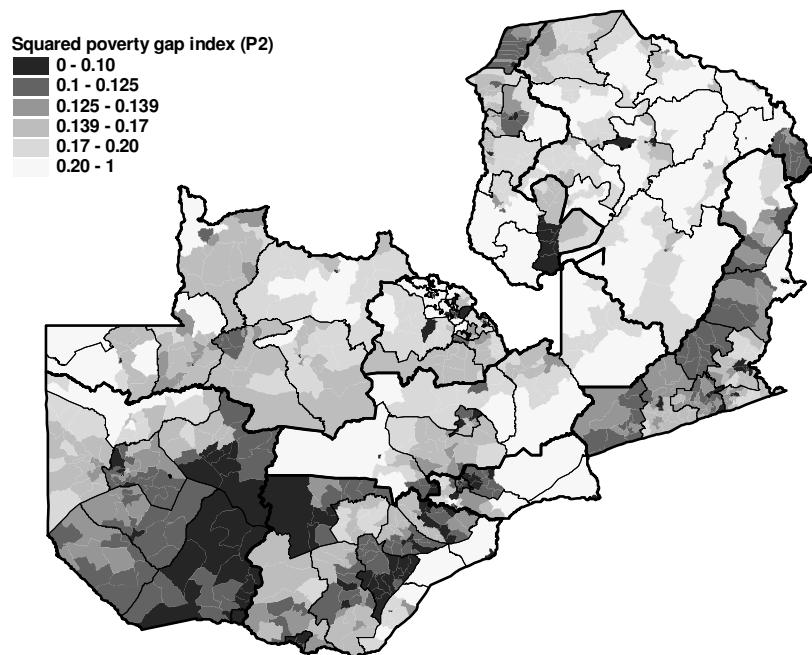


4.5.3 Squared poverty gap index (P_2) by ward

Figure 15 presents the estimates of the squared poverty gap index (P_2) by ward. Although there are subtle differences between this figure and the ward-level estimates of the poverty gap in Figure 8, the overall impression is that the patterns are much more similar than they are different. As with the poverty gap estimates, the ward-level map reveals substantial variability in the squared poverty gap within constituencies. This heterogeneity is most notable in Southern, Eastern, and Northern provinces.

The tabular results for the squared poverty gap index for each ward, including confidence intervals, are shown in Annex D, alongside the results for the poverty headcount and poverty gap indexes. Overall, the ward-level P_2 estimates are the least precise estimates that are presented here. Although the standard errors and confidence intervals are acceptable for most of the wards, it should be noted that many of the differences in the point estimates between different wards are not statistically significant. This should be borne in mind when assessing these findings and applying them to practical policy and program issues.

Figure 15: Small-area estimates of squared poverty gap (P_2) at ward level



Chapter 5: Conclusions

This report has used data from the 2000 Population and Housing Census, the 2002–03 Living Conditions Monitoring Survey, and additional geo-referenced data on geographic and agro-climatic characteristics to develop the first small-area estimates of poverty for Zambia. It has briefly reviewed recent empirical evidence on poverty in Zambia at more aggregate levels, and discussed the details of the application of small-area estimation—or poverty mapping—in Zambia. The results have been presented both as a series of maps that provide an easily understandable snapshot of the distribution of poverty in Zambia, and as detailed tables that give the point estimates and confidence intervals for three Foster-Greer-Thorbecke poverty indices (headcount, poverty gap, and squared poverty gap).

The findings from the research confirm the significant heterogeneity of poverty levels that exists within provinces, within districts, and within constituencies in Zambia. This is consistent with findings in neighboring countries, and although such results were expected for Zambia, this is the first time to document these results. To put it simply, national and provincial poverty indices are averages, and behind those averages are widely varying poverty rates at the sub-province and sub-district level. It is difficult to generalize the varied patterns revealed by the poverty maps, but the finding that comes through most strongly is that poverty rates tend to be lower in more densely populated urban areas, while poverty in the surrounding peri-urban and rural areas is significantly higher.

However, even though urban areas tend to have lower poverty indices, they tend to have a greater concentration of poor people. The explanation for this is twofold. The first part is simply a result of the higher population density in urban areas. Secondly, even though poverty rates are lower in urban areas, they are still extremely high. In essence, the slightly lower probability of urban dwellers to be poor is offset by the large number of urban dwellers.

This report has focused on estimating poverty in small areas and describing the patterns that emerge from the analysis. The logical next steps to build on this work are to use the detailed poverty estimates for more effective poverty reduction policy. This includes using the results to refine geographic targeting of programs, to inform resource allocation decisions at the central and decentralized levels, and to improve poverty monitoring systems. This research also paves the way for future research into the spatial determinants of poverty, which could provide useful insights for poverty reduction interventions in the future.

Although these findings represent an important step forward in poverty information in Zambia, there are three limitations to the results that should be kept in mind. The first is that just like poverty estimates obtained directly from survey data, the figures are estimates, and one also needs to remain cognizant of the confidence intervals around the point estimates. Secondly, the small-area poverty estimates are representative of the Census year, i.e., 2000. Despite the persistence of poverty in Zambia, it is highly likely that conditions have changed to some degree in the past six years. Finally, even though small-area estimation is a technically sound analytical tool and the results are easily understood by non-technical audiences, it is not a panacea. The information from the poverty maps should not be treated in isolation, but should be used to complement other sources of information to arrive at well-informed program and policy decisions.

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Annex A

Regression Results

Table A1—Regression output, Rural Central Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	11.2661	1.2009	9.3816	<.0001
Constituency median annual evapotranspiration	0.0041	0.0011	3.8207	0.0002
Constituency mean annual maximum temperature	-0.1610	0.0547	-2.9406	0.0034
Household owns bicycle	0.1144	0.0563	2.0300	0.0430
No. of boys with no education	0.0962	0.0397	2.4249	0.0157
Household owns canoe	0.2965	0.1151	2.5768	0.0103
No. of members with a disability	-0.1379	0.0703	-1.9615	0.0505
No. of members who work in service sector	0.2642	0.1036	2.5513	0.0111
No. of girls with complete primary education	0.2700	0.0865	3.1216	0.0019
No. of girls with complete secondary education	1.0792	0.4782	2.2567	0.0245
No. of household members	-0.2181	0.0214	-10.1747	<.0001
No. of household members squared	0.0072	0.0012	6.0046	<.0001
Household uses candles for lighting	0.3826	0.1043	3.6688	0.0003
Household uses fire for lighting	-0.2330	0.1201	-1.9396	0.0531
Household owns a telephone	0.9161	0.2815	3.2547	0.0012
Household owns a plough	0.1600	0.0635	2.5196	0.0121
Household uses a latrine	0.1492	0.0623	2.3959	0.0170
Observations	453			
Number of clusters	33			
F	14.441			
RMSE	0.538			
R ²	0.3464			
Adj-R ²	0.3224			

Table A2—Regression output, Urban Central Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	6.3255	1.1905	5.3132	<.0001
Constituency mean annual maximum temperature	0.2150	0.0442	4.8628	<.0001
Household has electricity	0.2987	0.0746	4.0016	<.0001
No. of girls with some primary education	-0.0933	0.0331	-2.8183	0.0051
Household head is married	0.1410	0.0534	2.6404	0.0086
Natural log(No. of household members)	-0.5913	0.0504	-11.7225	<.0001
No. of men with some primary education	-0.1289	0.0497	-2.5917	0.0099
Highest level of education of anyone in the household	0.1512	0.0303	4.9889	<.0001
Dwelling has a metal roof	0.2148	0.0538	3.9937	<.0001
Household owns a television	0.2019	0.0689	2.9309	0.0036
Proportion of households in EA that own motor vehicle	2.8969	0.5191	5.5803	<.0001
Observations	387			
Number of clusters	16			
F	50.735			
RMSE	0.448			
R ²	0.5744			
Adj-R ²	0.5630			

Table A3—Regression output, Rural Copperbelt Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	10.7041	0.6010	17.8097	<.0001
Constituency mean annual minimum temperature	0.1891	0.0429	4.4076	<.0001
Household owns bicycle	0.1870	0.0546	3.4238	0.0007
Household owns fridge	0.4087	0.1431	2.8552	0.0046
No. of household members	-0.3518	0.0340	-10.3571	<.0001
No. of household members squared	0.0164	0.0029	5.6092	<.0001
Highest level of education of anyone in the household	0.1335	0.0307	4.3426	<.0001
Dwelling has an asbestos roof	0.2000	0.0830	2.4103	0.0166
Drinking water source: Borehole	0.2496	0.0895	2.7885	0.0056
Drinking water source: Public tap	-0.3291	0.1171	-2.8102	0.0053
Observations	299			
Number of clusters	20			
F	38.809			
RMSE	0.424			
R ²	0.5472			
Adj-R ²	0.5331			

Table A4—Regression output, Urban Copperbelt Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	13.6141	0.1210	112.5064	0.0000
No. of boys who ever attended school	0.0432	0.0160	2.6966	0.0071
Household owns canoe	0.9174	0.2808	3.2670	0.0011
Household cooks with charcoal	0.1689	0.0625	2.7037	0.0070
Household cooks with electricity	0.3145	0.0706	4.4531	0.0000
Dwelling has a mud floor	-0.1056	0.0423	-2.4937	0.0128
Household owns fridge	0.2072	0.0413	5.0114	0.0000
No. of household members	-0.3378	0.0166	-20.3198	0.0000
No. of household members squared	0.0144	0.0012	12.0605	0.0000
No. of men with some primary education	-0.1182	0.0374	-3.1650	0.0016
Highest level of education of anyone in the household	0.1162	0.0191	6.0886	0.0000
Proportion of members that are girls 0-4 years old	-0.3006	0.1173	-2.5641	0.0105
Household owns a telephone	0.3225	0.0464	6.9451	0.0000
Household owns a radio	0.1099	0.0291	3.7805	0.0002
Household buries its refuse	0.0708	0.0293	2.4140	0.0159
Household refuse is collected	0.2668	0.0477	5.5875	0.0000
Household owns a television	0.1227	0.0356	3.4450	0.0006
Household owns a motor vehicle	0.4786	0.0552	8.6729	0.0000
Dwelling has concrete walls	-0.2049	0.0302	-6.7822	0.0000
Drinking water source: Piped (interior or private tap)	0.2921	0.0354	8.2611	0.0000
No. of women with complete post-secondary education	0.0739	0.0336	2.1966	0.0282
Observations	1,247			
Number of clusters	50			
F	152.391			
RMSE	0.197			
R ²	0.7131			
Adj-R ²	0.7085			

Table A5—Regression output, Rural Eastern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	-1.5290	1.9308	-0.7919	0.4287
Constituency median annual evapotranspiration	0.0085	0.0020	4.2794	<.0001
Constituency median annual precipitation	0.0023	0.0004	5.7109	<.0001
Constituency mean annual maximum temperature	-0.1357	0.0592	-2.2930	0.0221
Household owns bicycle	0.1080	0.0352	3.0722	0.0022
No. of boys with complete primary education	-0.1770	0.0703	-2.5197	0.0120
Household cooks with wood	-0.2657	0.1192	-2.2294	0.0261
Dwelling has a mud floor	-0.1988	0.0633	-3.1407	0.0018
Age of household head	-0.0042	0.0010	-4.0856	<.0001
No. of household members	-0.3042	0.0202	-15.0681	<.0001
No. of household members squared	0.0136	0.0016	8.7476	<.0001
No. of men with complete primary education	0.0925	0.0350	2.6453	0.0083
No. of men with complete secondary education	0.2132	0.0805	2.6490	0.0083
Highest level of education of anyone in the household	0.0863	0.0261	3.3026	0.0010
Household owns a plough	0.1867	0.0456	4.0921	<.0001
Dwelling has a metal roof	-0.1710	0.0623	-2.7444	0.0062
Household uses communal flush toilet	-1.5812	0.6384	-2.4768	0.0135
Household owns a television	0.3223	0.1221	2.6392	0.0085
Household owns a motor vehicle	1.3219	0.2592	5.1004	<.0001
Dwelling has grass walls	-0.3163	0.1581	-2.0001	0.0459
Drinking water source: Borehole	-0.1365	0.0377	-3.6171	0.0003
Observations	734			
Number of clusters	50			
F	38.133			
RMSE	0.428			
R ²	0.5168			
Adj-R ²	0.5033			

Table A6—Regression output, Urban Eastern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	12.7708	0.0779	164.0281	0.0000
Proportion of households in EA that have electricity	0.4632	0.1067	4.3397	0.0000
Household owns fridge	0.2772	0.0917	3.0224	0.0028
Household uses paraffin for lighting	-0.2492	0.0615	-4.0506	0.0001
Natural log(No. of household members)	-0.6958	0.0413	-16.8333	0.0000
No. of men with some primary education	-0.1741	0.0518	-3.3588	0.0009
Proportion of members that are boys 0-4 years old	-0.6476	0.2316	-2.7968	0.0056
Household owns a television	0.2724	0.0662	4.1172	0.0001
Household owns a motor vehicle	0.4983	0.1554	3.2064	0.0015
Drinking water source: Borehole	0.4147	0.0884	4.6900	0.0000
Observations	248			
Number of clusters	10			
F	66.773			
RMSE	0.400			
R ²	0.7163			
Adj-R ²	0.7056			

Table A7—Regression output, Rural Luapula Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	4.5151	2.3653	1.9088	0.0568
Constituency mean annual evapotranspiration	0.0044	0.0013	3.2742	0.0011
Constituency median annual precipitation	0.0020	0.0003	6.1144	0.0000
Household owns fridge	1.2281	0.4730	2.5965	0.0097
No. of household members	-0.3968	0.0367	-10.8026	0.0000
No. of household members squared	0.0216	0.0030	7.1847	0.0000
Highest level of education of anyone in the household	0.1684	0.0315	5.3454	0.0000
Proportion of members that are women 60+ years old	-0.3178	0.1448	-2.1942	0.0286
Constituency mean population density	0.0423	0.0055	7.7163	0.0000
Constituency median population density	-0.0139	0.0046	-2.9941	0.0029
Household owns a radio	0.2379	0.0511	4.6527	0.0000
Dwelling has a metal roof	0.3746	0.1051	3.5630	0.0004
Household owns a television	0.7475	0.2124	3.5199	0.0005
Dwelling has concrete walls	-1.5002	0.3104	-4.8331	0.0000
Observations	553			
Number of clusters	37			
F	34.304			
RMSE	0.478			
R ²	0.4528			
Adj-R ²	0.4396			

Table A8—Regression output, Urban Luapula Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	12.5447	0.2247	55.8241	<.0001
Proportion of households in EA that own bicycle	1.0297	0.1965	5.2408	<.0001
Household cooks with electricity	0.3939	0.0780	5.0470	<.0001
Household cooks with wood	0.2117	0.0863	2.4529	0.0148
Household head's age squared	-0.0001	0.0000	-3.2286	0.0014
No. of household members	0.0939	0.0303	3.1003	0.0021
Household uses paraffin for lighting	-0.1727	0.0637	-2.7126	0.0071
Natural log(No. of household members)	-1.0601	0.1382	-7.6723	<.0001
Constituency mean population density	0.0417	0.0096	4.3573	<.0001
Household owns a radio	0.1744	0.0587	2.9743	0.0032
Drinking water source: Public tap	0.4150	0.0772	5.3787	<.0001
Observations	299			
Number of clusters	12			
F	36.820			
RMSE	0.429			
R ²	0.5611			
Adj-R ²	0.5459			

Table A9—Regression output, Rural Lusaka Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	39.4770	4.2810	9.2215	0.0000
Constituency annual absolute maximum temperature	-5.9225	1.3697	-4.3238	0.0000
Constituency mean annual maximum temperature	6.0312	1.4594	4.1327	0.0000
Household cooks with electricity	0.5556	0.0961	5.7814	0.0000
Household head is male	0.3285	0.0790	4.1587	0.0000
Household head has never married	0.4696	0.1524	3.0822	0.0023
Household head is separated or divorced	0.2255	0.1065	2.1171	0.0353
No. of household members	-0.2989	0.0451	-6.6248	0.0000
No. of household members squared	0.0147	0.0033	4.5236	0.0000
No. of men with some primary education	-0.1162	0.0568	-2.0446	0.0420
Household owns a radio	0.2167	0.0660	3.2858	0.0012
Household uses communal flush toilet	-0.5085	0.2256	-2.2535	0.0251
Household owns a motor vehicle	1.3232	0.1266	10.4475	0.0000
Dwelling has metal walls	-0.5661	0.2010	-2.8168	0.0053
Drinking water source: Public tap	-0.3029	0.1026	-2.9511	0.0035
Drinking water source: River or other surface water	0.2362	0.0999	2.3647	0.0188
Observations	257			
Number of clusters	18			
F	45.196			
RMSE	0.451			
R ²	0.7377			
Adj-R ²	0.7214			

Table A10—Regression output, Urban Lusaka Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	12.2257	0.1231	99.2856	0.0000
No. of boys with some primary education	0.0546	0.0191	2.8530	0.0044
Household has electricity	0.2314	0.0371	6.2298	0.0000
Household owns fridge	0.1731	0.0424	4.0799	0.0000
No. of girls with no education	0.0557	0.0267	2.0817	0.0376
Household head has never married	0.1134	0.0565	2.0066	0.0450
Household uses paraffin for lighting	-0.2216	0.0608	-3.6443	0.0003
Natural log(No. of household members)	-0.8031	0.0323	-24.8706	0.0000
No. of men with some primary education	0.0808	0.0395	2.0477	0.0408
Highest level of education of anyone in the household	0.0962	0.0227	4.2337	0.0000
Household owns a radio	0.1039	0.0329	3.1609	0.0016
Household burns its refuse	0.2786	0.1365	2.0406	0.0415
Household refuse is collected	-0.2198	0.0462	-4.7622	0.0000
Dwelling has an asbestos roof	-0.1582	0.0540	-2.9300	0.0035
Dwelling has a metal roof	-0.2461	0.0599	-4.1125	0.0000
Household uses private flush toilet	0.3072	0.0480	6.4015	0.0000
Household owns a motor vehicle	0.6134	0.0550	11.1434	0.0000
Drinking water source: Public tap	-0.1415	0.0350	-4.0378	0.0001
No. of women with complete post-secondary education	0.1584	0.0420	3.7737	0.0002
Observations	1,152			
Number of clusters	50			
F	130.201			
RMSE	0.467			
R ²	0.6741			
Adj-R ²	0.6689			

Table A11—Regression output, Rural Northern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	21.4770	1.4258	15.0634	0.0000
Constituency annual absolute maximum temperature	-0.2150	0.0390	-5.5073	0.0000
Household owns bicycle	0.1340	0.0431	3.1081	0.0020
Proportion of households in EA that own bicycle	-0.8120	0.1676	-4.8435	0.0000
No. of boys with no education	0.0793	0.0333	2.3816	0.0175
Household owns canoe	-0.2307	0.0586	-3.9391	0.0001
Proportion of households in EA that have electricity	6.2366	1.3966	4.4657	0.0000
Dwelling has a mud floor	-0.2111	0.0665	-3.1763	0.0016
Household head is male	0.1095	0.0496	2.2049	0.0278
No. of household members	-0.3858	0.0334	-11.5664	0.0000
No. of household members squared	0.0198	0.0028	7.1647	0.0000
Household owns a radio	0.1436	0.0452	3.1766	0.0016
Proportion of households in EA that own a radio	0.6681	0.1976	3.3819	0.0008
Household buries its refuse	0.1045	0.0420	2.4901	0.0130
Constituency mean elevation	-0.0011	0.0002	-4.8730	0.0000
Dwelling has walls made of poles	0.1406	0.0614	2.2883	0.0224
Drinking water source: Borehole	0.5877	0.1479	3.9750	0.0001
Drinking water source: River or other surface water	0.1802	0.0557	3.2326	0.0013
Drinking water source: Unprotected well	0.2278	0.0597	3.8153	0.0001
Observations	657			
Number of clusters	44			
F	31.141			
RMSE	0.471			
R ²	0.4677			
Adj-R ²	0.4527			

Table A12—Regression output, Urban Northern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	12.9635	0.3411	38.0069	0.0000
Constituency annual absolute minimum temperature	0.0874	0.0260	3.3622	0.0009
No. of boys with complete primary education	0.1585	0.0639	2.4793	0.0136
Household cooks with electricity	0.3202	0.0950	3.3704	0.0008
Dwelling has a mud floor	-0.3396	0.0608	-5.5822	0.0000
Household owns fridge	0.2717	0.0952	2.8535	0.0046
No. of girls with complete primary education	0.1262	0.0619	2.0380	0.0422
Household head is separated or divorced	-0.3746	0.0994	-3.7702	0.0002
No. of household members	-0.3114	0.0377	-8.2630	0.0000
No. of household members squared	0.0125	0.0027	4.6310	0.0000
Household uses candles for lighting	0.1815	0.0785	2.3136	0.0212
Proportion of members that are men 60+ years old	0.8691	0.4182	2.0781	0.0384
Household owns a television	0.2321	0.0771	3.0114	0.0028
Household owns a motor vehicle	0.8161	0.1416	5.7627	0.0000
Observations	397			
Number of clusters	16			
F	38.697			
RMSE	0.465			
R ²	0.5678			
Adj-R ²	0.5531			

Table A13—Regression output, Rural North-Western Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	20.0154	1.6966	11.7977	<.0001
Constituency mean annual P/PE (agro-ecological index)	11.8651	3.0867	3.8439	0.0001
Constituency mean annual precipitation	-0.0249	0.0076	-3.2654	0.0012
Constituency median annual precipitation	0.0100	0.0048	2.0801	0.0380
Household owns bicycle	0.1742	0.0434	4.0179	<.0001
Age of household head	-0.0049	0.0013	-3.7769	0.0002
No. of household members	-0.2795	0.0243	-11.4978	<.0001
No. of household members squared	0.0123	0.0018	6.9614	<.0001
Household uses paraffin for lighting	0.1201	0.0431	2.7893	0.0055
Household owns a plough	0.7132	0.1525	4.6784	<.0001
Dwelling has a thatch roof	-0.2093	0.0650	-3.2212	0.0014
Dwelling has concrete walls	0.3633	0.1615	2.2502	0.0248
Dwelling has walls of 'other' material	-0.2392	0.1205	-1.9854	0.0476
Dwelling has walls made of poles	-0.2178	0.0668	-3.2593	0.0012
Observations	571			
Number of clusters	40			
F	28.471			
RMSE	0.468			
R ²	0.3992			
Adj-R ²	0.3852			

Table A14—Regression output, Urban North-Western Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	12.9297	0.1700	76.0552	<.0001
Household cooks with electricity	0.3992	0.0907	4.4020	<.0001
No. of household members	-0.3357	0.0445	-7.5529	<.0001
No. of household members squared	0.0162	0.0032	5.0552	<.0001
Household uses paraffin for lighting	-0.3557	0.0779	-4.5640	<.0001
No. of men with some primary education	-0.2419	0.0880	-2.7491	0.0064
Household owns a motor vehicle	0.5791	0.1672	3.4631	0.0006
Drinking water source: Piped (interior or private tap)	0.3306	0.0850	3.8910	0.0001
Observations	247			
Number of clusters	10			
F	48.469			
RMSE	0.482			
R ²	0.5867			
Adj-R ²	0.5746			

Table A15—Regression output, Rural Southern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	0.8503	2.7276	0.3117	0.7554
Constituency median annual evapotranspiration	0.0040	0.0012	3.4109	0.0007
Constituency mean annual precipitation	-0.0164	0.0045	-3.6256	0.0003
Constituency median annual precipitation	0.0219	0.0048	4.5701	<.0001
Household owns bicycle	0.1171	0.0409	2.8598	0.0044
No. of boys with complete primary education	0.1868	0.0805	2.3200	0.0207
Household has electricity	0.2620	0.0865	3.0282	0.0026
Household head is male	-0.1371	0.0586	-2.3423	0.0195
Household head is widow(er)	-0.2552	0.0714	-3.5731	0.0004
No. of household members	-0.2249	0.0163	-13.8179	<.0001
No. of household members squared	0.0069	0.0008	8.8479	<.0001
Household uses paraffin for lighting	0.2005	0.0431	4.6540	<.0001
Highest level of education of anyone in the household	0.0582	0.0272	2.1432	0.0325
Household owns a motorcycle	-0.7473	0.2161	-3.4576	0.0006
Household owns a plough	0.2223	0.0444	5.0132	<.0001
Proportion of members that are men 15-39 years old	0.4678	0.1019	4.5888	<.0001
Household uses a latrine	0.0932	0.0427	2.1811	0.0296
Constituency mean elevation	0.0018	0.0004	4.6864	<.0001
Household owns a television	0.3290	0.0826	3.9853	<.0001
Household owns a motor vehicle	0.7879	0.1662	4.7406	<.0001
Drinking water source: Protected well	0.1684	0.0705	2.3883	0.0172
Drinking water source: River or other surface water	0.1091	0.0505	2.1616	0.0311
Observations	597			
Number of clusters	41			
F	33.333			
RMSE	0.434			
R ²	0.5490			
Adj-R ²	0.5326			

Table A16—Regression output, Urban Southern Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	13.7890	0.1535	89.8148	0.0000
Household head has never married	0.2502	0.0952	2.6273	0.0089
Household uses paraffin for lighting	-0.2731	0.0591	-4.6237	0.0000
Natural log(No. of household members)	-0.5961	0.0503	-11.8458	0.0000
No. of men with complete primary education	-0.1069	0.0322	-3.3263	0.0010
Household owns a plough	0.4355	0.0933	4.6679	0.0000
Household owns a radio	0.2291	0.0517	4.4291	0.0000
Household uses private flush toilet	0.1788	0.0515	3.4688	0.0006
Household owns a motor vehicle	0.4040	0.0881	4.5855	0.0000
No. of women with complete secondary education	0.0998	0.0391	2.5523	0.0110
Observations	444			
Number of clusters	10			
F	48.662			
RMSE	0.456			
R ²	0.5023			
Adj-R ²	0.4919			

Table A17—Regression output, Rural Western Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	18.7954	1.4620	12.8560	<.0001
Constituency median annual evapotranspiration	0.0048	0.0011	4.5347	<.0001
Constituency mean annual maximum temperature	-0.4645	0.0806	-5.7666	<.0001
Household owns bicycle	0.2003	0.0842	2.3788	0.0177
No. of girls with complete secondary education	-0.8051	0.3539	-2.2748	0.0233
Household head is married	0.1050	0.0441	2.3806	0.0176
No. of household members	-0.3241	0.0282	-11.4846	<.0001
No. of household members squared	0.0150	0.0023	6.4712	<.0001
Highest level of education of anyone in the household	0.0721	0.0227	3.1736	0.0016
Proportion of members that are women 15-39 years old	0.2457	0.1140	2.1559	0.0315
Household owns a plough	0.1250	0.0521	2.3973	0.0169
Drinking water source: Borehole	-0.1867	0.0750	-2.4907	0.0131
Drinking water source: Protected well	0.2405	0.0857	2.8076	0.0052
Observations	536			
Number of clusters	41			
F	35.433			
RMSE	0.443			
R ²	0.4484			
Adj-R ²	0.4358			

Table A18—Regression output, Urban Western Province

Regressor	Coef.	Std.Err.	z	Prob> z
Intercept	14.5967	0.2961	49.2937	<.0001
No. of members who work in agric sector	-0.1147	0.0340	-3.3720	0.0009
No. of members who are employed by others	0.1061	0.0480	2.2113	0.0283
Household head's age squared	-0.0001	0.0000	-2.7929	0.0058
No. of household members	-0.2195	0.0321	-6.8325	<.0001
No. of household members squared	0.0083	0.0023	3.5986	0.0004
No. of men with some primary education	-0.1487	0.0520	-2.8569	0.0048
Household owns a motor vehicle	1.1333	0.2477	4.5746	<.0001
Dwelling has concrete walls	0.3020	0.0627	4.8199	<.0001
Drinking water source: Unprotected well	0.4166	0.1193	3.4916	0.0006
Observations	189			
Number of clusters	9			
F	32.335			
RMSE	0.359			
R ²	0.6192			
Adj-R ²	0.6000			

Annex B

Province and Rural/Urban Level Poverty Estimates

Table B1—Province and rural/urban level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Area	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
LCMS III estimates						
Central Province Rural	0.728	0.652 – 0.804	0.314	0.265 – 0.362	0.166	0.133 – 0.200
Central Province Urban	0.567	0.446 – 0.688	0.227	0.162 – 0.292	0.110	0.072 – 0.148
Copperbelt Province Rural	0.765	0.679 – 0.850	0.301	0.244 – 0.359	0.151	0.112 – 0.191
Copperbelt Province Urban	0.545	0.467 – 0.624	0.213	0.173 – 0.253	0.107	0.083 – 0.131
Eastern Province Rural	0.736	0.677 – 0.796	0.296	0.256 – 0.337	0.149	0.122 – 0.176
Eastern Province Urban	0.399	0.210 – 0.588	0.129	0.060 – 0.199	0.057	0.022 – 0.091
Luapula Province Rural	0.736	0.661 – 0.810	0.311	0.257 – 0.364	0.166	0.129 – 0.202
Luapula Province Urban	0.532	0.375 – 0.688	0.177	0.104 – 0.249	0.079	0.042 – 0.117
Lusaka Province Rural	0.728	0.569 – 0.887	0.357	0.257 – 0.457	0.212	0.140 – 0.284
Lusaka Province Urban	0.528	0.451 – 0.606	0.185	0.149 – 0.221	0.086	0.065 – 0.107
Northern Province Rural	0.838	0.788 – 0.888	0.399	0.353 – 0.444	0.225	0.186 – 0.264
Northern Province Urban	0.589	0.459 – 0.718	0.236	0.156 – 0.315	0.122	0.072 – 0.173
North-Western Province Rural	0.767	0.721 – 0.813	0.320	0.284 – 0.357	0.165	0.137 – 0.193
North-Western Province Urban	0.415	0.242 – 0.588	0.172	0.080 – 0.265	0.090	0.035 – 0.144
Southern Province Rural	0.682	0.614 – 0.750	0.265	0.226 – 0.304	0.130	0.102 – 0.158
Southern Province Urban	0.435	0.312 – 0.558	0.132	0.092 – 0.173	0.057	0.038 – 0.076
Western Province Rural	0.693	0.622 – 0.765	0.258	0.212 – 0.305	0.127	0.098 – 0.157
Western Province Urban	0.343	0.222 – 0.463	0.092	0.047 – 0.137	0.034	0.013 – 0.054
Small-area (poverty-mapping method) estimates						
Central Province Rural	0.720	0.691 – 0.749	0.323	0.302 – 0.345	0.180	0.163 – 0.198
Central Province Urban	0.518	0.492 – 0.545	0.187	0.171 – 0.204	0.090	0.079 – 0.102
Copperbelt Province Rural	0.749	0.725 – 0.774	0.326	0.304 – 0.349	0.174	0.156 – 0.192
Copperbelt Province Urban	0.555	0.539 – 0.571	0.222	0.211 – 0.234	0.115	0.107 – 0.123
Eastern Province Rural	0.707	0.684 – 0.730	0.297	0.281 – 0.314	0.157	0.145 – 0.170
Eastern Province Urban	0.372	0.346 – 0.398	0.107	0.094 – 0.120	0.042	0.035 – 0.050
Luapula Province Rural	0.721	0.698 – 0.744	0.311	0.293 – 0.329	0.168	0.153 – 0.183
Luapula Province Urban	0.527	0.490 – 0.563	0.183	0.160 – 0.206	0.085	0.070 – 0.100
Lusaka Province Rural	0.698	0.657 – 0.739	0.327	0.298 – 0.355	0.189	0.167 – 0.211

Table B1—Province and rural/urban level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Area	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lusaka Province Urban	0.488	0.466 – 0.510	0.176	0.163 – 0.189	0.084	0.076 – 0.092
Northern Province Rural	0.783	0.758 – 0.809	0.369	0.347 – 0.391	0.211	0.192 – 0.230
Northern Province Urban	0.561	0.533 – 0.589	0.216	0.198 – 0.234	0.108	0.095 – 0.121
North-Western Province Rural	0.760	0.737 – 0.783	0.334	0.314 – 0.355	0.182	0.165 – 0.199
North-Western Province Urban	0.447	0.408 – 0.486	0.172	0.145 – 0.199	0.089	0.069 – 0.110
Southern Province Rural	0.685	0.662 – 0.707	0.279	0.263 – 0.296	0.146	0.133 – 0.159
Southern Province Urban	0.407	0.371 – 0.443	0.116	0.101 – 0.131	0.046	0.038 – 0.054
Western Province Rural	0.675	0.645 – 0.705	0.265	0.241 – 0.290	0.133	0.114 – 0.152
Western Province Urban	0.307	0.258 – 0.356	0.087	0.065 – 0.108	0.035	0.024 – 0.046

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Annex C
District-Level Poverty Estimates

Table C2—District-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / District (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Central Province						
Chibombo (101)	0.674	0.636 – 0.712	0.286	0.261 – 0.312	0.154	0.136 – 0.172
Kabwe (102)	0.498	0.471 – 0.525	0.177	0.161 – 0.193	0.084	0.073 – 0.095
Kapiri Mposhi (103)	0.709	0.674 – 0.743	0.318	0.291 – 0.345	0.178	0.157 – 0.198
Mkushi (104)	0.734	0.702 – 0.765	0.332	0.309 – 0.356	0.186	0.168 – 0.205
Mumbwa (105)	0.702	0.669 – 0.734	0.311	0.285 – 0.337	0.171	0.151 – 0.192
Serenje (106)	0.754	0.717 – 0.791	0.351	0.317 – 0.385	0.201	0.173 – 0.229
Copperbelt Province						
Chililabombwe (201)	0.570	0.548 – 0.592	0.234	0.221 – 0.247	0.123	0.113 – 0.132
Chingola (202)	0.543	0.525 – 0.562	0.224	0.213 – 0.236	0.119	0.111 – 0.127
Kalulushi (203)	0.613	0.594 – 0.632	0.265	0.250 – 0.281	0.144	0.132 – 0.156
Kitwe (204)	0.567	0.551 – 0.582	0.227	0.216 – 0.239	0.117	0.109 – 0.125
Luanshya (205)	0.587	0.571 – 0.603	0.231	0.220 – 0.242	0.117	0.109 – 0.125
Lufwanyama (206)	0.802	0.779 – 0.825	0.354	0.330 – 0.378	0.188	0.167 – 0.208
Masaiti (207)	0.689	0.656 – 0.722	0.285	0.259 – 0.310	0.148	0.129 – 0.167
Mpongwe (208)	0.741	0.710 – 0.771	0.302	0.275 – 0.329	0.152	0.131 – 0.173
Mufulira (209)	0.546	0.528 – 0.565	0.214	0.203 – 0.224	0.109	0.101 – 0.116
Ndola (210)	0.597	0.582 – 0.612	0.250	0.238 – 0.262	0.133	0.124 – 0.143
Eastern Province						
Chadiza (301)	0.651	0.611 – 0.690	0.271	0.245 – 0.298	0.145	0.123 – 0.166
Chama (302)	0.778	0.739 – 0.817	0.319	0.294 – 0.343	0.161	0.144 – 0.179
Chipata (303)	0.627	0.600 – 0.655	0.254	0.234 – 0.273	0.132	0.117 – 0.146
Katete (304)	0.639	0.602 – 0.675	0.246	0.221 – 0.271	0.122	0.105 – 0.140
Lundazi (305)	0.791	0.759 – 0.822	0.367	0.341 – 0.393	0.206	0.186 – 0.226
Mambwe (306)	0.561	0.501 – 0.621	0.215	0.180 – 0.250	0.108	0.084 – 0.132
Nyimba (307)	0.600	0.531 – 0.670	0.238	0.192 – 0.284	0.123	0.091 – 0.154
Petauke (308)	0.694	0.666 – 0.721	0.279	0.261 – 0.298	0.143	0.129 – 0.156
Luapula Province						
Chiengi (401)	0.655	0.589 – 0.722	0.245	0.200 – 0.291	0.119	0.089 – 0.149

Table C2—District-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / District (code)	P_0	95% confidence interval		P_1	95% confidence interval		P_2	95% confidence interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Kawambwa (402)	0.686	0.660	0.713	0.283	0.264	0.303	0.149	0.134	0.164
Mansa (403)	0.744	0.713	0.775	0.340	0.313	0.367	0.192	0.170	0.213
Milenge (404)	0.835	0.798	0.872	0.428	0.393	0.463	0.261	0.231	0.290
Mwense (405)	0.762	0.735	0.790	0.322	0.298	0.345	0.168	0.149	0.188
Nchelenge (406)	0.722	0.691	0.754	0.296	0.269	0.324	0.153	0.131	0.174
Samfya (407)	0.582	0.535	0.629	0.233	0.204	0.262	0.122	0.102	0.142
Lusaka Province									
Chongwe (501)	0.670	0.621	0.718	0.299	0.268	0.331	0.168	0.145	0.191
Kafue (502)	0.605	0.570	0.641	0.256	0.232	0.279	0.136	0.119	0.154
Luangwa (503)	0.916	0.896	0.937	0.578	0.523	0.633	0.405	0.344	0.466
Lusaka (504)	0.490	0.468	0.511	0.177	0.164	0.190	0.085	0.076	0.093
Northern Province									
Chilubi (601)	0.767	0.717	0.818	0.359	0.316	0.402	0.205	0.172	0.239
Chinsali (602)	0.803	0.780	0.827	0.390	0.366	0.413	0.228	0.207	0.248
Isoka (603)	0.715	0.676	0.753	0.312	0.285	0.339	0.170	0.150	0.190
Kaputa (604)	0.707	0.629	0.785	0.307	0.254	0.360	0.167	0.130	0.203
Kasama (605)	0.675	0.656	0.694	0.294	0.279	0.309	0.160	0.148	0.172
Luwingu (606)	0.750	0.716	0.783	0.332	0.305	0.359	0.181	0.160	0.202
Mbala (607)	0.768	0.737	0.800	0.358	0.325	0.391	0.203	0.175	0.230
Mpika (608)	0.737	0.708	0.765	0.335	0.311	0.359	0.188	0.168	0.207
Mporokoso (609)	0.776	0.746	0.807	0.350	0.322	0.377	0.193	0.171	0.215
Mpulungu (610)	0.722	0.676	0.769	0.322	0.285	0.359	0.178	0.150	0.206
Mungwi (611)	0.830	0.798	0.861	0.413	0.381	0.445	0.245	0.218	0.272
Nakonde (612)	0.813	0.780	0.845	0.423	0.381	0.464	0.259	0.222	0.296
North-Western Province									
Chavuma (701)	0.883	0.814	0.952	0.454	0.364	0.544	0.273	0.197	0.350
Kabompo (702)	0.671	0.639	0.704	0.273	0.250	0.296	0.141	0.124	0.158
Kasempa (703)	0.686	0.638	0.735	0.294	0.258	0.330	0.159	0.132	0.186
Mufumbwe (Chizera)	0.672	0.617	0.726	0.267	0.228	0.306	0.137	0.110	0.163

Table C2—District-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / District (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
(704)						
Mwinilunga (705)	0.739	0.706 – 0.772	0.315	0.289 – 0.341	0.167	0.148 – 0.186
Solwezi (706)	0.727	0.705 – 0.750	0.325	0.304 – 0.345	0.179	0.162 – 0.196
Zambezi (707)	0.711	0.676 – 0.746	0.311	0.282 – 0.340	0.169	0.147 – 0.192
Southern Province						
Choma (801)	0.554	0.520 – 0.588	0.185	0.165 – 0.205	0.083	0.070 – 0.096
Gwembe (802)	0.788	0.733 – 0.843	0.401	0.361 – 0.440	0.244	0.211 – 0.277
Itezhi-tezhi (803)	0.608	0.571 – 0.645	0.224	0.199 – 0.249	0.109	0.091 – 0.127
Kalomo (804)	0.664	0.624 – 0.705	0.257	0.228 – 0.286	0.128	0.108 – 0.148
Kazungula (805)	0.706	0.659 – 0.754	0.283	0.251 – 0.315	0.144	0.121 – 0.166
Livingstone (806)	0.406	0.372 – 0.441	0.126	0.112 – 0.141	0.054	0.046 – 0.062
Mazabuka (807)	0.596	0.563 – 0.629	0.223	0.201 – 0.244	0.109	0.095 – 0.124
Monze (808)	0.638	0.612 – 0.664	0.230	0.213 – 0.247	0.108	0.096 – 0.120
Namwala (809)	0.735	0.696 – 0.775	0.312	0.276 – 0.348	0.164	0.138 – 0.191
Siavonga (810)	0.797	0.759 – 0.835	0.446	0.399 – 0.493	0.291	0.248 – 0.334
Sinazongwe (811)	0.702	0.623 – 0.781	0.316	0.253 – 0.379	0.178	0.129 – 0.227
Western Province						
Kalabo (901)	0.704	0.671 – 0.737	0.290	0.265 – 0.316	0.151	0.132 – 0.170
Kaoma (902)	0.610	0.554 – 0.666	0.231	0.194 – 0.269	0.114	0.089 – 0.139
Lukulu (903)	0.780	0.740 – 0.820	0.350	0.313 – 0.387	0.192	0.163 – 0.220
Mongu (904)	0.555	0.527 – 0.582	0.204	0.184 – 0.223	0.098	0.084 – 0.112
Senanga (905)	0.642	0.611 – 0.674	0.239	0.213 – 0.265	0.115	0.096 – 0.134
Sesheke (906)	0.558	0.520 – 0.596	0.193	0.168 – 0.218	0.088	0.072 – 0.105
Shang'ombo (907)	0.668	0.628 – 0.707	0.255	0.222 – 0.287	0.124	0.101 – 0.148

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Annex D

Constituency-Level Poverty Estimates

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Central Province						
Chisamba (001)	0.692	0.658 – 0.725	0.301	0.276 – 0.325	0.164	0.145 – 0.183
Katuba (002)	0.622	0.558 – 0.686	0.244	0.204 – 0.283	0.124	0.098 – 0.150
Keembe (003)	0.688	0.655 – 0.722	0.299	0.276 – 0.321	0.163	0.146 – 0.179
Bwacha (004)	0.598	0.568 – 0.628	0.222	0.202 – 0.241	0.108	0.095 – 0.122
Kabwe (005)	0.427	0.401 – 0.454	0.145	0.131 – 0.159	0.067	0.058 – 0.076
Kapiri Mposhi (006)	0.709	0.674 – 0.743	0.318	0.291 – 0.345	0.178	0.157 – 0.198
Mkushi North (007)	0.716	0.673 – 0.760	0.314	0.280 – 0.349	0.172	0.147 – 0.198
Mkushi South (008)	0.798	0.747 – 0.848	0.398	0.347 – 0.449	0.238	0.196 – 0.280
Mumbezhi (009)	0.564	0.492 – 0.637	0.212	0.170 – 0.254	0.105	0.078 – 0.132
Mumbwa (010)	0.740	0.704 – 0.777	0.347	0.309 – 0.385	0.198	0.166 – 0.229
Nangoma (011)	0.748	0.716 – 0.781	0.335	0.308 – 0.362	0.184	0.163 – 0.206
Chitambo (012)	0.742	0.692 – 0.793	0.346	0.300 – 0.392	0.199	0.161 – 0.237
Muchinga (013)	0.770	0.731 – 0.810	0.364	0.330 – 0.399	0.211	0.182 – 0.239
Serenje (014)	0.750	0.702 – 0.797	0.343	0.302 – 0.385	0.194	0.162 – 0.226
Copperbelt Province						
Chililabombwe (015)	0.570	0.548 – 0.592	0.234	0.221 – 0.247	0.123	0.113 – 0.132
Chingola (016)	0.602	0.581 – 0.623	0.254	0.239 – 0.268	0.135	0.125 – 0.145
Nchanga (017)	0.465	0.444 – 0.485	0.186	0.175 – 0.196	0.097	0.089 – 0.104
Kalulushi (018)	0.613	0.594 – 0.632	0.265	0.250 – 0.281	0.144	0.132 – 0.156
Chimwemwe (019)	0.661	0.644 – 0.679	0.275	0.261 – 0.288	0.144	0.134 – 0.154
Kamfinsa (020)	0.582	0.563 – 0.601	0.233	0.220 – 0.245	0.119	0.110 – 0.128
Kwacha (021)	0.533	0.517 – 0.549	0.217	0.205 – 0.229	0.112	0.103 – 0.121
Nkana (022)	0.446	0.426 – 0.466	0.170	0.159 – 0.181	0.085	0.077 – 0.093
Wusakile (023)	0.599	0.575 – 0.623	0.235	0.219 – 0.251	0.120	0.109 – 0.131
Luanshya (024)	0.610	0.595 – 0.625	0.251	0.240 – 0.263	0.131	0.122 – 0.140
Roan (025)	0.559	0.533 – 0.586	0.207	0.192 – 0.221	0.100	0.091 – 0.110
Kankoyo (026)	0.618	0.595 – 0.641	0.247	0.233 – 0.261	0.127	0.118 – 0.136
Kantanshi (027)	0.423	0.398 – 0.448	0.153	0.142 – 0.164	0.075	0.068 – 0.081
Mufulira (028)	0.629	0.611 – 0.648	0.256	0.242 – 0.270	0.133	0.122 – 0.143
Kafulafuta (029)	0.697	0.660 – 0.734	0.312	0.287 – 0.337	0.173	0.148 – 0.198

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lufwanyama (030)	0.802	0.779 – 0.825	0.354	0.330 – 0.378	0.188	0.167 – 0.208
Masaiti (031)	0.685	0.651 – 0.720	0.272	0.245 – 0.299	0.137	0.118 – 0.156
Mpongwe (032)	0.741	0.710 – 0.771	0.302	0.275 – 0.329	0.152	0.131 – 0.173
Bwana Mkubwa (033)	0.602	0.586 – 0.619	0.252	0.240 – 0.265	0.135	0.125 – 0.144
Chifubu (034)	0.629	0.609 – 0.649	0.256	0.242 – 0.270	0.133	0.123 – 0.144
Kabushi (035)	0.622	0.602 – 0.643	0.256	0.241 – 0.272	0.135	0.123 – 0.146
Ndola (036)	0.551	0.536 – 0.566	0.239	0.227 – 0.252	0.131	0.120 – 0.141
Eastern Province						
Chadiza (037)	0.640	0.601 – 0.679	0.256	0.231 – 0.282	0.132	0.113 – 0.151
Vubwi (038)	0.668	0.620 – 0.716	0.295	0.263 – 0.327	0.165	0.136 – 0.193
Chama North (039)	0.840	0.802 – 0.878	0.366	0.340 – 0.392	0.192	0.172 – 0.212
Chama South (040)	0.713	0.650 – 0.775	0.269	0.226 – 0.311	0.129	0.101 – 0.157
Chipangali (041)	0.743	0.707 – 0.780	0.322	0.294 – 0.351	0.174	0.153 – 0.194
Chipata (042)	0.458	0.437 – 0.479	0.156	0.145 – 0.167	0.072	0.065 – 0.078
Kasenengwa (043)	0.680	0.639 – 0.721	0.279	0.251 – 0.308	0.146	0.125 – 0.166
Luangeni (044)	0.696	0.658 – 0.735	0.297	0.269 – 0.325	0.160	0.138 – 0.181
Milanzi (045)	0.633	0.576 – 0.689	0.240	0.204 – 0.277	0.119	0.095 – 0.143
Mkaika (046)	0.606	0.565 – 0.648	0.229	0.201 – 0.257	0.113	0.094 – 0.131
Sinda (047)	0.682	0.652 – 0.712	0.270	0.248 – 0.291	0.137	0.121 – 0.153
Chasefu (048)	0.874	0.836 – 0.912	0.423	0.389 – 0.458	0.242	0.214 – 0.269
Lumezi (049)	0.647	0.607 – 0.687	0.253	0.228 – 0.278	0.127	0.110 – 0.145
Lundazi (050)	0.819	0.779 – 0.859	0.398	0.363 – 0.432	0.230	0.203 – 0.258
Malambo (051)	0.561	0.501 – 0.621	0.215	0.180 – 0.250	0.108	0.084 – 0.132
Nyimba (052)	0.600	0.531 – 0.670	0.238	0.192 – 0.284	0.123	0.091 – 0.154
Kapoche (053)	0.770	0.726 – 0.813	0.319	0.286 – 0.353	0.165	0.140 – 0.189
Petauke (054)	0.644	0.611 – 0.676	0.251	0.230 – 0.273	0.126	0.111 – 0.141
Msanzala (055)	0.637	0.575 – 0.700	0.254	0.212 – 0.296	0.131	0.101 – 0.160
Luapula Province						
Kawambwa (056)	0.562	0.503 – 0.621	0.202	0.163 – 0.240	0.096	0.072 – 0.121
Mwansabombwe (057)	0.724	0.697 – 0.752	0.296	0.276 – 0.317	0.153	0.137 – 0.169

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Pambashe (058)	0.782	0.733 – 0.832	0.360	0.318 – 0.403	0.203	0.170 – 0.235
Bahati (059)	0.716	0.683 – 0.749	0.316	0.289 – 0.343	0.174	0.154 – 0.195
Chembe (060)	0.761	0.729 – 0.794	0.354	0.324 – 0.385	0.203	0.179 – 0.227
Mansa (061)	0.835	0.798 – 0.872	0.428	0.393 – 0.463	0.261	0.231 – 0.290
Chipili (062)	0.761	0.729 – 0.794	0.328	0.302 – 0.354	0.175	0.155 – 0.195
Mambilima (063)	0.788	0.754 – 0.821	0.343	0.315 – 0.371	0.183	0.160 – 0.205
Mwense (064)	0.746	0.714 – 0.777	0.304	0.276 – 0.333	0.155	0.133 – 0.177
Chienga (065)	0.655	0.589 – 0.722	0.245	0.200 – 0.291	0.119	0.089 – 0.149
Nchelenge (066)	0.722	0.691 – 0.754	0.296	0.269 – 0.324	0.153	0.131 – 0.174
Bangweulu (067)	0.440	0.369 – 0.510	0.147	0.112 – 0.182	0.068	0.048 – 0.089
Chifunabuli (068)	0.702	0.650 – 0.754	0.303	0.264 – 0.342	0.165	0.137 – 0.193
Luapula (069)	0.710	0.658 – 0.761	0.319	0.282 – 0.356	0.179	0.151 – 0.207
Lusaka Province						
Kafue (070)	0.599	0.568 – 0.630	0.250	0.231 – 0.269	0.132	0.118 – 0.146
Feira (071)	0.916	0.896 – 0.937	0.578	0.523 – 0.633	0.405	0.344 – 0.466
Chilanga (072)	0.617	0.550 – 0.683	0.265	0.217 – 0.314	0.143	0.108 – 0.178
Chongwe (073)	0.575	0.512 – 0.638	0.213	0.176 – 0.251	0.103	0.079 – 0.127
Rufunsa (074)	0.915	0.877 – 0.953	0.522	0.468 – 0.577	0.336	0.284 – 0.387
Chawama (075)	0.610	0.584 – 0.635	0.222	0.205 – 0.239	0.105	0.093 – 0.116
Kabwata (076)	0.253	0.227 – 0.280	0.077	0.066 – 0.088	0.033	0.027 – 0.039
Kanyama (077)	0.572	0.546 – 0.599	0.200	0.184 – 0.217	0.092	0.082 – 0.103
Lusaka Central (078)	0.260	0.242 – 0.279	0.090	0.082 – 0.098	0.042	0.038 – 0.047
Mandevu (079)	0.515	0.493 – 0.537	0.199	0.183 – 0.215	0.101	0.088 – 0.113
Matero (080)	0.420	0.395 – 0.445	0.146	0.133 – 0.159	0.068	0.060 – 0.076
Munali (081)	0.584	0.560 – 0.609	0.220	0.204 – 0.236	0.107	0.097 – 0.118
Northern Province						
Chilubi (082)	0.767	0.717 – 0.818	0.359	0.316 – 0.402	0.205	0.172 – 0.239
Chinsali (083)	0.802	0.777 – 0.827	0.398	0.371 – 0.425	0.237	0.213 – 0.260
Shiwa-Ng' Andu (084)	0.805	0.779 – 0.830	0.380	0.356 – 0.404	0.217	0.196 – 0.238
Isoka East (085)	0.625	0.538 – 0.712	0.237	0.180 – 0.293	0.117	0.080 – 0.153

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Isoka West (086)	0.781	0.754 – 0.808	0.368	0.343 – 0.393	0.210	0.189 – 0.231
Nakonde (087)	0.813	0.780 – 0.845	0.423	0.381 – 0.464	0.259	0.222 – 0.296
Chimbamilonga (088)	0.717	0.645 – 0.788	0.316	0.266 – 0.367	0.174	0.138 – 0.209
Kaputa (089)	0.697	0.610 – 0.785	0.299	0.241 – 0.356	0.160	0.122 – 0.199
Kasama (090)	0.611	0.591 – 0.631	0.260	0.246 – 0.274	0.140	0.128 – 0.151
Lukasha (091)	0.740	0.718 – 0.762	0.330	0.311 – 0.348	0.181	0.167 – 0.196
Malole (092)	0.830	0.798 – 0.861	0.413	0.381 – 0.445	0.245	0.218 – 0.272
Lubansenshi (093)	0.738	0.709 – 0.767	0.325	0.302 – 0.349	0.178	0.159 – 0.197
Lupososhi (094)	0.759	0.720 – 0.798	0.337	0.305 – 0.368	0.184	0.160 – 0.208
Mbala (095)	0.733	0.699 – 0.766	0.329	0.297 – 0.361	0.182	0.156 – 0.207
Mpulungu (096)	0.722	0.676 – 0.769	0.322	0.285 – 0.359	0.178	0.150 – 0.206
Senga Hill (097)	0.811	0.776 – 0.845	0.393	0.354 – 0.431	0.228	0.196 – 0.260
Kanchibiya (098)	0.790	0.758 – 0.822	0.364	0.337 – 0.391	0.204	0.183 – 0.226
Mfuwe (099)	0.780	0.722 – 0.838	0.378	0.320 – 0.436	0.221	0.175 – 0.267
Mpika (100)	0.658	0.628 – 0.687	0.281	0.261 – 0.301	0.151	0.137 – 0.166
Lunte (101)	0.790	0.761 – 0.819	0.358	0.331 – 0.385	0.198	0.176 – 0.220
Mporokoso (102)	0.758	0.720 – 0.796	0.338	0.304 – 0.372	0.186	0.160 – 0.212
North-Western Province						
Chavuma (103)	0.883	0.814 – 0.952	0.454	0.364 – 0.544	0.273	0.197 – 0.350
Kabompo East (104)	0.700	0.663 – 0.736	0.287	0.263 – 0.312	0.149	0.132 – 0.167
Kabompo West (105)	0.641	0.600 – 0.682	0.258	0.228 – 0.287	0.133	0.112 – 0.153
Kasempa (106)	0.686	0.638 – 0.735	0.294	0.258 – 0.330	0.159	0.132 – 0.186
Mufumbwe (107)	0.672	0.617 – 0.726	0.267	0.228 – 0.306	0.137	0.110 – 0.163
Mwinilunga East (108)	0.716	0.670 – 0.762	0.287	0.254 – 0.320	0.146	0.123 – 0.168
Mwinilunga West (109)	0.762	0.730 – 0.795	0.343	0.314 – 0.373	0.189	0.166 – 0.212
Solwezi Central (110)	0.613	0.583 – 0.642	0.270	0.245 – 0.295	0.151	0.131 – 0.170
Solwezi East (111)	0.780	0.733 – 0.827	0.344	0.303 – 0.385	0.187	0.156 – 0.218
Solwezi West (112)	0.794	0.769 – 0.820	0.359	0.335 – 0.383	0.198	0.178 – 0.218
Zambezi East (113)	0.667	0.630 – 0.703	0.279	0.252 – 0.305	0.148	0.128 – 0.167
Zambezi West (114)	0.820	0.777 – 0.864	0.389	0.345 – 0.434	0.223	0.186 – 0.259

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Southern Province						
Choma (115)	0.447	0.407 – 0.487	0.130	0.112 – 0.149	0.053	0.043 – 0.063
Mbabala (116)	0.665	0.625 – 0.704	0.245	0.215 – 0.274	0.116	0.096 – 0.137
Pemba (117)	0.571	0.523 – 0.619	0.190	0.163 – 0.218	0.085	0.068 – 0.101
Gwembe (118)	0.788	0.733 – 0.843	0.401	0.361 – 0.440	0.244	0.211 – 0.277
Dundumwenze (119)	0.707	0.669 – 0.745	0.283	0.252 – 0.315	0.144	0.120 – 0.168
Kalomo (120)	0.629	0.581 – 0.678	0.230	0.197 – 0.263	0.110	0.088 – 0.132
Katombola (121)	0.706	0.659 – 0.754	0.283	0.251 – 0.315	0.144	0.121 – 0.166
Mapatizya (122)	0.691	0.614 – 0.768	0.285	0.233 – 0.337	0.149	0.115 – 0.184
Livingstone (123)	0.406	0.372 – 0.441	0.126	0.112 – 0.141	0.054	0.046 – 0.062
Chikankata (124)	0.592	0.531 – 0.653	0.214	0.177 – 0.250	0.102	0.078 – 0.125
Magoye (125)	0.710	0.674 – 0.745	0.292	0.266 – 0.318	0.151	0.132 – 0.170
Mazabuka (126)	0.508	0.479 – 0.536	0.174	0.158 – 0.189	0.081	0.071 – 0.091
Bweenga (127)	0.723	0.689 – 0.758	0.287	0.262 – 0.313	0.144	0.125 – 0.162
Monze (128)	0.594	0.566 – 0.622	0.202	0.185 – 0.218	0.091	0.080 – 0.102
Moomba (129)	0.643	0.597 – 0.689	0.226	0.198 – 0.255	0.104	0.085 – 0.122
Itezhi-Tezhi (130)	0.608	0.571 – 0.645	0.224	0.199 – 0.249	0.109	0.091 – 0.127
Namwala (131)	0.735	0.696 – 0.775	0.312	0.276 – 0.348	0.164	0.138 – 0.191
Siavonga (132)	0.797	0.759 – 0.835	0.446	0.399 – 0.493	0.291	0.248 – 0.334
Sinazongwe (133)	0.702	0.623 – 0.781	0.316	0.253 – 0.379	0.178	0.129 – 0.227
Western Province						
Kalabo (134)	0.652	0.622 – 0.682	0.257	0.235 – 0.279	0.129	0.113 – 0.146
Liuwa (135)	0.767	0.722 – 0.811	0.328	0.292 – 0.363	0.173	0.147 – 0.199
Sikongo (136)	0.740	0.701 – 0.780	0.317	0.286 – 0.348	0.169	0.145 – 0.192
Kaoma (137)	0.543	0.478 – 0.607	0.194	0.155 – 0.232	0.091	0.067 – 0.115
Luampa (138)	0.565	0.488 – 0.642	0.199	0.151 – 0.247	0.093	0.063 – 0.123
Mangango (139)	0.734	0.688 – 0.779	0.306	0.270 – 0.343	0.160	0.132 – 0.187
Lukulu East (140)	0.761	0.722 – 0.801	0.336	0.300 – 0.372	0.182	0.154 – 0.211
Lukulu West (141)	0.827	0.778 – 0.876	0.385	0.340 – 0.430	0.215	0.180 – 0.250
Luena (142)	0.637	0.604 – 0.670	0.245	0.221 – 0.269	0.121	0.103 – 0.139
Mongu (143)	0.472	0.440 – 0.504	0.166	0.148 – 0.183	0.078	0.066 – 0.090

Table D1—Constituency-level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

Province / Constituency (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Nalikwanda (144)	0.646	0.607 – 0.684	0.242	0.212 – 0.272	0.117	0.096 – 0.138
Nalolo (145)	0.686	0.654 – 0.719	0.260	0.232 – 0.289	0.126	0.105 – 0.147
Senanga (146)	0.607	0.573 – 0.641	0.221	0.195 – 0.248	0.105	0.087 – 0.124
Sinjembela (147)	0.668	0.628 – 0.707	0.255	0.222 – 0.287	0.124	0.101 – 0.148
Mulobezi (148)	0.543	0.493 – 0.594	0.181	0.151 – 0.210	0.080	0.062 – 0.099
Mwandi (149)	0.589	0.545 – 0.632	0.210	0.182 – 0.237	0.098	0.080 – 0.116
Sesheke (150)	0.546	0.508 – 0.584	0.189	0.163 – 0.215	0.087	0.070 – 0.105

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Annex E
Ward-Level Poverty Estimates

Table E1—Central Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chibombo District (101)	0.701	0.662 – 0.739	0.299	0.270 – 0.327	0.160	0.139 – 0.181
Muswishi (01)	0.740	0.705 – 0.775	0.339	0.310 – 0.368	0.192	0.169 – 0.215
Chamuka (02)	0.688	0.653 – 0.723	0.302	0.277 – 0.328	0.166	0.146 – 0.185
Liteta (03)	0.625	0.588 – 0.661	0.261	0.237 – 0.284	0.140	0.123 – 0.157
Chisamba (04)	0.553	0.502 – 0.604	0.233	0.205 – 0.262	0.130	0.110 – 0.150
Chaloshi (05)	0.607	0.557 – 0.658	0.252	0.228 – 0.276	0.134	0.118 – 0.151
Chibombo (06)	0.648	0.604 – 0.692	0.272	0.245 – 0.299	0.143	0.123 – 0.163
Chikobo (07)	0.694	0.655 – 0.732	0.298	0.273 – 0.323	0.162	0.143 – 0.180
Kakoma (08)	0.713	0.677 – 0.750	0.304	0.277 – 0.331	0.163	0.142 – 0.184
Kalola (09)	0.690	0.651 – 0.728	0.297	0.272 – 0.322	0.161	0.142 – 0.180
Mashikili (10)	0.716	0.673 – 0.759	0.307	0.282 – 0.332	0.166	0.147 – 0.185
Keembe (11)	0.563	0.486 – 0.639	0.213	0.170 – 0.255	0.106	0.080 – 0.132
Katuba (12)	0.549	0.445 – 0.653	0.194	0.144 – 0.245	0.093	0.064 – 0.122
Chunga (13)	0.626	0.561 – 0.690	0.248	0.207 – 0.288	0.127	0.100 – 0.154
Mungule (14)	0.691	0.631 – 0.752	0.287	0.244 – 0.331	0.152	0.121 – 0.183
Muchenje (15)	0.641	0.578 – 0.705	0.251	0.210 – 0.291	0.127	0.100 – 0.154
Kabile (16)	0.688	0.638 – 0.738	0.306	0.276 – 0.337	0.170	0.148 – 0.192
Chitanda (17)	0.729	0.689 – 0.768	0.330	0.302 – 0.357	0.184	0.163 – 0.206
Ipongo (18)	0.710	0.669 – 0.751	0.308	0.279 – 0.338	0.167	0.145 – 0.189
Chikonkomene (19)	0.766	0.724 – 0.808	0.354	0.324 – 0.383	0.198	0.176 – 0.221
Lunjofwa (20)	0.701	0.662 – 0.739	0.299	0.270 – 0.327	0.160	0.139 – 0.181
Kabwe District (102)						
Kalonga (01)	0.436	0.400 – 0.472	0.145	0.127 – 0.164	0.066	0.054 – 0.078
Mpima (02)	0.467	0.416 – 0.518	0.156	0.134 – 0.179	0.072	0.058 – 0.086
Luangwa (03)	0.248	0.221 – 0.275	0.077	0.065 – 0.089	0.034	0.027 – 0.040
Highridge (04)	0.215	0.173 – 0.256	0.062	0.046 – 0.078	0.026	0.017 – 0.034
Justine Kabwe (05)	0.279	0.229 – 0.330	0.076	0.058 – 0.095	0.031	0.021 – 0.040
David Ramushu (06)	0.516	0.473 – 0.559	0.172	0.149 – 0.195	0.078	0.063 – 0.092
Njanji (07)	0.239	0.194 – 0.285	0.066	0.050 – 0.082	0.026	0.018 – 0.035
Chirwa (08)	0.559	0.523 – 0.595	0.194	0.173 – 0.214	0.090	0.077 – 0.103

Table E1—Central Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Luansase (09)	0.584	0.512 – 0.655	0.245	0.208 – 0.282	0.132	0.105 – 0.159
Nakoli (10)	0.641	0.593 – 0.689	0.230	0.204 – 0.256	0.110	0.093 – 0.127
Kaputula (11)	0.483	0.441 – 0.525	0.164	0.142 – 0.185	0.076	0.063 – 0.089
Waya (12)	0.624	0.589 – 0.659	0.255	0.232 – 0.278	0.133	0.115 – 0.150
Chililalila (13)	0.746	0.706 – 0.786	0.302	0.273 – 0.331	0.155	0.133 – 0.177
Moomba (14)	0.715	0.672 – 0.757	0.268	0.240 – 0.296	0.130	0.111 – 0.150
Makululu (15)	0.637	0.588 – 0.685	0.234	0.206 – 0.262	0.111	0.092 – 0.131
Ben Kapufi (16)	0.621	0.569 – 0.672	0.228	0.198 – 0.258	0.110	0.091 – 0.129
Kawama (17)	0.615	0.571 – 0.658	0.215	0.191 – 0.239	0.100	0.085 – 0.115
Munga (18)	0.543	0.491 – 0.595	0.202	0.174 – 0.230	0.099	0.080 – 0.119
Munyama (19)	0.688	0.642 – 0.734	0.285	0.258 – 0.312	0.151	0.131 – 0.171
Muwowo (20)	0.589	0.552 – 0.626	0.226	0.203 – 0.249	0.114	0.097 – 0.130
Bwacha (21)	0.418	0.355 – 0.482	0.125	0.097 – 0.153	0.053	0.038 – 0.068
Chimanimani (22)	0.408	0.336 – 0.480	0.120	0.090 – 0.149	0.050	0.034 – 0.066
Ngungu (23)	0.358	0.306 – 0.409	0.105	0.082 – 0.127	0.044	0.031 – 0.056
Zambezi (24)	0.774	0.731 – 0.817	0.324	0.295 – 0.354	0.170	0.149 – 0.191
Kang'omba (25)	0.684	0.642 – 0.726	0.274	0.246 – 0.301	0.141	0.120 – 0.162
Kapiri Mposhi District (103)						
Ngambwe (01)	0.739	0.680 – 0.798	0.352	0.306 – 0.398	0.206	0.169 – 0.243
Mukubwe (02)	0.707	0.645 – 0.770	0.324	0.276 – 0.371	0.186	0.150 – 0.221
Lwanchele (03)	0.708	0.663 – 0.752	0.320	0.287 – 0.353	0.180	0.154 – 0.205
Chipepo (04)	0.711	0.664 – 0.757	0.321	0.289 – 0.352	0.180	0.157 – 0.203
Mpunde (05)	0.716	0.674 – 0.759	0.328	0.298 – 0.358	0.186	0.163 – 0.209
Chibwelelo (06)	0.754	0.708 – 0.800	0.340	0.306 – 0.374	0.189	0.162 – 0.215
Kapiri Mposhi (07)	0.582	0.545 – 0.618	0.221	0.201 – 0.241	0.112	0.099 – 0.125
Mushimbili (08)	0.754	0.713 – 0.796	0.349	0.315 – 0.383	0.198	0.171 – 0.224
Lunchu (09)	0.750	0.709 – 0.792	0.345	0.313 – 0.377	0.195	0.170 – 0.219
Chang'ondo (10)	0.761	0.716 – 0.806	0.355	0.321 – 0.390	0.203	0.176 – 0.229
Kakwelesa (11)	0.775	0.737 – 0.813	0.367	0.336 – 0.398	0.211	0.185 – 0.236

Table E1—Central Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kampumba (12)	0.780	0.731 – 0.830	0.391	0.349 – 0.433	0.235	0.199 – 0.271
Mkushi District (104)						
Upper Lusemfwa (01)	0.712	0.657 – 0.768	0.307	0.267 – 0.348	0.166	0.136 – 0.195
Chalata (02)	0.639	0.574 – 0.703	0.257	0.219 – 0.295	0.134	0.108 – 0.159
Chibefwe (03)	0.716	0.673 – 0.759	0.315	0.281 – 0.349	0.172	0.147 – 0.197
Mushibemba (04)	0.704	0.648 – 0.761	0.297	0.256 – 0.338	0.158	0.128 – 0.187
Nkumbi (05)	0.679	0.623 – 0.736	0.282	0.241 – 0.322	0.148	0.118 – 0.177
Musoh (06)	0.755	0.699 – 0.812	0.344	0.298 – 0.390	0.193	0.157 – 0.229
Tembwa (07)	0.718	0.664 – 0.772	0.315	0.272 – 0.357	0.172	0.140 – 0.204
Nshinso (08)	0.758	0.710 – 0.805	0.346	0.306 – 0.387	0.195	0.163 – 0.226
Kalwa (09)	0.752	0.651 – 0.853	0.392	0.302 – 0.482	0.249	0.171 – 0.327
Chikanda (10)	0.725	0.673 – 0.777	0.326	0.286 – 0.366	0.182	0.152 – 0.212
Munda (11)	0.781	0.725 – 0.837	0.376	0.325 – 0.427	0.219	0.179 – 0.259
Kamimbya (12)	0.810	0.761 – 0.860	0.411	0.361 – 0.461	0.246	0.203 – 0.289
Mwalala (13)	0.719	0.623 – 0.814	0.372	0.296 – 0.448	0.236	0.172 – 0.300
Chipaba (14)	0.806	0.704 – 0.908	0.438	0.340 – 0.536	0.282	0.197 – 0.368
Ching'ombe (15)	0.852	0.801 – 0.904	0.438	0.380 – 0.495	0.265	0.215 – 0.314
Mumbwa District (105)						
Nampundwe (01)	0.427	0.357 – 0.498	0.149	0.117 – 0.181	0.072	0.053 – 0.090
Makombwe (02)	0.575	0.481 – 0.669	0.204	0.152 – 0.256	0.096	0.065 – 0.128
Milandu (03)	0.587	0.497 – 0.676	0.224	0.173 – 0.274	0.112	0.080 – 0.143
Kalundu (04)	0.586	0.502 – 0.669	0.220	0.171 – 0.268	0.110	0.079 – 0.140
Chabota (05)	0.746	0.681 – 0.810	0.312	0.258 – 0.366	0.163	0.123 – 0.203
Kapyanga (06)	0.667	0.584 – 0.750	0.264	0.214 – 0.314	0.134	0.099 – 0.169
Chisalu (07)	0.770	0.731 – 0.808	0.351	0.321 – 0.382	0.196	0.170 – 0.221
Choma (08)	0.756	0.710 – 0.802	0.355	0.314 – 0.395	0.203	0.169 – 0.237
Nalubanda (09)	0.793	0.751 – 0.834	0.372	0.337 – 0.406	0.211	0.182 – 0.239
Myooye (10)	0.741	0.699 – 0.783	0.326	0.295 – 0.357	0.177	0.153 – 0.201
Nambala (11)	0.837	0.790 – 0.883	0.391	0.340 – 0.442	0.217	0.175 – 0.258

Table E1—Central Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chibolyo (12)	0.842	0.789 – 0.896	0.418	0.366 – 0.471	0.247	0.203 – 0.291
Shimbizhi (13)	0.829	0.780 – 0.878	0.391	0.340 – 0.442	0.220	0.179 – 0.260
Nangoma (14)	0.730	0.692 – 0.769	0.308	0.280 – 0.336	0.161	0.140 – 0.182
Nakasa (15)	0.707	0.667 – 0.746	0.314	0.285 – 0.343	0.175	0.152 – 0.197
Mumba (16)	0.827	0.782 – 0.873	0.410	0.361 – 0.459	0.242	0.201 – 0.282
Mupona (17)	0.449	0.396 – 0.501	0.152	0.126 – 0.178	0.070	0.055 – 0.086
Mpusu (18)	0.774	0.663 – 0.885	0.359	0.280 – 0.437	0.205	0.146 – 0.263
Kalyanyembe (19)	0.811	0.759 – 0.863	0.395	0.342 – 0.449	0.230	0.186 – 0.275
Nalusanga (20)	0.831	0.785 – 0.877	0.430	0.381 – 0.478	0.261	0.220 – 0.302
Serenje District (106)						
Lulimala (01)	0.673	0.574 – 0.772	0.334	0.255 – 0.413	0.208	0.143 – 0.273
Chipundu (02)	0.738	0.675 – 0.801	0.321	0.274 – 0.367	0.174	0.140 – 0.208
Luombwa (03)	0.780	0.682 – 0.879	0.417	0.319 – 0.516	0.268	0.182 – 0.353
Chalilo (04)	0.786	0.742 – 0.830	0.374	0.332 – 0.416	0.215	0.179 – 0.250
Ng'answa (05)	0.769	0.709 – 0.829	0.358	0.303 – 0.413	0.204	0.160 – 0.248
Musangashi (06)	0.750	0.684 – 0.817	0.364	0.306 – 0.423	0.218	0.170 – 0.267
E Muchinda (07)	0.741	0.681 – 0.800	0.331	0.282 – 0.380	0.183	0.146 – 0.221
Muchinka (08)	0.764	0.715 – 0.812	0.349	0.304 – 0.394	0.197	0.160 – 0.233
Chitambo (09)	0.725	0.674 – 0.775	0.327	0.286 – 0.369	0.185	0.151 – 0.218
Mailo (10)	0.727	0.665 – 0.789	0.328	0.280 – 0.376	0.186	0.148 – 0.224
Kanona (11)	0.793	0.750 – 0.836	0.403	0.360 – 0.445	0.245	0.207 – 0.283
Kabamba (12)	0.759	0.700 – 0.818	0.351	0.300 – 0.401	0.199	0.160 – 0.239
Ibolelo (13)	0.746	0.703 – 0.788	0.335	0.299 – 0.372	0.186	0.158 – 0.213
Masaninga (14)	0.771	0.734 – 0.809	0.354	0.323 – 0.385	0.198	0.173 – 0.223
Chibale (15)	0.763	0.717 – 0.809	0.359	0.322 – 0.396	0.206	0.177 – 0.236
Sancha (16)	0.791	0.740 – 0.842	0.381	0.336 – 0.426	0.222	0.184 – 0.259
Lukusanshi (17)	0.799	0.753 – 0.845	0.376	0.337 – 0.415	0.214	0.183 – 0.245
Chisomo (18)	0.746	0.673 – 0.819	0.371	0.314 – 0.428	0.227	0.179 – 0.275
Kabansa (19)	0.797	0.712 – 0.883	0.382	0.314 – 0.451	0.222	0.165 – 0.278

Table E1—Central Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Serenje (20)	0.808	0.760 – 0.856	0.395	0.355 – 0.435	0.233	0.199 – 0.267

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chililabombwe District (201)						
Kafue (01)	0.116	0.085 – 0.147	0.028	0.018 – 0.038	0.011	0.006 – 0.015
Mvula (02)	0.322	0.256 – 0.388	0.093	0.066 – 0.121	0.038	0.023 – 0.053
Mathew Nkoloma (03)	0.551	0.502 – 0.600	0.193	0.166 – 0.221	0.089	0.072 – 0.107
Silwizya (04)	0.813	0.768 – 0.858	0.395	0.359 – 0.431	0.226	0.196 – 0.257
Helen Kaunda (05)	0.542	0.478 – 0.606	0.184	0.154 – 0.214	0.083	0.065 – 0.102
James Phiri (06)	0.402	0.356 – 0.448	0.129	0.107 – 0.150	0.056	0.044 – 0.069
Chitimukulu (07)	0.407	0.296 – 0.518	0.120	0.074 – 0.167	0.050	0.026 – 0.075
Yeta (08)	0.402	0.324 – 0.479	0.121	0.089 – 0.153	0.051	0.034 – 0.067
Ngebe (09)	0.455	0.381 – 0.529	0.140	0.108 – 0.172	0.059	0.042 – 0.076
Kamima (10)	0.435	0.354 – 0.517	0.130	0.094 – 0.165	0.054	0.035 – 0.072
Nakatindi (11)	0.618	0.585 – 0.651	0.252	0.233 – 0.270	0.130	0.117 – 0.143
Mukuka (12)	0.670	0.631 – 0.708	0.276	0.250 – 0.301	0.143	0.124 – 0.162
Yotamu Muleya (13)	0.807	0.769 – 0.846	0.370	0.342 – 0.399	0.206	0.183 – 0.229
Joseph Mwilwa (14)	0.829	0.744 – 0.915	0.398	0.329 – 0.467	0.227	0.173 – 0.280
Mumba (15)	0.283	0.235 – 0.331	0.087	0.068 – 0.105	0.037	0.028 – 0.047
Anoya Zulu (16)	0.928	0.874 – 0.983	0.468	0.407 – 0.529	0.267	0.213 – 0.321
Kawama (17)	0.916	0.880 – 0.952	0.513	0.456 – 0.571	0.320	0.265 – 0.376
Chitambi (18)	0.808	0.777 – 0.838	0.393	0.367 – 0.419	0.227	0.206 – 0.249
Kakoso (19)	0.599	0.557 – 0.642	0.234	0.208 – 0.261	0.117	0.100 – 0.135
Chilimina (20)	0.826	0.783 – 0.869	0.407	0.372 – 0.443	0.236	0.207 – 0.264
Chingola District (202)						
Kapisha (01)	0.823	0.802 – 0.845	0.394	0.374 – 0.414	0.225	0.209 – 0.242
Kabundi (02)	0.223	0.191 – 0.255	0.062	0.050 – 0.074	0.025	0.019 – 0.031
Kasala (03)	0.300	0.240 – 0.359	0.082	0.061 – 0.103	0.032	0.022 – 0.043
Buntungwa (04)	0.441	0.393 – 0.489	0.140	0.117 – 0.162	0.060	0.048 – 0.073
Nsansa (05)	0.419	0.372 – 0.466	0.139	0.118 – 0.159	0.063	0.051 – 0.074
Sekela (06)	0.289	0.246 – 0.332	0.084	0.068 – 0.100	0.034	0.026 – 0.043

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Nchanga (07)	0.270	0.228 – 0.313	0.078	0.062 – 0.094	0.032	0.024 – 0.040
Kwacha (08)	0.076	0.047 – 0.104	0.017	0.009 – 0.025	0.006	0.002 – 0.009
Chingola (09)	0.256	0.225 – 0.286	0.079	0.067 – 0.092	0.035	0.028 – 0.042
Chiwempala (10)	0.646	0.610 – 0.683	0.268	0.244 – 0.292	0.140	0.123 – 0.157
Kabungo (11)	0.667	0.634 – 0.700	0.269	0.246 – 0.292	0.138	0.122 – 0.154
Chitimukulu (12)	0.651	0.615 – 0.686	0.268	0.246 – 0.290	0.138	0.122 – 0.155
Maiteneke (13)	0.714	0.685 – 0.743	0.323	0.299 – 0.347	0.180	0.160 – 0.199
Chabanyama (14)	0.647	0.609 – 0.686	0.263	0.237 – 0.289	0.135	0.117 – 0.153
G. Chimfwembe (15)	0.649	0.604 – 0.693	0.259	0.231 – 0.287	0.131	0.112 – 0.150
Twatasha (16)	0.645	0.606 – 0.684	0.259	0.232 – 0.287	0.132	0.113 – 0.152
Chikola (17)	0.387	0.344 – 0.430	0.128	0.110 – 0.147	0.058	0.048 – 0.069
Lulamba (18)	0.323	0.276 – 0.370	0.094	0.074 – 0.114	0.039	0.029 – 0.049
Kasompe (19)	0.591	0.535 – 0.648	0.226	0.194 – 0.258	0.111	0.090 – 0.132
Mimbula (20)	0.516	0.479 – 0.554	0.184	0.163 – 0.206	0.087	0.073 – 0.101
Musenge (21)	0.804	0.766 – 0.843	0.396	0.364 – 0.428	0.232	0.206 – 0.258
Kalilo (22)	0.807	0.763 – 0.852	0.397	0.365 – 0.429	0.232	0.206 – 0.258
Ipafu (23)	0.839	0.799 – 0.880	0.425	0.387 – 0.464	0.252	0.219 – 0.285
Muchinshi (24)	0.829	0.783 – 0.875	0.410	0.367 – 0.453	0.238	0.202 – 0.274
Mutenda (25)	0.847	0.812 – 0.881	0.427	0.396 – 0.458	0.253	0.227 – 0.279
Kalulushi District (203)						
Remmy Chisupa (01)	0.726	0.687 – 0.764	0.319	0.292 – 0.347	0.174	0.153 – 0.196
Kankonshi (02)	0.722	0.662 – 0.783	0.318	0.281 – 0.355	0.172	0.144 – 0.201
Buseko (03)	0.688	0.642 – 0.733	0.283	0.256 – 0.311	0.147	0.129 – 0.166
Chibuluma (04)	0.737	0.695 – 0.778	0.317	0.288 – 0.346	0.169	0.147 – 0.192
Kalengwa (05)	0.721	0.674 – 0.768	0.312	0.281 – 0.344	0.167	0.142 – 0.192
Ngweshi (06)	0.448	0.395 – 0.502	0.148	0.123 – 0.172	0.066	0.052 – 0.081
Kafue (07)	0.538	0.499 – 0.578	0.202	0.183 – 0.221	0.100	0.088 – 0.112
Luapula (08)	0.456	0.404 – 0.509	0.150	0.127 – 0.173	0.067	0.053 – 0.081
Dongwe (09)	0.379	0.305 – 0.453	0.116	0.084 – 0.148	0.050	0.031 – 0.068
Kalungwishi (10)	0.410	0.351 – 0.469	0.133	0.110 – 0.156	0.059	0.046 – 0.073

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lubuto (11)	0.265	0.222 – 0.307	0.076	0.060 – 0.092	0.031	0.022 – 0.040
Kalanga (12)	0.260	0.231 – 0.288	0.099	0.089 – 0.109	0.053	0.046 – 0.059
Ichimpe (13)	0.868	0.826 – 0.910	0.454	0.406 – 0.502	0.271	0.228 – 0.315
Mwambashi (14)	0.834	0.798 – 0.869	0.417	0.387 – 0.448	0.244	0.218 – 0.270
Lukoshi (15)	0.769	0.698 – 0.839	0.351	0.298 – 0.405	0.195	0.155 – 0.235
Lulamba (16)	0.745	0.644 – 0.845	0.326	0.265 – 0.386	0.178	0.137 – 0.218
Chambishi (17)	0.484	0.446 – 0.522	0.180	0.159 – 0.202	0.090	0.076 – 0.103
Musakashi (18)	0.685	0.659 – 0.712	0.294	0.273 – 0.314	0.158	0.142 – 0.174
Chembe (19)	0.816	0.769 – 0.863	0.400	0.357 – 0.443	0.232	0.197 – 0.266
Chati (20)	0.849	0.796 – 0.903	0.419	0.359 – 0.480	0.241	0.193 – 0.290
Kitwe District (204)						
Itimpi (01)	0.681	0.657 – 0.705	0.298	0.280 – 0.315	0.161	0.147 – 0.175
Kawama (02)	0.755	0.733 – 0.778	0.333	0.315 – 0.352	0.181	0.166 – 0.195
Twatasha (03)	0.756	0.737 – 0.776	0.333	0.315 – 0.350	0.180	0.166 – 0.195
Buntungwa (04)	0.622	0.596 – 0.648	0.250	0.232 – 0.268	0.128	0.115 – 0.141
Chimwemwe (05)	0.582	0.550 – 0.614	0.221	0.203 – 0.239	0.109	0.097 – 0.121
Lubuto (06)	0.520	0.483 – 0.557	0.186	0.166 – 0.206	0.088	0.075 – 0.101
Bupe (07)	0.648	0.616 – 0.679	0.259	0.236 – 0.283	0.132	0.115 – 0.149
Ndeke (08)	0.548	0.516 – 0.581	0.205	0.186 – 0.225	0.100	0.087 – 0.113
Kafue (09)	0.727	0.706 – 0.749	0.319	0.300 – 0.337	0.173	0.158 – 0.187
Kamfinsa (10)	0.397	0.381 – 0.412	0.158	0.146 – 0.169	0.081	0.073 – 0.089
Lubwa (11)	0.310	0.287 – 0.333	0.121	0.110 – 0.131	0.062	0.055 – 0.069
Riverside (12)	0.443	0.417 – 0.469	0.158	0.144 – 0.172	0.076	0.067 – 0.085
Ipusukilo (13)	0.659	0.641 – 0.678	0.281	0.267 – 0.294	0.150	0.139 – 0.161
Bulangililo (14)	0.649	0.555 – 0.744	0.245	0.190 – 0.300	0.119	0.084 – 0.153
Kwacha (15)	0.737	0.702 – 0.771	0.315	0.289 – 0.340	0.164	0.145 – 0.183
Buchi (16)	0.686	0.661 – 0.710	0.292	0.273 – 0.311	0.155	0.140 – 0.171
Parklands (17)	0.114	0.090 – 0.139	0.029	0.020 – 0.037	0.011	0.007 – 0.015
Rokana (18)	0.219	0.192 – 0.246	0.075	0.065 – 0.085	0.036	0.030 – 0.041
Mukuba (19)	0.271	0.242 – 0.300	0.084	0.072 – 0.097	0.037	0.030 – 0.044

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Miseshi (20)	0.386	0.346 – 0.426	0.121	0.104 – 0.139	0.053	0.043 – 0.063
Mindola (21)	0.567	0.539 – 0.594	0.219	0.204 – 0.233	0.110	0.100 – 0.120
Wusakile (22)	0.550	0.508 – 0.592	0.198	0.172 – 0.223	0.094	0.078 – 0.110
Chibote (23)	0.453	0.414 – 0.491	0.148	0.129 – 0.167	0.066	0.055 – 0.077
Chamboli (24)	0.538	0.497 – 0.579	0.183	0.161 – 0.205	0.083	0.070 – 0.097
Luangwa (25)	0.777	0.755 – 0.798	0.361	0.340 – 0.381	0.203	0.186 – 0.221
Luanshya District (205)						
Kawama (01)	0.718	0.683 – 0.752	0.310	0.286 – 0.334	0.166	0.147 – 0.184
Chilambula (02)	0.722	0.679 – 0.765	0.287	0.256 – 0.318	0.143	0.120 – 0.165
Buntungwa (03)	0.795	0.772 – 0.819	0.371	0.351 – 0.391	0.209	0.193 – 0.225
Chitwi (04)	0.701	0.651 – 0.751	0.286	0.248 – 0.323	0.146	0.118 – 0.173
Fisenge (05)	0.689	0.659 – 0.718	0.277	0.253 – 0.300	0.139	0.122 – 0.157
Twashuka (06)	0.717	0.675 – 0.759	0.289	0.258 – 0.320	0.145	0.122 – 0.167
Mipundu (07)	0.574	0.541 – 0.607	0.224	0.202 – 0.246	0.113	0.097 – 0.129
Zambezi (08)	0.707	0.676 – 0.738	0.296	0.274 – 0.318	0.156	0.139 – 0.172
Levi Chito (09)	0.666	0.638 – 0.694	0.279	0.259 – 0.298	0.147	0.132 – 0.161
Mikomfwa (10)	0.803	0.776 – 0.831	0.377	0.351 – 0.404	0.214	0.191 – 0.236
James Phiri (11)	0.440	0.407 – 0.474	0.160	0.142 – 0.178	0.077	0.065 – 0.089
Buteko (12)	0.302	0.277 – 0.328	0.101	0.091 – 0.112	0.047	0.040 – 0.054
Mpelembe (13)	0.215	0.183 – 0.247	0.059	0.048 – 0.071	0.024	0.017 – 0.030
Kafubu (14)	0.456	0.401 – 0.512	0.146	0.121 – 0.172	0.064	0.050 – 0.079
Nkoloma (15)	0.389	0.319 – 0.460	0.120	0.094 – 0.146	0.052	0.038 – 0.066
Lumumba (16)	0.391	0.349 – 0.433	0.123	0.103 – 0.143	0.054	0.042 – 0.065
Kafue (17)	0.506	0.472 – 0.540	0.175	0.157 – 0.193	0.081	0.070 – 0.092
Mulungushi (18)	0.598	0.565 – 0.632	0.231	0.209 – 0.253	0.116	0.100 – 0.132
Justine Kabwe (19)	0.625	0.585 – 0.665	0.248	0.222 – 0.274	0.126	0.108 – 0.144
Mpatamatu (20)	0.635	0.586 – 0.685	0.248	0.217 – 0.279	0.124	0.102 – 0.146
Nkulumashimba (21)	0.603	0.565 – 0.642	0.227	0.203 – 0.251	0.111	0.094 – 0.128
Baluba (22)	0.528	0.463 – 0.593	0.188	0.156 – 0.220	0.089	0.070 – 0.109
Kansengu (23)	0.536	0.480 – 0.591	0.183	0.155 – 0.210	0.083	0.067 – 0.100

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Miluashi (24)	0.579	0.538 – 0.620	0.219	0.198 – 0.241	0.109	0.095 – 0.123
Ngebe (25)	0.616	0.578 – 0.655	0.234	0.213 – 0.255	0.116	0.102 – 0.130
Lufwanyama District (206)						
Mushingashi (01)	0.829	0.800 – 0.859	0.375	0.345 – 0.405	0.201	0.175 – 0.226
Kabundia (02)	0.812	0.781 – 0.843	0.358	0.327 – 0.390	0.189	0.162 – 0.215
Boso (03)	0.819	0.791 – 0.847	0.367	0.340 – 0.394	0.197	0.173 – 0.221
Kansoka (04)	0.785	0.750 – 0.820	0.336	0.311 – 0.360	0.175	0.155 – 0.194
Lufwanyama (05)	0.797	0.763 – 0.831	0.355	0.323 – 0.387	0.189	0.162 – 0.216
Kafubu (06)	0.809	0.781 – 0.836	0.344	0.320 – 0.367	0.176	0.155 – 0.196
Mpindi (07)	0.806	0.774 – 0.838	0.352	0.327 – 0.377	0.185	0.163 – 0.206
Chibanga (08)	0.792	0.765 – 0.819	0.353	0.326 – 0.379	0.189	0.165 – 0.212
Sokontwe (09)	0.805	0.777 – 0.834	0.352	0.331 – 0.373	0.184	0.166 – 0.202
Bulaya (10)	0.763	0.695 – 0.831	0.322	0.284 – 0.360	0.168	0.140 – 0.197
Mwelushi (11)	0.804	0.764 – 0.843	0.352	0.320 – 0.385	0.187	0.161 – 0.214
Mukombo (12)	0.775	0.745 – 0.805	0.343	0.315 – 0.371	0.184	0.161 – 0.208
Masaiti District (207)						
Mwatishi (01)	0.722	0.681 – 0.763	0.322	0.288 – 0.355	0.177	0.147 – 0.207
Majaliwa (02)	0.637	0.600 – 0.673	0.274	0.246 – 0.302	0.150	0.123 – 0.177
Mutaba (03)	0.711	0.668 – 0.754	0.319	0.291 – 0.346	0.177	0.151 – 0.203
Chondwe (04)	0.735	0.685 – 0.786	0.338	0.304 – 0.371	0.189	0.159 – 0.220
Miengwe (05)	0.708	0.645 – 0.771	0.324	0.287 – 0.360	0.183	0.153 – 0.213
Ishitwe (06)	0.717	0.657 – 0.776	0.332	0.294 – 0.370	0.189	0.154 – 0.224
Chinondo (07)	0.704	0.666 – 0.742	0.284	0.254 – 0.313	0.144	0.123 – 0.165
Kashitu (08)	0.712	0.670 – 0.753	0.292	0.261 – 0.322	0.150	0.127 – 0.172
Mishikishi (09)	0.698	0.660 – 0.736	0.280	0.250 – 0.309	0.140	0.119 – 0.161
Lumano (10)	0.657	0.623 – 0.692	0.256	0.229 – 0.283	0.127	0.108 – 0.146
Katuba (11)	0.659	0.614 – 0.704	0.256	0.226 – 0.285	0.128	0.108 – 0.148
Shimibanga (12)	0.735	0.682 – 0.788	0.305	0.263 – 0.347	0.157	0.126 – 0.187

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Miputu (13)	0.616	0.567 – 0.665	0.227	0.197 – 0.256	0.108	0.089 – 0.127
Ward 14 (14)	0.629	0.582 – 0.675	0.232	0.203 – 0.260	0.111	0.092 – 0.129
Mpongwe District (208)						
Kalweo (01)	0.798	0.762 – 0.835	0.346	0.314 – 0.379	0.181	0.154 – 0.207
Ibenge (02)	0.737	0.700 – 0.774	0.298	0.267 – 0.329	0.149	0.125 – 0.172
Kanyenda (03)	0.756	0.721 – 0.791	0.308	0.278 – 0.337	0.154	0.130 – 0.178
Kasamba (04)	0.751	0.699 – 0.802	0.306	0.270 – 0.341	0.155	0.127 – 0.183
Mpongwe (05)	0.765	0.723 – 0.808	0.310	0.277 – 0.342	0.154	0.129 – 0.180
Chowa (06)	0.718	0.680 – 0.756	0.289	0.262 – 0.316	0.145	0.125 – 0.166
Kashiba (07)	0.714	0.659 – 0.768	0.283	0.246 – 0.320	0.140	0.112 – 0.168
Munkunpu (08)	0.728	0.698 – 0.759	0.297	0.272 – 0.322	0.150	0.131 – 0.169
Musofu (09)	0.765	0.718 – 0.812	0.324	0.291 – 0.356	0.167	0.141 – 0.193
Ipumbu (10)	0.718	0.667 – 0.769	0.301	0.259 – 0.343	0.156	0.123 – 0.189
Kasonga (11)	0.805	0.747 – 0.864	0.334	0.282 – 0.386	0.169	0.130 – 0.207
Mufulira District (209)						
Kafue (01)	0.787	0.712 – 0.862	0.367	0.304 – 0.430	0.203	0.154 – 0.252
Kansuswa (02)	0.640	0.604 – 0.677	0.247	0.223 – 0.271	0.123	0.106 – 0.139
Kawama (03)	0.707	0.672 – 0.743	0.307	0.286 – 0.329	0.166	0.149 – 0.183
Kasempa (04)	0.475	0.423 – 0.526	0.159	0.133 – 0.184	0.072	0.057 – 0.087
Hanky Kalanga (05)	0.668	0.639 – 0.696	0.273	0.254 – 0.292	0.141	0.127 – 0.156
Kamuchanga (06)	0.618	0.583 – 0.653	0.235	0.212 – 0.258	0.115	0.099 – 0.131
Chachacha (07)	0.628	0.597 – 0.658	0.256	0.236 – 0.275	0.133	0.118 – 0.147
Buntungwa (08)	0.562	0.521 – 0.602	0.217	0.196 – 0.237	0.108	0.094 – 0.122
John Kampengele (09)	0.710	0.676 – 0.744	0.298	0.275 – 0.322	0.156	0.139 – 0.174
Bwananyina (10)	0.634	0.611 – 0.657	0.279	0.262 – 0.296	0.154	0.140 – 0.168
Mutundu (11)	0.769	0.726 – 0.813	0.369	0.336 – 0.402	0.212	0.185 – 0.239
Francis Mukuka (12)	0.345	0.306 – 0.385	0.116	0.097 – 0.135	0.054	0.042 – 0.065
Maina Soko (13)	0.197	0.164 – 0.230	0.053	0.040 – 0.066	0.021	0.014 – 0.028
David Kaunda (14)	0.124	0.092 – 0.156	0.030	0.020 – 0.040	0.011	0.006 – 0.016

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Bwafwano (15)	0.350	0.301 – 0.399	0.106	0.086 – 0.127	0.046	0.035 – 0.057
Mulungushi (16)	0.356	0.309 – 0.404	0.102	0.084 – 0.119	0.041	0.032 – 0.050
Shinde (17)	0.426	0.389 – 0.464	0.135	0.118 – 0.151	0.058	0.049 – 0.067
Bwembya Silwizya (18)	0.444	0.386 – 0.502	0.143	0.117 – 0.169	0.063	0.048 – 0.078
Lwansobe (19)	0.787	0.751 – 0.824	0.371	0.347 – 0.395	0.211	0.192 – 0.230
Kwacha (20)	0.522	0.475 – 0.569	0.178	0.155 – 0.202	0.082	0.068 – 0.096
Butondo (21)	0.523	0.480 – 0.566	0.179	0.158 – 0.201	0.083	0.069 – 0.096
Fibusa (22)	0.529	0.486 – 0.573	0.187	0.165 – 0.209	0.088	0.075 – 0.101
Mpelembe v (23)	0.628	0.583 – 0.673	0.239	0.215 – 0.263	0.118	0.101 – 0.134
Minambe (24)	0.819	0.774 – 0.863	0.393	0.358 – 0.428	0.224	0.196 – 0.251
Murundu (25)	0.765	0.724 – 0.805	0.349	0.323 – 0.375	0.193	0.172 – 0.214
Ndola District (210)						
Kanseshi (01)	0.148	0.128 – 0.168	0.040	0.033 – 0.047	0.016	0.012 – 0.020
Nkwazi (02)	0.772	0.745 – 0.799	0.346	0.325 – 0.366	0.190	0.173 – 0.206
Yengwe (03)	0.142	0.123 – 0.162	0.041	0.034 – 0.048	0.017	0.013 – 0.021
Chipulukusu (04)	0.752	0.728 – 0.776	0.335	0.315 – 0.355	0.184	0.168 – 0.199
Kanini (05)	0.277	0.256 – 0.298	0.093	0.083 – 0.103	0.043	0.037 – 0.049
Itawa (06)	0.389	0.367 – 0.411	0.141	0.130 – 0.153	0.069	0.062 – 0.076
Kafubu (07)	0.721	0.697 – 0.746	0.335	0.312 – 0.359	0.190	0.170 – 0.209
Skyways (08)	0.587	0.559 – 0.615	0.238	0.221 – 0.256	0.124	0.112 – 0.137
Masala (09)	0.633	0.599 – 0.667	0.264	0.241 – 0.287	0.140	0.123 – 0.157
Kaloko (10)	0.604	0.571 – 0.636	0.231	0.211 – 0.252	0.115	0.101 – 0.129
Kabushi (11)	0.746	0.719 – 0.773	0.331	0.307 – 0.355	0.180	0.161 – 0.199
Mukuba (12)	0.689	0.661 – 0.718	0.289	0.269 – 0.309	0.152	0.137 – 0.167
Lubuto (13)	0.512	0.483 – 0.540	0.184	0.167 – 0.201	0.088	0.077 – 0.099
Kantolomba (14)	0.728	0.700 – 0.756	0.322	0.302 – 0.342	0.177	0.161 – 0.192
Toka (15)	0.612	0.580 – 0.645	0.255	0.234 – 0.275	0.135	0.120 – 0.151
Mushili (16)	0.580	0.558 – 0.603	0.235	0.221 – 0.250	0.123	0.112 – 0.133
Munkulungwe (17)	0.749	0.723 – 0.775	0.336	0.313 – 0.360	0.186	0.167 – 0.205

Table E2—Copperbelt Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kavu (18)	0.709	0.678 – 0.740	0.314	0.291 – 0.338	0.172	0.154 – 0.191
Chichele (19)	0.657	0.639 – 0.675	0.285	0.272 – 0.299	0.156	0.144 – 0.167
Twapia (20)	0.751	0.727 – 0.774	0.350	0.328 – 0.372	0.199	0.181 – 0.218
Kawama (21)	0.779	0.754 – 0.803	0.359	0.336 – 0.381	0.201	0.183 – 0.220
Kamba (22)	0.582	0.549 – 0.616	0.219	0.200 – 0.237	0.107	0.095 – 0.119
Chihbu (23)	0.614	0.584 – 0.643	0.241	0.223 – 0.259	0.122	0.109 – 0.135
Fibobe (24)	0.565	0.535 – 0.595	0.212	0.194 – 0.230	0.104	0.092 – 0.116
Pamodzi (25)	0.601	0.580 – 0.621	0.243	0.230 – 0.257	0.126	0.116 – 0.136
Ward 26 (26)	0.327	0.264 – 0.390	0.094	0.072 – 0.115	0.038	0.027 – 0.049
Ward 27 (27)	0.568	0.505 – 0.630	0.202	0.166 – 0.239	0.095	0.073 – 0.118

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chadiza District (301)						
Mangwe (01)	0.646	0.597 – 0.696	0.259	0.226 – 0.291	0.133	0.109 – 0.156
Naviluri (02)	0.634	0.587 – 0.681	0.250	0.220 – 0.280	0.127	0.106 – 0.148
Chilenga (03)	0.663	0.607 – 0.718	0.263	0.230 – 0.297	0.135	0.111 – 0.159
Chamandala (04)	0.654	0.599 – 0.710	0.265	0.231 – 0.299	0.138	0.113 – 0.163
Kampini (05)	0.640	0.584 – 0.696	0.259	0.226 – 0.291	0.134	0.111 – 0.157
Ambidzi (06)	0.700	0.649 – 0.751	0.299	0.261 – 0.337	0.161	0.131 – 0.190
Taferansoni (07)	0.685	0.626 – 0.745	0.279	0.242 – 0.317	0.145	0.118 – 0.172
Kabvumo (08)	0.689	0.627 – 0.750	0.307	0.266 – 0.348	0.171	0.135 – 0.207
Kandabwako (09)	0.701	0.649 – 0.753	0.295	0.260 – 0.330	0.157	0.131 – 0.183
Chadiza (10)	0.524	0.489 – 0.559	0.196	0.176 – 0.215	0.097	0.083 – 0.111
Nsadzu (11)	0.667	0.616 – 0.717	0.273	0.239 – 0.308	0.142	0.118 – 0.167
Manje (12)	0.664	0.618 – 0.710	0.267	0.237 – 0.296	0.137	0.116 – 0.158
Khumba (13)	0.675	0.611 – 0.739	0.299	0.260 – 0.338	0.167	0.136 – 0.198
Mwangazi (14)	0.701	0.642 – 0.761	0.320	0.279 – 0.361	0.182	0.147 – 0.216
Mbozi (15)	0.690	0.634 – 0.746	0.307	0.267 – 0.347	0.172	0.138 – 0.207
Vumbwi (16)	0.649	0.597 – 0.702	0.283	0.248 – 0.317	0.156	0.127 – 0.186
Chisiya (17)	0.642	0.577 – 0.707	0.276	0.235 – 0.316	0.151	0.118 – 0.184
Mlawe (18)	0.656	0.601 – 0.711	0.286	0.246 – 0.325	0.159	0.124 – 0.193
Dzodwe (19)	0.671	0.609 – 0.733	0.297	0.256 – 0.337	0.166	0.132 – 0.200
Chadzombe (20)	0.649	0.593 – 0.705	0.287	0.252 – 0.322	0.160	0.131 – 0.190
Chama District (302)						
Mapamba (01)	0.662	0.586 – 0.737	0.237	0.193 – 0.280	0.110	0.083 – 0.137
Chilenje (02)	0.705	0.633 – 0.777	0.268	0.221 – 0.315	0.129	0.099 – 0.160
Vilimukulu (03)	0.696	0.629 – 0.762	0.260	0.218 – 0.301	0.124	0.097 – 0.152
Lunzi (04)	0.714	0.645 – 0.783	0.267	0.222 – 0.312	0.127	0.097 – 0.157
Lumezi (05)	0.740	0.677 – 0.803	0.287	0.243 – 0.331	0.140	0.109 – 0.170
Chibungwe (06)	0.782	0.710 – 0.854	0.312	0.254 – 0.369	0.153	0.113 – 0.194
Bazimu (07)	0.697	0.633 – 0.760	0.258	0.217 – 0.300	0.123	0.095 – 0.150

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mabinga (08)	0.731	0.663 – 0.800	0.280	0.235 – 0.325	0.135	0.105 – 0.166
Mwalala (09)	0.888	0.845 – 0.931	0.399	0.366 – 0.432	0.212	0.186 – 0.238
Kamphemba (10)	0.743	0.709 – 0.777	0.294	0.272 – 0.315	0.144	0.128 – 0.160
Mphalansenga (11)	0.863	0.820 – 0.906	0.382	0.350 – 0.414	0.202	0.176 – 0.227
Kalinkhu (12)	0.887	0.843 – 0.931	0.402	0.371 – 0.433	0.216	0.190 – 0.241
Manthepa (13)	0.883	0.836 – 0.929	0.400	0.368 – 0.432	0.214	0.189 – 0.240
Mbazi (14)	0.832	0.782 – 0.881	0.358	0.326 – 0.390	0.186	0.163 – 0.209
Ndunda (15)	0.854	0.805 – 0.902	0.372	0.340 – 0.404	0.194	0.171 – 0.218
Chisunga (16)	0.852	0.796 – 0.908	0.363	0.332 – 0.395	0.188	0.164 – 0.211
Luangwa (17)	0.863	0.822 – 0.905	0.387	0.355 – 0.418	0.207	0.182 – 0.231
Mazonde (18)	0.870	0.818 – 0.921	0.404	0.368 – 0.440	0.222	0.192 – 0.252
Muchinga (19)	0.874	0.832 – 0.916	0.394	0.363 – 0.424	0.211	0.188 – 0.234
Chipala (20)	0.709	0.614 – 0.805	0.270	0.210 – 0.330	0.133	0.093 – 0.173
Chipata District (303)						
Nsingo (01)	0.687	0.646 – 0.728	0.293	0.263 – 0.323	0.158	0.135 – 0.180
Mankangila (02)	0.680	0.633 – 0.727	0.283	0.251 – 0.315	0.149	0.126 – 0.173
Mkhova (03)	0.687	0.645 – 0.728	0.290	0.261 – 0.319	0.155	0.133 – 0.177
Chikando (04)	0.722	0.683 – 0.761	0.314	0.285 – 0.344	0.171	0.147 – 0.194
Kazimule (05)	0.731	0.686 – 0.776	0.320	0.285 – 0.355	0.174	0.147 – 0.201
Chingazi (06)	0.701	0.655 – 0.748	0.292	0.259 – 0.326	0.154	0.130 – 0.178
Makungwa (07)	0.659	0.617 – 0.702	0.268	0.240 – 0.296	0.139	0.119 – 0.159
Ngongwe (08)	0.680	0.634 – 0.725	0.281	0.250 – 0.311	0.147	0.126 – 0.169
Kwenje (09)	0.673	0.630 – 0.717	0.271	0.241 – 0.301	0.139	0.118 – 0.160
Mboza (10)	0.697	0.654 – 0.740	0.294	0.263 – 0.325	0.156	0.134 – 0.179
Chiparamba (11)	0.682	0.633 – 0.731	0.278	0.248 – 0.309	0.145	0.123 – 0.166
Sisinje (12)	0.745	0.704 – 0.786	0.326	0.294 – 0.358	0.177	0.153 – 0.201
Nthope (13)	0.740	0.702 – 0.779	0.318	0.288 – 0.349	0.171	0.149 – 0.193
Kasenga (14)	0.754	0.715 – 0.792	0.331	0.301 – 0.360	0.180	0.157 – 0.202
Msandile (15)	0.744	0.705 – 0.783	0.322	0.292 – 0.351	0.173	0.151 – 0.195
Rukuzye (16)	0.738	0.697 – 0.778	0.321	0.291 – 0.351	0.173	0.151 – 0.195

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chipangali (17)	0.738	0.698 – 0.778	0.316	0.287 – 0.345	0.168	0.147 – 0.190
Msanga (18)	0.480	0.455 – 0.506	0.166	0.154 – 0.179	0.077	0.070 – 0.085
Kanjala (19)	0.505	0.480 – 0.530	0.179	0.166 – 0.192	0.084	0.075 – 0.093
Dilika (20)	0.407	0.386 – 0.428	0.132	0.122 – 0.142	0.058	0.052 – 0.065
Katete District (304)						
Kafumbwe (01)	0.574	0.509 – 0.639	0.209	0.171 – 0.246	0.100	0.077 – 0.124
Kazala (02)	0.675	0.615 – 0.736	0.268	0.225 – 0.311	0.136	0.106 – 0.166
Milanzi (03)	0.595	0.535 – 0.655	0.218	0.179 – 0.257	0.105	0.080 – 0.130
Kapoche (04)	0.626	0.551 – 0.700	0.232	0.190 – 0.274	0.112	0.085 – 0.139
Kamwaza (05)	0.697	0.661 – 0.732	0.277	0.252 – 0.301	0.140	0.122 – 0.159
Nchingilizya (06)	0.675	0.631 – 0.720	0.256	0.231 – 0.281	0.126	0.108 – 0.143
Chindwale (07)	0.662	0.601 – 0.723	0.258	0.215 – 0.300	0.129	0.100 – 0.159
Kapangulula (08)	0.667	0.606 – 0.728	0.259	0.219 – 0.299	0.130	0.103 – 0.156
Luandazi (09)	0.681	0.643 – 0.720	0.265	0.240 – 0.291	0.133	0.114 – 0.151
Dole (10)	0.628	0.559 – 0.697	0.236	0.194 – 0.277	0.115	0.088 – 0.142
Chimwa (11)	0.617	0.535 – 0.699	0.229	0.183 – 0.276	0.112	0.081 – 0.142
Mphangwe (12)	0.445	0.408 – 0.482	0.147	0.130 – 0.163	0.067	0.056 – 0.077
Chavuka (13)	0.652	0.597 – 0.708	0.251	0.215 – 0.287	0.125	0.101 – 0.149
Chiwuyu (14)	0.678	0.644 – 0.712	0.267	0.245 – 0.289	0.135	0.119 – 0.152
Kadula (15)	0.666	0.615 – 0.717	0.268	0.231 – 0.305	0.138	0.112 – 0.163
Sinda (16)	0.667	0.624 – 0.710	0.269	0.241 – 0.296	0.138	0.119 – 0.157
Mnyamanzi (17)	0.700	0.657 – 0.742	0.281	0.250 – 0.311	0.143	0.122 – 0.165
Nyamasonkho (18)	0.686	0.651 – 0.721	0.268	0.244 – 0.293	0.135	0.117 – 0.152
Mng'omba (19)	0.707	0.671 – 0.744	0.291	0.262 – 0.320	0.151	0.129 – 0.173
Kasangazi (20)	0.662	0.624 – 0.699	0.254	0.234 – 0.275	0.126	0.111 – 0.141
Vulamkoko (21)	0.635	0.582 – 0.688	0.240	0.207 – 0.272	0.117	0.096 – 0.139
Chimtende (22)	0.652	0.600 – 0.705	0.251	0.218 – 0.285	0.125	0.102 – 0.147
Mkaika (23)	0.662	0.611 – 0.714	0.259	0.223 – 0.294	0.130	0.106 – 0.154
Matunga (24)	0.624	0.572 – 0.675	0.234	0.199 – 0.268	0.114	0.091 – 0.137
Mwandafisi (25)	0.618	0.559 – 0.677	0.231	0.194 – 0.269	0.113	0.088 – 0.138

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lundazi District (305)						
Diwa (01)	0.657	0.610 – 0.704	0.260	0.229 – 0.291	0.132	0.111 – 0.153
Kamimba (02)	0.653	0.609 – 0.697	0.257	0.230 – 0.283	0.130	0.111 – 0.148
Chamtowa (03)	0.655	0.613 – 0.698	0.258	0.231 – 0.286	0.131	0.112 – 0.150
Wachitangachi (04)	0.627	0.575 – 0.679	0.240	0.211 – 0.269	0.120	0.100 – 0.139
Kazembe (05)	0.649	0.599 – 0.699	0.251	0.222 – 0.280	0.125	0.106 – 0.144
Lumimba (06)	0.647	0.600 – 0.694	0.253	0.225 – 0.281	0.128	0.109 – 0.146
Lukusuzi (07)	0.645	0.591 – 0.699	0.248	0.215 – 0.282	0.124	0.101 – 0.148
Chibande (08)	0.613	0.563 – 0.663	0.232	0.204 – 0.260	0.115	0.098 – 0.133
Lunewwa (09)	0.863	0.817 – 0.909	0.427	0.388 – 0.467	0.251	0.219 – 0.283
Nthitimila (10)	0.875	0.831 – 0.919	0.438	0.398 – 0.478	0.258	0.225 – 0.291
Chimaliro (11)	0.873	0.826 – 0.919	0.434	0.395 – 0.474	0.255	0.223 – 0.287
Chioliola (12)	0.845	0.795 – 0.894	0.404	0.364 – 0.444	0.231	0.200 – 0.263
Msuzi (13)	0.873	0.833 – 0.913	0.445	0.407 – 0.484	0.265	0.233 – 0.298
Mnyamazi (14)	0.688	0.654 – 0.721	0.311	0.285 – 0.338	0.174	0.154 – 0.195
Ndonda (15)	0.866	0.816 – 0.916	0.420	0.381 – 0.458	0.242	0.212 – 0.272
Vuu (16)	0.844	0.796 – 0.892	0.406	0.368 – 0.445	0.234	0.203 – 0.264
Chaboli (17)	0.836	0.788 – 0.884	0.377	0.340 – 0.415	0.206	0.178 – 0.234
Membe (18)	0.854	0.805 – 0.903	0.397	0.357 – 0.437	0.219	0.189 – 0.249
Nkhanga (19)	0.864	0.823 – 0.904	0.411	0.376 – 0.446	0.232	0.206 – 0.259
Kapilisanga (20)	0.858	0.815 – 0.901	0.403	0.368 – 0.437	0.225	0.199 – 0.251
tuwerezi (21)	0.896	0.854 – 0.937	0.440	0.400 – 0.480	0.252	0.220 – 0.285
Susa (22)	0.905	0.870 – 0.940	0.463	0.424 – 0.501	0.273	0.240 – 0.305
Magodi (23)	0.869	0.830 – 0.907	0.420	0.385 – 0.455	0.238	0.211 – 0.266
Manda Hill (24)	0.903	0.868 – 0.938	0.464	0.427 – 0.500	0.275	0.244 – 0.306
Kajilime (25)	0.894	0.857 – 0.930	0.444	0.408 – 0.481	0.257	0.228 – 0.287
Mambwe District (306)						
Nsefu (01)	0.566	0.504 – 0.627	0.217	0.182 – 0.253	0.110	0.085 – 0.134
Jumbe (02)	0.585	0.522 – 0.647	0.229	0.193 – 0.266	0.117	0.091 – 0.143

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chipapa (03)	0.527	0.454 – 0.600	0.195	0.153 – 0.236	0.096	0.068 – 0.123
Mphomwa (04)	0.613	0.513 – 0.712	0.243	0.181 – 0.304	0.124	0.082 – 0.167
Chikowa (05)	0.598	0.514 – 0.682	0.238	0.187 – 0.288	0.122	0.088 – 0.157
Mnkhanya (06)	0.554	0.487 – 0.621	0.210	0.172 – 0.248	0.105	0.080 – 0.130
Kakumbi (07)	0.524	0.461 – 0.588	0.201	0.165 – 0.237	0.102	0.078 – 0.126
Ncheka (08)	0.602	0.535 – 0.669	0.237	0.196 – 0.278	0.122	0.092 – 0.151
Msoro (09)	0.575	0.476 – 0.674	0.218	0.162 – 0.274	0.109	0.071 – 0.147
Kasamanda (10)	0.572	0.506 – 0.638	0.216	0.179 – 0.253	0.107	0.082 – 0.133
Mdima (11)	0.550	0.480 – 0.620	0.207	0.170 – 0.243	0.102	0.078 – 0.127
Malama (12)	0.531	0.450 – 0.612	0.201	0.156 – 0.246	0.100	0.070 – 0.130
Nyimba District (307)						
Chinsumbwe (01)	0.587	0.494 – 0.681	0.229	0.174 – 0.284	0.117	0.079 – 0.154
Katipa (02)	0.603	0.514 – 0.692	0.235	0.184 – 0.287	0.120	0.085 – 0.154
Vizimumba (03)	0.592	0.517 – 0.667	0.233	0.185 – 0.281	0.120	0.087 – 0.153
Ngozi (04)	0.613	0.539 – 0.687	0.245	0.195 – 0.295	0.127	0.092 – 0.162
Lwezi (05)	0.559	0.484 – 0.633	0.217	0.170 – 0.264	0.110	0.078 – 0.143
Nyimba (06)	0.587	0.517 – 0.657	0.233	0.188 – 0.278	0.121	0.089 – 0.152
Kaliwe (07)	0.642	0.569 – 0.715	0.263	0.211 – 0.315	0.138	0.101 – 0.175
Chiweza (08)	0.604	0.526 – 0.682	0.238	0.189 – 0.287	0.122	0.089 – 0.156
Mombe (09)	0.563	0.483 – 0.644	0.215	0.169 – 0.261	0.108	0.078 – 0.138
Chamilala (10)	0.597	0.512 – 0.683	0.234	0.182 – 0.286	0.119	0.084 – 0.154
Chinambi (11)	0.632	0.556 – 0.708	0.257	0.208 – 0.306	0.135	0.100 – 0.169
Luangwa (12)	0.631	0.543 – 0.720	0.248	0.194 – 0.301	0.126	0.089 – 0.163
Petauke District (308)						
Kapoche (01)	0.729	0.678 – 0.780	0.299	0.263 – 0.335	0.154	0.128 – 0.179
Chingombe (02)	0.783	0.736 – 0.829	0.325	0.289 – 0.360	0.167	0.141 – 0.193
Mwangaila (03)	0.756	0.709 – 0.804	0.307	0.271 – 0.342	0.156	0.131 – 0.181
Matambazi (04)	0.763	0.716 – 0.809	0.315	0.281 – 0.350	0.162	0.138 – 0.186
Kaumbwe (05)	0.780	0.736 – 0.823	0.327	0.293 – 0.360	0.170	0.145 – 0.194

Table E3—Eastern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Manjazi (06)	0.776	0.731 – 0.821	0.324	0.290 – 0.358	0.168	0.143 – 0.192
Manyane (07)	0.783	0.738 – 0.828	0.329	0.294 – 0.364	0.171	0.145 – 0.197
Msumbazi (08)	0.709	0.671 – 0.746	0.289	0.263 – 0.315	0.149	0.130 – 0.169
Ongoliwe (09)	0.673	0.627 – 0.719	0.263	0.235 – 0.291	0.132	0.113 – 0.151
Kovskyane (10)	0.706	0.664 – 0.747	0.283	0.256 – 0.311	0.145	0.125 – 0.164
Mbala (11)	0.686	0.646 – 0.726	0.276	0.249 – 0.302	0.141	0.122 – 0.160
Chilimanyama (12)	0.696	0.655 – 0.736	0.280	0.254 – 0.305	0.143	0.124 – 0.161
Nvika (13)	0.515	0.485 – 0.544	0.181	0.166 – 0.197	0.085	0.075 – 0.095
Nsimbo (14)	0.709	0.661 – 0.757	0.287	0.256 – 0.319	0.148	0.126 – 0.170
N yakaw ise (15)	0.640	0.576 – 0.704	0.256	0.212 – 0.300	0.132	0.101 – 0.163
Mateyo (16)	0.622	0.556 – 0.687	0.244	0.203 – 0.286	0.125	0.096 – 0.153
Singozi (17)	0.634	0.564 – 0.705	0.249	0.204 – 0.294	0.127	0.096 – 0.158
Mawanda (18)	0.635	0.566 – 0.703	0.253	0.206 – 0.300	0.130	0.097 – 0.163
Lusangazi (19)	0.645	0.563 – 0.726	0.258	0.212 – 0.305	0.133	0.102 – 0.164
Chisangu (20)	0.647	0.586 – 0.709	0.262	0.220 – 0.304	0.136	0.106 – 0.166

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E4—Luapula Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chienege District (401)						
Lambwe Chomba (01)	0.698	0.636 – 0.760	0.281	0.235 – 0.327	0.144	0.112 – 0.176
Mwabu (02)	0.682	0.609 – 0.756	0.271	0.220 – 0.322	0.138	0.103 – 0.174
Chipungu (03)	0.638	0.566 – 0.711	0.238	0.191 – 0.284	0.115	0.085 – 0.146
Chienge (04)	0.675	0.605 – 0.745	0.252	0.203 – 0.302	0.122	0.088 – 0.155
Kantete (05)	0.662	0.588 – 0.735	0.237	0.189 – 0.285	0.111	0.080 – 0.142
Ifuna (06)	0.672	0.605 – 0.739	0.254	0.207 – 0.301	0.124	0.093 – 0.155
Chipamba (07)	0.668	0.598 – 0.739	0.247	0.198 – 0.296	0.118	0.085 – 0.150
Kalobwa (08)	0.665	0.594 – 0.736	0.251	0.204 – 0.299	0.123	0.091 – 0.155
Chitutu (09)	0.664	0.594 – 0.733	0.260	0.212 – 0.309	0.132	0.099 – 0.164
Munwa (10)	0.605	0.532 – 0.679	0.219	0.177 – 0.262	0.105	0.079 – 0.132
Kalungwishi (11)	0.607	0.533 – 0.681	0.211	0.167 – 0.255	0.097	0.070 – 0.124
Mununga (12)	0.647	0.575 – 0.718	0.235	0.188 – 0.283	0.112	0.082 – 0.142
Kawambwa District (402)						
Luongo (01)	0.788	0.732 – 0.844	0.373	0.328 – 0.417	0.215	0.180 – 0.250
Chibote (02)	0.799	0.744 – 0.855	0.379	0.332 – 0.426	0.218	0.180 – 0.255
Mulunda (03)	0.783	0.730 – 0.835	0.364	0.319 – 0.408	0.206	0.172 – 0.239
Pambashe (04)	0.801	0.744 – 0.858	0.377	0.329 – 0.425	0.215	0.177 – 0.254
Ilombe I (05)	0.766	0.712 – 0.820	0.347	0.303 – 0.390	0.193	0.161 – 0.226
Kabanse (06)	0.793	0.741 – 0.845	0.355	0.309 – 0.402	0.194	0.159 – 0.229
Luena (07)	0.644	0.560 – 0.728	0.245	0.192 – 0.299	0.124	0.090 – 0.158
Fisaka (08)	0.587	0.498 – 0.675	0.214	0.161 – 0.267	0.104	0.070 – 0.137
Iy anga (09)	0.697	0.620 – 0.774	0.259	0.203 – 0.315	0.123	0.086 – 0.160
Ng'ona (10)	0.506	0.449 – 0.563	0.173	0.141 – 0.205	0.080	0.060 – 0.100
Kawambwa (11)	0.343	0.275 – 0.412	0.103	0.077 – 0.130	0.044	0.031 – 0.058
Ntumbachushi (12)	0.654	0.565 – 0.742	0.233	0.175 – 0.290	0.107	0.071 – 0.144
Senga (13)	0.676	0.600 – 0.753	0.258	0.205 – 0.312	0.129	0.093 – 0.164
Mbereshi (14)	0.678	0.639 – 0.717	0.286	0.260 – 0.313	0.156	0.135 – 0.178
Kayo (15)	0.744	0.700 – 0.788	0.326	0.293 – 0.360	0.179	0.153 – 0.204

Table E4—Luapula Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chipita (16)	0.751	0.712 – 0.790	0.313	0.285 – 0.341	0.163	0.141 – 0.185
Mwansabombwe (17)	0.668	0.609 – 0.728	0.253	0.211 – 0.294	0.124	0.095 – 0.152
Lufubu (18)	0.746	0.708 – 0.783	0.312	0.287 – 0.338	0.164	0.144 – 0.184
Mulele (19)	0.789	0.754 – 0.824	0.333	0.304 – 0.362	0.172	0.148 – 0.196
Mununshi (20)	0.728	0.688 – 0.769	0.285	0.257 – 0.312	0.140	0.119 – 0.162
Mansa District (403)						
Mutuna (01)	0.766	0.727 – 0.806	0.348	0.315 – 0.381	0.195	0.169 – 0.221
Misakalala (02)	0.753	0.711 – 0.796	0.342	0.310 – 0.373	0.191	0.167 – 0.215
Kaole (03)	0.626	0.591 – 0.660	0.248	0.225 – 0.270	0.128	0.111 – 0.144
Mushipashi (04)	0.769	0.724 – 0.814	0.364	0.327 – 0.401	0.211	0.181 – 0.241
Chibeleka (05)	0.830	0.787 – 0.873	0.415	0.372 – 0.458	0.247	0.212 – 0.283
Lukangaba (06)	0.812	0.768 – 0.857	0.401	0.358 – 0.443	0.236	0.202 – 0.271
Mulenshi (07)	0.720	0.678 – 0.762	0.296	0.264 – 0.328	0.153	0.130 – 0.176
Chilyapa (08)	0.634	0.585 – 0.683	0.245	0.215 – 0.274	0.122	0.103 – 0.142
Muchinka (09)	0.668	0.616 – 0.720	0.251	0.216 – 0.285	0.121	0.097 – 0.144
Mansa (10)	0.743	0.700 – 0.785	0.337	0.306 – 0.369	0.189	0.164 – 0.214
Chansunsu (11)	0.775	0.729 – 0.822	0.377	0.337 – 0.417	0.222	0.191 – 0.253
Myulu (12)	0.777	0.737 – 0.817	0.363	0.330 – 0.397	0.208	0.181 – 0.235
Katangashi (13)	0.740	0.693 – 0.787	0.339	0.305 – 0.373	0.192	0.165 – 0.218
Lwingishi (14)	0.831	0.790 – 0.873	0.424	0.383 – 0.466	0.257	0.222 – 0.291
Luapula (15)	0.828	0.788 – 0.868	0.421	0.380 – 0.463	0.255	0.220 – 0.289
Milenge District (404)						
Chiswishi (01)	0.807	0.750 – 0.864	0.392	0.349 – 0.434	0.228	0.194 – 0.262
Mulumbi (02)	0.823	0.775 – 0.871	0.411	0.367 – 0.455	0.245	0.210 – 0.280
Itemba (03)	0.809	0.765 – 0.853	0.400	0.361 – 0.438	0.237	0.206 – 0.268
Fibalala (04)	0.830	0.779 – 0.880	0.429	0.387 – 0.471	0.264	0.227 – 0.300
Nsaka (05)	0.830	0.768 – 0.892	0.402	0.349 – 0.455	0.234	0.192 – 0.277
Milambo (06)	0.818	0.769 – 0.868	0.406	0.366 – 0.445	0.241	0.208 – 0.274
Nsunga (07)	0.779	0.717 – 0.840	0.373	0.327 – 0.419	0.217	0.178 – 0.255

Table E4—Luapula Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chipungu (08)	0.856	0.744 – 0.968	0.439	0.352 – 0.527	0.267	0.196 – 0.337
Mumbotuta (09)	0.871	0.824 – 0.919	0.478	0.433 – 0.523	0.305	0.265 – 0.345
Kapalala (10)	0.843	0.787 – 0.899	0.432	0.387 – 0.478	0.263	0.225 – 0.301
Mikula (11)	0.864	0.829 – 0.900	0.464	0.426 – 0.503	0.292	0.257 – 0.327
Sokontwe (12)	0.841	0.791 – 0.891	0.434	0.392 – 0.477	0.266	0.230 – 0.301
Mwense District (405)						
Kaombe (01)	0.810	0.773 – 0.847	0.356	0.320 – 0.391	0.192	0.162 – 0.222
Nkanga (02)	0.775	0.739 – 0.812	0.319	0.287 – 0.350	0.162	0.137 – 0.187
Luche (03)	0.767	0.732 – 0.802	0.318	0.287 – 0.348	0.163	0.138 – 0.187
Peb-kabesa (04)	0.788	0.751 – 0.826	0.330	0.298 – 0.363	0.169	0.143 – 0.196
Kapela (05)	0.767	0.726 – 0.807	0.315	0.282 – 0.347	0.160	0.135 – 0.186
Chachacha (06)	0.780	0.739 – 0.822	0.320	0.285 – 0.355	0.163	0.137 – 0.190
Kati ti (07)	0.748	0.708 – 0.787	0.303	0.270 – 0.336	0.153	0.127 – 0.179
Kasengu (08)	0.559	0.517 – 0.601	0.195	0.173 – 0.217	0.090	0.076 – 0.104
Kalanga (09)	0.803	0.763 – 0.843	0.352	0.323 – 0.382	0.189	0.165 – 0.214
Nsenga (10)	0.764	0.729 – 0.800	0.327	0.300 – 0.354	0.173	0.152 – 0.194
Mumbwe (11)	0.768	0.727 – 0.809	0.325	0.294 – 0.356	0.171	0.147 – 0.194
Chibalashi (12)	0.756	0.716 – 0.796	0.322	0.293 – 0.351	0.171	0.149 – 0.193
Nalupembe (13)	0.750	0.713 – 0.788	0.334	0.306 – 0.363	0.185	0.163 – 0.207
Nkonge (14)	0.772	0.733 – 0.812	0.328	0.298 – 0.358	0.173	0.149 – 0.197
Nsomfi (15)	0.763	0.723 – 0.804	0.322	0.291 – 0.352	0.167	0.144 – 0.191
Munwa (16)	0.789	0.745 – 0.833	0.335	0.305 – 0.366	0.176	0.152 – 0.201
Mambilima (17)	0.733	0.691 – 0.775	0.302	0.273 – 0.331	0.156	0.134 – 0.178
Musonda (18)	0.792	0.756 – 0.828	0.340	0.308 – 0.371	0.178	0.152 – 0.204
Chibembe (19)	0.856	0.820 – 0.893	0.395	0.360 – 0.431	0.218	0.188 – 0.248
Mpasa (20)	0.802	0.760 – 0.844	0.384	0.349 – 0.419	0.222	0.192 – 0.252
Nchelenge District (406)						
Kabuta (01)	0.789	0.750 – 0.828	0.335	0.299 – 0.372	0.175	0.146 – 0.204
Munkombwe (02)	0.815	0.762 – 0.867	0.369	0.317 – 0.421	0.200	0.157 – 0.244

Table E4—Luapula Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mwatishi (03)	0.758	0.717 – 0.799	0.308	0.275 – 0.340	0.155	0.130 – 0.180
Kashikishi (04)	0.603	0.567 – 0.639	0.223	0.201 – 0.245	0.108	0.093 – 0.123
Kilwa (05)	0.746	0.706 – 0.787	0.328	0.292 – 0.365	0.179	0.150 – 0.208
Nchelenge (06)	0.634	0.593 – 0.674	0.227	0.201 – 0.253	0.106	0.089 – 0.123
Kasamba (07)	0.749	0.708 – 0.790	0.317	0.283 – 0.351	0.167	0.141 – 0.194
Mulwe (08)	0.772	0.729 – 0.814	0.318	0.280 – 0.356	0.163	0.134 – 0.191
Chisenga (09)	0.715	0.671 – 0.760	0.306	0.274 – 0.337	0.164	0.139 – 0.188
Shabo (10)	0.775	0.736 – 0.815	0.332	0.297 – 0.367	0.176	0.150 – 0.203
Momfwe (11)	0.749	0.707 – 0.792	0.309	0.274 – 0.345	0.159	0.131 – 0.187
Katofyo (12)	0.740	0.694 – 0.785	0.308	0.274 – 0.342	0.160	0.135 – 0.186
Samfya District (407)						
Masonde (01)	0.728	0.671 – 0.785	0.318	0.275 – 0.360	0.173	0.142 – 0.205
Kasansa (02)	0.716	0.662 – 0.770	0.311	0.269 – 0.353	0.169	0.138 – 0.199
Kapamba (03)	0.715	0.659 – 0.772	0.309	0.268 – 0.350	0.167	0.137 – 0.197
Chinkutila (04)	0.699	0.645 – 0.754	0.301	0.261 – 0.342	0.163	0.134 – 0.193
Chishi (05)	0.725	0.661 – 0.789	0.312	0.268 – 0.355	0.168	0.137 – 0.199
Kafumbo (06)	0.690	0.634 – 0.746	0.297	0.257 – 0.337	0.162	0.133 – 0.191
Kasongole (07)	0.706	0.654 – 0.758	0.309	0.271 – 0.347	0.169	0.140 – 0.199
Chifunabuli (08)	0.668	0.611 – 0.726	0.283	0.244 – 0.323	0.153	0.125 – 0.181
Mbabala (09)	0.678	0.618 – 0.737	0.291	0.247 – 0.334	0.158	0.126 – 0.190
Chimana (10)	0.342	0.287 – 0.398	0.101	0.079 – 0.123	0.043	0.031 – 0.054
Mano (11)	0.478	0.387 – 0.570	0.164	0.119 – 0.210	0.078	0.051 – 0.104
Katanshya (12)	0.478	0.389 – 0.568	0.166	0.121 – 0.211	0.078	0.052 – 0.105
Isamba (13)	0.483	0.386 – 0.579	0.168	0.119 – 0.216	0.080	0.052 – 0.108
Kapata (14)	0.472	0.383 – 0.561	0.165	0.119 – 0.212	0.079	0.052 – 0.106
Nkutila (15)	0.693	0.639 – 0.747	0.304	0.266 – 0.342	0.168	0.140 – 0.195
Lunga (16)	0.717	0.660 – 0.774	0.324	0.283 – 0.365	0.183	0.151 – 0.214
Nsalushi (17)	0.711	0.652 – 0.770	0.316	0.275 – 0.358	0.176	0.145 – 0.207
Ncheta (18)	0.727	0.671 – 0.782	0.339	0.297 – 0.380	0.195	0.163 – 0.227
Musaba (19)	0.478	0.384 – 0.573	0.166	0.120 – 0.211	0.078	0.051 – 0.105

Table E4—Luapula Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lumanya (20)	0.504	0.410 – 0.598	0.176	0.127 – 0.225	0.083	0.054 – 0.112

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E5—Lusaka Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chongwe District (501)						
Shikabeta (01)	0.921	0.862 – 0.979	0.513	0.426 – 0.599	0.323	0.244 – 0.402
Mankanda (02)	0.897	0.841 – 0.954	0.476	0.401 – 0.552	0.293	0.228 – 0.358
Rufunsa (03)	0.943	0.912 – 0.975	0.560	0.506 – 0.613	0.368	0.315 – 0.421
Bunda Bunda (04)	0.886	0.843 – 0.930	0.489	0.433 – 0.544	0.307	0.256 – 0.357
Nyangwena (05)	0.911	0.863 – 0.958	0.510	0.448 – 0.572	0.323	0.267 – 0.379
Manyika (06)	0.652	0.576 – 0.729	0.248	0.200 – 0.295	0.121	0.089 – 0.152
Lwimba (07)	0.644	0.559 – 0.728	0.241	0.189 – 0.293	0.117	0.083 – 0.151
Kanakantapa (08)	0.586	0.509 – 0.664	0.219	0.175 – 0.263	0.106	0.078 – 0.134
Chongwe (09)	0.587	0.531 – 0.644	0.214	0.181 – 0.247	0.102	0.080 – 0.124
Lukoshi (10)	0.634	0.564 – 0.703	0.242	0.198 – 0.287	0.119	0.090 – 0.149
Ntandabale (11)	0.479	0.412 – 0.546	0.177	0.142 – 0.211	0.086	0.064 – 0.108
Chinkuli (12)	0.512	0.449 – 0.576	0.184	0.149 – 0.220	0.089	0.066 – 0.111
Kapwayambale (13)	0.497	0.428 – 0.566	0.178	0.144 – 0.212	0.085	0.063 – 0.106
Nakatindi (14)	0.580	0.499 – 0.662	0.210	0.164 – 0.257	0.100	0.070 – 0.129
Mwachilele (15)	0.914	0.878 – 0.949	0.538	0.485 – 0.592	0.353	0.301 – 0.406
Kafue District (502)						
Chiyaba (01)	0.803	0.748 – 0.857	0.365	0.325 – 0.405	0.203	0.171 – 0.234
Kambale (02)	0.736	0.662 – 0.811	0.318	0.264 – 0.371	0.170	0.132 – 0.208
Malundu (03)	0.604	0.558 – 0.649	0.255	0.227 – 0.283	0.136	0.116 – 0.156
Lukolongo (04)	0.757	0.706 – 0.809	0.351	0.315 – 0.387	0.197	0.168 – 0.225
Kafke (05)	0.474	0.432 – 0.517	0.184	0.163 – 0.205	0.095	0.082 – 0.109
Matanda (06)	0.618	0.579 – 0.657	0.236	0.215 – 0.258	0.118	0.103 – 0.133
Kasenje (07)	0.518	0.489 – 0.547	0.205	0.187 – 0.223	0.104	0.091 – 0.116
Munugu (08)	0.816	0.764 – 0.867	0.385	0.343 – 0.427	0.218	0.184 – 0.251
Chikupi (09)	0.774	0.727 – 0.822	0.352	0.316 – 0.388	0.194	0.167 – 0.222
Chilanga (10)	0.465	0.410 – 0.520	0.188	0.153 – 0.222	0.099	0.075 – 0.123
Chilongolo (11)	0.604	0.537 – 0.671	0.263	0.213 – 0.313	0.144	0.108 – 0.180
Namalombwe (12)	0.590	0.524 – 0.656	0.240	0.195 – 0.285	0.124	0.093 – 0.155

Table E5—Lusaka Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Nyemba (13)	0.569	0.492 – 0.647	0.233	0.187 – 0.279	0.120	0.090 – 0.150
Nakachenje (14)	0.704	0.625 – 0.783	0.320	0.257 – 0.383	0.180	0.133 – 0.227
Chinyanja (15)	0.746	0.666 – 0.827	0.340	0.269 – 0.411	0.188	0.134 – 0.242
Luangwa District (503)						
Dzalo (01)	0.627	0.576 – 0.678	0.211	0.175 – 0.247	0.094	0.071 – 0.118
Mkaliva (02)	0.979	0.953 – 1.005	0.641	0.571 – 0.712	0.452	0.372 – 0.532
Mandombe (03)	0.950	0.912 – 0.987	0.585	0.499 – 0.672	0.396	0.306 – 0.486
Phwazi (04)	0.977	0.952 – 1.002	0.641	0.573 – 0.709	0.452	0.376 – 0.528
Mphuka (05)	0.977	0.956 – 0.998	0.658	0.594 – 0.723	0.475	0.399 – 0.551
Kabawo (06)	0.971	0.900 – 1.041	0.594	0.481 – 0.707	0.398	0.283 – 0.514
Kapoche (07)	0.971	0.945 – 0.997	0.616	0.538 – 0.694	0.424	0.340 – 0.509
Chiriwe (08)	0.944	0.899 – 0.989	0.637	0.564 – 0.709	0.469	0.392 – 0.545
Lunya (09)	0.969	0.938 – 0.999	0.639	0.567 – 0.712	0.453	0.371 – 0.536
Katondwe (10)	0.965	0.933 – 0.997	0.655	0.585 – 0.724	0.474	0.395 – 0.553
Chikoma (11)	0.984	0.968 – 1.000	0.682	0.620 – 0.743	0.499	0.426 – 0.573
Mburuma (12)	0.960	0.931 – 0.989	0.641	0.574 – 0.708	0.460	0.385 – 0.535
Mwalilia (13)	0.976	0.955 – 0.998	0.670	0.607 – 0.733	0.490	0.417 – 0.563
Kaunga (14)	0.978	0.959 – 0.998	0.675	0.608 – 0.743	0.495	0.416 – 0.575
Mankhokwe (15)	0.950	0.911 – 0.989	0.602	0.525 – 0.679	0.416	0.335 – 0.496
Lusaka District (504)						
Chainda (01)	0.350	0.331 – 0.369	0.130	0.119 – 0.141	0.063	0.056 – 0.071
Mtendere (02)	0.504	0.468 – 0.540	0.172	0.153 – 0.190	0.078	0.067 – 0.089
Kabulonga (03)	0.473	0.450 – 0.496	0.179	0.165 – 0.192	0.088	0.079 – 0.097
Kalingalinga (04)	0.504	0.479 – 0.529	0.182	0.167 – 0.197	0.087	0.077 – 0.096
Chakunkula (05)	0.344	0.318 – 0.371	0.126	0.112 – 0.140	0.061	0.052 – 0.070
Munali (06)	0.295	0.263 – 0.327	0.094	0.078 – 0.109	0.042	0.033 – 0.050
Roma (07)	0.577	0.548 – 0.605	0.220	0.201 – 0.238	0.108	0.096 – 0.120
Mulungushi (08)	0.144	0.116 – 0.172	0.043	0.032 – 0.054	0.019	0.013 – 0.024
Ngwerere (09)	0.562	0.536 – 0.587	0.208	0.191 – 0.224	0.100	0.089 – 0.111

Table E5—Lusaka Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Silwizya (10)	0.079	0.055 – 0.102	0.020	0.013 – 0.028	0.008	0.004 – 0.012
Raphael (11)	0.632	0.606 – 0.657	0.243	0.225 – 0.260	0.120	0.108 – 0.132
Justine Kabwe (12)	0.572	0.537 – 0.608	0.203	0.183 – 0.222	0.095	0.083 – 0.107
Chaisa (13)	0.677	0.650 – 0.705	0.267	0.246 – 0.287	0.134	0.119 – 0.148
Mtrchinga (14)	0.380	0.345 – 0.415	0.130	0.110 – 0.149	0.061	0.048 – 0.073
Kapwepwe (15)	0.558	0.532 – 0.585	0.217	0.199 – 0.235	0.110	0.096 – 0.124
Matero (16)	0.416	0.393 – 0.440	0.153	0.136 – 0.169	0.075	0.063 – 0.086
Lima (17)	0.660	0.631 – 0.689	0.272	0.252 – 0.291	0.143	0.127 – 0.158
Harry (18)	0.572	0.542 – 0.601	0.197	0.180 – 0.214	0.090	0.079 – 0.101
Kanyama (19)	0.615	0.588 – 0.642	0.219	0.201 – 0.236	0.101	0.090 – 0.113
Munkolo (20)	0.444	0.418 – 0.470	0.157	0.143 – 0.172	0.074	0.065 – 0.082
Nkoloma (21)	0.672	0.646 – 0.698	0.252	0.232 – 0.271	0.121	0.107 – 0.134
Chawama (22)	0.576	0.548 – 0.604	0.203	0.186 – 0.220	0.094	0.083 – 0.105
Lilayi (23)	0.576	0.548 – 0.604	0.209	0.191 – 0.227	0.099	0.087 – 0.112
Kamwala (24)	0.349	0.318 – 0.379	0.114	0.100 – 0.128	0.051	0.043 – 0.060
Independence (25)	0.125	0.101 – 0.149	0.034	0.026 – 0.042	0.014	0.010 – 0.018
Kabwata (26)	0.186	0.155 – 0.217	0.053	0.042 – 0.064	0.022	0.016 – 0.027
Libala (27)	0.124	0.091 – 0.157	0.031	0.019 – 0.042	0.011	0.006 – 0.017
Chilenge (28)	0.259	0.229 – 0.288	0.076	0.064 – 0.088	0.032	0.025 – 0.038
Lubwa (29)	0.135	0.111 – 0.160	0.036	0.026 – 0.045	0.014	0.009 – 0.018
Mwebeshi (30)	0.488	0.461 – 0.515	0.185	0.168 – 0.202	0.093	0.080 – 0.106

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chilubi District (601)						
Mpanshya (01)	0.710	0.664 – 0.757	0.303	0.274 – 0.331	0.162	0.140 – 0.184
Kanchindi (02)	0.753	0.681 – 0.824	0.356	0.299 – 0.413	0.206	0.161 – 0.251
Kashitu (03)	0.750	0.683 – 0.817	0.346	0.296 – 0.397	0.197	0.159 – 0.235
Kapoka (04)	0.760	0.698 – 0.822	0.359	0.308 – 0.410	0.207	0.167 – 0.247
Kambahashi (05)	0.761	0.693 – 0.829	0.356	0.302 – 0.409	0.203	0.162 – 0.245
Kawena (06)	0.702	0.635 – 0.769	0.308	0.261 – 0.355	0.170	0.134 – 0.206
Chinkundu (07)	0.766	0.700 – 0.831	0.358	0.306 – 0.410	0.205	0.165 – 0.245
Kanana (08)	0.799	0.732 – 0.867	0.396	0.337 – 0.454	0.236	0.188 – 0.284
Mubemba (09)	0.773	0.703 – 0.843	0.372	0.317 – 0.428	0.218	0.173 – 0.263
Luangwa (10)	0.757	0.682 – 0.832	0.359	0.295 – 0.423	0.208	0.158 – 0.258
Bumba (11)	0.828	0.767 – 0.888	0.414	0.358 – 0.470	0.248	0.202 – 0.293
Chiloba (12)	0.774	0.722 – 0.827	0.363	0.317 – 0.410	0.208	0.170 – 0.246
Mofu (13)	0.781	0.720 – 0.843	0.369	0.317 – 0.422	0.212	0.170 – 0.254
Chisupa (14)	0.843	0.793 – 0.893	0.419	0.365 – 0.472	0.247	0.202 – 0.292
Bulilo (15)	0.750	0.692 – 0.808	0.336	0.293 – 0.378	0.186	0.155 – 0.218
Muteka (16)	0.755	0.695 – 0.816	0.337	0.293 – 0.382	0.187	0.153 – 0.221
Katamba (17)	0.744	0.666 – 0.821	0.341	0.287 – 0.395	0.193	0.154 – 0.232
Ndela (18)	0.759	0.700 – 0.818	0.351	0.305 – 0.396	0.199	0.164 – 0.234
Chifwenge (19)	0.778	0.726 – 0.830	0.359	0.315 – 0.404	0.203	0.169 – 0.237
Mulanda (20)	0.775	0.710 – 0.839	0.366	0.315 – 0.418	0.211	0.171 – 0.251
Chinsali District (602)						
Itaba (01)	0.871	0.837 – 0.906	0.470	0.427 – 0.513	0.294	0.254 – 0.333
Chilunda (02)	0.905	0.863 – 0.948	0.525	0.475 – 0.576	0.345	0.295 – 0.394
Chilinda (03)	0.839	0.805 – 0.874	0.425	0.391 – 0.460	0.255	0.225 – 0.285
Kaunga (04)	0.864	0.828 – 0.900	0.443	0.405 – 0.481	0.267	0.234 – 0.300
Malalo (05)	0.828	0.777 – 0.879	0.407	0.362 – 0.452	0.238	0.200 – 0.276
Chipanga (06)	0.834	0.793 – 0.875	0.418	0.376 – 0.461	0.249	0.212 – 0.286
Luko (07)	0.894	0.847 – 0.940	0.480	0.425 – 0.535	0.299	0.248 – 0.350

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lubwa (08)	0.847	0.810 – 0.884	0.431	0.397 – 0.466	0.260	0.231 – 0.289
Ichinga (09)	0.688	0.659 – 0.717	0.296	0.275 – 0.316	0.160	0.144 – 0.176
Munwakubili (10)	0.725	0.674 – 0.776	0.344	0.312 – 0.376	0.198	0.173 – 0.223
Chamusenga (11)	0.793	0.750 – 0.836	0.364	0.329 – 0.400	0.205	0.177 – 0.233
Muchinga (12)	0.743	0.704 – 0.782	0.330	0.298 – 0.362	0.182	0.157 – 0.207
Chandaula (13)	0.779	0.742 – 0.815	0.356	0.325 – 0.387	0.199	0.174 – 0.224
Makumbi (14)	0.776	0.726 – 0.827	0.360	0.317 – 0.402	0.204	0.170 – 0.238
Chibinga (15)	0.830	0.800 – 0.860	0.400	0.370 – 0.430	0.232	0.206 – 0.258
Mayembe (16)	0.827	0.786 – 0.868	0.399	0.363 – 0.435	0.232	0.200 – 0.263
Mwiche (17)	0.785	0.734 – 0.835	0.369	0.331 – 0.407	0.211	0.180 – 0.243
Ichingo (18)	0.808	0.772 – 0.845	0.374	0.341 – 0.408	0.211	0.184 – 0.238
Chimpundu (19)	0.800	0.764 – 0.836	0.374	0.345 – 0.402	0.212	0.190 – 0.234
Nkulungwe (20)	0.864	0.826 – 0.902	0.441	0.395 – 0.487	0.265	0.224 – 0.306
Isoka District (603)						
Kasoka (01)	0.559	0.513 – 0.606	0.205	0.179 – 0.232	0.100	0.082 – 0.117
Kantenshya (02)	0.863	0.830 – 0.896	0.432	0.400 – 0.465	0.255	0.226 – 0.283
Milonga (03)	0.822	0.782 – 0.862	0.399	0.363 – 0.435	0.231	0.202 – 0.261
Kapililonga (04)	0.847	0.811 – 0.883	0.427	0.397 – 0.458	0.254	0.229 – 0.280
Nsansamwenje (05)	0.840	0.807 – 0.873	0.410	0.379 – 0.441	0.238	0.212 – 0.264
Mpundu (06)	0.830	0.778 – 0.881	0.390	0.342 – 0.438	0.221	0.183 – 0.258
Luangwa (07)	0.831	0.779 – 0.883	0.404	0.355 – 0.453	0.235	0.194 – 0.275
Mafinga (08)	0.595	0.497 – 0.693	0.219	0.162 – 0.276	0.106	0.070 – 0.142
Nkombwa (09)	0.832	0.787 – 0.877	0.401	0.355 – 0.447	0.232	0.192 – 0.272
Ntonga (10)	0.663	0.574 – 0.752	0.266	0.201 – 0.331	0.137	0.092 – 0.181
Thendele (11)	0.602	0.507 – 0.697	0.224	0.167 – 0.282	0.109	0.073 – 0.146
Kakoma (12)	0.640	0.549 – 0.732	0.242	0.184 – 0.300	0.119	0.082 – 0.156
Luhoka (13)	0.663	0.573 – 0.752	0.254	0.193 – 0.315	0.125	0.084 – 0.166
Kalonga (14)	0.614	0.521 – 0.707	0.228	0.170 – 0.285	0.111	0.074 – 0.147
Mukutu (15)	0.623	0.534 – 0.711	0.236	0.180 – 0.292	0.117	0.081 – 0.153

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kaputa District (604)						
Nsumbu (01)	0.648	0.554 – 0.743	0.281	0.217 – 0.346	0.155	0.110 – 0.200
Munkonge (02)	0.754	0.683 – 0.826	0.340	0.282 – 0.399	0.188	0.145 – 0.232
Chisela (03)	0.753	0.672 – 0.833	0.341	0.281 – 0.401	0.191	0.146 – 0.236
Munwa (04)	0.780	0.722 – 0.837	0.356	0.307 – 0.406	0.199	0.161 – 0.238
Mwawe (05)	0.759	0.673 – 0.845	0.341	0.278 – 0.403	0.188	0.144 – 0.232
Kaleulu (06)	0.729	0.641 – 0.817	0.318	0.257 – 0.379	0.172	0.130 – 0.214
Mowa (07)	0.676	0.584 – 0.767	0.267	0.204 – 0.330	0.135	0.093 – 0.177
Choma (08)	0.518	0.454 – 0.583	0.188	0.150 – 0.225	0.091	0.066 – 0.115
Chipili (09)	0.638	0.507 – 0.769	0.257	0.181 – 0.334	0.133	0.085 – 0.180
Nkota (10)	0.658	0.533 – 0.783	0.277	0.203 – 0.350	0.147	0.100 – 0.194
Kalungwishi (11)	0.749	0.659 – 0.840	0.331	0.267 – 0.395	0.181	0.135 – 0.226
Mofwe (12)	0.698	0.574 – 0.822	0.289	0.211 – 0.366	0.151	0.100 – 0.202
Chiyulundu (13)	0.715	0.631 – 0.800	0.313	0.250 – 0.377	0.170	0.124 – 0.216
Mukubwe (14)	0.757	0.694 – 0.819	0.339	0.291 – 0.387	0.186	0.151 – 0.222
Kashikishi (15)	0.683	0.574 – 0.792	0.297	0.229 – 0.364	0.162	0.117 – 0.207
Kakusu (16)	0.666	0.508 – 0.824	0.277	0.186 – 0.368	0.147	0.090 – 0.203
Kapinda (17)	0.684	0.563 – 0.805	0.296	0.223 – 0.370	0.162	0.113 – 0.210
Mfwambeshi (18)	0.770	0.690 – 0.851	0.337	0.273 – 0.400	0.182	0.135 – 0.228
Fungwa (19)	0.780	0.722 – 0.838	0.351	0.298 – 0.404	0.194	0.153 – 0.234
Chubo (20)	0.759	0.683 – 0.836	0.334	0.273 – 0.394	0.181	0.136 – 0.226
Kasama District (605)						
Chilunga (01)	0.693	0.656 – 0.730	0.308	0.284 – 0.332	0.169	0.150 – 0.188
Bululu (02)	0.779	0.745 – 0.813	0.360	0.330 – 0.391	0.202	0.178 – 0.226
Kasenga (03)	0.792	0.763 – 0.821	0.366	0.339 – 0.393	0.205	0.183 – 0.228
Lukulu (04)	0.791	0.753 – 0.830	0.363	0.332 – 0.394	0.203	0.177 – 0.228
Lukupa (05)	0.729	0.697 – 0.762	0.338	0.312 – 0.363	0.191	0.171 – 0.211
Mulilansolo (06)	0.461	0.431 – 0.492	0.171	0.154 – 0.187	0.084	0.072 – 0.095
Buseko (07)	0.414	0.368 – 0.460	0.138	0.114 – 0.161	0.063	0.049 – 0.077
Chiba (08)	0.633	0.600 – 0.667	0.250	0.228 – 0.272	0.127	0.110 – 0.144

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lualuo (09)	0.745	0.718 – 0.771	0.334	0.313 – 0.356	0.185	0.167 – 0.202
Kapongolo (10)	0.714	0.689 – 0.739	0.311	0.292 – 0.330	0.169	0.154 – 0.184
Mukanga (11)	0.834	0.796 – 0.872	0.397	0.362 – 0.432	0.226	0.197 – 0.254
Lusenga (12)	0.812	0.771 – 0.853	0.384	0.350 – 0.418	0.218	0.191 – 0.246
Musowa (13)	0.799	0.754 – 0.843	0.365	0.324 – 0.406	0.203	0.171 – 0.235
Chumba (14)	0.815	0.775 – 0.856	0.390	0.358 – 0.421	0.224	0.198 – 0.250
Chibumbu (15)	0.772	0.733 – 0.812	0.352	0.321 – 0.383	0.196	0.173 – 0.220
Luwingu District (606)						
Itandashi (01)	0.798	0.753 – 0.844	0.365	0.325 – 0.404	0.202	0.172 – 0.233
Kaela (02)	0.794	0.748 – 0.839	0.359	0.319 – 0.399	0.197	0.166 – 0.229
Munshinga (03)	0.734	0.684 – 0.784	0.329	0.294 – 0.365	0.182	0.154 – 0.209
Katilye (04)	0.810	0.747 – 0.873	0.390	0.339 – 0.442	0.227	0.185 – 0.268
Kanfinsa (05)	0.755	0.706 – 0.804	0.333	0.292 – 0.373	0.181	0.150 – 0.212
Mufili (06)	0.782	0.737 – 0.827	0.351	0.314 – 0.388	0.193	0.165 – 0.221
Ilambo (07)	0.739	0.677 – 0.800	0.331	0.284 – 0.378	0.183	0.148 – 0.219
Mwelawamanu (08)	0.763	0.711 – 0.816	0.327	0.287 – 0.367	0.174	0.144 – 0.203
Ibale (09)	0.684	0.620 – 0.749	0.287	0.242 – 0.332	0.151	0.119 – 0.183
Bwalinde (10)	0.704	0.642 – 0.766	0.307	0.265 – 0.350	0.168	0.137 – 0.200
Isansa (11)	0.730	0.664 – 0.796	0.318	0.269 – 0.368	0.173	0.138 – 0.208
Isangano (12)	0.753	0.699 – 0.808	0.343	0.299 – 0.388	0.192	0.158 – 0.227
Lwata (13)	0.789	0.731 – 0.848	0.364	0.314 – 0.414	0.205	0.166 – 0.243
Mushitu-Wambo (14)	0.771	0.719 – 0.822	0.344	0.303 – 0.385	0.188	0.157 – 0.219
Chifwiie (15)	0.767	0.718 – 0.815	0.346	0.305 – 0.387	0.192	0.160 – 0.225
Masonde (16)	0.805	0.762 – 0.849	0.371	0.330 – 0.412	0.208	0.174 – 0.242
Ipusukilo (17)	0.761	0.713 – 0.809	0.337	0.301 – 0.374	0.185	0.158 – 0.212
Chulung'oma (18)	0.661	0.628 – 0.694	0.272	0.253 – 0.292	0.142	0.128 – 0.156
Namukolo (19)	0.744	0.697 – 0.790	0.331	0.295 – 0.366	0.182	0.154 – 0.211
Kampemba (20)	0.775	0.725 – 0.826	0.340	0.298 – 0.382	0.184	0.152 – 0.216
Mbala District (607)						

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mwiluzi (01)	0.795	0.746 – 0.843	0.381	0.342 – 0.421	0.220	0.188 – 0.252
Chela (02)	0.806	0.768 – 0.844	0.381	0.342 – 0.420	0.218	0.185 – 0.250
Nsunzu (03)	0.766	0.721 – 0.811	0.343	0.303 – 0.383	0.189	0.158 – 0.221
Mwambezi (04)	0.628	0.574 – 0.681	0.271	0.236 – 0.306	0.147	0.121 – 0.172
Moto Moto (05)	0.626	0.590 – 0.661	0.256	0.232 – 0.281	0.133	0.115 – 0.151
Intala (06)	0.778	0.738 – 0.819	0.363	0.322 – 0.403	0.205	0.172 – 0.238
Kawimbe (07)	0.810	0.766 – 0.854	0.385	0.340 – 0.430	0.220	0.184 – 0.257
Lwandi (08)	0.765	0.716 – 0.814	0.339	0.295 – 0.383	0.185	0.152 – 0.219
Malamba (09)	0.861	0.822 – 0.901	0.432	0.388 – 0.476	0.255	0.217 – 0.293
Chimbili (10)	0.828	0.788 – 0.869	0.399	0.355 – 0.443	0.230	0.193 – 0.267
Chinyika (11)	0.834	0.797 – 0.872	0.410	0.370 – 0.450	0.240	0.206 – 0.273
Chipembe (12)	0.841	0.795 – 0.886	0.410	0.367 – 0.453	0.239	0.204 – 0.274
Lapisha (13)	0.854	0.819 – 0.888	0.424	0.381 – 0.467	0.249	0.212 – 0.287
Mukololo (14)	0.815	0.771 – 0.859	0.396	0.351 – 0.441	0.231	0.194 – 0.268
Chozi (15)	0.646	0.575 – 0.718	0.294	0.252 – 0.336	0.165	0.135 – 0.195
Mpika District (608)						
Chambeshi (01)	0.787	0.753 – 0.821	0.362	0.335 – 0.389	0.204	0.182 – 0.226
Lulingila (02)	0.744	0.692 – 0.797	0.344	0.304 – 0.384	0.196	0.164 – 0.228
Lubaleshi (03)	0.809	0.758 – 0.861	0.377	0.325 – 0.429	0.212	0.172 – 0.253
Munikashi (04)	0.755	0.710 – 0.801	0.345	0.311 – 0.379	0.194	0.167 – 0.221
Chawama (05)	0.778	0.734 – 0.823	0.359	0.324 – 0.393	0.202	0.175 – 0.229
Mumbubu (06)	0.759	0.707 – 0.812	0.338	0.302 – 0.375	0.186	0.159 – 0.212
Lukulu (07)	0.798	0.754 – 0.843	0.364	0.328 – 0.401	0.202	0.174 – 0.231
Lulimala (08)	0.826	0.780 – 0.873	0.387	0.345 – 0.428	0.218	0.185 – 0.251
Chikanda (09)	0.836	0.780 – 0.893	0.420	0.362 – 0.478	0.251	0.203 – 0.299
Chibwa (10)	0.831	0.787 – 0.875	0.392	0.349 – 0.435	0.222	0.187 – 0.256
Kanchibiya (11)	0.765	0.726 – 0.803	0.338	0.307 – 0.368	0.185	0.161 – 0.209
Lwitikila (12)	0.672	0.617 – 0.727	0.300	0.269 – 0.331	0.166	0.144 – 0.188
Musakanya (13)	0.597	0.548 – 0.646	0.246	0.215 – 0.278	0.130	0.108 – 0.152
Lubambala (14)	0.600	0.549 – 0.652	0.238	0.204 – 0.273	0.122	0.098 – 0.145

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Nachikufu (15)	0.710	0.673 – 0.748	0.314	0.288 – 0.340	0.173	0.153 – 0.193
Chipembele (16)	0.849	0.789 – 0.908	0.422	0.357 – 0.487	0.250	0.197 – 0.302
Mutekwe (17)	0.819	0.755 – 0.883	0.401	0.337 – 0.465	0.236	0.184 – 0.288
Mupamadzi (18)	0.661	0.595 – 0.727	0.307	0.258 – 0.356	0.175	0.137 – 0.213
Muchinga (19)	0.770	0.661 – 0.879	0.360	0.266 – 0.454	0.206	0.134 – 0.278
Chifungwe (20)	0.803	0.719 – 0.887	0.375	0.295 – 0.455	0.211	0.149 – 0.273
Mporokoso District (609)						
Lumangwe (01)	0.824	0.778 – 0.871	0.382	0.337 – 0.428	0.215	0.178 – 0.251
Chikulu (02)	0.815	0.764 – 0.866	0.389	0.342 – 0.436	0.223	0.184 – 0.262
Mumbuluma (03)	0.772	0.700 – 0.844	0.337	0.285 – 0.389	0.181	0.144 – 0.219
Chisha-Mwamba (04)	0.758	0.708 – 0.809	0.340	0.301 – 0.380	0.189	0.159 – 0.219
Mikomba (05)	0.512	0.455 – 0.568	0.179	0.151 – 0.207	0.083	0.064 – 0.102
Kapumo (06)	0.718	0.640 – 0.796	0.315	0.268 – 0.363	0.173	0.141 – 0.206
Chipolunge (07)	0.806	0.754 – 0.858	0.361	0.318 – 0.404	0.197	0.163 – 0.230
Mabale (08)	0.781	0.735 – 0.827	0.352	0.310 – 0.394	0.194	0.161 – 0.226
Mutotoshi (09)	0.791	0.738 – 0.845	0.363	0.316 – 0.411	0.204	0.166 – 0.241
Masonde (10)	0.814	0.775 – 0.854	0.368	0.336 – 0.401	0.202	0.176 – 0.228
Luangwa (11)	0.795	0.745 – 0.844	0.362	0.325 – 0.399	0.202	0.171 – 0.233
Kansanshi (12)	0.815	0.773 – 0.856	0.385	0.349 – 0.420	0.219	0.190 – 0.249
Isenga (13)	0.808	0.771 – 0.845	0.376	0.340 – 0.411	0.211	0.182 – 0.240
Nchelenge (14)	0.797	0.763 – 0.831	0.368	0.335 – 0.402	0.207	0.179 – 0.236
Malambwa (15)	0.811	0.769 – 0.852	0.379	0.341 – 0.418	0.215	0.182 – 0.247
Malaila (16)	0.801	0.763 – 0.839	0.357	0.324 – 0.390	0.195	0.167 – 0.222
Kalungwishi (17)	0.771	0.732 – 0.811	0.344	0.313 – 0.376	0.190	0.165 – 0.214
Kanyanta (18)	0.792	0.743 – 0.841	0.357	0.318 – 0.395	0.196	0.166 – 0.227
Lunte (19)	0.782	0.740 – 0.823	0.345	0.314 – 0.376	0.187	0.162 – 0.212
Lubushi (20)	0.682	0.616 – 0.747	0.282	0.247 – 0.317	0.148	0.125 – 0.170
Mpulungu District (610)						
Kapembwa (01)	0.714	0.625 – 0.804	0.326	0.259 – 0.393	0.186	0.136 – 0.235

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Iyendwe (02)	0.717	0.652 – 0.782	0.320	0.269 – 0.371	0.177	0.139 – 0.216
Itumbwe (03)	0.811	0.626 – 0.995	0.407	0.273 – 0.541	0.237	0.129 – 0.345
Mumila (04)	0.815	0.767 – 0.863	0.377	0.328 – 0.426	0.211	0.171 – 0.250
Katwe (05)	0.783	0.714 – 0.852	0.366	0.312 – 0.419	0.208	0.166 – 0.251
Chilumba (06)	0.659	0.522 – 0.795	0.294	0.196 – 0.392	0.165	0.088 – 0.243
Mpulungu (07)	0.637	0.587 – 0.687	0.268	0.233 – 0.302	0.144	0.119 – 0.169
Isoko (08)	0.739	0.676 – 0.802	0.333	0.283 – 0.383	0.186	0.148 – 0.223
Chibulula (09)	0.708	0.634 – 0.782	0.312	0.259 – 0.365	0.172	0.134 – 0.211
Vyamba (10)	0.807	0.760 – 0.853	0.375	0.332 – 0.417	0.210	0.177 – 0.244
Chisha (11)	0.816	0.771 – 0.861	0.380	0.336 – 0.424	0.214	0.178 – 0.249
Isunga (12)	0.782	0.728 – 0.835	0.347	0.304 – 0.391	0.190	0.155 – 0.225
Mungwi District (611)						
Lubala (01)	0.823	0.780 – 0.866	0.409	0.368 – 0.449	0.243	0.209 – 0.277
Kabisha (02)	0.835	0.789 – 0.881	0.408	0.367 – 0.448	0.238	0.205 – 0.270
Fibwe (03)	0.878	0.841 – 0.914	0.452	0.409 – 0.496	0.272	0.234 – 0.310
Chafubu (04)	0.840	0.806 – 0.874	0.418	0.384 – 0.451	0.246	0.218 – 0.275
Mpanda (05)	0.859	0.820 – 0.897	0.436	0.397 – 0.475	0.261	0.228 – 0.293
Iyaya (06)	0.847	0.808 – 0.886	0.426	0.389 – 0.463	0.253	0.222 – 0.284
Fube (07)	0.809	0.776 – 0.843	0.406	0.373 – 0.438	0.241	0.214 – 0.269
Mungwi (08)	0.733	0.704 – 0.762	0.332	0.310 – 0.355	0.186	0.168 – 0.204
Ngulula (09)	0.804	0.758 – 0.850	0.382	0.347 – 0.418	0.220	0.192 – 0.247
Kalunga (10)	0.847	0.805 – 0.889	0.436	0.394 – 0.479	0.265	0.229 – 0.301
Chambeshi (11)	0.848	0.809 – 0.887	0.432	0.393 – 0.471	0.260	0.226 – 0.293
Mfinshe (12)	0.870	0.831 – 0.910	0.449	0.405 – 0.492	0.272	0.235 – 0.308
Nakonde District (612)						
Mulalo (01)	0.875	0.828 – 0.922	0.468	0.416 – 0.520	0.290	0.245 – 0.336
Luchinde (02)	0.894	0.851 – 0.938	0.487	0.431 – 0.543	0.306	0.255 – 0.357
Ngumba (03)	0.870	0.827 – 0.913	0.451	0.402 – 0.499	0.273	0.231 – 0.315
Musyani (04)	0.773	0.726 – 0.819	0.406	0.363 – 0.449	0.251	0.213 – 0.289

Table E6—Northern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Popomozi (05)	0.891	0.846 – 0.935	0.483	0.429 – 0.536	0.302	0.254 – 0.349
Chiwanza (06)	0.923	0.884 – 0.962	0.522	0.461 – 0.584	0.335	0.277 – 0.392
Ilonda (07)	0.912	0.865 – 0.958	0.501	0.440 – 0.563	0.314	0.259 – 0.369
Isunda (08)	0.874	0.827 – 0.920	0.465	0.411 – 0.518	0.286	0.239 – 0.333
Nakonde (09)	0.610	0.572 – 0.647	0.264	0.241 – 0.287	0.145	0.129 – 0.162
Musele (10)	0.912	0.873 – 0.950	0.512	0.453 – 0.571	0.327	0.271 – 0.383
Mpande (11)	0.890	0.847 – 0.933	0.476	0.421 – 0.532	0.295	0.245 – 0.344
Mukulila (12)	0.906	0.857 – 0.956	0.492	0.425 – 0.559	0.305	0.244 – 0.366

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E7—North-Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Chavuma District (701)						
Chavuma (01)	0.871	0.794 – 0.948	0.439	0.343 – 0.535	0.260	0.179 – 0.341
Chiyeke-Kakoma (02)	0.876	0.798 – 0.955	0.433	0.338 – 0.528	0.253	0.174 – 0.331
Kalombo-Kamusamba (03)	0.878	0.802 – 0.954	0.438	0.346 – 0.530	0.257	0.181 – 0.333
Chibombo Mbalanga (04)	0.903	0.834 – 0.971	0.477	0.386 – 0.568	0.292	0.212 – 0.372
Lingelingenda (05)	0.870	0.788 – 0.952	0.437	0.341 – 0.532	0.259	0.180 – 0.339
Sanjongo (06)	0.901	0.843 – 0.959	0.484	0.397 – 0.570	0.299	0.221 – 0.377
Chambi-Mandalu (07)	0.903	0.839 – 0.968	0.476	0.385 – 0.568	0.290	0.209 – 0.371
Lukolwe-Musanga (08)	0.891	0.822 – 0.959	0.479	0.395 – 0.564	0.299	0.225 – 0.373
Kanyinda-Likundu (09)	0.911	0.842 – 0.979	0.490	0.393 – 0.587	0.302	0.216 – 0.389
Kambuya Mukelangombe (10)	0.910	0.841 – 0.978	0.502	0.411 – 0.593	0.317	0.234 – 0.401
Nyatanda-Nyambongila (11)	0.855	0.768 – 0.941	0.443	0.353 – 0.532	0.270	0.195 – 0.345
Nguvu (12)	0.912	0.851 – 0.972	0.503	0.415 – 0.591	0.318	0.236 – 0.400
Kabompo District (702)						
Lunyiwe (01)	0.750	0.694 – 0.806	0.326	0.284 – 0.367	0.176	0.145 – 0.207
Kayombo (02)	0.783	0.723 – 0.843	0.357	0.309 – 0.404	0.198	0.161 – 0.236
Dihamba (03)	0.679	0.621 – 0.738	0.272	0.239 – 0.305	0.138	0.115 – 0.162
Lusongwa (04)	0.813	0.772 – 0.854	0.378	0.341 – 0.415	0.214	0.183 – 0.244
Kashinakaji (05)	0.796	0.728 – 0.864	0.364	0.314 – 0.413	0.203	0.163 – 0.242
Chiteve (06)	0.729	0.650 – 0.808	0.311	0.260 – 0.362	0.167	0.129 – 0.205
Manyinga (07)	0.699	0.649 – 0.749	0.290	0.258 – 0.322	0.151	0.127 – 0.175
Chikonkwelo (08)	0.703	0.634 – 0.772	0.281	0.239 – 0.323	0.142	0.113 – 0.171
Katuva (09)	0.719	0.635 – 0.804	0.299	0.242 – 0.357	0.158	0.115 – 0.200
Chikenge (10)	0.703	0.631 – 0.776	0.284	0.235 – 0.333	0.146	0.112 – 0.180
Maveve (11)	0.675	0.605 – 0.745	0.270	0.226 – 0.313	0.138	0.108 – 0.168
Lubi (12)	0.667	0.603 – 0.731	0.271	0.227 – 0.315	0.140	0.109 – 0.172
Kamafwafwa (13)	0.660	0.596 – 0.725	0.258	0.220 – 0.296	0.130	0.104 – 0.156
Loloma (14)	0.691	0.654 – 0.729	0.274	0.249 – 0.299	0.138	0.120 – 0.157
Kawanda (15)	0.656	0.608 – 0.703	0.261	0.234 – 0.288	0.133	0.114 – 0.152

Table E7—North-Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kaula (16)	0.692	0.648 – 0.735	0.282	0.254 – 0.309	0.145	0.126 – 0.165
Kamisombo (17)	0.700	0.649 – 0.751	0.283	0.246 – 0.319	0.144	0.118 – 0.171
Kabompo (18)	0.488	0.447 – 0.528	0.187	0.162 – 0.211	0.095	0.077 – 0.112
Kabulamena (19)	0.666	0.603 – 0.728	0.263	0.221 – 0.305	0.133	0.104 – 0.162
Mumbeji (20)	0.677	0.626 – 0.728	0.266	0.228 – 0.304	0.133	0.107 – 0.160
Kasempa District (703)						
Kamakuku (01)	0.769	0.695 – 0.842	0.361	0.301 – 0.420	0.207	0.160 – 0.254
Nselauke (02)	0.738	0.681 – 0.794	0.311	0.269 – 0.354	0.165	0.133 – 0.196
Ingwe (03)	0.722	0.658 – 0.786	0.312	0.263 – 0.360	0.169	0.132 – 0.205
Mukema (04)	0.776	0.714 – 0.837	0.354	0.303 – 0.405	0.198	0.160 – 0.237
Kamatete (05)	0.770	0.703 – 0.838	0.341	0.291 – 0.391	0.187	0.148 – 0.226
Dengwe (06)	0.715	0.653 – 0.778	0.304	0.263 – 0.346	0.163	0.133 – 0.193
Njenga (07)	0.729	0.666 – 0.793	0.318	0.273 – 0.363	0.173	0.140 – 0.207
Kalombe (08)	0.710	0.640 – 0.780	0.295	0.246 – 0.344	0.155	0.120 – 0.190
Kamusongolwa (09)	0.321	0.235 – 0.408	0.106	0.068 – 0.145	0.050	0.026 – 0.074
Kikonkomene (10)	0.363	0.304 – 0.421	0.133	0.104 – 0.162	0.067	0.048 – 0.086
Nkenyauna (11)	0.741	0.644 – 0.839	0.313	0.250 – 0.376	0.166	0.118 – 0.214
Mukinge (12)	0.641	0.568 – 0.714	0.254	0.209 – 0.299	0.130	0.099 – 0.160
Kantenda (13)	0.701	0.642 – 0.760	0.308	0.264 – 0.352	0.170	0.135 – 0.204
Mpungu (14)	0.705	0.631 – 0.778	0.307	0.258 – 0.355	0.168	0.132 – 0.203
Nyoka (15)	0.744	0.671 – 0.816	0.328	0.275 – 0.381	0.180	0.140 – 0.220
Kelongwa (16)	0.727	0.652 – 0.803	0.322	0.271 – 0.373	0.178	0.139 – 0.216
Mukunashi (17)	0.723	0.657 – 0.789	0.315	0.266 – 0.363	0.172	0.135 – 0.208
Kanongo (18)	0.699	0.638 – 0.759	0.284	0.242 – 0.325	0.147	0.118 – 0.176
Kamakechi (19)	0.768	0.687 – 0.849	0.351	0.291 – 0.411	0.197	0.150 – 0.244
Jifumpa (20)	0.645	0.540 – 0.749	0.272	0.213 – 0.330	0.145	0.102 – 0.187
Mufumbwe (Chizera) District (704)						
Kashima West (01)	0.609	0.534 – 0.684	0.219	0.177 – 0.262	0.104	0.077 – 0.130

Table E7—North-Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kashima East (02)	0.632	0.529 – 0.736	0.241	0.181 – 0.302	0.118	0.079 – 0.157
Matushi (03)	0.662	0.593 – 0.731	0.249	0.202 – 0.295	0.120	0.090 – 0.151
Kamabuta (04)	0.687	0.613 – 0.760	0.261	0.209 – 0.312	0.127	0.092 – 0.162
Kalarnbu (05)	0.622	0.560 – 0.683	0.243	0.207 – 0.278	0.123	0.100 – 0.146
Chizela (06)	0.598	0.532 – 0.663	0.254	0.201 – 0.307	0.141	0.098 – 0.183
Shukwe (07)	0.681	0.610 – 0.752	0.265	0.216 – 0.315	0.133	0.100 – 0.167
Kikonze (08)	0.759	0.684 – 0.835	0.322	0.269 – 0.374	0.170	0.132 – 0.208
Munyambala (09)	0.745	0.670 – 0.820	0.311	0.256 – 0.365	0.162	0.122 – 0.201
Kalengwa (10)	0.640	0.559 – 0.720	0.236	0.188 – 0.284	0.114	0.084 – 0.144
Kabipupu (11)	0.715	0.637 – 0.792	0.288	0.238 – 0.337	0.146	0.111 – 0.182
Mushima (12)	0.738	0.673 – 0.803	0.316	0.266 – 0.366	0.170	0.133 – 0.207
Musonweji (13)	0.744	0.673 – 0.815	0.311	0.258 – 0.365	0.164	0.126 – 0.202
Kaminzekenzeke (14)	0.732	0.656 – 0.808	0.317	0.261 – 0.372	0.172	0.132 – 0.212
Lalafuta (15)	0.706	0.621 – 0.791	0.296	0.241 – 0.351	0.157	0.119 – 0.194
Mwinilunga District (705)						
Chana - Chamuhinga (01)	0.833	0.787 – 0.880	0.401	0.359 – 0.442	0.230	0.197 – 0.264
Jimbe (02)	0.848	0.808 – 0.888	0.403	0.365 – 0.441	0.229	0.196 – 0.262
Nyakaseya (03)	0.817	0.775 – 0.859	0.374	0.337 – 0.410	0.206	0.178 – 0.234
Ikelenge (04)	0.823	0.779 – 0.866	0.375	0.338 – 0.411	0.207	0.178 – 0.235
Mwinimylamba (05)	0.828	0.788 – 0.868	0.387	0.351 – 0.422	0.217	0.189 – 0.246
Kanong'esha (06)	0.830	0.790 – 0.870	0.375	0.338 – 0.411	0.205	0.177 – 0.232
Mukangala (07)	0.826	0.786 – 0.866	0.380	0.341 – 0.419	0.210	0.180 – 0.241
Mulumbi (08)	0.542	0.502 – 0.582	0.218	0.192 – 0.245	0.114	0.094 – 0.134
Kanyama (09)	0.720	0.671 – 0.769	0.290	0.254 – 0.326	0.148	0.123 – 0.172
Kakoma (10)	0.691	0.637 – 0.744	0.272	0.237 – 0.307	0.137	0.113 – 0.161
Kasampula (11)	0.741	0.670 – 0.811	0.332	0.280 – 0.385	0.184	0.144 – 0.224
Lumwana (12)	0.716	0.661 – 0.770	0.286	0.250 – 0.321	0.145	0.121 – 0.169
Sailunga (13)	0.749	0.693 – 0.804	0.302	0.260 – 0.344	0.154	0.124 – 0.183
Samuteba (14)	0.712	0.657 – 0.767	0.282	0.244 – 0.320	0.142	0.116 – 0.169
Mundwiji (15)	0.688	0.641 – 0.734	0.269	0.239 – 0.300	0.135	0.114 – 0.156

Table E7—North-Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mudyanyama (16)	0.731	0.677 – 0.786	0.294	0.256 – 0.331	0.149	0.122 – 0.176
Kamampanda (17)	0.728	0.680 – 0.775	0.299	0.263 – 0.336	0.155	0.129 – 0.181
Chibwika (18)	0.739	0.679 – 0.799	0.311	0.270 – 0.351	0.163	0.135 – 0.192
Chisasa (19)	0.688	0.632 – 0.743	0.262	0.225 – 0.298	0.128	0.104 – 0.152
Ntambu (20)	0.736	0.686 – 0.785	0.292	0.255 – 0.330	0.147	0.120 – 0.173
Solwezi District (706)						
Musaka (01)	0.748	0.690 – 0.806	0.312	0.268 – 0.356	0.163	0.131 – 0.194
Chikola (02)	0.790	0.736 – 0.844	0.352	0.305 – 0.399	0.193	0.156 – 0.229
Kangwena (03)	0.781	0.734 – 0.828	0.351	0.309 – 0.393	0.193	0.161 – 0.226
Kalilele (04)	0.765	0.706 – 0.825	0.339	0.297 – 0.382	0.186	0.154 – 0.217
Mulonga (05)	0.777	0.725 – 0.830	0.342	0.301 – 0.383	0.185	0.154 – 0.216
Mapunga (06)	0.807	0.763 – 0.851	0.363	0.320 – 0.407	0.199	0.166 – 0.233
Mujimanzovu (07)	0.811	0.757 – 0.866	0.380	0.328 – 0.431	0.216	0.175 – 0.257
Kapijimpanga (08)	0.811	0.761 – 0.860	0.382	0.336 – 0.428	0.218	0.182 – 0.254
Sandang'ombe (09)	0.801	0.760 – 0.842	0.413	0.364 – 0.462	0.252	0.207 – 0.297
Kamalamba (10)	0.680	0.637 – 0.723	0.304	0.268 – 0.341	0.168	0.141 – 0.196
Tuvwananai (11)	0.471	0.429 – 0.514	0.182	0.153 – 0.210	0.094	0.073 – 0.115
Kimasala (12)	0.440	0.402 – 0.478	0.166	0.140 – 0.193	0.085	0.065 – 0.105
Mumena (13)	0.804	0.776 – 0.831	0.372	0.346 – 0.398	0.209	0.187 – 0.231
Kibanza (14)	0.776	0.727 – 0.826	0.345	0.306 – 0.384	0.188	0.157 – 0.220
Mukumbi (15)	0.752	0.712 – 0.792	0.322	0.292 – 0.351	0.171	0.149 – 0.194
Matebo (16)	0.789	0.749 – 0.829	0.358	0.321 – 0.394	0.198	0.169 – 0.228
Shilenda (17)	0.832	0.803 – 0.860	0.387	0.360 – 0.415	0.217	0.194 – 0.241
Mumbezhi (18)	0.776	0.743 – 0.809	0.338	0.310 – 0.366	0.181	0.159 – 0.203
Musete (19)	0.786	0.756 – 0.815	0.342	0.316 – 0.367	0.183	0.163 – 0.204
Chovwe (20)	0.800	0.769 – 0.831	0.348	0.320 – 0.376	0.185	0.163 – 0.208
Zambezi District (707)						
Lunkunyi (01)	0.683	0.626 – 0.741	0.280	0.239 – 0.321	0.146	0.117 – 0.176
Mukandankunda (02)	0.703	0.658 – 0.749	0.293	0.262 – 0.324	0.155	0.132 – 0.177

Table E7—North-Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Dipalata (03)	0.689	0.627 – 0.751	0.275	0.232 – 0.317	0.139	0.109 – 0.169
Nyakulenga (04)	0.718	0.670 – 0.765	0.309	0.277 – 0.341	0.167	0.143 – 0.191
Zambezi (05)	0.406	0.355 – 0.456	0.155	0.122 – 0.188	0.080	0.056 – 0.103
Chilenga-Chizenzi (06)	0.694	0.647 – 0.742	0.282	0.248 – 0.317	0.145	0.121 – 0.169
Lwitadi-Lwatembo (07)	0.770	0.721 – 0.820	0.356	0.316 – 0.397	0.202	0.170 – 0.234
Chivweji-Kasesi (08)	0.676	0.630 – 0.721	0.273	0.242 – 0.305	0.141	0.118 – 0.164
Chitokoioki (09)	0.704	0.647 – 0.762	0.292	0.252 – 0.332	0.152	0.123 – 0.182
Mpidi-Kakonga (10)	0.710	0.657 – 0.763	0.303	0.266 – 0.339	0.162	0.136 – 0.189
Likungu (11)	0.793	0.739 – 0.848	0.359	0.309 – 0.409	0.199	0.161 – 0.238
Mapachi-Chiyingi (12)	0.819	0.775 – 0.864	0.379	0.335 – 0.424	0.212	0.176 – 0.248
Muyembe-Liyoyu (13)	0.813	0.761 – 0.866	0.392	0.345 – 0.439	0.228	0.189 – 0.266
Mwange-Nyawanda (14)	0.814	0.758 – 0.870	0.393	0.341 – 0.445	0.227	0.184 – 0.270
Matondo-Nyachika (15)	0.864	0.820 – 0.908	0.434	0.385 – 0.483	0.258	0.215 – 0.301

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Choma District (801)						
Simaubi (01)	0.688	0.647 – 0.729	0.256	0.226 – 0.287	0.122	0.101 – 0.144
Mapanza (02)	0.631	0.583 – 0.679	0.228	0.197 – 0.259	0.107	0.086 – 0.128
Manguza (03)	0.662	0.616 – 0.708	0.239	0.208 – 0.270	0.112	0.091 – 0.133
Chilatambo (04)	0.655	0.606 – 0.703	0.236	0.205 – 0.267	0.111	0.090 – 0.132
Kabimba (05)	0.674	0.619 – 0.728	0.256	0.223 – 0.289	0.124	0.102 – 0.147
Macha (06)	0.640	0.585 – 0.695	0.239	0.201 – 0.276	0.115	0.089 – 0.141
Mbabala (07)	0.684	0.639 – 0.728	0.249	0.216 – 0.281	0.117	0.095 – 0.139
Simavwa (08)	0.654	0.607 – 0.701	0.245	0.212 – 0.278	0.119	0.096 – 0.142
Kasiya (09)	0.551	0.493 – 0.609	0.177	0.148 – 0.207	0.077	0.060 – 0.094
Hamaundu (10)	0.510	0.454 – 0.566	0.163	0.134 – 0.191	0.071	0.055 – 0.087
Maambo (11)	0.574	0.517 – 0.632	0.191	0.159 – 0.222	0.085	0.066 – 0.104
Kauba (12)	0.611	0.550 – 0.672	0.212	0.177 – 0.247	0.097	0.075 – 0.118
Habunkulu (13)	0.652	0.599 – 0.704	0.231	0.195 – 0.266	0.106	0.083 – 0.129
Nachibanga (14)	0.596	0.544 – 0.649	0.203	0.171 – 0.234	0.092	0.073 – 0.111
Namuswa (15)	0.509	0.435 – 0.582	0.165	0.130 – 0.199	0.073	0.053 – 0.092
Stateland (16)	0.455	0.391 – 0.518	0.147	0.116 – 0.178	0.065	0.047 – 0.083
Batoka (17)	0.586	0.541 – 0.632	0.200	0.174 – 0.226	0.091	0.074 – 0.107
Singani (18)	0.476	0.404 – 0.547	0.146	0.113 – 0.178	0.061	0.044 – 0.079
Nakaeempa (19)	0.468	0.399 – 0.537	0.144	0.112 – 0.176	0.061	0.044 – 0.079
Siasikabole (20)	0.501	0.424 – 0.578	0.157	0.120 – 0.194	0.067	0.047 – 0.088
Pemba (21)	0.460	0.386 – 0.535	0.124	0.095 – 0.152	0.047	0.032 – 0.061
Kalundanya (22)	0.411	0.367 – 0.455	0.107	0.090 – 0.125	0.039	0.030 – 0.048
Simacheche (23)	0.472	0.407 – 0.537	0.123	0.098 – 0.147	0.045	0.032 – 0.057
Sikalundu (24)	0.270	0.219 – 0.322	0.063	0.046 – 0.080	0.021	0.013 – 0.030
Mabula (25)	0.485	0.429 – 0.541	0.135	0.112 – 0.158	0.051	0.039 – 0.064
Gwembe District (802)						
Masanga (01)	0.802	0.736 – 0.869	0.414	0.365 – 0.464	0.254	0.212 – 0.296
Sinafala (02)	0.835	0.771 – 0.899	0.449	0.401 – 0.496	0.282	0.242 – 0.322

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Jumbo/Khoma (03)	0.827	0.764 – 0.889	0.439	0.390 – 0.488	0.274	0.232 – 0.315
Chibwe (04)	0.766	0.697 – 0.836	0.373	0.327 – 0.419	0.220	0.182 – 0.258
Syampande (05)	0.824	0.762 – 0.885	0.439	0.393 – 0.485	0.275	0.235 – 0.315
Kotakota (06)	0.758	0.678 – 0.839	0.372	0.318 – 0.425	0.221	0.176 – 0.265
Luumbo (07)	0.801	0.731 – 0.870	0.405	0.354 – 0.457	0.244	0.200 – 0.288
Bbondo (08)	0.775	0.706 – 0.845	0.380	0.333 – 0.426	0.226	0.187 – 0.265
Chisale (09)	0.784	0.709 – 0.859	0.410	0.355 – 0.465	0.253	0.208 – 0.297
Fumbo (10)	0.831	0.761 – 0.900	0.437	0.386 – 0.487	0.270	0.226 – 0.314
Jongola (11)	0.807	0.731 – 0.882	0.406	0.357 – 0.455	0.245	0.206 – 0.284
Lukonde (12)	0.709	0.665 – 0.753	0.340	0.310 – 0.370	0.203	0.177 – 0.229
Itezhi-tezhi District (803)						
Itezhi-Tezhi (01)	0.434	0.372 – 0.495	0.130	0.106 – 0.154	0.054	0.041 – 0.068
Itumbi (02)	0.659	0.612 – 0.705	0.259	0.223 – 0.295	0.130	0.103 – 0.157
Lubanda (03)	0.615	0.559 – 0.672	0.227	0.193 – 0.261	0.110	0.087 – 0.134
Luubwe (04)	0.511	0.422 – 0.600	0.165	0.121 – 0.210	0.073	0.045 – 0.100
Basanga (05)	0.535	0.471 – 0.598	0.184	0.152 – 0.216	0.085	0.065 – 0.105
Luchena (06)	0.552	0.489 – 0.614	0.195	0.161 – 0.228	0.092	0.070 – 0.114
Mbila (07)	0.634	0.578 – 0.690	0.230	0.195 – 0.265	0.109	0.086 – 0.132
Masemu (08)	0.651	0.613 – 0.688	0.250	0.226 – 0.275	0.126	0.107 – 0.144
Kabulungwe (09)	0.586	0.496 – 0.676	0.220	0.167 – 0.272	0.107	0.073 – 0.142
Mankunku (10)	0.637	0.563 – 0.711	0.233	0.194 – 0.272	0.110	0.082 – 0.139
Nyambo (11)	0.631	0.582 – 0.681	0.236	0.200 – 0.273	0.115	0.088 – 0.142
Banamwaze (12)	0.656	0.593 – 0.719	0.245	0.202 – 0.288	0.120	0.089 – 0.151
Kalomo District (804)						
Chikanta (01)	0.695	0.650 – 0.739	0.277	0.243 – 0.312	0.140	0.115 – 0.166
Munyeke (02)	0.703	0.661 – 0.745	0.277	0.245 – 0.308	0.139	0.115 – 0.163
Kasukwe (03)	0.716	0.676 – 0.755	0.292	0.260 – 0.324	0.150	0.125 – 0.175
Chamuka (04)	0.707	0.643 – 0.772	0.292	0.242 – 0.342	0.150	0.112 – 0.188
Namela (05)	0.710	0.669 – 0.751	0.282	0.250 – 0.314	0.142	0.118 – 0.166

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Siachitema (06)	0.669	0.615 – 0.724	0.256	0.218 – 0.293	0.125	0.099 – 0.151
Kalonda (07)	0.646	0.588 – 0.703	0.235	0.198 – 0.273	0.112	0.088 – 0.137
Choonga (08)	0.522	0.484 – 0.561	0.164	0.145 – 0.184	0.071	0.059 – 0.083
Mayoba (09)	0.643	0.588 – 0.697	0.236	0.198 – 0.273	0.113	0.087 – 0.138
Namwianga (10)	0.621	0.556 – 0.686	0.237	0.196 – 0.279	0.119	0.091 – 0.147
Simayakwe (11)	0.689	0.630 – 0.747	0.271	0.231 – 0.312	0.137	0.109 – 0.164
Chawila (12)	0.622	0.552 – 0.691	0.223	0.181 – 0.265	0.106	0.079 – 0.133
Sipatunyana (13)	0.535	0.442 – 0.627	0.177	0.131 – 0.223	0.079	0.051 – 0.106
Zimba (14)	0.648	0.555 – 0.741	0.252	0.199 – 0.306	0.127	0.092 – 0.162
Luyaba (15)	0.681	0.597 – 0.765	0.277	0.222 – 0.333	0.145	0.107 – 0.182
Nachikungu (16)	0.656	0.597 – 0.716	0.243	0.203 – 0.283	0.116	0.089 – 0.142
Chidi (17)	0.708	0.630 – 0.786	0.300	0.245 – 0.356	0.160	0.122 – 0.199
Simwata Chela (18)	0.663	0.579 – 0.747	0.264	0.212 – 0.317	0.135	0.100 – 0.169
Siamafumba (19)	0.689	0.608 – 0.769	0.282	0.229 – 0.335	0.147	0.111 – 0.182
Mbwiko (20)	0.717	0.644 – 0.791	0.303	0.251 – 0.354	0.160	0.124 – 0.196
Kazungula District (805)						
Mooba (01)	0.729	0.675 – 0.783	0.300	0.263 – 0.337	0.155	0.127 – 0.183
Chooma (02)	0.765	0.708 – 0.823	0.320	0.276 – 0.363	0.167	0.136 – 0.198
Ngwezi (03)	0.634	0.563 – 0.704	0.226	0.185 – 0.268	0.105	0.079 – 0.131
Sekute (04)	0.726	0.670 – 0.782	0.301	0.260 – 0.341	0.157	0.129 – 0.186
Sikauzwe (05)	0.683	0.625 – 0.740	0.267	0.232 – 0.302	0.134	0.110 – 0.157
Musokotwane (06)	0.655	0.598 – 0.712	0.249	0.217 – 0.282	0.123	0.101 – 0.145
Kanchele (07)	0.678	0.627 – 0.730	0.259	0.229 – 0.290	0.128	0.107 – 0.149
Simango (08)	0.732	0.679 – 0.784	0.292	0.259 – 0.325	0.147	0.123 – 0.171
Nyawa (09)	0.752	0.696 – 0.808	0.308	0.268 – 0.348	0.158	0.129 – 0.186
Kauwe (10)	0.755	0.705 – 0.804	0.323	0.284 – 0.362	0.172	0.143 – 0.201
Katapazi (11)	0.718	0.669 – 0.768	0.300	0.268 – 0.333	0.158	0.134 – 0.181
Mukuni (12)	0.680	0.626 – 0.733	0.261	0.228 – 0.294	0.129	0.107 – 0.151
Livingstone District (806)						

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Freedom (01)	0.302	0.250 – 0.355	0.079	0.061 – 0.098	0.030	0.021 – 0.039
Musi-o-tunya (02)	0.247	0.203 – 0.290	0.063	0.048 – 0.079	0.024	0.016 – 0.031
Dr. Mubitana (03)	0.227	0.168 – 0.286	0.055	0.034 – 0.076	0.020	0.010 – 0.029
Namatama (04)	0.441	0.392 – 0.489	0.136	0.113 – 0.158	0.057	0.044 – 0.070
Libuyu (05)	0.560	0.524 – 0.597	0.195	0.176 – 0.214	0.090	0.078 – 0.102
Mwalibonena (06)	0.447	0.407 – 0.487	0.144	0.124 – 0.164	0.063	0.051 – 0.075
Maramba (07)	0.335	0.281 – 0.389	0.091	0.070 – 0.111	0.035	0.025 – 0.045
Akapelwa (08)	0.245	0.194 – 0.295	0.064	0.045 – 0.082	0.024	0.015 – 0.033
Linzuma (09)	0.313	0.250 – 0.376	0.082	0.059 – 0.105	0.031	0.020 – 0.042
Simonga (10)	0.569	0.528 – 0.610	0.196	0.173 – 0.219	0.090	0.075 – 0.105
Dambwa (11)	0.399	0.357 – 0.441	0.120	0.101 – 0.138	0.049	0.039 – 0.060
Zambezi (12)	0.420	0.372 – 0.469	0.135	0.113 – 0.157	0.058	0.045 – 0.071
Kariba (13)	0.387	0.321 – 0.453	0.113	0.088 – 0.138	0.046	0.033 – 0.058
Nansanzu (14)	0.394	0.331 – 0.457	0.119	0.092 – 0.146	0.050	0.036 – 0.064
Shungu (15)	0.602	0.562 – 0.643	0.222	0.197 – 0.247	0.104	0.087 – 0.122
Mazabuka District (807)						
Itebe (01)	0.720	0.669 – 0.770	0.296	0.261 – 0.332	0.153	0.128 – 0.179
Kalama (02)	0.702	0.648 – 0.756	0.283	0.250 – 0.316	0.145	0.121 – 0.169
Mwanachingwala (03)	0.678	0.633 – 0.723	0.271	0.241 – 0.302	0.139	0.118 – 0.160
Mmenga (04)	0.725	0.670 – 0.780	0.295	0.258 – 0.332	0.151	0.125 – 0.178
Ngwezi (05)	0.676	0.640 – 0.712	0.272	0.248 – 0.297	0.140	0.123 – 0.157
Munjile (06)	0.758	0.705 – 0.812	0.320	0.282 – 0.358	0.167	0.139 – 0.195
Chivuna (07)	0.736	0.698 – 0.774	0.310	0.280 – 0.339	0.162	0.141 – 0.184
Konkola (08)	0.766	0.710 – 0.821	0.320	0.281 – 0.359	0.167	0.139 – 0.196
Malala (09)	0.599	0.526 – 0.671	0.218	0.177 – 0.259	0.104	0.078 – 0.130
Mabwetuba (10)	0.541	0.472 – 0.610	0.186	0.147 – 0.225	0.085	0.062 – 0.109
Upper Kaleyia (11)	0.584	0.514 – 0.654	0.209	0.169 – 0.249	0.099	0.075 – 0.124
Chizobo (12)	0.517	0.482 – 0.553	0.178	0.160 – 0.196	0.084	0.071 – 0.096
Mazabuka (13)	0.483	0.450 – 0.516	0.153	0.137 – 0.170	0.066	0.056 – 0.076
Nakambala (14)	0.397	0.354 – 0.441	0.113	0.096 – 0.130	0.045	0.037 – 0.054

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lubombo (15)	0.624	0.580 – 0.669	0.238	0.211 – 0.266	0.119	0.100 – 0.137
Nega-Nega (16)	0.600	0.562 – 0.638	0.232	0.207 – 0.257	0.117	0.099 – 0.135
Kasengo (17)	0.590	0.523 – 0.656	0.210	0.171 – 0.249	0.100	0.075 – 0.125
Chitete (18)	0.686	0.613 – 0.759	0.259	0.213 – 0.305	0.126	0.096 – 0.156
Nansenga (19)	0.663	0.602 – 0.724	0.257	0.215 – 0.299	0.128	0.099 – 0.156
Narnalundu (20)	0.390	0.339 – 0.441	0.109	0.087 – 0.131	0.043	0.031 – 0.055
Monze District (808)						
Malundu (01)	0.730	0.689 – 0.771	0.297	0.267 – 0.326	0.151	0.129 – 0.173
Kaila (02)	0.737	0.692 – 0.781	0.291	0.259 – 0.323	0.144	0.122 – 0.167
Keembe (03)	0.722	0.688 – 0.755	0.291	0.266 – 0.317	0.148	0.128 – 0.167
Choongo West (04)	0.729	0.680 – 0.777	0.289	0.259 – 0.319	0.145	0.124 – 0.165
Bweengwa (05)	0.732	0.686 – 0.778	0.287	0.257 – 0.318	0.142	0.121 – 0.162
Choongo East (06)	0.704	0.666 – 0.741	0.277	0.249 – 0.305	0.139	0.118 – 0.159
Mwanza West (07)	0.633	0.586 – 0.681	0.223	0.195 – 0.250	0.103	0.085 – 0.120
Chona (08)	0.645	0.586 – 0.705	0.227	0.192 – 0.262	0.105	0.082 – 0.128
Mwanza East (09)	0.645	0.593 – 0.697	0.226	0.193 – 0.259	0.102	0.081 – 0.124
Moomba (10)	0.677	0.616 – 0.738	0.240	0.203 – 0.277	0.109	0.085 – 0.133
Chipembele (11)	0.635	0.589 – 0.681	0.219	0.194 – 0.244	0.100	0.083 – 0.116
Ufwenuka (12)	0.646	0.601 – 0.691	0.228	0.202 – 0.253	0.105	0.088 – 0.122
Manungu (13)	0.523	0.477 – 0.568	0.157	0.135 – 0.178	0.063	0.051 – 0.076
Chisekesi (14)	0.622	0.584 – 0.660	0.223	0.200 – 0.246	0.105	0.089 – 0.120
Mayaba (15)	0.620	0.566 – 0.674	0.210	0.179 – 0.241	0.094	0.075 – 0.114
Hufwa (16)	0.665	0.624 – 0.706	0.237	0.213 – 0.260	0.110	0.094 – 0.126
Katimba (17)	0.697	0.655 – 0.739	0.259	0.231 – 0.286	0.123	0.103 – 0.142
Hatontola (18)	0.661	0.621 – 0.702	0.234	0.212 – 0.256	0.108	0.093 – 0.123
Bbombo (19)	0.645	0.597 – 0.693	0.226	0.198 – 0.254	0.103	0.084 – 0.122
Monze (20)	0.380	0.337 – 0.423	0.105	0.087 – 0.123	0.041	0.031 – 0.050
Namwala District (809)						
Namwala Central (01)	0.481	0.438 – 0.524	0.156	0.135 – 0.177	0.069	0.056 – 0.082

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kaluweza/Ngabo (02)	0.759	0.711 – 0.807	0.334	0.294 – 0.373	0.180	0.150 – 0.210
Baambwe (03)	0.746	0.689 – 0.802	0.308	0.265 – 0.351	0.160	0.128 – 0.192
Maala (04)	0.711	0.664 – 0.759	0.308	0.266 – 0.349	0.166	0.134 – 0.197
Kantengwa (05)	0.744	0.697 – 0.791	0.315	0.280 – 0.351	0.167	0.140 – 0.193
Kabulamwanda (06)	0.744	0.694 – 0.794	0.325	0.284 – 0.365	0.175	0.144 – 0.205
Chitongo (07)	0.790	0.744 – 0.837	0.354	0.312 – 0.396	0.192	0.159 – 0.225
Nakamboma (08)	0.771	0.728 – 0.814	0.329	0.289 – 0.369	0.172	0.142 – 0.203
Mbeza (09)	0.727	0.672 – 0.782	0.300	0.259 – 0.341	0.157	0.127 – 0.187
Ndema (10)	0.715	0.669 – 0.762	0.310	0.272 – 0.349	0.165	0.136 – 0.194
Namakube (11)	0.767	0.716 – 0.817	0.333	0.290 – 0.376	0.178	0.146 – 0.210
Moobola (12)	0.754	0.704 – 0.804	0.316	0.276 – 0.356	0.165	0.136 – 0.194
Siavonga District (810)						
Chirundu (01)	0.710	0.672 – 0.749	0.373	0.334 – 0.412	0.237	0.202 – 0.272
Ng'ombe-Ilede (02)	0.925	0.877 – 0.974	0.558	0.498 – 0.618	0.377	0.322 – 0.432
Lusitu (03)	0.916	0.868 – 0.963	0.547	0.485 – 0.610	0.369	0.311 – 0.427
Nanyangwe (04)	0.901	0.841 – 0.960	0.513	0.447 – 0.580	0.334	0.275 – 0.393
Kariba i (05)	0.449	0.408 – 0.490	0.162	0.144 – 0.179	0.081	0.070 – 0.091
Simaamba (06)	0.932	0.883 – 0.981	0.551	0.485 – 0.616	0.365	0.304 – 0.426
Manchawwa (07)	0.803	0.759 – 0.846	0.463	0.411 – 0.515	0.309	0.260 – 0.357
Sinadambwe (08)	0.873	0.805 – 0.941	0.487	0.411 – 0.562	0.314	0.247 – 0.380
Lusangazi (09)	0.921	0.869 – 0.973	0.549	0.486 – 0.613	0.367	0.308 – 0.426
Mulimya (10)	0.922	0.872 – 0.973	0.540	0.475 – 0.605	0.357	0.297 – 0.418
Sikoonga (11)	0.923	0.873 – 0.972	0.549	0.486 – 0.611	0.367	0.311 – 0.424
Ibwe Munyama (12)	0.927	0.876 – 0.978	0.558	0.489 – 0.627	0.376	0.311 – 0.440
Sinazongwe District (811)						
Mabinga (01)	0.725	0.608 – 0.843	0.327	0.243 – 0.411	0.183	0.121 – 0.245
Namazambwe (02)	0.740	0.646 – 0.834	0.344	0.268 – 0.420	0.197	0.137 – 0.257
Mweenenda (03)	0.772	0.685 – 0.859	0.371	0.299 – 0.442	0.217	0.159 – 0.275
Muuka (04)	0.712	0.599 – 0.825	0.317	0.238 – 0.396	0.176	0.118 – 0.235

Table E8—Southern Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Tekelo (05)	0.737	0.632 – 0.842	0.329	0.251 – 0.408	0.182	0.123 – 0.241
Mweenba (06)	0.721	0.624 – 0.817	0.325	0.253 – 0.397	0.182	0.127 – 0.238
Maamba (07)	0.489	0.442 – 0.535	0.172	0.147 – 0.198	0.084	0.066 – 0.101
Mweezya (08)	0.728	0.634 – 0.823	0.332	0.259 – 0.406	0.188	0.131 – 0.246
Nkandambwe (09)	0.748	0.660 – 0.837	0.353	0.279 – 0.426	0.204	0.146 – 0.261
Sinazongwe (10)	0.608	0.548 – 0.668	0.243	0.202 – 0.285	0.127	0.096 – 0.158
Nang'ombe (11)	0.769	0.679 – 0.859	0.367	0.291 – 0.443	0.213	0.153 – 0.274
Malima (12)	0.814	0.726 – 0.902	0.394	0.313 – 0.475	0.229	0.163 – 0.294

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey

Table E9—Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Kalabo District (901)						
Mambolomoka (01)	0.801	0.746 – 0.857	0.358	0.309 – 0.407	0.195	0.156 – 0.233
Lueti (02)	0.804	0.755 – 0.854	0.361	0.317 – 0.404	0.196	0.161 – 0.231
Ng'uma (03)	0.723	0.675 – 0.770	0.295	0.261 – 0.330	0.151	0.126 – 0.177
Lukona (04)	0.699	0.651 – 0.747	0.280	0.249 – 0.311	0.142	0.119 – 0.165
Ndoka (05)	0.667	0.625 – 0.710	0.262	0.234 – 0.290	0.132	0.111 – 0.152
Kandambo (06)	0.694	0.643 – 0.745	0.278	0.244 – 0.311	0.141	0.117 – 0.164
Tuuwa (07)	0.722	0.674 – 0.771	0.303	0.271 – 0.336	0.159	0.135 – 0.183
Lutwi (08)	0.706	0.670 – 0.741	0.289	0.263 – 0.315	0.149	0.129 – 0.169
Buleya (09)	0.684	0.645 – 0.723	0.271	0.243 – 0.299	0.137	0.115 – 0.158
Luanginga (10)	0.369	0.299 – 0.440	0.110	0.077 – 0.143	0.046	0.028 – 0.064
Mapungu (11)	0.708	0.661 – 0.754	0.276	0.241 – 0.311	0.137	0.111 – 0.163
Yuka (12)	0.679	0.640 – 0.717	0.273	0.245 – 0.301	0.140	0.119 – 0.161
Liumba (13)	0.704	0.662 – 0.746	0.289	0.258 – 0.320	0.150	0.126 – 0.174
Liumena (14)	0.728	0.679 – 0.777	0.314	0.277 – 0.351	0.168	0.139 – 0.197
Maala (15)	0.770	0.725 – 0.815	0.349	0.310 – 0.387	0.192	0.161 – 0.223
Licha (16)	0.715	0.671 – 0.759	0.296	0.264 – 0.328	0.154	0.130 – 0.177
Lwambi (17)	0.758	0.702 – 0.815	0.326	0.287 – 0.365	0.173	0.144 – 0.203
Mwenyi (18)	0.738	0.683 – 0.794	0.311	0.272 – 0.350	0.163	0.135 – 0.191
Sishekanu (19)	0.746	0.699 – 0.793	0.318	0.284 – 0.352	0.168	0.143 – 0.194
Libonda (20)	0.773	0.716 – 0.831	0.320	0.275 – 0.366	0.164	0.131 – 0.197
Kuuli (21)	0.770	0.722 – 0.818	0.335	0.296 – 0.374	0.180	0.150 – 0.209
Mutala (22)	0.691	0.634 – 0.749	0.283	0.242 – 0.324	0.145	0.116 – 0.175
Nengu (23)	0.705	0.642 – 0.768	0.286	0.247 – 0.325	0.146	0.119 – 0.173
Siliwe (24)	0.760	0.713 – 0.807	0.333	0.295 – 0.372	0.180	0.150 – 0.210
Likulundundu (25)	0.789	0.741 – 0.836	0.346	0.310 – 0.383	0.186	0.159 – 0.214
Kaoma District (902)						
Nyambi (01)	0.571	0.483 – 0.659	0.201	0.146 – 0.255	0.093	0.060 – 0.127
Namando (02)	0.534	0.444 – 0.623	0.181	0.131 – 0.231	0.082	0.052 – 0.112

Table E9—Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Litoya (03)	0.590	0.504 – 0.676	0.213	0.163 – 0.263	0.101	0.070 – 0.132
Nkeyema (04)	0.598	0.509 – 0.688	0.219	0.165 – 0.272	0.104	0.071 – 0.138
Namilangi (05)	0.602	0.524 – 0.680	0.217	0.171 – 0.264	0.103	0.074 – 0.132
Mulamatila (06)	0.393	0.348 – 0.437	0.129	0.106 – 0.151	0.058	0.044 – 0.071
Naliele (07)	0.524	0.437 – 0.612	0.178	0.130 – 0.227	0.081	0.052 – 0.111
Shikombwe (08)	0.712	0.651 – 0.772	0.289	0.244 – 0.335	0.148	0.115 – 0.181
Shitwa (09)	0.610	0.535 – 0.684	0.223	0.177 – 0.269	0.107	0.077 – 0.137
Lalafuta (10)	0.643	0.563 – 0.724	0.243	0.194 – 0.293	0.119	0.087 – 0.151
Mangango (11)	0.750	0.681 – 0.820	0.313	0.259 – 0.367	0.163	0.123 – 0.202
Kanabilumbu (12)	0.709	0.641 – 0.776	0.290	0.241 – 0.340	0.150	0.114 – 0.186
Mbanyutu (13)	0.571	0.489 – 0.654	0.201	0.152 – 0.249	0.094	0.063 – 0.124
Nkenga (14)	0.703	0.645 – 0.760	0.284	0.241 – 0.326	0.145	0.114 – 0.176
Mushwala (15)	0.739	0.678 – 0.799	0.320	0.266 – 0.373	0.172	0.131 – 0.212
Luambuwa (16)	0.749	0.698 – 0.801	0.311	0.271 – 0.350	0.160	0.131 – 0.190
Namafulo (17)	0.755	0.703 – 0.807	0.318	0.277 – 0.359	0.166	0.136 – 0.197
Lui (18)	0.593	0.518 – 0.668	0.215	0.165 – 0.265	0.102	0.069 – 0.134
Mulwa J (19)	0.583	0.497 – 0.670	0.207	0.151 – 0.262	0.097	0.061 – 0.132
Luampa (20)	0.563	0.474 – 0.653	0.202	0.146 – 0.257	0.095	0.060 – 0.130
Lukulu District (903)						
Kashamba (01)	0.759	0.651 – 0.867	0.300	0.233 – 0.368	0.149	0.104 – 0.194
Dongwe (02)	0.852	0.796 – 0.909	0.399	0.341 – 0.456	0.221	0.174 – 0.268
Mwito (03)	0.787	0.738 – 0.835	0.356	0.313 – 0.398	0.196	0.163 – 0.230
Kamilende (04)	0.818	0.769 – 0.866	0.374	0.324 – 0.425	0.207	0.166 – 0.248
Simakumba (05)	0.824	0.778 – 0.869	0.381	0.330 – 0.433	0.212	0.169 – 0.256
Kang'oti (06)	0.740	0.686 – 0.793	0.314	0.277 – 0.352	0.166	0.138 – 0.194
Luanchuma (07)	0.750	0.701 – 0.799	0.322	0.284 – 0.360	0.171	0.144 – 0.199
Lukau (08)	0.784	0.729 – 0.838	0.345	0.303 – 0.388	0.186	0.154 – 0.218
Likapai (09)	0.778	0.715 – 0.841	0.343	0.294 – 0.393	0.185	0.148 – 0.221
Mbanga (10)	0.803	0.751 – 0.856	0.357	0.309 – 0.404	0.192	0.156 – 0.229
Kawaya (11)	0.815	0.760 – 0.871	0.369	0.320 – 0.418	0.203	0.164 – 0.242

Table E9—Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mwandi (12)	0.661	0.622 – 0.699	0.279	0.249 – 0.309	0.149	0.126 – 0.172
Namayula (13)	0.810	0.753 – 0.868	0.368	0.314 – 0.421	0.202	0.159 – 0.245
Kashizhi (14)	0.825	0.777 – 0.874	0.379	0.333 – 0.425	0.210	0.175 – 0.246
Nyaala (15)	0.827	0.771 – 0.883	0.384	0.334 – 0.433	0.214	0.175 – 0.252
Mataba (16)	0.810	0.750 – 0.871	0.371	0.320 – 0.421	0.204	0.165 – 0.244
Mitete (17)	0.828	0.774 – 0.883	0.386	0.340 – 0.433	0.217	0.180 – 0.253
Lutembwe (18)	0.855	0.804 – 0.906	0.413	0.359 – 0.468	0.237	0.192 – 0.282
Lupui (19)	0.855	0.796 – 0.915	0.412	0.358 – 0.466	0.235	0.193 – 0.277
Kakwacha (20)	0.756	0.686 – 0.825	0.336	0.287 – 0.386	0.185	0.147 – 0.223
Mongu District (904)						
Kanyonyo (01)	0.270	0.213 – 0.326	0.070	0.049 – 0.091	0.026	0.016 – 0.037
Kambule (02)	0.459	0.416 – 0.503	0.175	0.145 – 0.205	0.088	0.066 – 0.111
Lewanika (03)	0.194	0.146 – 0.241	0.049	0.033 – 0.065	0.018	0.010 – 0.026
Mulambwa (04)	0.307	0.229 – 0.384	0.079	0.049 – 0.109	0.030	0.015 – 0.044
Imwiko (05)	0.234	0.174 – 0.294	0.061	0.040 – 0.081	0.023	0.014 – 0.033
Ushaa (06)	0.683	0.630 – 0.736	0.277	0.234 – 0.319	0.141	0.110 – 0.172
Mabili (07)	0.628	0.561 – 0.696	0.239	0.203 – 0.275	0.118	0.093 – 0.143
Limulunga (08)	0.542	0.505 – 0.579	0.188	0.166 – 0.210	0.086	0.072 – 0.101
Ikwichi (09)	0.640	0.568 – 0.712	0.242	0.209 – 0.276	0.119	0.097 – 0.141
Namboma (10)	0.660	0.607 – 0.712	0.258	0.220 – 0.295	0.129	0.101 – 0.157
Mabumbu (11)	0.575	0.522 – 0.628	0.209	0.177 – 0.240	0.100	0.078 – 0.121
Lealui (12)	0.665	0.620 – 0.711	0.251	0.220 – 0.281	0.122	0.101 – 0.143
Kaande (13)	0.675	0.604 – 0.746	0.273	0.220 – 0.326	0.141	0.102 – 0.179
Yeta (14)	0.646	0.601 – 0.690	0.233	0.205 – 0.261	0.109	0.089 – 0.128
Katongo (15)	0.672	0.633 – 0.711	0.267	0.236 – 0.297	0.135	0.111 – 0.158
Lumbo (16)	0.669	0.630 – 0.708	0.253	0.226 – 0.280	0.123	0.102 – 0.143
Namushakende (17)	0.530	0.489 – 0.570	0.191	0.169 – 0.213	0.091	0.077 – 0.106
Nakato (18)	0.602	0.550 – 0.653	0.218	0.186 – 0.251	0.104	0.082 – 0.126
Nangula (19)	0.685	0.651 – 0.720	0.274	0.248 – 0.299	0.139	0.119 – 0.158
Ndanda (20)	0.669	0.625 – 0.713	0.263	0.234 – 0.291	0.132	0.110 – 0.153

Table E9—Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Lui (21)	0.673	0.626 – 0.720	0.257	0.221 – 0.294	0.126	0.100 – 0.152
Imalyo (22)	0.661	0.611 – 0.711	0.250	0.213 – 0.287	0.122	0.096 – 0.148
Mbekise (23)	0.650	0.605 – 0.695	0.247	0.218 – 0.276	0.121	0.100 – 0.142
Nakanyaa (24)	0.611	0.570 – 0.653	0.223	0.194 – 0.251	0.106	0.087 – 0.125
Mutondo (25)	0.671	0.622 – 0.719	0.254	0.218 – 0.290	0.123	0.098 – 0.148
Senanga District (905)						
Kambai (01)	0.703	0.665 – 0.741	0.271	0.242 – 0.299	0.133	0.112 – 0.154
Makoka (02)	0.676	0.637 – 0.716	0.261	0.231 – 0.291	0.128	0.106 – 0.150
Lyamakumba (03)	0.701	0.662 – 0.739	0.265	0.233 – 0.297	0.128	0.104 – 0.151
Silowana (04)	0.672	0.631 – 0.713	0.247	0.216 – 0.278	0.117	0.095 – 0.140
Nanjucha (05)	0.682	0.645 – 0.718	0.255	0.223 – 0.287	0.122	0.098 – 0.146
Muoyo (06)	0.657	0.602 – 0.713	0.249	0.214 – 0.283	0.121	0.096 – 0.145
Kataba (07)	0.683	0.635 – 0.731	0.263	0.230 – 0.297	0.130	0.106 – 0.154
Silwizi (08)	0.649	0.599 – 0.700	0.233	0.200 – 0.266	0.108	0.086 – 0.131
Sibuhali (09)	0.668	0.610 – 0.725	0.252	0.213 – 0.290	0.122	0.095 – 0.149
Mata (10)	0.649	0.599 – 0.699	0.237	0.202 – 0.271	0.112	0.088 – 0.136
Naluywa (11)	0.632	0.579 – 0.686	0.227	0.193 – 0.261	0.106	0.084 – 0.129
Wanyau (12)	0.439	0.399 – 0.479	0.146	0.126 – 0.165	0.066	0.054 – 0.078
Imatongo (13)	0.640	0.598 – 0.683	0.231	0.198 – 0.263	0.108	0.086 – 0.131
Mwanambinyi (14)	0.681	0.633 – 0.728	0.263	0.226 – 0.301	0.130	0.103 – 0.157
Lipuwe (15)	0.643	0.602 – 0.684	0.241	0.210 – 0.272	0.117	0.095 – 0.139
Sesheke District (906)						
Imusho (01)	0.659	0.585 – 0.732	0.238	0.190 – 0.285	0.111	0.079 – 0.144
Kalobolelwa (02)	0.623	0.561 – 0.685	0.231	0.184 – 0.278	0.111	0.079 – 0.144
Lusu (03)	0.591	0.527 – 0.656	0.198	0.164 – 0.231	0.087	0.066 – 0.108
Mulimambango (04)	0.455	0.417 – 0.493	0.151	0.130 – 0.172	0.068	0.054 – 0.081
Maondo (05)	0.608	0.541 – 0.675	0.222	0.179 – 0.266	0.107	0.078 – 0.135
Simungoma (06)	0.527	0.452 – 0.602	0.169	0.130 – 0.207	0.073	0.050 – 0.097
Mwandi (07)	0.463	0.398 – 0.528	0.143	0.112 – 0.173	0.060	0.043 – 0.078

Table E9—Western Province: Ward -level estimates of the poverty headcount ratio (P_0), poverty gap (P_1) and squared poverty gap (P_2)

District / Ward (code)	P_0	95% confidence interval	P_1	95% confidence interval	P_2	95% confidence interval
Mabunibu (08)	0.598	0.543 – 0.654	0.217	0.177 – 0.256	0.103	0.076 – 0.130
Sankolonga (09)	0.599	0.533 – 0.665	0.213	0.170 – 0.255	0.099	0.072 – 0.127
Magumwi (10)	0.594	0.529 – 0.658	0.209	0.168 – 0.249	0.096	0.070 – 0.122
Machile (11)	0.528	0.465 – 0.591	0.175	0.141 – 0.208	0.078	0.057 – 0.099
Mulobezi (12)	0.565	0.514 – 0.615	0.191	0.161 – 0.222	0.086	0.066 – 0.106
Sichili (13)	0.511	0.449 – 0.572	0.166	0.133 – 0.199	0.073	0.053 – 0.093
Luamuloba (14)	0.552	0.497 – 0.607	0.188	0.156 – 0.221	0.086	0.065 – 0.106
Kamanga (15)	0.519	0.441 – 0.596	0.170	0.129 – 0.211	0.076	0.051 – 0.100
Natvinda (16)	0.582	0.517 – 0.647	0.192	0.154 – 0.231	0.085	0.061 – 0.109
Luampungu (17)	0.605	0.550 – 0.659	0.208	0.174 – 0.243	0.095	0.072 – 0.117
Mashukula (18)	0.648	0.587 – 0.708	0.241	0.207 – 0.274	0.115	0.093 – 0.138
Loazamba (19)	0.632	0.574 – 0.690	0.233	0.198 – 0.268	0.112	0.088 – 0.135
Loanja (20)	0.651	0.574 – 0.727	0.249	0.199 – 0.299	0.123	0.089 – 0.156
Shang'ombo District (907)						
Kalongola (01)	0.677	0.629 – 0.725	0.244	0.212 – 0.277	0.113	0.089 – 0.138
Mbcta (02)	0.672	0.622 – 0.723	0.243	0.209 – 0.277	0.113	0.089 – 0.137
Sioma (03)	0.691	0.624 – 0.759	0.256	0.211 – 0.301	0.122	0.090 – 0.154
Mufulanl (04)	0.682	0.620 – 0.744	0.256	0.209 – 0.303	0.123	0.090 – 0.156
Mutomena (05)	0.606	0.529 – 0.682	0.224	0.182 – 0.266	0.108	0.082 – 0.134
Sikabange (06)	0.658	0.611 – 0.706	0.255	0.220 – 0.290	0.127	0.101 – 0.152
Nalttashi (07)	0.641	0.579 – 0.703	0.242	0.201 – 0.284	0.119	0.091 – 0.146
Beshe (08)	0.666	0.615 – 0.717	0.262	0.224 – 0.301	0.132	0.104 – 0.160
Mulonga (09)	0.694	0.650 – 0.737	0.275	0.240 – 0.310	0.139	0.112 – 0.165
Sitiuu (10)	0.656	0.614 – 0.699	0.251	0.218 – 0.285	0.124	0.100 – 0.147
Sipunia (11)	0.688	0.638 – 0.738	0.262	0.223 – 0.301	0.128	0.100 – 0.156
Kaunga-Mashi (12)	0.652	0.596 – 0.709	0.250	0.211 – 0.289	0.123	0.096 – 0.149

Source: Authors' estimates from 2000 Census of Population and Housing and 2002–03 Living Conditions Monitoring Survey