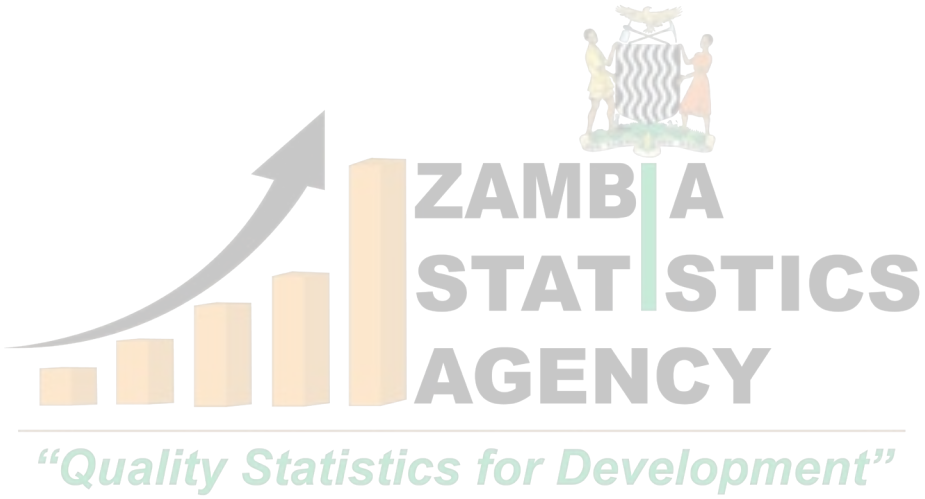
ZAMBIA STATISTICS AGENCY

"Quality Statistics for Development"

2022
LIVING CONDITIONS MONITORING SURVEY REPORT

OFFICIAL STATISTICS OF ZAMBIA
Republic of Zambia



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Republic of Zambia

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FOREWORD

In the month of July and August 2022, the **Zambia Statistics Agency (ZamStats)** conducted the eighth **Living Conditions Monitoring Survey (LCMS)**. The first LCMS was conducted in 1996. The other LCMS surveys were done 1998, 2002/2003, 2004, 2006 ,2010 and 2015. The LCMS is a population-based, household survey that collects data using structured personal interviews with household members. The main objective of the LCMS is to measure the wellbeing of the population in Zambia, and to provide trends in the different measures of societal wellbeing over time.

The 2022 LCMS was designed to provide reliable estimates at national, rural/urban and province levels. Survey estimates were also disaggregated by age, sex and socio-economic strata. The survey collected information on the following areas of population wellbeing: general living conditions (including household size, composition and relationships; household incomes and expenditures; food production, food security and coping strategies), economic activity and employment status of household members, education level of household members, health status of household members (including child nutrition; incidence of ill health and injury; household deaths and cause of death), housing conditions (including type of housing; access to water and sanitation; and access to electricity), as well as access to community level socioeconomic facilities such as health facilities, schools, banks, transport and household food consumption and security.

Results contained in this report are by no means exhaustive on the topics covered in the survey, but only highlight the salient aspects of the living conditions and wellbeing of the population at the time of the survey. It should also be noted that the analysis of the 2022 LCMS data included a number of methodological improvements in the estimation of poverty levels among households, and thus users need to take caution when making comparisons of poverty estimates from this survey with those from past surveys. The 2022 LCMS dataset and any specialized tabulations can be made available to users upon request. I would like to take this opportunity to thank the **Government of the Republic of Zambia (GRZ)**, The **United Nations Development Program (UNDP), UNICEF, other UN Agencies** and **SIDA** for funding the 2022 LCMS activities, from survey design and preparation to data analysis and report writing. I also thank the World Bank for providing technical assistance during the different stages of the survey undertaking. I would like to extend my sincere thanks and appreciation to the households surveyed, for their patience, cooperation and truthfulness when responding to our data collectors. I also thank all the staff involved at different stages of the survey for ensuring the successful implementation of the 2022 LCMS. I hope the results contained in this report, and the rich dataset upon which it is based will find use among policy makers, programme managers, researchers and other data users for the betterment of the Zambian population.

Goodson Sinyenga
STATISTICIAN GENERAL

August, 2024

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LIST OF ABBREVIATIONS

AES	- Adult Equivalent Scale
BCG	- Bacillus Calmete Guerin (Vaccination against Tuberculosis)
CAPI	- Computer Assisted Personal Interview
CBN	- Cost of Basic Needs
CPI	- Consumer Price Index
CSA	-Census Supervisory Area
CSO	- Central Statistical Office
DPT	- Diphtheria, Pertussis and Tetanus
EA	- Enumeration Area
FGT	- Foster, Greer and Thorbecke
FHANIS	- Food Security, Health, Agricultural and Nutrition Information System
FNDP	- Fifth National Development Plan
GAR	- Gross Attendance Rate
GDP	- Gross Domestic Product
HFCE	- Household Final Consumption Expenditure
ICLS	- International Conference of Labour Statisticians
IGA	– Income Generating Activities
ILO	- International Labour Organization
LCMB	- Living Conditions Monitoring Branch
LCMS	-Living Conditions Monitoring Survey
LSAS	- Large Scale Agricultural Stratum
MDG	- Millennium Development Goals
MSAS	- Medium Scale Agricultural Stratum
NAR	- Net Attendance Rate
NAS	- Non-Agricultural Stratum
NFNC	- National Food and Nutrition Commission
PIC	- Price and Income Commission
PPES	- Probability Proportional to Estimated Size
PRSP	- Poverty Reduction Strategy Paper
PSDP	- Private Sector Development Programme
PSU	- Primary Sampling Unit
R- SNDP	-Revised Sixth National Development Plan
SAP	- Structural Adjustment Programme
SDGs	- Sustainable Development Goals
SSAS	- Small Scale Agricultural Stratum
TA	- Technical Assistance
TNDP	- Transitional National Development Plan
WB	- World Bank
ZDHS	- Zambia Demographic and Health Survey
ZamStats	- Zambia Statistics Agency

EXECUTIVE SUMMARY

The 2022 Living Conditions Monitoring Survey (LCMS) was conducted in June/July of the year 2022 and covered 8,520 households in 420 randomly selected Enumeration Areas (EAs) across the 10 provinces of Zambia. The survey estimated a total population of 19,610,769 million, with 60 percent of that residing in rural areas. The survey estimated a total of 3,861,557 households, with an average household size of 5.1 persons.

Survey results indicate 31.4 percent of population was economically active (in the labour force), while 68.6 percent was economically inactive. Analysis by sex shows that 34.8 percent of males and 28.4 percent of females were in the labour force. Results further show that unemployment rate was estimated at 13.1 percent. Females had a higher unemployment rate (14.9 percent) than their male counterparts at 11.5 percent.

The agriculture, forestry and fishing industry had the highest proportion of employed persons at 37.2 percent. The water supply, sewerage, waste management industry, information and communication and extraterritorial organization and bodies had the least proportions of the less than 0.1 percent each..

Monthly average income for households in rural areas was K2,112.2 while that of households in urban areas was K5,546.6.

The survey estimated that the top 10 percent of households earned 51.5 percent of total household incomes while the bottom 50 percent earned 7.9 percent of the total household incomes. The level of income inequality estimated by the Gini Coefficient was high at 0.65 (0.65 for rural areas and 0.64 for urban areas). In rural areas, households spent 56.4 percent of their incomes on food and 43.6 percent on non-food expenditure items, while in urban areas expenditure on food amounted to 34.7 percent of household incomes and non-food expenditure amounted to 65.3 percent.

Survey results show that 60 percent of the population was living below the total poverty line at the time of the survey relative to 78.8 percent in rural areas and 31.9 percent in urban areas. Further, the survey shows that 48.0 percent of the population were extremely poor. Overall results show that 58.8 percent of the male-headed households compared to 63.4 percent of the female-headed households were poor at national level. This implies that out of every 100 households, female-headed households were more likely to be poorer than households headed by their male counterparts. In addition, among the rural households, the incidence of poverty was highest amongst the small scale agricultural households at 81.0 percent, followed by medium scale agricultural and non-agricultural households at 73.2 and 70.4 percent, respectively. Muchinga Province had the largest proportion of the population that was poor at 82.6 percent, followed by Western Province at 78.6 percent and Northern Province at 78 percent.

At national level, results show that the most common type of housing unit occupied by households was an improved traditional house at 26.3 percent followed by a traditional housing unit at 25.6 percent.

Analysis by residence shows that 63.0 percent of households in rural areas had access to safe water while 91.9 percent of households in urban areas had access to safe water.

At provincial level, Lusaka Province had the highest percentage of households with access to safe water at about 96.1 percent and Northern Province had the lowest percentage of households with access to safe water at 39.9 percent. There was a decline in the proportion of households who treated or boiled their water for drinking at national level from 24.7 percent to 21.7 percent.

About 33.8 percent of households in rural areas had connection to an electricity source while 66.2 percent were not connected. In urban areas 80.2 percent of households had connection to an electricity source while 19.7 percent were not connected

At national level, the main source of energy used for lighting by households was electricity at 33.9 percent followed by a torch at 31.1 percent. Further, 49.3 percent of the households used collected firewood as their main source of energy for cooking, followed by purchased charcoal at 35.8 percent and electricity at 8.5 percent.

Chapter 1: **OVERVIEW ON ZAMBIA**

1.1 Introduction

Zambia is a land linked sub-Sahara African country sharing boundaries with eight countries, namely, Malawi and Mozambique to the east; Zimbabwe, Botswana and Namibia to the south; Angola to the west; and the Democratic Republic of Congo and Tanzania to the north. The country lies between latitudes 8° and 18° south and longitudes 22° and 34° east. It covers 752,612 square kilometres. About 58 percent of Zambia's total land area of 39 million hectares is potentially good for agricultural production although most of this arable land is yet to be fully exploited for the purpose of increasing the contribution of the Agricultural sector to the National economy. Zambia`s agricultural activities are mainly rain fed despite having large water bodies that can easily be tapped for irrigation purposes. Zambia`s economy primarily still depends on Copper and Cobalt exports to generate most of its foreign exchange revenue. As a result, the country remains susceptible to the high risk of external commodity price fluctuations.

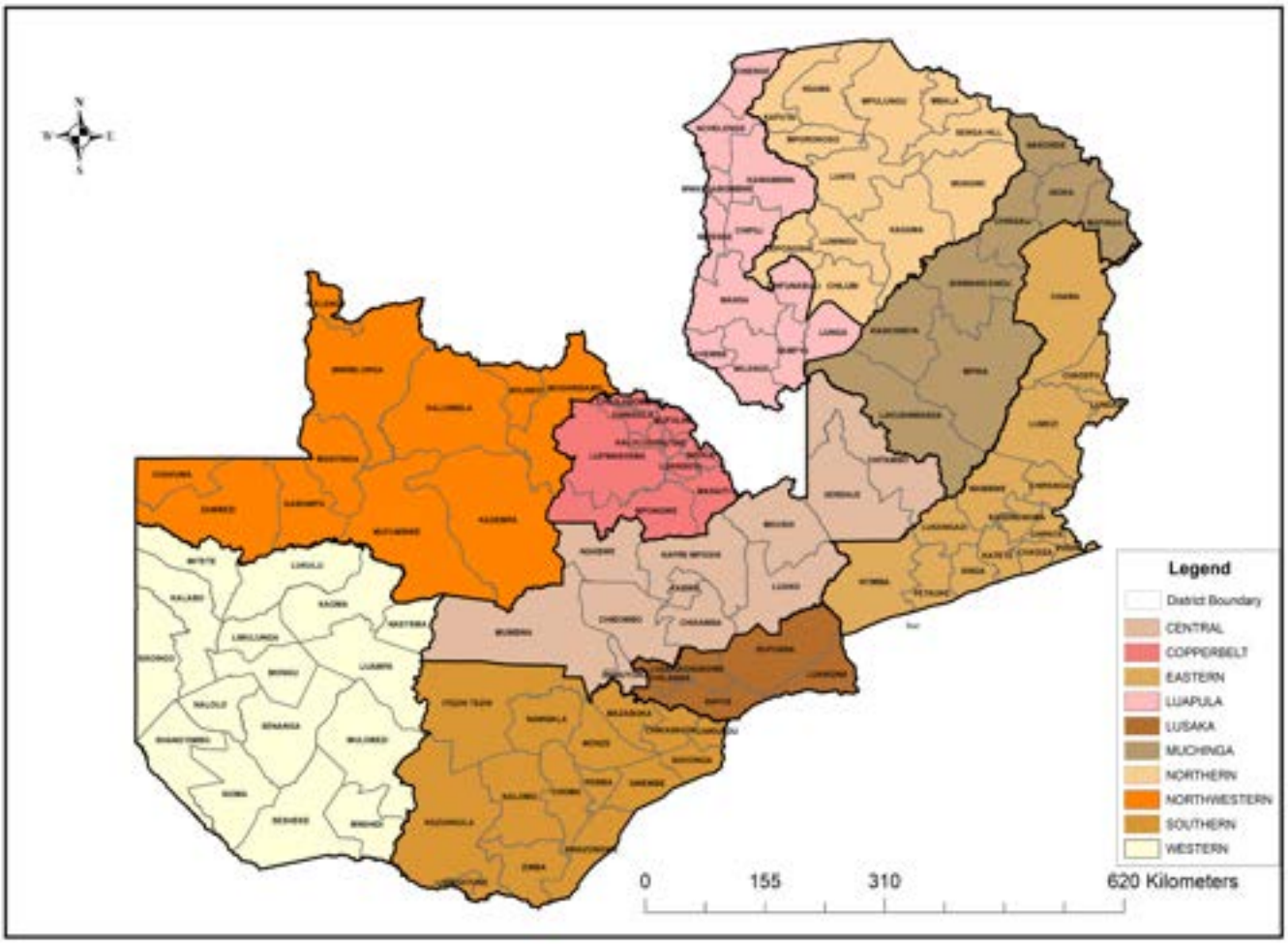
1.2 Land and the People

The population of Zambia increased from 5.7 million in 1980 to 19.6 million in 2022. Between 2010 and 2022, the population increased from 13.1 to 19.6 million representing an increase of 49.8 percent. The country's average population density has increased to 26.1 from 17.4 persons per square kilometre between 2015 and 2022 while Lusaka Province had the highest density of 140.1 persons per square Kilometre. There are 73 ethnic groupings in Zambia with seven major languages used besides English which is the official language. The seven major languages are Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga.

1.3. Politics and Administration

Zambia got its independence from Britain in 1964. Politically, the country has gone through the era of multi-party democracy, 1964-72- and one-party rule, 1972-1991 and later multi-party democracy since 1991. Administratively, the country is divided into 10 provinces namely Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, North-Western, Southern and Western. These provinces are further subdivided into districts, constituencies and wards.

Figure 1.1: Administrative Map of Zambia showing Districts and Provinces



1.4. Economy

During the period 2017-2021, the country's economy declined with the real growth rate averaging 1.4 percent largely due to unfavourable weather conditions which negatively impacted the Agriculture and Energy sectors in the earlier years of the period. Another notable development was in 2020 when economic growth contracted by 2.8 percent, registering the first recession since 1998, real GDP growth recovered to 3.6 percent, with the Agriculture, Manufacturing, Energy, Wholesale and Retail trade as well as the ICT sectors driving growth. Reduction in output from the mines was largely due to disruptions in supply chains and measures aimed at containing the effects of COVID-19 pandemic on sectors such as Tourism, Construction, Wholesale and Retail trade as well as Manufacturing. The situation was compounded by the country's worsening fiscal position resulting from increased borrowing on the domestic market which crowded out the private sector. In 2021, the country's economy slowly starting amidst a pick-up in global economic activity and commodity prices (**8th NDP, Ministry of Finance and National Planning, 2022**).

Further, a survey on Socio-economic Impact Assessment of COVID-19 on households conducted in Zambia in 2021 revealed that the COVID-19 pandemic had significantly and negatively impacted on the welfare of the population in Zambia ranging from reduced economic activities to hampering access to social services thereby threatening the gains made in the previous decades especially in a quest to

improve the wellbeing of people through provision of various services such as health and education. The majority of households (67 percent) indicated that the COVID-19 pandemic resulted in a reduction in business, 9 percent reported that their businesses temporarily closed while 7 percent had difficulties in accessing raw materials/inputs (**SEIA, 2021**).

Zambia's economic growth in 2022 was estimated at 5.2 percent (National Accounts, ZamStats, 2022). Most of the population in Zambia (60.0 percent) live in rural areas and are dependent on agriculture for their livelihood. Thus, addressing basic challenges faced by the agricultural community would not only improve household food security but also help quicken the process of poverty reduction. Further, Zambia's GDP was recorded at K154,026.4 billion in 2022, an increase from K97,215.9 recorded in 2010. Zambia's GDP per Capita increased from K7,425.2 in 2010 to K7,860.4 in 2022 registering a 5.9 percentage increase. The average annual inflation rate was recorded at 11.1 percent in 2022 from 8.2 percent in 2010.

Table 1.1: Gross Domestic Product (GDP), Inflation and Exchange Rates, Zambia 2000-2022

Year	GDP at Current Prices (K' billions)	GDP at constant 2010 prices (K' billions)	Per capita GDP at current prices (K'000)	Per capita GDP at constant 2010 prices (K'000)	GDP growth rate %	Average Annual LME Copper Price	Average annual Inflation rate %	Average exchange rates
2000	11,201.00	47,404.90	1,143.86	4,841.00	3.9	-	25.9	3,112
2001	14,748.80	49,925.30	1,461.72	4,948.00	5.3	-	21.7	3,611
2002	18,447.00	52,174.90	1,772.11	5,012.20	4.5	1,552.48	22.2	4,307
2003	23,201.90	55,798.50	2,159.41	5,193.20	6.9	1,779.15	21.5	4,911
2004	29,729.90	59,722.50	2,680.86	5,385.40	7.0	2,864.94	18	4,846
2005	37,189.30	64,043.70	3,250.43	5,597.60	7.2	3,678.89	18.4	4,562
2006	45,964.20	69,105.60	3,896.00	5,857.50	7.9	6,722.14	9.1	3,698
2007	56,263.00	74,877.50	4,627.00	6,157.80	8.4	7,118.53	10.7	4,078
2008	67,088.70	80,698.50	5,536.00	6,659.00	7.8	6,955.88	12.4	3,777
2009	77,348.30	88,139.10	5,997.00	6,833.60	9.2	5,148.74	13.5	5,079
2010	97,215.95	97,215.90	7,425.00	7,425.20	10.3	7,534.78	8.2	4,816
2011	114,029.71	102,630.10	8,311.56	7,480.60	5.6	8,820.99	6.4	4,872
2012	131,271.88	110,427.30	9,280.14	7,806.30	7.6	7,949.95	6.6	5,170
2013	151,330.80	116,012.20	10,379.25	7,956.40	5.1	7,326.17	7.0	5,377
2014	167,052.44	121,456.90	11,119.54	8,084.50	5.0	6,859.14	7.8	5,910
2015	183,381.06	125,003.50	11,850.98	8,078.30	2.9	5,501.69	10	8.86
2016	216,098.08	129,698.00	13,562.17	8,125.00	3.6	4,863.20	18.2	10.23
2017	246,251.73	134,270.60	15,010.56	8,184.60	3.7	6,162.70	6.6	9.55
2018	275,174.38	139,688.10	16,294.35	8,271.50	4.0	6,525.30	7.5	10.47
2019	300,449.77	141,701.50	17,285.87	8,152.50	1.4	6,005.10	9.1	12.91
2020	332,720.85	137,755.00	18,575.08	7,702.00	-2.8	6,168.50	15.7	18.32
2021	442,336.84	146,343.90	24,095.05	7,830.70	6.2	9,314.70	22.1	19.91
2022	493,964.30	154,026.40	25,188.42	7,860.40	5.2	8,814.80	11.1	16.9

1.5. Developments in the Social Sectors

Gross attendance rate which refers to the number of pupils attending a given level of education at any time during the reference academic year, regardless of age, as a percentage of the official school-age population. Gross attendance rate for primary school in 2022 reduced to 98.3 percent from 104.1 percent in 2015.

Health indicators have also shown some improvements since the early 1990s. The Zambia Demographic and Health Surveys in 2013-2014 and 2018 showed that the HIV and AIDS prevalence was 13.3 percent and 11.1%, respectively. In 2018, HIV prevalence was higher among women than men (14.2% versus 7.5%).

The 2013-2014 ZDHS estimated that pregnancy related mortality ratio (PRMR) declined to 398 deaths per 100,000 live births from 591 deaths per 100,000 live births in 2007 and further declined to 278 per 100,000 live births in 2018.

Under-five mortality has equally been declining over the years It fell from 168 deaths per 1,000 live births in 2001-2002, 119 deaths per 1,000 live births in 2007 to 75 deaths per 1,000 live births in 2013-2014 and further went down to 61 deaths per 1000 live births in 2018.

Chapter 2: SURVEY BACKGROUND AND SAMPLE DESIGN METHODOLOGY

2.1 Survey Background

Following the change of government in 1991, the Zambian economy was liberalized anchored on free market policies. The newly formed government then launched a vigorous Structural Adjustment Programme (SAP) as the main developmental undertaking in reforming the ailing economy. The SAP had its own share of successes and failures. Arising from the observed adverse effects of this reform process, the Government of the Republic of Zambia with its co-operating partners agreed to put in place a mechanism for monitoring and evaluating the welfare of the population in Zambia. This was done through the Priority Surveys I(PSI 1991) and II(PSII 1993).

The Living Conditions Monitoring Surveys (LCMSs) evolved from these monitoring and evaluation mechanisms. The first LCMS was conducted in 1996. Since then, eight surveys have been undertaken inclusive of the 2022 LCMS.

Each of the successive LCMS has been used to monitor the impact of government policies and development programmes in improving the welfare of the citizens. For instance, the LCMS of 2002/2003 and 2004, which coincided with the period of the Transitional National Development Plan (TNDP) and the Poverty Reduction Strategy Paper (PRSP) covering the period 2002 - 2005, were mainly used to monitor and evaluate the impact these two sets Government policies and programmes.

The 2006 and 2010 LCMSs were mainly designed to help monitor and evaluate the Fifth National Development Plan (FNDP) covering the period 2006-2010. The FNDP was part of the long-term programme of the Vision 2030 targeting to transform Zambia into "**A prosperous middle-income nation by 2030**".

The 2015 LCMS was designed to evaluate the progress made in attaining the 2015 MDG targets and provided benchmark indicators for the Sustainable Development Goals (SDGs) and the Seventh National Development Plan (7NDP).

In June and July of 2022, the Zambia Statistics Agency (ZamStats) conducted the eighth LCMS which will help evaluate the achievements under 7NDP and provide benchmark indicators for the Eighth National Development Plan (8NDP).

2.2 Objectives of the 2022 Living Conditions Monitoring Survey

The 2022 LCMS was mainly designed to monitor and highlight the living conditions of the people in Zambia. The survey also included a set of priority indicators on poverty and living conditions that are periodically monitored and evaluated.

The following were the key objectives of the 2022 LCMS:

1. Monitor the level of poverty and its distribution in Zambia;
2. Monitor the impact of government policies and programmes on the well-being of the population in Zambia;
3. Provide various users with a set of reliable indicators to monitor progress and development and
4. Identify vulnerable groups in society and enhance targeting of pro-poor policies and programmes.

For the purpose of assessing attainment of the above objectives, the LCMS questionnaire covered the following areas:

- Demography and Migration;
- Orphan hood;
- Marital Status;
- Health;
- Education;
- Economic Activities;
- Income;
- Household Agricultural Production;
- Household Expenditure;
- Household Assets;
- Household Amenities and Housing Conditions;
- Household Access to Facilities;
- Child Health and Nutrition;
- Community Developmental Issues;
- Death in Households and
- Self-assessed Poverty, Shocks to Household Welfare and Household Coping Strategies.

2.3 Sample Design and Coverage

The 2022 LCMS was a cross-sectional survey designed to cover a representative sample of at least 8,400 non-institutionalized private households residing in both rural and urban parts of the country. A total of 420 Enumeration Areas (EAs) were drawn from a total of 25,600 EAs nationwide. The survey was designed to produce reliable estimates at national, rural/urban and provincial levels.

2.3.1 Sample Stratification and Allocation

The sampling frame used for the 2022 LCMS was developed from the 2010 Census of Population and Housing updated with data from the 2017-2020 Census Mapping exercise.

Zambia is administratively demarcated into 10 provinces, which are further divided into districts. The districts are further subdivided into constituencies, which are in turn divided into wards. For purposes of conducting household-based surveys, wards are further divided into Enumeration Areas (EAs). The EAs constitute the Primary Sampling Units (PSUs) for surveys.

In order to have reliable estimates at provincial level and at the same time consider variation in size of provinces, the Survey adopted the Optimal Square Root sample allocation method (Leslie Kish, 1987). This approach offers a better compromise between Equal and Proportional allocation, i.e. small sized strata (province) are allocated larger samples compared to proportional allocation. The allocation of the sample points to rural and urban strata was approximately proportional. Over the years the sample distribution of the LCMSs were initially the same but have been changed since 2015, in order to meet desired levels of precision for the key domains of analysis. Table 2.1 shows the allocation of PSUs by Province and Rural/Urban.

Table 2.1: Total number of selected SEAs by Province, Rural/Urban, Zambia 2022

Province	Rural	Urban	Total
Central	16	27	43
Copperbelt	29	20	49
Eastern	14	33	47
Luapula	13	28	41
Lusaka	32	20	52
Muchinga	11	23	34
Northern	13	28	41
North Western	11	22	33
Southern	16	27	43
Western	11	26	37
All Zambia	**166**	**254**	**420**

2.3.2. Coverage

The 2022 LCMS was undertaken using a sample of 420 EAs. All households were explicitly stratified into groups based on the scale of their agricultural activities (in rural areas) and cost of residential area (in urban areas), respectively. Rural households were classified as Small, Medium, Large scale farming and Non-agriculture households. In case of households residing in urban areas, the Survey adopted the classification system used by the Local authorities (Low, Medium and High-cost residential areas).

The survey was designed to cover a representative sample of at least 8,400 non-institutionalized private households residing both in rural and urban areas. The sample was intended to give reliable estimates at national, rural/urban and provincial levels.

2.3.4 Selection of Enumeration Areas (EAs)

The EAs in each stratum were selected as follows:

Calculating the sampling interval ***(I)*** of the stratum.

$$I = \frac{\sum_i m_i}{a}$$

Where: $\sum_i m_i$ the total stratum size

a = the number of EAs allocated to the stratum calculating the cumulated size of the cluster (EA). Calculating the sampling numbers **R, R+I, R+2I... R+(n-1)I**, where **R** is the random start number between 1 and I. Comparing each sampling number with the cumulated sizes.

The first EA with a cumulated size that was greater or equal to the random number was selected. The subsequent selection of EAs was achieved by comparing the sampling numbers to the cumulated sizes of EAs in the same manner.

2.3.5 Selection of Households

The 2022 survey employed a two-stage stratified cluster sample design. During the first stage, 420 EAs were selected with Probability Proportional to Estimated Size (PPES) within the respective strata. The measure of size used was population figures taken from the updated frame developed from the 2010 Census of Population and Housing. During the survey, listing of all the households in the selected EAs was done before a sample of households to be interviewed was drawn. In the case of rural EAs, households were listed and stratified according to the scale of their agricultural activities. Therefore, there were four explicit strata created at the second sampling stage in each rural EA: the Small Scale Agricultural Stratum (SSAS), the Medium Scale Agricultural Stratum (MSAS), the Large Scale Agricultural Stratum (LSAS) and the Non-Agricultural Stratum (NAS). For the purposes of the survey, 9, 7 and 4 households were selected from the SSAS, MSAS and NAS, respectively. Large scale agricultural households were selected on a 100 percent basis. Urban EAs were explicitly stratified into Low cost, Medium cost and High cost areas based on ZamStats and local authorities' classification of residential areas.

In each rural EA, a minimum of 20 households were selected in the absence of large-scale agricultural households, while 20 households in each urban EA were selected.

The selection of households from various strata was preceded by assigning each listed household with a sampling serial number. The circular systematic sampling method was used to select households. The sampling process was done using a listing application developed in CS-Entry

Let **N=nk** Where:
N = total number of households assigned sampling serial numbers in a stratum
n = total desired sample size to be drawn from a stratum
in an EA
k = the sampling interval in a given EA calculated as **k=N/n**.

2.4. Data collection

2.4.1. Computer Assisted Personal Interview (CAPI)

Face-to- face personal interviews were conducted using a structured electronic questionnaire via the Computer Assisted Personal Interviewing (CAPI) technique. The questionnaire was designed to collect data on the various aspects of the living conditions of the households using CAPI. The software used for data collection was Survey Solutions which was developed by the World Bank.

Data collection for the 2022 LCMS involved 210 Enumerators, 40 Supervisors and 30 Master Trainers.

Table 2.2: Household Response Rate by Province, Zambia 2022

Central	100.0
Copperbelt	99.5
Eastern	93.2
Luapula	99.4
Lusaka	99.4
Muchinga	100.0
Northern	99.6
North Western	99.7
Southern	89.8
Western	99.5
All Zambia	**98.0**

2.5. Estimation Procedure

2.5.1. Sample Weights

Due to the disproportionate allocation of the sample points to various strata, sampling weights are required to correct for differential representation of the sample at the national and sub-national levels. The weights of the sample are in this case equal to the inverse of the product of the two selection probabilities employed at each stage of selection.

Therefore, the probability of selecting an EA was calculated as follows:

$$P_{hi}^{1} = \frac{\mathbf{a}_h \mathbf{M}_{hi}}{\sum_I \mathbf{M}_{hi}}$$

Where: P_{hi}^{1} = the first selection probability of **EAs**

a_h = the number of EAs selected in stratum **h**

M_{hi} = the size (in terms of the population count) of the ith EA in stratum **h**

$\sum_I \mathbf{M}_{hi}$ = the total size of the stratum h, where i = 1, 2, 3...n

The selection probability of the household was calculated as follows:

$$P_{hi}^{2} = \frac{\mathbf{n}_{hi}}{\mathbf{N}_{hi}}$$

Where:

P_{hi}^{2} = the probability of selecting a household

P_{hi}^{2} = the number of households selected from the ith EA of h stratum

$\mathbf{N}_{hi}$ = the total number of households listed in an ith EA of h stratum.

Therefore, the EA specific sample weight was calculated as follows:

$$w_{hi}^{i} = \frac{1}{P_{hi}^{1} * P_{hi}^{2}}$$

w_{hi}^{i} is called the PPS sample weight. In the case of rural EAs which have more than one second stage stratum selection, the first selection probability is multiplied with separate stratum- specific second stage selection probabilities. Therefore, the number of weights in each rural EA depends on the number of second stage strata that are available.

2.5.2. Post-Stratification Adjustment

The 2022 LCMS collected data on all usual household members in section 1 of the questionnaire. The weighted sum of the total number of household members (household size) is supposed to give a fairly good and accurate estimate of the current population in a particular domain such as province, residence and national level for which this survey was designed. The expression which is used to obtain the population total based on the base weights is as follows:

$$Y' = \sum_{h}\sum_{i}\sum_{j} W_{hi}^{i} Y_{hij}$$

Where
Y' = the population based on base-weights

W_{hi}^{i} = the weight of the sample households in the ***ith*** **EA** of stratum ***h***

Y_{hij} = the household size **(y)** of the ***jth*** sample household with the ith **EA** of stratum **h**

The weighted results generated by the 2022 LCMS underestimated the total population when compared to the ZamStats 2022 Census preliminary population figures. Therefore, the base-weights were adjusted to reflect the population distribution of the 2022 Census population figures. The procedure for adjusting the weights based on Census population figures is given below:

$$r = \frac{Y_{census}}{\hat{Y}}$$

Where
r = adjustment factor, which represents growth in the population

Y_{census} the Census Population figure of the domain (Province) from the 2022 Census Preliminary Report

$\hat{Y}$= the estimated population using base weights. Therefore, the final weight was obtained as follows;
Where

$$W_{hi} = W_{hi}^{i} r$$

W_{hi} = the adjusted final household weight.

2.5.3. Estimation process

In order to correct for differential representation, all estimates generated from the 2022 LCMS data were weighted expressions.

Therefore, if $\mathbf{Y}_{hij}$ is an observation on variable **Y** for the **j**th household in the ith **EA** of the **h**th stratum, then the estimated total for the **h**th stratum is expressed as follows:

$$\hat{Y}_h = \sum_{i=1}^{a_h} \sum_{j=1}^{n_h} W_{hi} Y_{hij}$$

Where:

$\hat{Y}_h$ = the estimated total for the **h**th stratum **i = 1** to $\mathbf{a}_h$: the number of selected clusters in the stratum
(Where **a** is the cluster)
j = 1 to $\mathbf{n}_h$: the number of sample households in the stratum In order to get the national and provincial estimates the following estimator is used:

$$\hat{Y} = \sum_{h=1}^{H} \hat{Y}_h$$

Where:

$\hat{Y}_h$ = the national total estimate n = the number of strata in a domain.

2.6 Data Processing and Analysis

The 2022 LCMS data was electronically collected using the Computer Assisted Personal Interviewing (CAPI) technique. Using tablets loaded with the World Bank developed Survey Solutions software, data collected from the field was transmitted to the CAPI command Centre created in all the provincial headquarters. If accepted, the same information was then sent to the HQ command Centre for further scrutiny in terms of completeness and accuracy. However, incomplete questionnaires were sent back to the field staff for verification and subsequent correction. Once that was done, it was re-transmitted to HQ to be part of the verified dataset.

After data collection, the data were subjected to extensive checks on their validity and consistency in order to facilitate analysis using statistical software. A master version of the files was maintained in Stata and SPSS formats. ZamStats provides data sets in the two formats depending on the clients' choice.

2.7. Limitations of the Living Conditions Monitoring Surveys (LCMS)

The Living Conditions Monitoring surveys (LCMSs) are typically undertaken on a sample basis as opposed to conducting a complete census. This implies that errors of estimation will always exist regardless of the perfection in the underlying design of the survey. Further, the 2022 LCMS poverty analysis is based on data from cross- sectional sample surveys implying that data is collected at a single point in time and therefore causal inference can not be made. It also does not take into account seasonality aspects in poverty estimation as opposed to longitudinal surveys.

To permit comparison of results for surveys done at different points in time, adjustments are made during data analysis. Another limitation of the 2022 analysis of poverty emanates from the use of household consumption data which is collected using recall as opposed to the diary methods. The recall method has the disadvantage of some households facing the challenge of comprehensively accounting for all their consumption expenditures.

Chapter 3: GENERAL CONCEPTS & DEFINITIONS

3.1. Introduction

Concepts and definitions used in this report conform to the standard used in household surveys. These definitions are the same as those used in the previous Living Conditions Monitoring Surveys (LCMSs). Specific definitions are given within their relevant chapters.

3.2. General Concepts and Definitions

Building refers to any independent structure comprising one or more rooms or other spaces, covered by a roof and usually enclosed with external walls or dividing walls, which extend from the foundation to the roof. For purposes of the survey, partially completed structures were considered as buildings if they were used for living purposes. In rural areas, huts belonging to one household and grouped on the same premises were considered as one building.

Housing Unit is an independent place of abode intended for habitation by one household. This has direct access to the outside such that the occupants can come in or go out without passing through anybody else's premises, that is, a housing unit has at least one door which directly leads outside in the open or into a public corridor or hallway. Structures which are not intended for habitation such as garages and barns, classroom etc., but are occupied as living quarters by one or more households at the time of the survey are also treated as housing units.

Household refers to a group of persons who normally cook, eat and live together. These people may or may not be related by blood, but make common provisions for food and other essentials for a living. A household comprises several members and, in some cases, may have only one member.

A usual member of a household is considered to be one who has been living with the household for at least six months prior to the survey. Newly married couples are regarded as usual members of the household even if one or both of them has been in the household for less than six months. The newly born babies of usual members are also considered as usual members of the household. Members of the household who are at boarding schools or temporarily away from the household, e.g. away on seasonal work, in hospital, visiting relatives or friends, but who normally live and eat together, are included in the list of usual members of the household.

Usual Member: The de jure approach is adopted for collecting data in all the Living Conditions Monitoring Surveys on household composition as opposed to the defacto approach which only considers those household members present at the time of enumeration. The dejure definition relies on the concept of usual residence.

Head of Household refers to the person who normally makes day-to-day decisions concerning the running of the household. This is the person all members of the household regard as the head. The head of the household could be either male or female. In case of shared accommodation, the Enumerator had to identify how many households were there and enumerate them accordingly. If they were identified as one household and the household members could not identify or consider one person as being the head, the oldest person had to be taken as the head. In polygamous households, the husband was

assigned as head of the household of the most senior wife. The other housewives were identified as running separate households. This was done to avoid double counting. In this case, other spouses automatically become the head of her household.

Background Variables: The analysis in this report uses seven main background variables:

- Province
- Residence (rural and urban)
- Sex of head of household
- Stratum
- Socio-economic group
- Poverty status, and
- Age-group.

Urban Area: The CSO defines an urban area mainly based on two criteria:

1. Population size, and
2. Economic activity.

An urban area is one with a minimum population size of 5,000 people. In addition, the main economic activity of the population must be non-agricultural, such as wage employment. The area must also have basic modern facilities, such as piped water, tarred roads, post office, police post/station, health centre, etc. and dominantly having permanent structures.

Stratum: Survey households were classified into different strata, based on the cost of residential area in urban areas and on the scale of agricultural activities in rural areas. The urban areas were pre-classified while the rural strata were stratified based on the scale of agricultural activities using data collected during the listing stage. The presentation of results in this report uses seven strata as follows:

Rural Areas:

- Small-scale agricultural households
- Medium scale agricultural households
- Large-scale agricultural households
- Non-agricultural households

Urban Areas:

- Low cost housing residential areas
- Medium cost housing residential areas
- High cost housing residential areas.

These seven groups are mutually exclusive, and thus each household belongs only to one and only one stratum. The reader should note that within urban areas, these strata constitute sampling domains which refer to areas rather than individual households. Therefore, a poor household can be living in a high cost housing area (an example might be servants' quarters), or a rich person may live in a low-cost area.

Demographic Characteristics: Refers to socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation and employment status, and average size of the household.

Socio-economic Group: All persons aged 12 years or older were assigned a socio-economic status. These socioeconomic groupings were based on the main economic activity, occupation, employment status and sector of employment of an individual.

In total, 11 socio-economic groups were specified as follows:

- **Subsistence farmers,** i.e. those whose main current economic activity was farming and whose occupational code indicated subsistence agricultural and fishery workers, ISCO code 6210, forestry workers ISCO code 6141, fishery workers, hunters and trappers, ISCO codes 6151, 6152, 6154, respectively.

- **Commercial farmers,** i.e. those whose main current economic activity was farming and whose occupational code indicated market oriented skilled agricultural workers, ISCO codes 6111-4, and market-oriented crop and animal producers, ISCO code 6130.

- **Government employees,** comprising both Central and Local Government employees.

- **Parastatal employees** were those employees who worked for firms/companies which were partly or wholly owned/controlled by Government.

- **Formal employment,** i.e. those whose employment was accompanied with social security entitlements such as pension, paid leave or gratuity.

- I**nformal employment,** i.e. those whose employment does not provide any entitlement to some social security scheme including pension, paid leave or gratuity.

- **Self-employed outside agriculture,** i.e. their employment status was self-employed on the basis of being Own-account workers and their main current economic activity was running a non-farming business.

- **Unpaid family worker,** i.e. a person that worked in a family business or a farm with no entitlement to payment of a salary or wage.

- **Workers not elsewhere classified,** based on employment status.

- **Unemployed** were those who were neither working nor running a business, but were looking for work or means to do business, or neither working nor running a business and not looking for work or means to do business, but available and wishing to do so.

- I**nactive persons** were those whose main current activity was full time student, full time homemaker, retired or unable to work because of old age or for reasons of ill-health or disability.

- **Asset:** An asset is a store of value representing a benefit or series of benefits accruing to the economic owner by holding or using the entity over a period of time.

Poverty status: All households and household members were assigned a poverty status based on their household consumption expenditure. Each member of a household was assigned the same poverty status based on the household's adult equivalent consumption expenditure. Households and individuals were classified as non-poor, moderately poor or extremely poor. The construction of the different poverty lines is described in detail in Chapter 12.

3.3. Conventions

The following conventions are adopted for this publication:

- Percentages and proportions are presented to one decimal place.
- General rounding rules are applied. In some case, when summing up percentages, the total may not always add up to 100 percent.
- - Implies no observation.

Chapter 4: GENERAL DEMOGRAPHIC CHARACTERISTICS

4.1. Introduction

The demographic characteristics of any country are important in understanding the living conditions of the people through the impact they may have on the prevailing socio- economic situation.

Furthermore, data on the demographic characteristics provide background information and the framework necessary for the understanding of other aspects of the population, including economic activity, poverty and food security. For instance, information on all aspects of the living conditions of the population become more useful when disaggregated by demographic characteristics such as age, sex and geographical areas.

The 2022 LCMS collected data on the following demographic characteristics:

- Population size, age, sex and geographical distribution;
- Household size and headship;
- Marital status;
- Disability;
- Orphanhood; and
- Deaths in households.

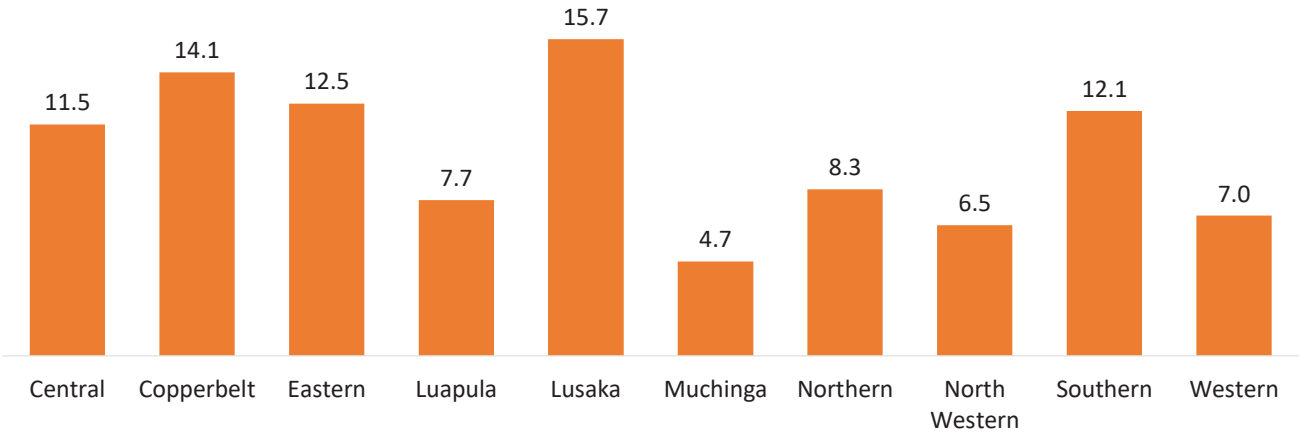
4.2. Population Size and Distribution

Table 4.1 shows the percentage distribution of the population by province in 2022. Zambia's estimated population in 2022 was 19,610,769. Lusaka Province accounted for the largest share (15.7%) followed by Copperbelt Province at 14.1 percent with the least being Muchinga Province at 4.7 percent.

Table 4.1: Percentage Distribution of Population by Province, Zambia 2022

Province	Number of persons	Percentage Distribution
Total	**19,610,769**	**100.0**
Rural	11,766,141	60.0
Urban	7,844,628	40.0
Province		
Central	2,252,483	11.5
Copperbelt	2,757,539	14.1
Eastern	2,454,788	12.5
Luapula	1,514,011	7.7
Lusaka	3,079,964	15.7
Muchinga	918,296	4.7
Northern	1,618,412	8.3
North-western	1,270,028	6.5
Southern	2,381,728	12.1
Western	1,363,520	7.0

Figure 4.1: Percentage Distribution of the Population by Province and Rural/Urban, Zambia 2022



4.3. Age and Sex Distribution of the Population

Table 4.2 shows the percentage distribution of the population by age-group and sex in 2022. Results show that the largest proportion of the population were in the age-group 5-9 years at 14.9 percent followed by those in the age-group 10-14 years at 14.8 percent and the age-group 15-19 years at 13.4 percent. Further, the age-groups 5-24 years accounted for almost 54 percent of the population. Additionally, 63.3 percent of the population was below the age of 25 years

Analysis by sex shows that the percentage share of females (51.5%) was 3.0 percentage-points larger than that of males at 48.5 percent in 2022.

Table 4.2: Percentage Distribution of the Population by Age-group and Sex, Zambia 2022

Total Population	Age-group	Both Sexes	Male	Female
		Percentage Share		
19,610,769	**All**	**100.0**	**48.5**	**51.5**
1,918,044	0-4	9.8	48.9	51.1
2,926,070	5-9	14.9	49.5	50.5
2,899,289	10-14	14.8	50.2	49.8
2,632,185	15-19	13.4	48.6	51.4
2,029,842	20-24	10.4	48.5	51.5
1,527,388	25-29	7.8	46.7	53.3
1,132,811	30-34	5.8	46.6	53.4
1,097,086	35-39	5.6	46.2	53.8
906,574	40-44	4.6	47.3	52.7
712,634	45-49	3.6	49.3	50.7
579,221	50-54	3.0	52.1	47.9
372,699	55-59	1.9	51.5	48.5
285,133	60-64	1.5	51.2	48.8
591,793	65+	3.0	40.9	59.1

Table 4.3 shows the population and household distribution by socio-economic strata and rural/urban in 2022. Results show that 76.8 percent of the population in rural areas comprised small scale farming households. Large scale farming households had the smallest percentage share of the population among rural strata at 0.8 percent.

In urban areas, 82 percent of the households were from a low-cost housing category representing the largest proportion. Notably, households in high-cost areas accounted for the smallest proportion in urban at 7.8 percent.

Table 4.3: Distribution of the Population by Stratum, Zambia 2022

Stratum	Total Population	Percentage Share	Total Number	Percentage Share
Province	**19,610,769**		**3,861,557**	**100**
Rural	**11,766,141**	**100**	**2,278,256**	**59.00**
Small Scale	9,036,512	76.8	1,726,146	44.7
Medium Scale	1,220,697	10.4	190,671	4.9
Large Scale	99,974	0.8	15,154	0.4
Non-agriculture	1,408,958	12.0	346,285	9
Urban	**7,844,628**	**100**	**1,583,302**	**41.00**
Low Cost	6,435,289	82.0	1,289,650	33.4
Medium Cost	799,605	10.2	166,174	4.3
High Cost	609,733	7.8	127,478	3.3

Table 4.4 shows the population distribution by rural/urban, age-group and sex ratio in 2022. Analysis of the age specific sex ratio (number of males per 100 females) by rural/urban, results show that there were more females per 100 males in rural areas for the age ranges 0-9; 20-49; 50-54, 55-59 and 60-64 years, respectively. However, there were more males per 100 females in the rest of the age-groups.

In urban areas, except for the age range 50-59 years, the rest of the age-groups had more males per 100 females.

Table 4.4: Percentage Distribution of the Population by Rural/Urban, Sex and Age-group, Zambia 2022

5-year Age-group	Rural			Urban		
	Male	Female	Sex Ratio	Male	Female	Sex Ratio
Total	**5,775,939**	**5,990,202**	**96.4**	**3,740,781**	**4,103,847**	**91.2**
0-4	588,648	607,099	97	349,008	373,289	93.5
5-9	947,887	970,071	97.7	501,412	506,701	99
10-14	982,203	912,612	107.6	474,112	530,363	89.4
15-19	808,732	804,012	100.6	470,226	549,215	85.6
20-24	562,960	589,267	95.5	420,501	457,115	92
25-29	376,208	406,956	92.4	337,745	406,479	83.1
30-34	264,530	306,736	86.2	263,689	297,856	88.5
35-39	265,481	326,470	81.3	241,909	263,226	91.9
40-44	237,108	270,332	87.7	191,568	207,567	92.3
45-49	204,115	204,714	99.7	146,973	156,832	93.7
50-54	184,363	172,334	107	117,486	105,039	111.9
55-59	114,625	108,607	105.5	77,366	72,101	107.3
60-64	94,737	80,473	117.7	51,267	58,655	87.4
65+	144,345	230,520	62.6	97,519	119,409	81.7

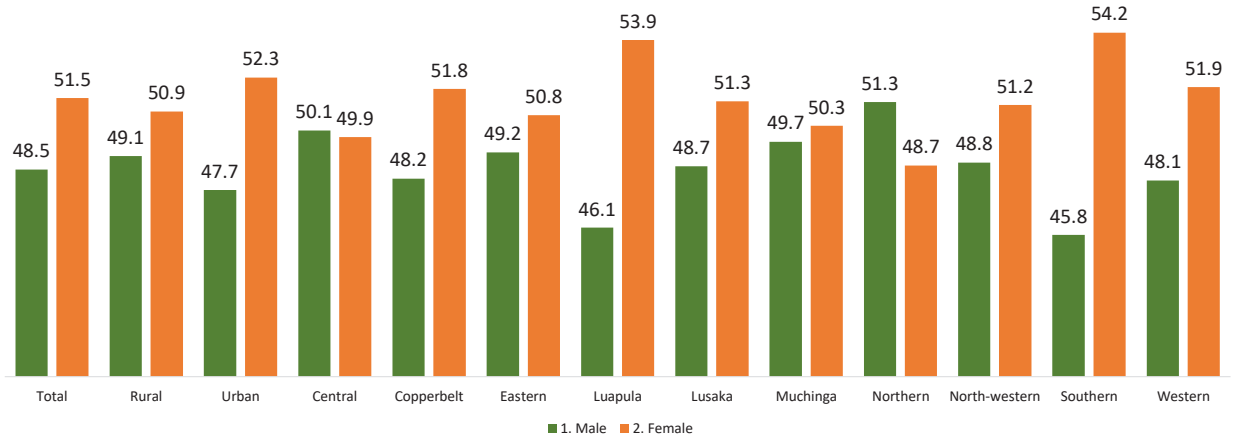
Table 4.5 shows the percentage distribution of the population by relationship to the head of household in 2022. Results show that heads of households make up 20 percent of household members. Own child and spouse accounted for 47 and 13.0 percent of household members, respectively.

Table 4.5: Percentage Share of the Population by Relationship to the Household Head, Zambia 2015-2022

Relationship to the head of Household	Number of persons	Percentage share	Number of persons	Percentage share
	PERIOD			
	2015		2022	
All Zambia	**15,473,905**	**100.0**	**19,610,769**	**100.0**
Head	3,014,965	19.5	3,861,557	20.0
Spouse	2,146,728	13.9	2,544,413	13.0
Own child	7,630,931	49.3	9,211,421	47.0
Step child	148,235	1.0	268,188	1.4
Adopted	2,847	0.0	18,016	0.1
Grand child	1,125,102	7.3	1,721,518	8.8
Brother/Sister	327,168	2.1	501,233	2.6
Cousin	66,006	0.4	104,197	0.5
Nephew/Niece	558,147	3.6	812,918	4.1
Brother/Sister in law	197,887	1.3	191,973	1.0
Parent	65,170	0.4	88,360	0.5
Parent in law	33,402	0.2	42,536	0.2
Other relatives	112,360	0.7	159,088	0.8
Maid/Nanny/House-servant	14,273	0.1	18,747	0.1
Non-relative	30,685	0.2	66,607	0.3

Figure 4.2 shows percentage distribution of the population by sex and rural/urban in 2022. The distribution of the male and female populations across rural and urban areas tends to be similar across provinces, with a larger female population in most provinces. Central, Lusaka and Northern provinces were the only provinces with a higher population of males in rural areas than females.

Figure 4.2: Percentage Distribution of the Population by Sex, Rural/Urban and Province, Zambia 2022



4.4 Household Distribution, Size and Headship

Table 4.6 shows the distribution of households by province in 2022. Of the 3,861,557 households in Zambia, 59 percent were living in rural areas while 41 percent were in urban areas.

Analysed by province, results show that Lusaka and Copperbelt provinces had the largest percentage shares of households at 16.3 and 13.8 percent, respectively.

However, Muchinga Province had the smallest percentage share of households at 4.7 percent.

Table 4.6: Distribution of Households by Rural/Urban and Province, Zambia 2022

	Number of Households	Percentage Share
Total	**3,861,557**	**100.0**
Rural	2,278,255	59.0
Urban	1,583,301	41.0
Province		
Total	**3,861,557**	**100.0**
Central	434,996	11.3
Copperbelt	533,915	13.8
Eastern	526,125	13.6
Luapula	295,608	7.7
Lusaka	628,772	16.3
Muchinga	181,762	4.7
Northern	313,883	8.1
North Western	226,853	5.9
Southern	461,927	12.0
Western	257,716	6.7

Table 4.7 shows the distribution of households by rural/urban and stratum. The results show that 44.7 percent of all households were small scale, 33.4 percent were in low cost and 0.4 percent were in large scale.

Table 4.7: Distribution of household by Rural/Urban and stratum, Zambia 2022

Rural/Urban	Stratum	Number of households	Percentage share
All Zambia		**3,861,557**	**100**
Rural	**Total**	**2,278,255**	**59**
	Small Scale	1,726,146	44.7
	Medium Scale	190,671	4.9
	Large Scale	15,154	0.4
	Non-Agriculture	346,285	9
Urban	**Total**	**1,583,301**	**41**
	Low Cost	1,289,650	33.4
	Medium Cost	166,174	4.3
	High Cost	127,478	3.3

Table 4.8 show the percentage distribution of household heads by age-group in 2022. Results show that the percentage share of household heads increase with increase in age-group upto 44 years However, beyond the age of 44 years, the percentage share of household heads declines steadily as the age-group of household heads increases.

Table 4.8: Percentage Distribution of Household Heads by Age-group, Zambia 2022

Age of Household Head	Number of Household Head	Percentage Share
Total	**3,861,557**	**100**
10-14	1,551	0.0
15-19	10,930	0.3
20-24	195,254	5.1
25-29	426,692	11.0
30-34	479,211	12.4
35-39	550,805	14.3
40-44	518,755	13.4
45-49	428,366	11.1
50-54	375,333	9.7
55-59	257,437	6.7
60-64	206,076	5.3
65+	411,145	10.6

Figure 4.3 depicts the percentage distribution of household heads by age-group between 2015 and 2022. Results show that household heads in the age-group 30-39 and 40-49years both in 2015 and 2022 constituted the largest proportions at 30.5 and 26.7 percent and 23.1 and 24.5 percent, respectively.

Notably, 0.3 percent of the household heads both in 2015 and 2022 were aged below 20 years of age.

Figure 4.3: Percentage Distribution of Household Heads by Age-group, Zambia 2015-2022

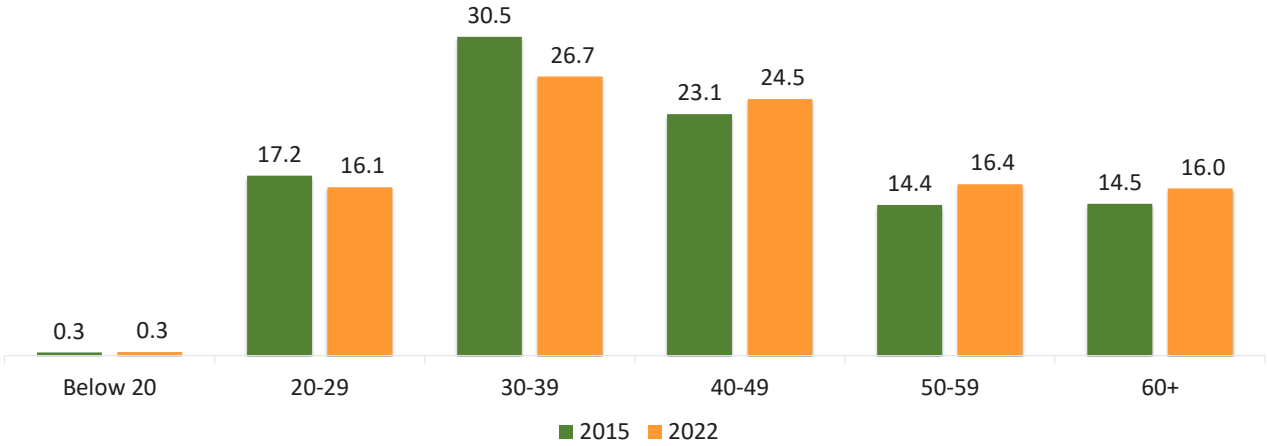


Table 4.9 shows the average household size by province, rural/urban and sex of household head in 2022. Overall, the average household size in Zambia was 5.1 persons. Further, the average household size in rural areas was 5.2 persons relative to 5.0 persons in urban areas.

Analysing average household size by province, results show that North-western Province had the largest household household size at 5.6 followed by Western Province at 5.3. Lusaka Province, on average, had the smallest household sizes at 4.9. Male-headed households were more likely to be larger in size than those headed by their female counterparts.

Table 4.9 : Average Household Size by Rural/Urban, Zambia 2022

Province	Total		Sex of Head	
	Number of Households	Average Household Size	Male	Female
Total	**3,861,557**	**5.1**	**5.3**	**4.6**
1. Rural	2,278,255	5.2		
2. Urban	1,583,301	5.0		
Province				
1. Central	434,579	5.2	5.3	4.7
2. Copperbelt	532,594	5.2	5.4	4.7
3. Eastern	527,710	4.7	4.8	4.4
4. Luapula	295,761	5.1	5.4	4.5
5. Lusaka	628,772	4.9	5.0	4.6
6. Muchinga	181,762	5.1	5.3	4.0
7. Northern	313,883	5.2	5.5	4.3
8. North-western	226,853	5.6	6.0	4.5
9. Southern	461,927	5.2	5.4	4.6
10. Western	257,716	5.3	5.6	4.8

Table 4.10 shows the percentage distribution of female headed households by province and rural/urban in 2022. Results show that 28.9 percent of the households in Zambia were female headed. Further, 28.2 percent of the households in rural areas relative to 29.9 percent in urban areas were female-headed.

Western Province had the largest proportion of female headed households at 41.8 followed by Southern Province at 31.1 percent. Muchinga had the smallest proportion of female headed households at 21.7 percent.

Table 4.10: Percentage Share of Female-headed Households by Province, Zambia 2022

Province	All Zambia	Number
Total	**28.9**	**1,117,385**
Central	23.9	103,960
Copperbelt	27.7	148,144
Eastern	28.7	151,110
Luapula	29.1	85,886
Lusaka	30.3	190,416
Muchinga	21.7	39,413
Northern	27.2	85,360
North Western	27.2	61,660
Southern	31.1	143,677
Western	41.8	107,758

4.5 Marital Status

Table 4.11 shows the percentage distribution of persons age 12 years and above by marital status in 2022. Results show that 49.6 percent of the persons aged 12 years and above had never been married while 40.4 percent were married.

Analysis by sex shows that 54.9 percent of the males aged 12 years or older had never been married before compared to 44.6 percent of their female counterparts. Further, 41.0 percent of the males compared to 39.8 percent of their female counterparts were married. The proportion of females (7.8%) that were widowed was 6.5 times higher than that of their male (1.2%) counterparts.

The proportion of the population who were married started increasing at the age-group 20- 24 at 28.4 percent and was at its peak between the ages 30–49 at 73.4 percent.

Further, women reported getting married before the age of 17 at 0.8 percent relative to their male cohorts at 0.1 percent. For the rest of the results.

Table 4:11: Percentage Distribution of the Population Aged 12 years or Older by Marital Status, Zambia 2022

Sex, Age Group	Never Married	Married	Separated	Divorced	Widowed	Co-habiting	Total	Persons aged 12 years and older
Total	**49.6**	**40.4**	**1.8**	**3.4**	**4.6**	**0.3**	**100**	**13,642,936**
Male	54.9	41	1	1.7	1.2	0.3	100	6,553,823
Female	44.6	39.8	2.5	4.9	7.8	0.4	100	7,089,113
Total Zambia	**49.6**	**40.4**	**1.8**	**3.4**	**4.6**	**0.3**	**100**	**13,642,936**
12-16	99.4	0.5	0	0.1	-	0.1	100	2,934,987
17-19	91.9	7.5	0.2	0.1	-	0.3	100	1,476,231
20-24	67.5	28.4	1.3	2	0.1	0.7	100	2,029,831
25-29	40.1	52.4	2.6	3.1	0.7	1	100	1,526,525
30-49	11.8	73.4	3.7	6.7	4.2	0.3	100	3,848,228
50+	2.7	64.8	1.7	6.1	24.6	0.1	100	1,827,133
Total Male	**54.9**	**41**	**1**	**1.7**	**1.2**	**0.3**	**100**	**6,553,823**
12-16	99.8	0.1	-	0.1	-	-	100	1,424,611
17-19	98.9	1.1	-	0	-	-	100	736,447
20-24	81.7	16.8	0.3	0.6	0	0.5	100	983,456
25-29	52	44.3	1.4	1	0.2	1.1	100	713,096
30-49	13.8	79.2	2.3	3.5	0.9	0.3	100	1,815,360
50+	2.6	86	1.3	3.4	6.5	0.2	100	880,852
Total Female	**44.6**	**39.8**	**2.5**	**4.9**	**7.8**	**0.4**	**100**	**7,089,113**
12-16	99.1	0.8	0	0	-	0.1	100	1,510,376
17-19	85	13.9	0.4	0.2	-	0.5	100	739,784
20-24	54.1	39.3	2.2	3.2	0.2	0.9	100	1,046,376
25-29	29.7	59.5	3.7	4.9	1.2	0.9	100	813,429
30-49	10	68.2	4.9	9.5	7.2	0.2	100	2,032,867
50+	3	45	2	9	41	0	100	946,281

4.6. Orphanhood

Prevalence and level of orphanhood are a direct consequence of the prevailing mortality patterns among the adult population. An orphan is defined as any person aged 20 years or below who has lost at least one parent. The 20-year cut off point is used because, beyond this age, a person is considered old enough to fend for oneself.

Orphans are usually classified into three categories: "Paternal orphans", those who have lost a father; "Maternal orphans", those who have lost a mother; and "Double orphans", those who have lost both parents. Whatever the category, orphanhood often negatively affects a child's welfare by increasing the risk of missing out on important normal life opportunities such as education, living in a food-secure home, being protected from anxiety or depression.

Table 4.12 shows the percentage share of orphans by rural/urban, age-group, stratum and province in 2022.
At national level, the incidence of orphanhood was 13.7 percent. Further, the percentage share of orphans in urban areas was 14.4 percent compared to 13.4 percent in rural areas.

However, in absolute terms, there were more orphans in rural areas than in urban areas i.e. 916, 519 orphans against 565,323 orphans.

Analysed by age-group, the peak age for orphanhood was 10-14 and 15-18 years of age at 30.0 and 28.6 percent, respectively. These two age-groups accounted for 58.6 percent of total orphan-hood population. Further, the proportion of paternal orphans was almost three times that of maternal orphans (i.e. 8.7% against 3%) and four times that of double orphans (i.e. 8.7% against 2.1%).

Analysed by stratum, results show that households that belonged to small scale agricultural activities had the largest proportion of orphans accounting for almost half the orphan population countrywide at 48.8 percent. Thus, among the rural strata i.e. Small, Medium, Large and Non-agricultural, households in small scale had more orphans.

Further, households that belonged to Low cost housing stratum had the largest proportion of orphans among the urban strata i.e. Low, Medium and High cost housing areas at 32.1percent. Among the urban strata, the percentage share of orphans from households in Low cost housing was almost 10 and 12 times as much as that of the percentage share of orphans that belonged to Medium (32.1% against 3.3%) and High (32.1% against 2.7%) cost housing strata, respectively.

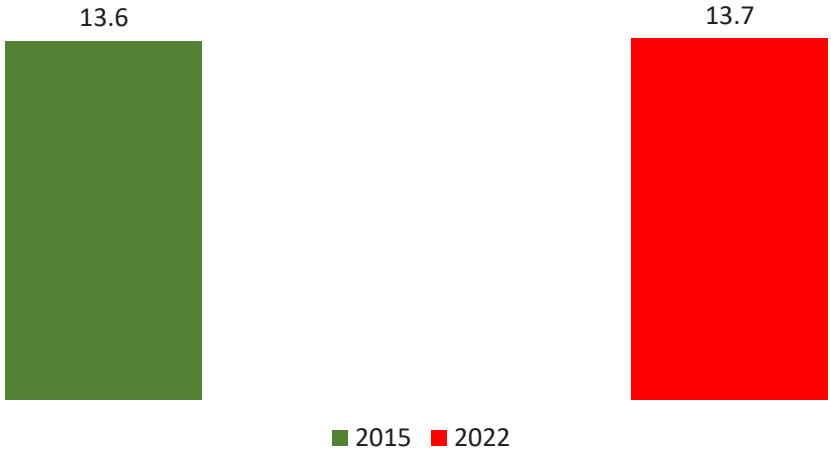
Analysed by province, results show that Lusaka (13.9%), Copperbelt (13.2%), Southern (12.1%) and Luapula (11.8%) provinces had the largest, second, third and fourth largest proportions of orphans, respectively while Muchinga had the smallest proportion of orphans out of the 10 provinces at 4.5 percent.

Table 4.12: Percentage Distribution of Orphans by Type, Rural/Urban, Age-group, Stratum and Province, Zambia 2022

Categories	Number of Persons Aged 0 -20	Orphan-hood						Total
		Total Orphans	Percentage Share of Orphans	Mother Not Alive (Maternal Orphans)	Father Not alive (Paternal Orphans)	Mother & Father Not Alive (Double Orphans)	Mother & Father Alive (Non-Orphans)	
Total	**10,779,700**	**1,481,842**	**13.7**	**3**	**8.7**	**2.1**	**86.3**	**100**
Rural	6,863,438	916,519	13.4	3	8.3	2	86.6	100
Urban	3,916,261	565,323	14.4	2.9	9.3	2.3	85.6	100
0-5	2,420,543	134,421	9.1	1.9	3.2	0.4	94.4	100
6-9	2,389,011	251,010	16.9	2.9	6.3	1.4	89.5	100
10-14	2,878,021	444,651	30	3.5	9.7	2.3	84.6	100
15-18	2,193,297	424,188	28.6	3.3	12.6	3.4	80.7	100
19-20	898,827	227,571	15.4	3.9	17	4.5	74.7	100
Small Scale	5,309,240	723,588	48.8	3	8.6	2	86.4	100
Medium Scale	724,048	71,969	4.9	2.9	5.7	1.3	90.1	100
Large Scale	54,507	7,995	0.5	3.5	8.3	2.9	85.3	100
Non-Agricultural	775,643	112,967	7.6	3.4	8.8	2.4	85.4	100
Low Cost	3,277,049	476,264	32.1	2.6	9.6	2.3	85.5	100
Medium Cost	359,758	49,182	3.3	3.2	8.5	2	86.3	100
High Cost	279,455	39,877	2.7	6.1	6.7	1.4	85.7	100
Central	1,252,998	155,582	10.5	3.2	6.6	2.6	87.6	100
Copperbelt	1,382,060	195,354	13.2	2.9	9.3	1.9	85.9	100
Eastern	1,357,139	140,807	9.5	2.4	6.4	1.6	89.6	100
Luapula	873,324	174,550	11.8	4.7	11.8	3.5	80	100
Lusaka	1,505,677	205,494	13.9	2.3	8.9	2.5	86.4	100
Muchinga	524,046	67,262	4.5	2.2	7.8	2.8	87.2	100
Northern	983,705	134,754	9.1	2.3	9.4	1.9	86.3	100
North Western	726,742	102,192	6.9	3.6	8.9	1.5	85.9	100
Southern	1,376,790	178,977	12.1	3.2	8.5	1.2	87	100
Western	797,217	126,869	8.6	3.7	10.4	1.8	84.1	100

Figure 4.4 compares percentage shares of orphans between 2015 and 2022. Results show that the proportion of orphans has increased marginally from 13.6 percent in 2015 to 13.7 percent in 2022.

Figure 4.4: Proportion of Orphans, Zambia 2015 and 2022



4.7. Deaths in the Households

The 2022 LCMS collected information on death of a household member during the 12-month period prior to the Survey. For any death reported to have occurred during the reference period, information pertaining to sex, age and cause of death of the deceased was collected.

Table 4.13 presents information on the population and deaths reported by respondents during the 12-month period prior to the Survey as well as estimated crude death rate (CDR) by rural/urban and province in 2022.

A total of 294, 566 deaths were reported by households representing 1.5 percent of the population. Among the rural households, 39,029 deaths were reported relative to 15, 774 deaths in urban.

At national level, results show that, on average, 15 deaths reportedly occurred per 1000 persons (population). Broken down by rural/urban, 16 deaths reportedly occurred in rural areas compared to about 14 reported deaths per 1,000 persons in urban areas.

At province level, Luapula, Northern and Western provinces had higher crude death rates at 25; 23.3 and 19 deaths per 1,000 population, respectively. Central and North-western provinces reportedly had the least crude death rates both at 10.3 per 1,000 population.

Table 4.13: Population, Death Total and Estimated Crude Death Rate (CDR) by Rural/Urban and Province, Zambia 2022

Province/ Residence	Population	Deaths	Crude Death rate (CDR)/1000 Population
Total	**19,610,769**	**294,566**	**15.0**
Rural	11,766,141	188,375	16.0
Urban	7,844,628	106,191	13.5
Central	2,252,483	23,167	10.3
Copperbelt	2,757,539	41,324	15.0
Eastern	2,454,788	31,040	12.6
Luapula	1,514,011	37,877	25.0
Lusaka	3,079,964	40,746	13.2
Muchinga	918,296	14,691	16.0
Northern	1,618,412	38,702	23.9
North Western	1,270,028	13,027	10.3
Southern	2,381,728	28,024	11.8
Western	1,363,520	25,966	19.0

Figure 4.5 presents information on age-specific crude death rates (ASCDR) by rural/urban in 2022. The ASCDRs show that mortality rates tend to be higher for the age-groups above 64 years and below 5 years regardless of residence, respectively.

Below the age of 5 years, ASCDR in rural areas tended to be higher than that of the same age-group in urban areas at 32.6 deaths per 1000 population compared to 21.8 deaths per 1000 population in urban areas. However, mortality declines significantly among those aged 5-14, before steadily rising thereafter.

Results show higher ASCDRs at all age-groups in rural areas compared to urban areas, except for age-group 45-64 where the ASCDR in urban areas was 30.5 deaths per 1000 population compared to 26.5 deaths per 1000 population in rural areas. For the age-group 65+ years, the ASCDR was much higher in urban areas compared to rural areas (145.2 deaths per 1,000 population against 145 deaths per 1,000 in rural areas).

Figure 4.5: Distribution of Deaths by Age-specific Crude Death Rates (ASCDR) by Rural/Urban, Zambia

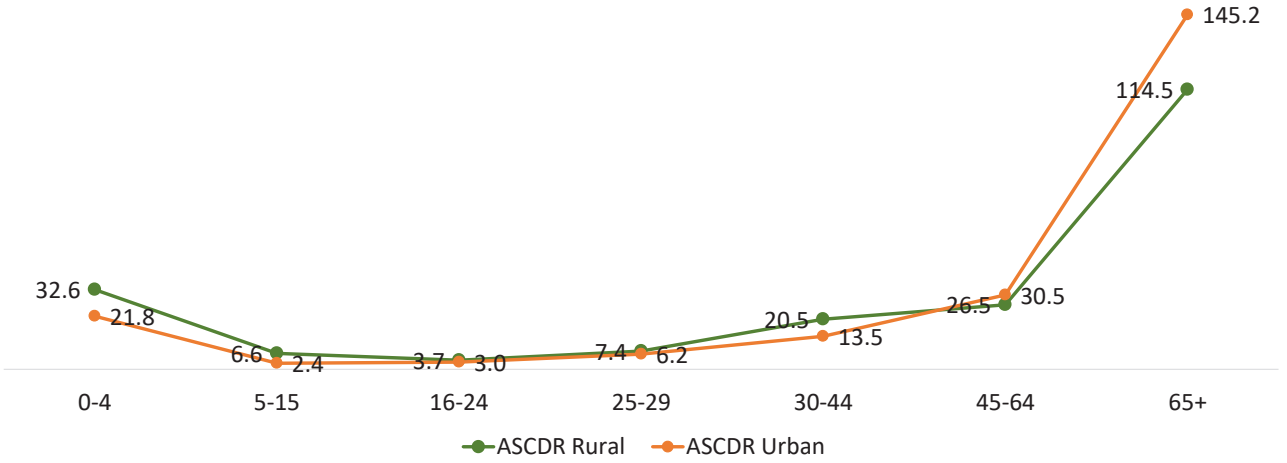


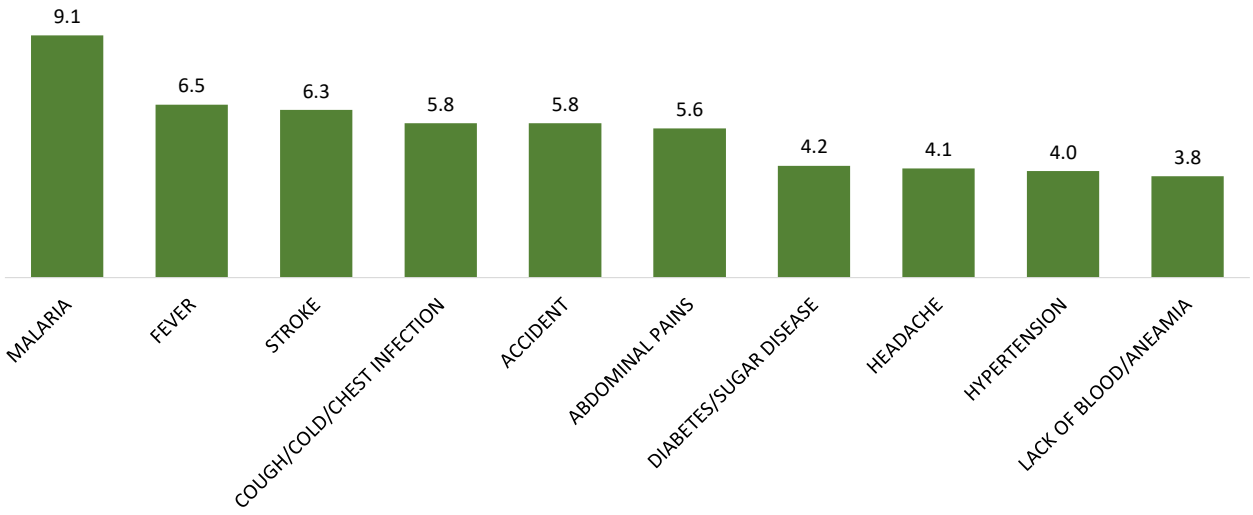
Table 4.14 shows the population and deaths by age-group and rural/urban in 2022. Results show that death rates were highest among the elderly (those aged 65 years or older) both in rural (42,939) and urban (31,502) areas. Deaths were lowest amongst the age-group 25-29 in both rural (5,830) and Urban (4,650) although the pattern of having more deaths being reported in rural areas than urban for the cohorts persisted.

Table 4.14: Population and Death by Age-group and Rural/Urban, Zambia 2022

Age-group	Total		Rural		Urban	
	Total Population	Deaths	Population	Death	Population	Death
Total Zambia	**19,610,769**	**294,566**	**11,766,141**	**188,375**	**7,844,628**	**106,191**
0-4	1,918,044	54,802	1,195,747	39,027	722,297	15,774
5-15	5,825,359	30,106	3,812,771	25,215	2,012,588	4,891
16-24	4,662,027	15,951	2,764,971	10,306	1,897,056	5,644
25-29	1,527,388	10,480	783,163	5,830	744,225	4,650
30-44	3,136,471	54,006	1,670,656	34,242	1,465,815	19,763
45-64	1,949,687	54,780	1,163,968	30,814	785,719	23,966
65+	591,793	74,442	374,864	42,939	216,928	31,502

Figure 4.6 shows the percentage distribution of the top 10 reported causes of death in 2022. At national level, the top 10 most common causes of death cited by households in descending order were Malaria (9.1%), Fever (6.5%), Stroke (6.3%), Cough/cold/chest infection (5.8%), Accident (5.8%), Abdominal pains (5.6%), Diabetes (4.2%), Headache (4.1%), Hypertension (4.0%) and Anaemia (3.8%).

Figure 4.6: Percentage Distribution of the top 10 reported Causes of Death, Zambia 2022



Chapter 5: **MIGRATION**

5.1 Introduction

Migration is one of the three components of population change that complement fertility (births) and mortality (deaths). A person is said to have migrated if he/she crosses the district or provincial or international boundary for the purpose of establishing a new residence. Migration can either be internal or international.

Internal Migration refers to the geographic movement of a person or persons across the district boundary of the same province or into another province within the same country for the purpose of establishing a new residence.

International Migration refers to changes of residence involving crossing a national boundary. People migrate for a number of reasons which maybe economic, social, political, etc. A migrant is a person who changes his/her usual place of residence by crossing an administrative boundary (district/provincial/international) boundary and residing in a new area for a period of not less than six months or intends to stay in the new area for a period of not less than six months. People migrate for a number of reasons which maybe economic, social, political, etc. Migration flows refers to a group of migrants having a common origin and destination in a given migration period.

Data on migration was obtained by asking household members to state; the place of residence (locality) 12 months prior to the survey, district of residence 12 months prior to the survey, place of residence (rural/urban) 12 months prior to the survey and the reason for migration.

The concept of residence referred to above means the actual place at which an individual was interviewed and the place where one was 12 months before enumeration.

This chapter presents findings on the migration status of the population in Zambia. Migration in this report includes proportions of persons who moved by age and reason for migrating. The analysis also considers the direction of flow of movement, internal migration i.e. rural-rural, rural-urban, urban-rural or urban-urban migration. During the 2022 LCMS, other than the individual migrants, households that moved from one district to another within the province or into another province for the purpose of establishing a new residence were similarly classified as migrants. The geographical units used in this report are rural, urban, district, and province. The terms migrants or persons who moved and non-migrants or persons who did not move have been used interchangeably.

For easy presentation of survey results, the findings have been divided into two major sections: Individual Migration and Household Migration. Each of these two sections has got three parts. The first part presents levels of migration, while the second part presents the direction or flow of migration and the third part looks at the reasons for migrating. Similar analysis has been applied to both individual and household migration except for the household section that has a part on characteristics of the head of the household.

5.2. Individual Migration

5.2.1 Level of Migration

Levels of migration have been discussed in relation to the residence of persons (rural or urban), province, level of involvement in agriculture (small, medium, or large Scale or non-agriculture), type of an urban area (Low, Medium, or High Cost), sex, and age of migrants. In this regard, individual migration is defined as the movement of an individual member of a household from one district to another within the same province or into another province or let alone cross the international boundary for the purpose of establishing a new residence irrespective of the fact that the head of the household moved with that individual or not.

Table 5.1 shows the percentage distribution of the population by type of migration, rural/urban, stratum and province in 2022. At national level, out of 19,610,769 people, 1.1 percent of the population migrated. Further, 0.8 percent of the population in rural areas relative to 1.6 percent in urban areas migrated. This implies that the proportion of migrants in urban areas was double that of migrants in rural areas.

Note that, the not applicable column applies to individuals that were not born during the reference period.

Table 5.1: Percentage Distribution of Population by Type of Migration, Rural/Urban, Stratum and Province, Zambia 2022

Residence/ Stratum/Province	Non-migrants	Internal Migrants	International Migrants	Not Applicable	Population
	Percent	Percent	Percent	Percent	Count
National	**98.1**	**1.1**	**0.03**	**0.7**	**19,610,769**
Rural	98.4	0.8	0.03	0.7	11,766,141
Urban	97.7	1.6	0.04	0.6	7,844,628
Stratum	**98.1**	**1.1**	**0.03**	**0.7**	**19,610,769**
1. Small Scale	98.8	20.6	0.03	0.6	9,036,512
2. Medium Scale	98.1	6.6	0	0.7	1,220,697
3. Large Scale	97.3	0.9	0	0.8	99,974
4. Non-Agric	96.2	14.2	0.01	1.6	1,408,958
5. Low Cost	97.8	43.6	0.04	0.6	6,435,289
6. Medium Cost	97.2	7.9	0	0.6	799,605
7. High Cost	97.2	6.2	0.02	0.5	609,733
Province	**98.1**	**1.1**	**0.03**	**0.7**	**19,610,769**
1. Central	98.1	10.5	0.03	0.8	2,253,610
2. Copperbelt	97.8	18.1	0	0.8	2,766,844
3. Eastern	99.2	2	0.1	0.5	2,445,430
4. Luapula	97.8	9.3	0	0.9	1,512,937
5. Lusaka	97.5	22.7	0.03	0.8	3,079,964
6. Muchinga	99.2	2	0	0.3	918,296
7. Northern	98.1	7.8	0.14	0.7	1,618,412
8. North Western	97.7	9.9	0	0.6	1,270,028
9. Southern	98.5	9.9	0	0.5	2,381,728
10. Western	98	7.8	0	0.7	1,363,520

Figure 5.1 shows the percentage distribution of the population 12 months prior to the survey by migration status, age-group and sex in 2022.

Analysed by age-group, results show that the peak age-groups for internal migration were 20-24 and 25-29 years both at 1.8 percent. Notably, the percentage share of internal migrants among individuals in the age range 60-64 years more than doubled relative to that of the age-group 50-59 years i.e. 1.6% against 0.6%. Analysis of migration status by age-group and sex, beyond the age of 20 years, show that males are more likely to migrate than their female counterparts.

Figure 5.1: Percent Share of Internal Migrants by Age-group 12 Months prior to the Survey, Zambia 2022

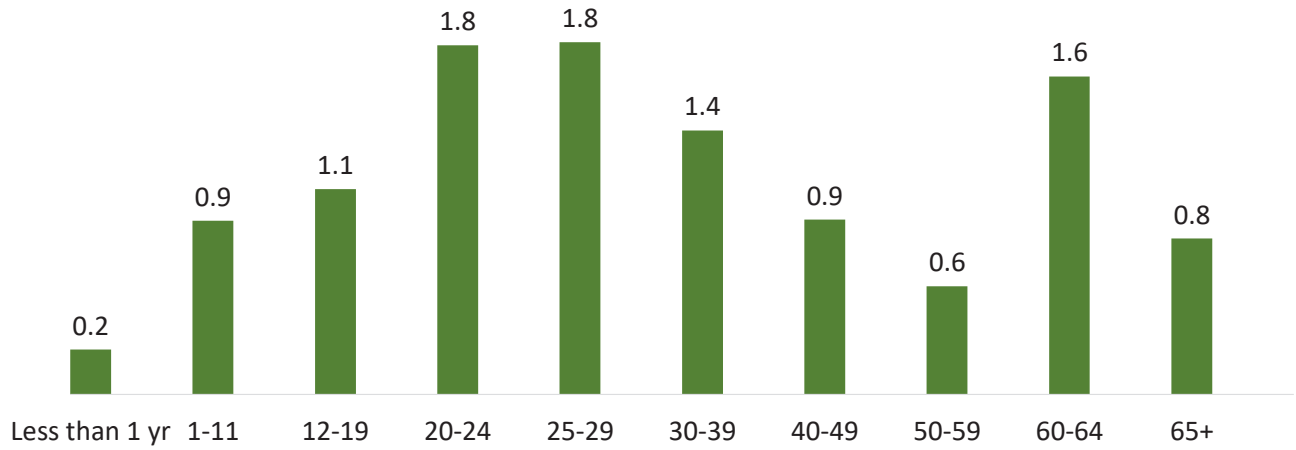


Table 5.2 shows the proportion of migrants and Non-migrants 12 months prior to the survey by poverty status in 2022. Of the 1.1 households that migrated, non-poor and moderately poor households were more likely to migrate than the extremely poor households. For instance, 1.0 and 0.7 percent of the non-poor and moderately poor, respectively, migrated across the province compared to 0.3 percent among the extremely poor households.

Table 5.2: Proportion of Migrants and Non-migrants 12 Months prior to the Survey by Poverty Status, Zambia 2022

Migration Status	Total		Non-poor	Moderately poor	Extreme poor
Same dwelling	3,533,901	93.3	90.3	94.1	96.3
Different dwelling, same locality/same district	156,791	4.1	5.9	3.5	2.4
Different locality/ same district	49,623	1.3	2.1	1.3	0.4
Different district same province	17,852	0.5	0.5	0.4	0.4
Different province	25,605	0.7	1.0	0.7	0.3
Different country	1,546	0.0	0.0	0.0	0.1
Not applicable	3,528	0.1	0.2	0.1	0.0
Total	**3,788,846**	**100.0**	**100.0**	**100.0**	**100.0**

5.2.2 Direction of Individual Migration

Knowing the direction or flow of migration helps planners and policy makers to come up with appropriate planning strategies and policies. By looking at migration flow, we are able to understand the pull and push factors affecting migration as well as assessing the available resources in a receiving residence and how sufficient they are to support the in-migrants.

Table 5.3 shows the percentage distribution of internal migrants by province and direction of migration flow in 2022.

Rural-to- Rural

Among the population that migrated internally from one rural area to another, Central Province had the largest percentage share at 52.9 percent while Lusaka Province had the smallest percentage share of 5.3 percent.

Rural-to- urban

Northern Province (35.1%) had the largest proportion of rural to urban migrants, followed by Luapula (33.2%) and Western (32.6%) Provinces. Southern Province had the smallest proportion of rural-to-urban internal migrants at 3.2 percent.

Urban-to- Rural

Lusaka Province had the largest proportion of Urban to Rural migrants at 54.7 percent followed by Copperbelt province at 31.7 percent. Western Province had the smallest proportion at 6.6 percent.

Urban-to- Urban

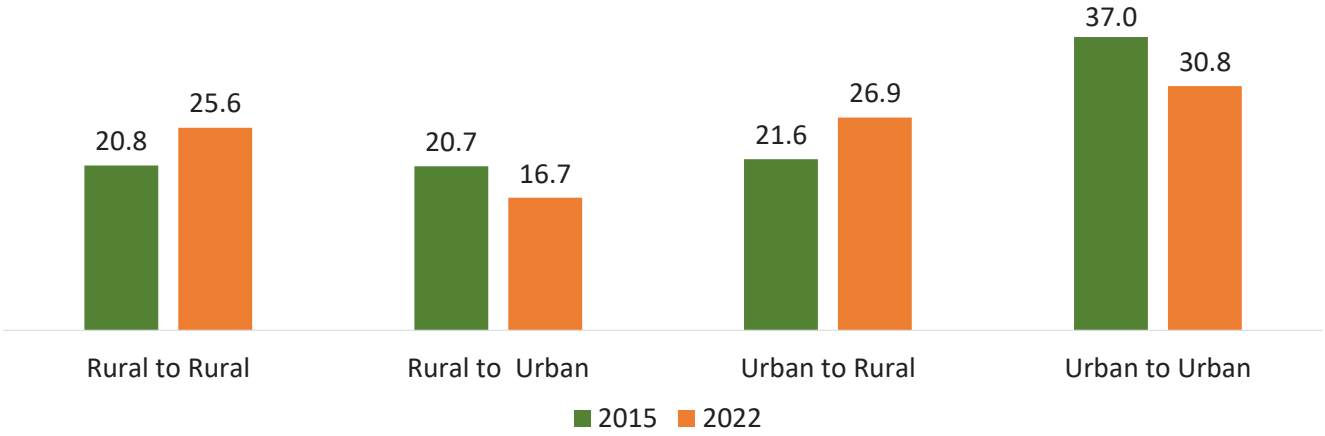
Eastern Province had the largest proportion of Urban-to-Urban migrants at 59.4 percent, followed by Copperbelt Province at 42.8 percent while Luapula Province had the smallest proportion at 13.3 percent.

Table 5.3: Percentage Distribution of Individual Migrants by Province and Direction of Internal Migration Flow, Zambia 2022

Direction	Central	Copper-belt	Eastern	Luapula	Lusaka	Muchinga	Northern	North-western	Southern	Western	Total
Number	23,403	40,260	4,434	20,737	50,415	4,481	17,240	22,120	21,980	17,308	222,377
Rural to Rural	52.9	16.3	7.8	38.7	5.3	13.7	17.1	35.3	41.7	37.2	25.6
Rural to Urban	25.5	9.2	23.1	33.2	8.2	31.5	35.1	7.6	3.2	32.6	16.7
Urban to Rural	0.0	31.7	9.6	14.9	54.7	13.3	21.4	25.3	22.0	6.6	26.9
Urban to Urban	21.6	42.8	59.4	13.3	31.8	41.5	26.4	31.7	33.1	23.6	30.8
Total	**100.00**	**100.0**	**100.0**	**100.00**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.00**

Figure 5.2 shows the percentage distribution of internal migrants by direction of migration flow in 2015 and 2022. Results show that the largest increase in migration flow between 2015 and 2022 was the proportion of internal migrants moving from urban to rural areas from 21.6 percent in 2015 to 26.9 percent in 2022 followed by those that migrated from rural to rural i.e. from 20.8 percent in 2015 to 25.6 percent in 2022. There was a reduction in the proportion of urban to rural migrants from 37.0 percent in 2015 to 30.8 percent in 2022.

Figure 5.2: Percentage Distribution of Internal Migrants by Direction of Migration Flow, Zambia 2015 and 2022



5.2.3. Reasons for Migrating

People migrate for different reasons and these reasons vary from place to place. Members of the household who had migrated 12 months prior to the survey were asked to state the main reason why they migrated.

Table 5.4 shows the percentage distribution of individual migrants by age-group and reason for migrating. Among those aged 12-19 years, 51.4 percent cited school as the main reason for migration while among those in the age range 25-29 years, 38.7 percent cited seeking work/ business while 50.1 percent of those in the age range 1-11 years cited transfer of head of household as their reason for migration.

Table 5.4: Percentage Distribution of Individual Migrants by Age-group and Reason for Migration, Zambia 2022

Age-group	Less 1 year	1-11	12-19	20-24	25-29	30-39	40-49	50-59	60-64	65+	Total
Reason for Movement	0.4	22.6	21.1	16.5	12.5	13.7	6.6	2.4	2.1	2.1	222,377
1. School	0	24.5	51.4	14.3	9.8	0	0	0	0	0	13,677
2. Back from School/Studies	0	0	16.6	52.6	7.7	0	23.1	0	0	0	5,252
3. To Seek Work/ Business	0	0	0	34.3	38.7	14.6	5.6	0	0	6.8	18,062
4. To Start Work/ Business	0	0	6.6	24	15.6	29.8	9.5	10.4	4	0	23,711
5. Transfer of Head of Household	0	50.1	20.8	5.6	10.3	11	0.8	0.8	0.3	0.4	53,765
6. Previous Household Could not Afford to Keep Him/Her	0	25.8	16.8	7.9	0	0	0	0	49.5	0	2,577
7. Death of Parent/Guardian	0	7.2	42.9	13.4	8	17.2	0	0	11.3	0	12,419
8. Got Married	0	0	26.4	36	25.2	11.5	0.9	0	0	0	10,246
9. New Household	1.1	40	26.4	7.8	1.5	6.2	7.7	5.1	2.6	1.6	29,618
11. Retrenchment	0	0	0	0	0	0	76.5	0	0	23.5	920
12. Decided to Resettle	1.5	14.6	17.5	17	15.1	15.8	10.5	2	0.4	5.7	36,344
13. Acquired Own/Different Accomodation	0	1.2	48.8	24.4	0	0	25.6	0	0	0	7,445
14. Found New Agricultural Land	0	15.1	0	9	4.6	51.4	13.4	3.1	0	3.4	6,916
15. Refugee/Sylum Seeker	0	0	0	100	0	0	0	0	0	0	605
16. Other	0	9.5	0	0	0	51.3	0	0	0	39.1	820

Table 5.5 shows the percentage distribution of individual migrants by reason cited for migration and direction of migration flow in 2022. Overall, the largest proportion of individual migrants migrated from urban to urban area at 30.8 percent followed by those who those who migrated from one urban area to a rural area at 26.9 percent. Further, 25.6 percent of the individual migrants moved from one rural area to another rural area while 16.7 percent migrated from one rural area to an urban area.

Analysed by main reason for migration, results show that among individuals that migrated within rural, the largest proportion cited having found new land for agricultural purposes at 80.7 percent while those who migrated from rural to urban cited "back from school/studies" at 38.3 percent. Further, the largest proportions of individuals who migrated from urban to rural areas cited acquisition of own/different accommodation and seeking asylum/refugee status both at 100 percent.

Table 5.5: Reasons for Individual Migration by Direction of Migration Flow, Zambia 2022

	Rural To Rural	Rural To Urban	Urban To Rural	Urban To Urban	Total
Reason For Migration	**25.6**	**16.7**	**26.9**	**30.8**	**222,377**
1. School	22.5	16.5	39	22	13,677
2. Back From School/Studies	4.2	38.3	22.8	34.6	5,252
3. To Seek Work/ Business	10.3	11.1	26.5	52.1	18,062
4. To Start Work/ Business	16.4	32.6	15.1	35.9	23,711
5. Transfer of Head of Household	23.1	19.4	12.1	45.3	53,765
6. Previous Household Could Not Afford To Keep Him/Her	14.5	8.8	39.6	37.1	2,577
7. Death of Parent/Guardian	20.8	14.4	64.2	0.5	12,419
8. Got Married	49.2	11.6	20.7	18.6	10,246
9. New Household	19.3	5.8	32.1	42.8	29,618
10. Retirement	0	0	0	0	0
11. Retrenchment	0	0	46.5	53.5	920
12. Decided to Resettle	44.4	17.6	23.4	14.5	36,344
13. Acquired Own/Different Accomodation	0	0	100	0	7,445
14. Found New Agric. Land	80.7	19.3	0	0	6,916
15. Refugee/Sylum Seeker	0	0	100	0	605
16. Other	0	14.3	85.7	0	820

5.3 Household Migration

Household migration is highly influenced by movement of head of household to a different residence. In order to establish the migration status of a household in this survey, it was assumed that the migration of the head of the household meant that the whole household migrated.

5.3.1. Household Migration Levels

Table 5.6 shows migrant and non-migrant households 12 months prior to the survey by rural/urban, stratum, and province in 2022. Overall, results show that 1.1 percent of the households migrated internally. Further, 1.0 percent of the rural households relative to 1.3 percent of their urban counterparts, similarly, migrated internally.

Analysed by stratum, among the rural strata i.e. small, medium, large and non-agricultural, 3.4 percent of the non-agricultural households migrated internally, reflecting the largest proportion, followed by large scale households at 2.7 percent. On the other hand, the largest proportion of internal migrants belonged to high cost category at 2.2 percent.

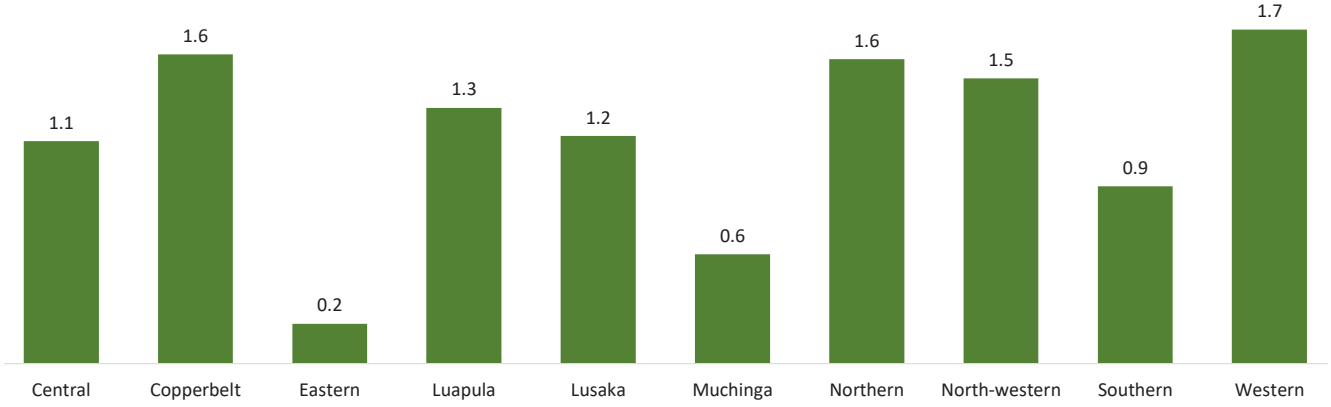
By province, Western had the largest proportion of households that migrated internally at 1.7 percent followed by Copperbelt and Northern provinces both at 1.6 percent. However, Eastern had the smallest proportion at 0.2 percent.

Table 5.6: Migrant and Non-migrant Households 12 Months prior to the Survey by Rural/Urban, Stratum and Province, Zambia 2022

Residence/ Stratum/ Province	Non-migrants		Internal Migrants		International Migrants		Not Applicable		Total
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count
Region	**3,811,950**	**98.7**	**43,894**	**1.1**	**1,546**	**0.04**	**4,167**	**0.1**	**3,861,557**
Rural	2,251,097	98.8	23,160	1	1,060	0.05	2,938	0.1	2,278,255
Urban	1,560,853	98.6	20,734	1.3	486	0.03	1,229	0.1	1,583,301
Stratum	**3,811,950**	**98.7**	**43,894**	**1.1**	**1,546**	**0.04**	**4,167**	**0.1**	**3,861,557**
Small Scale	1,715,128	99.4	9,243	0.5	1,060	0.06	715	0	1,726,146
Medium Scale	188,997	99.1	1,674	0.9	0	0	0	0	190,671
Large Scale	14,746	97.3	408	2.7	0	0	0	0	15,154
Non-Agric	332,227	95.9	11,835	3.4	0	0	2,223	0.6	346,285
Low Cost	1,273,861	98.8	15,143	1.2	370	0.03	276	0	1,289,650
Medium Cost	162,808	98	2,728	1.6	0	0	639	0.4	166,174
7. High Cost	124,184	97.4	2,863	2.2	116	0.09	315	0.2	127,478
Province	**3,811,950**	**98.7**	**43,894**	**1.1**	**1,546**	**0.04**	**4,167**	**0.1**	**3,861,557**
Central	427,657	98.3	5,000	1.1	116	0.03	2,223	0.5	434,996
Copperbelt	525,388	98.4	8,528	1.6	0	0	0	0	533,915
Eastern	523,983	99.6	1,082	0.2	1,060	0.2	0	0	526,125
Luapula	291,701	98.7	3,906	1.3	0	0	0	0	295,608
Lusaka	620,970	98.8	7,394	1.2	0	0	408	0.1	628,772
Muchinga	180,734	99.4	1,027	0.6	0	0	0	0	181,762
Northern	308,301	98.2	4,936	1.6	370	0.12	276	0.1	313,883
North Western	223,511	98.5	3,342	1.5	0	0	0	0	226,853
Southern	457,057	98.9	4,232	0.9	0	0	639	0.1	461,927
Western	252,648	98	4,448	1.7	0	0	621	0.2	257,716

Figure 5.3 shows the proportion of households that migrated 12 months prior to the Survey by province. The results show that Lusaka and Copperbelt provinces had the highest percentage of households that migrated at 2.0 percent and 1.8 percent respectively, whereas Eastern and Muchinga provinces had the least percentages at 0.7 percent and 0.6 percent, respectively.

Figure 5.3: Proportion of Households that Migrated 12 Months prior to the Survey by Province, Zambia 2022



5.3.2. Direction of Household Migration

Table 5.7 shows the percentage distribution of migrant households by province and direction of migration flow in 2022.

Rural-to- Rural

Among the households that migrated internally from one rural area to another, Southern and Central provinces had the highest and second highest percentages at 60.3 and 53.3 percent, respectively. However. However, Lusaka Province had the lowest percentage share at 11.5 percent.

Rural-to- urban

Western Province had the highest percentage share of households that migrated from rural to urban at 57.1 percent while Southern had the lowest percentage share at 2.6 percent.

Urban-to- Rural

Lusaka and Northern provinces represented the two provinces with the largest and second largest percentage shares of urban-to-rural households that migrated at 34.1 and 23.5 percent, respectively.

Urban-to- Urban

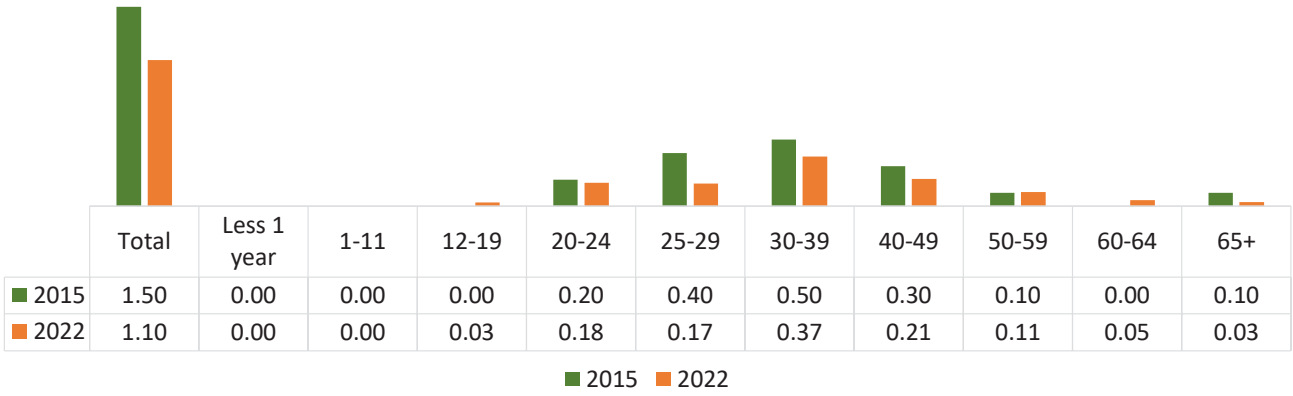
Among households that migrated internally from one urban area to another, Eastern Province at 67.3 percent had the largest percentage share followed by Copperbelt Province at 61.5 percent. However, Luapula Province had the smallest proportion of households that migrated at 13.4 percent.

Table 5.7: Percentage Distribution of Migrant Households by Province and Direction of Migration Flow, Zambia 2022

Province	Rural to Rural		Rural to Urban		Urban to Rural		Urban to Urban		Total	
Count	**12,889**	**29.4**	**10,271**	**23.4**	**5,842**	**13.3**	**14,892**	**33.9**	**43,894**	**100**
Central	2,664	53.3	1,489	29.8	0	0	847	16.9	5,000	100
Copperbelt	1,696	19.9	675	7.9	908	10.7	5,248	61.5	8,528	100
Eastern	173	16	181	16.7	0	0	728	67.3	1,082	100
Luapula	1,360	34.8	1,584	40.6	440	11.3	522	13.4	3,906	100
Lusaka	852	11.5	1,521	20.6	2,520	34.1	2,501	33.8	7,394	100
Muchinga	146	14.2	417	40.6	0	0	464	45.2	1,027	100
Northern	1,181	23.9	1,486	30.1	1,158	23.5	1,112	22.5	4,936	100
North Western	1,065	31.9	267	8	727	21.7	1,283	38.4	3,342	100
Southern	2,550	60.3	112	2.6	0	0	1,570	37.1	4,232	100
Western	1,203	27	2,538	57.1	89	2	618	13.9	4,448	100

Figure 5.4 shows the percentage distribution of households that migrated 12 months prior to the survey by age-group of household head in 2022. The highest proportion of household that migrated in 2022 were headed by persons in the aged range 30-39 and 40-49 years at 0.5 and 0.2 percent respectively while the largest proportion of households that migrated in 2015 were in the age range in 30-39 and 25-29 years at 0.5 and 0.4 percent, respectively.

Figure 5.4: Percentage Distribution of Migrant Households by Age-group of Household Head, Zambia 2015 and 2022



	Total	Less 1 year	1-11	12-19	20-24	25-29	30-39	40-49	50-59	60-64	65+
2015	1.50	0.00	0.00	0.00	0.20	0.40	0.50	0.30	0.10	0.00	0.10
2022	1.10	0.00	0.00	0.03	0.18	0.17	0.37	0.21	0.11	0.05	0.03

Chapter 6: **EDUCATION**

6.1 Introduction

This chapter presents statistical information on education characteristics of the population from the 2022 Living Conditions Monitoring Survey (LCMS). Education is one of the fundamental factors that enhance the quality of life and well-being of society. Education therefore, has a profound effect on the population's welfare in terms of health, employment earnings, poverty levels and nutrition. Data on education were collected based on the existing formal education system in Zambia. The survey collected data from each household member on the following:

1. Whether he/she was currently attending school?
   - The grade being attended.
   - The type of school currently being attended.

2. Whether one has ever attended school or not?
   - Highest grade completed.
   - Main reason for leaving school or never having attended school.

The following are the key education indicators that are used to assess and evaluate the performance of the education system in Zambia:

1. School attendance rate- the percentage of the population by age-group attending school (grades 1-12) at the time of the survey.
   - School attendance rate (SAR).
   - Gross attendance rate (GAR) refers to the number of learners attending a given level of education (Grade 1-12) as a percentage of the official school age population.
   - Net attendance rate (NAR) refers to the number of learners attending a given level of education (Grade 1-12) at any time during the reference academic year, corresponding to the official school age-group for that level, as a percentage of the official school-age population.

The estimation of the above stated rates follows Zambia's levels of formal education system which can be outlined as follows:

- Pre-primary/nursery level corresponds to persons of ages 5-6 years
- Lower primary grades 1-4 correspond to persons of ages 7-10 years
- Upper primary grades 5-7 correspond to persons of ages 11-13 years
- Primary school grades 1-7 correspond to persons of ages 7- 13 years
- Junior secondary grades 8 and 9 correspond to persons of ages 14-15 years
- Senior secondary grades 10-12 corresponds to persons of ages 16-18 years
- Tertiary education level corresponds to persons of ages 19 or older

6.2. School Attendance Rate

Table 6.1 shows the school attendance rates by age-group, rural/urban, stratum and sex in 2022. The school attendance rate for persons in Pre-primary school age range was 39.6 percent, Primary school at 79.2 percent.

Overall. school attendance rate for persons of secondary school age was 71.0 percent while that of persons of tertiary education level was 26.0 percent. Furthermore, school attendance rates for persons of Junior and Senior Secondary ages were 81.7 and 63.2 percent, respectively.

Analysis of school attendance rates for schools in rural areas shows that Pre-primary, Primary, Junior Secondary and Senior secondary schools were 29.7; 74.5; 78.3 and 58.8 percent, respectively. Overall school attendance rates for persons in secondary school and Tertiary education were at 67.2 percent and 22.3 percent, respectively.

School attendance rates in urban areas show that Pre-primary was 57.6 percent, Primary (88.2%), Junior Secondary (88.0%) and Senior Secondary was at 70.3 percent. School attendance rates for persons whose age corresponded with Secondary and Tertiary education levels were 77.2 and 31.1 percent, respectively. This implies that persons in urban areas are more likely to attend school at any level of education than their rural counterparts.

Analysis of school attendance rates by sex shows that for males in Pre-primary school attendance was 36.3 percent, Primary (77.3%), Junior Secondary (80.4%) and Senior Secondary was 71.0 percent. Further, school attendance rates for females in Pre-primary was 42.9 percent, Primary (81.2%), Junior Secondary (83.0%) and Senior Secondary was 70.9 percent.

Further, at national level, attendance rate for persons in higher education age range was 26 percent. Attendance rate for males in higher education was 30.4 percent relative to 21.6 percent for females. This implies that males in the age range 19-22 years were more likely to be attending school than their female counterparts.

Table 6.1: School Attendance Rates by Age-group, Rural/Urban, Stratum and Sex, Zambia 2022

Residence/ Stratum	Pre-primary age	Primary age		Secondary age		Primary age	Secondary age	Higher Education	Population estimates of persons 5-22 years old attending grades
	5 – 6 years	7 – 10 years	11 – 13 years	14 – 15 years	16 – 18 years	7-13 years	14-18 years	19 – 22 years	5-22 years
National Total	**39.6**	**74.8**	**85.8**	**81.7**	**63.2**	**79.2**	**71**	**26**	**9,813,137**
Male	36.3	72.6	84.1	80.4	64.3	77.3	71	30.4	4,862,366
Female	42.9	76.9	87.5	83	62.2	81.2	70.9	21.6	4,950,771
Rural	**29.7**	**69.1**	**82.6**	**78.3**	**58.8**	**74.5**	**67.2**	**22.3**	**6,215,016**
Male	26.9	66	80.4	76.5	61.8	72	68.1	26.8	3,139,232
Female	32.5	72.1	85.1	80.1	55.9	77.2	66.2	17.7	3,075,785
Urban	**57.6**	**85.7**	**91.6**	**88**	**70.3**	**88.2**	**77.4**	**31.1**	**3,598,121**
Male	52.4	85.5	91.9	88.4	68.6	88.1	76.4	35.5	1,723,135
Female	63.5	85.9	91.4	87.6	71.8	88.2	78.2	26.9	1,874,986
Strata Total	**39.6**	**74.8**	**85.8**	**81.7**	**63.2**	**79.2**	**71**	**26**	**9,813,137**
Male	36.3	72.6	84.1	80.4	64.3	77.3	71	30.4	4,862,366
Female	42.9	76.9	87.5	83	62.2	81.2	70.9	21.6	4,950,771
Small Scale	**29.2**	**69.1**	**82**	**79.1**	**58.7**	**74.4**	**67.5**	**22.3**	**4,791,045**
Male	26.5	66.1	79.9	78.3	61.2	72	68.5	26.4	2,417,875
Female	31.8	72.1	84.5	79.9	56.3	77	66.4	18.1	2,373,170
Medium Scale	**39.2**	**73.7**	**86.7**	**78.7**	**63.9**	**78.9**	**70.7**	**26.9**	**678,665**
Male	41	70.5	85.4	75.1	65.3	77	69.8	29.3	346,275
Female	37.7	76.6	88.2	82.9	62.3	80.9	71.6	24.1	332,390
Large Scale	**57.7**	**74.7**	**83.6**	**74.1**	**58.8**	**78.6**	**65.4**	**23.2**	**53,746**
Male	36.8	70.4	78.1	62.5	66.4	74.5	64.8	25	28,077
Female	70.9	77.6	91.3	86.3	47.7	82.4	66.2	20.3	25,669
Non-agric	**23.6**	**63.9**	**82.4**	**71.3**	**54.7**	**70.5**	**61.1**	**18.5**	**691,560**
Male	18.6	61	78.5	65.4	62.1	67.1	63.4	27.1	347,005
Female	29.2	67.2	86.6	77.4	48.5	74.2	59	10.6	344,555
Low Cost	**55.5**	**84.4**	**90.8**	**87.5**	**70**	**87**	**77**	**29.9**	**2,999,546**
Male	49.6	84.3	91	88.1	67.2	86.9	75.3	34.6	1,436,820
Female	62.3	84.6	90.7	87	72.4	87.2	78.4	25.5	1,562,726
Medium Cost	**65.2**	**92.4**	**95**	**87.5**	**68.7**	**93.5**	**75.9**	**39.9**	**343,702**
Male	64.7	91.9	97.5	87.3	72.5	94.3	79	44.3	167,633
Female	65.8	92.8	92.8	87.8	66	92.8	73.2	35.1	176,070
High Cost	**75**	**93.5**	**96**	**93.6**	**76.8**	**94.6**	**84.3**	**33.4**	**254,872**
Male	74.1	94.4	95	93.5	79.2	94.7	85.2	32.9	118,682
Female	76	92.8	97	93.6	74.8	94.6	83.5	33.8	136,191

Table 6.2 shows school attendance rate by age-group, sex and province in 2022. Results show that Copperbelt Province had the highest school attendance rate at 88.2 percent for persons in primary school age range while Eastern Province had the lowest rate at 62.4 percent.

Results further show that North-western Province had the highest attendance rate at 78.7 percent for persons in secondary school age range while Eastern Province had the lowest rate at 53.9 percent. For the rest of the results.

Table 6.2: School Attendance Rates by Age-group, Sex and Province, Zambia 2022

Sex/Province	Pre-primary	Primary		Secondary		Primary	Secondary	Higher Education	Population estimates of persons 5-22 years old attending grades
	5 – 6 years	7 – 10 years	11 – 13 years	14 – 15 years	16 – 18 years	7-13 years	14-18 years	19-22 years	5-22 years
National total	**39.6**	**74.8**	**85.8**	**81.7**	**63.2**	**79.2**	**71**	**26**	**9,813,137**
Male	36.3	72.6	84.1	80.4	64.3	77.3	71	30.4	4,862,366
Female	42.9	76.9	87.5	83	62.2	81.2	70.9	21.6	4,950,771
Central	**31.9**	**76.3**	**86.4**	**81.2**	**56**	**80.1**	**68**	**18.4**	**1,191,536**
Male	29.6	76.8	85.2	77.2	58.9	80	67.3	23.4	607,797
Female	34.4	75.7	87.9	84.5	53.2	80.3	68.6	13.5	583,738
Copperbelt	**52.3**	**85.8**	**91.5**	**89**	**70.1**	**88.2**	**77.5**	**30**	**1,258,793**
Male	45.6	87.2	91.8	88.8	67.7	89	75.8	37.7	600,011
Female	58.7	84.3	91.2	89.2	72.3	87.6	78.9	23	658,783
Eastern	**30.9**	**58.6**	**68**	**63.5**	**46.1**	**62.4**	**53.9**	**16.8**	**1,209,635**
Male	26.8	55.5	61.1	62.9	49.7	58	55.4	18.8	600,433
Female	34.7	61.2	76.2	64.1	42.5	66.7	52.4	14.7	609,202
Luapula	**24.2**	**64.5**	**81.7**	**76.8**	**72.2**	**71.3**	**73.9**	**28.3**	**782,266**
Male	20.1	64.6	83.1	77.4	75.7	72	76.4	38.4	366,409
Female	27.5	64.5	80.4	76.1	68.9	70.8	71.5	20.2	415,857
Lusaka	**65.6**	**84.6**	**91.6**	**92.3**	**70**	**87.4**	**78.5**	**28.1**	**1,390,676**
Male	57.7	80.3	91.6	95.1	69.4	85.3	79.2	30.6	694,857
Female	76.6	88.7	91.5	90	70.5	89.7	77.9	25.4	695,819
Muchinga	**15.8**	**59.7**	**77**	**78.6**	**62.6**	**66.8**	**69.3**	**21.8**	**480,735**
Male	15.8	57.9	76.1	76.4	70.3	65.5	72.9	26.3	246,689
Female	15.8	61.5	78	81.4	53.8	68.2	64.9	16.7	234,046
Northern	**16.4**	**65.4**	**85.5**	**83.5**	**61.6**	**73.7**	**71.4**	**23.2**	**893,037**
Male	13.6	61.8	84.4	84.8	66	71	74.1	31.8	483,519
Female	19.2	70.5	86.8	82.1	56	77.5	68.2	15	409,518
North-western	**47.9**	**82.9**	**89.3**	**85.9**	**73.6**	**85.4**	**78.7**	**34.7**	**652,576**
Male	36.2	81	90.6	82.8	72.7	84.7	77	40.3	326,359
Female	57.9	84.8	88	89.1	74.4	86.1	80.7	29.2	326,217
Southern	**49.7**	**80**	**93.4**	**83**	**63**	**85.4**	**71.2**	**31.2**	**1,219,044**
Male	48.8	76	91.5	79.8	62.8	82.5	70	28.4	570,999
Female	50.5	83.1	95.1	86.1	63.1	87.8	72.2	34.1	648,045
Western	**37.2**	**79.5**	**87.9**	**83.9**	**58.5**	**83.1**	**69.1**	**28.6**	**734,839**
Male	39.1	73.5	85.3	79.8	56	78.4	66.1	33.4	365,293
Female	34.7	85	90.1	88	60.8	87.2	72	23.4	369,546

Table 6.3 shows school attendance rates by poverty status in 2022. Results show that primary school attendance rates for the extremely poor was 70.3 percent while that of the moderately poor and non-poor persons were 83.7 and 91.9 percent, respectively. Results further show that secondary school attendance rates for extremely poor, moderately poor and non-poor persons were 63.3 percent, 74.4 percent and 80.5 percent, respectively.

Analysed by rural/urban, results show that primary school attendance rates in rural and urban among the extremely poor persons were 69.5 and 74.3 percent, respectively. On the other hand, secondary school attendance rates for extremely poor persons in rural and urban areas were 62.3 percent and 68.3 percent, respectively.

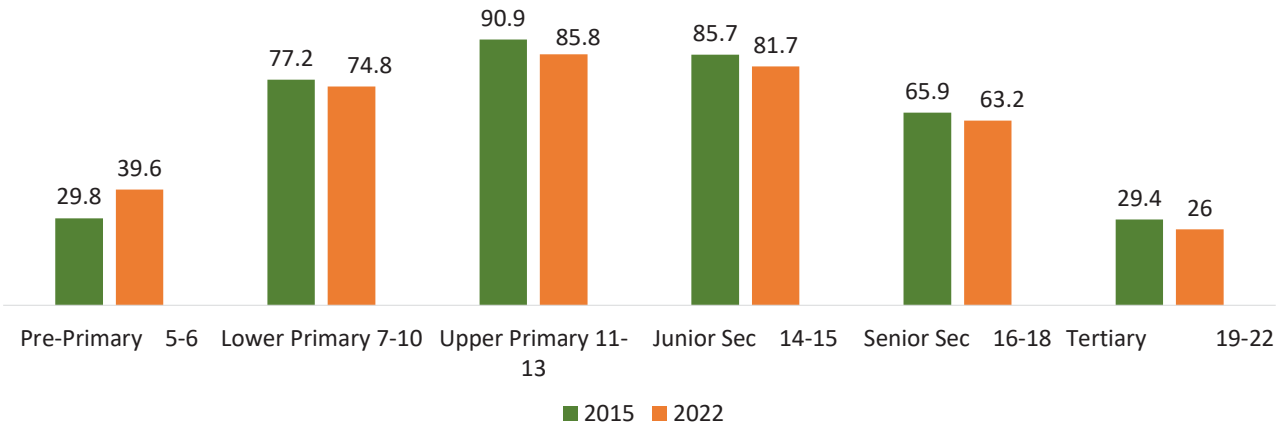
Table 6.3: School Attendance Rates by Age-group and Poverty Status, Zambia 2022

Age-group/ Poverty Status	Pre-primary	Lower Primary	Upper Primary	Junior Sec	Senior Sec	Primary	Secondary	Higher Education	Population estimate of persons 5-22 years old attending grades
	5 - 6 years	7 - 10 years	11 - 13 years	14 - 15 years	16 - 18 years	7-13 years	14-18 years	19 - 22years	5-22 years
All Zambia	**39.6**	**74.8**	**85.9**	**81.7**	**63.1**	**79.3**	**70.9**	**25.6**	**9,621,999**
Male	36.2	72.5	84.3	80.6	63.9	77.3	70.9	30.1	4,769,997
Female	43	77	87.4	82.8	62.3	81.2	70.9	21.3	4,852,002
Rural	29.4	69.1	82.7	78.3	58.6	74.6	67	22	6,109,802
Urban	57.9	85.8	91.8	87.9	70.4	88.2	77.4	30.7	3,512,197
Extremely Poor	**27**	**64.7**	**78.9**	**74.3**	**54.9**	**70.3**	**63.3**	**22.6**	**4,841,224**
Male	24.7	61.7	75.7	73	56.5	67.3	63.5	26.8	2,469,546
Female	29.3	67.7	82.4	75.5	53.3	73.4	63.1	18.2	2,371,678
Rural	25.5	63.6	78.6	73.6	53.8	69.5	62.3	21.3	4,074,351
Urban	35.8	70.6	80.2	77.7	60.8	74.3	68.3	28.1	766,873
Moderate Poor	**36.1**	**78.2**	**91.3**	**87**	**64.9**	**83.7**	**74.4**	**21**	**1,396,759**
Male	30.3	78.5	90	84.9	66.7	83.5	75.1	24.6	684,521
Female	40.5	77.8	92.7	89.2	63.3	83.9	73.8	17.6	712,238
Rural	32	75.9	88.1	86.9	61.5	80.8	73.1	19.9	907,727
Urban	43.9	83.1	96.9	87.1	70.1	89.2	76.7	22.8	489,032
Non-poor	**58.3**	**90.3**	**94.1**	**91.7**	**73.5**	**91.9**	**80.5**	**30.4**	**3,384,016**
Male	53	89.2	96.5	92.2	74	92.2	81	35.6	1,615,930
Female	64.5	91.2	92.1	91.3	73.1	91.6	80.2	25.6	1,768,086
Rural	40.6	86.4	93.7	90.5	73.4	89.5	80	25	1,127,723
Urban	67.6	92.2	94.4	92.3	73.6	93.1	80.8	33	2,256,293

Figure 6.1 shows school attendance rates by age-group and level of education between 2015 and 2022. Except for pre-school, generally, school attendance rates for the rest of the age-groups in 2022 were lower than those of 2015 although the number of learners attending school in 2022 were larger in absolute terms.

Notably, the largest proportion of learners in 2022 were attending Upper primary school at 85.8 percent, followed by Junior secondary school at 81.7 percent and Lower primary at 74.8 percent. However, those in Tertiary institutions in the age-group 19-22 years accounted for the smallest proportion at 26 percent.

Figure 6.1: School Attendance Rates by Age-group and Level of Education, Zambia 2015 and 2022



6.3: Gross Attendance Rate

Gross attendance rate (GAR) is one of the educational indicators that show the proportion of population participating at a given level of education. It reflects the efficiency of the education system in terms of participation by particular age-groups in a corresponding education level, reflecting the extent of over-aged or under-aged persons. Ideally, the computed GAR should portray a measure out of 100 percent, in principle implying that the education system is able to accommodate the entire school age population. However, this is not usually the case as the numerator includes all persons attending a level, regardless of age, and it is possible to obtain a gross attendance rate that is over 100 percent.

Table 6.4 shows the gross attendance rate by grade, rural/urban, stratum and sex in 2022. At national level, the gross attendance rate for persons of primary school age was 98.3 percent while that of persons of secondary school age (14-18 years) was 65.3 percent. Further, the gross attendance rates for Junior and Senior secondary schools were 87.6 and 49.2 percent, respectively.

Analysed by rural/urban, results show that the GAR for persons of primary age in rural areas was 96.4 percent relative to 101.9 percent in urban areas while the GAR for junior secondary in rural areas was 75.6 percent relative to 109.4 percent in urban. Further, the GAR for senior secondary school in rural and urban areas was 49.9 and 91.4 percent, respectively.

Table 6.4: Gross Attendance Rates by Grade, Rural/Urban, Stratum and Sex, Zambia 2022

Province/Sex			1 - 4	5 - 7	8 – 9	10 - 12	Total	Primary	Secondary	Population estimate of persons 5-22 years old attending Grade 1-12
Total Zambia		**Total**	**99.9**	**95.99**	**87.59**	**49.24**	**85.22**	**98.31**	**65.29**	**5,931,141**
		Male	100.79	93.92	85.85	49.92	85.05	97.95	64.95	2,925,166
		Female	99.03	98.12	89.24	48.59	85.38	98.66	65.61	3,005,976
Region	Rural	**Total**	**99.03**	**92.59**	**75.55**	**30.67**	**78.43**	**96.43**	**49.9**	**3,519,694**
		Male	100.52	88.41	75.32	32.25	78.28	95.43	50.84	1,785,719
		Female	97.57	97.32	75.8	29.07	78.58	97.47	48.94	1,733,975
	Urban	**Total**	**101.56**	**102.29**	**109.39**	**79.34**	**97.54**	**101.86**	**91.41**	**2,411,447**
		Male	101.32	105.65	107.57	81	98.37	103.05	91.45	1,139,447
		Female	101.78	99.41	110.86	77.92	96.8	100.77	91.38	1,272,000
Stratum	Small Scale	**Total**	**99.77**	**91.91**	**76.75**	**27.65**	**78.17**	**96.54**	**48.76**	**2,706,294**
		Male	102.43	86.75	77.56	29.14	78.26	95.75	49.94	1,378,143
		Female	97.13	97.75	75.93	26.13	78.06	97.37	47.56	1,328,151
	Medium Scale	**Total**	**103.16**	**102.31**	**67.84**	**42.04**	**83.35**	**102.82**	**53.81**	**422,937**
		Male	104.38	102.27	63.42	41.51	82.12	103.47	51.61	213,366
		Female	102.06	102.34	72.95	42.63	84.63	102.16	56.31	209,571
	Large Scale	**Total**	**105.21**	**108.58**	**74.57**	**34.08**	**83.4**	**106.69**	**51.73**	**31,950**
		Male	126.95	98.03	98.06	21.69	84.45	111.54	52.31	16,680
		Female	90.39	123.62	49.95	51.99	82.29	102.12	51.01	15,270
	Non-Agric	**Total**	**89.75**	**85.36**	**75.98**	**39.53**	**74.75**	**88.19**	**53.65**	**358,513**
		Male	83.58	84.58	71.44	45.99	73.79	83.93	56.55	177,530
		Female	96.44	86.18	80.73	34.11	75.71	92.74	51	180,983
	Low Cost	**Total**	**102.16**	**101.07**	**108.57**	**75.24**	**96.37**	**101.72**	**88.59**	**1,984,057**
		Male	100.9	105.77	107.39	75.91	96.95	102.81	88.04	937,160
		Female	103.38	97.08	109.49	74.65	95.85	100.72	89.05	1,046,897
	Medium Cost	**Total**	**98.64**	**113.54**	**125.23**	**96.75**	**106.34**	**105.22**	**107.6**	**247,555**
		Male	105.77	106.08	124.58	108.22	110.29	105.9	115.36	121,996
		Female	91.9	120.33	125.97	88.24	102.76	104.58	100.78	125,559
	High Cost	**Total**	**97.53**	**102.16**	**97.6**	**100.98**	**99.56**	**99.61**	**99.48**	**179,835**
		Male	101.36	103.94	81.62	102.79	99.09	102.57	93.91	80,291
		Female	94.57	100.57	109.06	99.42	99.94	97.17	103.9	99,544

Figure 6.2 shows the gross attendance rates by grade in 2015 and 2022. Results show that both in 2015 and 2022, persons of lower primary school age had the highest gross attendance rates at 107 and 99.9 percent, respectively. However, persons of senior secondary school age had the lowest gross attendance rates in 2015 and 2022 at 51.2 and 49.2 percent, respectively.

Figure 6.2: Gross Attendance Rates by Grade, Zambia 2015 and 2022

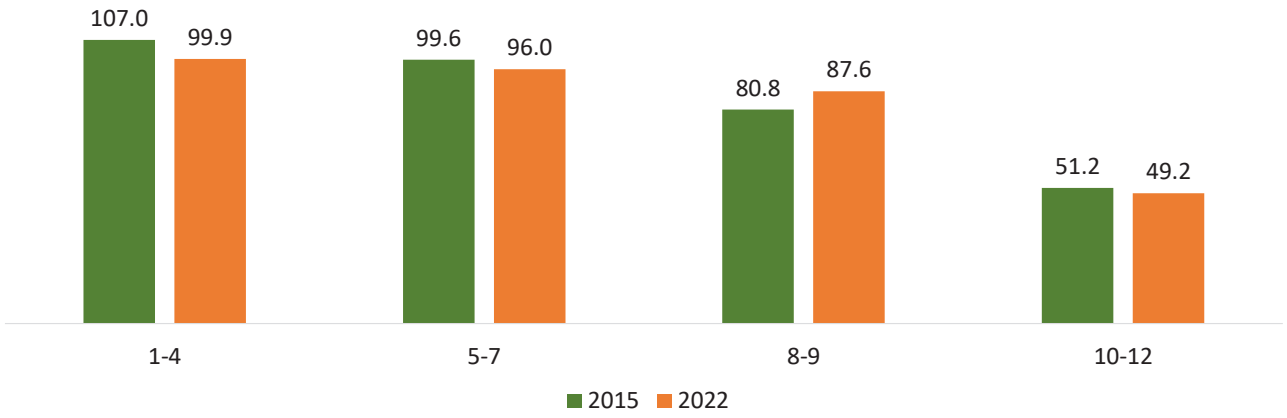


Table 6.5 shows the gross attendance rates by grade, province and sex in 2022. Analysis by province shows that Lusaka Province had the highest primary gross attendance rate at 109.6 percent followed by North-western province at 103.6 percent while Eastern Province had the lowest gross attendance rate at 82.3 percent. At secondary school level, Lusaka and Copperbelt provinces at 91.8 and 91.3 percent, respectively had the highest and second highest gross attendance rates. Eastern Province had the lowest gross attendance rate at 34.3 percent.

Table 6.5: Gross Attendance Rates by Grade, Province and Sex, Zambia 2022

Sex/Province	Grade					Primary	Secondary
	Total	1-4	5-7	8 – 9	10-12	1-7	8-12
National	**85.22**	**99.9**	**95.99**	**87.59**	**49.24**	**98.31**	**65.29**
Male	85.05	100.79	93.92	85.85	49.92	97.95	64.95
Female	85.38	99.03	98.12	89.24	48.59	98.66	65.61
Central	**81.33**	**99.5**	**103.88**	**64**	**40.11**	**101.17**	**51.49**
Male	81.49	99.09	101.25	69.13	33.82	99.92	50.01
Female	81.15	99.98	106.97	59.73	46.1	102.62	52.82
Copperbelt	**96.79**	**106.67**	**92.3**	**116.26**	**75.38**	**100.44**	**91.3**
Male	99.16	101.49	106.33	115.02	78.44	103.39	92.61
Female	94.64	112.19	81.43	117.32	72.7	97.71	90.17
Eastern	**63.33**	**87.1**	**75.25**	**47.29**	**23.74**	**82.29**	**34.27**
Male	62.11	94.79	61.19	48.56	25.02	79.71	35.3
Female	64.53	80.59	92.14	46.08	22.42	84.8	33.24
Luapula	**82.21**	**104.18**	**94.09**	**84.65**	**36.44**	**100.16**	**54.57**
Male	85.54	103.11	101.53	88.82	42.76	102.48	60.68
Female	79.14	105.12	87.42	80.31	30.54	98.1	48.62
Lusaka	**102.03**	**105.8**	**115.04**	**123.12**	**72.62**	**109.55**	**91.8**
Male	101.84	108.67	101.35	129.04	75.97	105.45	96.21
Female	102.2	103.13	132.07	118.3	69.92	113.84	88.23
Muchinga	**77.43**	**82.7**	**96.95**	**93.43**	**36.07**	**88.57**	**59.98**
Male	79.36	81.63	98.77	96.69	42.27	88.82	65.64
Female	75.35	83.75	95.03	89.26	29.01	88.33	53.22
Northern	**78.76**	**103.13**	**93.57**	**67.17**	**32.98**	**99.15**	**48.3**
Male	78.39	95.95	92.15	75.95	35.86	94.4	53.19
Female	79.23	113.16	95.38	57.44	29.31	105.55	42.45

Sex/Province	Grade					Primary	Secondary
	Total	1-4	5-7	8 – 9	10-12	1-7	8-12
North-western	**95.93**	**108.78**	**95.56**	**108.48**	**65.19**	**103.61**	**83.44**
Male	96.03	110.75	94.22	105.53	66.62	104.38	82.91
Female	95.82	106.78	96.86	111.61	63.64	102.84	84
Southern	**85.14**	**96.2**	**101.8**	**87.88**	**46.21**	**98.47**	**63.29**
Male	82.53	102.75	102.38	61.31	43.82	102.59	51.26
Female	87.34	91.16	101.28	113.46	48.25	95.11	74.04
Western	**85.27**	**101.93**	**87.13**	**104.86**	**42.54**	**95.68**	**68.65**
Male	83.85	102.87	85.27	94.58	44.77	95.49	66.08
Female	86.6	101.07	88.79	115.46	40.41	95.85	71.19

Table 6.6 shows the gross attendance rates grade and poverty status in 2022. Results show that the gross attendance rates for persons of primary school age that belonged to extremely, moderately and non-poor households were 93.5; 101.3 and 104.8 percent, respectively. Further, results show that the gross attendance rates for persons of secondary school age that belonged to extremely, moderately and non-poor households were 44.2, 66.0 and 94.4 percent, respectively.

Table 6.6: Gross Attendance Rates by Grade and Poverty Status, Zambia 2022

Schooling grades						Primary	Secondary	Population 5-22 years in grades 1-12
	Total	1-4	5 – 7	8-9	10-12	1-7	8-12	1-12
National	**85.0**	**100.3**	**95.4**	**86.8**	**48.8**	**98.3**	**64.7**	**6,822,866**
Male	84.8	101.4	93.6	84.4	49.1	98.2	63.9	3,376,685
Female	85.2	99.2	97.3	89.1	48.5	98.4	65.4	3,446,181
Region	**85**	**100.3**	**95.4**	**86.8**	**48.8**	**98.3**	**64.7**	**6,822,866**
Rural	78.3	99.5	92.4	74.6	30.3	96.6	49.3	4,414,428
Urban	97.3	101.9	101.1	109.3	79	101.6	91.1	2,408,438
Extreme Poor	**74.3**	**97.4**	**87.5**	**68.8**	**25.2**	**93.5**	**44.2**	**3,562,570**
Male	73.6	98.8	82.7	66.3	27	92.2	43.9	1,822,917
Female	75.0	96.1	92.8	71.3	23.3	94.8	44.5	1,739,653
Rural	72.8	97.5	86.3	65.3	21.4	93	40.5	3,009,838
Urban	82.6	97.2	94.4	86.4	44.7	96.1	63.2	552,732
Moderately Poor	**87.7**	**100.5**	**102.4**	**88.3**	**49**	**101.3**	**66**	**979,379**
Male	88.8	104.4	104.2	81.9	45.9	104.3	62.4	492,662
Female	86.7	96.6	100.5	95	51.7	98.2	69.4	486,717
Rural	83.0	96.5	105.1	76.6	35.9	100	54.6	639,937
Urban	96.7	109	97.6	112.5	69.4	103.9	86.1	339,442
Non-poor	**100.5**	**105**	**104.5**	**116.1**	**80.8**	**104.8**	**94.4**	**2,280,917**
Male	102.2	104.8	107.3	118.5	83.4	105.9	96.9	1,061,105
Female	99.1	105.2	102.2	114	78.5	103.9	92.3	1,219,811
Rural	96.2	110.6	105.1	112.1	57.3	108.3	78.4	764,653
Urban	102.7	102.2	104.2	118	92.3	103	102.2	1,516,264

6.4: Net Attendance Rate

The net attendance rate (NAR) is the number of persons of the official school age-group attending a given level of education, expressed as a percentage of the population corresponding to the official age-group.

Table 6.7 shows net attendance rates by grade, rural/urban, stratum and sex in 2022. At national level, the primary school net attendance rate was 28.7 percent. This implies that only 29 out of every 100 children of age 7-13 years were rightly attending primary school grades. The NAR for Junior secondary school was estimated at 26.9 percent, while NAR for Senior secondary school was estimated at 17.4 percent.

Analysed by rural/urban, results show that the net attendance rate for persons of primary and secondary school ages in rural areas were 26.5 and 12.4 percent, respectively. In the urban areas, the NAR for primary school was 32.3 percent and that for secondary school was 24.7 percent.

Analysed by stratum, results show that the least net attendance rates were recorded among persons in senior secondary school that belonged to small scale (8.6%), medium scale (14.75%), non-agricultural (12.9%) and large-scale agricultural households at 16.9 percent.

Table 6.7: Net Attendance Rates by Grade, Rural/Urban, Stratum and Sex, Zambia 2022

Rural/Urban, Stratum and Sex	Schooling grade				Primary	Primary and Junior Secondary	Secondary	Population 7-18 years attending.
	1-4	5-7	8-9	10-12	1-7	1-9	8-12	1-12
National Total	**34.12**	**21.92**	**20.42**	**14.6**	**28.74**	**26.9**	**17.4**	**5,283,576**
Male	35.36	20.17	17.03	13.48	28.53	26.03	15.16	2,571,761
Female	32.97	23.63	23.53	15.7	28.94	27.73	19.54	2,711,816
Rural	**32.48**	**19.11**	**15.01**	**9.88**	**26.5**	**23.96**	**12.44**	**3,214,969**
Male	32.39	16.67	12.68	7.6	25.03	22.28	10.06	1,606,790
Female	32.56	21.71	17.31	12.43	27.92	25.59	14.94	1,608,178
Urban	**36.65**	**26.6**	**29.13**	**21**	**32.34**	**31.63**	**24.71**	**2,068,608**
Male	39.86	26.67	24.78	22.81	34.35	32.33	23.7	964,970
Female	33.63	26.55	32.68	19.51	30.52	31.01	25.54	1,103,638
Small scale	**31.68**	**18.6**	**12.94**	**8.6**	**25.77**	**22.92**	**10.79**	**2,482,751**
Male	30.56	15.29	10.85	6.09	23.34	20.55	8.42	1,242,551
Female	32.69	22.14	15.02	11.4	28.13	25.24	13.27	1,240,200
Medium scale	**34.13**	**22.68**	**20.69**	**14.75**	**29.07**	**27.13**	**17.77**	**383,579**
Male	37.04	21.59	20.76	12.83	29.61	27.49	16.77	192,198
Female	31.71	23.91	20.61	16.96	28.55	26.78	18.87	191,382
Large scale	**33.73**	**17.6**	**16.92**	**17.21**	**26.18**	**24.03**	**17.07**	**27,975**
Male	39.58	28.87	16.82	9.04	33.6	29.9	12.04	13,845
Female	30.11	3.85	17	33.65	19.84	19.15	23.24	14,130
Non-agric	**36.32**	**19.08**	**24.97**	**12.93**	**29.15**	**28.32**	**18.37**	**320,663**
Male	39.82	20.98	16.97	12.31	32.08	29.18	14.3	158,197
Female	32.86	17.29	32.04	13.6	26.31	27.5	22.36	162,466
Low cost	**37.04**	**27**	**28.9**	**19.6**	**32.78**	**31.93**	**23.83**	**1,706,868**
Male	40.46	27.06	23.59	21.91	34.97	32.65	22.67	794,887
Female	33.75	26.95	33.11	17.7	30.77	31.3	24.77	911,981
Medium cost	**43.52**	**27.49**	**27.45**	**27.75**	**36.33**	**34.19**	**27.62**	**198,419**
Male	46.89	28.35	32.03	24.36	38.53	36.85	28.06	96,465
Female	40.36	26.67	22.19	30.53	34.26	31.57	27.2	101,955
High cost	**24.49**	**21.74**	**33.34**	**26.73**	**23.24**	**25.58**	**30**	**163,321**
Male	23.59	20.92	25.77	30.09	22.33	23.08	28.1	73,618
Female	25.21	22.46	38.77	23.66	23.99	27.58	32	89702

Figure 6.3 shows the net attendance rates by grade in 2022. Overall, persons of lower primary school age had the highest net attendance rates regardless of residency. Further, the higher the grade of attendance, the lower the net attendance rates tended to be.

Figure 6.3: Net Attendance Rates by Grade Level, Zambia 2022

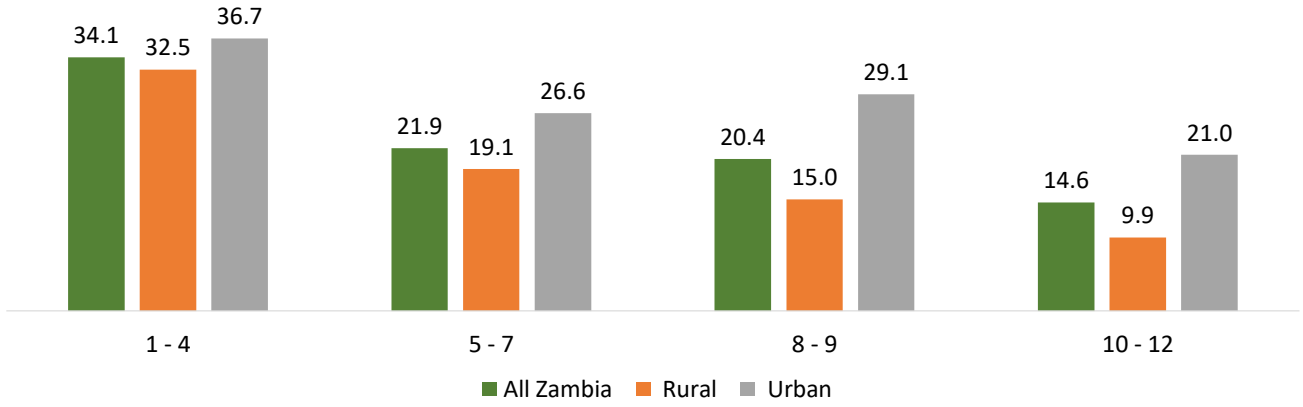


Figure 6.4 shows net attendance rates by grade in 2015 and 2022. Generally, net attendance rates between 2015 and 2022 have reduced by a minimum of 1.5 percent across all grades though net attendance rates among persons in grades 1-4 were the highest in both years under consideration at 68.5 percent in 2015 and 34.1 percent in 2022.

Figure 6.4: Net Attendance Rates by Grade, Zambia 2015 and 2022

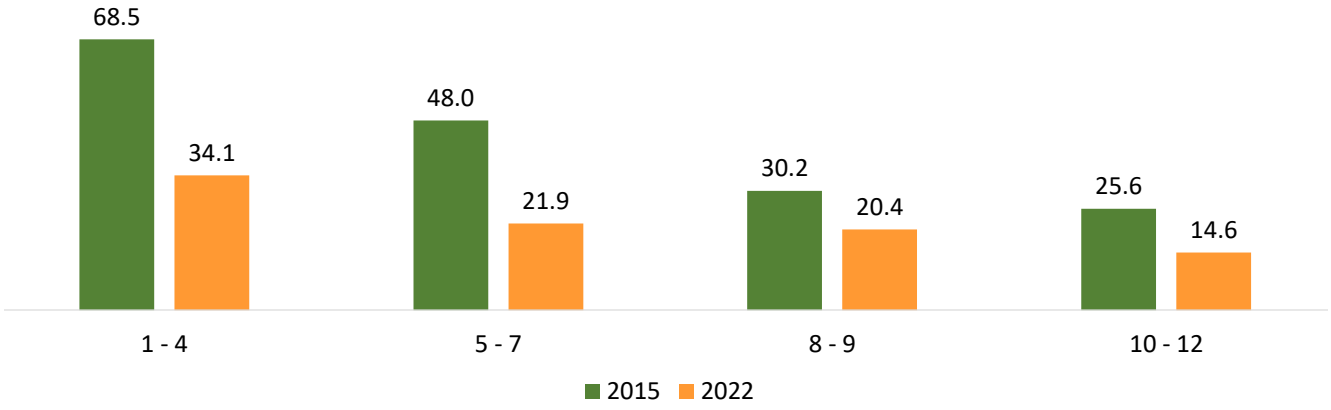


Table 6.8 shows the net attendance rates by grade level, province and sex in 2022. Analysis by province shows that North-western had the highest primary school net attendance rate (34.3%), followed by Lusaka province (32.5%) while Northern province had the lowest rate at 24.1 percent.

For junior secondary, Lusaka Province had the highest NAR at 31.6 percent followed by Copperbelt Province at 29.6 percent while Eastern had the lowest rate at 7.6 percent. Further, the highest NAR for senior secondary was recorded in Lusaka Province at 20.2 percent, followed by Copperbelt and Central Provinces at 17.2 percent while Luapula Province at 7.6 percent was the lowest rate.

Table 6.8: Net Attendance Rate by Grades, Province and Sex, Zambia 2022

Province and Sex	Schooling grade	Primary	Junior Secondary	Secondary	Population estimates of persons 7-18 years Attending grades			
	1-4	5-7	8-9	10-12	1-7	1-9	8-12	1-12
National	**34.1**	**21.9**	**20.4**	**14.6**	**28.7**	**26.9**	**17.4**	**5,283,576**
Male	35.4	20.2	17.0	13.5	28.5	26.0	15.2	2,571,761
Female	33.0	23.6	23.5	15.7	28.9	27.7	19.5	2,711,816
Central	**33.4**	**20.8**	**19.1**	**17.2**	**28.2**	**26.0**	**18.3**	**650,169**
Male	35.4	23.8	19.4	13.3	30.7	28.3	16.5	331,810
Female	31.1	17.3	18.9	21.3	25.4	23.6	19.9	318,359
Copperbelt	**31.0**	**24.7**	**29.6**	**17.2**	**28.1**	**28.4**	**22.7**	**721,723**
Male	32.2	21.8	26.9	19.7	28.0	27.8	23.0	342,525
Female	29.7	26.9	31.9	15.1	28.3	29.1	22.5	379,198
Eastern	**33.3**	**20.4**	**7.6**	**9.5**	**27.6**	**23.0**	**8.5**	**511,332**
Male	29.1	18.7	7.7	9.6	24.2	20.3	8.7	244,404
Female	36.5	22.1	7.5	9.4	30.5	25.4	8.4	266,928
Luapula	**37.6**	**19.2**	**18.7**	**7.6**	**29.2**	**27.0**	**11.9**	**399,934**
Male	41.1	18.6	21.8	7.1	30.7	28.7	12.9	195,253
Female	34.5	19.9	15.4	8.1	27.9	25.5	10.9	204,682
Lusaka	**36.1**	**27.5**	**31.6**	**20.2**	**32.5**	**32.3**	**25.3**	**782,507**
Male	39.4	27.9	21.0	20.1	34.0	31.2	20.5	375,581
Female	33.4	27.0	40.8	20.3	31.0	33.3	29.2	406,926
Muchinga	**32.5**	**20.9**	**15.1**	**7.9**	**27.0**	**24.1**	**11.3**	**225,590**
Male	33.9	23.4	16.7	5.3	28.8	25.7	10.4	118,511
Female	31.1	18.4	13.2	11.9	25.2	22.5	12.5	107,079
Northern	**34.4**	**13.0**	**8.3**	**15.3**	**24.1**	**20.1**	**11.6**	**460,454**
Male	34.3	14.1	5.2	15.6	24.5	19.7	10.5	256,821
Female	34.4	11.7	11.9	14.7	23.5	20.5	13.1	203,633
Nwestern	**41.9**	**23.4**	**23.8**	**16.2**	**34.3**	**32.1**	**19.7**	**389,542**
Male	47.5	17.3	21.3	10.8	35.1	32.2	15.5	194,777
Female	36.4	29.5	26.2	21.8	33.6	32.1	23.9	194,765
Southern	**29.3**	**22.7**	**20.7**	**13.4**	**26.4**	**25.3**	**16.9**	**733,014**
Male	30.3	16.1	13.1	11.2	23.7	21.5	12.1	325,670
Female	28.6	28.3	27.4	15.3	28.5	28.3	21.0	407,344
Western	**36.6**	**21.7**	**20.5**	**12.1**	**30.0**	**28.0**	**16.4**	**409,310**
Male	33.5	15.6	18.3	12.3	25.4	23.8	15.3	186,409
Female	39.0	26.8	22.6	12.0	33.7	31.5	17.3	222,901

Figure 6.5 shows primary school net attendance rates by province in 2022. North-western (34.3%) had the highest NAR while Northern (24.1 %) had the lowest NAR. Further, results show that net primary attendance rates for Central, Copperbelt, Eastern Muchinga, Southern and Northern provinces were below the national level.

Figure 6.5: Primary School Net Attendance Rates by Province, Zambia 2022

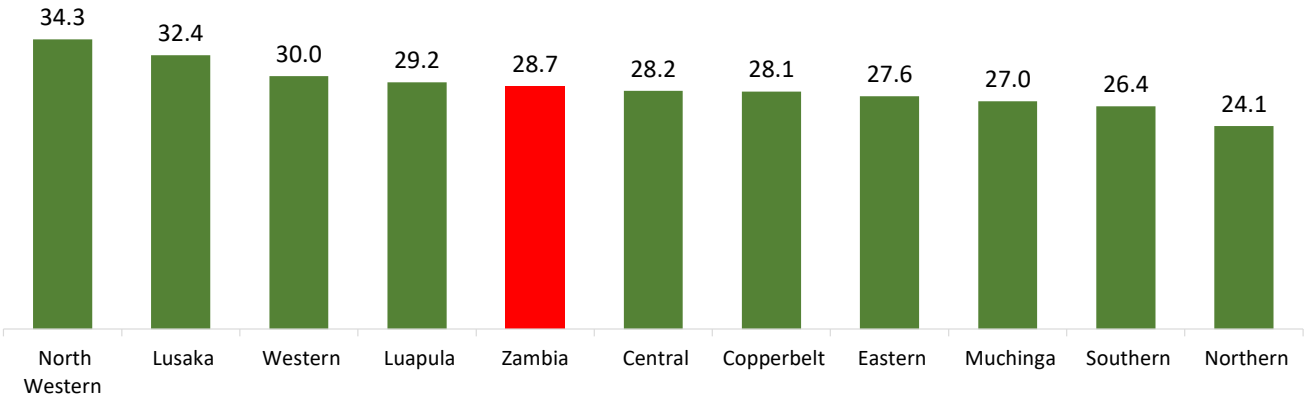


Table 6.9 shows the net attendance rate by grade and poverty status in 2022.

Analysed by poverty status, overall results show that regardless of poverty status, net attendance rates for persons in grades 1-4 were the highest although net attendance rates tended to increase with reduction in poverty.

The net primary and secondary school attendance rates for persons from extremely poor households were 24.8 and 11.3 percent, respectively while the rates for persons from moderately poor households were 29.2 and 17.7 percent, respectively. Notably, net attendance rates for the non-poor were higher both for primary and secondary schools.

Table 6.9: Net Attendance Rates by Grades and Poverty Status, Zambia 2022

Poverty Status	Schooling grade				Primary	Primary and Junior Secondary	Secondary	Population estimates of persons 7-18 years Attending grades
	1-4	5-7	8-9	10-12	1-7	1-9	8-12	1-12
National	**34.02**	**21.76**	**20.58**	**14.67**	**28.6**	**26.83**	**17.52**	**5,180,395**
Male	35.41	19.98	17.21	13.38	28.44	25.98	15.21	2,525,778
Female	32.74	23.53	23.71	15.92	28.76	27.64	19.72	2,654,617
Rural	32.24	19.04	15.1	10.07	26.31	23.83	12.59	3,163,203
Urban	36.79	26.38	29.55	20.92	32.32	31.71	24.85	2,017,193
Extreme Poor	**31.16**	**16.82**	**14.72**	**7.71**	**24.77**	**22.49**	**11.29**	**2,406,477**
Male	33.21	14.77	11.91	6.52	24.74	21.84	9.18	1,200,284
Female	29.26	18.94	17.43	9.03	24.8	23.12	13.47	1,206,193
Rural	30.29	16.71	13.26	6.81	24.16	21.73	10.11	2,009,409
Urban	35.45	17.46	21.62	11.86	28.01	26.45	16.79	397,068
Moderately	**35.12**	**22.24**	**20.14**	**15.23**	**29.23**	**27.23**	**17.72**	**784,599**
Male	35.57	18.98	16.42	16.58	27.88	25.4	16.49	395,812
Female	34.65	25.77	23.89	14.01	30.66	29.14	18.89	388,787
Rural	31.68	20.83	16.41	14.34	26.89	24.49	15.47	498,747
Urban	41.76	24.52	27.88	16.45	33.41	32.29	21.49	285,852
Non-poor	**37.05**	**27.9**	**28.63**	**21.54**	**33.11**	**32.15**	**24.66**	**1,989,319**
Male	38.11	27.6	25.16	20.16	33.52	31.76	22.35	929,682
Female	36.13	28.17	31.61	22.75	32.75	32.5	26.67	1,059,637
Rural	38.82	25.03	20.25	15.91	32.64	30.04	17.81	655,047
Urban	36.21	29.41	32.65	24.29	33.34	33.19	27.99	1,334,272

6.5. School Attendance by type of School and Level

Table 6.10 shows the percentage distribution of school attendance rates by type of school and level of education in 2022. Type of school refers to institutional ownership or the entity that runs the school. Regardless of the level of education, the majority of the population of school going age were attending school in schools owned by the central government at 72.9 percent followed by private schools at 11.9 percent.

Table 6.10: School Attendance Rates by Type of School and Level, Zambia 2022

Type of school	Central government	Local government (council)	Mission/ religious	industrial	Private	Community	Other	Total
All level	**72.9**	**11.8**	**2.7**	**0.1**	**11.9**	**0.5**	**0.1**	**100**
Nursery / Kindergarten	42.7	5.5	3.9	0.1	47.4	0.3	0.0	100
Primary	75.5	11.5	2.2	0.0	10.1	0.8	0.0	100
Secondary	77.7	14.9	3.3	0.0	3.8	0.1	0.1	100
College	57.1	10.1	3.5	2.9	25.2	0.0	1.2	100
University or above	54.8	7.1	3.6	0.3	33.9	0.0	0.2	100

6.6. Characteristics of Persons not in Education at the time of Survey.

Table 6.11 shows the percentage distribution of the population 5 years or older who were not attending school at the time of the survey by highest level of education attained, rural/urban, age-group and sex in 2022.

Overall, 30 percent of the population aged 5 years or older had no formal education. Almost 30 percent of the population had attended primary level of education. Of the total estimated population aged 5 years or older, 1.3 percent had a degree or higher qualifications.

Table 6.11: Percentage Distribution of Population 5 Years or Older not Attending School at the time of the Survey by Highest Level of Education Attained, Rural/Urban, Age-group and Sex, Zambia 2022

Residence, Age-group and Sex		Highest Level Of Education Obtained							Total	Population Estimate Persons 5+ Yrs. Currently Not In Education
		No Education	Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12	Grade 12 (A-Level / Certificate / Diploma / under graduate)	Degree (Postgraduate & Above		
Total Zambia		**30.3**	**9.3**	**20.4**	**16.4**	**17.5**	**4.8**	**1.3**	**100**	**12,163,917**
	Male	29.9	7.3	18.2	16.8	20.4	5.6	1.8	48	5,834,455
	Female	30.6	11.2	22.5	15.9	14.8	4	0.9	52	6,329,462
Rural	**Total**	**37.8**	**12.4**	**23.7**	**14.8**	**9.1**	**1.8**	**0.5**	**100**	**7,447,457**
	Male	37.8	9.9	21.8	15.8	11.8	2.3	0.6	48.3	3,596,001
	Female	37.7	14.7	25.5	13.8	6.6	1.3	0.3	51.7	3,851,456
Urban	**Total**	**18.6**	**4.5**	**15.3**	**18.9**	**30.7**	**9.4**	**2.7**	**100**	**4,716,460**
	Male	17.4	3.1	12.3	18.5	34.3	10.7	3.7	47.5	2,238,454
	Female	19.6	5.8	17.9	19.2	27.4	8.2	1.8	52.5	2,478,006

Age-group									
Total	**30.3**	**9.3**	**20.4**	**16.4**	**17.5**	**4.8**	**1.3**	**100**	**12,163,917**
0 - 4	99.7	0	0.2	0.1	0	0	0	8.1	981,599
5-9	96.3	3	0.3	0.1	0.2	0	0	9.7	1,175,464
10-14	66.6	22.4	8.7	1.7	0.5	0.1	0	3.6	441,718
15 - 19	20.6	12.3	31.9	18.3	16.1	0.8	0.1	8	973,396
20 - 24	9.6	6.9	23.6	25	31.1	3.5	0.3	13.5	1,645,245
25 - 29	8.6	5.7	20.1	24.4	31.3	8.3	1.7	11.8	1,434,717
30 - 34	8.7	8.2	22.5	22.1	26.8	8.9	2.7	9	1,090,065
35 - 39	12.4	10.9	25	18.8	21.4	9.3	2.2	8.7	1,063,903
40 - 44	15.1	12.5	24.6	22.6	15.7	7.2	2.4	7.3	883,047
45 - 49	15.5	11.5	28.7	19.4	16.8	6.1	2.1	5.7	695,631
50 - 54	13.1	13.5	29.2	20.1	14.8	6.4	2.9	4.6	562,275
55 - 59	13.8	13	36.5	15.6	12.7	5.9	2.5	2.9	358,069
60 - 64	18.7	14.5	31.3	12.1	15.4	5.7	2.3	2.3	279,135
65 +	26.9	22.2	25.1	10.9	9.8	3.4	1.7	4.8	579,651

The survey collected data relating to the reason for leaving school among persons not attending school at the time of enumeration. Table 6.12 shows the percentage distribution of the population not in school by reason cited for leaving school by rural/urban and Sex in 2022.

At national level, the main reason cited was lack of financial support to meet educational costs at 40.7 percent. The same reason was the highest cited both in rural and urban areas at 41.7 and 39.4 percent, respectively.

Among the females, 9.5 percent cited pregnancy as their reason for leaving school, while 7.8 percent of the males cited "**Not selected or failed**" as their reason for leaving school. Further, 7.8 percent cited "**no need to continue school**".

Table 6.12: Percentage Distribution of the Non-school attending Population by Reason cited for Leaving School by Rural/urban and Sex, Zambia 2022

Reason for Leaving school	Residence		Sex		Total
	Rural	Urban	Male	Female	
Lack of financial support	41.7	39.4	41.4	40	40.7
Completed studies/school	8.4	26.5	20	13.3	16.7
No need to continue school	10.7	4.2	8	7.6	7.8
Not selected/failed	7.9	6.6	7.8	6.9	7.3
Pregnancy	5.6	4.3	0.2	9.5	4.8
Expensive	3.3	3.7	3.7	3.3	3.5
Too far	5	1.3	3	3.7	3.3
School not important	4.1	2	3.7	2.7	3.2
Got married	3.8	2.4	1.2	5.1	3.1
Started working/business	1.7	4.7	4.5	1.7	3.1
Illness/injury/disabled	2.7	1.5	2.2	2.2	2.2
Needed to help out at home	2	1.1	1.4	1.8	1.6
Other	1.1	1.2	1.2	1.1	1.1
Made girl pregnant	0.7	0.4	0.9	0.2	0.6
Un safe to travel to school	0.6	0.2	0.2	0.6	0.4
Expelled	0.3	0.2	0.3	0.1	0.2
Financial constraints due to covid-19	0.2	0.1	0.1	0.2	0.2
Fear of contracting covid-19	0.1	0	0	0.1	0.1

Table 6.13 shows the percentage distribution of the non-school attending population by age-group and reason cited for having never attended school in 2022. Regardless of age-group, the most common reasons cited for never having attended school were "**I was never enrolled**" across all age-groups with a minimum of 47 percent for the age-group 5-9. Lack of financial support was the second most cited reason at a minimum of 6.3 percent for the youngest age-group.

Table 6.13: Percentage Distribution of the Non-school Attending Population by Age-group and Reason cited for never having Attended School, Zambia 2022

Reason for never having attended school 2022	Total Zambia		5-9	10 -14	15 -19	20 -24	25 -29	30 -34	35- 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 +
Under-age	1,270,969	35.3	38.8	0	0	0	0	0	0	0	0	0	0	0	0
Was never enrolled	1,508,303	41.9	47	65.5	60.5	53.3	56.6	48.1	57.6	59	62.6	51.1	51.2	63.9	61.8
Could not get a place	62,644	1.7	2.7	2.7	1.6	1.8	0.6	2.2	3.2	0	1.2	4.2	1.1	0.5	4.2
Expensive	30,564	0.8	0.6	1.3	1.7	4.3	0.8	1.6	0	0.6	1.7	2.2	2.1	0.7	0.4
No financial support	462,454	12.8	6.3	15.7	22.4	28.5	33.7	36.3	28.3	26.8	24.8	30.2	33.3	16.2	16.6
School too far	111,927	3.1	2.8	6.2	3.4	2	3.3	6	3	8.8	1.5	2.7	3.9	8.2	5.7
Illness/injury	42,746	1.2	0.7	3.9	2.7	1.8	2	2.2	2.6	1.2	1.7	2.2	2.2	1.6	0.6
School not important	75,652	2.1	0.2	2.8	6.1	7	2.9	2.8	3.5	3.2	3.8	4.6	3.2	5.4	9.1
Unsafe to travel to school	22,617	0.6	0.3	1.1	1.1	0.3	0	0.2	1.8	0.4	2.6	2.7	3.1	3.4	1.5
Financial constraints due to covid 19	6,013	0.2	0	0.9	0.5	1.1	0	0.6	0	0	0	0	0	0	0
Other	6,564	0.2	0.5	0	0	0	0	0	0	0	0	0	0	0	0
All Zambia	**3,600,452**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Chapter 7: **HEALTH**

7.1 Introduction

The 2022 LCMS collected data on the health status of all persons in Zambia. The health status of a household member directly affects the welfare of the household. Information on health consultations made and health facilities visited was obtained from all persons who reported being ill two weeks prior to the survey in order to come up with indicators on incidence of illnesses, medication and health consultations costs.

The following data were collected on the survey: -

- Whether the individual had been sick or injured in the two-week period preceding the survey;
- The symptoms or illnesses the individual suffered from;
- Whether a person consulted health institution(s) or personnel for the illness or injury;
- The amount of money spent on medication and/or consultation;
- The source of medication and the amount spent;
- The type of personnel or institution that attended to the person during the period of illness or injury;
- If a person was admitted at an institution and for how long;
- The mode of payment used to pay for services, and
- Whether a person was unable to carry out normal activities due to illness or injury.

7.2 Prevalence of illness or Injury

Table 7.1 shows the proportion of the population who reported being ill or injured two weeks prior to the survey by rural/urban, stratum and province in 2022. At national level, 7.0 percent of the population reported being ill or injured two weeks prior to the survey. Further, 7.3 percent of the population in urban compared to 6.8 percent in rural areas reported being ill or injured during the reference period.

Analysed by stratum, results show that the largest proportion of persons that reported being ill or injured during the two-week period prior to the survey were from low cost stratum at 7.5 percent followed by those from small scale at 7.0 percent while the smallest proportion were from high cost stratum at 5.7 percent.

By province, results show that Western and Southern provinces had the largest and second largest proportions of the population that reported being ill or injured two weeks prior to the survey at 11.3 and 10.1 percent, respectively, while Central Province had the smallest proportion at 3.5 percent.

Table 7.1: Proportion of Persons who reported Illness/Injury Two Weeks prior to the Survey by Rural/Urban, Stratum and Province, Zambia 2022

Rural/Urban	Ill/Injured	Total Number of persons
TOTAL	**7.0**	**1,375,562**
Rural	6.8	802,639
Urban	7.3	572,923
Stratum	**7.0**	**1,375,562**
Small Scale	7.0	632,884
Medium Scale	6.6	80,221
Large Scale	6.5	6,475
Non-Agric	5.9	83,058
Low Cost	7.5	484,683
Medium Cost	6.7	53,251
High Cost	5.7	34,990
Province	**7.0**	**1,375,562**
Central	3.5	79,040
Copperbelt	6.4	175,522
Eastern	6.0	148,385
Luapula	8.6	129,651
Lusaka	7.4	226,925
Muchinga	4.6	41,945
Northern	5.9	95,071
North Western	6.7	84,842
Southern	10.1	240,492
Western	11.3	153,689

Figure 7.1: Proportion of Persons who reported Illness in two weeks preceeding the Survey by Province, Zambia 2022

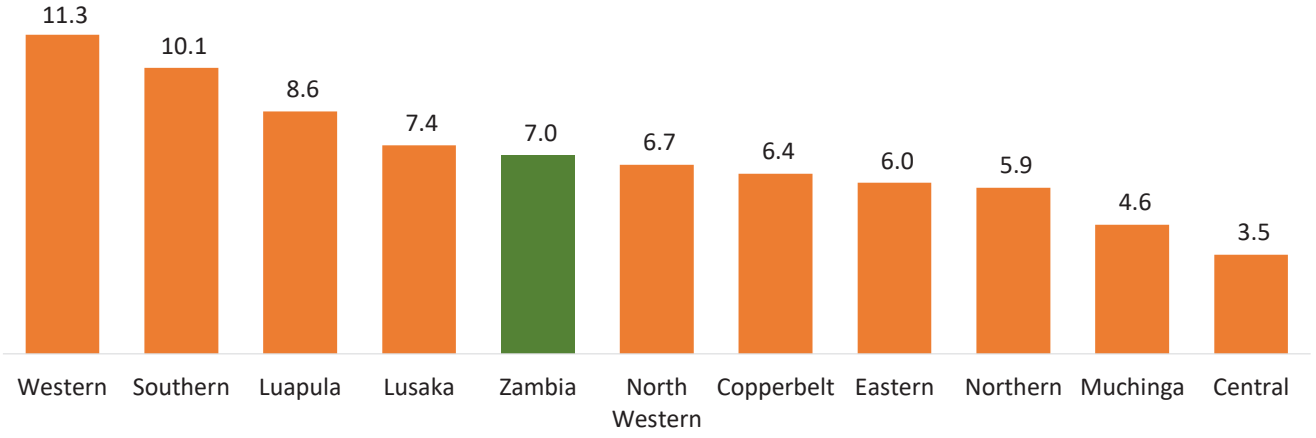


Table 7.2 shows the percentage distribution of persons reporting illness or injury two weeks prior to the survey by sex and age-group in 2022. Out of the total 9,516, 721 male population, 6.5 percent reported being ill or injured prior to the survey relative to 7.5 percent of the total 10,094,048 female population.

Analysed by age-group, results generally show that the proportions of persons that reported being ill or injured two weeks prior to the survey increased the older a person became starting from the age-group 20-24 years or older. Persons in th age range 65 years or older accounted for the largest proportion of the population that reported being ill or injured at 19.3 percent.

Table 7.2: Percentage Distribution of Persons who Reported Illness /Injury in the Two-Week Period Preceding the Survey by Sex and Age-group, Zambia 2022

		No ill/injured	ill/Injury	Percent	Total number
All Zambia	**Total**	**92.9**	**7.0**	**100**	**19,610,769**
Sex	Male	93.4	6.5	100	9,516,721
	Female	92.4	7.5	100	10,094,048
5yr_Age_Group	**Total**	**92.9**	**7**	**100**	**19,610,769**
	0 - 4	90.9	9	100	1,918,044
	05-9	94.4	5.5	100	2,926,070
	10-14	94.3	5.5	100	2,899,289
	15 - 19	94.6	5.4	100	2,632,185
	20 - 24	94.7	5.2	100	2,029,842
	25 - 29	94.3	5.6	100	1,527,388
	30 - 34	94	5.9	100	1,132,811
	35 - 39	92.4	7.5	100	1,097,086
	40 - 44	91.6	8.4	100	906,574
	45 - 49	90.8	9.1	100	712,634
	50 - 54	87.8	12.2	100	579,221
	55 - 59	89.6	10.3	100	372,699
	60 - 64	87.7	12.3	100	285,133
	65 +	80.7	19.3	100	591,793

7.3. Main illness

Table 7.3 shows the proportion of persons by main type of ill or injured reported two weeks preceeding the survey in 2022. At national level, 31.4 percent cited malaria as the main cause of illness reflecting the largest proportion while 28.8 percent cited cough/cold/chest infection as their main cause of illness represented the second largest proportion.

By rural/urban, similar to the pattern at national level, malaria and cough/cold/chest infection remained the top two main illnesses cited as the main cause both in rural and urban areas.

Table 7.3: Percentage Distribution of the Population by reported Main Illness, Rural/Urban, Zambia 2022

Type of Illness	All Zambia	Rural	Urban	Total Number
Total	**100**	**100**	**100**	**1,310,989**
Malaria	31.4	35.8	25.3	412,098
Cough/Cold/Chest Infection	28.8	25.2	33.8	377,545
Fever	5.4	4.9	6.2	71,349
Headache	4.8	4.8	4.8	63,036
Abdominal Pains	4.2	4.1	4.4	55,423
Other	2.8	2.3	3.5	36,376
Blood Pressure	1.8	0.6	3.4	23,194
Toothache/Mouth Infection	1.6	1.6	1.5	20,790
Backache	1.6	2.5	0.3	20,609
Leg Pain	1.6	1.8	1.3	21,061
Diarrhoea	1.4	1.2	1.8	19,006
Paralysis Of Any Kind	1.4	1.6	1.0	17,838
Eye Infection	1.4	1.7	0.8	17,743
Asthma	1.1	1.1	1.0	13,778
Skin Infection	1.1	1.3	0.8	14,523
Constipation/Stomach Upset	1.0	0.8	1.3	13,237
Lack Of Blood/Aneamia	0.8	0.6	1.0	10,069
Body Pain	0.8	1.1	0.6	11,141
Pneumonia/Chest Pain	0.7	0.7	0.7	9,396
Skin Rash	0.6	0.4	1.0	7,973
Stroke	0.6	0.5	0.7	7,533
Diarrhoea Without Blood	0.5	0.3	0.7	6,043
Diarrhoea And Vomitting	0.5	0.4	0.6	6,652
Vomiting	0.5	0.4	0.5	6,332
Seizure/Epilepsy	0.5	0.7	0.1	6,009
Tuberculosis (Tb)	0.4	0.5	0.2	4,838
Bronchitis	0.3	0.3	0.3	4,043
Diarrhoea With Blood	0.3	0.3	0.2	3,684
Boils	0.3	0.4	0.2	3,999
Kidney Problem	0.3	0.1	0.7	4,520
Diabetes	0.3	0.2	0.3	3,329
Ear Infection	0.2	0.2	0.3	3,195
Meninjitis	0.2	0.2	0.2	2,163
Mental Illness	0.2	0.3	0.1	2,913
Covid-19	0.1	0.1	0.0	1,022
Liver Infection/Side Pain	0.1	0.1	0.1	1,149
Shingles/Herpes Zoster	0.1	0.2	0.0	1,433
Measles	0.1	0.1	0.1	1,179
Jaundice/Yellowness	0.1	0.2	-	1,581
Cancer Of Any Kind	0.1	0.1	0.1	1,496
Blood Pressure And Diabetes	0.1	0.1	0.2	1,568
Piles/Haemoroids	0.0	0.0	-	128

Figure 7.2 shows the proportional distribution of the top 10 most commonly reported main illnesses in rural areas in 2022 in descending order. Results show that 35.8 percent of the population in rural areas cited malaria as the main illness representing the largest proportion followed by those who cited cough/cold/ chest infection at 25.2 percent.

The least reported illness was paralysis and toothache/mouth infection both at 1.6 percent.

Figure 7.2: Proportional Distribution of the Top 10 most commonly reported Main illnesses in Rural areas, Zambia 2022

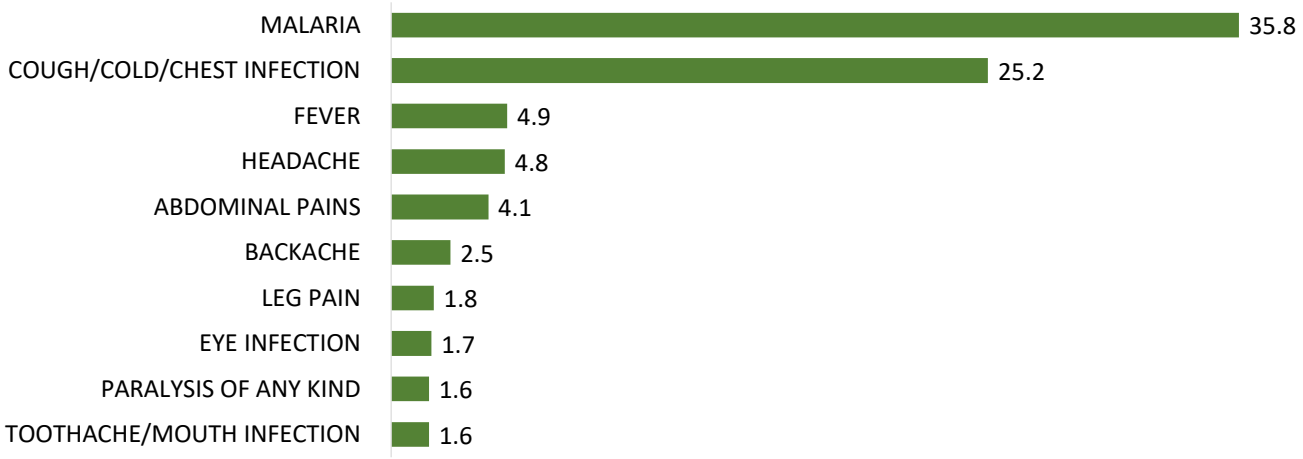


Figure 7.3 shows the proportional distribution of the top 10 most commonly reported main illnesses in urban areas in 2022 in descending order with cough/cold/ chest infection at 33.8 percent as the largest proportion in urban areas followed by those who cited malaria at 25.3 percent. For the rest of the results.

Figure 7.3: Proportional Distribution of the top 10 most commonly reported Main illnesses in urban areas, Zambia 2022

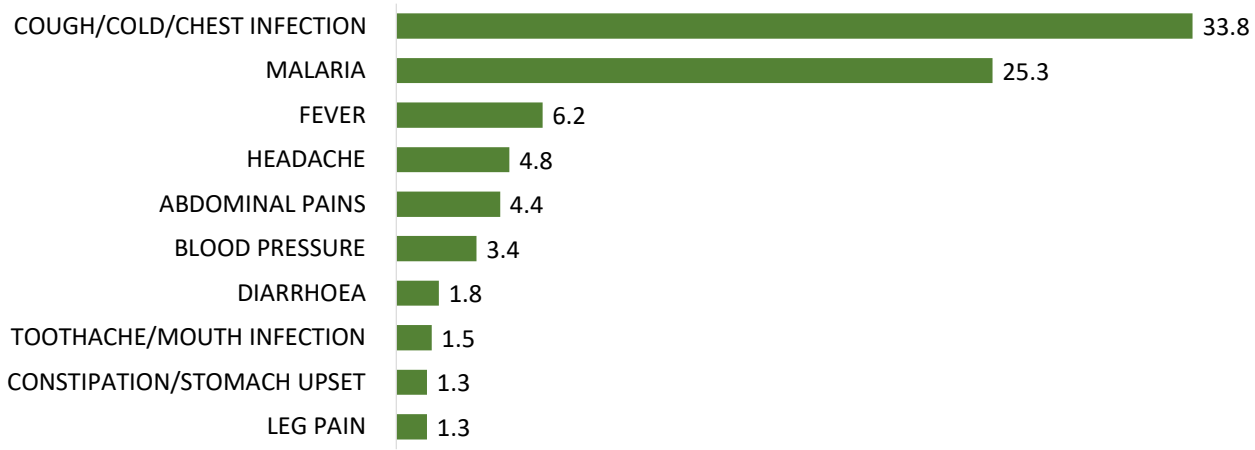


Table 7.4 shows percentage distribution of the population by main illness reported and poverty status in 2022. The following were the top 10 most commonly cited illnesses: fever, cough/cold/chest infection; covid-19; malaria; measles; constipation/stomach upset; body pains, mental illness; kidney problem and headache.

Further, of the top 10 most commonly identified illnesses affecting the population, headache cough/ cold/chest infection and constipation affected the extremely poor most at 48.1, 47.6 and 47.5 percent, respectively.

Table 7.4 Percentage Distribution of the Population by Reported Main illness and Poverty Status, Zambia 2022

Type of Illness	Extreme poor	Moderately poor	Non-poor	Total
Fever	40.4	16.6	43.0	1,291,100
Cough/Cold/Chest Infection	47.6	15.4	37.0	403,021
Covid-19	30.9	19.7	49.4	371,974
Malaria	34.6	16.0	49.3	69,765
Measles	37.2	21.9	40.9	62,576
Constipation/Stomach Upset	47.5	11.1	41.4	55,423
Body Pain	37.1	6.8	56.0	36,376
Mental Illness	29.0	7.8	63.2	23,194
Kidney Problem	45.1	24.5	30.4	21,061
Headache	48.1	16.3	35.6	20,790
Cancer Of Any Kind	76.9	10.6	12.5	19,729
Diarrhoea Without Blood	20.2	17.7	62.1	18,621
Stroke	24.0	38.2	37.9	17,838
Ear Infection	44.7	9.9	45.4	17,743
Piles/Haemoroids	59.6	10.1	30.3	14,523
Bronchitis	45.9	20.1	34.0	13,778
Liver Infection/Side Pain	57.3	2.2	40.5	12,938
Seizure/Epilepsy	54.5	11.8	33.7	11,141
Boils	49.8	15.2	35.0	9,907
Diarrhoea	37.0	16.9	46.1	9,396
Skin Infection	33.8	17.6	48.7	7,973
Eye Infection	24.3	22.9	52.8	6,979
Vomiting	40.0	13.9	46.1	6,652
Diarrhoea With Blood	23.7	19.0	57.2	6,043
Leg Pain	78.7	9.2	12.1	6,009
Abdominal Pains	38.1	14.0	47.9	5,958
Asthma	33.5	14.3	52.3	4,838
Diabetes	21.2	0.0	78.8	4,520
Pneumonia/Chest Pain	62.2	10.8	27.0	4,043
Skin Rash	34.2	25.2	40.6	3,999
Diarrhoea And Vomitting	52.6	24.9	22.6	3,684
Blood Pressure	47.5	1.1	51.5	3,329
Toothache/Mouth Infection	63.7	5.2	31.0	3,195
Blood Pressure and Diabetes	54.2	0.0	45.8	2,704
Other	61.7	0.0	38.3	2,163
Backache	0.0	100	0.0	1,581
Meninjitis	45.7	0.0	54.3	1,496
Paralysis Of Any Kind	0.0	34.4	65.6	1,433
Jaundice/Yellowness	28.9	8.6	62.5	1,179
Tuberculosis (TB)	5.5	0.0	94.5	1,022
Lack Of Blood/Aneamia	16	84	0.0	813
Shingles/Herpes Zoster	100	0.0	0.0	128

Table 7.5 shows the percentage distribution of the population by main type of illness reported by age-group in 2022. Overall, higher proportions of the population cited Malaria and Fever as their main illness across all age-groups. Results show that the peak age-group for Malaria was 5-9 years.

Table 7.5: Percentage Distribution of the Population by Main type of illness reported by Age-group, Zambia 2022

	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 +	
Total															**1,310,989**
Fever	29.7	37.1	40.6	41.3	40.4	35.5	28.1	32.3	32.4	15.8	21.5	23.6	14.2	12.7	412,098
Malaria	35	40.7	26.1	21.1	19.9	23.3	33.2	31	22.1	26.8	37.6	22	28	26.4	377,545
Cough/Cold/ Chest	9.2	4.6	4.8	6.1	3.9	3.5	7.8	3.5	4.8	4.7	7.3	1.5	5.6	4.8	71,349
Covid-19	1.5	1.3	10.7	5.5	8.5	4.1	5.6	5.6	3.4	7.2	3.4	2.8	2.9	3.5	63,036
Tuberculosis (TB)	1	2	1.9	3	6.6	9.6	4.9	3.5	7.5	1.4	2.3	12.6	11.6	6.6	55,423
Asthma	1.5	1.2	4	1.3	1.2	2.9	0.6	2.8	5.9	6.4	2.4	2.9	3.3	5.7	36,376
Bronchitis	-	-	-	2.2	-	1	0.9	1.1	6.5	6.7	1.3	3.1	7.1	4.7	23,194
Pneumonia/Chest Pain	0.2	0.2	1.2	0.3	2.2	1.1	5.7	0.1	1.5	1.6	3.1	1.3	0.3	6.1	21,061
Diarrhoea	-	0.5	0.1	1.7	1.4	1.8	1.9	3.8	3.6	5.8	3.4	5.4	-	0.2	20,790
Diarrhoea without Blood	0.9	-	-	1.6	0.1	0.3	2.1	1	1.2	-	3.4	8.4	5.6	5.9	20,609
Diarrhoea with Blood	4.9	0.1	-	1.3	2.1	1.9	1.2	1.5	0	2.8	0.7	-	-	1.1	19,006
Diarrhoea and Vomitting	0.3	0.9	1.1	-	2.2	0.5	1.6	1	-	1.7	4.1	2.4	2.4	4	17,838
Vomiting	0.5	1.6	2.1	1.3	2.1	0.5	-	1.2	-	4.1	0.5	-	3.7	1.7	17,743
Abdominal Pains	2.3	1.9	1	0.7	1.4	1.3	1.5	-	-	2	-	0.6	-	0.5	14,523
Constipation/ Stomach Upset	0.5	1.3	0.4	0.9	0.9	1.7	1.4	1.8	0.1	0.7	0.9	0.4	4.1	1.6	13,778
Liver Infection/ Side Pain	1.6	-	-	3	2	1.1	0.3	0.9	1.4	-	0.3	-	-	1.5	13,237
Lack of Blood/ Aneamia	-	0.4	-	0.7	0.1	0.9	-	0.1	0.4	2.5	0.7	3.4	2.2	4	11,141
Boils	-	-	1.5	1.7	1.7	-	-	2	0.4	0.5	0.1	3.2	-	0.3	10,069
Skin Rash	0.8	0.3	0.4	0.1	0	0.7	0.8	1.2	3.2	2	0.9	-	-	0.6	9,396
Skin Infection	1.7	1.8	0.5	0.5	0.1	0.2	-	-	-	1	0.1	-	-	-	7,973
Piles/Haemoroids	-	-	-	1.2	-	0.2	-	0.1	0.8	0.7	-	0.4	-	4.2	7,533
Shingles/Herpes Zoster	3	0.7	-	-	-	-	-	-	0.4	0.5	-	-	-	-	6,652
Paralysis of Any Kind	1.2	1	-	0.9	-	1	0.8	-	-	-	-	0.9	-	-	6,332
Stroke	2.2	0.4	-	-	-	0.4	-	0.3	0.2	0.1	-	-	-	0.9	6,043
Eye Infection	0.3	-	0.8	0.5	1.1	0.4	0.7	1.4	-	-	0.7	-	-	-	6,009
Ear Infection	-	-	0.1	0.7	-	0.5	-	-	0.1	0.7	1.1	2.9	2.4	0.3	4,838
Toothache/Mouth Inf.	-	-	0.2	0.9	0.5	2.9	-	-	-	-	-	-	0.6	-	4,520
Headache	0.3	0.5	0.1	0.6	0.2	0.7	-	-	-	-	1.4	-	-	-	4,043
Measles	0.6	0.4	0.6	-	-	1.1	-	-	-	-	-	-	-	0.6	3,999
Jaundice/Yellow-ness	0.7	-	0.2	-	-	-	0.5	-	1.7	-	1	-	-	-	3,684
Backache	-	-	-	-	-	-	0.1	2	-	1.9	0.7	-	-	0.1	3,329
Cancer of Any Kind	0.1	0.6	0.6	0.3	-	0.3	-	-	-	-	0.6	-	-	-	3,195
Meninjitis	-	-	-	0.3	1	0.5	-	-	-	0.4	-	0.6	1.6	-	2,913
Other	-	-	0.6	0.1	-	-	0.4	-	1.4	-	-	-	-	-	2,163
Body Pain	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1,581
Seizure/Epilepsy	-	-	-	-	-	-	-	-	-	-	0.5	-	3.4	0.1	1,568
Leg Pain	-	-	-	-	-	-	-	-	1.2	-	-	1	-	0.3	1,496
Kidney Problem	-	0.3	-	-	-	-	-	1.2	-	-	0.1	-	-	-	1,433
Diabetes	-	-	0.3	0.1	0.2	-	-	-	-	0.2	-	0.7	-	0.1	1,179
Blood Pressure	-	-	-	0.2	-	-	-	0.5	-	0.2	-	-	1	-	1,149
Mental Illness	-	-	-	-	-	0.1	-	-	-	1.6	-	-	-	-	1,022
Bpand Diabetes	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	128

7.4. Health Consultations

Health consultations in this survey imply seeking medical advice from any health institution or personnel. Institutions consulted included medical, traditional, church and spiritual institutions. If a person initially consulted and later used self-administered medicine, this person was regarded as having consulted.

Table 7.6 shows the percentage distribution of persons reporting illness two weeks prior to the survey by rural/urban, province and consultation status in 2022.

At national level, out of 1,379,484 persons that reported illness two weeks prior to the survey, 25.4 percent did not consult any medical personnel. Further, a higher proportion persons residing in urban areas relative to those in rural did not consult any medical personnel over their illness or injury at 30.1 and 22.1 percent, respectively.

Analysed by province, Lusaka and Southern provinces represents the two provinces with the largest and second largest proportions of the population that did not consult any medical personnel at 37.3 and 32.6 percent, respectively.

Table 7.6: Percentage Distribution of Persons who Reported an illness/injury Two Weeks Prior to the Survey by Rural/urban, Province and Consultation Status, Zambia 2022

	Consulted	Did Not Consult	Total	Total Number of ill persons
All Zambia	**74.6**	**25.4**	**100.0**	**1,379,484**
Rural	78.0	22.0	100.0	803,863
Urban	69.9	30.1	100.0	575,622
Province	**74.6**	**25.4**	**100.0**	**1,379,484**
Central	76.0	24.0	100.0	79,175
Copperbelt	77.0	23.0	100.0	177,350
Eastern	80.8	19.2	100.0	148,385
Luapula	80.2	19.8	100.0	130,068
Lusaka	62.7	37.3	100.0	226,925
Muchinga	79.4	20.6	100.0	42,037
Northern	74.0	26.0	100.0	95,628
North Western	82.3	17.7	100.0	84,866
Southern	67.4	32.6	100.0	241,274
Western	84.3	15.7	100.0	153,778

Table 7.7 shows the percentage distribution of persons reporting illness two weeks prior to the survey by sex, age-group and consultation status in 2022.

Analysed by sex, results show that 27.5 percent of the females compared to 22.7 percent of the males did not consult health personnel.

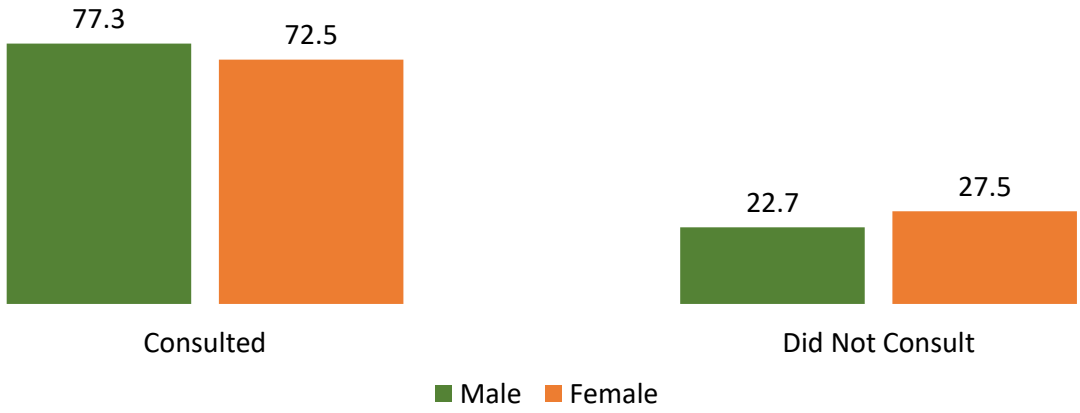
Analysis by age-group, results show that the largest proportion of persons who consulted were from the age-group 55-59 years at 83.9 percent, followed by those in the age-group 0-4 years at 80.7 percent. Persons in the age-group 50-54 years made the lowest consultations at 63.7 percent.

Table 7.7: Percentage Distribution of Persons reporting illness in the last two weeks prior to the Survey by Sex, Age-group and Consultation Status, Zambia 2022

	Consulted	Did Not Consult	Total	Total Number of ill persons
All Zambia	**74.6**	**25.4**	**100**	**1,379,484**
Male	77.3	22.7	100	617,809
Female	72.5	27.5	100	761,676
0 - 4	80.7	19.3	100	172,880
4-9	75.8	24.2	100	161,063
10-14	72.9	27.1	100	160,603
15 - 19	75.2	24.8	100	141,644
20 - 24	75.0	25	100	106,091
25 - 29	75.8	24.2	100	86,934
30 - 34	73.7	26.3	100	67,897
35 - 39	78.9	21.1	100	82,723
40 - 44	69.8	30.2	100	76,385
45 - 49	71.6	28.4	100	64,779
50 - 54	63.7	36.3	100	70,781
55 - 59	83.9	16.1	100	38,202
60 - 64	72.1	27.9	100	35,109
65 +	71.0	29.0	100	114,393

Figure 7.4 shows the proportion of persons reporting illness/injury in the last two weeks prior to the survey by sex and consultation status in 2022. Results show that a higher proportion of males than females consulted medical personnel over their illness or injury.

Figure 7.4: Percentage Distribution of Persons Reporting Illness in the last Two Weeks prior to the Survey by Sex and Consultation Status, Zambia 2022



7.4.1 Medical Institution Visited

Persons that reported having consulted over the illness or injury in the two-week period prior to the survey were asked the type of institution (or personnel) they visited. Table 7.8 shows the percentage distribution of persons who visited a health institution by type of institution (or personnel) visited by rural/urban, stratum and province in 2022.

At national level, results show that 92.0 percent of the persons who reported illness or injury in the two-week period prior to the survey consulted public health facilities out of which the largest proportion visited a government hospital at 48.7 percent. In rural areas, 92.6 percent visited a public health facility compared to 91.2 percent in urban.

Analysed by stratum, similar to the picture at national level, a minimum of 74.9 percent of the persons who reported being ill or injury two weeks prior to the survey visited a public medical institution regardless of the stratum. Notably, 22.5 percent of persons from high cost visited a private medical institution at 22.5 percent compared to those from medium cost at 11.3 percent and large scale at 5.6 percent.

Further analysed by province, the majority of the population that reported being ill or injured two weeks prior to the survey across all the 10 provinces visited a public health medical institution. North-western Province accounted for the smallest proportion at 86.3 percent of which Copperbelt (61.1%) and Central (59.5%) provinces had highest and second proportion visiting government clinic or health centre, respectively.

Table 7.8: Percentage Distribution of Persons who visited a Health Institution by type of Institution (Or Personnel) visited by Rural/ Urban, Stratum and Province, Zambia 2022

Residence/ Stratum/ Province	Govt Hosp	GRZ clinic/H/ centre	Govt Health Post	Public Facilities	Mission Hospital	Industrial Insti.	Private Institution	Institution Outside Zambia	Medical Personnel	Traditional Healer	Faith/ Spiritual/ Church Healer	Other	Total
Total	**37**	**48.7**	**6.3**	**92**	**3.1**	**0.1**	**3.2**	**0**	**0.7**	**0.7**	**0**	**0.1**	**1,029,441**
Rural	32.6	50.8	9.2	92.6	3.9	0	1.5	0	0.8	1.1	0	0.2	627,063
Urban	43.9	45.5	1.8	91.2	2	0.2	5.9	0	0.5	0.1	0	0.1	402,378
Total	**37**	**48.7**	**6.3**	**92**	**3.1**	**0.1**	**3.2**	**0**	**0.7**	**0.7**	**0**	**0.1**	**1,029,441**
Small Scale	31.5	51.7	9.5	92.7	4	0	1	0	0.9	1.3	0	0.2	496,454
Medium Scale	34.1	49.3	8.1	91.5	4.5	0	2.4	0.2	1.1	0.2	0	0.1	58,293
Large Scale	43.8	41.9	0	85.7	6.9	0	5.6	0	1.7	0	0	0	5,418
Non-Agric	38.9	46.1	7.9	92.9	2.2	0	3.9	0	0	0.6	0.4	0	66,898
Low Cost	43.4	47.5	1.9	92.8	2.4	0.1	4	0	0.5	0.2	0	0.1	337,237
Medium Cost	50.5	36.1	1.3	87.9	0	0	11.3	0	0.8	0	0	0	39,524
High Cost	39.7	34	1.2	74.9	0	2.1	22.5	0	0	0	0	0.3	25,617
Total	**37**	**48.7**	**6.3**	**92**	**3.1**	**0.1**	**3.2**	**0**	**0.7**	**0.7**	**0**	**0.1**	**1,029,441**
Central	24.7	59.5	5.6	89.8	7.2	0	2	0	1	0	0	0	60,187
Copperbelt	33.6	61.1	2.1	96.8	0	0	2.7	0	0.6	0	0	0	136,582
Eastern	34.6	47.3	8.8	90.7	5.3	0	2.4	0	0	0.8	0	0.8	119,884
Luapula	28.3	51.3	9.2	88.8	1	0	5.5	0	1.4	3.1	0	0.3	104,327
Lusaka	56.8	36.7	0.7	94.2	1.3	0	4.5	0	0	0	0	0	142,310
Muchinga	47.8	35.1	12.2	95.1	3	0	0.5	0	1.3	0	0	0	33,378
Northern	42.9	48.5	4.4	95.8	1.6	0	0.5	0.2	1.4	0.5	0	0	70,723
North Western	38.9	44.6	2.8	86.3	9	0.8	2.5	0	0.9	0.3	0.2	0	69,804
Southern	27	50.9	11.5	89.4	3	0.1	6.2	0	1.3	0	0	0	162,674
Western	39.7	46	7.3	93	4.1	0	0.5	0	0	2.1	0.1	0.1	129,572

7.4.2. Personnel Consulted

Table 7.9 shows the percentage distribution of personnel consulted by those who reported being Ill or Injured two weeks prior to the survey by rural/urban and province in 2022.

At national level, 41.5 percent of the persons that reported being ill or injured consulted a Nurse/Midwife followed by Clinical Officers 35.4 percent while 19.7 consulted a Medical doctor. Further, the largest proportion in rural areas consulted a Nurse/Midwife at 46.3 percent while the largest proportion in urban areas consulted a Clinical officer at 34.6 percent.

Analysed by province, similar to the picture at national level, higher proportions of those who reported being ill or injured two weeks prior to the survey consulted a Nurse/Midwife regardless of the province with Luapula and Western provinces representing the highest percentage both at 63.1. Further, 37.6 percent in Lusaka Province consulted a medical doctor, 47.3 percent in Southern Province consulted a clinical officer while 12.7 percent in Muchimga Province consulted a community health worker reflecting the largest proportions of each category of personnel consulted.

Table 7.9: Percentage Distribution of Personnel Consulted by those who reported being Ill or Injured in the last Two weeks prior to the Survey by Rural/Urban and Province, Zambia 2022

	Medical Doctor	Clinical Officer	Nurse/ Midwife	Community Health Worker	Traditional Healer	Faith Healer	Spiritual Healer	Church Healer	9. Other	Percent	Total Number Of Ill Persons
Total	**19.7**	**35.4**	**41.5**	**2.6**	**0.7**	**0**	**0**	**0**	**0.1**	**100**	**1,029,441**
Rural	12.5	35.8	46.3	4	1.1	0	0	0	0.2	100	627,063
Urban	30.9	34.6	34	0.2	0.1	0	0	0	0.1	100	402,378
Total	19.7	35.4	41.5	2.6	0.7	0	0	0	0.1	100	1,029,441
Small Scale	10.7	36.2	47.5	4.3	1.3	0	0	0	0	100	496,454
Medium Scale	16.9	36.7	39.3	5.1	0.1	0	0	0	1.9	100	58,293
Large Scale	36.8	37.2	24.3	1.7	0	0	0	0	0	100	5,418
Non-Agric	20.6	32.5	45.2	1	0.6	0.2	0	0	0	100	66,898
Low Cost	29.3	33.7	36.4	0.3	0.2	0	0	0	0.1	100	337,237
Medium Cost	40.6	34.1	25.3	0	0	0	0	0	0	100	39,524
High Cost	36.3	47.2	16.5	0	0	0	0	0	0	100	25,617
Total	19.7	35.4	41.5	2.6	0.7	0.0	0.0	0.0	0.1		1,029,441
Central	25.2	35.4	35.5	3.9	0.0	0.0	0.0	0.0	0.0		60,187
Copperbelt	28.6	39.7	31.7	0.0	0.0	0.0	0.0	0.0	0.0		136,582
Eastern	20.0	35.9	39.3	4.1	0.8	0.0	0.0	0.0	0.0		119,884
Luapula	8.3	22.9	63.1	2.2	3.1	0.0	0.0	0.0	0.4		104,327
Lusaka	37.6	29.7	32.6	0.0	0.0	0.0	0.0	0.0	0.0		142,310
Muchinga	18.8	37.0	31.5	12.7	0.0	0.0	0.0	0.0	0.0		33,378
Northern	4.4	44.9	46.8	1.8	0.5	0.0	0.0	0.0	1.5		70,723
North Western	21.4	39.0	36.6	2.7	0.0	0.0	0.3	0.0	0.0		69,804
Southern	17.6	47.3	32.1	3.0	0.0	0.0	0.0	0.0	0.0		162,674
Western	7.3	24.0	63.1	3.4	2.1	0.1	0.0	0.0	0.0		129,572

7.4.3 Mode of Payment for Consultation

Table 7.10 shows the percentage distribution of persons who consulted over their illness by mode of payment by rural/urban, stratum and province in 2022.

Overall results show that 65.9 percent of those that consulted did not pay for the services while 21 percent paid directly over the counter while 1.8 percent used national health insurance to settle their bills.

Table 7.10: Percentage Distribution of Persons who Consulted over their Illness by Province by Mode of Payment used to Pay for Consultation, Zambia 2022

	National Health Insurance (Nhima)	Pre-Payment Scheme Low Cost	Pre-Payment Scheme High Cost	Paid For By Employer	Paid By Insurance	Paid Part And The Other Part By Other (Employer, Friends, Insurance)	Paid Directly	Did Not Pay	Paid For By Other (Specify)	Not Applicable	Total Number Of Ill Persons
Total	**1.8**	0.3	0.3	0.4	0.8	0.7	21.0	65.9	0.3	8.5	1,029,441
Rural	0.7	0.0	0.0	0.2	0.2	0.3	14.4	75.2	0.3	8.7	627,063
Urban	3.6	0.7	0.8	0.7	1.7	1.3	31.2	51.4	0.2	8.3	402,378
Total	1.8	0.3	0.3	0.4	0.8	0.7	21.0	65.9	0.3	8.5	1,029,441
Small Scale	0.5	0.0	0.0	0.1	0.3	0.3	13.6	76.5	0.4	8.3	496,454
Medium Scale	1.6	0.0	0.0	0.1	0.0	0.3	23.1	67.8	0.0	7.1	58,293
Large Scale	0.9	0.0	0.0	0.0	0.0	0.0	30.1	68.9	0.0	0.0	5,418
Non-Agric	1.0	0.0	0.0	1.3	0.0	0.0	12.0	72.1	0.0	13.6	66,898
Low Cost	2.9	0.7	0.2	0.5	0.4	1.5	31.6	53.0	0.2	9.1	337,237
Medium Cost	4.9	0.0	0.0	3.2	0.0	0.0	34.8	54.4	0.0	2.7	39,524
High Cost	11.0	2.1	11.0	0.0	22.1	0.0	20.3	27.1	0.0	6.3	25,617
Total	1.8	0.3	0.3	0.4	0.8	0.7	21.0	65.9	0.3	8.5	1,029,441
Central	0.0	0.0	0.0	0.0	0.0	0.0	30.6	62.5	0.0	6.9	60,187
Copperbelt	3.3	0.4	0.0	0.6	0.3	3.4	31.1	56.8	0.0	4.0	136,582
Eastern	0.3	0.0	0.1	0.0	0.0	0.5	7.5	84.2	0.4	7.1	119,884
Luapula	1.3	0.0	0.0	0.0	1.5	0.2	16.1	65.8	0.0	15.1	104,327
Lusaka	5.5	1.6	0.0	0.0	0.9	0.0	34.5	45.8	0.0	11.7	142,310
Muchinga	4.1	0.0	0.0	0.5	0.0	2.2	2.4	67.3	0.0	23.5	33,378
Northern	0.3	0.0	0.0	0.0	0.0	0.0	8.0	73.1	0.0	18.6	70,723
North Western	0.7	0.0	4.0	0.6	0.8	0.0	14.8	71.9	0.0	7.3	69,804
Southern	0.6	0.0	0.3	1.5	2.9	0.0	28.5	64.4	0.0	1.9	162,674
Western	1.4	0.0	0.0	0.2	0.0	0.5	13.4	76.6	1.8	6.1	129,572

7.4.4. Average Amount Paid for Consultation and/or Medication

Data on the amount paid for either consultation or medication was collected from all persons who reported an illness or injury. Table 7.11 shows the average amount spent on consultation and/or medication, by personnel consulted by rural/urban in 2022.

At national level, the average amount spent on consultation and/or medication regardless of personnel consulted was K136.39 in 2022, an increase from K113.70 in 2015. The average amount spent on consultation and/or medication in rural areas both in 2015 and 2020 was lower than the average amounts spent by urban dwellers.

Analysing the average amount paid for consultation and/or medication by type of personnel consulted, results show that the cost of consulting and /or getting medication from a traditional healer, on average, was not only more expensive than any other type of personnel but had also almost doubled between 2015 and 2022 at K349.56 in 2015 relative to 632.63 in 2022. Further. The cost of consulting and/or getting medication from a medical doctor went up from K303.10 in 2015 to K334.05 in 2022.

Notably, the cost of consulting and/ or getting medication through a nurse/midwife increased by more than five times between 2015 and 2022 from K23.46 to K123.59 in 2022. The average cost of consulting a faith healer (K450) in 2022 was more than that of a medical doctor (K334.05).

Table 7.11: Average Amount Spent on Consultation and/or Medication by Persons Consulted and Rural/ Urban, Zambia 2022

Type of Consultation/ Medication	2015			2022		
	Total	Rural	Urban	Total	Rural	Urban
Total	**113.7**	**72.64**	**176.22**	**136.39**	**121.8**	**159.13**
Medical Doctor	303.1	234.59	352.59	334.05	196.72	421.03
Clinical Officer	25.95	16.12	44.2	41.21	35.49	50.45
Nurse/Midwife	23.46	14.14	42.22	123.59	165.81	34.15
Community Health Worker	7.89	7.67	14.15	6.47	5.64	27.48
Traditional Healer	349.56	361.61	147.77	632.63	677.69	45.3
Faith Healer	0	0	0	450	450	0
Spiritual Healer	30	30	0	0	0	0
Church Healer	8.69	8.69	0	0	0	0
Other	14.19	10.88	21.75	4.34	0	14.67

Chapter 8: ECONOMIC ACTIVITIES OF THE POPULATION

8.1. Introduction

The general welfare of any society largely depends on active economic participation of its citizens. Engagement of individuals in gainful economic activities directly influence households' well-being. Human beings have always exchanged their labour for income in order to access various basic needs such as food, education service, health services, shelter, clothing, etc.

It is therefore imperative to assess and monitor the participation of the population in various economic activities in the country. Sometimes, inordinate changes in the levels of economic participation could have implications on the poverty status and general well-being of the citizenry.

A number of topics are incorporated in measurement of economic activities of the population. Unlike the previous LCMSs, the 2022 LCMS adopted the ILO's 19th International Conference of Labour Statisticians (ICLS) resolution I of 2013 in respect of measurement of employment, which depicts a narrower definition of employment that has a significant effect on the overall measurement of economic activities. Given this adoption, the current measurement of employment is determined on the basis of work performed to produce goods and/or services by individuals for pay or profit only, while the previous measurement included not only work done to produce goods and services for pay or profit but also work performed to produce goods and/or services for own use consumption. It is therefore critical to note that comparison of statistics on economic activities of the 2022 LCMS with the previous surveys and future reports will be limited.

The following thematic areas were covered in this chapter:

- Main economic activity;
- Labour force participation;
- Employment and unemployment;
- Sector of employment, formal and informal;
- Prevalence of secondary jobs;
- Reasons for changing jobs and
- Income-generating activities for those currently not working.

8.2. Concepts and Definitions

The following concepts and definitions constituted guiding principles for collecting, processing and analyzing economic activities and labour force data. Concepts used in this report conform to the current ILO definitions on economic activity.

8.2.1. Working-age population

Working-age population refers to all persons above a 'specified' minimum age of either sex irrespective of their labour force status in a given territory at a specified point in time. In the context of measuring living conditions in Zambia, the minimum age for working- age- population is set at 12 years This is to allow for a comprehensive measurement of all economic activities that may have ever existed even among child-headed households, without which could compromise overall measurement of citizens' welfare.

8.2.2. The economically active population (Labour Force)

Economically active population refers to all persons aged 12 years or older of either sex whose economic activity status was to supply labour for the production of goods or provision of services during a specified 'short' reference period.

8.2.3. Labour force participation rate

Labour force participation rate refers to the total labour force expressed as a percentage of the working-age population. It measures the extent of an economy's working-age population that is economically active. A low activity rate implies that a large proportion of persons is not participating in the labour market.

8.2.4. The employed population

This comprises persons (including persons temporarily absent from work or business) of working-age who performed some work or conducted some business for pay, profit or family gain during a given reference period.

8.2.5. Status of employment

Status of employment describes whether the employed person is: 1) an employer, 2) paid employee, 3) self-employed or 4) contributing family worker (i.e. Unpaid family workers), as outlined below:

a. Employer: A person who operates his/her own economic enterprise(s) and uses hired labour;
b. Paid employee: A person who works for a public or private employer and receives a remuneration in wages or salaries either in cash or kind;
c. Self-employed: A person who operates his/her own enterprises and hires no labour; and
d. Contributing family worker (Unpaid family workers): A person who normally assists in a family business or farm but does not receive any pay or profit for the hours worked or work performed.

8.2.6. Unemployed population

This constitutes persons above a specified minimum age who, during a specified reference period, were not in employment but were actively seeking paid work/means to do business and were available for paid work/business.

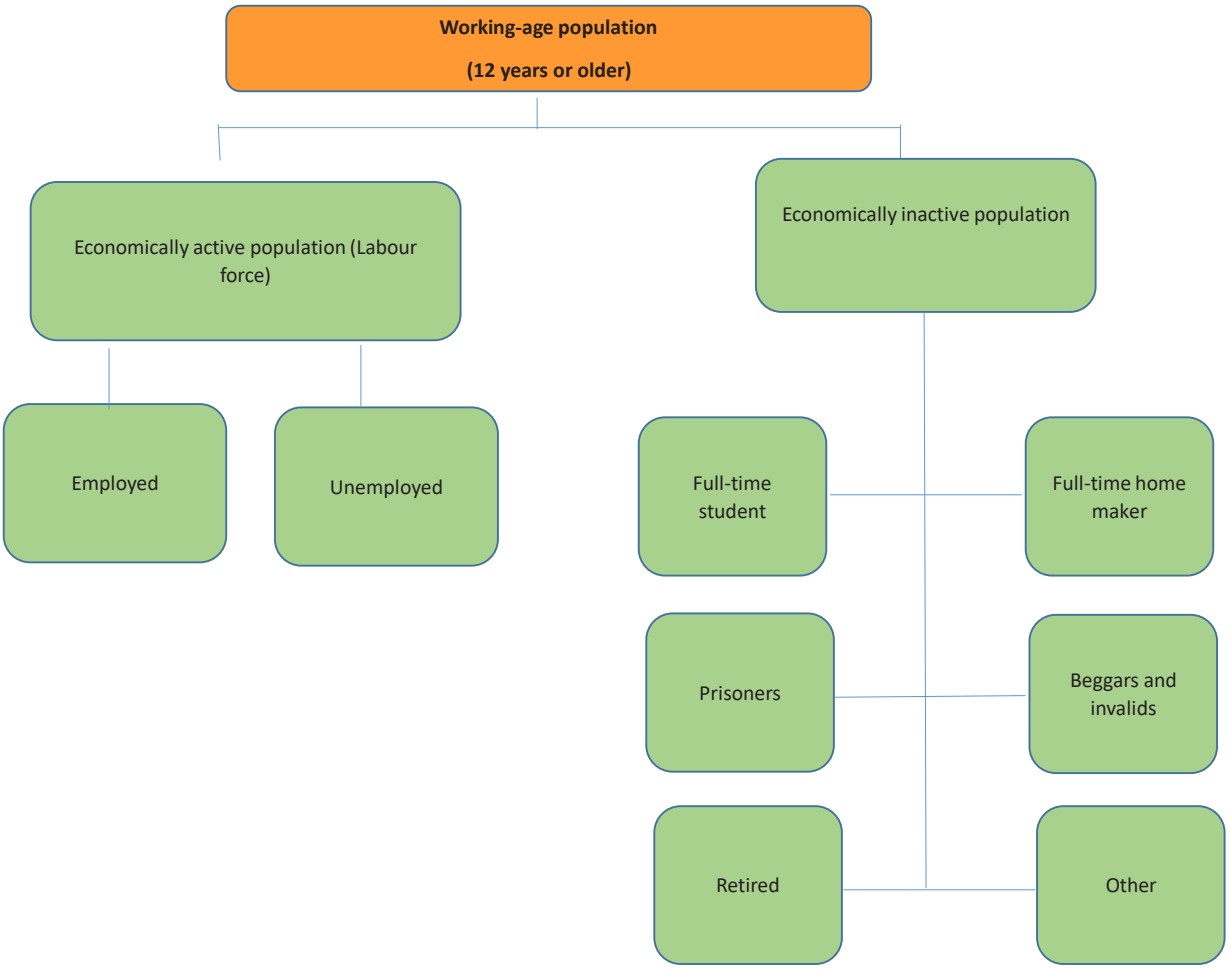
8.2.7. Unemployment rate

Unemployment rate is the number of unemployed persons expressed as a percentage of the labour force.

8.2.8. Inactive population

This refers to persons above a specified minimum age (12 years) who were not economically active (not in the labour force). It includes full time students (but not students on paid leave), full time homemakers, retired persons not doing any gainful work or business, invalids, vagabonds, beggars, etc (**Figure 8.1**).

Figure 8.1: Economic Activity Status



8.2.9. Diagrammatical Representation of Economic Activity

The economic status of the population 12 years or older has been divided into two categories; namely economically active (Labour force) and the economically inactive. The total working age population was 13,648,127.

Table 8.1 show the percentage distribution of the population 12 years and older by main economic activity and inactivity status, sex, residence, stratum and province in 2022. Results show that 31.4 percent of the population (4,285,512) were in the labour force, while 68.6 percent were economically inactive. Urban areas recorded a higher proportion of persons who were economically active at 32.4 percent compared to 30.7 percent in rural areas. Muchinga Province with 36.3 percent had the highest proportion of the population that was economically active, followed by Northern and Eastern provinces at 35.4 and 35.9 percent, respectively.

Analysis by sex shows that 34.8 percent of males and 28.4 percent of females were in the labour force. Rural areas had a lower percentage share (30.7 percent) of the labour force relative to urban areas at 32.4 percent.

Table 8.1: Percentage Distribution of the Population 12 years or older by Main Economic Activity Status, Sex, Rural/Urban, Stratum and Province, Zambia 2022

Residence, sex, stratum and province	Economically active population (Labour force)	Economically inactive population	Population 12 years or older
Total	**31.4**	**68.6**	**13,648,127**
Rural	30.7	69.3	7,937,322
Urban	32.4	67.6	5,710,805
Male	34.8	65.2	6,556,415
Female	28.4	71.6	7,091,712
Stratum			
Small Scale	30.9	69.1	6,078,564
Medium Scale	30.5	69.5	837,088
Large Scale	28.8	71.2	72,090
Non-Agric	30.3	69.7	949,580
Low Cost	33	67	4,637,650
Medium Cost	29.5	70.5	616,113
High Cost	31	69	457,042
Province			
Central	32.5	67.5	1,562,358
Copperbelt	34	66	1,995,879
Eastern	35.9	64.1	1,698,537
Luapula	27.1	72.9	1,030,140
Lusaka	33.2	66.8	2,259,274
Muchinga	36.3	63.7	625,605
Northern	35.4	64.6	1,092,629
North Western	27.1	72.9	852,967
Southern	24.3	75.7	1,599,727
Western	25.1	74.9	931,011

Table 8.2 shows the percentage distribution of the population 12 years or older by main economic activity status, sex, rural/urban, stratum and province in 2022. Among the economically active population, 23.1 percent were in paid employment while unpaid family workers accounted for 4.2 percent. Among males, 27.0 percent were in paid employment compared to 19.5 percent among females.

At provincial level, Lusaka and Copperbelt province had the highest proportions of persons in paid employment at 29.7 and 27.7 percent, respectively, while Muchinga Province had the lowest proportion at 13.2 percent.

Table 8.2: Percentage Distribution of the Economically Active Population 12 years or older by Main Economic Activity Status, Sex, Rural/Urban, Stratum and Province, Zambia 2022

Sex, Rural/ Urban, Stratum and Province	Economically active				Population 12 years or older	
	Paid employment	Unpaid family worker	Not working	Economically inactive population		
Total	**23.1**	**4.2**	**4.1**	**68.6**	**100**	**13,648,127**
Rural	19.8	6.4	4.5	69.3	100	7,937,322
Urban	27.7	1.1	3.6	67.6	100	5,710,805
Male	27	3.8	4	65.2	100	6,556,415
Female	19.5	4.6	4.2	71.6	100	7,091,712
Stratum						
Small Scale	19.4	6.7	4.7	69.1	100	6,078,564
Medium Scale	19	7.9	3.6	69.5	100	837,088
Large Scale	17.2	6.4	5.3	71.2	100	72,090
Non-Agric	23.3	2.9	4.1	69.7	100	949,580
Low Cost	28	1.2	3.7	67	100	4,637,650
Medium Cost	25.2	1	3.4	70.5	100	616,113
High Cost	27.9	0.5	2.7	69	100	457,042
Province						
Central	22.5	6.2	3.8	67.5	100	1,561,523
Copperbelt	27.7	1.2	4.9	66.1	100	1,989,760
Eastern	23.4	7.4	5.2	64.1	100	1,705,031
Luapula	20.3	2.9	3.9	72.9	100	1,030,600
Lusaka	29.7	0.7	2.8	66.8	100	2,259,274
Muchinga	13.2	18.4	4.7	63.7	100	625,605
Northern	24.8	6.2	4.5	64.6	100	1,092,629
North Western	17.9	4	5.1	72.9	100	852,967
Southern	18.8	2.3	3.2	75.7	100	1,599,727
Western	18.1	2.8	4.3	74.9	100	931,011

Figure 8.2 shows the percentage share of the population 12 years or older by sex and economic activity status in 2022. Of the total 6,556,415 male population age 12 years or older, 34.8 percent were economically active while 28.4 percent of the female population age 12 years or older were economically active.

Figure 8.2: Percentage Share of the Population 12 years or older by Sex and Economic Activity status, Zambia 2022

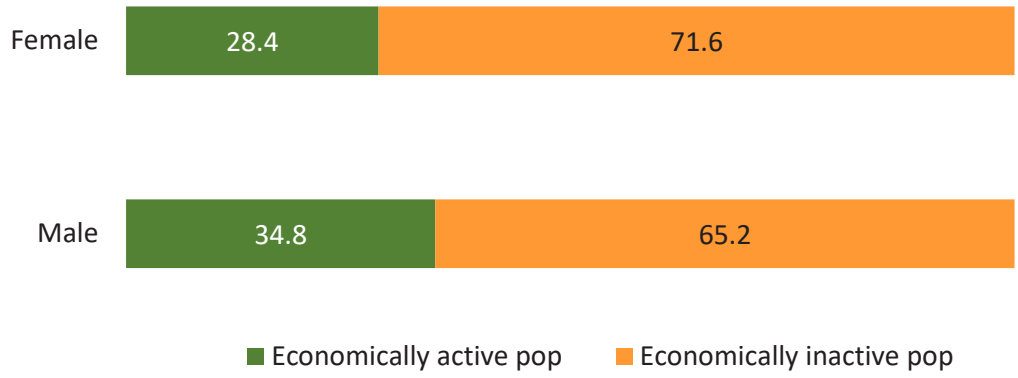


Figure 8.3 shows the percentage share of the population 12 years or older by main economic activity status and by rural/urban in 2022. Generally, except for those in paid employment, results show that the percentage shares of the population composed of unpaid family workers (rural: 6.4% against urban: 1.1%), those not working (rural: 4.5% against urban: 3.6%) and the economically inactive population (rural: 69.8% against urban: 67.6%) in rural areas, respectively, were higher than the shares of their urban counterparts.

Figure 8.3: Percentage Share of the Population 12 years or older by Sex, Economic Activity status and by Rural/Urban, Zambia 2022

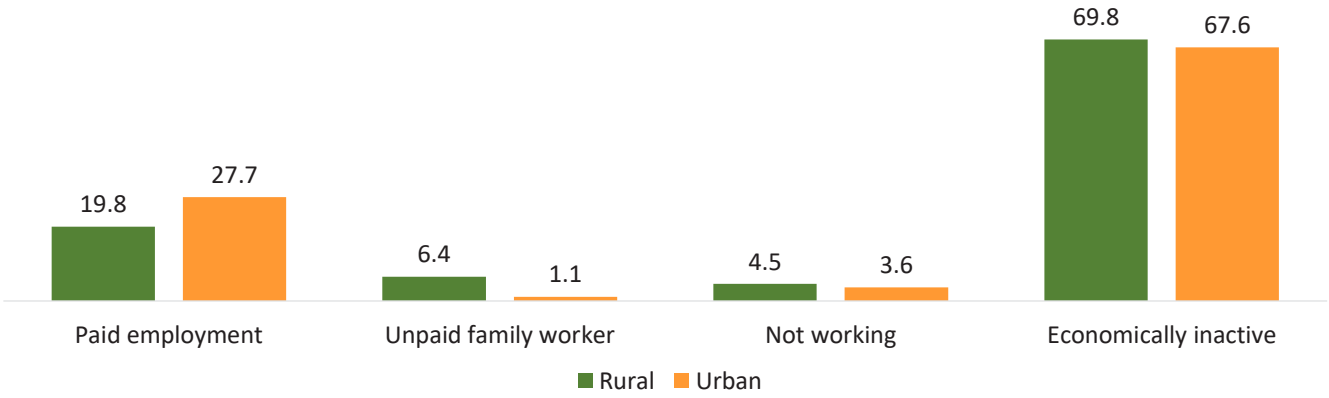


Table 8.3 shows labour force participation rate by sex, rural/urban, stratum and province in 2022. Overall, results show that the labour force participation rate in urban areas at 32.4 percent was higher than that of rural areas at 30.7 percent. Further, results reveal that labour force participation rate for males in urban areas was higher than that of their female counterparts in urban i.e. (urban: male 35.9% vs urban: females 29.4%).

Table 8.3: Labour Force Participation Rate of Persons 12 years or older by Sex, Rural/Urban, Stratum and Province, Zambia 2022

	Both sexes	Male	Female	Population 12 years or older
Totalw	**31.4**	**34.8**	**28.4**	**13,648,127**
Rural	30.7	34.0	27.6	7,937,322
Urban	32.4	35.9	29.4	5,710,805
Central	32.5	37.6	27.7	1,562,358
Copperbelt	34.0	38.1	30.1	1,995,879
Eastern	35.9	37.4	34.4	1,698,537
Luapula	27.1	31.4	23.3	1,030,140
Lusaka	33.2	37.5	29.3	2,259,274
Muchinga	36.3	40.0	32.7	625,605
Northern	35.4	38.7	32.1	1,092,629
North Western	27.1	26.6	27.5	852,967
Southern	24.3	26.5	22.4	1,599,727
Western	25.1	27.5	23.0	931,011

Figure 8.4 shows percentage share of the population age 12 years or older by main economic activity status and sex in 2022. Except for the category "Paid employment" with higher proportions of males (27%) than females (19.5%), results show higher proportions of females than males in the rest of the categories.

Figure 8.4: Labour Force Participation Rate by Sex, Zambia 2022

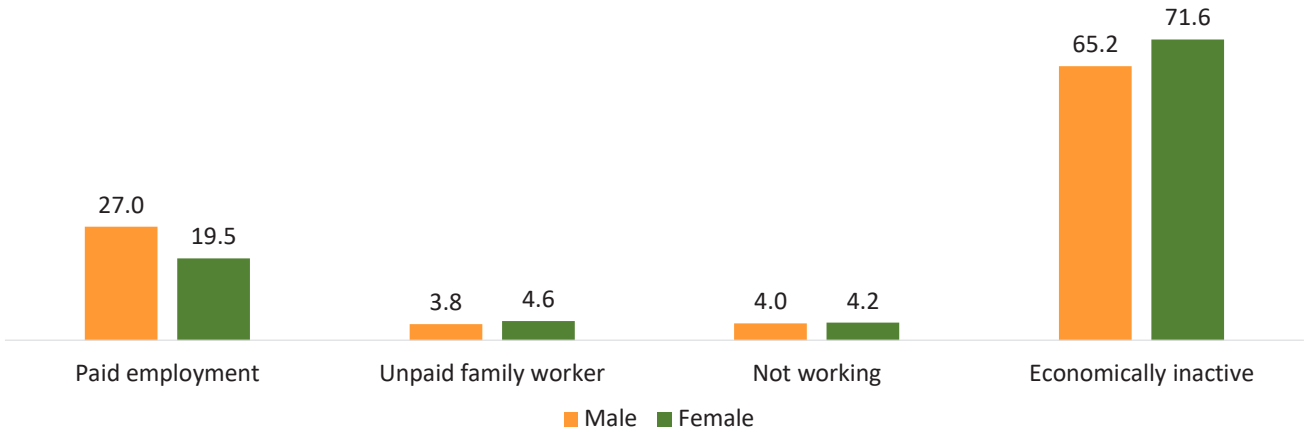


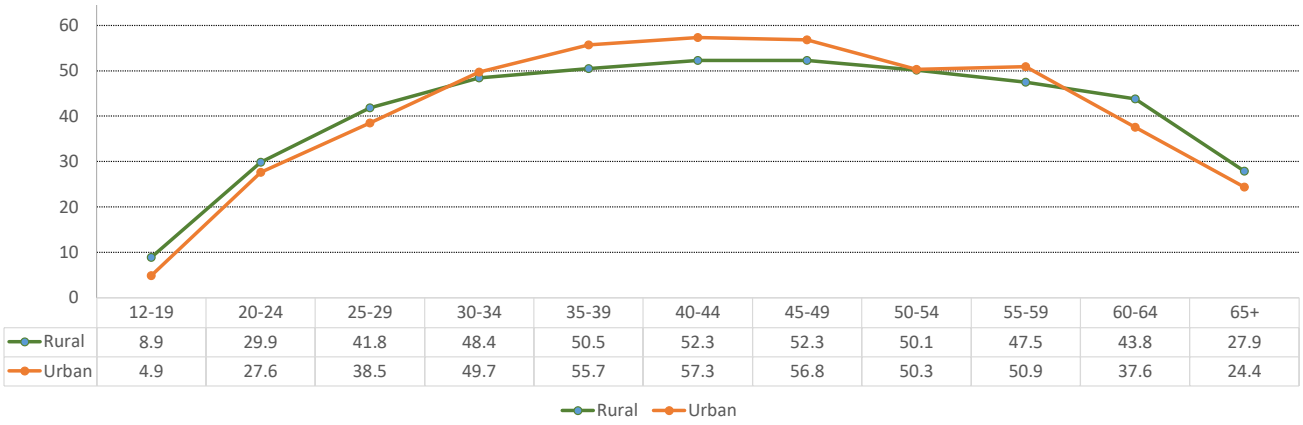
Table 8.4 reflects labour force participation rates of the population 12 years or older by age-group, rural/urban and sex in 2022. At national level, regardless of sex, overall results show that labour force participation rates increased from 7.4 percent among persons of age 12-19 years peaking at 54.5 percent among persons of age 40-44 years of age. Beyond the age-group 40-44 years, labour force participation rates steadily declines from 54.2 percent for the age-group 45-49 years to 41.4 percent for the age-group 60-64 years and further reduces drastically to 26.6 percent for the age-group 65years or older. Further analysed by sex, labour force participation rates for males were generally higher than that of their female counterparts regardless of age-group. For the rest of the results, see table 8.4.

Table 8.4: Labour Force Participation Rate of the Population 12 years or older by Age-group, Rural/Urban and Sex, Zambia 2022

Age-group	Total			Rural			Urban			Population 12 years or older
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	
Total	**34.8**	**28.4**	**31.4**	**34**	**27.6**	**30.7**	**35.9**	**29.4**	**32.4**	**13,648,127**
12-19	7.6	7.2	7.4	8.5	9.2	8.9	5.8	4.1	4.9	4,412,946
20-24	31.9	26	28.9	33.6	26.4	29.9	29.7	25.6	27.6	2,029,842
25-29	45.8	35.3	40.2	47.6	36.4	41.8	43.8	34.1	38.5	1,527,388
30-34	53.8	44.9	49	52.9	44.6	48.4	54.7	45.3	49.7	1,132,811
35-39	60.3	46.5	52.9	60	42.7	50.5	60.6	51.2	55.7	1,097,086
40-44	59.3	50.2	54.5	59.8	45.7	52.3	58.6	56.1	57.3	906,574
45-49	57.7	50.8	54.2	56	48.6	52.3	60	53.8	56.8	712,634
50-54	55.7	44.2	50.2	57.7	42.1	50.1	52.6	47.7	50.3	579,221
55-59	56.4	41	48.9	56.3	38.3	47.5	56.4	45	50.9	372,699
60-64	46.5	36.1	41.4	49.8	36.8	43.8	40.3	35.2	37.6	285,133
65+	35.2	20.7	26.6	38.1	21.4	27.9	30.9	19.2	24.4	591,793

Figure 8.5 shows labour force participation rate by rural/urban in 2022. Participation rates for the youthful age-group (15 to 34 years) in rural areas was higher compared to urban areas. Participation rate for the middle-aged persons (35 to 59 years) was higher in urban areas.

Figure 8.5: Labour Force Participation Rate among Persons aged 12 years or older by Sex, Rural/ Urban and Age-group, Zambia 2015 and 2022



	12-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Rural	8.9	29.9	41.8	48.4	50.5	52.3	52.3	50.1	47.5	43.8	27.9
Urban	4.9	27.6	38.5	49.7	55.7	57.3	56.8	50.3	50.9	37.6	24.4

8.3 Unemployment Rate

Unemployment is a phenomenon that is measured on the basis of both seeking work and being available for paid work during a specified recent 'short 'reference period by persons above a specified minimum age not currently in employment. Table 8.5 shows unemployment rates among persons aged 12 years or older by age-group, rural/urban and sex in 2022.

At national level, results show that unemployment rate was estimated at 13.1 percent. Further, unemployment rate for females was higher than that of their male counterparts at 14.9 and 11.5 percent, respectively.

Analysed by rural/urban, results show that unemployment rates in rural areas were higher than those of urban areas i.e. (14.7% against 11.0%). Further, within the rural and urban areas, unemployment rates for females tended to be higher than that of males i.e (rural: female 15.8% against male 13.8% and urban: female 13.8% against male 8.4%).

Analysed by province, North-western Province had the highest unemployment rate at 18.9 percent, followed by Western Province with 17.1 percent, while Lusaka had the lowest unemployment rate at 8.4 percent.

Table 8.5: Unemployment Rate among Persons aged 12 years or older by Sex, Rural/Ubran, Stratum and Province, Zambia 2022

Sex, Residence, Stratum and Province	Unemployment rate			Pop 12 years or older in the labour force
	Male	Female	Both sexes	
Total	**11.5**	**14.9**	**13.1**	**4,291,532**
Rural	13.8	15.8	14.7	2,439,574
Urban	8.4	13.8	11.0	1,851,957
Small Scale	14.2	16.4	15.2	1,875,667
Medium Scale	10.9	13.4	11.9	255,599
Large Scale	22.6	12.0	18.2	20,767
Non-Agric	13.3	13.8	13.5	287,542
Low Cost	8.3	14.3	11.2	1,528,382
Medium Cost	10.4	12.6	11.4	181,706
High Cost	6.2	10.9	8.6	141,869
Central	10.9	12.4	11.6	507,348
Copperbelt	11.3	18.3	14.6	674,870
Eastern	15.0	14.0	14.5	612,949
Luapula	10.8	18.7	14.4	279,450
Lusaka	6.4	10.8	8.4	749,310
Muchinga	13.1	12.8	13.0	227,241
Northern	12.3	13.0	12.6	386,953
North Western	17.0	20.8	18.9	231,044
Southern	10.5	15.6	13.1	388,330
Western	15.6	18.6	17.1	234,035

Figure 8.6 shows unemployment rates among persons of age 12 years or older by sex in 2015 and 2022. Overall, unemployment rate decreased by 2.7 percentage points from 15.8 percent in 2015 to 13.1 percent in 2022. Both in 2015 and 2022, female unemployment rates were higher compared to male unemployment rate.

Figure 8.6: Unemployment Rate among Persons Aged 12 Years or older by Sex, Zambia 2015 and 2022

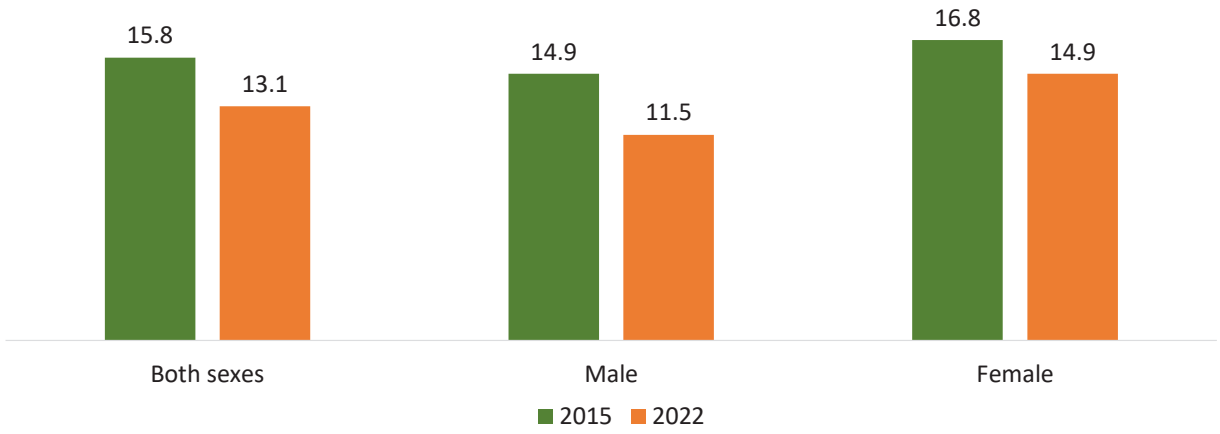


Figure 8.7 shows unemployment rates among persons of age 12 years or older by rural/urban in 2015 and 2022. Results show that unemployment rate in rural areas in 2022 was higher than in urban areas i.e (rural: 14.7% vs Urban: 11%). However, unemployment rate was lower in rural areas than urban areas in 2015 i.e. (rural: 8.6% vs urban:25.6%).

Figure 8.7: Unemployment Rate among Persons Aged 12 Years or older by Sex, Zambia 2015 and 2022

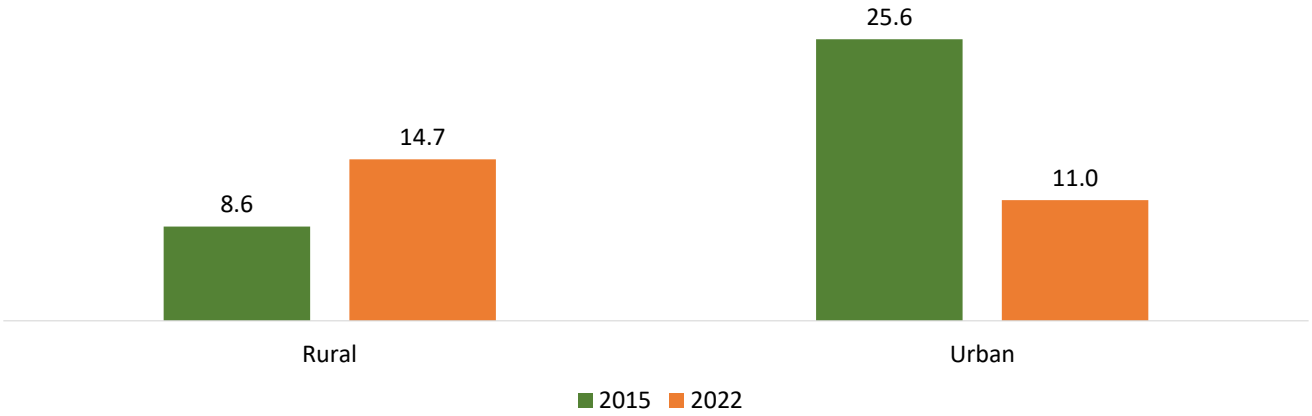


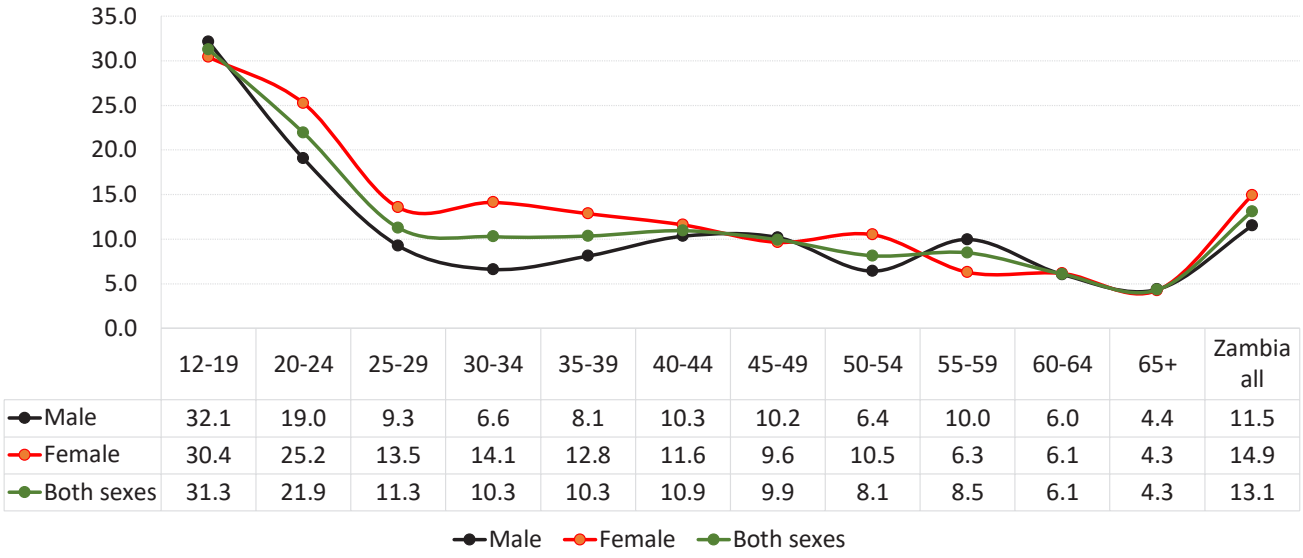
Table 8.6 shows unemployment rate by age-group, rural/urban and sex in 2022. Persons in the age-groups 12-19 and 20-24 years had relatively higher unemployment rates of 31.3 and 21.9 percent, respectively. However, unemployment rates tended to decline with increase in age-group, registering the least unemployment rate for the age-group 65 years or older at 4.3 percent.

Table 8.6: Unemployment Rate among Persons of Aged 12 years or older by Age-group, Zambia 2022

Age-group	Total			Rural			Urban			Pop 12 years or older in the labour force
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	
Total	**11.5**	**14.9**	**13.1**	**13.8**	**15.8**	**14.7**	**8.4**	**13.8**	**11.0**	**4,291,532**
12-19	32.1	30.4	31.3	31.4	26.1	28.7	34.2	45.3	39.3	326,363
20-24	19.0	25.2	21.9	18.6	26.6	22.2	19.7	23.4	21.5	586,598
25-29	9.3	13.5	11.3	12.1	12.1	12.1	5.8	15.1	10.3	613,852
30-34	6.6	14.1	10.3	8.4	15.4	11.9	4.8	12.8	8.7	555,619
35-39	8.1	12.8	10.3	12.3	12.1	12.2	3.6	13.6	8.4	580,050
40-44	10.3	11.6	10.9	12.9	15.3	14.0	7.1	7.7	7.4	493,942
45-49	10.2	9.6	9.9	15.9	11.2	13.7	2.7	7.8	5.2	386,443
50-54	6.4	10.5	8.1	7.3	13.9	10.0	4.8	5.6	5.2	290,849
55-59	10.0	6.3	8.5	10.8	7.0	9.3	8.8	5.3	7.3	182,248
60-64	6.0	6.1	6.1	6.3	4.3	5.5	5.4	8.9	7.1	118,110
65+	4.4	4.3	4.3	2.9	4.6	3.7	6.9	3.6	5.5	157,457

Figure 8.8 shows unemployment rate by age-group and sex in 2022. The graph shows declining unemployment rates both for males and females from age-group 12-19 years to the age-group 65 years or older.

Figure 8.8: Unemployment Rate among persons of Aged 12 years or older by Age-group, Zambia



	12-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	Zambia all
Male	32.1	19.0	9.3	6.6	8.1	10.3	10.2	6.4	10.0	6.0	4.4	11.5
Female	30.4	25.2	13.5	14.1	12.8	11.6	9.6	10.5	6.3	6.1	4.3	14.9
Both sexes	31.3	21.9	11.3	10.3	10.3	10.9	9.9	8.1	8.5	6.1	4.3	13.1

8.4 Employment by Industry, Occupation and Sector of Employment

This section provides an overview of the employed population and its distribution by industry, occupation and sector of employment. Respondents were asked to state their main current economic activity and the kind of work or business undertaken by their establishments. The responses were then classified using the international standard industrial classification of all economic activities (ISIC Rev. IV) code.

8.5 distribution of employed persons by industry

The percentage distribution of employed persons by province, age and residence provides valuable information for planning purposes and uses by various stakeholders. Policy makers require information on employed persons by type of work they are engaged in for them to identify which industries are more productive and employ most of the people.

Table 8.7 shows percentage distribution of employed persons 12 years or older by industry, rural/urban and sex in 2022.

At national level, the agriculture, forestry and fishing industry had the highest proportion of employed persons at 37.2 percent followed by trade, wholesale and retail distribution at 28.9 percent. However, electricity, gas, steam and air conditioning supply, real estate activities and arts, entertainment and recreation were among the industries with least proportions of employed persons at 0.1 percent each.

Analysed by rural/urban, regardless of residence, results show that the agriculture, forestry and fishing industry had the highest proportions of employed persons of age 12 years or older both in rural and urban areas at 36.7 and 37.9 percent, respectively. Similar to the pattern at national level, trade, wholesale and retail trade industry accounted for the second highest proportions of employed persons both in rural and urban areas at 29.4 and 28.3 percent, respectively.

Table 8.7: Percentage Distribution of Employed Population Aged 12 years or older by Industry, Sex, Rural/ Urban and Province, Zambia 2022

Industry	Total			Rural			Urban		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Total	**2,018,371**	**1,710,903**	**3,729,274**	**1,134,393**	**944,291**	**2,078,684**	**883,979**	**766,611**	**1,650,590**
All Zambia	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Agriculture, forestry and fishing	36.5	38.2	37.2	35.3	38.4	36.7	38	37.9	37.9
Trade, wholesale and retail distribution	29.2	28.6	28.9	30.2	28.4	29.4	27.9	28.9	28.3
Activities of household as Employers	7.9	7.8	7.8	7.8	7.2	7.5	8	8.5	8.2
Manufacturing	5.5	6.1	5.8	5.8	6.6	6.1	5.1	5.6	5.3
Construction	3.2	3.7	3.4	2.7	3.5	3	4	3.9	3.9
Education	3.1	2.7	2.9	3.5	3	3.3	2.5	2.3	2.4
Other service activities	3	2.3	2.6	2.9	2	2.5	3	2.6	2.8
Human Health and Social Work	1.8	2.2	2	1.4	1.9	1.6	2.4	2.6	2.5
Transportation and storage	1.9	1.7	1.8	2.3	1.8	2.1	1.5	1.5	1.5
Public Administration and Defence, Compulsory social security	2.3	1.3	1.8	2.2	1.4	1.8	2.4	1.2	1.8
Accommodation and food service activities	2	1.3	1.7	2	1.2	1.6	1.9	1.4	1.7
Administrative and support services	1.4	2.1	1.7	1.6	2.5	2	1.1	1.5	1.3
Financial and Insurance Activities	0.8	1.4	1.1	0.8	1.5	1.1	0.9	1.4	1.1
Professional, Scientific and technical activities	0.7	0.3	0.5	0.9	0.4	0.7	0.5	0.2	0.4
Mining and quarrying	0.3	0.1	0.2	0.5	0.1	0.3	0.1	0.2	0.1
Electricity, gas, steam and air conditioning supply	0.1	0.1	0.1	0.1	0	0	0.2	0.3	0.2
Real estate Activities	0.2	0.1	0.1	0.2	0	0.1	0.3	0.1	0.2
Arts, Entertainment and Recreation	0.1	0	0.1	0	0	0	0.2	0	0.1
Water Supply Sewerage, waste management and reme-diation activities	0	0.1	0	0	0	0	0.1	0.1	0.1
Information and communication	0	0	0	0	0	0	0	0	0
Activities of extraterritorial organization and bodies	0	0	0	0	0	0	0.1	0	0

8.6 Employed population by occupation

The respondents were asked to state the tasks and duties they actually performed in the industry they worked in. This information is critical for determining their occupation based on the ISCO-08 classification.

Table 8.8 shows percentage distribution of employed persons age 12 years or older by occupation, rural/urban and sex in 2022. Persons working in skilled agricultural, forestry and fisheries activities accounted for the highest proportion of employed persons at 32.0 percent followed by sales and service workers at 31.5 percent. Notably, those employed as managers accounted for the least proportion at 0.8 percent.

Furthermore, the persons working in skilled agricultural, forestry and fisheries activities accounted for the highest proportion in rural areas at 51.7 percent while persons working in service and sale activities accounted for the highest proportion in urban areas at 44.8 percent.

Table 8.8: Percentage Distribution of the Employed Population Aged 12 years or older by Occupation, Sex, Rural/urban and Province, Zambia 2022

Occupation	Total			Rural			Urban		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Total	**2,018,371**	**1,710,903**	**3,729,274**	**1,134,393**	**944,291**	**2,078,684**	**883,979**	**766,611**	**1,650,590**
All Zambia	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Managers	1.1	0.5	0.8	0.8	0.1	0.5	1.3	1.1	1.2
Professionals	3.7	4.0	3.8	2.4	2.7	2.5	5.5	5.5	5.5
Technician and Associated professionals	1.9	1.0	1.5	0.5	0.1	0.3	3.6	2.2	2.9
Clerical support workers	0.9	1.8	1.3	0.3	0.6	0.4	1.7	3.2	2.4
Service and sales workers	22.6	41.9	31.5	15.6	27.2	20.9	31.7	60.1	44.8
Skilled agriculture and forestry workers	35.1	28.4	32.0	56.5	46.0	51.7	7.5	6.7	7.1
Craft and related trade workers	14.0	2.5	8.7	7.2	2.2	5.0	22.6	2.8	13.4
Plant and machine operators and assemblers	5.2	2.8	4.1	1.4	4.0	2.6	10.0	1.3	6.0
Elementary occupations	15.6	17.0	16.2	15.3	17.0	16.1	15.9	17.0	16.4
Other	0.0	0.1	0.0	0.0	-	0.0	0.1	0.1	0.1

8.7 Informal and Formal Sector Employment

Informal sector employment can broadly be defined as employment in an unregistered enterprise whereas formal employment will be employment in a registered enterprise/establishment.

Table 8.9 shows percentage distribution of employed persons 12 years or older by sector of employment in 2022. At national level, results show that out of 3,729, 274 employed persons, 78.0 percent were in the informal sector while the remaining 22 percent were in the formal sector.

It is worth noting that some industrial sectors, by virtue of their economic activities, are less likely to be formalized than other establishments. For instance, none of captured sampled employed persons in arts, entertainment and recreation reported to be in the formal sector. Other industrial sectors that were less formal include: activities of extraterritorial organizations and bodies (95.3%); administrative and support services (84.7%); transport and communication (83.9%); construction (82.3%); real estate activities (82.2%); accommodation and food services activities (81.4%) and activities of households as employers (81.0%).

Table 8.9: Percentage Distribution of Employed Persons Aged 12 years or older by Sector of Employment and Industry, Zambia 2022

Industrial sector	Formal sector		Informal sector		Employed population
All Zambia	**819,268**	**22.0**	**2,910,006**	**78.0**	**3,729,274**
Agriculture, forestry and fishing	293,050	21.1	1,095,712	78.9	1,388,768
Mining and quarrying	1,629	18.1	7,390	81.9	9,019
Manufacturing	55,139	25.6	160,395	74.4	215,530
Electricity, gas, steam and air conditioning supply	2,032	42.2	2,783	57.8	4,815
Water Supply Sewerage, waste management and remediation activities	1,327	80.1	329	19.9	1,655
Construction	22,602	17.7	104,995	82.3	127,599
Trade, wholesale and retail distribution	256,540	23.8	821,814	76.2	1,078,344
Transportation and storage	10,890	16.1	56,871	83.9	67,762
Accommodation and food service activities	11,511	18.6	50,477	81.4	61,990
Information and communication	284	100.0	-	0.0	284
Financial and Insurance Activities	8,382	20.1	33,406	79.9	41,788
Real estate Activities	962	17.8	4,453	82.2	5,415
Professional, Scientific and technical activities	4,476	22.7	15,229	77.3	19,705
Administrative and support services	9,577	15.3	53,138	84.7	62,717
Public Administration and Defence, Compulsory social security	17,015	25.3	50,119	74.7	67,133
Education	24,496	22.7	83,181	77.3	107,676
Human Health and Social Work	19,506	26.1	55,299	73.9	74,804
Arts, Entertainment and Recreation	-	0.0	1,938	100.0	1,938
Other service activities	24,204	24.5	74,597	75.5	98,800
Activities of household as Employers	55,597	19.0	236,887	81.0	292,488
Activities of extraterritorial organization and bodies	49	4.7	993	95.3	1,043

Figure 8.9 shows percentage share of employed persons 12 years or older by sector of employment in 2015 and 2022. Despite the adjustment in the definition of the concept of employment as noted above, results show that formal sector employment accounted for a lower proportion of the employed population at 22.0 percent in 2022 relative to 19.7 percent in 2015.

Notably, the proportion of the employed population in the informal sector has decreased by 2.3 percentage-points from 80.3 percent in 2015 to 78 percent in 2022.

Figure 8.9: Percentage Share of Employed Population Aged 12 years or older by Sector of Employment, Zambia 2015 and 2022

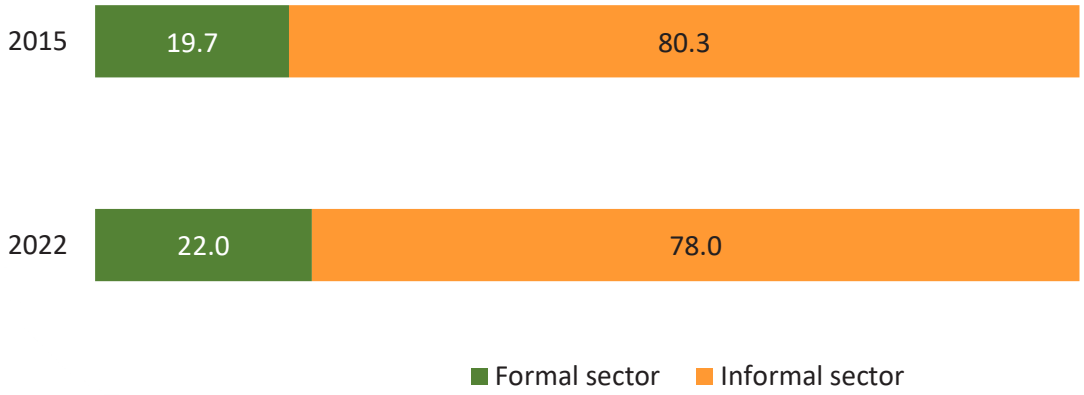


Table 8.10 shows the percentage distribution of the population 12 years or older employed in the informal sector broken down by agriculture and non-agriculture by sex, rural/urban, stratum and province in 2022. Results show that out of 2,910,006 employed persons in the informal sector, 62.3 percent were employed in informal non-agriculture sector while 37.7 percent were employed in the informal agriculture sector. Further, relative to their male counterparts, a higher proportion of females were employed in informal agriculture i.e. (Females: 38.5% vs Male: 36.8%) and a higher proportion of males relative to their females counterparts were employed in informal non-agriculture sector i.e (Male: 63.2% vs Females: 61.5%).

Analysed by province, Western Province had the highest proportion of persons 12 years or older employed in informal non-agriculture sector at 82.7percent while North-western Province had the least proportion at 54.8 percent. On the other hand, North-western Province accounted for the highest proportion of persons of age 12 years or older employed in the informal agriculture sector at 45.2 percent.

Table 8.10: Percentage Distribution of Population 12 years or older Employed in the Informal by Agriculture/ Non-agriculture Sector, Sex, Rural/Urban, Stratum and Province, Zambia 2022

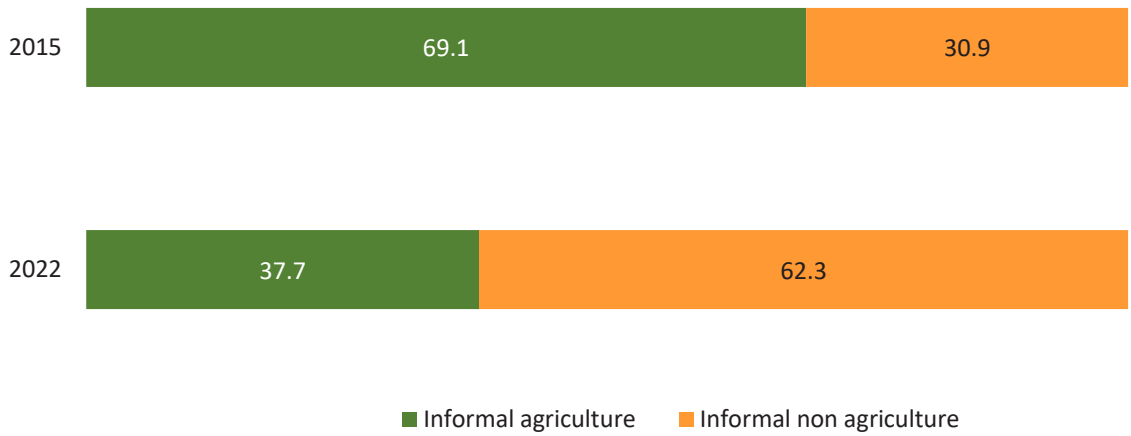
	Informal Sector of Employment				Number of Employed Persons 12 years and older in the Informal Sctor
	Informal Agriculture Sector		Informal Non-agriculture		
Total	**1,095,712**	**37.7**	**1,814,294**	**62.3**	**2,910,006**
Male	541,338	36.8	930,235	63.2	1,471,572
Female	554,374	38.5	884,059	61.5	1,438,434
Residence					
Rural	643,271	36.8	1,103,027	63.2	1,746,298
Urban	452,441	38.9	711,267	61.1	1,163,708
Stratum					
Small Scale	487,246	35.8	874,709	64.2	1,361,956
Medium Scale	70,985	38.5	113,287	61.5	184,273
Large Scale	2,624	22.2	9,176	77.8	11,800
Non-Agric	82,415	43.8	105,855	56.2	188,270
Low Cost	401,325	39.6	612,061	60.4	1,013,386
Medium Cost	35,757	37.0	61,000	63.0	96,757
High Cost	15,359	28.7	38,206	71.3	53,565

	Informal Sector of Employment				Number of Employed Persons 12 years and older in the Informal Sctor
	Informal Agriculture Sector		Informal Non-agriculture		
Province					
Central	153,946	42.5	208,468	57.5	362,414
Copperbelt	161,279	38.6	256,463	61.4	417,742
Eastern	153,851	36.4	268,930	63.6	422,781
Luapula	93,108	44.9	114,193	55.1	207,301
Lusaka	182,004	38.4	291,934	61.6	473,938
Muchinga	67,375	37.4	112,842	62.6	180,217
Northern	93,063	31.4	203,491	68.6	296,554
North Western	61,175	45.2	74,280	54.8	135,455
Southern	102,359	40.3	151,583	59.7	253,941
Western	27,552	17.3	132,110	82.7	159,662

Figure 8.10 shows the percentage share of the population employed in the informal sector disaggregated by agriculture and non-agriculture-based activities in 2015 and 2022. Results show that the percentage share of the population age 12 years or older employed in the informal agriculture sector in 2015 has reduced from 69.1 percent in 2015 to 37.7 percent in 2022 while the percentage share of the employed population in the informal non-agriculture sector has doubled from 30.9 percent in 2015 to 62.3 percent in 2022.

The smaller share of the population employed in informal agriculture of the informal sector in 2022 could be attributed to the adjustment in the definition of the concept of employment adopted, following the guidelines of the 19th International Conference of Labour Statistician resolution of 2013.

Figure 8.10: Percentage Share of the Population 12 years or older Employed in Informal Agriculture and Informal Non-agriculture sector, Zambia 2015 and 2022



Secondary jobs

Respondents were asked whether or not they had a secondary job to determine what proportion of the employed population were multiple job-holders. Table 8.10 shows proportion of employed persons who held secondary jobs by sex and employment status in the first job in 2022. Results show that 1.3 percent of those who were employed had a secondary job. Disaggregated by sex, 2.3 percent of females in employment had a secondary job compared to 1.9 percent of their male counterparts.

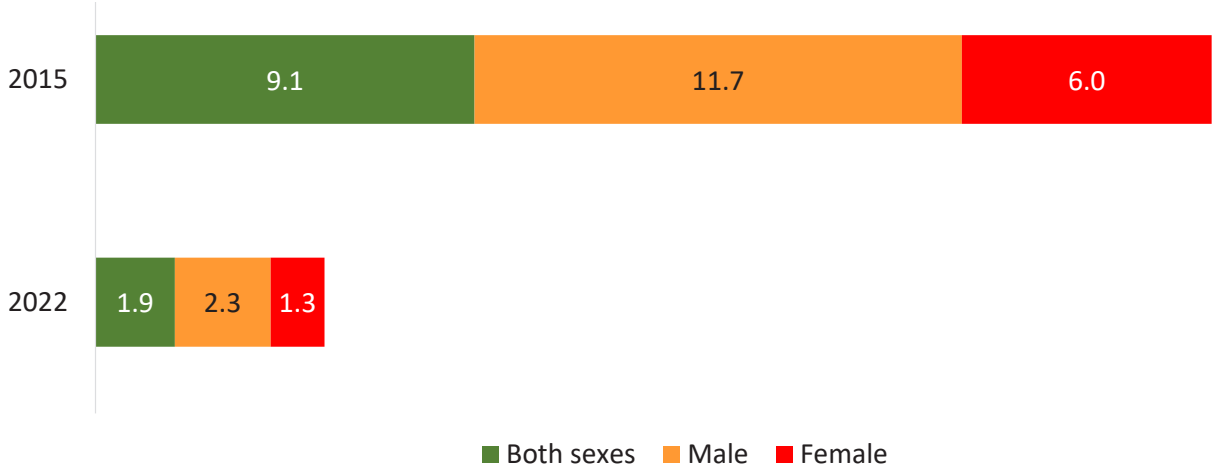
Table 8.11: Proportion of Employed Persons 12 years or older who held Secondary Jobs by Sex and Employment status in First Job, Zambia 2022

Status in employment	Male	Female	Both sexes	Employed population
Total	**1.9**	**2.3**	**1.3**	**3,729,274**
Paid employee	5.5	5.7	5.1	1,271,105
Self-employed	0.0	0.0	0.0	1,885,911
Unpaid family worker	0.0	0.0	0.0	572,258

Figure 8.11 reflects the proportion of employed persons 12 years or older with a secondary job by sex in 2015 and 2022. Results show a marked difference in the proportion of employed persons who held a secondary job in 2015 and 2022. Overall, the proportion of employed persons who held a secondary job was 9.1 percent in 2015 while 1.9 percent held a secondary job in 2022. The difference could largely be attributed to the change in the way the concept of employment has been defined as earlier alluded to (19th International Conference of Labour Statistician resolution of 2013).

Analysed by sex, results show that the proportions of males in employment with a secondary job in 2015 and 2022 was higher than that of females i.e. (2015: male (11.7%) vs female: 6.0%) and 2022: male (2.3% vs female (1.3%), respectively.

Figure 8.11: Proportion of Employed Persons 12 years or older with a Secondary Job by Sex, Zambia 2015 and 2022



Reasons for changing jobs

Table 8.15 shows number and percentage share of presently employed persons who changed their job by reason cited and sex in 2022. At national level, regardless of sex, 3.0 percent of the employed persons changed their job. Further disaggregated by sex, a higher proportion of males changed their jobs at 4 percent compared to 1.9 percent by their female counterparts.

Further each one of the 112,767 employed persons was asked to state the reason for changing their job. Results show that the highest proportion cited the temporal nature of their job as a reason for changing their job at 30.7 percent followed by 21.0 percent who cited low wage/salary. It is worth noting that 8.3 percent of the employed persons who changed their job cited poor working conditions. However, the least cited reason for changing a job was retrenchment/declared redundant at 0.8 percent.

Table 8.12: Percentage Share of Presently Employed Persons 12 years or older who changed their job by Reason Cited and Sex, Zambia 2022

Reasons for changing	Male		Female		Total	
	Number	Percentage share	Number	Percentage share	Number	Percentage share
	2,018,371	**4**	**1,710,903**	**1.9**	**3,729,274**	**3**
Total	**80,277**	**100**	**32,490**	**100**	**112,767**	**100**
Low wage./salary	14,617	18.2	9,041	27.8	23,658	21
Fired/dismissed	9,257	11.5	3,358	10.3	12,616	11.2
Enterprise closed	1,604	2	764	2.4	2,368	2.1
Enterprise privatised	-	0	-	0	-	0
Enterprise liquidated	1,002	1.2	304	0.9	1,306	1.2
Retrenched/declared redundant	879	1.1	-	0	879	0.8
Got another job	13,119	16.3	4,912	15.1	18,031	16
Bankruptcy	-	0	-	0	-	0
Lack of profit	1,258	1.6	986	3	2,244	2
Was a temporary job	24,516	30.5	10,073	31	34,588	30.7
Retired	-	0	-	0	-	0
Contract expired	5,941	7.4	101	0.3	6,042	5.4
Poor working conditions	6,615	8.2	2,742	8.4	9,358	8.3
Other	1,467	1.8	209	0.6	1,676	1.5

8.8 Income-generating Activities among Persons presently Unemployed or Inactive

During the survey, respondents who were outside the labour force (economically inactive) and/or unemployed were asked to state whether they had performed some income-generating activities in the 12-month period prior to the survey. In accordance with the definition of the International Labour Organisation (ILO), any person who carries out any activity for profit/gain for himself/herself or his/her household (family) is considered economically active if this work activity takes one hour or more per week. This question is necessary because some people do not consider these activities as 'work'.

Tables 8.13 (a) and 8.13(b) show number and percentage share of the unemployed and inactive populations that were engaged in some income-generating activities by sex in 2022. Results show that 6.2 percent of the unemployed and/or inactive population was actually engaged in some income-generating activities. Out of the unemployed population, 15.2 percent declared having engaged in some income-generating activities whereas only 5.6 percent of the economically inactive population declared having engaged in income-generating activities.

Of those engaged in income-generating activities, 23.2 percent of the unemployed and/or economically active population declared having been involved in crop farming representing the largest proportion. Further, 12.2, 19.5 and 18.5 percent, respectively, of the unemployed, economically inactive and unemployed but economically active populations were involved in piece work such as gardening, digging pits, etc.

Table 8.13(a): Number and Percentage Share of the Unemployed and Inactive Population engaged in some Income-generating Activities by Sex, Zambia 2022

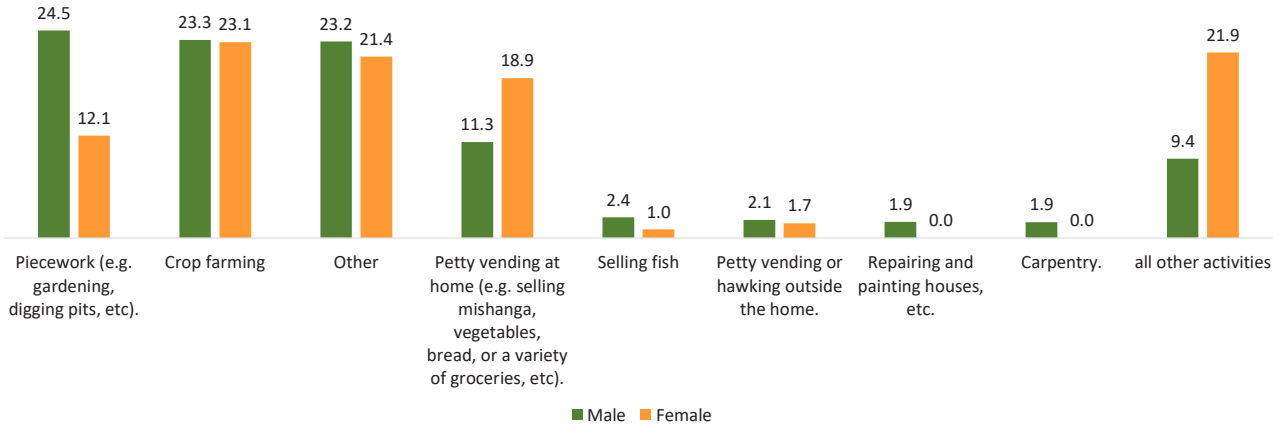
Income-Generating Activity	Unemployed Population				Economically Inactive Population				Unemployed And Economically Inactive Population (Total)					
									Male		Female		Both Sexes	
	Male	Female	Both Sexes		Male	Female	Both Sexes		Number	Percent	Number	Percent	Number	Percent
All Zambia	**262,256**	**300,001**	**562,258**	**Percent**	**4,276,095**	**5,080,500**	**9,356,595**		**4,538,351**	**Percent**	**5,380,502**		**9,918,853**	
Percentage share	17.2	13.5	15.2		6.4	5	5.6		7		5.5		6.2	
Total number of people engaging in income-generating activities	45,098	40,371	85,469	100	271,806	256,291	528,097	100	316,904	100	296,663	100	613,567	100
Petty vending at home (e.g. selling mishanga, vegetables, bread, or a variety of groceries, etc).	4,469	6,724	11,193	13.1	31,422	49,229	80,651	15.3	35,891	11.3	55,953	18.9	91,844	15
Petty vending or hawking outside the home.	242	1,774	2,017	2.4	6,557	3,404	9,961	1.9	6,799	2.1	5,178	1.7	11,977	2
Selling knitted items.	-	1,559	1,559	1.8	1,871	1,693	3,565	0.7	1,871	0.6	3,252	1.1	5,123	0.8
Selling own-sewed clothes	-	-	-	0	527	3,549	4,076	0.8	527	0.2	3,549	1.2	4,076	0.7
Baking fritters/scones/cakes for sale.	-	2,075	2,075	2.4	2,609	15,750	18,359	3.5	2,609	0.8	17,825	6	20,434	3.3
Brewing local (non-alcoholic) drinks, e.g. munkoyo for sale.	-	3,655	3,655	4.3	-	8,684	8,684	1.6	-	-	12,339	4.2	12,339	2
Brewing beer or other alcoholic drinks for sale.	397	2,708	3,105	3.6	3,597	7,287	10,884	2.1	3,994	1.3	9,995	3.4	13,989	2.3
Carpentry.	875	-	875	1	5,055	-	5,055	1	5,930	1.9	-	-	5,930	1
Making handicrafts, e.g. clay pots, door-mats, decorations, etc for sale.	283	-	283	0.3	781	3,177	3,957	0.7	1,064	0.3	3,177	1.1	4,241	0.7
Making reed mats or baskets for sale.	1,115	-	1,115	1.3	764	2,080	2,844	0.5	1,879	0.6	2,080	0.7	3,959	0.6

Table 8.13(b): Number and Percentage Share of the Unemployed and Inactive Population engaged in some Income-generating Activities by Sex, Zambia 2022

Income-generating activity	Unemployed population				Economically inactive population				Unemployed and economically inactive population (Total)					
									Male		Female		Both sexes	
	Male	Female	Both sexes		Male	Female	Both sexes		Number	Percent	Number	Percent	Number	Percent
All Zambia	**262,256**	**300,001**	**562,258**		**4,276,095**	**5,080,500**	**9,356,595**		**4,538,351**		**5,380,502**		**9,918,853**	
Hairdressing (braiding hair, cutting hair, styling hair, etc) at home.	-	85	85	0.1	2,411	8,359	10,770	2	2,411	0.8	8,444	2.8	10,855	1.8
Piecework (e.g. gardening, digging pits, etc).	6,984	3,484	10,468	12.2	70,533	32,343	102,876	19.5	77,517	24.5	35,827	12.1	113,344	18.5
Repairing and painting houses, etc.	166	-	166	0.2	5,857	-	5,857	1.1	6,023	1.9	-	-	6,023	1
Other	11,843	9,622	21,465	25.1	61,575	53,803	115,377	21.8	73,418	23.2	63,425	21.4	136,843	22.3
Subsistence farmer	-	123	123	0.1	1,332	352	1,684	0.3	1,332	0.4	475	0.2	1,807	0.3
Builder	678	-	678	0.8	4,019	85	4,104	0.8	4,697	1.5	85	0	4,782	0.8
Burns charcoal	1,827	955	2,782	3.3	2,595	-	2,595	0.5	4,422	1.4	955	0.3	5,376	0.9
Crop farming	12,898	6,138	19,036	22.3	61,030	62,279	123,309	23.3	73,928	23.3	68,417	23.1	142,345	23.2
Gardening	-	-	-	0	2,915	143	3,059	0.6	2,915	0.9	143	0	3,059	0.5
Selling fish	1,353	-	1,353	1.6	6,355	3,013	9,368	1.8	7,709	2.4	3,013	1	10,721	1.7
Selling of second hand clothes	-	764	764	0.9	-	-	-	0	-	-	764	0.3	764	0.1
Selling clothes	-	-	-	0	-	1,062	1,062	0.2	-	-	1,062	0.4	1,062	0.2
Making bricks	1,968	705	2,673	3.1	-	-	-	0	1,968	0.6	705	0.2	2,673	0.4

Figure 8.12 shows the percentage share of males and females by common income-generating activity declared, 2022. Piece work was the most common income-generating activity among males at 24.5 percent, followed by crop farming at 23.3 percent. On the other hand, the most common and popular income-generating activity among females was crop farming and petty vending at 23.1 and 18.9 percent, respectively. Note that the category " all other activities" is obtained by summing up all the other identified income generating activities too numerous to itemize.

Figure 8.12: Percent Share of Common Income-generating Activities by Sex, Zambia 2022



Chapter 9: HOUSEHOLD FOOD AND LIVESTOCK PRODUCTION

9.1. Introduction

The 2022 Living Conditions Monitoring Survey (LCMS) collected data on agricultural activities such as growing of food crops, rearing of livestock and raising of poultry because these activities contribute to the welfare of households. This chapter presents results on household food production relating to the 2021/22 Agricultural season.

The data was collected and analysed on the following:

- Households engagement in agricultural activities
- Food Crop Production including maize, groundnuts, mixed beans, soya beans, sweet potatoes, Irish potatoes and other crops.
- Livestock ownership (cattle, goats, pigs, sheep), and
- Poultry ownership (chicken, ducks/geese, guinea fowl, and other poultry)

9.2. Agricultural Households

An agricultural household was defined as one where at least one member of the household is engaged in any of the following agricultural activities: growing of crops, livestock/poultry ownership, fish farming or a combination of any of these.

Table 10.1 shows the percentage distribution of households by agricultural status, residence and province during the 2021/22 Agricultural season. Of the 3,861,557 households in Zambia, 55.9 percent were engaged in agricultural activities which translates into 2,159,670 households in absolute terms.

Analysed by rural/urban, of 2,159,670 agricultural households, 81.1 percent were located in rural areas relative to 19.7 percent in urban areas.

Analysed by province, results show that Eastern Province had the largest proportion of agricultural households at 18.9 percent which translates into 408, 529 households in absolute terms. Southern (14.6%), Central (13.3%) and Northern (10.6%) provinces had the second, third and fourth largest proportions of agricultural households accounting for 57.4 percent of the national share.

However, Muchinga and Lusaka provinces had the least proportion of agricultural households at 6.6 and 4.5 percent, respectively.

Table 9.1: Percentage Distribution of Households by Agricultural Status, Rural/Urban and Province, Zambia 2022

Province	Houselods	Agricultural Households			Non-agricultural Households		
	Number	Number	Percent	Proportion Distribution	Number	Percent	Proportion Distribution
Total	**3,861,557**	**2,159,670**	**55.9**	**100.0**	**1,701,887**	**44.1**	**100.0**
Rural	2,278,255	1,848,156	81.1	85.6	430,099	18.9	25.3
Urban	1,583,301	311,513	19.7	14.4	1,271,788	80.3	74.7
Province							
Central	434,579	287,854	66.2	13.3	146,725	33.8	8.6
Copperbelt	532,594	165,346	31.0	7.7	367,248	69.0	21.6
Eastern	527,710	408,529	77.4	18.9	119,181	22.6	7.0
Luapula	295,761	191,182	64.6	8.9	104,579	35.4	6.1
Lusaka	628,772	97,404	15.5	4.5	531,368	84.5	31.2
Muchinga	181,762	142,625	78.5	6.6	39,137	21.5	2.3
Northern	313,883	229,004	73.0	10.6	84,879	27.0	5.0
North-western	226,853	146,670	64.7	6.8	80,183	35.3	4.7
Southern	461,927	315,520	68.3	14.6	146,407	31.7	8.6
Western	257,716	175,536	68.1	8.1	82,180	31.9	4.8

Table 9.2 shows the percentage distribution of agricultural households by type of agricultural activity, by rural/urban and province during the 2021/22 Agriculture season.

Overall, of the total 2,159, 670 agricultural households, 94.1 percent of these households were engaged in crop growing. Further, 86.7 percent of these crop growing households were located in rural areas while 13.3 percent were in urban.

On the other hand, 51.8 percent of the agricultural households were involved in livestock raising the majority of whom were located in rural areas and another 0.9 percent were involved in fish farming. Analysed by province, Eastern and Southern provinces had the largest and second largest proportions of households involved in crop growing during the 2021/22 Agricultural season at 19.5 and 13.7 percent, respectively. Lusaka Province had smallest proportion of households that were engaged in crop growing at 4.4 percent.

On the other hand, Southern, Central and Eastern provinces were among the provinces with the largest, second and third largest proportions of households that were involved in livestock raising at 23.4; 18.9 and 17.7 percent, respectively. Lusaka Province had the smallest proportion at 4.2 percent.

For fish farming, Northern (29.8%), Muchinga (19.2%) and Copperbelt (18.8%) provinces, respectively, accounted for the three largest proportions of households involved in fish farming.

Table 9.2: Percentage Distribution of Agricultural Households by Type of Agricultural activity by Rural/ Urban and Province, 2021/22 Agriculture season, Zambia 2022

Province/ Region	Agricultural Households	Number of Crop Growing Households	Percentage of Crop Growing Households	Number of Livestock Raising Households	Percentage of Livestock Raising Households	Number of Fish Farming Households	Percentage of Fish Farming Households
Total	**2,159,670**	**2,031,885**	**94.1**	**1,118,145**	**51.8**	**20,245**	**0.9**
Rural	1,848,156	1,760,884	86.7	1,004,750	89.9	16,987	83.9
Urban	311,513	271,001	13.3	113,395	10.1	3,258	16.1
Central	287,854	272,437	13.4	211,475	18.9	491	2.4
Copperbelt	165,346	146,621	7.2	74,299	6.6	3,811	18.8
Eastern	408,529	395,273	19.5	197,875	17.7	-	-
Luapula	191,182	185,483	9.1	52,344	4.7	651	3.2
Lusaka	97,404	89,357	4.4	47,179	4.2	325	1.6
Muchinga	142,625	135,832	6.7	55,723	5.0	3,880	19.2
Northern	229,004	221,268	10.9	101,212	9.1	6,027	29.8
North Western	146,670	139,702	6.9	51,859	4.6	2,144	10.6
Southern	315,520	278,906	13.7	261,556	23.4	224	1.1
Western	175,536	167,006	8.2	64,625	5.8	2,693	13.3

9.3. Food Crop Production

9.3.1 Maize

Table 9.3 shows the percentage distribution of agricultural households producing maize and quantity produced by residence and province during the 2021/22 Agriculture season.

Overall, results show that 50.4 percent of the agricultural households during the 2021/22 Agricultural season were growing maize. Further, 88 percent of these maize growing households were located in rural areas relative to 12 percent in urban areas. Further, 34.6 percent of the agricultural households were growing hybrid maize translating into 746,608 households. Results show that a total of 2,765,847 metric tonnes of maize were produced during the 2021/22 Agriculture season.

Table 9.3: Percentage Share of Agricultural Households Producing Maize and Quantity Produced by Rural/ Urban and Province, 2021/22 Agricultural season, Zambia 2022

Region	Agric. HHDs	No. of HHDs Growing Maize	% Growing Maize	No. of HHDs Growing Hybrid Maize	Percentage Growing Hybrid Maize	Quantity of Local Maize Harvested	Percentage Distrib.	Quantity of Hybrid Maize Harvested	Percentage Distrib.	Maize Production
Zambia total	**2,159,670**	**1,089,132**	**50.4**	**746,608**	**34.6**	**1,223,710**	**100.0**	**1,542,136**	**100.0**	**2,765,847**
Rural	1,848,156	958,597	88.0	627,664	84.1	1,051,639	85.9	1,367,172	88.7	2,418,811
Urban	311,513	130,535	12.0	118,944	15.9	172,071	14.1	174,965	11.3	347,036
Central	287,854	193,068	17.7	83,285	11.2	342,684	28.0	200,043	13.0	542,728
Copperbelt	165,346	70,912	6.5	74,466	10.0	119,163	9.7	177,447	11.5	296,610
Eastern	408,529	214,139	19.7	177,332	23.8	196,857	16.1	371,426	24.1	568,283
Luapula	191,182	58,023	5.3	57,618	7.7	45,303	3.7	97,409	6.3	142,712
Lusaka	97,404	51,574	4.7	20,387	2.7	79,378	6.5	32,233	2.1	111,611
Muchinga	142,625	72,770	6.7	35,211	4.7	97,518	8.0	78,377	5.1	175,895
Northern	229,004	84,482	7.8	71,874	9.6	97,896	8.0	154,624	10.0	252,520
North Western	146,670	74,601	6.8	59,847	8.0	51,034	4.2	138,725	9.0	189,759
Southern	315,520	136,171	12.5	147,098	19.7	121,704	9.9	269,478	17.5	391,182
Western	175,536	133,392	12.2	19,490	2.6	72,172	5.9	22,375	1.5	94,548

9.3.2. Cassava

Table 9.4 shows the percentage share of agricultural households producing cassava and total estimated quantity produced by province and rural/urban during the 2021/22 Agriculture season.

At national level, an estimated 354,411 households were engaged in cassava production representing 16.4 percent of the 2,159,670 agricultural households. Further, these households produced an estimated 156,651 metric tonnes of cassava during the 2021/22 Agriculture season.

Analysed by rural/urban, of the total 354,411 households that produced cassava, 90.5 percent were located in rural areas while the remaining 9.5 percent lived in in urban areas. In addition, among the agricultural households in rural areas, 17.4 percent produced cassava which translates into an estimated 320,881 households producing an estimated 144,474 metric tonnes of cassava during 2021/22 Agricultural season.

Of an estimated 311,513 agricultural households in urban areas, 10.8 percent of them produced cassava representing an estimated the 33,530 households in absolute terms. These households produced 12,177 metric tonnes of cassava during the season under consideration.

By province, Luapula and Northern provinces accounted for the largest and second largest proportions of households that produced cassava during the 2021/22 Agriculture season at 34.7 and 27.3 percent, respectively. However, none of the sampled households in Southern reported producing cassava during the 2021/22 Agriculture season.

Table 9.4: Percentage Share of Agricultural Households Producing Cassava and Quantity Produced (Mt) by rural/urban and Province, 2021/22 Agricultural season, Zambia 2022

Province/ Residence	All Households	Number of Agricultural Households	Number Growing Cassava	Percentage Share	Proportional Share	Quantity Produced in Metric Tonnes
Total	**3,861,557**	**2,159,670**	**354,411**	**16.4**	**16.4**	**156,651**
Rural	2,278,255	1,848,156	320,881	17.4	90.5	144,474
Urban	1,583,301	311,513	33,530	10.8	9.5	12,177
Central	434,579	287,854	11,545	4.0	3.3	7,453
Copperbelt	532,594	165,346	2,356	1.4	0.7	692
Eastern	527,710	408,529	1,383	0.3	0.4	277
Luapula	295,761	191,182	122,819	64.2	34.7	70,614
Lusaka	628,772	97,404	2,171	2.2	0.6	958
Muchinga	181,762	142,625	36,665	25.7	10.3	13,059
Northern	313,883	229,004	96,675	42.2	27.3	41,825
North Western	226,853	146,670	44,494	30.3	12.6	10,078
Southern	461,927	315,520	-	-	-	
Western	257,716	175,536	36,303	20.7	10.2	11,695

9.3.3. Millet

Table 9.5 shows the percentage distribution of agricultural households producing millet and total estimated quantity produced, by residence and province during the 2021/22 Agriculture season.

At national level 6.7 percent of the agricultural households were engaged in millet production. These households produced an estimated 28,173 metric tonnes during the 2021/22 Agriculture season. Further, of the 6.7 percent agricultural households that produced millet, 89.1 percent were located in rural areas while 10.9 percent were in urban areas. Naturally, 88.5 percent of millet produced during the 2021/22 Agriculture season came from rural areas.

Analysing millet production by province, results show that Northern Province was the largest producer of millet acounting for 57.9 percent followed by Luapula Province at 15.4 percent. Central Province was the smallest producer of millet at 0.4 percent during the 2021/22 Agricultural season.

Table 9.5: Percentage Distribution of Millet Producing Agricultural Households and Total Estimated Quantity Produced by Rural/urban and Province, 2021/22 Agricultural season, Zambia 2022

Region/ Province	Agricultural Households	Millet Growing Households	Percent	Quantity Harvested MT	Percent
Total Zambia	**2,159,670**	**144,781**	**6.7**	**28,173**	**100.0**
Rural	1,848,156	128,985	89.1	24,926	88.5
Urban	311,513	15,796	10.9	3,247	11.5
Province					
Central	287,854	1,204	0.8	112	0.4
Copperbelt	165,346	4,406	3.0	419	1.5
Eastern	408,529	3,112	2.1	426	1.5
Luapula	191,182	23,447	16.2	4,352	15.4
Lusaka	97,404	1,609	1.1	183	0.7
Muchinga	142,625	9,953	6.9	1,810	6.4
Northern	229,004	63,225	43.7	16,302	57.9
North Western	146,670	17,184	11.9	1,961	7.0
Southern	315,520	11,971	8.3	2,069	7.3
Western	175,536	8,671	6.0	540	1.9

9.3.4. Sorghum

Table 9.6 shows the percentage distribution of agricultural households that produced sorghum and total estimated quantity produced, by residence and province during the 2021/22 Agricultural season.

At national level, 2.5 percent of the agricultural households produced sorghum during the 2021/22 Agricultural season. These households produced an estimated 20,671 metric tonnes. Further, of the 54,552 agricultural households that produced sorghum, 97.1 percent were in rural areas while 2.9 percent were in urban areas.

Additionally, 99.0 percent of the sorghum produced during the 2021/22 Agricultural season came from rural areas while the rest came from urban households.

Analysing sorghum production by province, Southern (48.1%) and Lusaka (34.3%) provinces produced the largest quantities of sorghum accounting for 82.4 percent of the national total.

Table 9.6: Percentage Distribution of Sorghum Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agricultural season, Zambia 2022

	Agricultural Households	Sorghum Growing Households	Percent	Quantity Harvested MT	Percent
Total Zambia	**2,159,670**	**54,552**	**2.5**	**20,671**	**100.0**
Rural	1,848,156	52,994	97.1	20,470	99.0
Urban	311,513	1,558	2.9	201	1.0
Province					
Central	287,854	1,425	2.6	233	1.1
Copperbelt	165,346	616	1.1	29	0.1
Eastern	408,529	0	0.0	0	0.0
Luapula	191,182	202	0.4	125	0.6
Lusaka	97,404	19,772	36.2	7,083	34.3
Muchinga	142,625	3,750	6.9	1,369	6.6
Northern	229,004	2,376	4.4	404	2.0
North Western	146,670	0	0.0	0	0.0
Southern	315,520	16,051	29.4	9,952	48.1
Western	175,536	10,361	19.0	1,476	7.1

9.3.5. Rice

Table 9.7 shows the percentage distribution of agricultural households producing rice and total estimated quantity produced, by residence and province during the 2021/22 Agriculture season.

At national level 2.9 percent of the agricultural households were engaged in rice production during the 2021/22 Agriculture season. These households produced an estimated 43,699 metric tonnes. Further, of the 2.9 percent of the agricultural households that produced rice, 88.2 percent were located in rural areas while 11.8 percent were in urban areas. In addition, 81.2 percent of the rice produced during the 2021/22 Agricultural season came from rural areas while the rest, 18.8 percent came from urban households.

Analysed by province, Northern (38.5%), Muchinga (29.5%) and Western (25.5%) provinces were the three largest producers of rice during the 2021/22 Agriculture season accounting for 93.5 percent of the total national production. For the rest of the details.

Table 9.7: Percentage Distribution of Rice Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agricultural season, Zambia 2022

Region/ Province	Agricultural Households	Rice Growing Households	Percent	Quantity Harvested (Mt)	Percent
Total Zambia	**2,159,670**	**62,173**	**2.9**	**43,699**	**100**
Rural	1,848,156	54,846	88.2	35,473	81.2
Urban	311,513	7,327	11.8	8,226	18.8
Central	287,854	-	-	-	-
Copperbelt	165,346	875	1.4	44	0.1
Eastern	408,529	705	1.1	-	0.0
Luapula	191,182	577	0.9	174	0.4
Lusaka	97,404	55	0.1	192	0.4
Muchinga	142,625	12,424	20.0	12,910	29.5
Northern	229,004	21,013	33.8	16,840	38.5
North Western	146,670	4,017	6.5	2,410	5.5
Southern	315,520	-	-	-	-
Western	175,536	22,509	36.2	11,130	25.5

9.3.6 Mixed Beans

Table 9.8 shows the percentage distribution of agricultural households who produced mixed beans and total estimated quantity produced, by rural/urban and province during the 2021/22 Agriculture season. At national level, 6.7 percent of the agricultural households produced mixed beans during the 2021/22 Agriculture season. These households produced an estimated 28,173 metric tonnes. Further, of the agricultural households that produced mixed beans, 89.1 percent were in rural areas while 10.9 percent were in urban areas.

In addition, 88.5 percent of the mixed beans produced during the 2021/22 Agriculture season came from rural areas while the rest i.e. 11.5 percent came from urban households.

Analysed by province, Northern and Luapula provinces accounted for the largest and second largest percentage shares of mixed beans production at 57.9 and 15.4 percent, respectively, together accounting for 73.3 percent of the national production total. Central Province accounted for the smallest percentage share at 0.4 percent.

Table 9.8: Percentage Distribution of Mixed Beans Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agriculture season, Zambia 2022

	Agricultural Households	Mixed Beans Growing HHDs	Percent	Quantity Harvested (Mt)	Percent
Total	**2,159,670**	**144,781**	**6.7**	**28,173**	**100.0**
Rural	1,848,156	128,985	89.1	24,926	88.5
Urban	311,513	15,796	10.9	3,247	11.5
Central	287,854	1,204	0.8	112	0.4
Copperbelt	165,346	4,406	3.0	419	1.5
Eastern	408,529	3,112	2.1	426	1.5
Luapula	191,182	23,447	16.2	4,352	15.4
Lusaka	97,404	1,609	1.1	183	0.7
Muchinga	142,625	9,953	6.9	1,810	6.4
Northern	229,004	63,225	43.7	16,302	57.9
North Western	146,670	17,184	11.9	1,961	7.0
Southern	315,520	11,971	8.3	2,069	7.3
Western	175,536	8,671	6.0	540	1.9

9.3.7. Soya Beans

Table 9.9 shows the percentage distribution of agricultural households producing soya beans and total estimated quantity produced, by residence and province during the 2021/22 Agriculture season.

At national level, 16.6 percent of the agricultural households were engaged in soya beans production during the 2021/22 Agriculture season. These households produced an estimated 293,715 metric tonnes. Further, of the 16.6 percent agricultural households that produced soya beans, 93.5 percent were located in rural areas while 6.5 percent were in urban areas. In addition, 94 percent of the soya beans produced during the 2021/22 Agriculture season came from rural areas while the rest i.e. 6.0 percent came from urban areas.

Analysed by province, Central and Eastern provinces had the largest and second largest production shares at 41.6 and 38 percent, respectively, together accounting for 79.6 percent of the entire national production total.

However, Luapula Province accounted for the lowest production share at 0.1 percent.

Table 9.9: Percentage Distribution of Soya beans Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agriculture season, Zambia 2022

Region/ Province	Agricultural Households	Soya beans Growing Households	Percentage	Quantity Produced MT	Percent
Total Zambia	**2,159,670**	**358,935**	**16.6**	**293,715**	**100.0**
Rural	1,848,156	335,518	93.5	276,007	94.0
Urban	311,513	23,416	6.5	17,708	6.0
Province					
Central	287,854	102,783	28.6	122,239	41.6
Copperbelt	165,346	5,650	1.6	20,043	6.8
Eastern	408,529	201,497	56.1	111,664	38.0
Luapula	191,182	2,590	0.7	434	0.1
Lusaka	97,404	7,177	2.0	6,242	2.1
Muchinga	142,625	4,144	1.2	964	0.3
Northern	229,004	13,701	3.8	3,732	1.3
North Western	146,670	7,033	2.0	21,627	7.4
Southern	315,520	13,703	3.8	5,605	1.9
Western	175,536	656	0.2	1,165	0.4

9.3.8. Sweet Potatoes

Table 9.10 shows the percentage distribution of agricultural households that produced sweet potatoes and total estimated quantity produced, by residence and province during the 2021/22 Agriculture season.

At national level, 9.2 percent of the agricultural households produced sweet potatoes during the 2021/22 Agricultural season. These households produced an estimated 133,001 metric tonnes. Further, of the 9.2 percent agricultural households that produced sweet potatoes, 84.5 percent were in rural areas while the rest were in urban areas.

Additionally, 90.7 percent of the sweet potatoes produced during the 2021/22 Agriculture season came from rural areas while 9.3 percent came from urban households.

Analysed by province, Central Province accounted for the largest percentage shares at 52.9 percent, Western Province accounted for the smallest production share at 1.0 percent.

Table 9.10: Percentage Distribution of Sweet Potato Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agriculture season, Zambia 2022

Region/ Province	Agricultural Households	Sweet Potato Growing Households	Percent	Quantity Harvested (Mt)	Percent
Total Zambia	**2,159,670**	**198,441**	**9.2**	**133,001**	**100.0**
Rural	1,848,156	167,777	84.5	120,662	90.7
Urban	311,513	30,664	15.5	12,339	9.3
Province					
Central	287,854	48,051	24.2	70,338	52.9
Copperbelt	165,346	17,437	8.8	9,283	7.0
Eastern	408,529	9,811	4.9	9,653	7.3
Luapula	191,182	13,258	6.7	6,015	4.5
Lusaka	97,404	4,803	2.4	5,319	4.0
Muchinga	142,625	10,216	5.1	3,918	2.9
Northern	229,004	27,148	13.7	7,880	5.9
North Western	146,670	18,911	9.5	7,733	5.8
Southern	315,520	38,133	19.2	11,546	8.7
Western	175,536	10,672	5.4	1,314	1.0

9.3.9. Irish Potatoes

Table 9.11 shows the percentage distribution of Irish potato producing agricultural households and total estimated quantity produced by rural/urban and province during the 2021/22 Agriculture season.

At national level, 0.1 percent of the agricultural households produced Irish potatoes during the 2021/22 Agricultural season. These households produced an estimated 1,224.4 metric tonnes of Irish potatoes. Further, none of the sampled agricultural households in urban areas produced Irish potatoes. Thus the entire 1,224.4 metric tonnes of Irish potatoes were grown by the 2,535 rural households.

Analysed by province, results show that Muchinga and North-western provinces accounted for the largest and second largest shares of production at 70.6 and 14.9 percent, respectively. These two provinces accounted for 85.5 percent of the national production.

Table 9.11: Percentage Distribution of Irish Potato Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agriculture season, Zambia 2022

Region/ Province	Agricultural Households	Irish Potato Growing HHDs	Percent	Quantity Produced MT	Percent
Total Zambia	**2,159,670**	**2,535**	**0.1**	**1,224.4**	**100.0**
Rural	1,848,156	2,535	100.0	1,224.4	100.0
Urban	311,513	-	0.0	-	0.0
Province					
Central	287,854	-	0.0	-	0.0
Copperbelt	165,346	44	1.7	0.8	0.1
Eastern	408,529	220	8.7	54.9	4.5
Luapula	191,182	-	0.0	-	0.0
Lusaka	97,404	13	0.5	33.6	2.7
Muchinga	142,625	247	9.7	864.5	70.6
Northern	229,004	264	10.4	66.1	5.4
North Western	146,670	1,068	42.1	182.3	14.9
Southern	315,520	678	26.8	22.3	1.8
Western	175,536	-	0.0	-	0.0

9.3.10 Groundnuts

Table 9.12 shows the percentage distribution of agricultural households that produced groundnuts and total estimated quantity produced, by residence and province during the 2021/22 Agriculture season.

At national level, 25.2 percent of the agricultural households produced groundnuts during the 2021/22 Agriculture season. These households produced an estimated 199,324 metric tonnes. Further, of the 544,228 agricultural households that produced groundnuts, 89.1 percent were in rural areas while 10.9 percent were in urban areas.

Additionally, 90.5 percent of the groundnuts produced during the 2021/22 Agriculture season were produced by rural households while 9.5 percent was produced by urban households.

Analysing groundnut-production by province, results show that Eastern Provinces was the highest producer of groundnuts during the 2021/22 Agricultural season at 20.8 percent. Central and Luapula provinces jointly produced the second highest quantities of groundnuts at 17.5 percent each. The four provinces that is Eastern, Central, Luapula and Southern accounted for 72.5 percent of the total national production. Lusaka Province accounted for the smallest production share at 1.8 percent.

Table 9.12: Percentage Distribution of Groundnut Producing Agricultural Households and Total Estimated Quantity Produced by Rural/Urban and Province, 2021/22 Agriculture season, Zambia 2022

Region/ Province	All Households	Agricultural Households	Groundnuts Growing Households	Percent	Quantity Harvested (Mt)	Percent
Total Zambia	**3,861,557**	**2,159,670**	**544,228**	**25.2**	**199,324**	**100.0**
Rural	2,278,255	1,848,156	484,808	89.1	180,431	90.5
Urban	1,583,301	311,513	59,420	10.9	18,893	9.5
Province						
Central	434,579	287,854	65,854	12.1	34,882	17.5
Copperbelt	532,594	165,346	39,424	7.2	16,226	8.1
Eastern	527,710	408,529	127,111	23.4	41,368	20.8
Luapula	295,761	191,182	78,107	14.4	34,880	17.5
Lusaka	628,772	97,404	10,923	2.0	3,529	1.8
Muchinga	181,762	142,625	24,189	4.4	7,399	3.7
Northern	313,883	229,004	61,674	11.3	13,439	6.7
North-western	226,853	146,670	29,181	5.4	8,878	4.5
Southern	461,927	315,520	85,932	15.8	33,302	16.7
Western	257,716	175,536	21,832	4.0	5,423	2.7

9.4. Livestock

9.4.1. Livestock Ownership

Table 9.13 shows the proportional distribution of households owning livestock by type, rural/urban and province during the 2021/22 Agriculture season.

Cattle

At national level, results show that 18.1 percent of the households in Zambia during the 2021/22 Agriculture season owned cattle representing 391,810 in absolute terms. Of these households, 94.6 percent were in rural areas while 5.4 percent were in urban areas.

Analysing the proportional distribution of household by ownership of cattle by province, results show that 31.2 percent of the households that owned cattle were in Southern Province accounting for the largest percentage share followed by Central and Eastern provinces at 26.5 and 25.4 percent, respectively.

However, Luapula Province had the smallest proportion of households that owned cattle at 0.04 percent.

Goats

At national level, results show that 21.1 percent of the households in Zambia owned goats during the 2021/22 Agricultural season translating into 455,155 households in absolute terms. Of these households, 95.1 percent were in rural areas while the remaining 4.9 percent were in urban.

Analysed by province, Southern Province accounted for the largest proportion of households that owned goats during the 2021/22 Agriculture season at 36.5 percent followed by Central and Eastern provinces at 23.3 and 13.3 percent, respectively.

However, Western Province had the smallest proportion of households that owned goats at 1.3 percent.

Pigs

At national level, results show that 6.1 percent of the households in Zambia owned pigs during the 2021/22 Agricultural season which translates into 132,766 pigs in absolute terms. Of these households, 96.6 percent were in rural areas while the rest were in urban areas.

Analysed by province, Southern Province accounted for the largest proportion of households that owned pigs at 33.2 percent translated to 44,079 households in absolute terms. Eastern and Northern provinces accounted for the second and third largest proportions of households that owned pigs at 20.2 and 13.5 percent, respectively. Further, Lusaka Province accounted for the smallest proportion of households that owned pigs at 0.8 percent.

Sheep

At national level, results show that 1.1 percent of the households in Zambia owned sheep during the 2021/22 Agriculture season representing 23,683 households in absolute terms. Of the households that owned sheep, 90.3 percent were from rural areas while the remaining 9.7 percent were from urban areas.

Analysed by province, results show that Southern Province accounted 56.3 percent of the total national population of agricultural households that owned sheep. Luapula Province accounted for the smallest proportion of households that owned sheep at 0.2 percent.

Table 9.13: Proportional Distribution of Households owning Livestock by Type, Rural/Urban and Province, Zambia 2022

Region/ Province	Households Owning Livestock									
	Cattle		Goats		Pigs		Sheep		Agricultural Households	
	Households	Percent	Households	Percent	Households	Percent	Households	Percent	Count	Proportional share
Total Zambia	**391,810**	**18.1**	**455,145**	**21.1**	**132,766**	**6.1**	**23,683**	**1.1**	**2,159,670**	**100.0**
Rural	370,458	94.6	432,920	95.1	128,194	96.6	21,395	90.3	1,848,156	85.6
Urban	21,352	5.4	22,225	4.9	4,572	3.4	2,288	9.7	311,513	14.4
Province										
Central	103,798	26.5	105,916	23.3	8,854	6.7	2,148	9.1	287,854	13.3
Copperbelt	6,736	1.7	16,124	3.5	7,030	5.3	384	1.6	165,346	7.7
Eastern	99,484	25.4	60,676	13.3	26,830	20.2	2,998	12.7	408,529	18.9
Luapula	159	0.04	16,116	3.54	3,705	2.79	40	0.2	191,182	8.9
Lusaka	14,654	3.7	21,389	4.7	1,036	0.8	1,550	6.5	97,404	4.5
Muchinga	2,007	0.5	10,251	2.3	8,891	6.7	0.0	0.0	142,625	6.6
Northern	4,231	1.1	37,657	8.3	17,934	13.5	2,800	11.8	229,004	10.6
North Western	10,192	2.6	14,648	3.2	6,626	5.0	442	1.9	146,670	6.8
Southern	122,324	31.2	166,291	36.5	44,079	33.2	13,322	56.3	315,520	14.6
Western	28,225	7.2	6,076	1.3	7,781	5.9	0	0.0	175,536	8.1

9.4.2 Livestock by Type

Table 9.14 shows the proportional distribution of livestock by type, rural/urban and province during the 2021/22 Agriculture season.

Cattle

At national level, there was an estimated 3,983,425 cattle during the 2021/22 Agriculture season. Of the total cattle population, 94.4 percent were in rural areas whereas 5.6 percent were in urban areas.

Analysing cattle distribution by province, Southern and Central provinces accounted for the largest and second largest proportions of cattle at 42.6 and 23.5 percent, respectively. However, Luapula Province had the smallest proportion at 0.02percent.

Goats

At national level, there was an estimated 3,777,572 goats during the 2021/22 Agriculture season. Of the total goat population, 91.4 percent were in rural areas whereas 8.6 percent were in urban areas.

By province, Southern and Central provinces similarly accounted for the largest and second largest proportions of the goat population at 42.9 and 25.4 percent, respectively. However, Western Province had the smallest proportion at 1.2 percent.

Pigs

During the 2021/22 Agriculture season, the country had an estimated 920,042 pigs. Of this population, 96.2 percent were in rural areas whereas 3.2 percent were in urban areas.

Analysed by province, Southern and Eastern provinces accounted for the largest and second largest proportions of the pig population at 51.3 and 11.4 percent, respectively. Luapula Province had the smallest proportion at 0.9 percent.

Sheep

The country had an estimated 448,952 sheep population during the 2021/22 Agriculture season. Of this population, 96.4 percent were in rural areas whereas 3.6 percent were in urban areas.

By province, Southern had the largest proportion of the sheep population at 86.3 percent while North-western Province had the smallest proportion at 0.3 percent. Of the sampled households in Muchinga and Western provinces, none reported owning sheep.

Table 9.14: Proportional Distribution of Livestock by Type, Rural/Urban and Province, Zambia 2022

Region/ Province	Livestock Code							
	Cattle		Goats		Pigs		Sheep	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	**3,983,425**	**100.0**	**3,777,572**	**100.0**	**920,042**	**100.0**	**448,952**	**100.0**
Rural	3,759,083	94.4	3,452,762	91.4	884,874	96.2	432,707	96.4
Urban	224,342	5.6	324,810	8.6	35,168	3.8	16,245	3.6
Province								
Central	934,980	23.5	959,013	25.4	56,612	6.2	17,038	3.8
Copperbelt	48,908	1.2	230,915	6.1	51,693	5.6	2,228	0.5
Eastern	691,813	17.4	297,891	7.9	104,484	11.4	17,921	4.0
Luapula	794	0.02	56,643	1.5	7,983	0.9	80	0.02
Lusaka	157,364	4.0	220,166	5.8	24,142	2.6	14,377	3.2
Muchinga	12,480	0.3	49,538	1.3	38,843	4.2	-	-
Northern	14,358	0.4	192,518	5.1	63,152	6.9	8,400	1.9
North Western	75,683	1.9	105,247	2.8	48,813	5.3	1,293	0.3
Southern	1,697,543	42.6	1,621,782	42.9	471,868	51.3	387,615	86.3
Western	349,501	8.8	43,858	1.2	52,451	5.7	-	-

Table 9.15 shows the number and poultry distribution by type, by rural/urban and province during the 2021/22 Agriculture season.

Chicken

At national level, 42.7 percent of the agricultural households in Zambia owned chickens during the 2021/22 Agriculture season. Of these households, 89.6 percent resided in rural areas whereas 10.4 percent were in urban areas.

These 922,079 households reared 17,632,261 chickens. Of the total chicken population, 70.9 percent were produced by households in rural areas while the remainder 21.9 percent were produced by the households in urban areas.

By province, Southern and Central provinces accounted for the largest and second largest proportions of chickens at 19.5 and 19.3 percent, respectively. However, Muchinga Province had the smallest proportion at 3.0 percent.

Ducks & Geese

Results show that 5.3 percent of the agricultural households in Zambia owned ducks and geese during the 2021/22 Agriculture season. Of these households, 92.2 percent were residing in rural areas whereas 7.8 percent were in urban areas.

These 114,247 households that owned ducks and geese produced 786,661 ducks and geese. Of the total ducks and geese population, 88.3 percent were produced by households in rural areas while the remainder 11.7 percent were produced by the households in urban areas.

Analysed by province, Southern, Northern and Central provinces were the three provinces with the largest proportions of ducks and geese at 24.7; 13.4 and 13.3 percent, respectively. Further, Muchinga Province had the smallest proportion at 4.4 percent.

Table 9.15: Number and Poultry Distribution by Type, Rural/Urban and Province, Zambia 2022

Region/ Province	Agricultural HHDs	Chicken-owning HHDS	Chickens	Percent	Ducks & Geese Owning HHDs	Ducks & Geese	Percent
Total Zambia	**2,159,670**	**42.7**	**17,632,261**	**100.0**	**5.3**	**786,661**	**100.0**
Rural	1,848,156	89.6	12,494,330	70.9	92.2	694,332	88.3
Urban	311,513	10.4	5,137,931	29.1	7.8	92,329	11.7
Central	287,854	21.6	3,440,400	19.5	15.1	104,375	13.3
Copperbelt	165,346	7.1	2,397,329	13.6	4.7	45,900	5.8
Eastern	408,529	15.6	2,175,889	12.3	13.3	83,253	10.6
Luapula	191,182	4.2	899,128	5.1	6.0	46,249	5.9
Lusaka	97,404	3.9	2,124,595	12.0	4.9	71,191	9.0
Muchinga	142,625	4.4	526,809	3.0	5.3	34,921	4.4
Northern	229,004	9.0	1,161,557	6.6	12.2	105,503	13.4
North Western	146,670	4.7	858,082	4.9	3.8	40,888	5.2
Southern	315,520	24.2	3,408,786	19.3	29.7	194,009	24.7
Western	175,536	5.2	639,687	3.6	5.2	60,373	7.7

Guinea Fowls

At national level, 4.7 percent of the agricultural households owned guinea fowls during the 2021/22 Agriculture season. Of the households that owned guinea fowls, 96.7 percent were residing in rural areas whereas 3.3 percent were in urban areas.

These 101,733 households that owned guinea fowls produced 941,536 guinea fowls. Of the total Guinea fowl population, 98.1 percent were produced by households in rural areas while the remainder were produced by the households in urban areas.

By province, Southern and Central provinces accounted for the largest and second largest proportions of guinea fowls at 64.8 and 24.2 percent, respectively. The two provinces produced 89 percent of the national population of guinea fowls.

However, Luapula Province had the smallest proportion at 0.2 percent.

Other Poultry

Included in the category "other poultry" are turkeys, rabbits, pigeons, quails, etc. At national level, results show that 3.2 percent of the agricultural households in Zambia owned "other poultry" during the 2021/22 Agriculture season. Of these households, 89.1 percent were residing in rural areas whereas 10.9 percent were in urban areas.

These 70,120 households that owned "other poultry" reared 1,464,249 birds. Of the total bird population of "other poultry", 86.2 percent were produced by households in rural areas while the remainder were produced by the households in urban areas.

By province, Southern and Eastern provinces accounted for the largest and second largest proportions at 44.3 and 16.1 percent, respectively. The two provinces produced 60.4 percent of the national population. However, Luapula, North-western and Western provinces accounted for the smallest proportions of 0.5 percent each..

Table 9.15.2: Number and Poultry Distribution by Type, Rural/Urban and Province, Zambia 2022

Region/ Province	Agricultural HHDs	Guinea fowls Owning HHDs	Guinea fowls	Percent	Other poultry (e.g. turkey, rabbits, pigeons, quails) Owning HHDs	Other poultry (e.g. turkey, rabbits, pigeons, quails)	Percent
Total Zambia	**2,159,670**	**4.7**	**941,536**	**100.0**	**3.2**	**1,464,249**	**100.0**
Rural	1,848,156	96.7	924,042	98.1	89.1	1,262,494	86.2
Urban	311,513	3.3	17,494	1.9	10.9	201,755	13.8
Central	287,854	33.7	228,214	24.2	14.4	201,381	13.8
Copperbelt	165,346	1.2	3,563	0.4	5.5	166,479	11.4
Eastern	408,529	3.8	50,688	5.4	6.7	235,971	16.1
Luapula	191,182	0.3	2,002	0.2	1.1	6,645	0.5
Lusaka	97,404	2.5	12,116	1.3	3.9	89,337	6.1
Muchinga	142,625	0.5	3,146	0.3	7.5	49,180	3.4
Northern	229,004	1.1	6,161	0.7	6.5	52,560	3.6
North Western	146,670	2.6	23,063	2.4	2.1	7,068	0.5
Southern	315,520	53.9	609,877	64.8	51.1	647,945	44.3
Western	175,536	0.4	2,705	0.3	1.2	7,681	0.5

Chapter 10 : HOUSEHOLD INCOME AND ASSETS

10.1 Introduction

Household income and assets play a vital role in the analysis of living conditions of households. Income and assets contribute to poverty alleviation as well as to the well-being of the population. Income is used as a measure of welfare because the consumption of goods and services is dependent on the sum of income available to a household at any given time. Households generally depend on income to meet their day to day expenditures, such as on food, housing, clothing, education, health, etc. A household's access to durable consumer goods is a good proxy indicator of its social economic status. Ownership of assets by a household not only improves its well-being but also enhances its socioeconomic standing in that community.

The 2022 survey collected data on income for persons of age 5 years or older.

The following income sources were included:

- Income from agricultural production;
- Income from non-agricultural business;
- Income in kind;
- Rental income from properties owned;
- Income from remittances;
- Income from pensions, grants and interests
- Income from interest or dividends on shares, bonds, securities, treasury bills, etc. and
- Any other source of income that accrued to a person.

Total household income was calculated by summing up income earned from all sources by each household member. Data on own consumption was collected and imputed into cash earnings. Household income presented in this chapter is based on an estimated 4,056,605 households in Zambia that reported non-zero income. Data on household asset ownership was also collected. Household members were asked whether or not they owned any assets in working condition and/or that were serviceable at the time of the survey. They were also asked when they first acquired the particular asset and its value at the time of acquisition as well as its present value.

10.2. Concepts and Definitions

The following concepts and definitions constituted the guiding principles for collecting, processing and analyzing the data on household income.

Household Monthly Income: This is the monthly earnings of a household from engaging in economic activities such as the production of goods and services and the ownership of assets. Household monthly income is the sum of all incomes of household members.

Per Capita Mean Monthly Income: This denotes the average monthly income of a household member, calculated as the quotient of total household monthly income and the total number of persons in the household.

Household Mean Monthly Income: This is the average monthly income of a household and is calculated as the quotient of the total monthly income of all households and the total number of households in Zambia. Related to the mean monthly income is the modal income representing the income received by the majority of households.

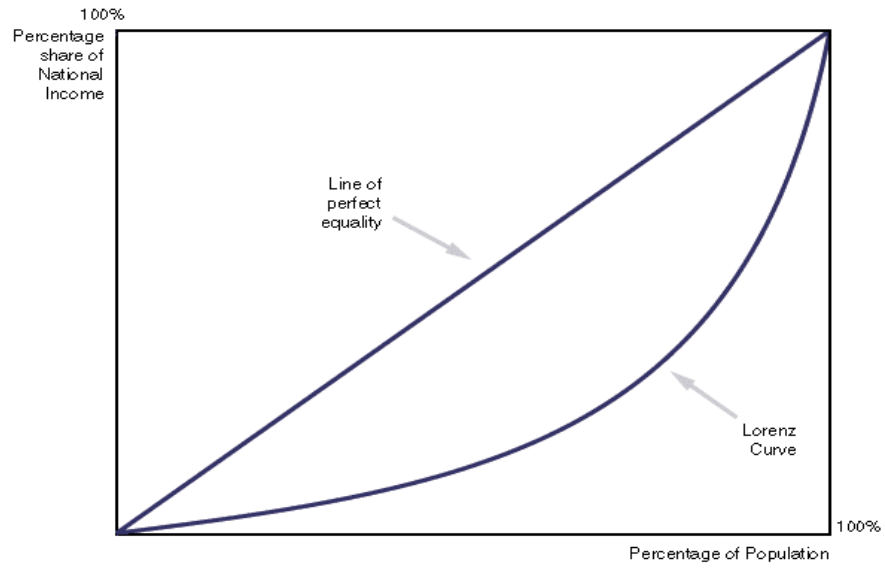
Per Capita Income Deciles: These are the tabular representations of income distribution of a population. Per capita income deciles divide an income distribution arranged in ascending or descending order into 10 equal parts or deciles. For each decile, the percentage of the total income is calculated as well as the percentage of the total population receiving the total income in the deciles. The difference between the two percentages varies directly with inequality in income distribution.

Lorenz Curve: A Lorenz curve is a graphical representation of income distribution of a population. It shows the different proportions of total income going to different proportions of the population. The curve depicts income inequalities by the extent to which it diverges from an equi-income distribution line. The equi-income distribution line is a straight line joining the ends of the Lorenz curve and represents total equality in income distribution. Each point on the equi-income distribution line is such that a given percentage of the population receives an equal share of total income. This implies that 10 percent of the population receives 10 per cent of the total income, 90 percent of the population receives 90 percent of the total income, and so on.

Gini Coefficient: Measures household income distribution using an index of inequality. The coefficient gives the numerical degree to which the Lorenz curve diverges from the equi-income distribution line. In Figure 10.1, the straight line 0C is the equi-income distribution line, while the curve 0C is the Lorenz curve. The Gini coefficient is the ratio of the area A to the sum of areas A and B; hence the Gini coefficient is given by: G=A/(A+B)

The Gini coefficient always ranges from 0 to 1. A coefficient of 0 represents total equality in income distribution, while a coefficient of 1 represents total inequality. The lower the Gini coefficient is, the more equitable income distribution is reflecting lower incidence of income inequality. For instance, a 0.66 coefficient represents a high incidence of inequality in income distribution, while a 0.15coefficient represents a more equitable income distribution.

Figure 10.1: Lorenz Curve, Zambia 2022



10.3. Distribution of Income

Table 10.1 shows average monthly household income distribution in Kwacha by rural/urban and province in 2022. Results show that average monthly household income in Zambia was K3,442.90. Further, average monthly household income of households in urban areas was almost double that of households in rural areas, (i.e K5,546.60 against K2,112.20), respectively.

Analysed by province, results show that households on the Copperbelt, Lusaka and North-western provinces were the highest earning at K6,353; K5,644.80 and K4,881.00, respectively. However, households in Muchinga were the least earning at K1,271.10. The average monthly income of households in Eastern, Luapula, Muchinga and Northern provinces were at least 1.8 percentage-points below the national average K3,442.90.

Table 10.1: Average Household Income (K) Distribution by Rural/Urban and Province, Zambia 2022

Region/ Province	Total
Total	**3,442.90**
Rural	2,122.20
Urban	5,546.60
Central	2,960.40
Copperbelt	6,353.00
Eastern	1,307.10
Luapula	1,417.10
Lusaka	5,644.80
Muchinga	1,271.10
Northern	1,904.10
North Western	4,881.00
Southern	3,140.40
Western	2,308.70

10.4. Income by Stratum

Table 10.2 shows average monthly household income distribution by stratum and province in 2022. At national level, results show that households from High Cost stratum, on average, earned the highest level of income on a monthly basis (K8,546.90) followed by households from Medium Cost whose average monthly income was K6,495.80 while the households from Small Scale Agricultural stratum, on average, earned the least amount of money per month at K1,692.40.

Analysing average household income by stratum within each province, results show that households in High Cost on the Copperbelt earned the highest income at K11,068.80 followed by Central and Eastern provinces at K10,992.20 and K9,697.20. However, households in Low Cost from Northern Province were the least earning among households in urban strata at K1,963.30.

Of the households in rural strata, Large Scale Agricultural households from Lusaka and Southern provinces earned the highest levels of income at K9,280.60 and K8,249.90, respectively, while among Medium Scale Agricultural households, households from Copperbelt Province earned the highest income at K6,998.10. However, Small Scale Agricultural households from Luapula earned the least income at K749.60.

Table 10.2: Distribution of Average Monthly Household Income by Stratum and Province, Zambia 2022

Province	Total	Small Scale	Medium Scale	Large Scale	Non-Agric	Low Cost	Medium Cost	High Cost
Total	**3,442.9**	**1,692.4**	**3,854.1**	**5,379.0**	**3,247.5**	**5,168.0**	**6,495.8**	**8,546.9**
Central	2,960.4	2,114.5	4,025.3	4,678.6	3,156.9	2,277.3	7,823.8	10,992.2
Copperbelt	6,353.0	4,009.0	6,998.1	7,648.0	4,276.5	6,346.6	7,899.7	11,068.8
Eastern	1,307.1	771.6	1,526.4	1,563.0	1,293.4	4,026.1	8,530.0	9,697.2
Luapula	1,417.1	749.6	773.8	1,170.3	2,317.5	2,687.6	4,227.8	5,815.6
Lusaka	5,644.8	3,729.8	5,219.1	9,280.6	5,048.4	5,900.2	6,019.3	6,121.5
Muchinga	1,271.1	867.4	4,048.9	7,068.1	2,663.2	1,977.7	2,493.2	3,052.8
Northern	1,904.1	1,594.9	3,683.3	7,542.2	2,212.9	1,963.3	2,183.6	2,292.3
North Western	4,881.0	3,343.7	4,968.3	5,598.9	7,191.0	5,403.0	6,274.6	9,078.3
Southern	3,140.4	1,743.7	5,382.1	8,249.9	3,461.6	5,014.6	5,883.6	7,893.8
Western	2,308.7	1,924.6	2,514.2	2,676.7	2,619.4	2,853.4	4,292.3	6,086.0

Table 10.3. shows average household Income cited by source in 2022. At national level, the largest source of income cited by households was "regular gross salary & allowance" at K5,787.79, followed by "**other non-farm business income**" at K4,406.52 and "regular salary" at K4,062.02. However, the least source of income cited by households was "dividend payments" at K130.

Table 10.3: Average Household Income (K) cited by Source, Zambia 2022

Income Source	Central	Copper-belt	Eastern	Luapula	Lusaka	Muchinga	Northern	North Western	Southern	Western	Total
Regular Gross Salary and Allowances	6,117.30	4,779.60	3,935.47	6,283.09	5,234.08	6,049.33	5,330.21	8,680.18	6,413.37	4,389.22	5,787.79
Other non-Farm	2,674.27	4,451.02	3,061.50	6,165.44	4,554.15	2,562.26	4,216.70	4,613.78	4,623.41	4,504.85	4,406.52
Regular Salary	3,296.80	5,043.40	2,432.42	3,248.45	3,841.17	3,262.70	3,427.03	6,784.43	3,833.73	3,961.53	4,062.02
Pension	1,926.34	9,472.33	1,000.00	583.56	1,575.35	868.74	1,320.76	1,412.98	1,419.81	2,491.46	3,035.78
Non-Regular Allowances	2,462.97	3,450.33	688.3	2,661.94	3,765.12	890.41	1,673.14	4,174.94	1,923.27	2,249.61	2,901.91
main non-farm	1,967.34	3,709.24	1,281.20	1,704.44	3,223.40	1,735.86	1,918.83	3,853.64	2,679.48	1,992.14	2,633.19
Non-regular allowance overtime	1,017.34	891.02	500	1,200.93	3,944.76	856.24	3,007.61	4,287.14	600	1,874.84	2,024.24
Rent Received	668.78	1,732.60	586.15	440.58	2,097.77	763.68	2,057.34	3,064.40	1,182.40	1,605.52	1,774.67
Any Other Sources	1,198.05	2,389.82	566.93	1,231.25	1,484.73	594	836.7	1,634.01	1,206.41	616.91	1,286.98
Interest On Savings	670.69	1,709.70	646.75	715.92	2,355.57	528.69	571.51	2,085.76	875.85	625.18	1,194.68
Grants	864.11	1,645.74	542.33	1,162.36	876.49	745.21	316.43	619.91	980.39	936.33	892.39
Remittances	843.54	1,021.30	368.22	500.03	819	375.57	466.12	1,059.55	1,262.58	449.74	757.65
livestock Monthly	338.6	400.93	244.95	332.57	1,155.58	76.18	149.55	510.17	1,548.39	839.9	743.89
Borrowing	671.48	752.57	355.85	1,780.07	787.53	295.5	426.97	1,431.02	876.85	407.76	724.22
income In Kind	872.01	957.37	315.08	221.51	1,803.31	334.86	362.83	451.65	1,244.89	217.63	707.3
crop Monthly	811.62	445.93	452.82	328.51	528.56	353.98	453.39	443.36	515.88	304.06	489.3
Social Cash Transfer	600.65	498.47	374.54	437.89	368.45	461.81	415.98	449.11	393.74	332.8	426.34
Poultry Monthly	126.34	790.79	548.52	162.77	648.76	85.59	120.63	452.04	121.37	138.27	244.91
Dividends Per Month	41.67	172.5	106.19	77.2	40.17	166.21	99.94	153.14	107.99	26.35	130

Table 10.4 shows the average household income cited by source, rural/urban, Zambia. Results show that household reporting regular gross salary and allowances had a higher average monthly income of 5,750.51 in rural and 5,800.65 in urban, followed by other non farm income (rural 4,995.33 and urban 4,484.90). Households reporting income from dividents per month had the lowest average income at 105.85 for rural and 144.20 for urban.

Table 10.4 : Average Household Income cited by Source by Rural/Urban, Zambia 2022

Income Source	Average Income (K)	
	Rural	Urban
Regular gross salary & allowances	5,750.51	5,800.65
Other non-farm	4,995.33	4,484.90
Regular salary	3,115.68	4,108.63
Main non-farm	1,784.14	3,769.81
Non-regular allowance & overtime	1,783.75	3,468.20
Non-regular allowance	1,730.27	3,444.66
Rent received	1,344.69	2,082.40
Pension	1,299.75	1,872.69
Any other source	987.83	1,769.47
Interest on savings	763.80	1,496.32
Livestock monthly	760.44	1,250.38
Income in kind	748.39	894.56
Remittances	620.54	857.09
borrowing	582.50	709.13
Crop monthly	486.92	654.85
Grants	467.06	505.33
Social cash transfer	420.62	468.61
Poultry monthly	184.42	448.32
Dividends per month	105.87	144.20

Figure 10.2 shows average household income earned by households in rural areas by stratum in 2022. Results show that Large scale agricultural households earned the highest level of income on a monthly basis at K5,379.00 followed by Medium scale agricultural households at K3,854.10. However, Small scale agricultural households were the least earning at K1,692.40.

Figure 10.2: Average Income (K) earned by Households in Rural Areas by Stratum, Zambia 2022

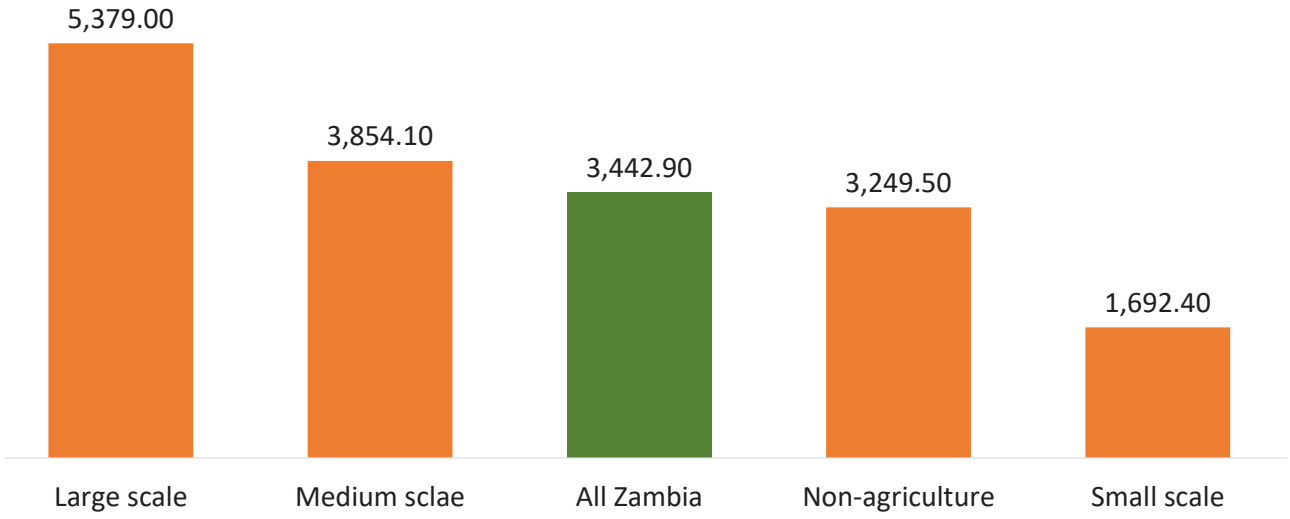


Figure 10.3 shows the average income earned by household by urban stratum in 2022. Overall, the results show that, on average, households in High-cost residential areas earned the highest level of income at K 8,546.9 followed by Medium cost at K6,495.8. Households in Low cost, on average, earned the least income at K5,168.0 although it was higher than the national average.

Figure 10.3: Average Household Income (K) earned by Urban Stratum, Zambia 2022

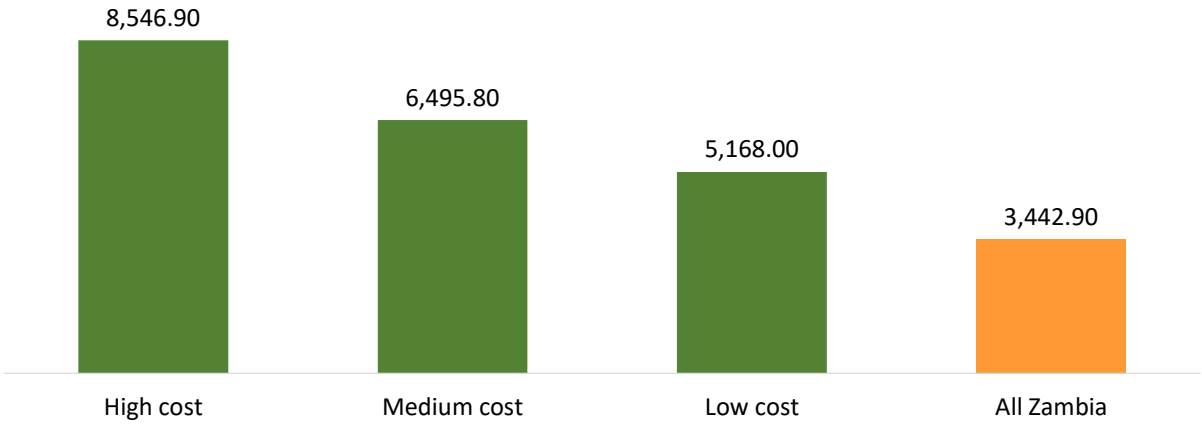
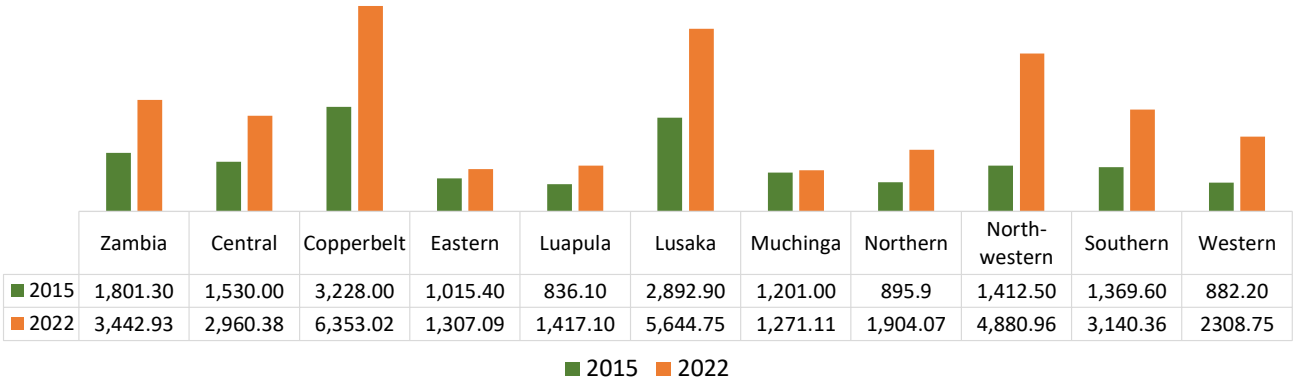


Figure 10.4 shows average income earned by households by province in Zambia between 2015 and 2022. Nominally, the average household income at national level in 2022 was twice that of 2015 i.e (K3,442.93 against K1,801.30).

Further, households in Copperbelt Province, on average, earned the highest monthly income both in 2015 and 2022 at K3,228.00 and K6,353.02, respectively, followed by Lusaka Province at K2,892.90 and K5,644.8 in 2015 and 2022. Households in Luapula Province, on average, earned the least of the 10 provinces in Zambia at K836.10 and K1,271.10 in 2015 and 2022.

Figure 10.4: Average Household Monthly Income earned by Province, Zambia 2022



	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North-western	Southern	Western
2015	1,801.30	1,530.00	3,228.00	1,015.40	836.10	2,892.90	1,201.00	895.9	1,412.50	1,369.60	882.20
2022	3,442.93	2,960.38	6,353.02	1,307.09	1,417.10	5,644.75	1,271.11	1,904.07	4,880.96	3,140.36	2308.75

10.4.1. Income distribution by Highest Level of Education Attained by Household Head

Table 10.4 shows Income distribution by level of education attained by head of household in 2022. Generally, the higher the level of education attained by the head of household, the more likely to be higher the income earned by that household. Households headed by persons with tertiary education earned the highest level of income at K11,733.89 followed by households whose head of household had attained Secondary education at K3,366.07 and Primary education at K1,621.72. Households headed by persons who had never attended school, on average, earned the least amount of money at K1,257.53. This implies that households headed by persons with tertiary education earned nine times as much as those headed by persons who had Never attended school.

Analysed by province, similar to the pattern at national level, generally, the higher the level of education attained by the head of household, the more likely to be higher the income earned by that household

than households headed by persons with lower levels of education who never attended school. Results show that households headed by persons with tertiary level of education earned the highest income at K11,733.89. Households headed by persons with tertiary education in North-western (K14,863.53), Southern (K13,421.44) and Lusaka (K12,930.14) provinces earned the highest income levels, respectively.

Table 10.5: Income Distribution by Level of Education of Household Head, Zambia 2022

Province	Never Attended	Primary	Secondary	Tertiary	Total
Zambia	**1,257.53**	**1,621.72**	**3,366.07**	**11,733.89**	**3,442.93**
Central	1,382.35	1,611.24	2,548.63	11,162.69	2,960.38
Copperbelt	3,166.96	2,740.34	5,878.35	10,678.87	6,353.02
Eastern	714.03	929.98	1,774.91	7,407.71	1,307.09
Luapula	445.87	874.88	1,375.13	8,142.77	1,417.10
Lusaka	1,912.85	3,873.84	4,653.13	12,930.14	5,644.75
Muchinga	672.41	841.57	1,336.13	10,930.85	1,271.11
Northern	1,084.16	1,591.66	2,096.47	6,548.42	1,904.07
North Western	1,398.33	1,500.12	3,274.18	14,863.53	4,880.96
Southern	2,505.09	1,177.75	3,222.87	13,421.44	3,140.36
Western	751.68	916.95	1,654.13	10,780.25	2,308.75

Table 10.6 shows average household income by sex of household head in 2022. Overall, the average income earned by male-headed households was K8,342.90 while that earned by their female counterparts was K3,442.90.

Analysed by province, average household incomes of male-headed households on the Copperbelt, in Lusaka and North-western provinces were one of the three highest at K6,353.00; K5,644.80 and K4,881.00, respectively while Male-headed households in Muchinga Province, on average, earned the least income at K1,271.10.

Further analysing income on a per capita basis, males on average earned more than double the average income earned by females i.e. (K503.60 against K203.10).

Table 10.6: Average Per Capita Household Income by Sex of Household Head, Zambia 2022

Province	Sex of Head		Monthly Income	
	Average Income (K)		Average per capita (K)	
	Male	Female	Male	Female
Total Zambia	**8,342.90**	**3,442.90**	**503.60**	**203.10**
Central	2,960.40	968.90	485.00	187.50
Copperbelt	6,353.00	1,286.70	836.30	299.40
Eastern	1,307.10	259.70	207.50	91.00
Luapula	1,417.10	162.60	192.30	61.70
Lusaka	5,644.80	2,218.80	907.20	574.70
Muchinga	1,271.10	197.00	178.10	28.70
North-western	4,881.00	1,363.40	644.40	215.70
Northern	1,904.10	811.90	318.50	149.60
Southern	3,140.40	1,884.00	442.30	514.10
Western	2,308.70	596.80	243.70	339.30

10.5 Income Inequality

Increases in household average income and average per capita income helps throw some light on change in welfare over time given that income is an important determinant of a households' ability to access goods and services. However, changes in per capita income alone does not tell the whole story

about changes in welfare particularly if it is not evenly distributed across the population. The welfare of the poorer sections of society could be worsening as that of the richest sections of society improves. Table 10.7 shows percentage distribution of households by per capita income deciles by rural/urban in 2022. The first decile relates to 10 percent of households in the lowest income group while the tenth decile is the 10 percent falling in the highest income group.

At national level, results show that the Gini Coefficient was 0.65. in urban areas, the Gini coefficient was 0.64 while in rural it was 0.65.

Table 10.7: Percentage Distribution of households by Per capita Income Deciles and Residence, Zambia 2022.

Income Group	Cumulative Freq	All Zambia		Rural		Urban	
		Percent share of per capita income	Cumulative share of per capita income	% share of per capita income	Cumulative share of per capita income	% share of per capita income	Cumulative share of per capita income
First decile	10	0.2	0.2	0.2	0.2	0.2	0.2
Second Decile	20	0.7	0.9	0.7	0.9	0.7	0.9
Third decile	30	1.4	2.3	1.4	2.3	1.4	2.3
Fourth Decile	40	2.2	4.5	2.1	4.4	2.4	4.7
Fifth Decile	50	3.4	7.9	3.3	7.7	3.5	8.2
Sixth Decile	60	4.6	12.4	4.5	12.3	4.6	12.8
Seven Decile	70	6.6	19.1	6.3	18.6	6.9	19.7
Eighth Decile	80	10.8	29.8	10.8	29.4	10.7	30.4
Ninth decile	90	18.6	48.5	19.2	48.6	18.2	48.6
Tenth decile	100	51.5	100.0	51.4	100.0	51.4	100.0
Gini Coefficient		0.65		0.65		0.64	

OWNERSHIP OF ASSESTS

Ownership of assets is another useful measure when considering changes in household welfare. Not only is it a proxy for ability to consume, but also ownership of productive assets such as farming implements can determine a household's ability to further generate income.

Table 10.8 shows the proportional distribution of households by type of asset owned in 2022. Of the top 10 most commonly owned assets, the largest proportion of households owned a mattress at 74.4 percent followed by those owning a Brazier/Mbaula at 62.1 percent. Households owning a dining table constituted the smallest proportion of the top 10 at 18.8 percent.

Table 10.8: Proportional Distribution of Households by the Top Ten Asset Owned, Zambia 2022

Assets	All Zambia	Residence	
		Rural	Urban
Mattress	74.4	61.4	93.2
Hoe	68.9	88.1	41.3
Brazier/ Mbaula	62.1	43.6	88.7
Bed	60.7	44	84.8
Mosquito net	54.5	55.1	53.5
Cellular phone	37.1	31.8	44.9
Lounge suit / sofa	28.6	11.3	53.6
Residential building	28.1	36.1	16.5
Radio/ stereo	27.1	25.3	29.6
Color Television	19.2	6.3	37.8
Table (dining)	18.8	12.1	28.5

Figure 10.5 shows the proportional distribution of households by 10 top most owned assets in Zambia in 2022. Results show that the highest proportion of households owned a mattress at 74.4 percent while a radio/stereo was the 10th among top 10 most owned assets at 27.1 percent.

Figure 10.5: Proportional Distribution of Households by 10 Top Most Owned Assets, Zambia 2022

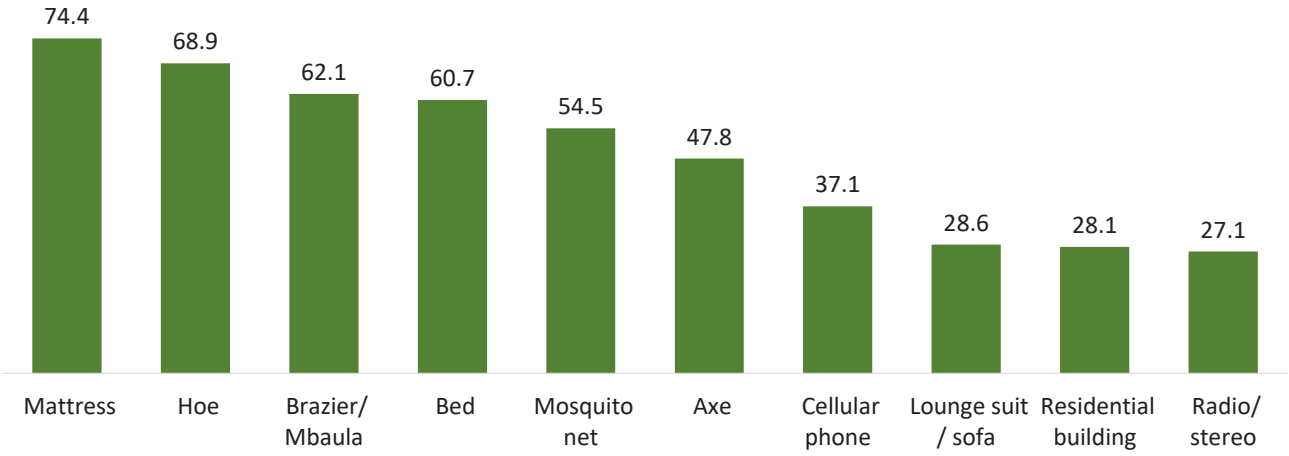


Figure 10.6 shows the proportional distribution of households by 10 top most owned assets in rural areas in 2022. Results show that a hoe (88.1%), an Axe (67.0%) and a Mattress (61.4%) were one of the three top most owned assets in rural areas while the radio was the least owned among the top 10 assets owned by rural households at 25.3 percent.

Figure 10.6: Proportional Distribution of Households by Top 10 most Owned Assets, Rural Zambia 2022

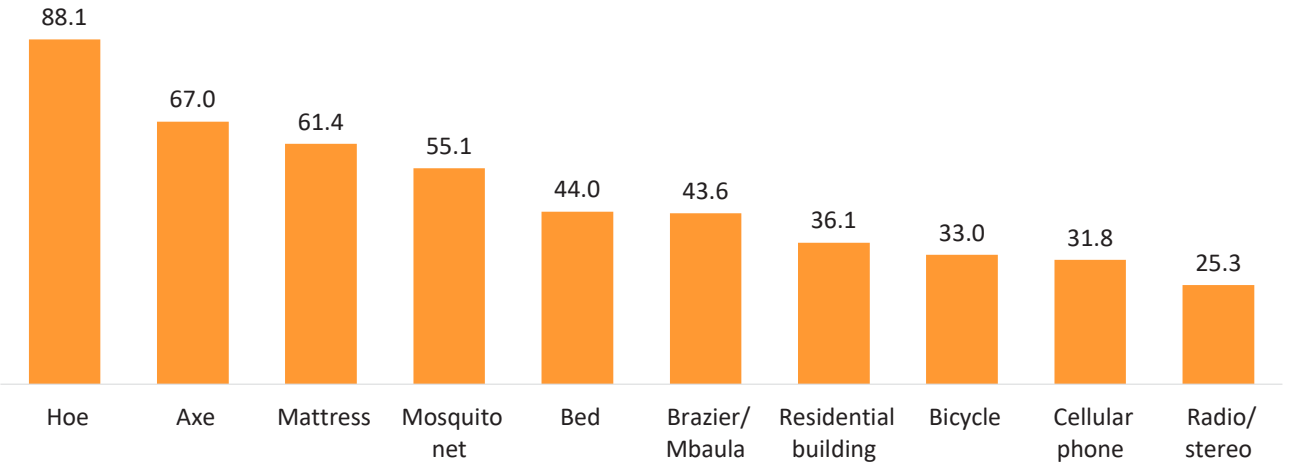


Figure 10.7 shows the proportional distribution of households by 10 top most owned assets in urban areas in 2022. Results show that the highest, second and third highest proportions of households in urban areas owned a mattress (93.2%), a brazier/mbaula (88.7%) and a bed at 84.8 percent, respectively while an electric stove was the least owned among the top 10 assets owned by urban households at 33.7 percent

Figure 10.7: Proportional Distribution of Households by Top 10 most Owned Assets, Urban Zambia 2022

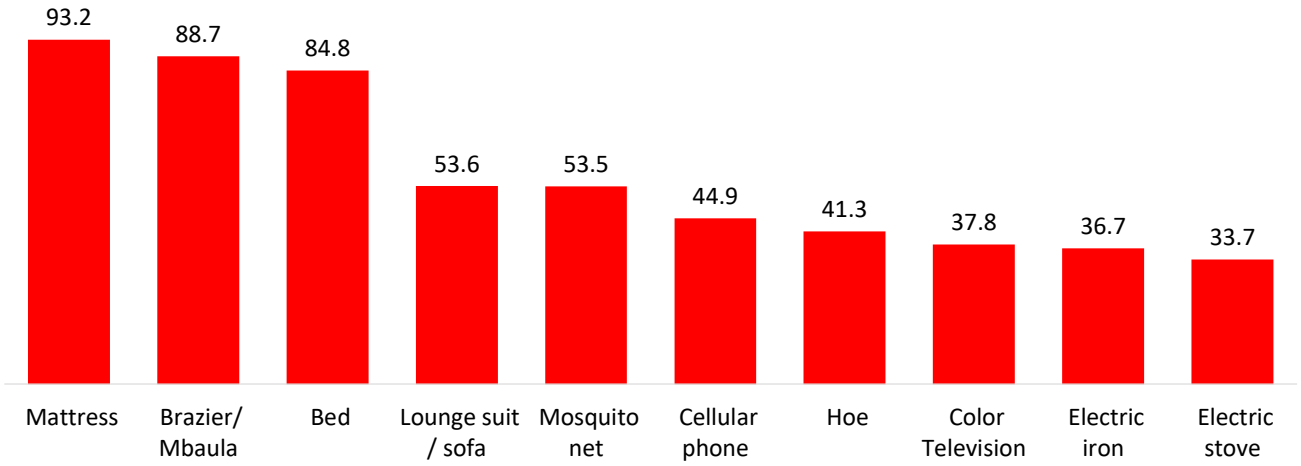


Table 10.9 shows the proportional distribution of households by top 10 most owned assets by sex of household head in 2022. Results show that 76.1 percent of the male-headed households owned a Mattress representing the largest proportion compared to a corresponding 70.3 percent female-headed households. Further, a land telephone was the least ranked of the top 10 most owned assets with 20.6 percent of male-headed owning it compared to a corresponding 14.4 percent of their female household head counterparts.

Table10.9: Proportional Distribution of Households by Top 10 Most Owned Assets by Sex of Household Head and Type, Zambia 2022

Assets	All Zambia	Sex of Household Head	
		Male	Female
Mattress	74.4	76.1	70.3
Brazier/ Mbaula	62.1	62.9	60.2
Bed	60.7	62.7	56
Mosquito net	54.5	55.4	52.1
Cellular phone	37.1	39.3	32
Lounge suit / sofa	28.6	30	25.2
Residential building	28.1	28.9	26.2
Radio/ stereo	27.1	31.1	17.2
Color Television	19.2	20.1	16.9
Land telephone	18.8	20.6	14.4

Figure 10.8 reflects the proportional distribution of female-headed households by top 10 most owned assets by type in 2022. Results in figure 10.4.1 show that among the female headed households, a bed (70.3%), a mosquito net (66.6%) and a Hammer (60.2%) were among the 10 top most commonly owned assets.

Figure 10.8: Proportional Distribution of Female-headed Households by Top 10 Most Owned Assets by Type, Zambia 2022

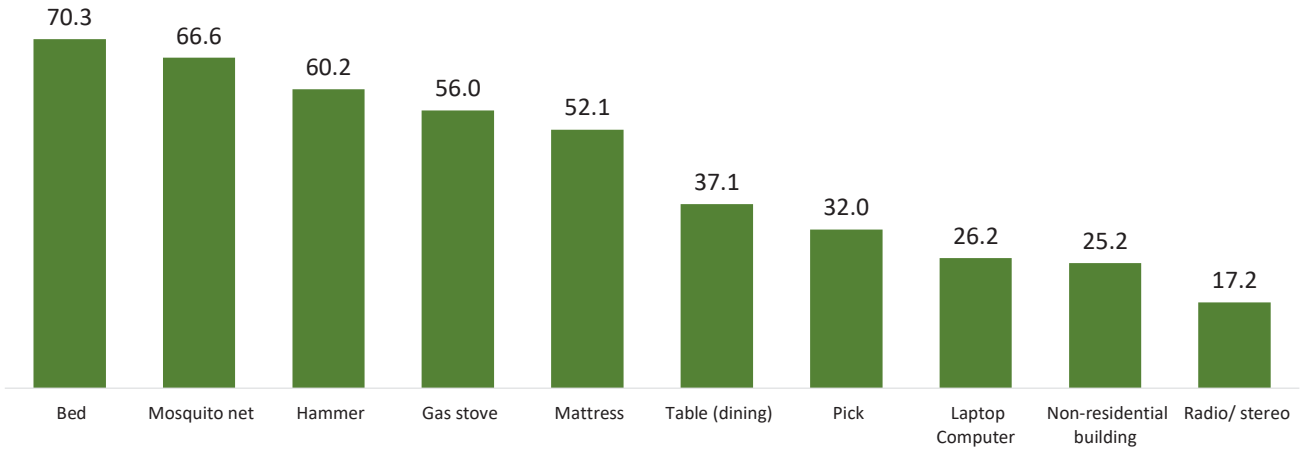
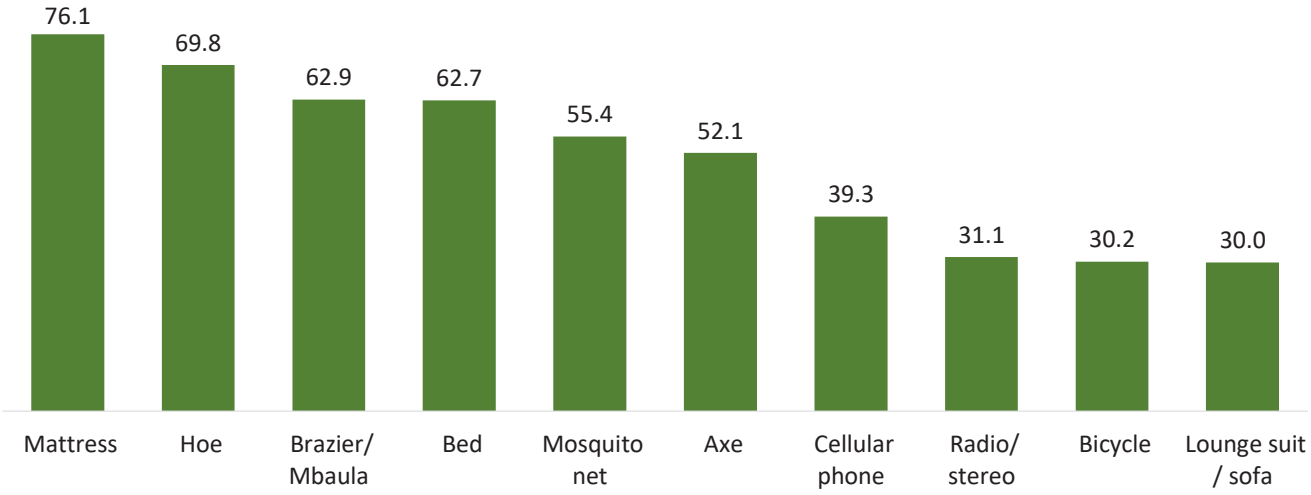


Figure 10.9 reflects the proportional distribution of male-headed households by top 10 most owned assets by type in 2022. Results in figure 10.4.2 show that among the male-headed headed households, a bed (76.1%), a mosquito net (69.8%), a brazier/mbaula (62.9%) and a bed (62.7%) were among the 10 top most commonly owned assets.

Figure 10.9: Proportional Distribution of Male-headed Households by Top 10 Most Owned Assets by Type, Zambia 2022



Chapter 11: CONSUMPTION EXPENDITURE

11.1 Introduction

Household consumption expenditure plays a crucial role in the economy for several reasons. It is closely linked to household poverty, well-being and the standard of living. Typically, households are classified into different poverty levels based on their spending on various goods and services, including basic necessities like food, housing, and clothing. The quality and quantity of goods and services a household can access contributes to its well-being and standard of living. Secondly, household consumption expenditure makes up a significant portion of final expenditure of National Accounts statistics when compiling the gross domestic product (GDP) using the Expenditure method.

Household consumption expenditure also has a significant impact on aggregate demand, income, and employment within an economy. In fact, in Zambia, Household Final Consumption Expenditure (HFCE) is the largest component of Gross Domestic Product (GDP) by type of expenditure, making up over 30% of the total GDP. Additionally, household consumption expenditure can serve as a proxy for household income since many households tend to underreport their income. This is why government institutions, non-governmental organizations, and individuals involved in policy formulation and poverty reduction rely on household expenditure data.

The 2022 LCMS collected data on the following household consumption expenditures:

- **Expenditure on food:** this includes expenses on bread, meat, milk, nuts, etc., including own produce and gifts consumed;
- Expenditure on alcoholic and non-alcoholic beverages, cigarettes and tobacco;
- **Expenditure on housing:** this includes expenses on rent, water charges, electricity bills, purchase of candles, paraffin, charcoal and firewood including value of own produce consumed and house maintenance costs, etc.;
- **Educational expenditure:** this includes expenses on school fees, purchases of school uniforms, contributions to Parent Teachers' Associations, private tuition fees, expenses on school stationery, etc.;
- **Medical expenses:** this includes expenses on medicines, fees to doctors, expenses under pre-payment schemes, etc.;
- **Expenditure on consumer goods:** this includes expenses on purchase of clothing and footwear, etc.;
- **Remittances in cash or in kind:** Expenditure on public and private transport: this includes transport expenses to and from work or school, fuel and vehicle maintenance expenses, etc. and
- **Expenditure on personal services:** this includes expenses on laundry, entertainment, hairdressing, etc.
- The data collected on consumption of own produce included both food and non-food items. The amounts of own produced food and non-food stuffs were converted to cash values by multiplying their respective quantities used by the household by their respective unit prices. The amounts were then added to the corresponding cash expenditure to give total household expenditure on the items.

11.2 Key Definitions

- **Household Monthly Expenditure:** This refers to household members' monthly expenditure on goods and services for consumption. It can be defined as the sum of all expenditure of household members.
- **Household Monthly Average Expenditure:** This is a household's monthly expenditure on goods and services for consumption. It is calculated as the quotient of total monthly expenditure of all households and the total number of households.
- **Average Per Capita Monthly Expenditure:** Average per capita monthly expenditure denotes the average monthly expenditure of a household member. It is calculated as a quotient of total household monthly expenditure and the total number of persons in the household.
- **Percentage Expenditure Share:** Percentage expenditure shares were calculated from food and non-food expenditures as the quotient of expenditure on food or non- food and total expenditure, multiplied by 100.

Constructing the Food Consumption Expenditure Aggregate

Household consumption expenditure for the 2022 LCMS was obtained by adding the various goods and services purchased, consumed from own production and received as gifts. Consumption expenditure of all these goods and services was converted into Kwacha values, converted into monthly values, and then added together to obtain a measure of monthly household expenditure. The various components of the consumption expenditure used to construct this aggregate were grouped into two main groups: food items and non-food items.

11.1 Total Average Monthly Household and Per Capita Consumption Expenditure

Calculating the food purchases sub-aggregate involved converting all reported consumption on food items to a uniform reference period "last 30 days" and then aggregating these expenditures across all food items consumed by the household.

The own produced food sub-aggregate was calculated by adding the reported value of consumption of each of the own produced food items in a manner analogous to that followed in the case of food purchases.

For items where the quantities were reported in local units such as meda, heap, etc. the data were converted based on standardization of measurement units. For households consuming non-zero quantities of a particular item with missing values and for cases with inconsistent data on quantities and values (that yielded outliers of unit prices), median unit prices in the strata where the household resides were used to make imputations. The median prices were computed and used separately for purchased and own produced items.

Table 11.1 shows the average monthly household consumption expenditure by rural/urban in 2015 and 2022. Overall, average monthly household consumption expenditure has doubled to K3,288 in 2022 from K1,588 in 2015.

Analysis of the average monthly household consumption expenditure by rural/urban shows that households in urban areas spent at least two times more than rural households in all areas of expenditure.

Total average monthly consumption expenditure for urban households was K 5,102.00 compared to K2,078.00 by rural households. Table 11.1 further indicates that the average per capita expenditure in 2022 was K597.00 The average per capita expenditure for an urban household was higher than the national average at K959.00, which was about three times that of the rural household at K356.00.

Table 11.1: Average Monthly Household Consumption Expenditure in Kwacha by Rural/Urban, Zambia 2015-2022

Region	Monthly Expenditure (Kwacha)		Per Capita Expenditure (Kwacha)		Overall
	2015	2022	2015	2022	Households
Total Zambia	**1,588**	**3,288**	**388**	**597**	**3,861,557**
Rural	763	2,078	172	356	2,278,255
Urban	2,680	5,102	675	959	1,583,301

Figure 11.1 depicts average monthly per capita consumption expenditure in Kwacha by rural/urban in 2015 and 2022. Results show an increase in average per capita consumption expenditure from K 388 in 2015 to K597 in 2022. Rural areas have experienced an increase in average per capita consumption expenditure, doubling from K172 to K356.

Further, results also show an increase in average per capita consumption expenditure by households in urban areas (i.e. 1.4 times as much), though the growth is not as pronounced as in rural areas. Average per capita consumption expenditure in urban areas has increased from K675 in 2015 to K959 in 2022.

Figure 11.1: Average Monthly per Capita Consumption Expenditure in Kwacha by Rural/Urban, Zambia 2015-2022

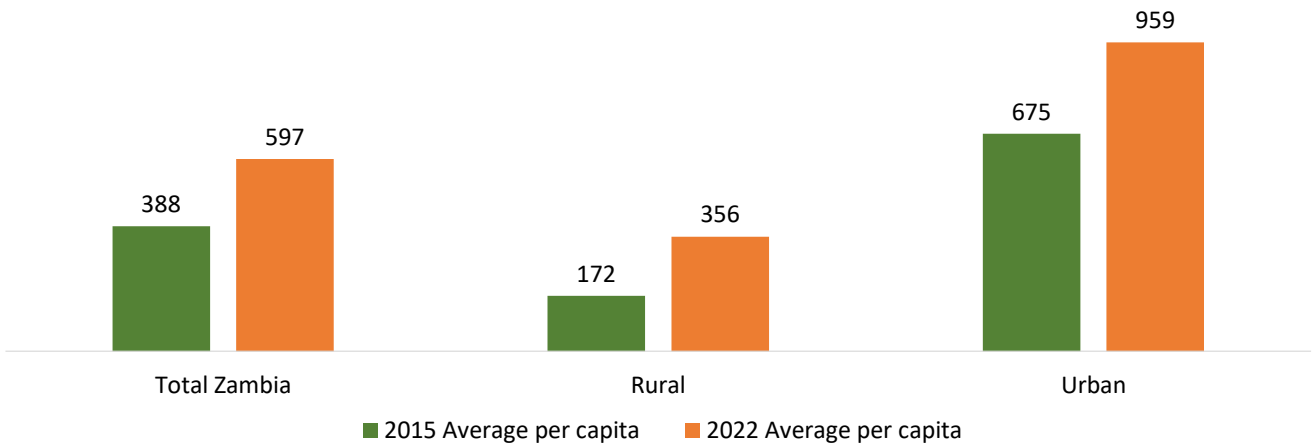


Table 11.2 shows average monthly household consumption expenditure in Kwacha by stratum, in 2015 and 2022. Overall, average monthly consumption expenditure increased from K1,588 in 2015 to K3,288 in 2022.

Analysed by rural/urban stratum, results generally show that average household consumption expenditure among the rural strata increased with the largest increase (i.e. 2.7 times as much) occurring among small agricultural households from K698 in 2015 to K1,892.90 in 2022.

Further, among urban strata, the largest increase in household consumption expenditure on a monthly basis was recorded among households in Low cost housing areas (i.e. 2.4 times from K1,893 in 2015 to K4,489.80 in 2022.

Table 11.2: Average Monthly Household Consumption Expenditure in Kwacha by Stratum, Zambia 2015-2022

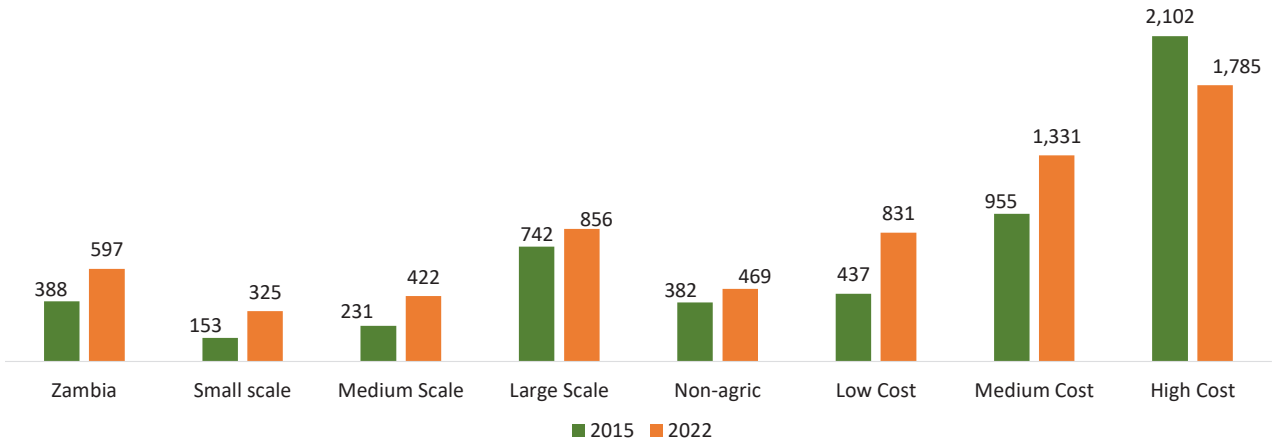
Stratum	Average Monthly Household Consumption Expenditure (Kwacha)		Average per Capita Expenditure (Kwacha)	Total Households
	2015	2022		
Total Zambia	**1,588**	**3,288**	**597**	**3,861,557**
Rural Stratum				
Small Scale	698	1,892.90	325	1,726,146
Medium Scale	1,454	3,021.10	422	190,671
Large Scale	3,645	6,317.60	856	15,154
Non-agriculture	1,222	2,155.50	469	346,285
Urban Stratum				
Low Cost	1,893	4,489.80	831	1,289,650
Medium Cost	4,078	7,092.30	1,331	166,174
High Cost	6,818	8,832.00	1,785	127,478

Figure 11.2 shows average monthly household per capita consumption expenditure in Kwacha by stratum in 2015 and 2022. Overall, monthly household per capita expenditure increased by 53.9 percent from K388 in 2015 to K597 in 2022.

Among the rural strata, small scale agricultural households recorded the largest increase in per capita expenditure (112.4%) between 2015 and 2022 from K153 to K325 during the period of comparison while least increase was recorded among large scale households at 15.4 percent.

Further, among the urban strata, the largest increase in per capita monthly household consumption expenditure (90.2%) was recorded among households from low cost housing areas from K437 in 2015 to K831 in 2022. However, there was a 15.1 percentage-point decline in per capita monthly household consumption expenditure between 2015 and 2022 from K2,102 to K1,785, respectively.

Figure 11.2: Average Monthly Household Per capita Consumption Expenditure Kwacha by Stratum, Zambia 2015-2022



11.3. Average Monthly Consumption Expenditure by Province

Table 11.3 presents the average monthly household consumption expenditure (K) by province in 2015 and 2022.

Analysis of average monthly household consumption expenditure by province shows that households in Lusaka Province at ZMK5,386.70 had the highest average followed by Copperbelt Province at KK5,072.20. Although Muchinga Province (K1,768.90) recorded the least average monthly household consumption expenditure, its difference with Eastern Province (K1,846.60) was marginal.

Analysed by province, Lusaka (K798 against K1,024) and Copperbelt (K539 against K914) provinces, respectively, reflected the largest and second largest per capita consumption expenditures increase both in 2015 and 2022.

Table 11.3: Average Monthly Household Consumption Expenditure (K) by Province, Zambia 2015-2022

Province	Average Monthly Household Consumption Expenditure (K)		Average per Capita Consumption Expenditure	
	2015	2022	2015	2022
Total Zambia	**1,588.00**	**3,288.00**	**388**	**597**
Central	1,299.00	2,710.40	322	476
Copperbelt	2,416.00	5,072.20	539	914
Eastern	933	1,846.60	197	367
Luapula	726	2,081.10	151	363
Lusaka	2,902.00	5,386.70	798	1024
Muchinga	953	1,768.90	226	322
Northern	691	2,072.40	155	364
North-Western	1,082.00	3,658.80	253	638
Southern	1,401.00	3,119.20	323	536
Western	689	2,240.10	163	398

Figure 11.3: Average Monthly Household Per capita Consumption Expenditure in Kwacha by Province, Zambia 2015-2022

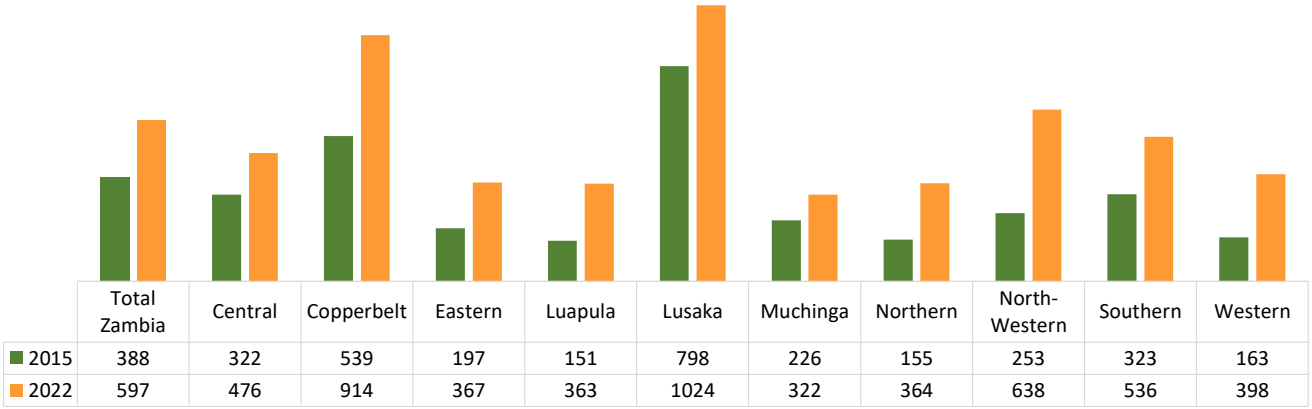


Table 11.4 shows the average monthly household consumption expenditure by quintile in 2022. Results show that the average monthly consumption expenditure of households in the 5th quintile i.e. the top 20 percent households is almost 10 times as much as the average of the households in the 1st (lowest) quintile i.e. the bottom 20 percent households (K833 against K8,286). Further, per capita consumption expenditure of households belonging to the poorest quintile i.e. the bottom 20 percent is 14.6 times lower than that of the highest (5th) and richest quintile (K115.80 against K1,689.30).

The bottom 40 percent households commanded 14 percent of the total share of consumption expenditure while the top 20 percent households commanded 50 percent of consumption expenditure implying that these households commanded 3.6 times more than the bottom 40 percent households. Thus, the average household size of the poorest quintile was 7.2 persons while the average household size of the richest quintile (highest) was 5.2 persons.

Table 11.4: Household Consumption Expenditure in Kwacha by Quintile, Zambia 2022

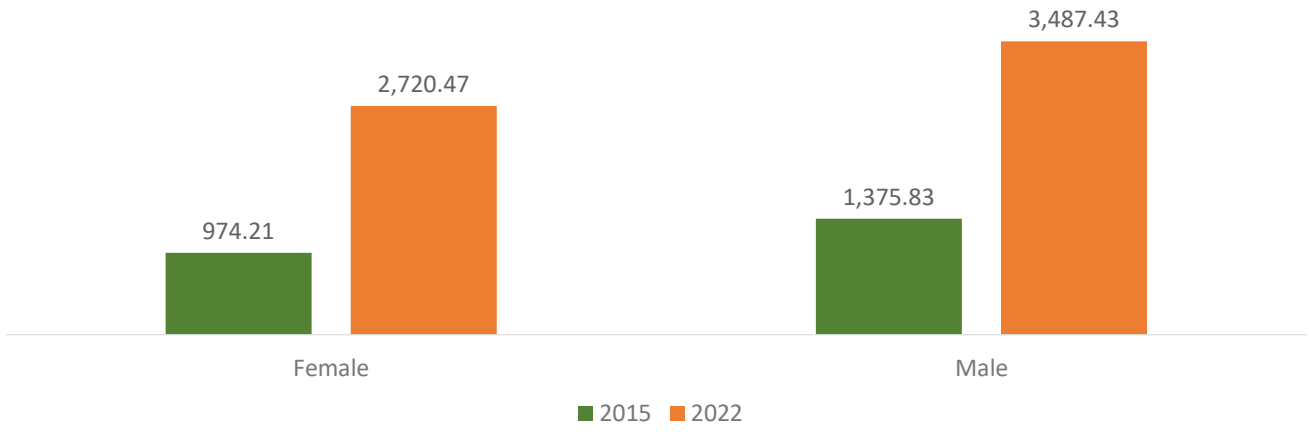
Quintile group	Average Monthly Consumption expenditure	Average Monthly per capita Consumption Expenditure	Percentage shares of households	Percentage share of Consumption expenditure	Average household size
Lowest	833	115.8	20	5.1	7.2
Second	1,463	219.0	20	8.9	6.7
Third	2,248	359.3	20	13.7	6.3
Fourth	3,600	613.0	20	21.9	5.9
Highest	8,286	1,689.3	20	50.4	5.2
Total	**3,288**	**597**	**100**	**100**	

11.4. Average Household Monthly Consumption Expenditure by Sex of Household Head

Figure 11.5 shows average monthly household consumption expenditure in Kwacha by sex of household head in 2015 and 2022. Irrespective of sex of household head, overall results show that average monthly consumption expenditure increased from K974.21 in 2015 to K2,720.47 in 2022 for female-headed households and increased from K1,375.83 in 2015 to K3,487.43 in 2022 for male-headed households.

Average monthly household consumption expenditure among male-headed households was higher than that of female-headed households both in 2015 and 2022.

Figure 11.5: Average Household Monthly Consumption Expenditure (K) by Sex of Household Head, Zambia 2015-2022



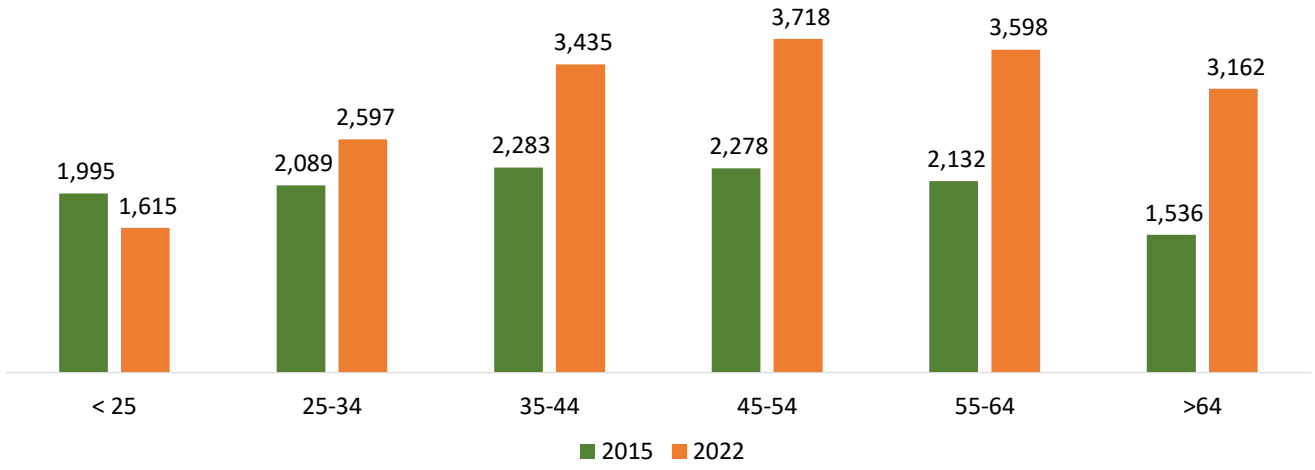
11.5 Average Monthly Household Consumption Expenditure by Age-groups of Household Head

Figure11.6 shows average monthly household consumption expenditure in Kwacha by age-group of household head in 2015 and 2022.

Overall, upto the age-group 45-54 years, results show an increase in average monthly household consumption expenditure in 2022. The highest expenditure was recorded amongst households headed by persons in the age-group 45-54 years at K3,718 followed by households headed by persons in the age-group 55-64 years at K3,598. However, households headed by persons below 25 years spent the least amounts per month on household consumption expenditure at Kl,615.

Comparison of average monthly household consumption expenditure between 2015 and 2022 show that households headed by persons in the age-group 35-44 years spent the highest amounts on household consumption at K2,283 in 2015 relative to household headed by persons in the age-group 45-54 years whose monthly average on household consumption expenditure was highest in 2022 at K3,718.

Figure11.6: Average Household Monthly Consumption Expenditure (K) by Age-group of Household Head, Zambia 2015-2022

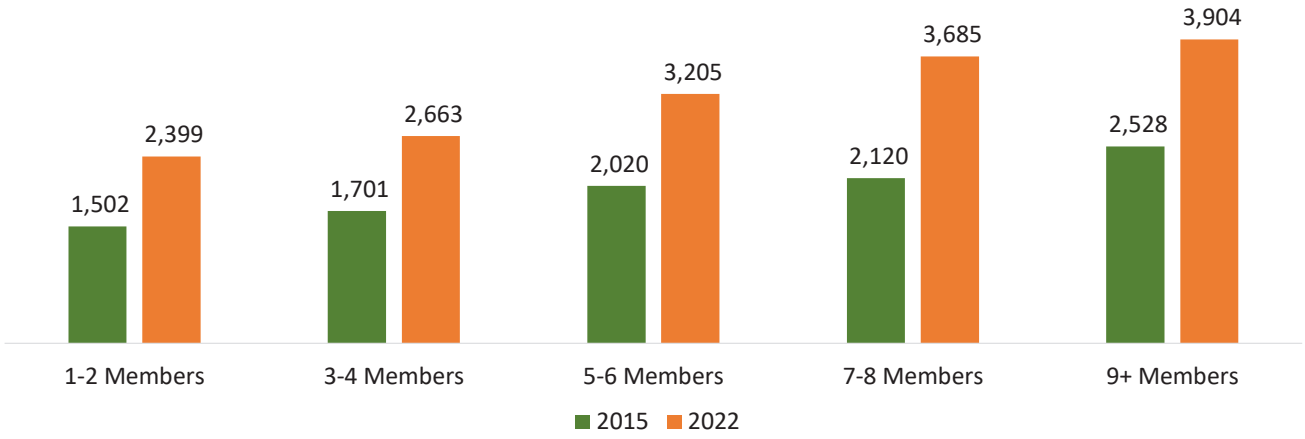


11.6 Average Household Monthly Consumption Expenditure by Household Size

Figure 11.7 shows average monthly household consumption expenditure in Kwacha by household size in 2015 and 2022. Overall results show an increase in average monthly household consumption expenditure as the size of the household increases both in 2015 and 2022. Households with at least 9 members, on average, spent the highest amounts on household consumption per month both in 2015 and 2022 at K2,528 and K3,904, respectively.

Households with at least 1-2 members, on average, spent the least amounts on household consumption per month at K1,502 and K2,399 in 2015 and 2022, respectively.

Figure 11.7: Average Monthly Household Consumption Expenditure (K) by Household Size, Zambia 2015-2022



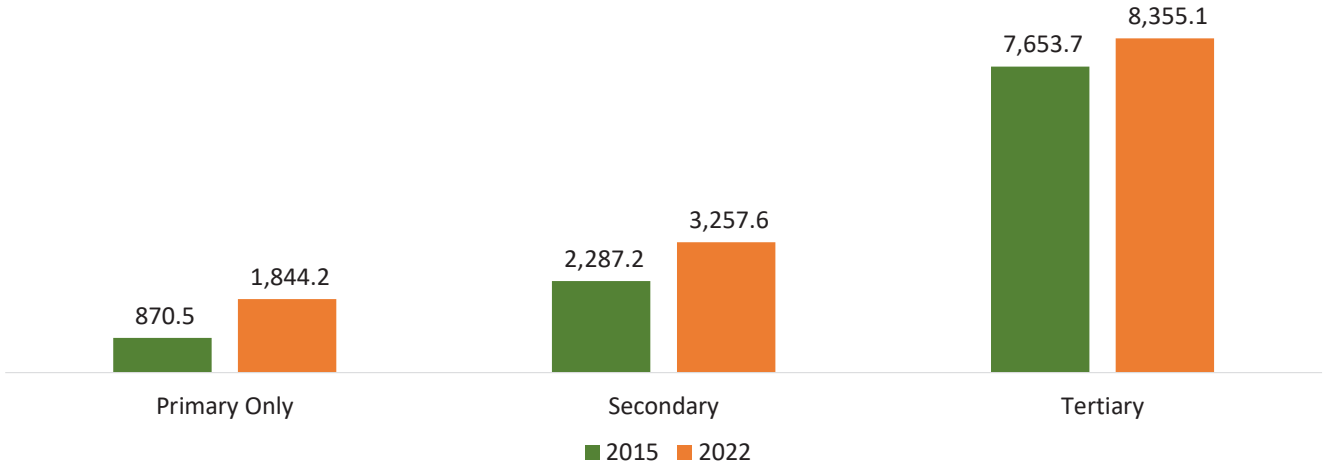
11.7 Average Household Monthly Consumption Expenditure by Level of Education of the Head of Household

Figure 11.8 shows average monthly household expenditure in Kwacha by level of education of household head in 2015 and 2022.

Overall, results generally show that average monthly household consumption expenditure increases with increase in the level of education attained by the head of household. Average household consumption expenditure of households headed by persons with Tertiary education was 4.5 times more than expenditure of households headed by persons with primary education (i.e K8,355.10 against K1,844.20).

Comparison of monthly household consumption expenditure between 2015 and 2022 show that average monthly household consumption expenditure with tertiary level of education was highest both in 2015 and 2022 at K7,653.70 and K8,355.10, respectively.

Figure 11.8: Average Monthly Household Expenditure (Kwacha) by Education Level of Household Head, Zambia 2015-2022



11.8. Household Consumption Expenditure by Type of Employment of the Household Head.

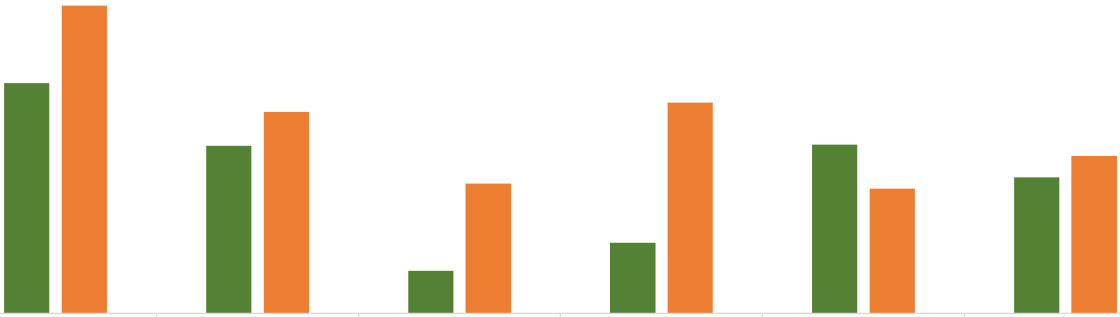
Figure 11.9 shows average household consumption expenditure by type of employment of household head in 2015 and 2022.

Generally, results show that average household consumption expenditure in 2022 was higher than that of 2015 regardless of the type of employment of the household head.

Further, households headed by persons in Wage employment spent the highest amounts on household consumption both in 2015 and 2022 at K3,862.60 and K5,159.80, respectively. In 2015, households headed by persons who were Unemployed spent the second highest amounts on household consumption at K2,831 while households headed by Self-employed persons spent the second highest on household consumption in 2022.

Households headed by persons in Agricultural activities and the Unemployed spent the least on household consumption in 2015 and 2022 at K714.70 and K2,096.40, respectively.

Figure 11.9 Average Household Consumption Expenditure (K) by Type of Employment of Household Head, Zambia 2015-2022



	Wage employee	Self-employed	Agriculture	Unpaid/piecemeal	Unemployed	Inactive
2015	3,861.6	2,811.4	714.7	1,187.8	2,831.0	2,279.7
2022	5,159.8	3,378.4	2,179.5	3,535.6	2,096.4	2,641.8

Chapter 12: **POVERTY ANALYSIS**

12.1. Introduction

One of the key challenges faced by the Government is how to reduce poverty and improve the welfare of its population through sustained and inclusive economic growth. Economic growth alone is not enough to reduce poverty but there is need for other complimentary policy measures designed to tackle uneven resource distribution challenges that touch the lives of the most vulnerable in society. Prior to the year 2012, the country`s gross domestic product (GDP), on average, grew at 5 percent per annum (National Accounts, ZamStats, 2022). However, the majority of Zambians continued to live in poverty. The majority of the population in Zambia live in rural areas whose livelihood is largely dependent on rainfed agriculture. This predisposes the rural population to the vagaries of the weather conditions and negative effects of climate change.

Against this background, the Government through the Ministries of Agriculture and Green Economy have been promoting climate-smart agricultural practices to enhance agricultural production and productivity, build resilience to droughts through promotion of drought-resistant seed, promotion of sustainable landscape management practices, amongst a number of policy response packages. Poverty has continued to be more of a rural phenomenon even though it is now beginning to impact more on urban households.

In view of the precarious situation of the majority poor, much of the recent Government policies and programs have essentially been focused on economic growth and poverty reduction. The Government has been monitoring the poverty situation in the country using the Living Conditions and Monitoring Surveys. The first LCMS survey was conducted in 1996. It is worth noting that dating back to the 1990s, the levels of poverty in Zambia have persistently remained above 50 percent amidst sustained real economic growth averaging 5 percent until the year 2011.

Since the year 2005, Government realized that despite the sustained real economic growth in the country, this economic growth did not translate into an improvement in living standards of the population in Zambia. Against such a background, the Seventh National Development Plan (7th NDP) was formulated focused on economic diversification, creation of employment opportunities for the growing number of unemployed youths, elimination of poverty by 2030, increased food security at household level, and attainment of the sustainable development goals. In order to kickstart the process of unlocking the economic potential and poverty reduction, the government has prioritized restructuring the debt to support higher growth in mining, agriculture, manufacturing and tourism.

Unlike the 2015 LCMS survey that was benchmarked against the 6th National Development Plan (SNDP), the 2022 LCMS survey is mainly targeted at assessment of progress made towards attainment of the goals of 7thNDP and sustainability of the sustainable development goals and their effect on the well-being of the population in Zambia. The main objectives of the **7NDP** include the following;

- To accelerate infrastructural development,
- To enhance economic growth and diversification,
- To promote rural investment and accelerate poverty reduction, and
- To enhance human capital development.

12.2. Objective of the 2022 Poverty Assessment

The main objective of poverty assessment in Zambia is to identify the poor, including where they live. Other objectives include the following:

- To understand the distribution of poverty in Zambia by residence and province,
- To identify possible correlates of poverty,
- To measure the intensity and severity of poverty,
- To measure the degree of inequality.
- To identify the salient characteristics of the poor,
- To help monitor and evaluate the impact of Government and its co-operating partners' policies and programmes on the poor, and
- To help monitor progress towards the achievement of the 7thNDP and SDG targets.

It is envisaged that the results from the 2022 poverty analysis will enhance targeting and subsequently help accelerate poverty reduction in the country.

12.3 Concepts and Definitions used in Poverty Analysis

The concept of poverty has several definitions mainly because of its multidimensional and complex nature. Thus, there is no universally agreed definition of poverty. However, the Living Conditions Monitoring Surveys (LCMS) consider an individual to be poor if he/she suffers some levels of economic and/or social deprivation. Income deprivation is the most commonly used indicator to identify the poor. Many poverty assessments across the world use the Income Shortfall approach when measuring poverty as this concept directly relates to income deprivation (UN Statistics Division, 2005). This approach is in many ways intuitively appealing since the ability to acquire nearly all basic human needs depends on the levels of income a household command.

The Zambia Statistics Agency (ZamStats) has adopted the material well-being approach of poverty measurement in which the poor are defined as those members of society who are unable to afford the minimum basic human needs, comprising food and essential non-food items, given all their total income. Although the definition may seem simple, there are several complications in determining the minimum requirements and the amounts of money necessary to meet these requirements. In the LCMS analysis, efforts to determine people's well-being in Zambia have, therefore, concentrated on estimating the aggregate value of all consumptive goods and services identified to be critical to the satisfaction of an individual's basic needs. The poor have in this case been identified by comparing their measure of income (i.e., consumption expenditure) to some Absolute Poverty Line. Since 1991, the Agency has been using household consumption expenditure data from the LCMS series when measuring the welfare of the population in Zambia.

Absolute Poverty: uses a poverty line based on a fixed expenditure or consumption level. Absolute poverty lines typically specify the amount of money that is required to meet a minimum standard of living, such as basic nutritional requirements and essential non-food necessities (basic clothing, housing, etc.). In general, the Agency uses Cost of Basic Needs approach when measuring absolute poverty.

Relative Poverty: describes an individual or group's wealth relative to that of other individuals in the group under study. Relative poverty lines are usually set as a percentage of average income or expenditure of the group. Very often, two thirds of the mean/median expenditure per capita has been used as a poverty line. This definition implies that all persons or households whose consumption falls below this threshold are considered poor. Some analysts have also used percentile cut-offs to define relative poverty lines at, say, the bottom 20 per cent of individuals in the poverty analysis in the distribution of income or expenditure. ZamStats does not use relative poverty lines to assess poverty in Zambia.

12.4 Poverty Assessment Methodology

ZamStats has been carrying out comprehensive poverty assessments since 1991. Typically, measurement of poverty has always started with identification of an absolute poverty line with a strong nutritional anchor. ZamStats has been using the basic food basket as a starting point, which is further supplemented by an allowance for non-food needs (CSO, 2010 Poverty Manual). Much of the poverty assessments in the country have been based on the data from the LCMS rounds. The Agency has successfully conducted eight Living Conditions Monitoring surveys inclusive of the 2022 one.

12.4.1 Deriving Consumption Expenditure Aggregates

ZamStats mainly uses the concept of income deprivation to measure poverty like is the case in other sub-Saharan African Countries. According to this concept, the poor are identified on the basis of comparison of household disposable income to the cost of the basic needs basket. It is for this reason that this approach of welfare evaluation is in general called the Income Shortfall approach (UN Statistics Division, 2005).

However, because of some well-documented shortcomings of income data, much of the contemporary poverty assessments use household consumption expenditure data as a proxy for household income (Haughton and Khandker, 2009). For both theoretical and practical reasons, consumption expenditure is seen to be much more reliable than income because:

- Individuals feel more comfortable to provide information on consumption than income.
- Consumption provides a better picture of long-term welfare than income.
- Income measurements in countries with widespread informal employment and a large segment of agricultural households are less accurate compared to expenditure measurements.

The Agency has consistently been using household consumption expenditure as a measure of welfare since 1991. Household Consumption expenditure comprises cash purchases (both food and non-food), value of own produce consumption (both food and non-food), value of consumable gifts and derived benefits arising from ownership of durable goods, which are not of intermediate nature (Goods that are not used to generate income). The 2022 LCMS consumption aggregate like the 2015 one, covers the following broad category of items:

- Food expenditure
- Alcohol and tobacco expenses
- Health expenditure

- Education expenditure
- Housing expenditure
- Transport expenditure
- Expenditure on personal services
- Consumption of services from durable goods

Furthermore, it has always been the case that some households on the survey will report zero consumption expenditures on certain non-food items when in fact they are also deriving welfare benefits from the consumption of these services such as water, electricity and housing. Take for instance, two identical households that are living in identical housing units but only differ in terms of their tenancy status. One household is renting and pays x amount, while the other household occupies its own housing unit (owner occupier). Since the two households are identical, it is most likely that they are both deriving identical welfare streams (utility) from their housing units except that the later does not pay any rent. Therefore, it is imperative to impute rent values for all the households that had reported zero rent expenditure during the surveys. During the 2015 poverty analysis, imputed use values were estimated in respect of households that had reported zero consumption on rent, water and electricity when in fact they had access to these services (i.e. deriving welfare benefits from the services). The housing rent, water and electricity imputations were made using Hedonic Regression Models, which essentially relate housing rent, water or electricity expenses of households with non-zero expenditure to key covariates mainly consisting of housing, household assets and characteristics, and location variables. The models adopted the following specification:

$$\text{In } RWEi = \beta\chi i + \varepsilon i (i = 1, 2, 3, \ldots..)$$

Where In RWEi is the log of monthly expenditure on Rent or Water or Electricity for householdi, is a vector of housing and household characteristics (i.e. building materials used, access to piped water, good sanitation, electricity, ownership of relevant household assets, location dummies, etc.), ß is a vector of parameter estimates and ε is the error term. For detailed information on these regression-based imputations, refer to the appendix of the poverty methodology note.

12.4.2 Adjustments for Cost-of-Living Differences

Contemporary poverty analysis requires that nominal consumption of households be adjusted for temporal and spatial cost-of-living differences because households at different times and locations face different prices for similar comparable goods and services. In the case of the 2022 LCMS, temporal differences are associated with the duration of the fieldwork, which stretched from June to July 2022 (i.e., K1000 in June 2022 may not have the same purchasing power in July 2022 of the same year).

However, due to data challenges and the need to restore comparability between 2015 and 2022 surveys, a different statistical approach was used to make poverty estimation. For a detailed explanation of the statistical estimation procedures applied to the 2022 LCMS data, refer to the poverty methodology note in the appendix.

12.4.3 Concept of Adult Equivalent

Ideally, poverty measurements should be done at individual level. However, most LCM surveys usually collect consumption expenditure information at the household level rather than at the individual level. Consequently, household consumption expenditure can never constitute a good welfare measure of individuals because households with different household compositions face different consumption needs. Further, different members of the same household have different age-specific energy and protein requirements necessary for them to lead normal active and healthy lives.

Thus, a good poverty measure should, therefore, consider not only the differences in household size but also differences in age composition of the household members. The adult equivalent scale has extensively been used by various poverty analysts, including the ZamStats, to normalize consumption for differences in household demographic composition (UN Statistics Division, 2005; CSO, 1997 and 2004.) It is for this reason that the Agency uses per adult equivalent monthly household consumption expenditure for its poverty analysis rather than per capita monthly expenditure, which assigns equal weight to every household member. Adult Equivalence scales are the factors that convert real household consumption into real individual consumption by correcting for differences in the demographic composition and size of households.

The 2022 poverty analysis has maintained the Adult Equivalence (AE) scale that ZamStats has been using since 1991.

Table 12.1: Adult Equivalent Scale used to Convert Real Household Consumption Expenditure, Zambia 2022

Age-group (years)	Member	Calorie requirement per person	Adult Equivalent Scale
0-3	1	1,000	0.36
4-6	1	1700	0.62
7-9	1	2100	0.76
10-12	1	2150	0.78

12.4.4 Poverty Line Determination

In general, ZamStats uses the Cost of Basic Needs (CBN) approach when measuring welfare outcomes of various households (Ravallion, 1994; CSO, 2004). As already alluded to, the Agency applied a different statistical estimation (SWIFT) method to restore comparability between 2015 and 2022 surveys.

In 2022, the total poverty line was updated based on total Consumer Price Index (CPI) to reflect the price levels prevalent during the survey data collection period. The total CPI in June/July 2022 was 363.12 compared to 150.14 during the 2015 survey data collection period in April/ May 2015. In 2022, the total poverty line was estimated at K 517.6 per adult equivalent per month, whereas the extreme poverty line was estimated to ZWM 367.6.

Table 12.2: Food Basket for a Family of Six, Zambia 2015-2022

Consumption	2015 Value in Kwacha	2022 Value in Kwacha
Consumer Price Index	150.14	363.12
Extreme Poverty Line	152	367.60
Total (Absolute) Poverty Line	214	517.60

Source: 2015-2022 ZamStats/WB Poverty Note

12.4.5 Characterisation of Poverty

In all the poverty assessments that have been undertaken by ZamStats, the Food Poverty line equivalent to the cost of the Food Basket, relates to the Extreme Poverty line, while the basic needs basket, which corresponds to the overall poverty line, represents the Absolute Poverty line. Based on these poverty lines, individuals are then classified as extremely, moderately or non-poor.

Thus, all persons whose per adult equivalent consumption is less than the Extreme Poverty line are classified as Extremely Poor. Conversely, the Moderately Poor comprise individuals whose per adult equivalent consumption is equal to or greater than the Extreme Poverty line but less than the Total Poverty line (Absolute Poverty line). Finally, an individual is classified as Non-poor if his/her per adult equivalent consumption is equal to or greater than the total poverty line.

12.5 Foster-Greer-Thorbecke (FGT) Poverty Measures

The Foster-Greer-Thorbecke (FGT) poverty measures summarise information on the prevalence, depth and severity of poverty (Foster, Greer, Thorbecke, 1984). Normally, the P-α class of poverty measures developed by these poverty analysts are used to compute the headcount ratio (Pα = 0), the poverty gap (Pα = 1) and the severity of poverty (Pα = 2). Pα = 0, which shows the incidence of poverty, is the most widely used indicator of poverty. It estimates the proportion of the population that is poor. Alternatively, it counts the number of persons whose per adult equivalent household consumption expenditure is below the total (Absolute) Poverty line. The headcount poverty measure is primarily used for making welfare comparisons across different periods and residences. It is the most widely used indicator in identifying vulnerable target groups requiring various forms of interventions to reduce poverty.

The shortcoming of the headcount index is that it may remain the same even when the depth and severity of poverty are rising. The intensity of poverty is measured by the poverty depth index represented by Pα = 1. This index measures the average difference between the poverty line and the actual income/ expenditures of each person/ household. This measure of poverty is sometimes called the Per Capita Aggregate Poverty Gap Ratio (PCAPGR). The index is useful in determination of the amount of money that would be required (under the assumptions of perfect targeting of the poor) in order to eradicate poverty. On the other hand, Pα = 2 is a measure of the square of the intensity of poverty. It measures the severity of poverty or income inequality among the poor themselves by giving greater weight to those further down the poverty line. The FGT poverty measure takes the following form:

$$\rho_{\alpha} = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right)^{\alpha}$$

n = the population size
q = the number of poor people
Z = the poverty line
Yi = consumption per adult equivalent, and α = Poverty Aversion Parameter

12.6 Comparability of Poverty Estimates

The 2010 poverty measures have not been included in the current report because they are not directly comparable to the 2015 and 2022 estimates. To see comparable 2010 estimates, refer to the Poverty Methodological note in the 2015 LCMS report.

Due to changes in the LCMS survey questionnaire, the consumption data from 2022 is not directly comparable to the consumption values reported in 2015. For this reason, it was not possible to produce comparable poverty and inequality estimates directly from the 2022 data using the same methods as in 2015. Instead, a statistical imputation method, SWIFT, had to be used to estimate a comparable trend between 2015 and 2022, controlling for the differences in survey questionnaires. For more details on the SWIFT method, refer to the methodological note in Annex I.

The World Bank guidelines (Vecchi and Mancini, 2021) for estimating poverty were updated in 2022 to reflect the current state of the literature on poverty measurement. Amongst other things, the new guidelines emphasize the importance of measuring consumption instead of expenditure, and accounting for economies of scale when adjusting consumption for household composition. In order to ensure comparability with 2015, these changes have not been implemented in the current report. Poverty estimate using the updated World Bank guidelines will be published subsequently in a separate paper.

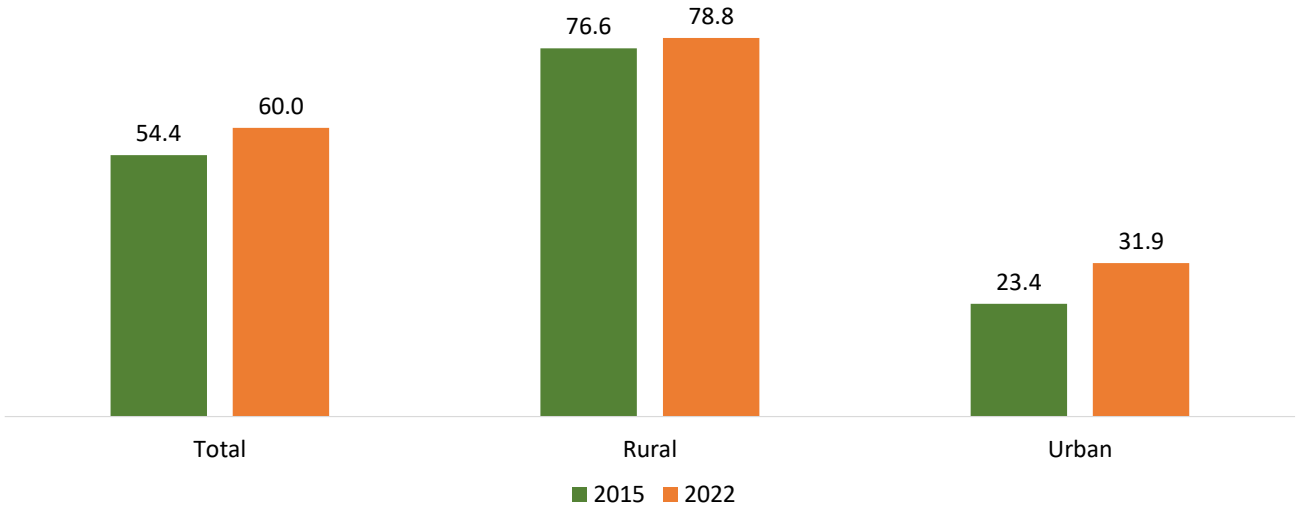
12.7 Poverty Results

12.7.1 Incidence of Poverty by Residence

Figure 12.1 shows the incidence of poverty by residence. At national level, results show that the incidence of poverty in 2022 was 60.0 percent compared to 54.4 percent in 2015. This implies that 60 out of every 100 persons in Zambia during the period of the Survey were poor.

Analysed by rural/urban, results show that 78.8 percent of the rural population in 2022 was poor compared to 76.6 percent in 2015 reflecting a 2.2 percentage-point increase. Further, 31.9 percent of the population in urban areas in 2022 were poor relative to 23.4 percent in 2015 translating into an increase in poverty of 8.5 percent. This implies that the proportion of the population that was poor in rural areas was 2.5 times more than that of the population in urban areas. Clearly, poverty in Zambia still remains much more pronounced in rural areas than in urban areas although poverty effects are now shifting much more towards households in urban areas than those in rural as evidenced by poverty results.

Figure 12.1: Incidence of Poverty by Residence, Zambia 2015-2022 (%)

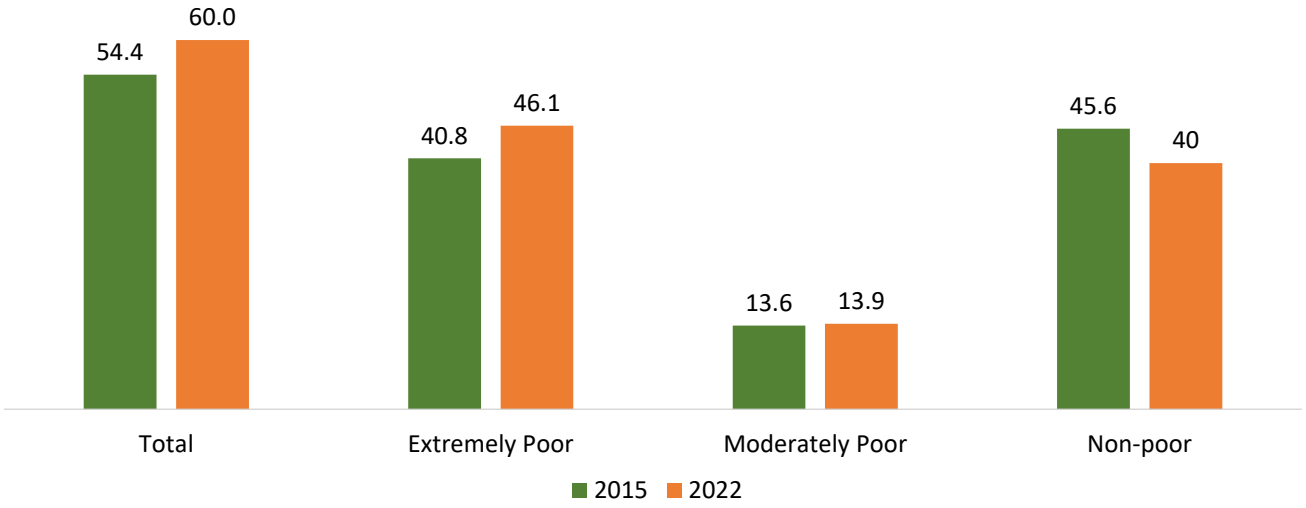


12.7.2 Incidence of Poverty by Level

Figure 12.2 shows the percentage distribution of the population by level of poverty in Zambia, 2015-2022. Results show that extreme and moderate poverty levels increased between 2015 and 2022. Extreme poverty increased from 40.8 percent in 2015 to 46.1 percent in 2022 while moderate poverty increased by 0.3 percentage-points to 13.9 percent in 2022 from 13.6 percent in 2015.

On the other hand, the proportion of the population that was non-poor reduced by 5.6 percentage-points from 45.6 percent in 2015 to 40.0 percent in 2022. To obtain the overall poverty rate, sum extreme and moderate poverty rates.

Figure 12.2: Percentage Distribution of the Population by Level of Poverty, Zambia 2015-2022

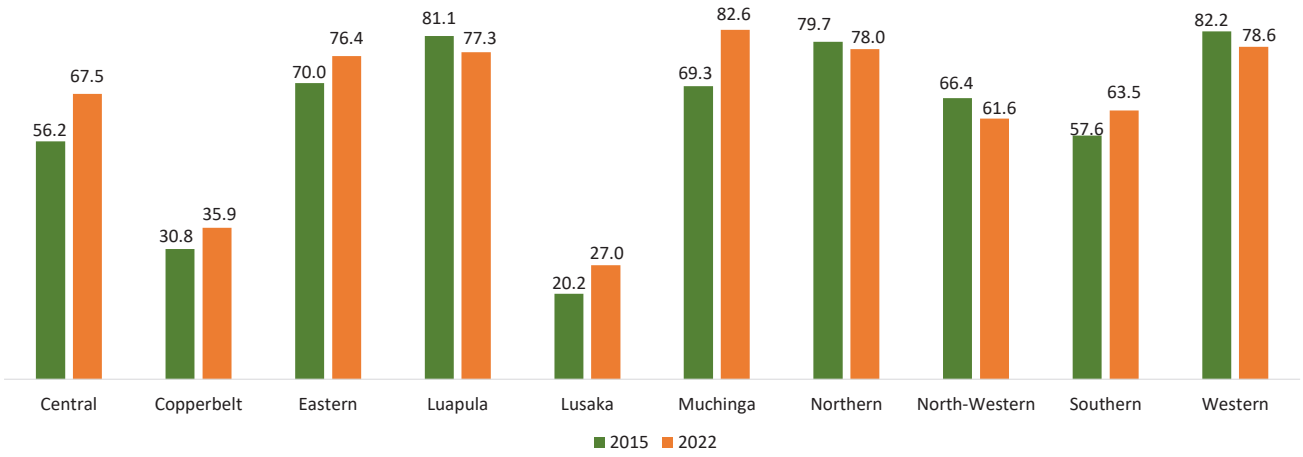


12.7.3 incidence of Poverty by Province

Figure 12.3 shows the incidence of poverty by province. Results show that Muchinga Province had the highest proportion of the population that was poor at 82.6 percent. Further, Western and Northern provinces had the second and third highest proportions of the population that were poor at 78.6 and 78.0 percent, respectively. This implies that 826; 786 and 780 persons out of every 1000 in Muchinga,

Western and Northern provinces, respectively, were more likely to be poor. Although Copperbelt and Lusaka provinces had the least poverty levels among the 10 provinces in 2022, relative to 2015, poverty levels in both provinces increased by 5.1 and 6.8 percent, respectively. This implies that 826; 786 and 780 persons out of every 1000 in Muchinga, Western and Northern provinces, respectively, were more likely to be poor. Although Copperbelt and Lusaka provinces had the least poverty levels among the 10 provinces in 2022, relative to 2015, poverty levels in both provinces increased by 5.1 and 6.8 percent, respectively.

Figure 12.3: Incidence of Poverty by Province, Zambia 2015-2022 (%)



12.7.4. Incidence of Poverty by Stratum

Like was the case in the 2015 LCMS survey, rural and urban households were both explicitly stratified into groups based on either the scale of their agricultural activities or the cost of housing of a residential area. Households in rural areas were classified either as small, medium, large scale agricultural or non-agriculture. For households in urban areas, the Survey adopted the classification system used by the local authorities (low, medium or high cost residential areas).

Figure 12.4 depicts poverty status by stratum in 2015 and 2022.

In rural areas, survey results in 2022 show that the incidence of poverty was highest amongst small scale agricultural households at 81.0 percent, followed by medium scale agricultural and non-agricultural households at 73.2 and 70.4 percent, respectively. The lowest incidence of poverty in rural areas was recorded amongst large scale agricultural households at 64.8 percent.

In urban areas, households residing in low cost housing areas accounted for the largest proportion of households in poverty at 36.3 percent. At the minimum, this implies that poverty levels amongst households residing in low cost areas were 2.7 times higher than that of their counterparts in medium and high cost areas whose poverty levels were 13.4 and 10.7 percent, respectively.

Analysing the poverty trend by stratum between 2015 and 2022, overall results show that the incidence of poverty in 2022 was higher than in 2015 irrespective of strata. Further, small scale agricultural households had the highest incidence of poverty at 78.9 and 81 percent in 2015 and 2022, respectively. Although households residing in high cost had the least poverty levels both in 2015 and 2022, the incidence of poverty increased by 5.8 percentage-points to 10.7 percent in 2022 from 4.9 percent in 2015.

Figure 12.4: Poverty Status by Stratum, Zambia 2015-2022 (%)

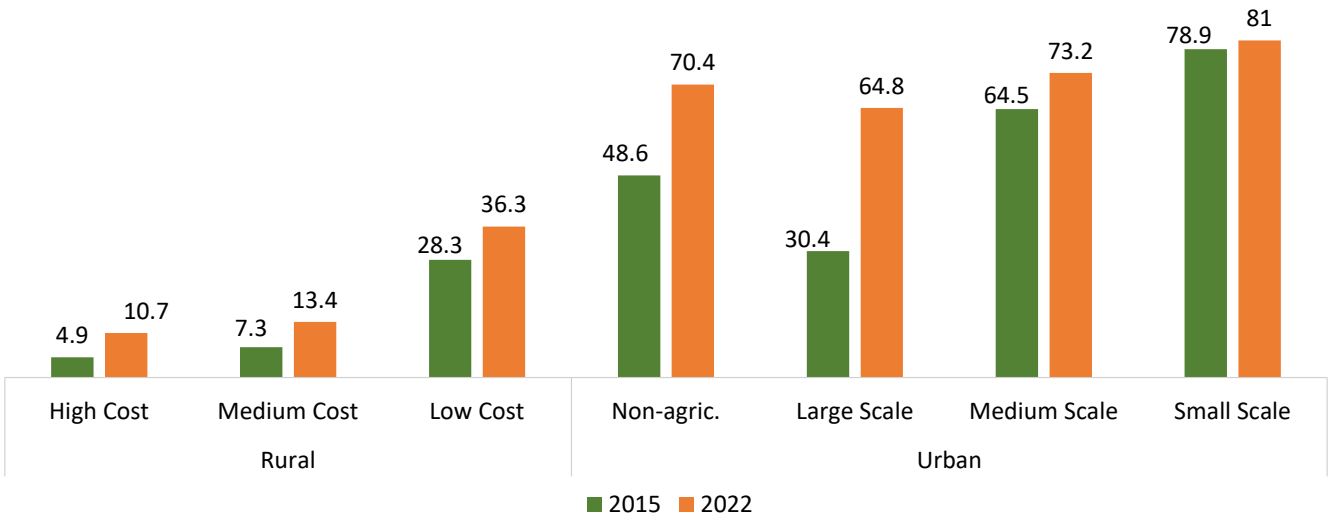


Figure 12.5 shows the percentage distribution of the population by poverty status in rural and urban areas in Zambia between 2015 and 2022. Results show that extreme poverty in rural areas increased by 3.8 percentage-points from 60.8 percent in 2015 to 64.6 percent in 2022 while extreme poverty in urban areas increased by 5.5 percentage-points from 12.8 percent in 2015 to 18.3 percent in 2022.

On one hand, the incidence of moderate poverty in rural areas reduced by 1.6 percentage-points from 15.8 percent in 2015 to 14.2 percent in 2022 while the incidence of moderate poverty in urban areas increased by 2.9 percentage-points from 10.6 percent in 2015 to 13.5 percent in 2022.

On the other hand, the proportion of non-poor population both in rural and urban areas dropped. The proportion of the population that was non-poor in rural areas dropped by 2.2 percentage-points from 23.4 percent in 2015 to 21.2 percent in 2022 while the proportion of the population that was non-poor in urban areas significantly went down by 8.5 percentage-points from 76.6 percent in 2015 to 68.1 percent in 2022. This implies that the proportion of the population that has fallen in the poverty trap in urban areas is almost four times that in rural areas between 2015 and 2022.

Figure 12.5: Percentage Distribution of the Population by Poverty Status and Rural/Urban, Zambia 2015-2022

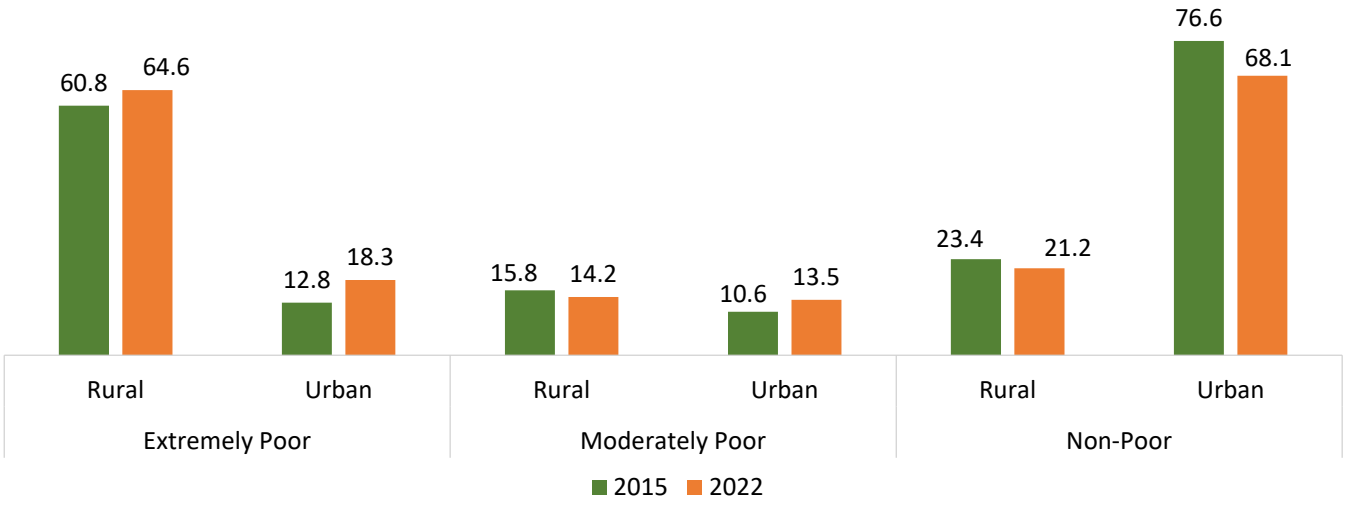


Figure 12.6 depicts incidence of extreme poverty in percentage by province between 2015 and 2022. Overall results show that extreme poverty in Zambia has gone up from 40.8 percent in 2015 to 46.1 percent in 2022.

Analysing extreme poverty by province, except for Western (-11.4%) and Muchinga (-2.3%) provinces where extreme poverty levels dropped, extreme poverty increased in the rest of the provinces between 2015 and 2022 by a minimum of 2.1 percentage-points in Luapula Province to as high an increase as 18.7 percent in Muchinga Province.

Thus, only Copperbelt and Lusaka provinces had extreme poverty levels below the national average at 23.4 and 16.5 percent, respectively.

Figure 12.6: Incidence of Extreme Poverty by Province, Zambia 2015-2022 (%)

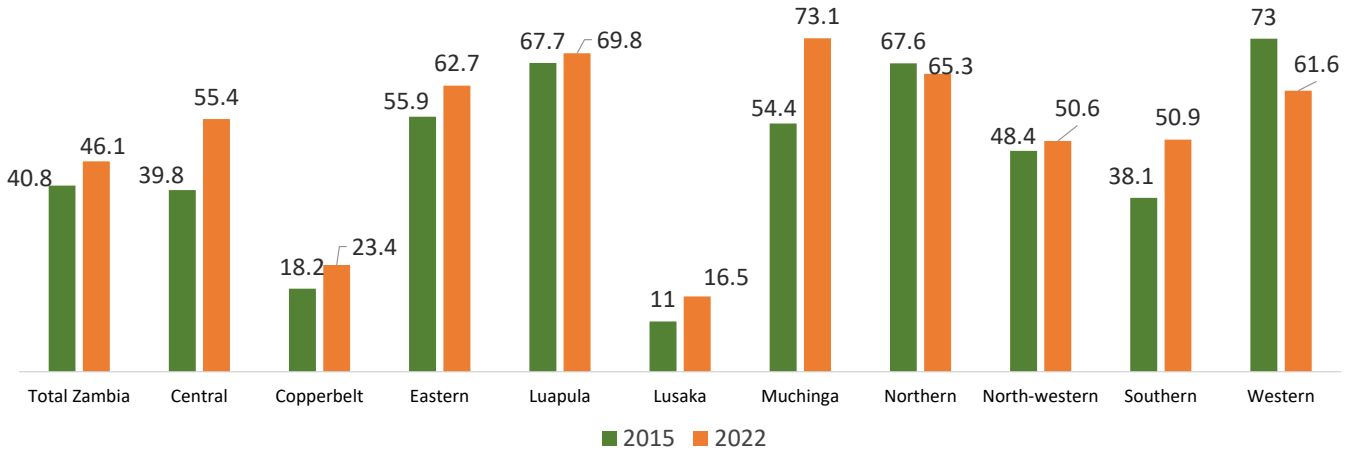


Figure 12.7 shows the incidence of moderate poverty by province in percentage terms between 2015 and 2022. Overall, there has been an increase in moderate poverty at national level by 0.3 percentage-points from 13.6 percent in 2015 to 13.9 percent in 2022.

Over the period 2015-2022, moderate poverty increased in Western, Lusaka and Northern provinces with Western reflecting the highest increase moderate poverty of 7.8 percentage-points while moderate poverty decreased in the rest of the provinces. The largest drop in moderate poverty was recorded in North-western (-7.0%), Southern (-6.9%), Luapula (-5.9%) and Muchinga (-5.5%) provinces. North-western Province recorded the highest reduction in moderate poverty from 18.0 percent in 2015 to 11.0 percent in 2022.

Figure 12.7: Incidence of Moderate Poverty by Province, Zambia 2015-2022 (%)

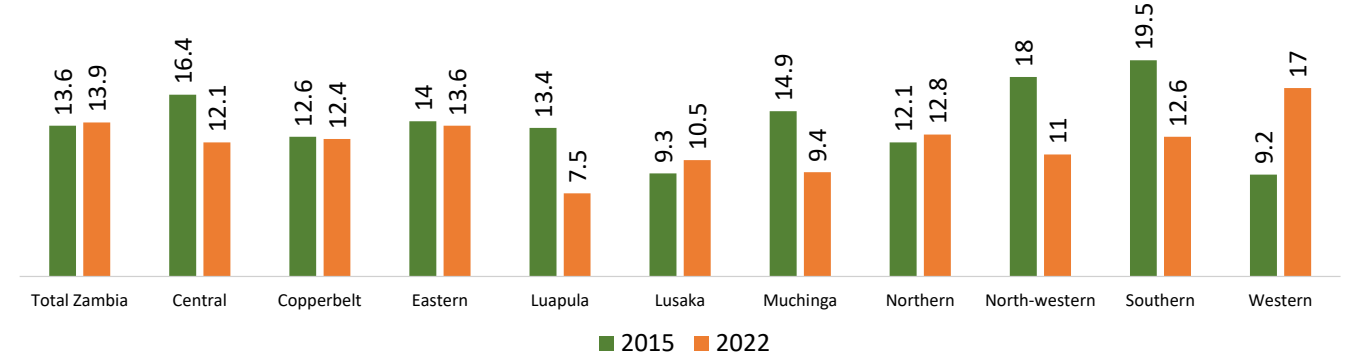


Figure 12.8 shows the incidence of extreme poverty by stratum in 2022. Among the rural strata, results show that 66.9 percent of the small scale agricultural households were extremely poor reflecting the largest proportion, followed by medium scale agricultural households at 58.1 percent and non-agricultural households at 56.4 percent. Further, large scale agricultural households had the smallest proportion of households that were extremely poor in rural areas at 51.0 percent.

In urban areas, the highest level of extreme poverty was recorded amongst households in low cost housing areas at 21.2 percent in 2022 reflecting a 5.4 percentage-point increase from 15.8 percent in 2015. Further, the Incidence of extreme poverty among households residing in medium and high Cost housing areas has either doubled or more than doubled since 2015 from 2.8 and 2.0 percent to 5.6 and 4.9 percent, respectively, in 2022.

Figure 12.8: Extreme Poverty by Stratum, Zambia 2022 (%)

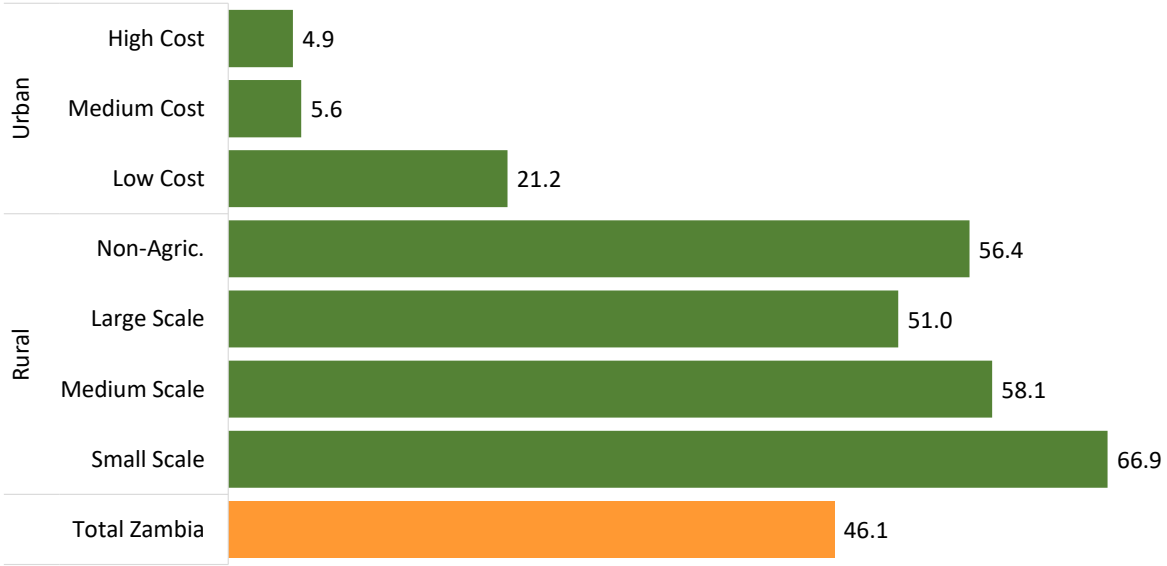
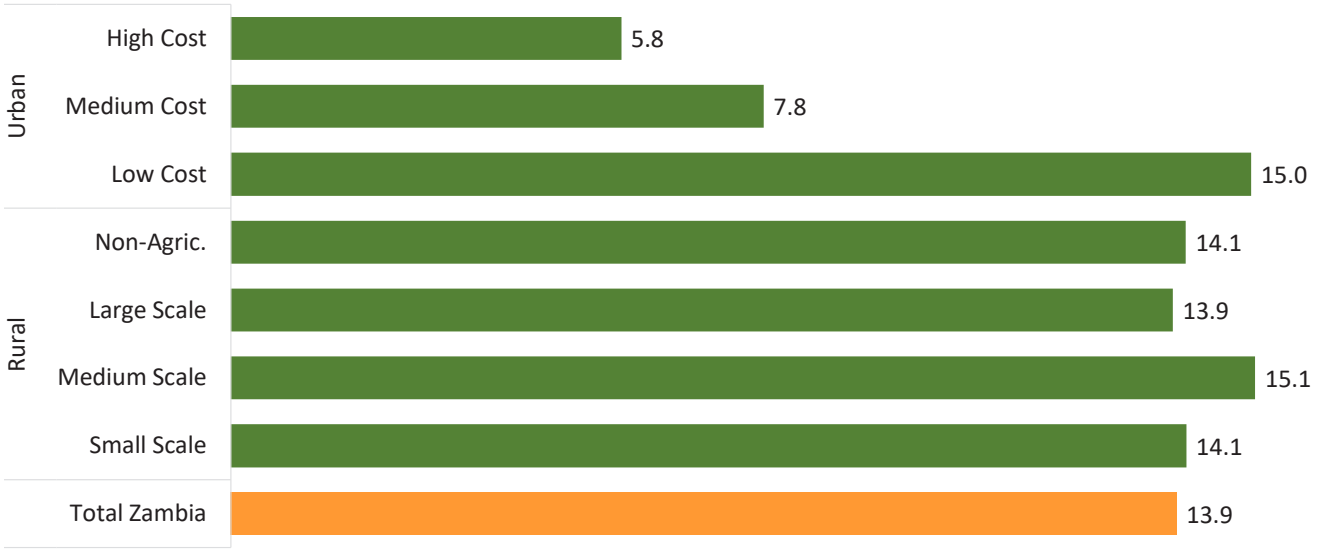


Figure 12.9 shows the incidence of moderate poverty by stratum in 2022. In rural areas, the highest incidence of moderate poverty in 2022 was recorded amongst medium scale agricultural households at 15.1 percent. However, compared to 2015, this reflects a 10.4 percentage-point reduction in moderate poverty for medium scale agricultural households from 25.5 percent in 2015 to 15.1 percent in 2022. Results further show that 14.1 percent of the households belonging to small scale and non-agriculture in 2022 were both moderately poor but relative to 2015, they reflect a 1.2 and 0.7 percentage-point decreases in moderate poverty, respectively. In contrast, moderate poverty among large scale agricultural households increased by 3 percentage-points from 10.9 percent in 2015 to 13.9 percent in 2022.

In urban areas, regardless of residential area, moderate poverty increased by a minimum of 2.5 percentage-points between 2015 and 2022. Though low-cost households accounted for the largest proportion of households with moderate poverty in urban in 2022, the largest increase in moderate poverty occurred amongst medium cost households by 3.3 percentage-points from 4.5 percent in 2015 to 7.8 percent in 2022. However, despite being the lowest, moderate poverty amongst high cost households doubled between 2015 and 2022 from 2.9 percent to 5.8 percent.

Figure 12.9: Moderate Poverty by Stratum, Zambia 2022 (%)



12.8. Poverty and Household Characteristics

This section looks at how poverty varies by household size, sex, age, education and economic activity status of the head of household. Various studies have shown that household's vulnerability to poverty, to a great extent, varies according to the dimensions of these socio-economic characteristics of the household.

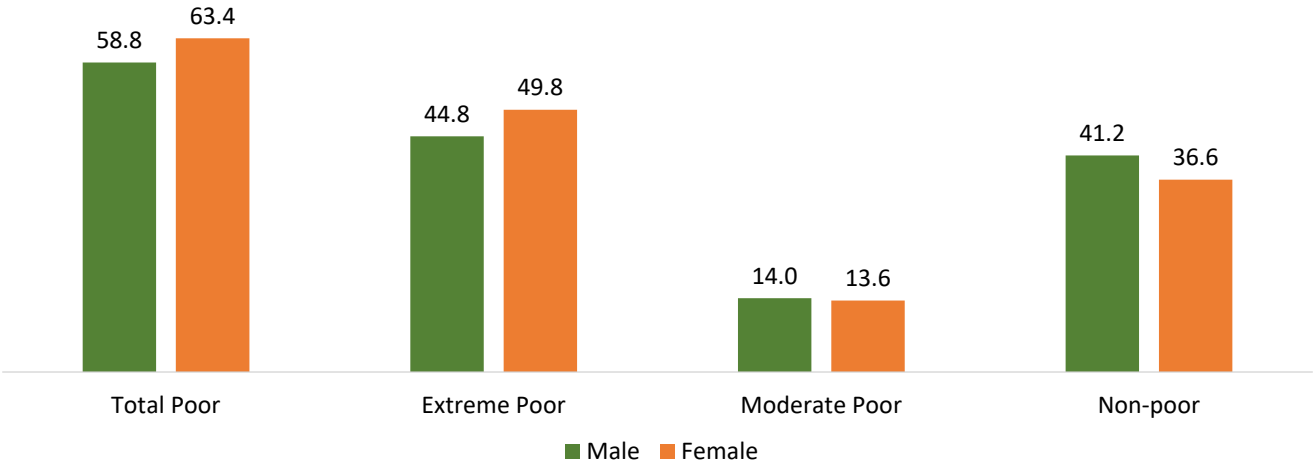
12.8.1 Poverty by Sex of Household Head

Figure 12.10 shows the Poverty status by sex of household head. Overall results show that 58.8 percent of the male-headed households compared to 63.4 percent of female-headed households were poor at national level.

Further, amongst the extremely poor households, 49.8 percent of the female-headed households compared to 44.8 percent of male-headed households were poor.

However, amongst the moderately poor households, 14 percent of the male-headed households compared to 13.6 percent of the female-headed households were poor. Amongst the non-poor, 41.2 percent of the male-headed households compared to 36.6 percent of the female-headed households were non-poor.

Figure 12.10: Poverty Level by Sex of Household Head, Zambia 2022 (%)



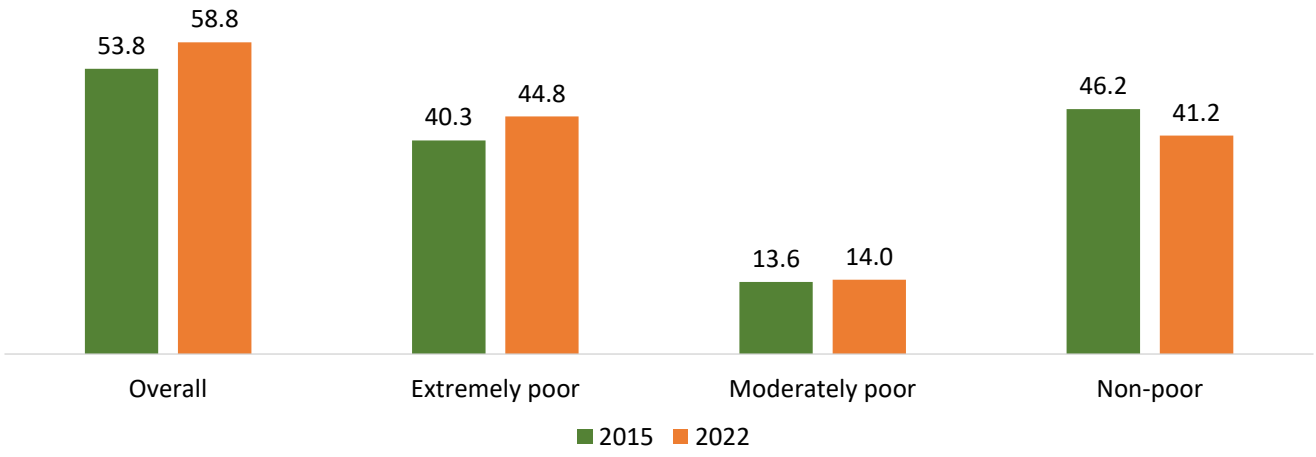
Figures 12.11 and 12.12 depicts poverty status by sex of household head , 2015-2022.

Male-headed Households

Overall results show that 53.8 of the male-headed households were poor in 2015 compared to 58.8 percent in 2022 reflecting a 5 percentage-point increase in poverty.

Amongst male-headed households, 40.3 percent were extremely poor in 2015 compared to 44.8 percent in 2022. Further, 13.6 percent were moderately poor in 2015 compared to 14 percent in 2022.
In 2015, 46.2 percent of the male-headed households were non-poor compared to 41.2 percent in 2022.

Figure 12.11: Poverty Level of Male-headed Household, Zambia 2015-2022 (%)



Female-headed Households

Overall results show that 56.7 percent of the female-headed households were poor in 2015 compared to 63.4 percent in 2022.

Further, amongst female-headed households, 42.9 percent were extremely poor in 2015 compared to 49.8 percent in 2022.

However, 13.7 percent of the female-headed households were moderately poor in 2015 compared to 13.6 percent in 2022.

On the other hand, 43.3 percent amongst the female-headed households were non-poor in 2015 compared to 36.6 percent in 2022. Thus, more female-headed households have fallen into the poverty trap over the period under review.

Figure 12.12: Poverty Level of Female-headed Households, Zambia 2015-2022 (%)

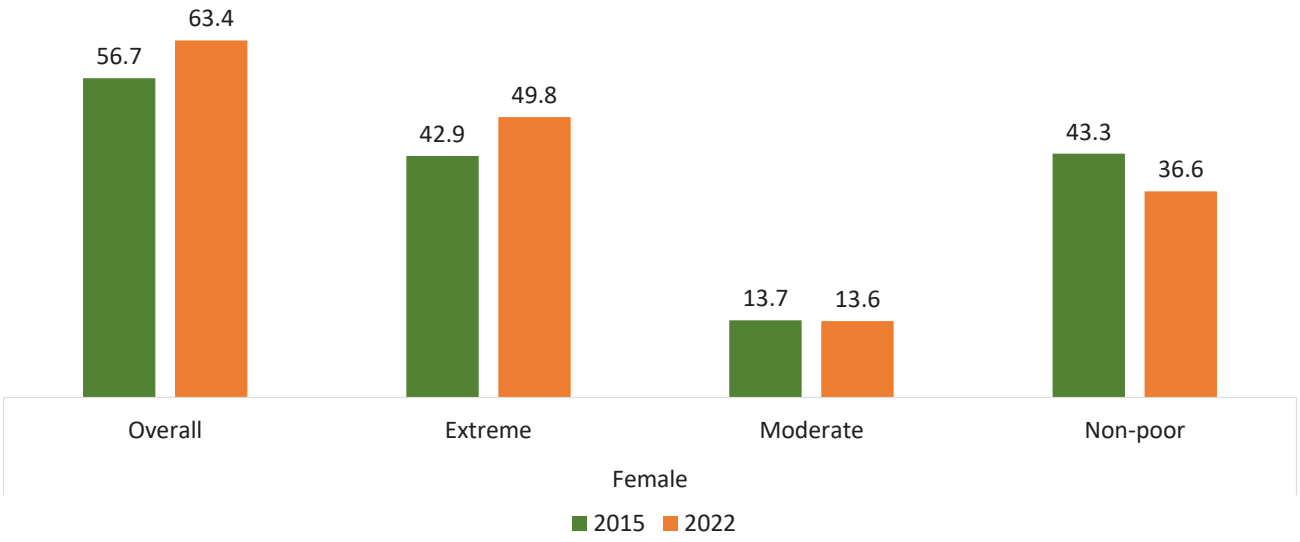


Figure 12.13 shows the percentage distribution of the rural population by poverty status and sex of household head in 2022. Results show that 77.3 percent of the male-headed households in rural areas were poor compared to 83.4 percent of the households headed by their female counterparts.

Further, 62.6 perent of the male-headed households were extremely poor compared to 70.6 percent of the households headed by females.

In addition, 14.6 percent of the male headed households were moderately poor compared to 12.8 percent of the households headed by females.

Amongst the households that were non-poor, 22.7 percent were male headed relative to 16.6 percent that were female-headed.

Figure 12.13: Rural Poverty Distribution by Sex of Household Head, Zambia 2022 (%)

Figures 12.14 and 12.15 depict level of poverty by sex of household head, 2015-2022.

Male-headed Households

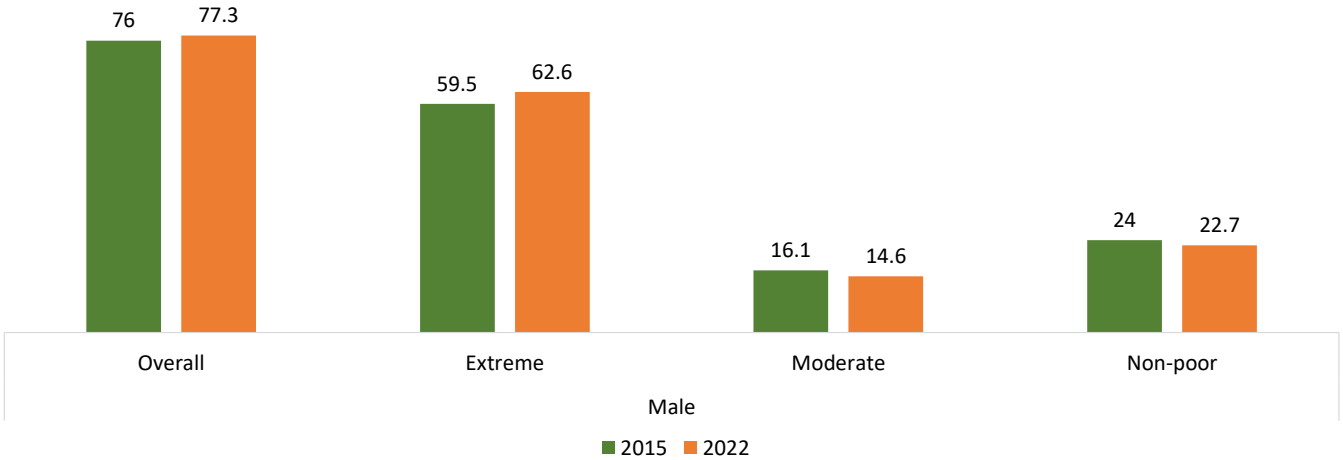
Figure 12.14 shows rural poverty level of male-headed household in 2015 and 2022. Overall results show that 76 percent of the male-headed households were poor in 2015 compared to 77.3 percent in 2022.

Further, 59.5 percent of the male-headed households were extremely poor in rural areas in 2015 compared to 62.6 percent in 2022.

In addition, 61.1 percent of the male-headed households were moderately poor in 2015 compared to 14.6 percent in 2022. This implies that there has been a 1.5 percenatege point decrease in moderate poverty among male-headed households between 2015 and 2022.

However, the proportion of male-headed households that were non-poor in 2022 has decreased to 22.7 percent from 24 percent in 2015.

Figure 12.14: Rural Poverty Level of Male-headed Household, Zambia 2015-2022 (%)



Female-headed Households

Overall results show that 78.9 percent of the female-headed households in rural areas were poor in 2015 compared to 83.4 percent in 2022.

Further, 64.9 percent of the female-headed households were extremely poor in 2015 compared to 70.6 percent in 2022 reflecting a 5.7-percentage point increase in extreme poverty.

In addition, 14 percent of the female-headed households were moderately poor in 2015 compared to 12.8 percent in 2022. Thus there has been a 1.2 percenatge point decrease in moderate poverty among female-headed households between 2015 and 2022.

In 2015, 21.1 percent of the female-headed households were non-poor compared to 16.6 percent in 2022. This implies that more female-headed households have become poor since 2015.

Figure 12.15: Rural Poverty Level of Female-headed Households, Zambia 2015-2022 (%)

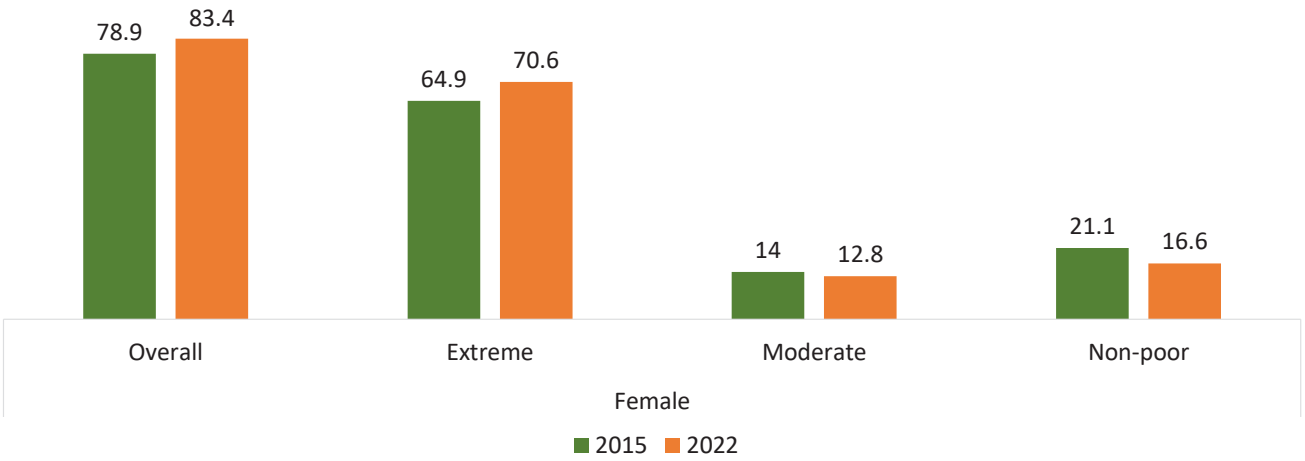


Figure 12.16 shows the distribution of the urban population by poverty status and sex of household head. Overall, results show that 30.1 percent of the male-headed households in urban were poor relative to 36.5 percent of the female-headed households.

Further, male-headed households tended to have lower shares of households identified as either extremely or moderately poor. Results show that 17 percent of the male-headed households were extremely poor compared to 21.8 percent among female-headed households. Similarly, 13.1 percent of the male-headed households were moderately poor relative to 14.7 percent among female-headed households.

On the other hand, despite the fact that the proportion of households that were non-poor dropped more among male-headed households between 2015 and 2022 from 78.3 to 69.9 percent and 70.4 to 63.5 percent, the proportion of female-headed households that were non-poor still remained lower than that of households headed by their male counterparts (8.4 percent vs 6.9 percent).

Figure 12.16: Urban Poverty Distribution by Sex of Household Head, Zambia 2022 (%)

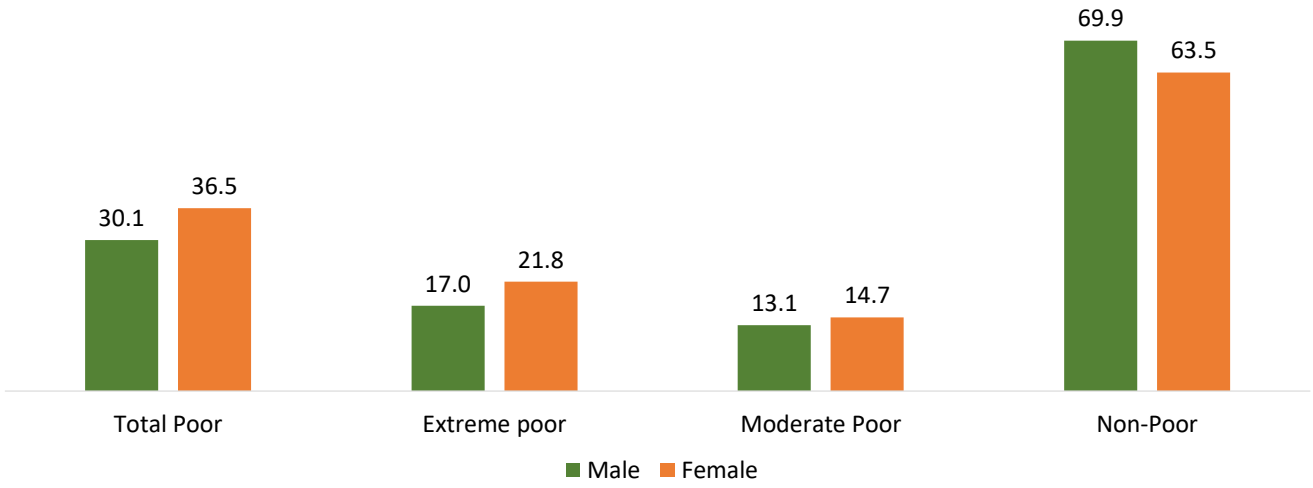


Figure 12.17 shows rural poverty status by sex of household head, 2015-2022. Analysing poverty status in urban areas by sex of household head between 2015 and 2022.

Male-headed Households

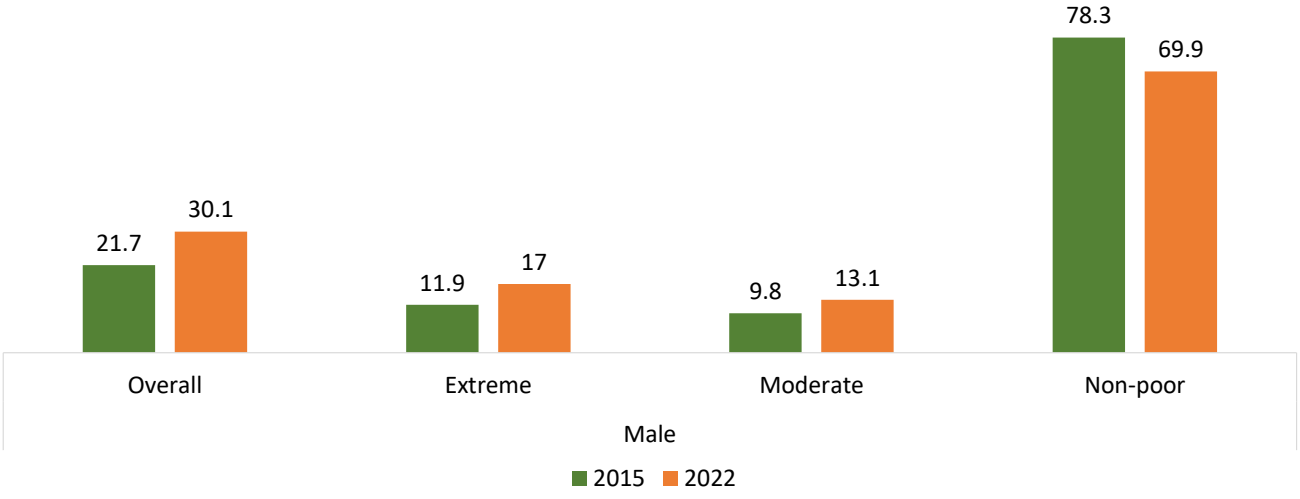
Overall results show that 21.7 percentof the male-headed households in urban areas were poor in 2015 compared to 30.1 percent in 2022 reflecting an increase in poverty.

Further, 11.9 percent of the male-headed households in urban areas were extremely poor in 2015 compared to 17 percent in 2022.

In addition, 9.8 percent of the male-headed households were moderately poor in 2015 compared to 13.1 percent in 2022.

In contrast, 78.3 percent of the male-headed households were non-poor in 2015 compared to 69.9 percent in 2022.

Figure 12.17: Urban Poverty Level of Male-headed Households, Zambia 2015-2022 (%)



Female-headed Households

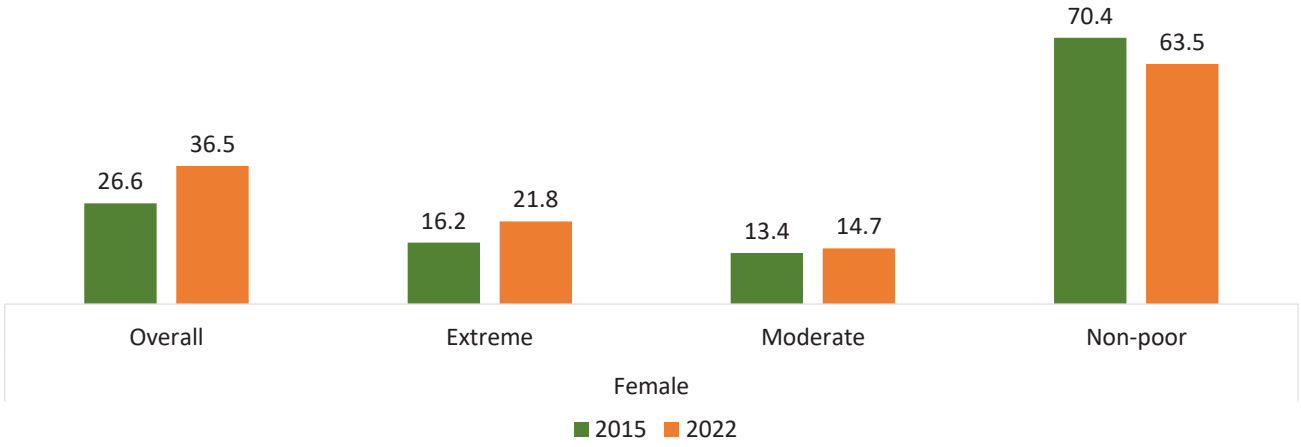
Overall results show that 26.6 percent of female-headed households in urban areas were poor in 2015 compared to 36.5 percent in 2022.

In 2015, 16.2 percent of the female-headed households were extremely poor compared to 21.8 percent in 2022.

Further, 13.4 percent of the female-headed households were moderately poor in 2015 relative to 14.7 percent in 2022.

In 2015, 70.4 percent of the female-headed households in urban areas were non-poor compared to 63.5 percent in 2022 reflecting a 6.9 percenatge point reduction in the proportion of non-poor female-headed households.

Figure 12.18: Urban Poverty Level of Female-headed Households, Zambia 2015-2022 (%)



12.8.2. Poverty Distribution by Age-group of Household Head

Figures 12.19 depicts headcount poverty by age-group of head of the household and residence in 2022. Generally, households tend to be poorer the older the age-group to which the household head belongs becomes.

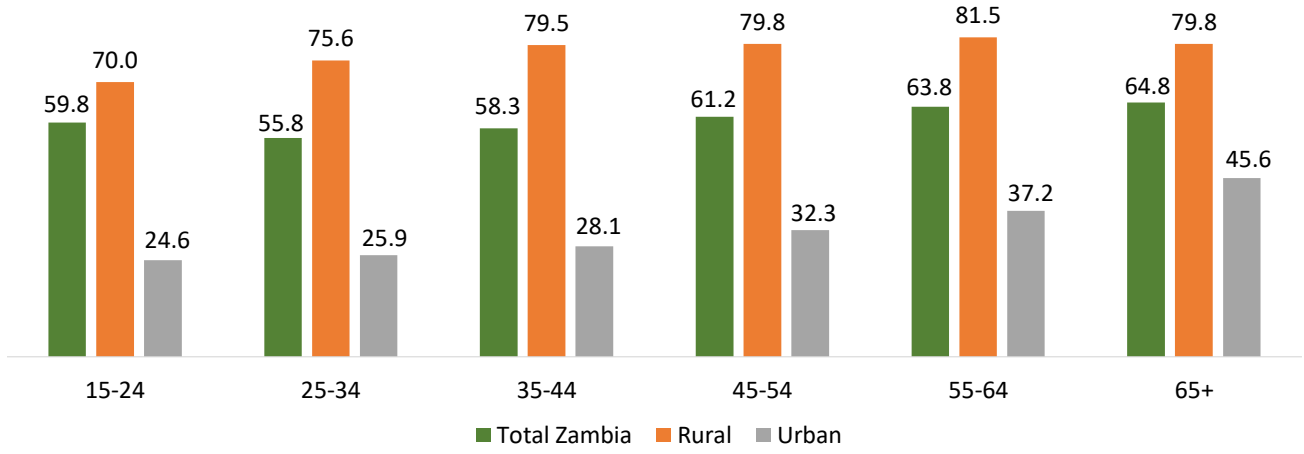
At national level, results show that households headed by persons in the age-group 25-34 years tended to have the smallest proportion of households that were poor at 55.8 percent while households headed by persons in the age-group 65 years or older tended to have the largest proportion of the poor at 64.8 percent.

Similar to the pattern at national level, headcount poverty in rural areas tended to increase the older the age-group to which a household head belongs becomes. Households headed by persons aged 55-64 years in rural areas had the largest proportion of the poor at 81.5 percent while in urban areas, it is households headed by persons in the age range 65 years or older who tended to have the largest proportion of the poor at 45.6 percent.

However, in urban areas, as the age-group of the household head advanced, the rate at which poverty increased tended to be higher (4.2 percent increase for the age-group 45-54 years against (4.9 percent increase for age-group 55-64 years) as well as (8.4 percent increase for the age-group 65 years or older).

Although poverty rates experienced by households in urban areas was generally lower than that of their rural counterparts, the 2022 LCMS survey results show that poverty rates in urban areas increased at a faster than in rural areas. Beyond the age-group 35-44 years, poverty rates in rural areas have been increasing at rates lower than those in urban areas. In fact, poverty rates for households between the age-groups 55-64 and 65+ years in rural areas reduced by 1.7 percentage points.

Figure 12.19: Headcount Poverty by Age-group of Household Head and Rural/Urban, Zambia 2022 (%)



12.8.3. Poverty and Household Size

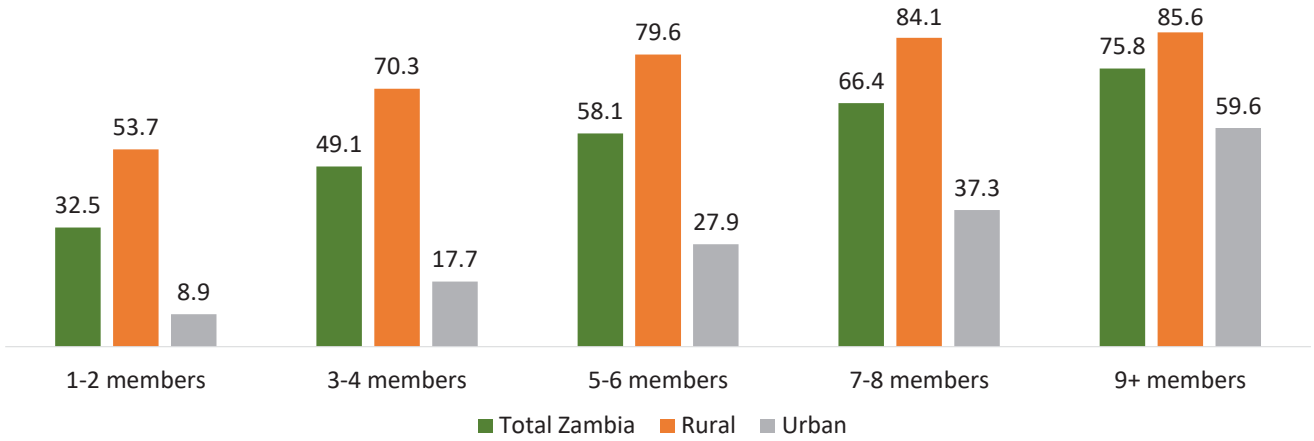
Figure 12.20 shows headcount poverty by size of household and residence in 2022. Overall, results show that the incidence of poverty tended to be higher, the larger the size of the household.

Overall, results show that households with at least 9 members had the highest poverty incidence at national level at 75.8 percent. Further, both in rural and urban areas, this category of households accounted for the largest proportions of the poor at 85.6 and 59.6 percent, respectively.

However, households whose composition was 1-2 members, overall, tended to have the least poverty levels at 32.5 percent. The poverty rate for these households in rural areas was 53.7 percent compared to 8.9 percent recorded among their urban counterparts. This implies that households with 1-2 members in rural areas were six times more likely to be poor than their urban counterparts.

Notably, the pattern of poverty distribution by size if related to 2015, is not very different from what was obtaining in 2022. Similarly, households with 1-2 members in 2015, on average, tended to have the lowest poverty levels at 29.9 percent while households with at least 9 members tended to have the highest poverty levels at 65.5 percent.

Figure 12.20: Headcount Poverty by Size of Household and Rural/Urban, Zambia 2022 (%)



12.8.4 Poverty and Education Level of Household Head

Education is one of the key elements that can successfully be used to transform people's livelihoods for the better. Generally, it is a well-known fact that the higher the level of education completed by the head of household, the easier it becomes for the head of that household to understand and respond to interventions programmes designed to reduce poverty.

Figure 12.21 shows headcount poverty by level of education completed by the head of household in 2022. Overall, results show that households whose household heads had attained tertiary education had the lowest levels of poverty regardless of residence at 12.7 percent.

Further, the poverty rate for households headed by persons with tertiary education in rural areas was 24. 8 percent compared to 8.0 percent in urban. This implies that although households headed by persons with tertiary education had the lowest poverty levels in general, the level of poverty for households headed by persons with the same level of education in rural areas was three times that of households in urban headed by persons with the same level of education.

However, households headed by persons with no formal education had the highest poverty levels in all respects i.e. 84.4 percent at national level, 88.9 percent in rural areas and 66.4 percent in urban areas. This implies that the level of poverty for households without formal education was almost 7 times higher than that of households headed by persons with tertiary education.

Figure 12.21: Headcount Poverty by Education Level of Household Head and Rural/Urban, Zambia 2022 (%)

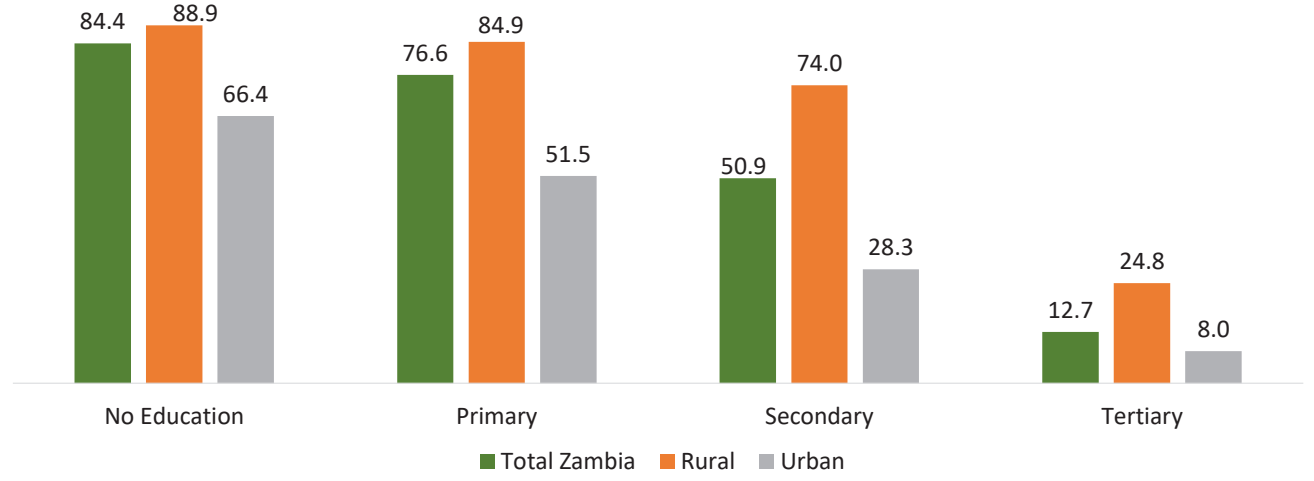
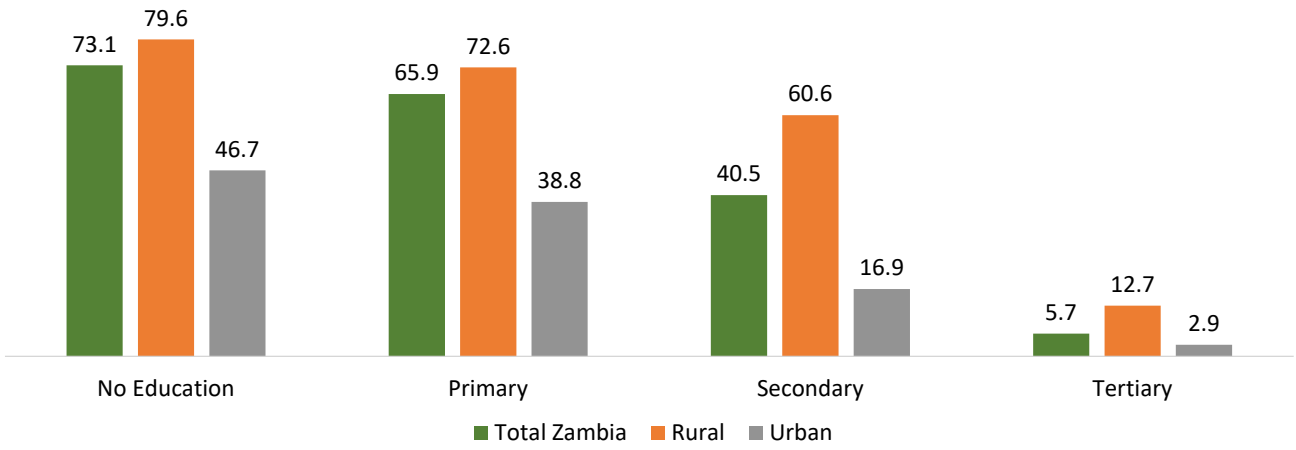


Figure 12.22 shows incidence of extreme poverty by level of education completed by head of household by rural/urban in 2022.

Generally, results show that extreme poverty levels tended to decline the higher the level of education completed by the head of household. At national level, the highest level of extreme poverty was recorded amongst households headed by persons with no formal education at 73.1 percent. Further disaggregated by rural/urban, 79.6 percent of the households headed by persons with no formal education in rural areas relative to 46.7 percent in urban were extremely poor representing the highest level of poverty.

Households headed by persons with tertiary education accounted for the least levels of extreme poverty countrywide at 5.7 percent. In rural areas, extreme poverty amongst households headed by persons with tertiary education was 9.8 percent higher than that of households headed by their urban counterparts i.e. [Rural: 12.7% vs 2.9 %: urban].

Figure 12.22: Extreme Poverty by Education Level of Head and Rural/Urban, Zambia 2022 (%)



12.8.5 Poverty and Employment Status of Household Head

The analysis in Figure 12.23 is based on the new definitions of employment in line with the 19th Resolution of the International Conference of Labour Statisticians of the International Labour Organisation.

At national level, results show that households headed by persons engaged in unpaid work/piece work accounted for the highest levels of poverty at 81.5 percent, followed by households headed by persons who were unemployed at 75.4 percent. Households headed by persons in self-employment and in wage employment accounted for the least levels of poverty at 26.9 and 36.5 percent, respectively.

In rural areas, poverty was highest among households headed by persons engaged in unpaid work/piece work at 86.3 followed by households headed by persons who were unemployed at 85.5 percent. The lowest incidence of poverty was recorded among households headed by persons in self-employment at 47.5 percent.

In urban areas, the highest and second highest levels of poverty were recorded among households headed by persons who were unemployed and those involved in unpaid work or piece work 46.7 and 45.2 percent, respectively. However, households headed by persons in self-employment recorded the lowest levels of poverty at 15.7 percent.

Figure 12.23: Headcount Poverty by Employment Status of Head and Rural/Urban, Zambia 2022 (%)

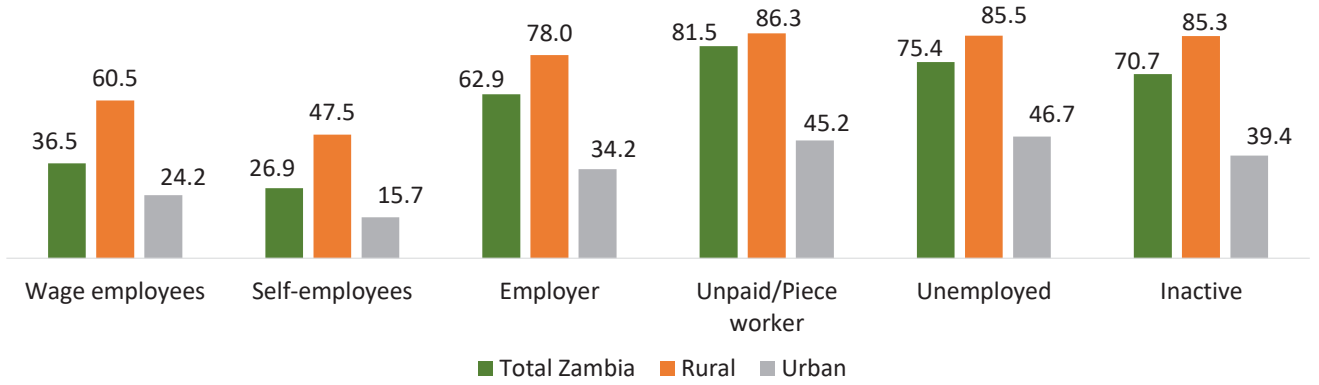
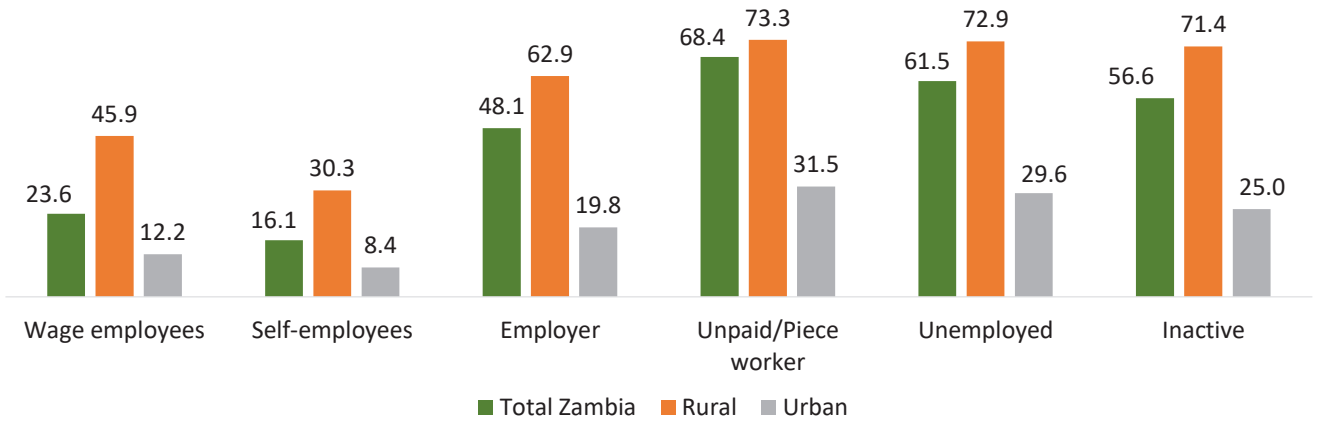


Figure 12.24 shows extreme poverty level by employment status and residence in 2022. At national level, the highest level of extreme poverty was recorded amongst households headed by persons in unpaid work or doing piece work at 68.4 percent followed by households headed by persons in unemployment at 61.5 percent. However, households headed by persons in self-employment had the lowest levels of poverty at 16.1 percent.

Further, in rural areas, households headed by persons in unpaid work/piece workers and the unemployed accounted for the highest and second highest incidence of poverty at 73.3 and 72.9 percent, respectively. However, in urban areas, households whose heads were engaged in unpaid work/piece work and the unemployed similarly accounted for the highest and second highest levels of extreme poverty at 31.5 and 29.6 percent, respectively.

Figure 12.24: Extreme Poverty by Employment Status of Head and Rural/Urban, Zambia 2022 (%)



12.9 The Poverty Gap Ratio.

Another welfare indicator that has increasingly gained prominence in contemporary poverty analysis is the Poverty Gap Ratio, which is also known as the Per Capita Aggregate Poverty Gap Ratio. This indicator not only identifies the poor but also shows us how far below the poverty line the poor are. It also gives an indication of the resources that would be required to lift the poor to the poverty line assuming there is perfect targeting. The wider the poverty gap, the wider the financing gap and consequently, the more the resources that would be required to seal the poverty gap or bring all the poor to the poverty line.

At national level, results show that 29.4 percent of the population were below the poverty line. Further, 41.3 percent of the population in rural areas were below the poverty line in 2022 relative to 11.4 percent in urban areas. This implies that the poor population in rural areas would require 3.62 times as much resources as their counterparts in urban to move to the poverty line assuming there was perfect targeting.

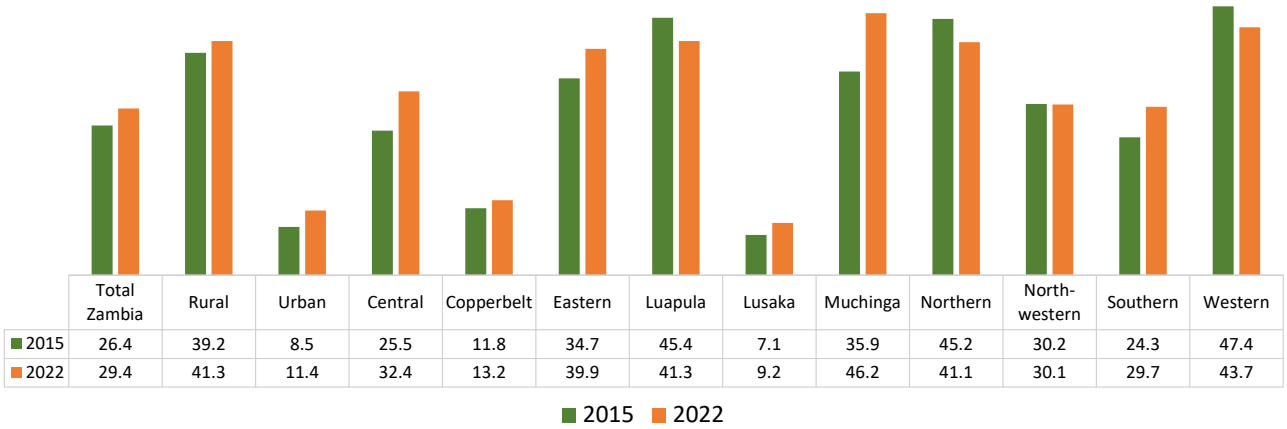
By province, Muchinga, Western, Luapula and Northern provinces had the largest the poverty gap ratios at 46.2; 43.7; 41.3 and 41.1 percent, respectively. Lusaka Province had the least poverty gap at 9.2 percent.

However, it is important to correctly interpret these results in absolute terms. For instance, although the poverty gap in Muchinga is wider than that of Luapula Province, in absolute terms, an estimated 625,286 persons in Luapula were below the poverty line relative to 424,252 persons in Muchinga. This implies that one would need more resources in Luapula than Muchinga to lift the poor to the poverty line.

Analysing the poverty gap between 2015 and 2022, overall results show that the poverty gap has widened by 3.0 percentage-points to 29.4 percent in 2022 from 26.4 percent in 2015. Whereas the poverty gap in rural areas has widened by 2.1 percentage-points between 2015 and 2022, the poverty gap in urban areas has widened by an extra 0.8 percentage-points to 2.9 percent between 2015 and 2022.

Although the poverty gap ratio in urban areas was lower than that of the rural population between 2015 and 2022, the fact that the poverty gap in urban widened by 2.9 percent relative to 2.1 percent in rural areas confirms that the poverty effects are now being felt more in urban than in rural areas although poverty still remains much more pronounced in rural areas.

Figure 12.25: Poverty Gap Ratio by Province and Rural/Urban, Zambia 2015-2022 (%)



	Total Zambia	Rural	Urban	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North-western	Southern	Western
2015	26.4	39.2	8.5	25.5	11.8	34.7	45.4	7.1	35.9	45.2	30.2	24.3	47.4
2022	29.4	41.3	11.4	32.4	13.2	39.9	41.3	9.2	46.2	41.1	30.1	29.7	43.7

12.10 Contribution to Total Poverty

Figures 12.26 shows the contribution of the population in Zambia to overall poverty by residence (RuralUrban) in 2022. Survey results show that the contribution of the rural population to overall poverty has reduced by 3 percentage-points from 82.1percent in 2015 to 79.1 percent in 2022. However, results now show that the contribution of the urban population to overall poverty has instead gone up by 3 percentage-points from 17.9 percent in 2015 to 20.9 percent in 2022 although overall results still show that poverty levels in urban areas remain much lower than is the case in rural areas.

Figure 12.26: Percentage Contribution to Total Poverty by Rural/Urban, Zambia 2022

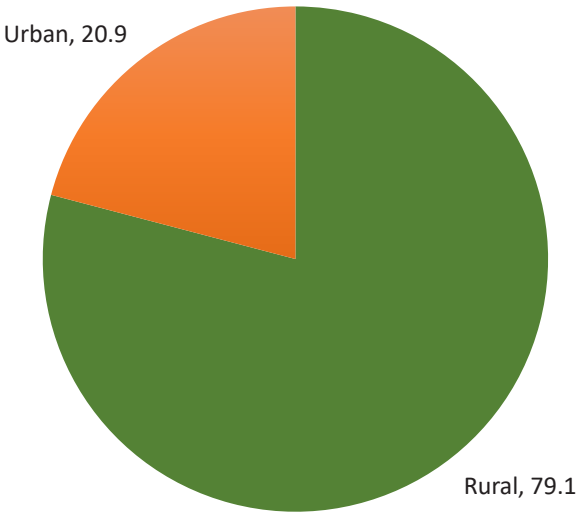
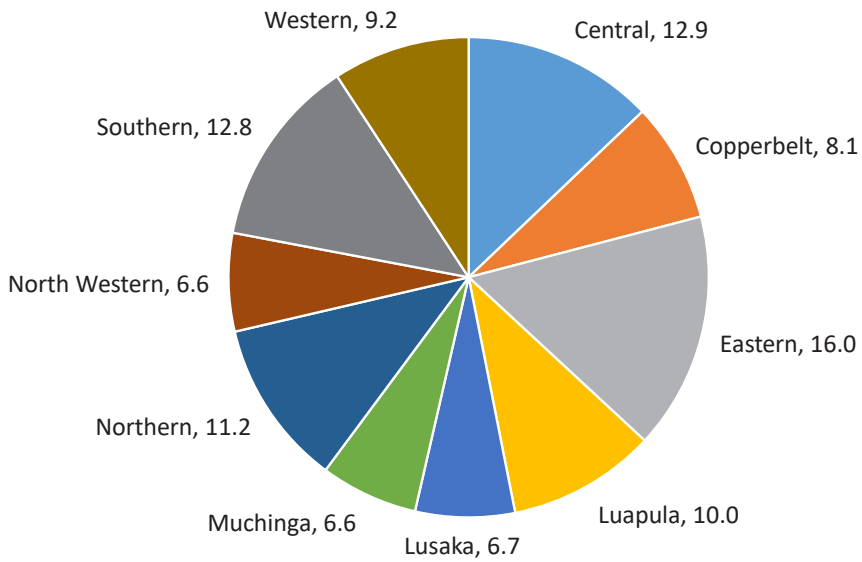


Figure 12.27 shows the contribution to overall poverty by province. Of the 10 provinces in Zambia, Eastern, Central and Southern provinces made the largest contributions to overall poverty at 16.0; 12.9 and 12.8 percent, respectively. However, North-western and Muchinga both contributed 6.6 percent while Lusaka contributed 6.7 percentage-points.

Figure 12.27: Provincial Contribution to Poverty, Zambia 2022 (%)



12.12. Changes in Expenditure Inequality

12.12.1. The Gini Coefficient as a Measure of inequality

Zambia has one of the highest inequality indexes in sub-Saharan Africa. This is partly due to the huge gap that exists between the rural and urban areas of the country. Rural livelihood in Zambia is predominantly based on rain-fed agriculture. A negative shock in the agricultural sector worsens the poverty situation of the population in rural areas.

On the other hand, most of the gainful economic activities in the country are concentrated along the line of rail, particularly Copperbelt and Lusaka provinces including North-western Province where a lot of mining activities are taking place.

High inequalities in the country perpetuates poverty as well as erodes the gains associated with increased income or economic growth. Therefore, in order for the benefits of economic growth to be felt by the poor and vulnerable members of society, these economic gains should be accompanied by progressive redistribution of income towards the poor in society.

There are several measures of inequality that have been seen in action over the last four decades. Nevertheless, the most widely used measure of inequality is the Gini coefficient (G). This report has settled for the Gini coefficient because it is one of the direct measures of expenditure differences that pass the Pigou-Dalton transfer condition. The Pigou-Dalton transfer condition requires that the Gini coefficient decreases whenever there is a transfer from a richer person to a poorer person (Walters, 2008).

Mathematically, the Gini coefficient is about one half of the relative mean difference, which is defined as the arithmetic average of the absolute values of differences between all pairs of income. This study has adopted this definition when computing the Gini coefficient using the Statistical Analysis System (SAS).

The formulae for the Gini coefficient can be presented as follows (Walters, 2008):

$$G = \left(\frac{1}{2}n^2\mu \sum_{i=1}^{n}\sum_{j=1}^{n}|y_i - y_j|\right)$$

Where:
G = the Gini coefficient
n = the number of persons in a distribution
μ = average consumption per person
$|y_i - y_j|$ = absolute difference in adult equivalent consumption.

Using the stated formula, the Gini coefficients were computed at region, province and residence.

Furthermore, the Gini coefficient, as a measure of inequality, can be derived directly from the surface areas of the Lorenz curve. In this case, it is simply the ratio of the area between the line of complete equality and the emerging Lorenz curve, when cumulative proportionate incomes are plotted against the cumulative proportionate population. Hence the Gini coefficient is given by:

G = A / (A+B)

The Gini coefficient always ranges from 0 to 1. A coefficient of 0 represents total equality in consumption distribution, while a coefficient of 1 represents total inequality. A coefficient such as 0.66 can be considered to represent a high incidence of inequality in income distribution, while a coefficient such as 0.15 represents a more equitable income distribution.

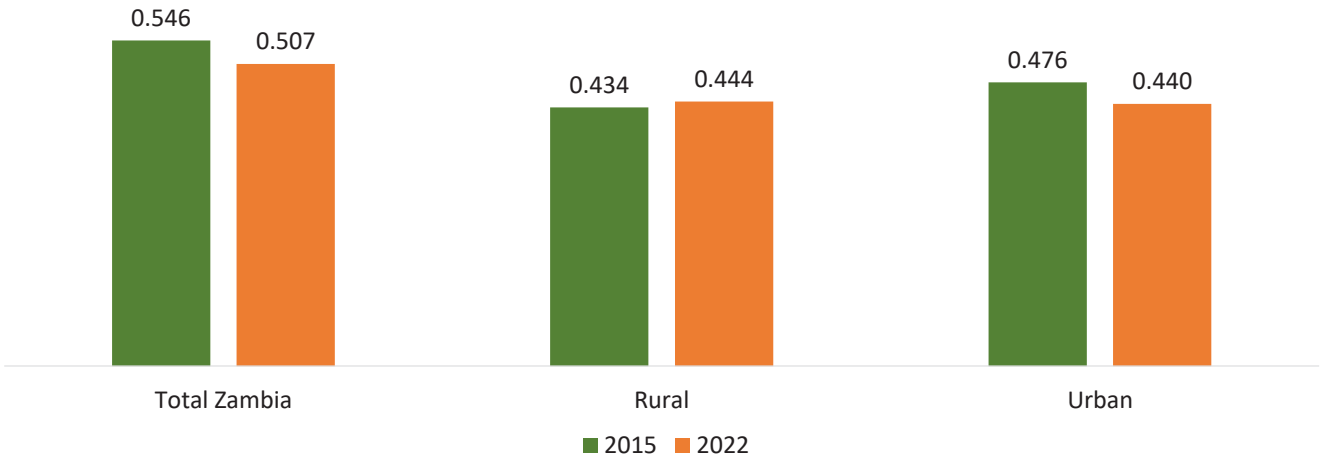
12.12.2. Inequality results based on Per Capita Expenditure Gini Coefficient

Figure 12.28 shows the trend in Gini coefficient by residence between 2015 and 2022. Overall, results show that the level of inequality as measured by the Gini coefficient in 2022 was 0.507. Though high, this reflects a reduction in inequality relative to the 2015 round.

Further, the Gini Coefficient for rural areas was 0.444 in 2022 compared to 0.434 in 2015. This implies that inequality in rural areas has worsened by 2.3 percentage-points during the period under consideration. In case of urban areas, results show that the inequality gap within urban areas has narrowed down to 0.440 in 2022 from 0.476 in 2015. This implies that the inequality gap in urban has narrowed down by 7.6 percentage-points. However, despite the narrow down of the gap in urban, poverty still remains more pronounced rural than in urban areas.

Analysed by rural-urban, results show that the inequality gap between rural and urban areas has narrowed down from a difference of as much as 0.042 between rural and urban in 2015 to as little as a difference of -0.004 between rural and urban in 2022.

Figure 12.28: Gini Coefficients by Rural/Urban, Zambia, 2015-2022 (%)



12.13. Conclusions

Generally, though already high, results show that:

- Poverty levels in Zambia have worsened between 2015 and 2022. Poverty has continued to be more of a rural phenomenon.
- However, the urban population is now being impacted more by poverty than their rural counterparts.
- Poverty levels in Muchinga, Western, Northern, Luapula and Eastern provinces remain higher than 70 percent.
- The majority of the poor have continued to face extreme levels of poverty particularly in rural parts of the country.
- Households headed by females are more likely to be impoverished than their male counterparts.
- Levels of poverty are more likely to be higher among households that are headed by elderly persons.
- Education, wage employment and improvement in agricultural policies provides a better chance of reducing poverty and vulnerability.
- The Poverty Gap Ratio in rural areas, especially in remote provinces, has continued to be wide.
- Inequality between rural and urban has narrowed down but more pronounced in urban.

CHAPTER 13: SELF-ASSESSED POVERTY AND COPING STRATEGIES

13.1 Introduction

Poverty is generally measured using money metric measures based either on income data or household expenditure, or measured based on ownership of assets, both productive and for household use. However, these measurements do not reflect the different dimensions and characteristics of poverty according to people's perceptions. The 2022 LCMS collected data on self- assessed poverty, a subjective measure of poverty based on the perception of the household. Households were asked to specify their poverty status across three possible categories, "Very Poor", "Moderately Poor" or "Non-Poor". This information is meant to complement other measures of poverty, obtained using money metric measures, and provide some context to the overall picture of poverty in Zambia. Households were also asked to indicate their coping mechanisms in times of economic hardship. The coping strategies employed by households will help to portray a picture of the vulnerability to poverty.

This chapter presents the results of the survey pertaining to:

- Self-assessed poverty status of households;
- Reasons for households' perceived poverty status;
- Household welfare comparisons;
- Average number of meals consumed by a household in a day and
- Household coping strategies.

13.2. Self-Assessed Poverty

Table 13.1 shows the percentage distribution of households by self-assessed poverty status, sex of household head and province in 2022.

At national level, the results show that 46.0 percent of the households regarded themselves to be very poor while 41.9 percent perceived themselves to be moderately poor. But 12.1 percent of the households perceived themselves to be non-poor. Further, a higher proportion of female-headed households perceived themselves to be very poor at 51.6 percent compared to 38 percent of the male-headed households although more male-headed households perceived themselves to be moderately poor (48.7%) than female-headed households at 39.3 percent.

Analysis by rural/urban shows that a higher proportion of households in rural areas perceived themselves to be very poor than their urban counterparts (i.e. rural 52.8% against 26.3%).

At provincial level, results show that more than half the proportion of households in Western, Muchinga, Luapula and Eastern provinces perceived themselves to be very poor at 64.6; 56.7; 54.8 and 53.4 percent, respectively.

However, households in Lusaka and Copperbelt provinces perceived themselves to be the least poor at 27.8 and 27.5 percent, respectively.

Table 13.1: Percentage Distribution of Households by Self-assessed Poverty status by Sex of Household Head, Rural/Urban and Province, Zambia 2022 (%)

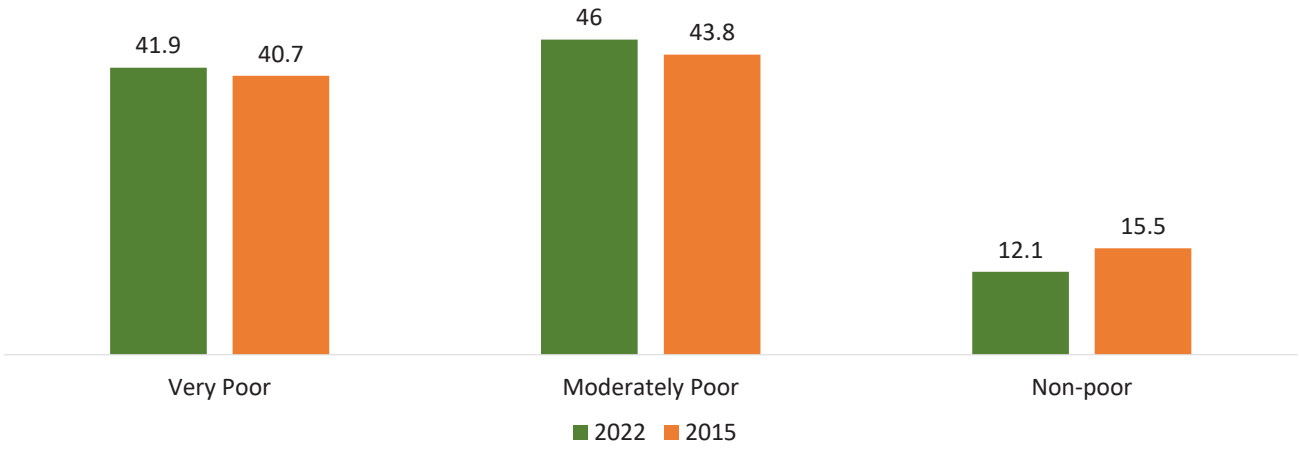
Region/ Province	Very Poor	Moderately Poor	Non-poor	Not Stated	Percent total	Total HHDs
Total Zambia	**41.9**	**46**	**12.1**	**0**	**100**	**3,861,557**
Sex of Head						
Male	38	48.7	13.4	-	100	2,744,164
Female	51.6	39.3	9.1	0.01	100	1,117,392
Residence						
Rural	52.8	41.1	6.1	0.01	100	2,278,255
Urban	26.3	53	20.7	-	100	1,583,301
Province						
Central	33.1	49.3	17.5	-	100	434,996
Copperbelt	27.5	55.3	17.2	-	100	533,915
Eastern	53.4	42.4	4.2	-	100	526,125
Luapula	54.8	38.5	6.7	-	100	295,608
Lusaka	27.8	48.5	23.7	-	100	628,772
Muchinga	56.7	36	7.3	-	100	181,762
Northern	45.2	46.2	8.6	-	100	313,883
North Western	37.4	49.2	13.5	-	100	226,853
Southern	46.4	47.9	5.7	-	100	461,927
Western	64.6	31	4.4	0.05	100	257,716

13.3. Self-Assessed Poverty status, 2015-2022

Figure 13.1 shows the percentage distribution of households by level of self-assessed poverty between 2015 and 2022. Overall results show that the proportion of households that perceive themselves to be very poor reduced by 1.2 percentage-points between 2015 and 2022 from 41.9 to 40.7 percent. Similarly, the proportion of households that perceived themselves to be moderately poor equally declined by 2.2 percentage-points from 46 percent in 2015 to 43.8 percent in 2022.

However, it is interesting to note that the proportion of households that perceived themselves to be non-poor has increased from 12.1 percent in 2015 to 15.5 percent in 2022.

Figure 13.1: Self-assessed Poverty by Level, Zambia 2015 and 2022 (%)



13.4. Reasons for Household Poverty

Households that perceived themselves to be either very poor or moderately poor were further asked to identify the reasons for their poverty perception. Table 13.2 shows the percentage distribution of households that perceived themselves to be poor by main reason cited for their subjective poverty by rural/urban and sex of household head in 2022.

At national level, the most common reason given for being poor was that the household "could not afford agricultural inputs" at 23.7 percent, followed by" lack of capital (money) to start own business or expand the business" at 11.8 percent and "lack of employment opportunities" at 8.0 percent. Further, 5.6 percent thought their "low salary" was responsible for their perceived poverty status while others cited "low agricultural production" at 5.3 percent. Furthermore, 5.2 percent cited "lack of money to expand agricultural output".

Analysed by rural/urban, the largest proportion of households in rural areas cited "inability to afford/ lack of agricultural inputs" as the main reason for their perceived poverty at 32.6 percent while the largest proportion in urban cited "lack of capital to start their own business or expand it" at 21.1 percent. Further, the second and third largest proportions in rural areas cited "low agricultural production" and "lack of agricultural inputs" for other reasons at 7.3 and 7.1 percent, respectively, relative to their urban counterparts who cited "lack of employment opportunities/jobs" and "salary/wage too low" at 15 and 11.8 percent, respectively.

By sex of head of household, results show that the main reasons for perceived poverty status cited by both male-headed and female-headed households did not vary significantly. For instance, 23.8 percent of the male-headed households cited "inability to afford agricultural inputs" against 23.4 percent by the female-headed households representing the largest proportions; 11.1 percent of the male-headed households cited "lack of capital to start a business or expand it" against 13.4 percent by female-headed households and 8.7 percent of the male-headed households cited "lack of employment opportunities" against 6.4 percent by female-headed households.

Table 13.2: Percentage Distribution of Households that Perceive themselves to be Poor by Main Reason cited for their Subjective Poverty, Rural/Urban and Sex of Household Head, Zambia 2022

Reason for Poverty	Rural, Urban and Sex					
	Rural	Urban	Male	Female	All Zambia	Total Number of Households
Total Zambia	100	100	100	100	100	3,393,264
Cannot afford/lack of agricultural inputs	32.6	8.4	23.8	23.4	23.7	802,702
Agricultural inputs are not available for buying in this area	3.9	0.7	3.3	1.3	2.7	92,164
Lack of agricultural inputs due to other reasons	7.1	1.1	5.3	3.9	4.9	164,671
Low agricultural production	7.3	1.8	5.8	4.1	5.3	179,118
Drought	4.0	0.4	2.4	3.3	2.7	91,678
Floods	1.6	0.2	1.0	1.1	1.1	35,845
Lack of adequate land	2.9	3.0	2.8	3.4	3.0	100,927
Low prices for their agricultural produce	1.8	0.8	1.7	0.9	1.5	49,311
Lack of market/buyers for the household's agricultural produce	0.9	0.2	0.7	0.5	0.6	20,455
Lack of cattle/oxen	3.8	0.2	2.3	2.8	2.5	83,322
Death of cattle due to diseases	0.9	0.1	0.5	0.9	0.6	20,885
Lack of capital (money) to start/ expand agricultural output	5.9	4.2	5.4	4.9	5.2	177,536
Lack of capital (money) to diversify into cash crops	2.9	3.5	3.2	3.0	3.1	106,360
Lack of credit facilities to start or to buy agricultural inputs	0.7	0.3	0.6	0.3	0.5	18,089
Lack of capital (money) to start own business or to expand	6.3	21.1	11.1	13.4	11.8	400,821
Lack of credit facilities to start business or to expand	0.4	1.8	0.9	1.1	1.0	32,750
Lack of employment opportunities/ cannot find a job	3.9	15.0	8.7	6.4	8.0	271,431
Salary/ wage too low	1.9	11.8	6.0	4.6	5.6	188,626
Pension payment too low	0.0	0.4	0.2	0.1	0.2	6,029
Retrenchment/redundancy	0.1	0.1	0.1	0.0	0.1	3,499
Prices of commodities too high	3.0	8.2	4.7	5.5	4.9	167,345
Hard economic times/economic decline of our country	2.8	7.5	4.6	4.3	4.5	153,539
Business not doing well	0.7	3.1	1.3	2.2	1.6	53,149
Too much competition	0.2	0.4	0.3	0.2	0.2	8,069
Due to disability	0.6	0.4	0.4	0.7	0.5	16,784
Death of bread winner	1.4	2.3	0.3	5.0	1.7	58,102
Debts	0.1	0.3	0.2	0.1	0.2	5,296
Other reasons	2.3	2.8	2.4	2.8	2.5	84,761

13.5. Reasons for Household Poverty, 2015-2022

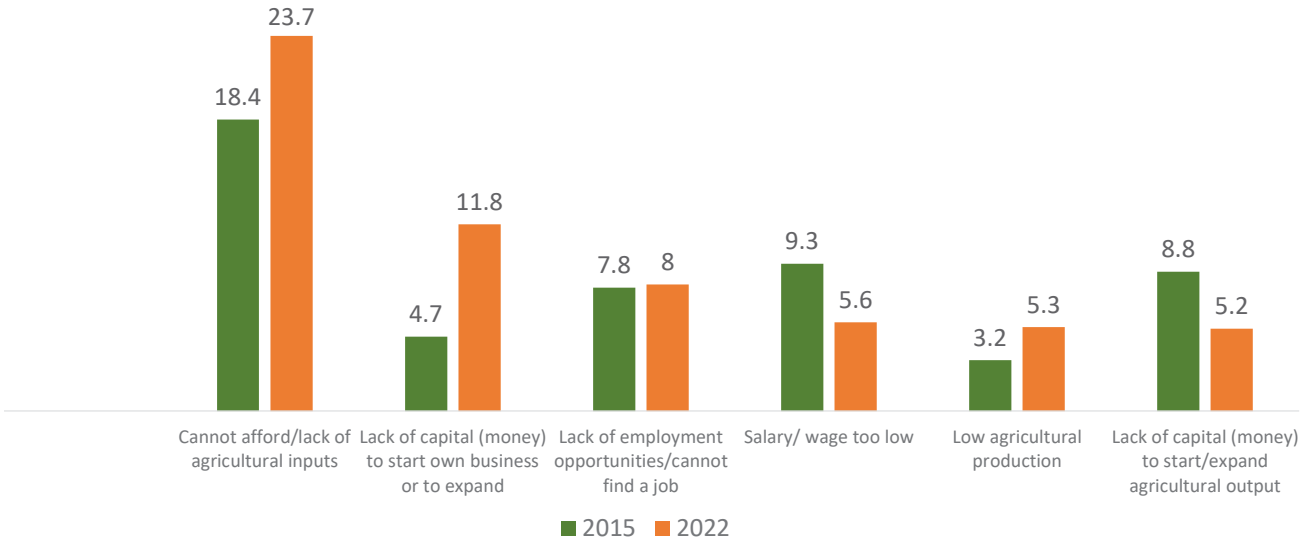
Table 13.3 and Figure 13.2 draws comparison between the main reasons cited by households for their perceived poverty status in 2015 and 2022.

The largest proportion of households both in 2015 and 2022 cited "inability to afford agricultural inputs" as a reason for their perceived poverty status at 18.4 and 23.7 percent, respectively. Further, in 2015, the second largest proportion of households cited "low salary/wage" at 9.3 percent while the second largest proportion in 2022 cited "lack of capital to start own business or expand it" at 11.8 percent. Additionally, households citing "lack of capita to expand agricultural production" (8.8%), "lack of employment opportunities" (7.8%) and "lack of capital to start a business or expand the business" (4.7%) accounted for the third, fourth and fifth largest proportions in 2015 while households that cited "lack of employment opportunities", "low salary/wage" and "low agricultural production" represented the third, fourth and fifth largest proportions in 2022.

Table 13.3: Percentage Distribution of Self-Assessed Poor Households by Main Reason cited for Poverty, Zambia 2015 and 2022

Main Reason of Poverty	Survey Year	
	2015	2022
Cannot afford/lack of agricultural inputs	18.4	23.7
Lack of capital (money) to start own business or to expand	4.7	11.8
Lack of employment opportunities/cannot find a job	7.8	8
Salary/ wage too low	9.3	5.6
Low agricultural production	3.2	5.3
Lack of capital (money) to start/expand agricultural output	8.8	5.2
Lack of agricultural inputs due to other reasons	3.2	4.9
Prices of commodities too high	3.1	4.9
Hard economic times/economic decline of our country	3.9	4.5
Lack of capital (money) to diversify into cash crops	1.5	3.1
Lack of adequate land	2	3
Agricultural inputs are not available for buying in this area	2.5	2.7
Drought	1.8	2.7
Lack of cattle/oxen	2.5	2.5
Other reasons	1.1	2.5
Death of bread winner	1.8	1.7
Business not doing well	1.7	1.6
Low prices for their agricultural produce	1.3	1.5
Floods	0.1	1.1
Lack of credit facilities to start business or to expand	2.3	1
Death of cattle due to diseases	0.4	0.6
Lack of market/buyers for the household's agricultural produce	0.4	0.6
Due to disability	0.3	0.5
Lack of credit facilities to start or to buy agricultural inputs	1.4	0.5
Debts	0.2	0.2
Pension payment too low	0.2	0.2
Too much competition	0.5	0.2
Retrenchment/redundancy	0.1	0.1
None given	15.5	0
Total	**100**	**100**

Figure 13.2: Proportional Distribution of Households by Main Reason cited for their Perceived Poverty Status, Zambia 2015-2022



13.6. Household Welfare Comparisons

Households were asked to state whether they thought their household was "better off", "the same" or "worse off" compared to the last 12 months.

Table 13.4 shows the percentage distribution of households by perceived change in welfare by sex of head, rural/urban, stratum and province in 2022.

At national level, 47.7 percent of the households were of the view that their welfare had remained the same relative to the previous year while 21.5 percent were of the view their welfare had changed for the better relative to the previous year. On the other hand, 29.9 percent of the households were of the view that their welfare worsened relative to the previous year.

Analysed by rural/urban, results show that 23.4 percent of the households in urban relative to 20.1 percent of their rural counterparts thought their household welfare was better than it was 12 months before. A higher proportion of households in rural areas were of the view that their welfare had remained the same at 50.1 percent compared to 44.4 percent of their counterparts in urban areas. However, the proportion of households who thought they were worse-off relative to the previous year was higher in urban (31.4 %) than in rural (28.9 %).

Analysed by sex of head of household, results show that 23.0 percent of the male- headed households were of the view their welfare had improved relative to the previous year against 17.8 percent of female-headed households with similar perception. In contrast, 28.7 percent of the male-headed households compared to 32.9 percent of the female-headed households were of the view that their household welfare in 2022 had worsened relative to the previous year.

Analysis by Province shows that, Muchinga (27.5 %) had the highest proportion of households that held the view that their welfare had improved followed by Copperbelt Province at 24.9 percent while households in Eastern accounted for the least proportion that perceived their welfare to have improved at 18.9 percent.

Table 13.4: Percentage Distribution of Households by Perceived Change in Welfare by Rural/Urban, Sex of Head, Stratum and Province, Zambia 2022

Rural/Urban, Sex of Head, Stratum / Province	Household Welfare Compared to Last Year						Total Number of Households
	Better Off	The Same	Worse Off	Not Applicable	Not stated	Total	
Total	21.5	47.7	29.9	0.9	0	100	3,861,557
Male	23	47.4	28.7	0.9	-	100	2,744,164
Female	17.8	48.3	32.9	1	0	100	1,117,392
Total	21.5	47.7	29.9	0.9	0	100	3,861,557
Rural	20.1	50.1	28.9	0.8	0	100	2,278,255
Urban	23.4	44.1	31.4	1.1	-	100	1,583,301
Total	21.5	47.7	29.9	0.9	0	100	3,861,557
Small Scale	19.8	50.4	29.2	0.6	-	100	1,726,146
Medium Scale	29.9	42.8	26.9	0.3	0.1	100	190,671
Large Scale	35.3	45.3	18.3	1.2	-	100	15,154
Non-Agric	15.7	53.2	29.2	1.9	-	100	346,285
Low Cost	21.9	43.9	33.5	0.7	-	100	1,289,650
Medium Cost	26.5	50.8	21.7	1	-	100	166,174
High Cost	34.8	37.2	23.2	4.9	-	100	127,478
Central	23	52.1	23.5	1.4	-	100	434,996
Copperbelt	24.9	44.6	29.1	1.4	-	100	533,915
Eastern	18.9	54.7	26.1	0.3	-	100	526,125
Luapula	19	41.7	38.7	0.7	-	100	295,608
Lusaka	20.2	42.5	36.8	0.5	-	100	628,772
Muchinga	27.5	46	25.6	0.8	-	100	181,762
Northern	23	46.7	29.6	0.7	-	100	313,883
North Western	19.9	51.5	28.5	0.1	-	100	226,853
Southern	21.1	50.7	28	0.1	-	100	461,927
Western	19.2	45	31.8	3.9	0	100	257,716

13.7. Average Number of Meals in a Day

The number of meals consumed by households per day vary. However, the most common number of meals consumed by most people in Zambia is 3 meals per day.

Table 13.5 shows percentage distribution of household by average number of meals consumed per day by sex of household head, rural/urban, stratum and province in 2022. At national level, 51.9 percent of the households consumed 2 meals per day representing the largest proportion followed by 38.1 percent of the households that reported consuming 3 meals per day. Further, 8.2 percent of the households reported consuming 1 meal per day.

Analysed by sex of household head, results show that, 54.3 percent of the female headed households on average consumed two meals in a day compared to 50.9 percent of the male headed households. Further, a higher proportion of male-headed households consumed three meals per day at 40.6 percent compared to 31.9 percent of the female headed households.

Analysed by poverty status, the average number of meals consumed by a household per day increases as poverty reduces in a given household. Notably, the proportion of households that consumed one meal per day among the extremely poor was more than double that of the non-poor (i.e. 12% vs 5%).

Analysed by stratum, 61 percent of the households from High cost reported consuming 3 meals per day representing the largest proportion followed by 58.9 percent from Medium cost while Non-agricultural

households accounted for the smallest proportion that reported consuming 3 meals per day at 26.5 percent.

Further, of the households that reported consuming 2 meals per day, the largest and second largest proportions were from Small and Medium scale agriculture categories at 61.2 and 58.4 percent, respectively. Notably, the largest proportion of households that reported consuming 1 meal per day belonged to the Non-agriculture stratum at 13.7 percent.

Analysed by province, Southern Province had the largest proportion of households that reported consuming at least 3 meals per day at 65.4 percent followed by Lusaka Province at 54.1 percent while Muchinga Province accounted for the smallest proportion of households that reported consuming at least 3 meals per day at 16 percent.

Of the households that consuming 2 meals per day, Muchinga and Northern provinces accounted for the largest and second largest proportions at 72.4 and 69.6 percent, respectively.

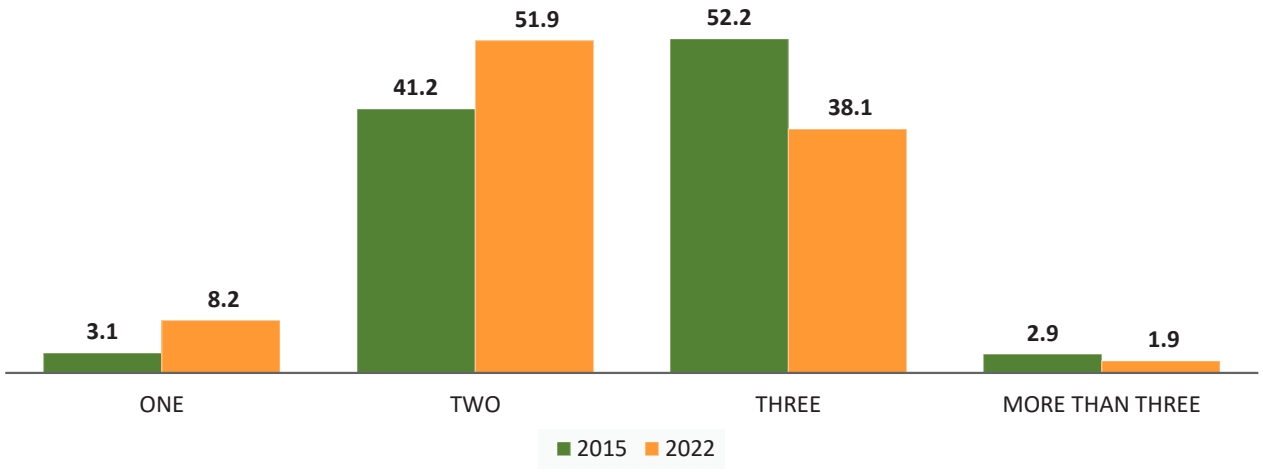
However, Luapula Province had the largest proportion of households that reported consuming 1 meal per day at 22.1 percent.

Table 13.5: Percentage Distribution of Household by Average Number of Meals Consumed Per Day by Sex of Head, Rural/Urban, Stratum and Province, Zambia 2022

Sex of Head, Rural/ Urban, Stratum and Province	One Meal	Two Meals	Three Meals	More than three meals	Not Stated	Total	Total Number of Households
Total	**8.2**	**51.9**	**38.1**	**1.9**	**0**	**100**	**3,861,557**
Sex of Household Head							
Male	6.5	50.9	40.6	2	-	100	2,744,164
Female	12.4	54.3	31.9	1.4	0	100	1,117,392
Actual Poverty Status							
Non-poor	5	37.2	54.1	3.7	-	100	1,725,272
Moderately poor	6.7	59.8	32.9	0.7	-	100	543,968
Extreme poor	12	65.7	22.2	0.2	-	100	1,519,606
Rural/Urban							
Rural	8.5	59.3	31.5	0.7	0	100	2,278,255
Urban	7.7	41.2	47.5	3.6	-	100	1,583,301
Stratum							
Small Scale	7.9	61.2	30.5	0.4	-	100	1,726,146
Medium Scale	4.7	45.1	48.8	1.4	0.1	100	190,671
Large Scale	5.8	39.9	46.3	8	-	100	15,154
Non-Agric	13.7	58.4	26.5	1.4	-	100	346,285
Low Cost	8.3	44.1	44.7	2.9	-	100	1,289,650
Medium Cost	5.7	29.8	58.9	5.7	-	100	166,174
High Cost	4.6	26.4	61	8	-	100	127,478
Province							
Central	4.5	50.4	43.2	1.9	-	100	434,996
Copperbelt	10.2	48.7	37.6	3.5	-	100	533,915
Eastern	5.1	57.6	35.9	1.3	-	100	526,125
Luapula	22.1	63.6	13.8	0.4	-	100	295,608
Lusaka	5.4	37.9	54.1	2.6	-	100	628,772
Muchinga	9.6	72.4	16	2	-	100	181,762
Northern	6.8	69.6	22.2	1.3	-	100	313,883
North Western	11.9	63.4	23.1	1.6	-	100	226,853
Southern	4.1	29.4	65.4	1.1	-	100	461,927
Western	11.7	64	22.9	1.5	0	100	257,716

Figure 13.3 shows the percentage distribution of households by average number of meals consumed per day in 2015 and 2022. Results show that the largest proportion of households in 2022 reported consuming 2 meals per day at 51.9 percent while 52.2 percent of the households in 2015 reported consuming 3 meals per day reflecting the largest proportion. Further, the proportion of household that reported consuming 1 meal per day has increased from 3.1 percent in 2015 to 8.2 percent in 2022.

Figure 13.3: Percentage Distribution of Households by Average Number of Meals Consumed per Day, Zambia 2015 and 2022



13.8. Household Coping Strategies

During the 2022 LCMS, each household on the survey was asked to indicate if it had experienced an incident that negatively affected its household welfare predisposing the household to the increased risk of poverty. The following were some of the incidents experienced by the households 12 months prior to the survey: Livestock disease, drought, lack of food/inadequate food, crop damage/crop pests, death of a bread winner, illness, family conflict, lack of financial resources/inadequate resources, job loss/no salary, change in price of agriculture products, change in price of agric. Inputs, crop damage in storage, victim of crime, house eviction, marital conflict/divorce, etc. It should be noted that various coping strategies employed by households help reveal its vulnerability to poverty.

Table 13.6 shows the proportion of households that experienced an incident 12 months prior to the survey by level of perceived poverty, rural/urban and stratum in 2022. At national level, an estimated 714,192 households experienced an incident 12 months prior to the survey representing 18.5 percent of the total households in 2022.

Analysed by poverty status, 23.1 percent of the households that perceived themselves to be very poor experienced an incident reflecting the largest proportion followed by 17.0 percent that perceived themselves to be moderately poor and 8.3 percent that perceived themselves to be non- poor.

Table 13.6: Proportion of Households that Experienced an Incident 12 Months Prior to the Survey by Level of Perceived Poverty, Rural/Urban and Stratum, Zambia 2022

Level of Perceived Poverty, Rural/ Urban and Stratum	Total	Proportion of Households who experienced an incidence
Total	**714,192**	**18.5**
Non-poor	38,943	8.3
Moderately poor	301,758	17.0
Very poor	373,491	23.1
Rural/Urban		
Rural	63,856	27.7
Urban	82,335	5.2
Rural Stratum		
Small Scale	522,603	30.3
Medium Scale	57,087	29.9
Large Scale	4,249	28.0
Non-Agric	47,918	13.8
Urban Stratum		
Low Cost	72,587	5.6
Medium Cost	4,434	2.7
High Cost	5,314	4.2

Households that experienced an incident 12 months prior to the survey were further asked to identify the incident by type.

Table 13.7 shows the proportional distribution of households by type of incident experienced 12 months prior to the survey by rural/urban in 2022.

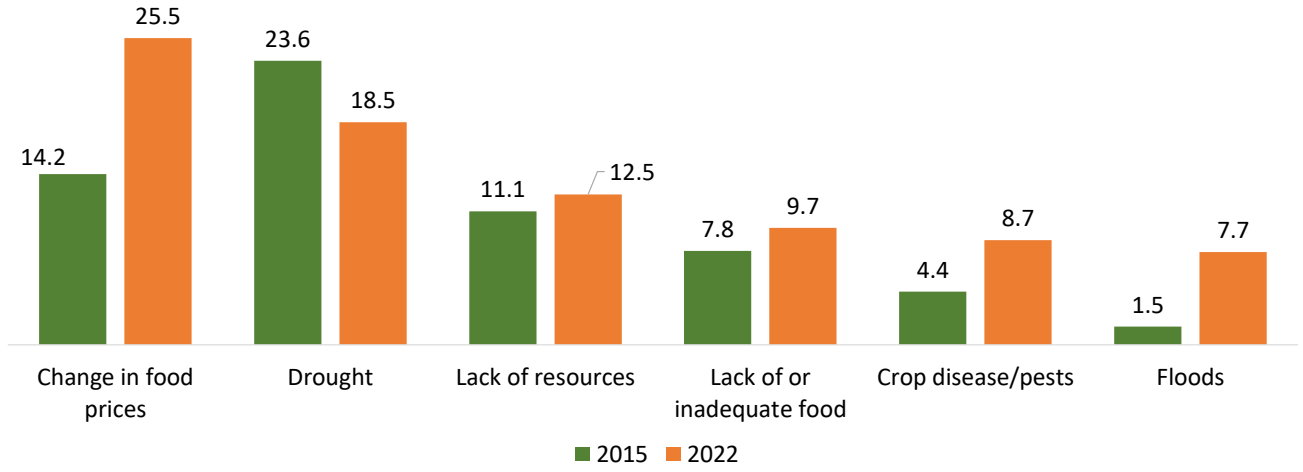
At national level, 25.5 percent of the households cited having experienced a "change in food prices" representing the largest proportion. Further, the largest proportion of households in rural areas cited a "drought" as a major shock or incident at 27.7 percent followed by "crop damage/crop pests" at 13.3 percent while the largest proportion of households in urban areas cited "change in food prices" as the major shock or incident experienced at 31 percent followed by "lack of financial resources/inadequate resources " at 15 percent while "collapse of business" was the third most common concern or incident in urban areas at 11.1 percent.

Table 13.7: Percentage Distribution of Households by Type of Incident Faced During the Last 12 Months by Rural/Urban, Zambia 2022

Incident	Total	All Zambia	Rural	Urban	Total Households
Change in food prices	Yes	25.5	21.6	31	983,441
Drought	Yes	18.5	27.7	5.2	714,192
Lack of financial resources/adequate resources	Yes	12.5	10.7	15	482,096
Lack of food / adequate food	Yes	9.7	9.1	10.6	374,403
Crop disease/crop pests	Yes	8.7	13.3	2.2	336,225
Flood	Yes	7.7	11.3	2.4	295,928
Illness	Yes	6.7	6.9	6.4	258,581
Collapse of business	Yes	6.1	2.7	11.1	236,793
Livestock disease	Yes	5.4	8.6	0.9	208,754
Job Loss / no salary	Yes	3.9	1.1	7.9	151,365
Change in sale prices of agriculture products	Yes	3.3	4.9	1.1	128,631
Change in agricultural input prices (e.g seeds)	Yes	3.1	4.5	0.9	117,994
Family conflicts	Yes	1.5	1.6	1.4	57,728
Damage to crop while in storage	Yes	1.3	1.9	0.3	48,517
Marital differences / divorce	Yes	1.3	1.3	1.4	50,951
Storm	Yes	1.2	1.6	0.4	44,530
Death of other household member	Yes	1.2	1.2	1.1	45,827
Change in money received from family/friends	Yes	1	0.7	1.3	38,302
Person joined household	Yes	1	0.8	1.4	40,415
Death of bread earner	Yes	1	0.9	1.1	36,962
Rise of profit from business	Yes	0.9	0.5	1.6	35,196
Inability to pay back loan	Yes	0.9	0.6	1.2	32,965
Victim of crime/business scam/ cheating	Yes	0.8	0.3	1.5	31,873
Serious injury / accident	Yes	0.6	0.4	0.8	23,051
Better pay/ work	Yes	0.5	0.2	0.9	19,485
Evicted from house	Yes	0.4	0.2	0.7	16,224
Destruction of housing (eg from fire / storm)	Yes	0.3	0.3	0.2	9,803
Law suit / imprisonment	Yes	0.1	0	0.2	3,570
Communal / political crisis / conflict (religious)	Yes	0.1	0	0.2	3,204

Figure 13.4 shows the proportional distribution of households by the top 6 selected shocks or incidents experienced by households 12 months prior to the survey in 2015 and 2022. Results show that the largest proportion of households in 2015 were affected by drought at 23.6 percent while the largest proportion of households in 2022 were mainly affected by "change in food prices" at 25.5 percent.

Figure 13.4: Selected Top 6 Shocks, Zambia 2015-2022



13.9. Impact of Shocks on the Households

Households that had experienced an incident 12 months prior to the survey were further asked to indicate the level of impact that incident had on the welfare of their household.

Table 13.8 shows the percentage share of households by type of shock and level of impact of that shock on household welfare in 2015 and 2022. The top 5 shocks experienced by households in 2015 in descending order were: Communal/Political crisis /Conflict (religious); Evicted from house; Death of bread winner; Serious injury/accident and Destruction of housing (eg from fire/storm) while the top 5 shocks experienced in 2022 in descending order were: Death of bread winner; Evicted from house; Destruction of housing (eg from fire/storm); Job Loss /no salary and Serious injury/Accident.

Results show that 32.5 percent of the households identified "communal/political/religious conflict" to have had a high impact in 2015 while more than double that proportion in 2022 similarly cited the same shock at 83.1 percent. Further, while 82.1 percent of the households in 2015 cited "death of a bread winner" having had a high impact on their household welfare, a slightly lower percentage share of households in 2022 cited the same shock at 75.3 percent.

Table 13.8: Percentage Share of Households by Type of Shock and Impact on Household Welfare, Zambia 2015-2022

Type of Shock	Low Impact		Medium Impact		High Impact	
	2015	2022	2015	2022	2015	2022
Communal / political crisis / conflict (religious)	12.9	0	38	16.9	32.5	83.1
Evicted from house	1.7	0.8	5.4	19.7	76.2	79.4
Death of bread earner	1	2.4	1.7	13.3	82.1	75.3
Serious injury / accident	22.6	8.7	10.1	19.1	61.5	72.2
Destruction of housing (eg from fire / storm)	7.9	6.1	11.5	21.7	69.7	72.2
Job Loss / no salary	6	5.4	16.2	22.3	66.7	72.1
Lack of food / adequate food	5.7	4.1	27.7	23.7	53.9	71.5
Livestock disease	7.6	4.8	20.3	22	54.1	70.6
Lack of financial resources/adequate resources	4.4	3.1	31.6	27.2	54.1	68.7
Flood	7.2	6.7	29.2	22	39.6	67.5
Change in agricultural input prices (e.g seeds)	8.2	4.5	35.7	25.4	44.2	67.3
Death of other household member	5.3	2.5	19.6	30.2	57	66.6
Collapse of business	9.8	4.2	26.2	28.7	57.4	66.2
Change in food prices	5.2	3.6	32.9	29.5	51.8	65.6
Marital differences / divorce	8.8	2.8	26.5	28.3	44.6	63.5
Storm	18.9	13	37.7	15.3	35	63.3
Change in sale prices of agriculture products	11.4	7.6	25.5	28.1	36.7	62.5
Victim of crime/business scam/ cheating	12	0.4	37.9	35.4	38.4	62.4
Damage to crop while in storage	13	7.3	28	26.7	45.4	62.3
Drought	5.1	4.8	23.2	30.7	54.9	61.2
Inability to pay back loan	4.1	5.6	41.5	27.5	36.4	59.3
Crop disease/crop pests	10.5	9	33.9	30	39.6	58.1
Rise of profit from business	2.2	12	12.8	16.2	2.5	57.3
Law suit / imprisonment	12.7	0	24.2	22.1	29.8	56.4
Illness	8.1	7.7	32.8	39.4	47.1	48.4
Better pay/ work	0	0	15.7	52.7	17.5	47.3
Family conflicts	9.8	11.9	45.1	42.1	31.5	43.5
Change in money received from family/friends	6	11.9	36.3	48.5	31.7	38.5
Person joined household	11.2	24.6	16.9	40.2	14.8	21.4

13.10. Coping Strategies used On Various Events

There are times when households are faced with challenges that compromise their desired level of welfare. In most cases, households attempt to come out of their predicament largely by using particular survival strategies available to them. The survey collected data on various strategies households use to cope with hard times. The mechanisms used by households to overcome these challenges are commonly referred to as coping strategies.

Table 13.9 shows the proportion of households by type of coping strategy, rural/urban and sex of household head in 2022. Overall, results show that 22.1 percent of the households used their "savings" as a coping strategy reflecting the largest proportion followed by 8.3 percent who "borrowed money from relatives, friend and other persons" Further, 8.0 percent of the households "bought cheaper food", 6.6 percent "bought less food" while 6.3 percent "worked more hours".

In rural areas, 6.8 percent of the households compared to 0.3 percent in urban areas "sold an animal" as a coping strategy. Further, the most common coping strategy used by households both in rural and urban areas were "savings" at 19.3 and 23.9 percent, respectively.

Table 13.9: Proportion of Households by Type of Coping Strategy, Rural/Urban and Sex of Household Head, Zambia 2022

Coping Strategy, Rural/Urban	Total		Rural		Urban	
	Number	Percent	Number	Percent	Number	Percent
Total Zambia.	**2,291,343**	**100**	**1,378,674**	**100**	**912,669**	**100**
Spent savings	505,493	22	329,030	24	176,463	19
Used insurance	4,063	0	899	0	3,164	0
Sold animals	96,891	4	93,918	7	2,973	0
Grew/sold additional/ other crops	51,096	2	44,005	3	7,091	1
Sold assets(tools)	70,344	3	36,375	3	33,969	4
Sold farm land	17,375	1	15,013	1	2,363	0
Worked more hours	144,769	6	81,631	6	63,138	7
Started business	77,876	3	29,266	2	48,611	5
Sent children to relatives or friends	26,253	1	13,861	1	12,392	1
went elsewhere/ migrated to work	13,162	1	7,805	1	5,358	1
Travelled/ migrated to seek health care	7,675	0	5,784	0	1,891	0
Sent children to work/sell	13,769	1	9,502	1	4,266	0
Received/asked for gifts/assis-tance from relatives or friends	100,875	4	61,617	4	39,059	4
Borrowed money from relatives/ friends	190,553	8	111,067	8	79,486	9
Borrowed money from lender	53,240	2	149,523	1	33,717	4
Borrowed money from bank/fi-nancial entity	5,542	0	1,745	0	3,797	0
Got help from religious entity	21,782	1	14,777	1	7,005	1
Sought spiritual help	14,614	1	10,161	1	4,454	0
Sought help from govt	16,436	1	13,222	1	3,214	0
Sought help from NGO/Interna-tional organ.	5,729	0	4,548	0	1,181	0
Got cash transfer	25,017	1	16,249	1	8,768	1

Coping Strategy, Rural/Urban	Total		Rural		Urban	
	Number	Percent	Number	Percent	Number	Percent
Got Remittances	34,143	1	19,752	1	14,391	2
Bought cheaper food	182,832	8	94,149	7	886,831	10
Bought less food	151,646	7	80,179	6	71,467	8
Reduced non-food expenses	43,178	2	14,919	1	28,260	3
Did piece work on other farms	57,735	3	51,474	4	6,261	1
other piece work	106,067	5	51,633	4	54,434	6
Did work for food or assets	7,113	0	5,942	0	1,171	0
Ate wild foods only	2,169	0	2,169	0	-	-
Substituted ordinary meals with mangoes	-	-	-	-	-	-
Reduced number of meals or food intake	66,669	3	43,327	3	25,342	3
Pulled children out of school	3,415	0	369	0	3,046	0
Did petty vending	13,778	1	7,379	1	6,398	1
Begged on th streets	971	0	512	0	459	0
Sought refuge in the neighbour-hood	10,975	0	10,494	1	481	0
other piece work	80,538	4	37,076	3	43,463	5
No response	67,561	3	41,104	3	26,457	3

Chapter 14: HOUSING CHARACTERISTICS, HOUSEHOLD AMENITIES AND ACCESS TO FACILITIES

14.1. Introduction

Household welfare can also be measured using housing standards and access to safe water sources, good sanitation and other social economic infrastructure. Provision of clean and safe water supply should be among the top priorities of Government because of the linkage that exists between inadequate supply of safe water and incidence of water borne diseases.

The 2022 Living Conditions Monitoring Survey collected data on housing, household characteristics and amenities pertaining to types of dwelling, tenancy of housing unit, main source of drinking water for households, sanitation, energy for cooking, energy for lighting and household access to facilities.

Facilities for which information was collected included the food market, post office, bank, education and health facilities. For each of these facilities, various information such as distance, walking time, means of getting to the facility, use of facilities and reason for not using a particular facility were also recorded.

14.2. Housing Characteristics

This section presents results on housing unit used by households by basis of occupation. The following concepts and definitions were used to identify types of dwelling.

Housing unit: A housing unit is an independent place of abode intended for habitation by one household. It should have direct access to the outside such that the occupants can come in and go out without passing through anybody else's premises. The housing unit should have at least one door which directly leads to the outside into the open or into a public corridor or hallway. Structures which are not intended for habitation such as garages and barns, classrooms etc. but are occupied as Living quarters.

Traditional Hut: Traditional hut is the type of housing found in the rural area of Zambia. It is however, usually made of mud material around the walls and roof is usually thatched. Even if it is found in the urban areas, it should be recorded as traditional hut.

Improved Traditional: This is the type of housing also common in the rural areas but has been improved by the materials used for either the walls and/or the roofing. Some of these huts may have red brick or burnt brick walling and, in some cases, asbestos or even iron sheets on the roof. In all respect, they are traditional huts but have a relevant improvement that sets them apart from typical traditional huts.

Detached House: This is usually a housing structure that is split into two or more housing units. Each housing unit is independently detached from the other and stands on its own. It is structurally-separated part of the permanent building by the way it is built, rebuilt or converted.

Flat/Apartment/Multi-unit: This is a housing structure that has a set of rooms and its accessories in a permanent building. It can also be a structurally permanent building by the way it is built, rebuilt or converted having several housing units.

Semi-detached House: This is a housing structure that is split into two or more housing units. The separate housing unit usually has a set of rooms and its accessories are not independently defined from the permanent structure and are seperated by a wall.

Guest House/Wing: This is a housing structure that is separate or part of the main house. This housing unit has a room or a set of rooms and its accessories in a permanent structure. It is a private housing unit, which is kept for visitors to stay and have meals.

Cottage built near Main House: This is a housing structure that is separate from the main house. This housing unit has a room or a set of rooms and its accessories in a permanent structure. It is a private housing unit, which is kept for Visitors to stay and have meals for payment (small hotel).

House attached to/on top of a Shop: This is a Living quarter that is part of a commercial building.

Hostel: A building or Living quarters in which certain types of people can live and eat, such as students/ young people working away from home can stay for payment.

Non-residential Building: These are premises in a permanent structure or structures that are not intended for habitation of people or groups of people. They are usually commercial building such as school classrooms, barns, warehouses, etc.

Unconventional: These are improvised housing units that are independent or makeshift shelters. They are structures that are built from mostly waste or salvaged materials and without a predetermined design or plan for the purpose of habitation by one or more households. However, these structures were being used as living quarters at the time of the survey even though they do not comply with generally accepted standards for human habitation. Such structures are common in urban or peri-urban areas. It is not unusual in shanty compounds to find households living in a Kantemba, storage container, etc. However, it is important to bear in mind that not every structure in shanty area is unconventional as it may have been built in a planned manner from regular building materials.

14.2.1. Housing Unit types

Table 14.1 shows the percentage distribution of households by type of housing unit occupied, rural/ urban, stratum, and province in 2022. At national level, results show that the most common type of housing unit occupied by households was "an improved traditional house" at 26.3 percent followed "traditional huts" at 25.6 percent. However, the least occupied type of housing unit was a "servant quarter" at 1.1 percent.

Analysed by rural/urban, results show that the highest proportion of households in rural areas occupied a "traditional hut" at 41.8 percent followed by those who lived in "improved traditional huts" at 34.9 percent and "detached houses" at 14.1percent.

In urban areas, the highest proportion of households occupied a "detached house" at 38.7 percent, followed by those who lived in "flats/apartments and multi-unit dwellings" at 24.8 percent. Further, 13.8 and 8.8 percent of the households occupied an "improved traditional housing unit" and a "semi-detached house", respectively. The least occupied type of housing unit in urban areas was a "servant quarter" at 1.9 percent.

Analysed by province, results show that Muchinga (52.3%), Western (52.1%), Northern (50.8%) and Luapula (45.9%) were provinces with the highest proportions of households that occupied traditional housing units in descending order. Apparently, these are the same provinces which had the highest incidence of objective poverty. Further, Eastern and Southern provinces accounted for the highest and second highest proportions of households that occupied improved traditional housing units at 41.7 and 36.9 percent, respectively. Furthermore, Copperbelt and North-western had the highest and second proportions of households that occupied detached housing units at 46.5 and 36.8 percent, respectively.

On the other hand, although Lusaka and Copperbelt had the highest and second highest proportions of households who occupied flats and semi-detached housing units, Lusaka Province had the largest proportion occupying flats at 40.6 percent while Copperbelt had the largest proportion occupying semi-detached housing units at 13.1 percent.

Table 14.1: Percentage Distribution of Households by Type of Housing Unit, Rural/Urban, Stratum and Province, Zambia 2022

	Traditional Hut	Improved Traditional House	Detached House	Flat/ Apart-ment/Mul-ti-Unit	Mixed Housing Unit	Semi-De-tached House	Servants Quarters	Other	Total	Total
Total	**25.6**	**26.3**	**24.2**	**11.3**	**6.3**	**4.2**	**1.1**	**1.1**	**100**	**3,861,557**
Rural	41.8	34.9	14.1	1.9	4.6	1.2	0.5	1	100	2,278,255
Urban	2.2	13.8	38.7	24.8	8.8	8.5	1.9	1.3	100	1,583,301
Stratum										
Small Scale	43	36.2	13	1.2	4.7	0.8	0.3	0.9	100	1,726,146
Medium Scale	29.8	41.4	18.5	1.7	5.6	1.2	0.5	1.2	100	190,671
Large Scale	36.8	33.9	14.2	1.1	8.1	3.3	0	2.5	100	15,154
Non-Agric	42.5	24.8	17.4	5.9	3.9	2.8	1.5	1.2	100	346,285
Low Cost	2.6	15.1	36	25.7	9.5	8.3	1.7	1.1	100	1,289,650
Medium Cost	0.4	7.8	50.8	19.5	6.5	10.2	2.8	2	100	166,174
High Cost	1.3	9.3	49.9	22.7	4	8.4	3	1.4	100	127,478
Province										
Central	28.6	30.4	20.9	5.2	12.2	1.8	0.3	0.6	100	434,850
Copperbelt	6	15.1	46.5	10.7	5.5	13.1	1.9	1.4	100	532,323
Eastern	30.5	41.7	18.2	2.7	4.3	2.4	0.2	0.1	100	527,710
Luapula	45.9	22.8	20.6	2.1	3.1	3.6	1.2	0.7	100	295,761
Lusaka	3.2	9.3	26.8	40.6	10.6	5.7	1.9	1.9	100	628,772
Muchinga	52.3	23.6	16	3.4	3.3	0.4	0.8	0.1	100	181,762
Northern	50.8	28.4	11.3	5.3	1.9	1.1	0.8	0.4	100	313,883
North Western	12.7	28.2	36.8	10.1	8	2.5	1.7	0.1	100	226,853
Southern	20.8	36.9	23.6	6.4	5.8	2.4	0.8	3.3	100	461,927
Western	52.1	34.8	5.5	2.8	2.6	1	0.6	0.7	100	257,716

14.2.2. Tenancy Status of Housing Unit

Table 14.2 shows the percentage distribution of households by tenancy status, rural/urban, stratum and province in 2022. Data on tenancy status was collected by asking the household head, the basis on which the household occupied the housing unit they lived in.

Owner occupied housing units refers to units occupied by owners of the house. Housing units could be rented from local government, central government, parastatals, private company or individual(s).

At national level, the results show that 72.0 percent of the households occupied their own housing units while 21.0 percent rented from private landlords, 3.5 percent occupied other free housing and about 2.1 percent occupied houses owned and provided for free by employer.

Analysed by rural/urban, results show 89.7 percent of the households in rural areas occupied their own housing units while 46.6 and 45.3 percent of the households in urban areas occupied their own housing units and rented the housing units they occupied from private persons (landlords), respectively, reflecting the largest and second largest proportions.

Analysing household tenancy status by province, overall results show that, except for Lusaka Province, more than half the proportion of households in each province occupied their own housing units. Further, 2.5 and 1.6 percent of the households on the Copperbelt and Luapula provinces rented from central government representing the two largest proportions.

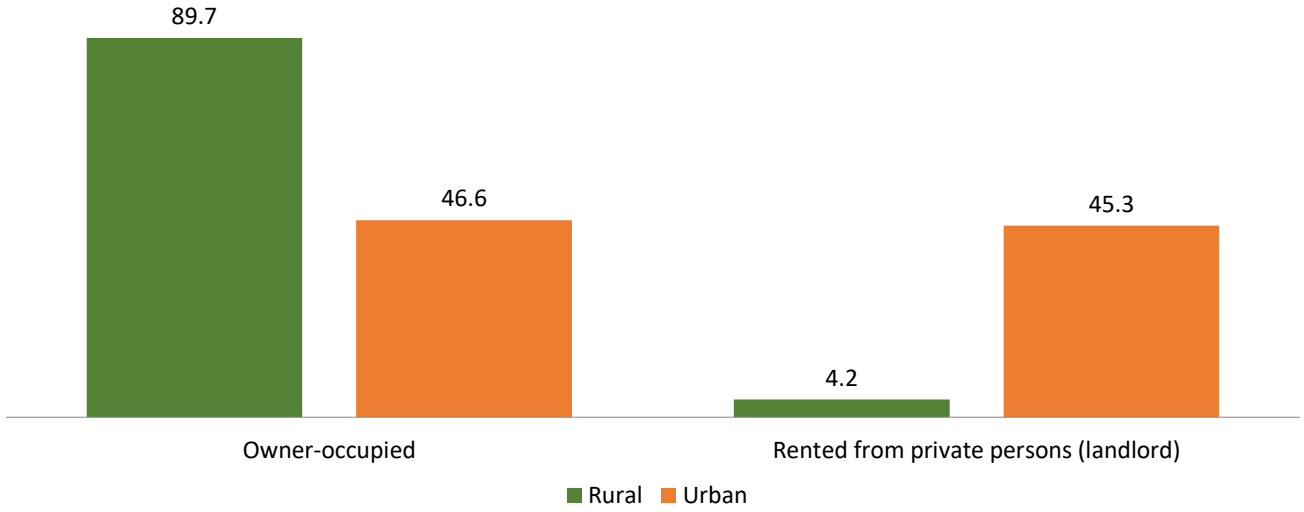
Notably, the proportion of households that are renting from private landlords in North-western Province at 21.7 percent has continued to grow following closely what is obtaining in Lusaka (52.1%) and Copperbelt (30.6%) provinces.

Table 14.2: Percentage Distribution of Households by Tenancy Status, Rural/Urban, Stratum and Province, Zambia 2022

	Owner-occupied	Rented from local Government (District council)	Rented from Central Government	Rented from Private Company	Rented from Parastatal (e.g. ZSIC, NAPSA, NHA, ZIMCO, etc.)	Rented from private persons (landlord)	House owned and provided free by employer	Other free housing	Total
Total	**72**	**0.3**	**0.7**	**0.2**	**0**	**21**	**2.1**	**3.5**	**3,861,557**
Rural	89.7	0.2	0.4	0.1	0	4.2	2.3	3.1	2,278,255
Urban	46.6	0.5	1.1	0.5	0.1	45.3	1.8	4.1	1,583,301
Stratum									
Small Scale	93.3	0.1	0.3	0	0	2.6	1.4	2.2	1,726,146
Medium Scale	93.3	0.3	1	0.3	0.1	1.2	2.3	1.6	190,671
Large Scale	92.6	0	0	0	0	2.4	2	3	15,154
Non-Agric	69.6	0.3	0.6	0.3	0	13.8	6.8	8.5	346,285
Low Cost	48.4	0.2	0.2	0.3	0	45.7	0.9	4.3	1,289,650
Medium Cost	41.6	0.9	1.4	1.2	0.6	47.4	3.5	3.5	166,174
High Cost	35	3.4	9.8	1.4	0	38.6	9.4	2.4	127,478

	Owner-occupied	Rented from local Government (District council)	Rented from Central Government	Rented from Private Company	Rented from Parastatal (e.g. ZSIC, NAPSA, NHA, ZIMCO, etc.)	Rented from private persons (landlord)	House owned and provided free by employer	Other free housing	Total
Province									
Central	79	0	0	0.2	0	13.6	2.4	4.7	434,850
Copperbelt	59.1	0.9	2.5	0	0	30.6	3.3	3.5	532,323
Eastern	88.9	0.2	0.2	0.2	0	6.8	0.9	2.7	527,710
Luapula	77.9	0.4	1.6	0.1	0	15.8	1.1	3.1	295,761
Lusaka	40.3	0.5	0.1	0.2	0	52.1	2.1	4.8	628,772
Muchinga	88.3	0	0	0.1	0	8.8	1	1.7	181,762
Northern	82.4	0.2	0.3	0.3	0	11.9	1	3.9	313,883
North Western	71.4	0.6	0.4	0.9	0	21.7	1	4	226,853
Southern	78.2	0	0.3	0.5	0.3	12.9	4.5	3.3	461,927
Western	88.4	0.1	0.9	0	0	7	1.9	1.7	257,716

Figure 14.1: Percentage Distribution of Households by Tenancy Status by Rural/urban, Zambia 2022



14.3. Household Amenities

This section discusses household access to various housing amenities including sources of water supply, lighting, cooking energy and energy utilisation. The section also looks at issues of sanitation, hygiene and garbage disposal methods used by the households.

14.3.1. Main Water Source

Water is an essential component of life that is key for balanced human health. Without water it is difficult to maintain acceptable hygienic standards, plant and animal life, engage in agricultural activities, etc. Households with access to the following water sources were considered to have access to safe water: Own tap, public tap, other tap, borehole, protected well, protected spring, water kiosk, bought from other vendor and bottled water.

Table 14.3 shows the percentage distribution of households by main water source disaggregated by rural/urban, stratum and province in 2022. At national level, 74.9 percent of households had access to safe water supply.

Analysis by rural/urban, results show that 63.0 percent of households in rural areas had access to safe water compared to 91.9 percent in urban areas. Further analysed by stratum, results show that households belonging to rural strata i.e. Small, Medium, Large and Non-agricultural had lower proportions with access to safe water.

At provincial level, Lusaka Province had the highest proportion of households with access to safe water at about 96.1 percent while Northern Province had the smallest proportion of households with access to safe water at 39.9 percent.

Table 14.3: Percentage Distribution of Households by Main Water Source by Rural/Urban, Stratum, Province, Zambia 2022

Rural/Urban, Stratum, Province,	Protect-ed Well	Bore-hole	Pro-tected Spring	Public Tap	Own Tap	Other Tap (Eg From Nearby Build-ing)	Water Kiosk	Bought From Other Vendor	Bottled Water	Total Safe	Directly From Riv-er/ Lake/ Stream/ Dam	Unpro-tected Well	Unpro-tected Spring	Other	Total Unsafe	Total	Total Number Of Households
Zambia	**15.2**	**28.7**	**0.3**	**6.8**	**17.6**	**4.6**	**1.6**	**0.1**	**0**	**74.9**	**9.5**	**14.1**	**1.3**	**0.2**	**25.1**	**100**	**3,861,557**
Rural	13.9	42.5	0.5	3.2	1.9	1	0.1	0	0	63	15.1	19.5	2.1	0.2	37	100	2,278,255
Urban	17.2	8.8	0.1	12	40.2	9.8	3.6	0.2	0	91.9	1.4	6.3	0.1	0.3	8.1	100	1,583,301
Stratum																	
Small Scale	14.1	43.4	0.5	2.7	1.3	0.8	0.1	0	0.1	62.9	14.5	20.1	2.3	0.3	37.1	100	1,726,146
Medium Scale	13.1	41	0.1	1.6	2.2	0.3	0.4	0	0	58.6	17	21.7	2.5	0.2	41.4	100	190,671
Large Scale	20.9	39.9	0	1.9	0.8	0.2	0	0.9	0	64.6	20.8	12.2	1	1.4	35.4	100	15,154
Non-Agric	13.1	38.5	0.4	6.5	4.8	2.4	0.2	0	0	66	17.1	15.8	1	0.1	34	100	346,285
Low Cost	19.6	9.7	0.1	12.8	33	11.1	4.2	0.2	0	90.8	1.5	7.3	0.1	0.3	9.2	100	1,289,650
Medium Cost	10.6	6	0	7.2	67.8	4.7	0	0	0	96.3	0.6	2.9	0.2	0	3.7	100	166,174
High Cost	0.6	4.1	0	9.6	76.5	3.6	2.3	0.7	0.2	97.6	1.6	0.5	0.2	0	2.4	100	127,478
Province																	
Central	25.8	27.6	0	4.6	9.6	0.8	1	0	0	69.4	7	22.2	1.1	0.3	30.6	100	434,850
Copperbelt	35.2	7.6	0.2	6.4	33.8	3	0.4	0	0.1	86.8	5.6	7.2	0.2	0.2	13.2	100	532,323
Eastern	8.1	69.5	0.6	1.5	6.1	0.8	1.5	0	0	88.1	2.4	8	1.5	0	11.9	100	527,710
Luapula	24.4	22.1	1.7	3.4	5.5	1.7	0	0	0	58.7	15.7	23.9	1.7	0	41.3	100	295,761
Lusaka	2.4	12.1	0	20.1	37.8	17.9	5.6	0.2	0.1	96.1	1.9	1.9	0.2	0	3.9	100	628,772
Muchinga	32.5	16.2	0.7	0.8	3.2	0.6	0.6	0.1	0.4	55.1	21.7	20.2	2.9	0.1	44.9	100	181,762
Northern	10.5	15.5	0	6.1	5.9	1.6	0.2	0	0	39.9	32.2	26.1	1.9	0	60.1	100	313,883
North Western	15.7	30.2	0.1	3.2	19.2	2	0.8	0.1	0	71.4	7.2	18.5	0.6	2.2	28.6	100	226,853
Southern	3.6	42.1	0	5	18.7	3.4	0.4	0.2	0	73.6	11.9	12.1	1.9	0.5	26.4	100	461,927
Western	5.7	37.8	0.5	4.9	6.3	3.7	2.1	0.1	0	61.1	9	26.7	3.2	0	38.9	100	257,716

14.3.2. Sources of Drinking Water

Sources of drinking water can also be defined as Safe or Unsafe, following the definition used in section 14.3.1 above. However, the WHO/UNICEF Joint Monitoring Programme (JMP) has established a standard set of drinking-water categories that are used for monitoring purposes. An "improved" drinking water source is one that, by the nature of its construction and when properly used, adequately protects the source from outside contamination, particularly faecal matter.

Table 14.4 lists improved sources of drinking water.

Table 14.4 Improved Sources of Drinking Water, Zambia 2022

Improved sources of drinking water
• Piped water into dwelling • Piped water to yard/plot • Public tap or standpipe • Tube well or borehole • Protected dug well • Protected spring • Rainwater • Bottled water

Table 14.5 shows the percentage distribution of households by main source of drinking water disaggregated by rural/urban, stratum and province in 2022. At national level, 75.7 percent of the households had access to improved sources of drinking water.

Further, 92.7 percent of urban households had access to improved sources of drinking water relative to 63.9 percent of the households in rural areas.

Analysed by province, except for Muchinga and Northern provinces, a minimum of 60 percent of the households in each province had access to an improved source of drinking water.

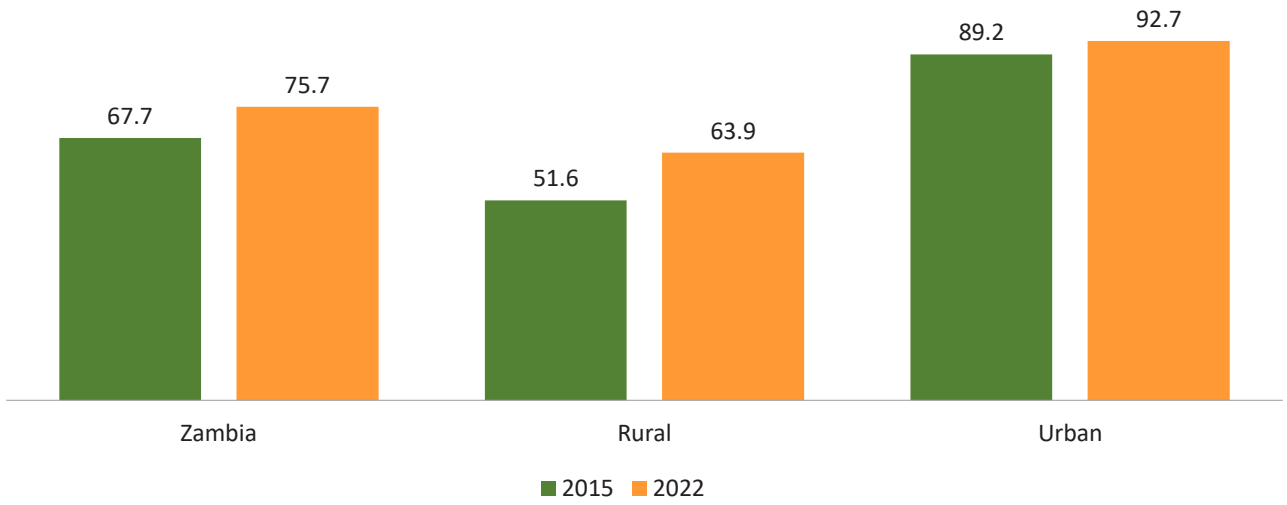
However, Lusaka Province at 96.2 percent had the highest proportion of households with access to improved sources of drinking water while Northern Province had the lowest proportion at 40.6 percent.

Table 14.5: Percentage Distribution of Households by Main Source of Drinking Water, Rural/Urban, Stratum and Province, Zambia 2022

Source of Drinking Water, Rural/ Urban, Stratum and Province	Rain Water	Pro-tected Well	Bore-hole	Pro-tected Spring	Public Tap	Own Tap	Other Tap From Nearby Build-ing	Water Kiosk	Bought From Other Vendor	Bottled Water	Total Im-proved Water	Directly From River/ Lake/ Stream/ Dam	Unpro-tected Well	Unpro-tected Spring	Other	Total Unsafe	Total	Total
Zambia	**0**	**14.6**	**29.6**	**0.4**	**6.9**	**17.3**	**4.9**	**1.6**	**0.1**	**0.3**	**75.7**	**9.3**	**13.5**	**1.3**	**0.2**	**24.3**	**100**	**3,861,557**
Rural	0	13.8	43.6	0.4	2.9	1.9	1	0.2	0	0.1	63.9	14.9	18.9	2.1	0.2	36.1	100	2,278,255
Urban	0	15.7	9.5	0.3	12.6	39.5	10.4	3.7	0.2	0.7	92.7	1.2	5.8	0.1	0.2	7.3	100	1,583,301
Stratum																		
Small Scale	0	13.7	44.8	0.4	2.6	1.2	0.8	0.1	0	0	63.7	14.3	19.4	2.3	0.3	36.3	100	1,726,146
Medium Scale	0.2	13.4	41.5	0.1	1.4	2.2	0.3	0.5	0	0.1	59.6	16.9	21	2.4	0.1	40.4	100	190,671
Large Scale	0	22.3	40.7	0	1.9	0.8	0.5	0	0	0.2	66.5	22.3	7.9	1.9	1.4	33.5	100	15,154
Non-Agric	0	14.1	38.9	0.4	5.7	4.9	2.4	0.4	0	0.2	67	16.3	15.5	1.1	0.1	33	100	346,285
Low Cost	0	18.1	10.5	0.4	13.6	32.4	11.8	4.3	0.2	0.5	91.8	1.2	6.7	0.1	0.2	8.2	100	1,289,650
Medium Cost	0	8.1	6.2	0	7.2	68.2	5.2	0.2	0	1.1	96.2	0.6	3.3	0	0	3.8	100	166,174
High Cost	0	1	3.8	0	9.6	74.2	3.7	2.6	0.7	2	97.7	1.8	0	0.2	0.3	2.3	100	127,478
Province																		
Central	0.1	24.4	28.1	0	4.6	9.9	0.9	1.9	0	0.1	69.9	7	21.8	1.1	0.2	30.1	100	434,850
Copperbelt	0	33.4	8.6	0.5	6.9	33.2	3.1	0.3	0	0.2	86.1	5.6	8	0.1	0.2	13.9	100	532,323
Eastern	0	7.2	70.9	0.4	2.1	5.8	0.8	1.5	0	0	88.8	1.8	7.9	1.5	0	11.2	100	527,710
Luapula	0.2	25	24.4	1.6	3.4	5.5	1.7	0	0	0	61.9	15.2	21.5	1.4	0	38.1	100	295,761
Lusaka	0	1.9	12.2	0.3	19	36.8	18.8	5.4	0.4	1.3	96.2	2.1	1.6	0.2	0	3.8	100	628,772
Muchinga	0	32.7	15.9	0.6	0.9	3.1	0.6	0.6	0.1	0.8	55.2	21.6	20.5	2.6	0.1	44.8	100	181,762
Northern	0	9.7	16.2	0	6.4	6	2	0.3	0	0	40.6	32.5	25.5	1.3	0	59.4	100	313,883
North Western	0	14.4	31.7	0.5	4.4	18.7	2.4	0.8	0.3	0.2	73.3	6.8	16	1.9	1.9	26.7	100	226,853
Southern	0	3	44.2	0	5.2	18.9	3.9	0.4	0.1	0.1	75.8	10.8	10.9	2	0.5	24.2	100	461,927
Western	0	7.1	37.8	0.1	5.1	6.2	3.5	2.2	0.1	0.1	62.2	8.9	25.4	3.5	0	37.8	100	257,716

Figures 14.2 shows the percentage distribution of households with access to improved sources of drinking water by rural/urban in 2015 and 2022. Generally, results show that higher proportions of households in 2022 had access to improved sources of drinking water than households in 2015.

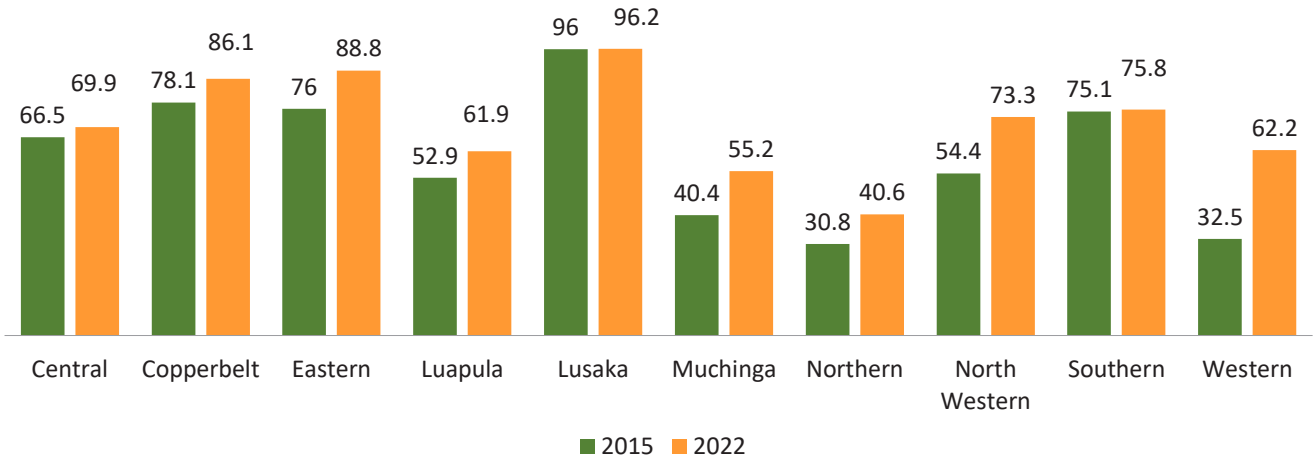
Figure 14.2: Percentage Distribution of Households Accessing Improved Source of Drinking Water by Rural/Urban, Zambia 2015 and 2022



Figures 14.3 shows the percentage distribution of households with access to improved sources of drinking water by province in 2015 and 2022.

Regardless of the province, overall results show that higher proportions of households in 2022 had access to improved sources of drinking water than households in 2015 with Lusaka Province accounting for the largest proportions both in 2015 and 2022 at 96 and 96.2 percent, respectively.

Figure 14.3: Percentage Distribution of Households Accessing Improved Source of Drinking Water by Province, Zambia 2015 and 2022



14.3.3. Treatment/Boiling of Drinking Water

In Zambia, water supplied through the public water supply systems is normally chlorinated and is assumed to be safe for drinking. However, health authorities encourage households to boil or treat their drinking water as an added precaution. Water treatment is encouraged especially for those households whose main sources of drinking water are considered unsafe.

Table 14.6 shows the percentage distribution of households who treated or boiled their drinking water disaggregated by rural/urban, stratum and province in 2022.

At national level, 21.7 percent of the households treated or boiled their drinking water while 78.3 percent did not treat or boil their water. Further analysed by rural/urban, 11.6 percent of the rural households compared to 36.1 percent in urban treated/boiled their drinking water.

At provincial level, Copperbelt and Lusaka provinces had the highest proportions of households who treated or boiled their drinking water at 46.3 and 33.8 percent, respectively, reflecting the largest and second largest proportions. Western Province had the smallest proportion of households who treated or boiled their drinking water at 5.2 percent.

Table 14.6: Percentage Distribution of Households who Treated/Boiled their Drinking Water by Rural/Urban, Stratum and Province, Zambia 2022

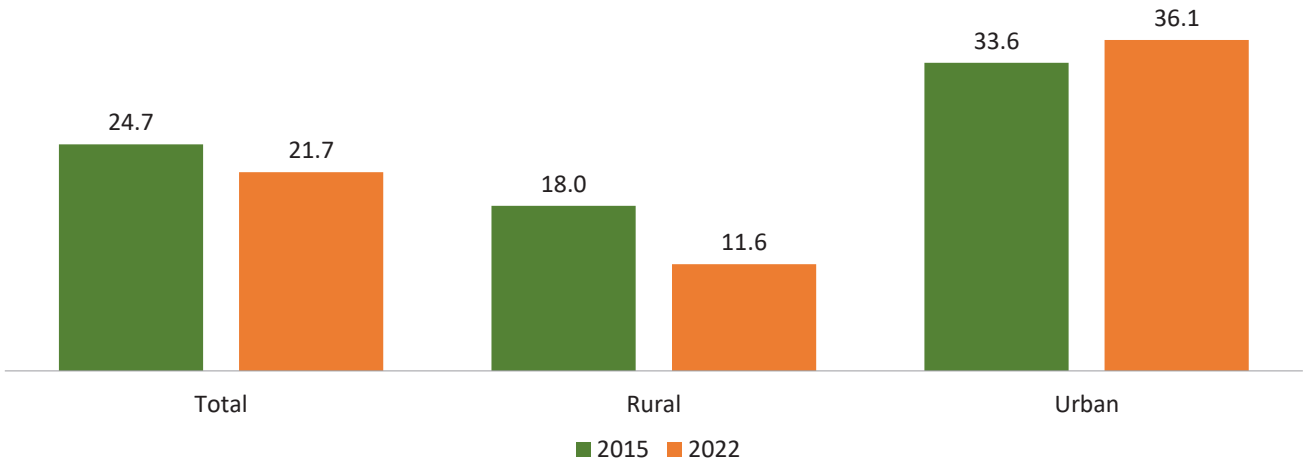
Rural/Urban, Stratum and Province	Proportion that Treated/Boiled drinking water	Proportion that did not Treat/Boil drinking water	Total	Total number of households
Total	**21.7**	**78.3**	**100**	**3,861,557**
Rural	11.6	88.4	100	2,278,255
Urban	36.1	63.9	100	1,583,301
Stratum				
Small Scale	10.9	89.1	100	1,726,146
Medium Scale	13.1	86.9	100	190,671
Large Scale	26.9	73.1	100	15,154
Non-Agric	13.9	86.1	100	346,285
Low Cost	35.4	64.6	100	1,289,650
Medium Cost	37.7	62.3	100	166,174
High Cost	41.4	58.6	100	127,478
Province				
Central	18.6	81.4	100	434,850
Copperbelt	46.3	53.7	100	532,323
Eastern	6.7	93.3	100	527,710
Luapula	17.2	82.8	100	295,761
Lusaka	33.8	66.2	100	628,772
Muchinga	12.4	87.6	100	181,762
Northern	20.8	79.2	100	313,883
North Western	21.8	78.2	100	226,853
Southern	12.8	87.2	100	461,927
Western	5.2	94.8	100	257,716

Figures 14.4 and 14.5 shows the of proportion of households who treated or boiled their drinking by rural/urban and province in 2022.

At national level, there was a 3 percentage-point decrease in the proportion of households who treated or boiled their drinking water from 24.7 percent in 2015 to 21.7 percent in 2022. Similarly, there was a decline in the percentage share of households who treated or boiled their drinking water among rural households from 18.0 percent in 2015 to 11.6 percent in 2022.

However, there was an increase in the proportion of households in urban areas who treated or boiled their drinking water from 33.6 percent in 2015 to 36.1 percent in 2022.

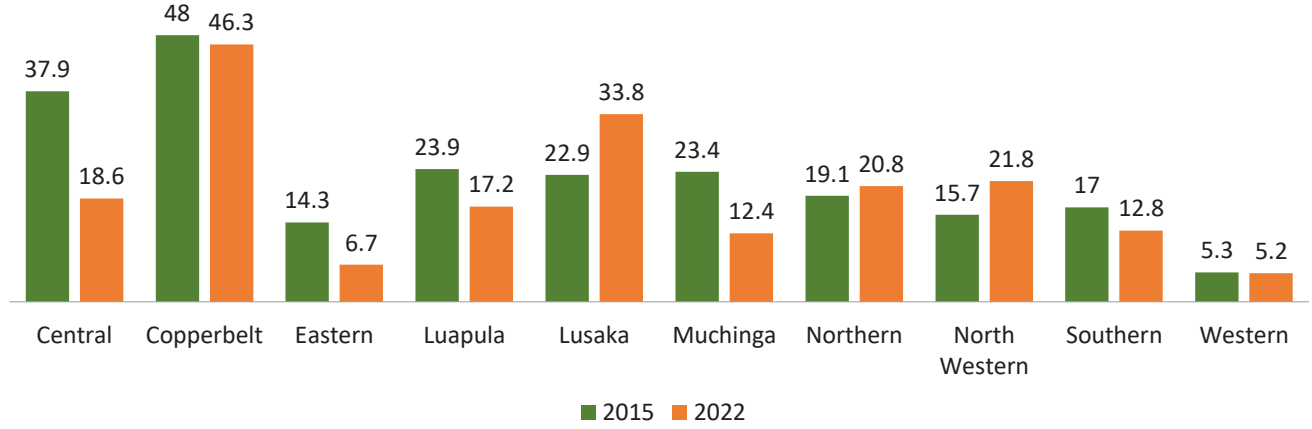
Figure 14.4: Proportion of Households who treated/ Boiled Drinking Water by Rural/Urban, Zambia 2015 and 2022



Figures 14.5 shows the of proportion of households who treated or boiled their drinking by Province in 2015 and 2022.

Except for Lusaka (2015: 22.9% against 33.8% : 2022), Northern(2015: 19.1% against 20.8% : 2022) and North-western (2015: 15.7% against 21.8% : 2022) provinces, the proportions of households that treated/boiled drinking water was higher in 2015 than in 2022 for the rest of the provinces.

Figure 14.5: Percentage Share of Households who Treated/ Boiled Drinking Water by Province, Zambia 2015 and 2022



14.3.4. Connection to Electricity

The survey collected data on two types of connections to electricity i.e. grid or non-grid. Table 14.7 show the percentage distribution of households connected to electricity by type disaggregated by rural/ urban, stratum and province in 2022.

At national level, 33.9 percent of the households had connection to electricity through the grid while 19 percent were connected through non-grid solutions such as solar home systems, solar lanterns, electric generator, rechargeable batteries, etc. Thus, on aggregate, 52.9 percent of the households were connected to an electricity source. Notably, 47.2 percent of the households in Zambia were not connected to any source of electricity.

Analysed by rural/urban, results show that 33.8 percent of the households in rural areas were connected to an electricity source. Further, of the households connected to an electricity source in rural areas, 5.6 percent were connected through the grid.

On the other hand, 80.2 percent of the households in urban areas were connected to an electricity source. Further, of the 80.2 percent households connected to an electricity source in urban areas, 74.5 percent were connected through the grid.

Analysed by stratum, among the rural strata i.e. Small scale, Medium scale, Large scale and Non-agriculture, the largest proportion of households connected to an electricity source were from the Large scale stratum at 50.2 percent followed by those from Medium scale at 48.1percent. Households from Small scale stratum accounted for the smallest proportion connected to an electricity source at 31.5 percent. However, among urban strata i.e. Low cost, Medium cost and High cost housing areas, a minimum of 77 percent of the households were connected to an electricity source.

By province, Lusaka and Copperbelt provinces had the largest and second largest proportions of the households connected to an electricity source at 83.8 and 78.4 percent, respectively. Further, Central and North-western provinces accounted for the third and fourth largest proportions of households connected to an electricity source at 60.9 and 51.5 percent, respectively.

Notably, Luapula (32.4%), Eastern (32.2%) and Western (30.1%) provinces were among the provinces with least proportions of households connected to an electricity source.

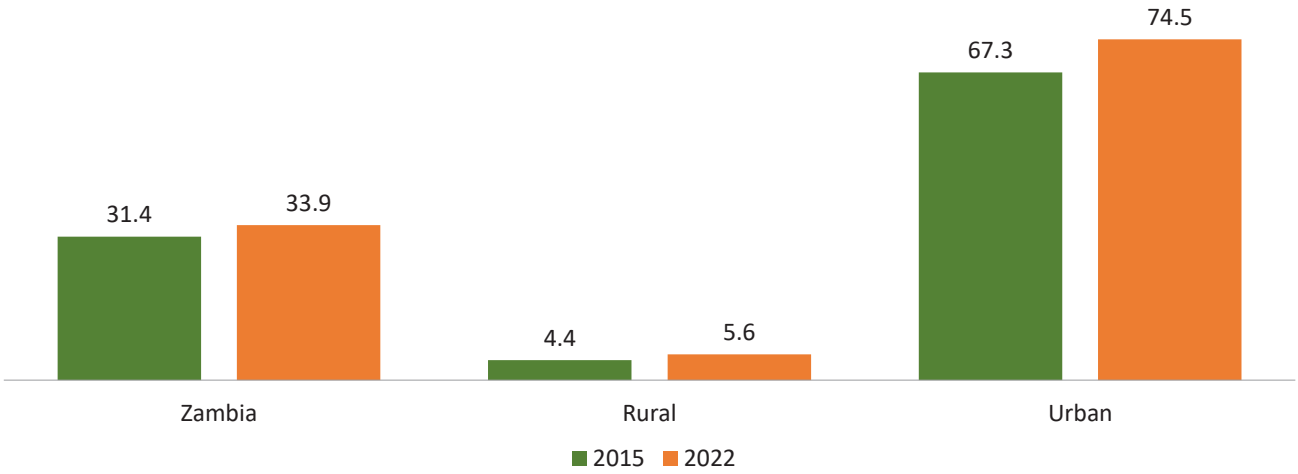
Table 14.7: Percentage Distribution of Households with Electricity Connection by Type, Rural/Urban, Stratum and Province, Zambia 2022

	Grid Connection	Non-Grid Connection	Connected to an electricity source	No Connection	Total number of households
Total	**33.9**	**19**	**52.9**	**47.2**	**3,861,557**
Rural	5.6	28.2	33.8	66.2	2,278,255
Urban	74.5	5.7	80.2	19.7	1,583,301
Stratum					
Small Scale	3.4	28.1	31.5	68.6	1,726,146
Medium Scale	5.4	42.7	48.1	52	190,671
Large Scale	8.8	41.4	50.2	49.7	15,154
Non-Agric	16.8	20.1	36.9	63.1	346,285
Low Cost	70.3	6.7	77	23	1,289,650
Medium Cost	91.6	2	93.6	6.4	166,174
High cost	94.8	1	95.8	4.2	127,478
Province					
Central	22.6	38.3	60.9	39.1	434,579
Copperbelt	64.3	14.1	78.4	21.7	532,594
Eastern	10.3	21.9	32.2	67.7	527,710
Luapula	14.2	18.2	32.4	67.7	295,761
Lusaka	78.3	5.5	83.8	16.2	628,772
Muchinga	12.1	21.2	33.3	66.6	181,762
Northern	11.7	26.2	37.9	62.1	313,883
North Western	36.9	14.6	51.5	48.5	226,853
Southern	23.2	18.3	41.5	58.4	461,927
Western	11.2	18.9	30.1	69.9	257,716

Figures 14.6 show the percentage distribution of households with grid connection by rural/urban in 2015 and 2022. Overall, results show that the proportion of households with grid connection has increased by 2.5 percentage-points to 33.9 percent in 2022 from 31.4 percent in 2015.

Further, the proportion of households with grid connection in rural areas has increased slightly from 4.4 percent in 2015 to 5.6 percent in 2022. Similarly, the proportion of households with grid connection in urban areas has increased by 7.2 percentage-points from 67.3 percent in 2015 to 74.5 percent in 2022.

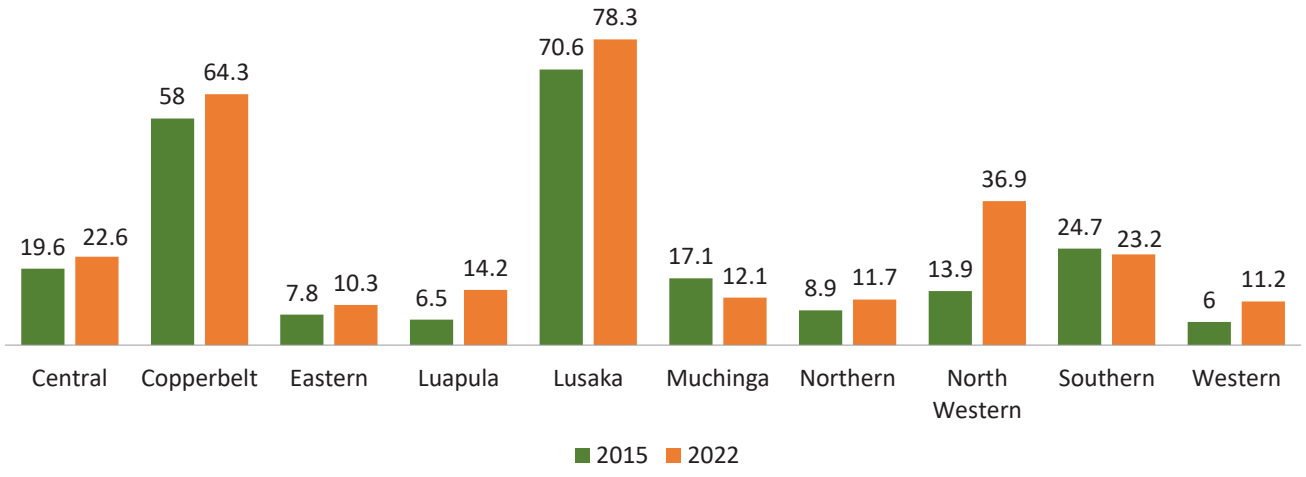
Figure 14.6: Percentage Distribution of Households with Grid Connection by Rural/Urban, Zambia 2015 and 2022



Figures 14.7 show the percentage distribution of households with grid connection by province in 2015 and 2022.

Overall, except for Muchinga Province (i.e. 17.1% [2015] against 12.1% [2022], higher proportions of households had grid connection in the remaining provinces in 2022 than was the case in 2015 with Lusaka (70.6% [2015] against 78.3% [2022]); Copperbelt (58% [2015] against 64.3% [2022]) and North-western (13.9% [2015] against 36.9% [2022]) provinces recording the largest proportions of households with grid connection, respectively.

Figure 14.7: Percentage Distribution of Households with Grid Connection by Province, Zambia 2015 and 2022



14.3.5 Sources of Lighting Energy

Data relating to the main type of energy used for lighting by households was also collected in the 2022 LCMS survey.

Table 14.8 shows the percentage distribution of households by main type of energy used for lighting disaggregated by rural/urban, stratum and province in 2022. At national level, 33.9 percent of households used grid electricity as a main source of energy for lighting followed by those who used a torch at 31.1 percent while 7.3 percent of the households used a solar lantern for lighting.

Analysis by rural/urban shows that the most common source of energy used for lighting in rural areas was a torch at 45.7 percent while the most common source of energy used for lighting in urban areas was grid connection at 74.4 percent.

Analysed by province, except for households in Lusaka (77.6%), Copperbelt (63.7%) and North-western (35.9%) provinces who used grid electricity as a source of energy for lighting, the largest proportion of households in each of the remaining 7 provinces used a torch as source of energy for lighting with Western and Eastern provinces accounting for the largest and second largest proportions at 51 and 48.4 percent, respectively.

Further, Southern and Central provinces were two provinces with the largest and second largest proportions of households that used solar lighting systems at 17.8 and 15.7 percent, respectively while 17.5 and 10.8 percent of the households in Muchinga and Copperbelt provinces, respectively, used a candle for lighting. Furthermore, Eastern (12.1%) and Central (10%) provinces had the largest and second largest proportions of households that used solar panels, respectively.

Notably, 4.2 percent of the households Luapula and Northern provinces used open firewood as a source of energy for lighting and a minimum of 10.3 percent of the households in Luapula, Muchinga and Western provinces did not report using any energy system for lighting.

Table 14.8: Percentage Distribution of Households by Main Type of Energy Used for Lighting by Rural/Urban, Stratum and Province, Zambia 2022

Rural/Urban, Stratum and Province	Kero-sine/ Paraffin	Electric-ity	Solar Panel	Candle	Diesel	Petrol Genset	Open Fire/ Wood	Torch	Bio Fuel	Solar Home System	Solar Lantern/ Lighting System	Battery	None	Other	Total
Total	**0.3**	**33.9**	**6.5**	**6.8**	**0**	**0**	**1.7**	**31.1**	**0**	**2.9**	**7.3**	**3**	**5**	**1.4**	**3,861,557**
Rural	0.3	5.7	9.8	5.7	0	0.1	2.9	45.7	0.1	4.5	11.3	4.1	7.8	2.2	2,278,255
Urban	0.3	74.4	1.8	8.3	0.1	0	0.1	10.1	0	0.6	1.7	1.4	0.9	0.2	1,583,301
Small Scale	0.3	3.4	9.6	5.6	0	0	2.7	48	0.1	4.4	11.6	4.5	7.4	2.4	1,726,146
Medium Scale	0	5.5	19.1	3.9	0	0	2.3	35	0	7.8	15.3	4.4	5.9	0.8	190,671
Large Scale	0	9.1	21	14.3	0	2.4	1.7	20.5	0	9.3	12.4	4.8	4.5	0	15,154
Non-Agric	0.1	17.2	5.2	7	0.1	0.2	4	41.1	0	2.6	7.5	2.4	10.5	2.1	346,285
Low Cost	0.3	70.2	2.1	9.8	0.1	0	0.1	11.7	0	0.7	2	1.5	1.1	0.2	1,289,650
Medium Cost	0	92	0.9	1.2	0	0	0	4.6	0	0.2	0.2	0.3	0.1	0.4	166,174
High Cost	0.1	93.9	0.6	2.1	0	0	0	1.5	0	0.2	0.3	1	0.4	0	127,478
Central	0.8	22.4	10	6.5	0	0.1	0.8	32.9	0	4.6	15.7	2.2	3.2	0.8	434,850
Copperbelt	0.2	63.7	3.2	10.8	0.1	0	0.6	11.4	0	2.5	2.5	3.2	1.3	0.4	532,323
Eastern	0	11.1	12.1	5.5	0.1	0	0.5	48.4	0	4.6	7.6	3.2	6.4	0.4	527,710
Luapula	0.1	14.1	6	6	0	0	4.2	45.4	0	3	3.6	5.4	10.3	1.9	295,761
Lusaka	0.1	77.6	1.9	5.1	0	0.1	0.3	11.1	0.2	0.8	1	0.9	0.8	0	628,772
Muchinga	1.8	12.2	9.3	17.5	0	0	6	30.4	0.3	1.8	5.3	3.4	10.5	1.5	181,762
Northern	0	11.9	8.5	6.7	0	0	4.2	34.7	0	3.3	8.8	7.9	6.8	7.2	313,883
North Western	0.3	35.9	4.8	8.8	0.3	0	1.2	31.7	0	2.5	8.2	1.9	3.6	0.7	226,853
Southern	0.1	24.7	5.4	3.4	0	0	0.1	37	0	3.4	17.8	2.3	5.2	0.7	461,927
Western	0	11.2	6.7	3.3	0	0	6	51	0	2.1	2.6	2	11.2	3.9	257,716

14.3.6 Sources of Cooking Energy

Table 14.9 shows the percentage distribution of households by main type of energy used for cooking by rural/urban, stratum and province in 2022. At national level, the largest proportion of households used firewood as the main source of energy for cooking at 51.4 percent followed by those who used charcoal at 39.2 percent and electricity at 8.5 percent, respectively.

In rural areas, 81.9 percent of the households used firewood as the main source of energy for cooking with the majority (79.5%) using collected firewood. Similar to the pattern at national level, the second largest proportion of households in rural areas used charcoal for cooking at 15.8 percent.

In urban areas, 73 percent of the households used charcoal as the main source of energy for cooking representing the largest proportion followed by households using electricity at 19.1 percent and households using firewood as the main source of energy for cooking at 7.5 percent.

Analysed by province, both Copperbelt and Lusaka provinces accounted for the largest and second largest proportions of households who used charcoal and electricity as the main sources of energy for cooking, respectively. Results show that 70.1 and 63.7 percent of the households on the Copperbelt and Lusaka Province, respectively, accounted for the largest and second largest proportions of households who used charcoal as the main source of energy for cooking. Similarly, the two provinces accounted for the largest and second largest proportions of households who used electricity as their main source of energy for cooking at 18.6 and 17.2 percent, respectively.

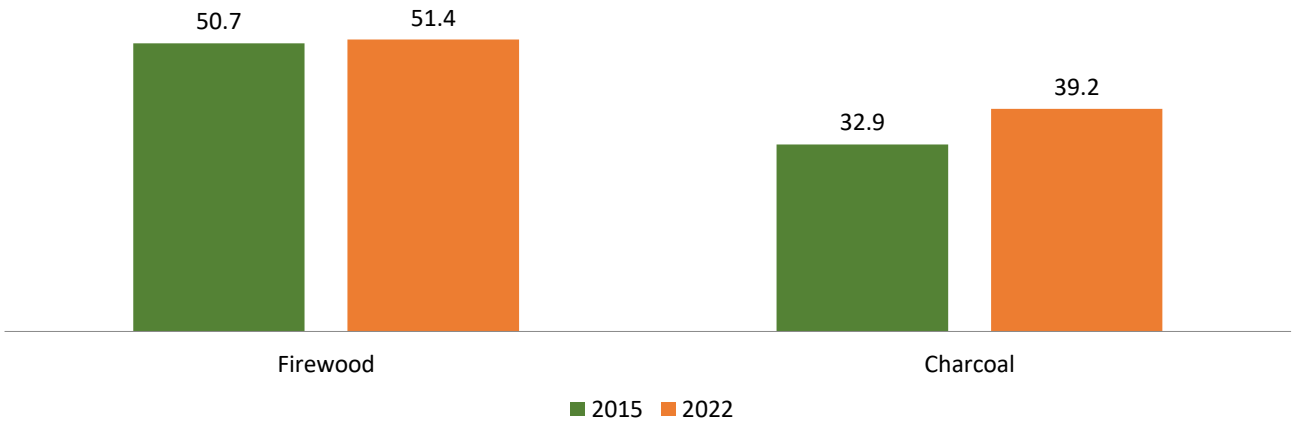
It is interesting to note that Luapula and North-western provinces were the two rural provinces with the highest and second highest percentage shares of households who used charcoal as a main source of energy for cooking at 49 and 41.4 percent, respectively.

Table 14.9: Percentage Distribution of Households by Main Type of Energy used for Cooking by Rural/Urban, Stratum and Province, Zambia 2022

	Collected Fire Wood	Purchased Fire-wood	Fire-wood	Char-coal Own Produced	Char-coal Purchased	Char-coal	Coal	Cow-dung	Liquified Petroleum Gas (Lpg)	Electricity	Solar	Crop/ Live-stock Residues	Bio Fuel	Gel Fuel	Wood Pellets/ Pellets	Other	Total	Total Number Of Households
Total	**49.3**	**2.1**	**51.4**	**3.4**	**35.8**	**39.2**	**0**	**0.1**	**0.1**	**8.5**	**0.2**	**0.1**	**0**	**0**	**0.1**	**0.4**	**100**	**3,861,557**
Rural	79.5	2.4	81.9	3.8	12	15.8	0	0.1	0.1	1.2	0.2	0.2	0	0	0.1	0.6	100	2,278,255
Urban	5.9	1.6	7.5	2.9	70.1	73.0	0	0.1	0.1	19.1	0.1	0	0	0	0.1	0.1	100	1,583,301
Stratum																		
Small Scale	83.2	1.9	85.1	3.6	9.6	13.2	0	0	0	0.7	0.2	0.1	0	0	0.1	0.5	100	1,726,146
Medium Scale	81	3	84.0	2.4	10.1	12.5	0	0.4	0.1	1.7	0.4	0.1	0	0.1	0.1	0.5	100	190,671
Large Scale	71.8	3.2	75.0	4.1	9.8	13.9	0	0	2	5.6	1.5	0.5	0	0	0.1	1.3	100	15,154
Non-Agric	60.3	4.4	64.7	5.4	24.7	30.1	0.1	0	0.2	3.1	0.3	0.6	0	0	0.2	0.6	100	346,285
Low Cost	7	1.7	8.7	3.1	74.4	77.5	0	0.1	0.1	13.3	0.1	0	0	0	0.1	0.1	100	1,289,650
Medium Cost	1.7	0.9	2.6	2	55.7	57.7	0	0	0	39.3	0	0	0	0	0	0.4	100	166,174
High Cost	0.3	1	1.3	2.1	45.1	47.2	0	0	0.1	50.8	0	0	0	0.3	0	0.3	100	127,478
Province																		
Central	65.4	1.5	66.9	3	21.4	24.4	0	0.1	0	8.6	0	0	0	0	0	0	100	434,850
Copperbelt	10.6	1.2	11.8	5.6	64.5	70.1	0	0	0.2	17.2	0	0.1	0	0.1	0.5	0.2	100	532,323
Eastern	76.7	4.1	80.8	1.8	14.4	16.2	0.1	0	0	2.5	0.3	0	0	0	0	0	100	527,710
Luapula	44.3	4.5	48.8	7.7	41.3	49.0	0	0	0	0.9	0.1	0	0	0	0	1.2	100	295,761
Lusaka	12.6	0.7	13.3	2.7	64.6	67.3	0	0.2	0.1	18.6	0	0	0	0	0	0.3	100	628,772
Muchinga	77.7	1.1	78.8	1.8	16.1	17.9	0	0	0	2.2	1.1	0	0	0	0	0	100	181,762
Northern	62	3	65.0	5.4	25.4	30.8	0.1	0.1	0	1.5	0.7	0.9	0	0	0	0.8	100	313,883
North Western	46.4	0.9	47.3	3.2	38.2	41.4	0	0	0	10.2	0	0	0	0	0.6	0.6	100	226,853
Southern	68.5	1.5	70.0	1.2	21.9	23.1	0	0	0.1	5.9	0.1	0.1	0	0	0.1	0.6	100	461,927
Western	73.9	2.4	76.3	2.6	17.2	19.8	0	0.2	0	2.9	0	0.2	0	0	0	0.5	100	257,716

Figure 14.9 shows the percentage distribution of households using firewood and charcoal as the main source of energy for cooking by rural/urban in 2015 and 2022. The proportion of households who used firewood as the main source of energy for cooking increased marginally by 0.7 percentage-points from 50.7 percent in 2015 to 51.4 percent in 2022 while the proportion using charcoal went up by 6.3 percentage-points from 32.9 percent in 2015 to 39.2 percent in 2022.

Figure 14.9: Percentage Distribution of Households using Firewood and Charcoal as Main Source of Energy for Cooking by Rural/Urban, Zambia 2015 and 2022



14.3.7. Toilet Facilities

The survey collected data on households' main toilet facility. The WHO/UNICEF Joint Monitoring Programme (JMP) has established a standard set of sanitation categories that are used for monitoring purposes. An "improved" sanitation facility is one that hygienically separates human excreta from human contact. The following are the improved sanitation facilities.

Improved sanitation (international)

- Flush/ pour flush to pit latrine
- Flush toilet
- Piped sewer system
- Pit latrine with slab or covered pit
- Ventilated improved pit latrine
- Septic tank
- Compositing toilet
- Aqua privy

Table 14.10 shows the percentage distribution of households by main type of toilet facility disaggregated by rural/urban, stratum and province in 2022. Overall results show that 41.7 percent of the households in Zambia had access to improved sanitation.

Analysed by province, Copperbelt (71.2%), Lusaka (65.5%) and Southern (41.6%) provinces had the largest, second and third largest proportions of households with access to improved sanitation, respectively. However, Muchinga and Western provinces had the least proportions of households with access to improved sanitation at 24.6 and 9.5 percent, respectively.

Table 14.10: Percentage Distribution of Households by Main Type of Toilet Facility, Rural/Urban, Stratum and Province, Zambia 2022

	Own flush toilet inside the house-hold	Own flush toilet outside the house-hold	Pour flush	Own pit latrine with slab	Aqua privy	Total im-proved sanita-tion	Own pit latrine without slab	Neigh-bours / another house-holds pit latrine with slab or plat-form	Com-munal pit latrine with slab	Com-munal pit latrine without slab	Neigh-bours pit latrine without slab or plat-form	Com-munal flush toilet	Bucket/ other contain-er	None	Other	Total unim-proved sanita-tion	Total	Total number of house-holds
Total	**10.2**	**4.8**	**2.2**	**24.4**	**0.1**	**41.7**	**37.6**	**2.5**	**4.8**	**4**	**2.6**	**0.1**	**0**	**6.7**	**0**	**58.3**	**100**	**3,861,557**
Rural	1.8	0.6	0.1	20.7	0	23.2	53.1	2.5	2.3	4.8	3.3	0	0	10.8	0	76.8	100	2,278,255
Urban	22.4	10.8	5.3	29.7	0.2	68.4	15.2	2.5	8.4	2.9	1.5	0.3	0.1	0.7	0	31.6	100	1,583,301
Stratum																		
Small Scale	0.8	0.3	0.1	19.1	0	20.3	55.7	2.6	1.8	5.2	3.2	0	0	11.2	0	79.7	100	1,726,146
Medium Scale	2.8	0.6	0	26.5	0	29.9	48.7	0.6	3.9	3.2	2.1	0	0	11.4	0.1	70	100	190,671
Large Scale	7.2	3.2	0	33.2	0	43.6	40	0.3	0.2	7.3	0	0	0	8.5	0	56.3	100	15,154
Non-Agric	5.7	1.8	0.3	24.8	0	32.6	43.3	3	3.9	3.7	4.8	0	0	8.7	0	67.4	100	346,285
Low Cost	15	10.4	5.6	32.9	0.2	64.1	17.4	2.8	9.4	3.3	1.8	0.3	0.1	0.8	0.1	36	100	1,289,650
Medium Cost	47.6	14.2	4.5	19.1	0	85.4	7.9	0.9	4.2	1.1	0	0	0	0.4	0	14.5	100	166,174
High Cost	65	9.8	3.6	11.4	0	89.8	3.3	1.5	4.1	0.7	0.5	0	0	0.1	0	10.2	100	127,478
Province																		
Central	9	1.8	0.2	23.7	0	34.7	53.9	0.6	3.3	3.2	1.2	0	0	3.1	0	65.3	100	434,850
Copperbelt	22.7	13.4	8	26.5	0.6	71.2	19.3	0.8	4.6	2.5	0.8	0.2	0.2	0.5	0	28.9	100	532,323
Eastern	1.6	1.1	0	28.3	0	31	38.8	5.7	2.5	2.8	6	0	0	13.1	0.1	69	100	527,710
Luapula	3.6	0.7	0.6	20.3	0	25.2	55.3	1.3	1.5	9.2	4.1	0	0	3.5	0	74.9	100	295,761
Lusaka	19.5	9.8	5.6	30.6	0	65.5	7.8	5.7	14.5	3.4	2.4	0.5	0	0.2	0	34.5	100	628,772
Muchinga	2.7	0.9	0	21	0	24.6	62.3	1.2	2	3.9	2.1	0	0	3.9	0	75.4	100	181,762
Northern	2.1	1.4	0.5	24.7	0	28.7	60.4	0.7	1.8	5.5	1.9	0	0.1	0.9	0	71.3	100	313,883
North Western	14.9	4.1	0.2	15.5	0	34.7	47.9	2.2	4.3	5	2.9	0	0	3	0	65.3	100	226,853
Southern	8.9	3.7	1	28	0	41.6	36.6	1.8	3.4	2.2	2.1	0	0	12.3	0	58.4	100	461,927
Western	2.6	1.2	0	5.7	0	9.5	45.2	0.9	1.3	7.2	1.9	0	0	33.9	0.2	90.6	100	257,716

Figure 14.10: Percentage Share of Households by Type of Sanitation Facility by Province, Zambia 2022

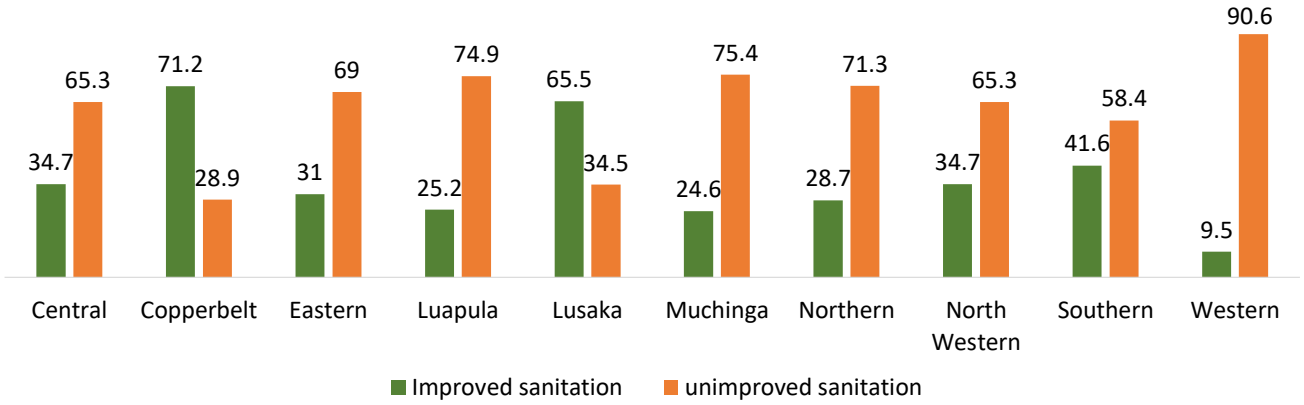
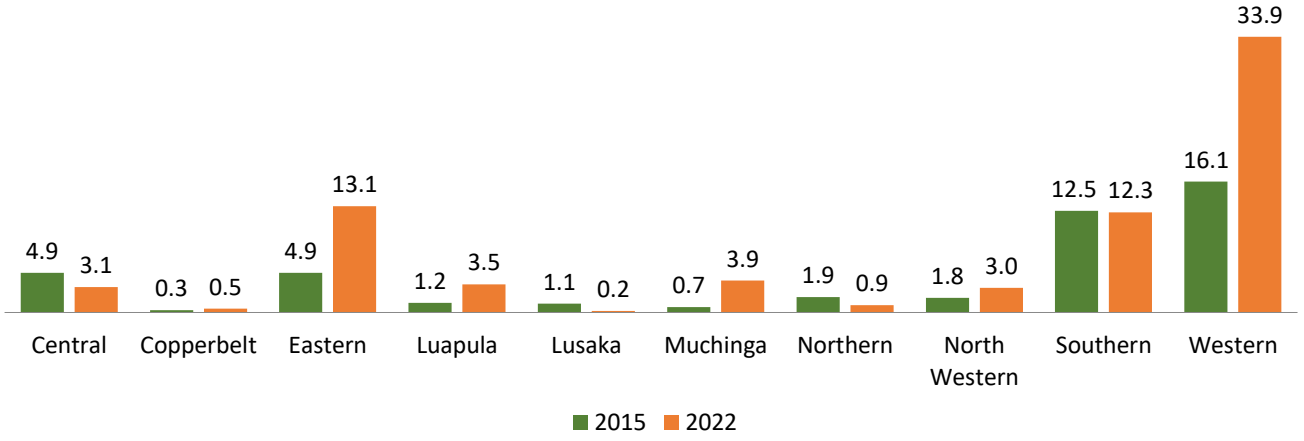


Figure 14.11 shows the percentage share of households with no toilet facility by province in 2015 and 2022. Results show that Western Province had the largest proportions of households without toilet facilty both in 2015 and 2022 at 16.1 and 33.9 percent, respectively. Copperbelt (0.3%) and Lusaka (0.2%) provinces had the smallest proportions of households without a toilet facility in 2015 and 2022.

Figure 14.11: Percentage Share of Households with no Toilet Facility by Province, Zambia 2022



14.3.8. Sewerage Facilities

During the Survey, households with flush toilets were further asked to indicate where sewer from their household was piped to. Table 14.11 and Figure 14.12 show the percentage distribution of households with flush toilets by type of connection to sewerage facility disaggregated by rural/urban in 2022.

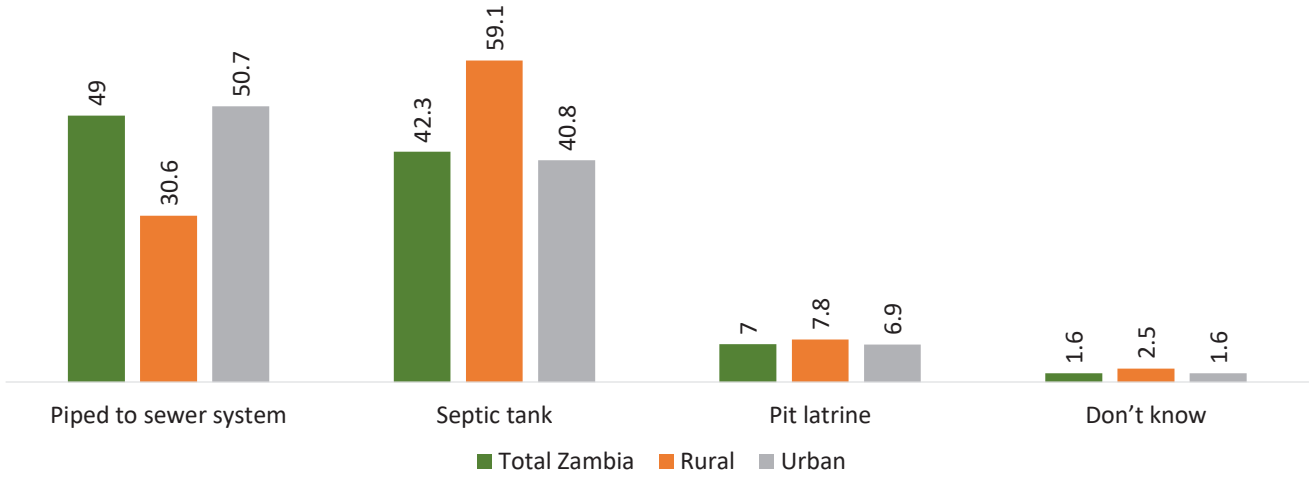
At national level, 49.0 percent of the households with flush toilets had their sewerage facility connected to a piped sewer system, 42.3 percent connected to a septic tank while 7.0 percent had their sewer connected to a pit latrine.

In rural areas, 59.1 percent of the households had their sewer connected to a septic tank representing the largest share while 50.7 percent of the households in urban had their sewer connected to a piped sewerage system.

Table 14.12: Percentage Distribution of Households with Flush Toilets by Type of Sewerage Facility, Rural/urban, Zambia 2022

	Piped sewer system	Septic tank	Pit latrine	Don't know	Total	Total Number of Households with own Flush Toilet
Total Zambia	**49**	**42.3**	**7**	**1.6**	**100**	**668,797**
Rural	30.6	59.1	7.8	2.5	100	55,958
Urban	50.7	40.8	6.9	1.6	100	612,840

Figure 14.12: Percentage Distribution of Households with Flush Toilets by Type of Connection to the Sewerage Facility, Rural/urban, Zambia 2022



14.3.9. Garbage Disposal

Table 14.13 shows the percentage distribution of households by main type of garbage disposal, residence, stratum and province. The most common method used for disposing garbage in Zambia was pitting at 55.7 percent, followed by those who dumped their garbage in undesignated places at 13.2 percent. Further, 10.3 percent of the households reported refuse being collected.

Analysed by rural/urban, 58.9 percent of the households in rural areas dispose their garbage in a pit while 17.4 percent dump in undesignated places and 13.5 percent burn the garbage. Further, 24.6 percent of the households in urban areas have their refuse collected and 7.1 percent dump in undesignated places.

At provincial level, except for households in Lusaka Province whose refuse is collected at 50.1 percent, the largest proportions of households in the remainder of the provinces throw their garbage in a pit with a minimum of 70.8 percent of the households in Northern, Luapula, North-western and Central provinces throwing their garbage in a pit.

Eastern, Southern and North-western provinces had the highest proportion of households dumping in undesignated places at 22.3; 20.9 and 16.4 percent, respectively.

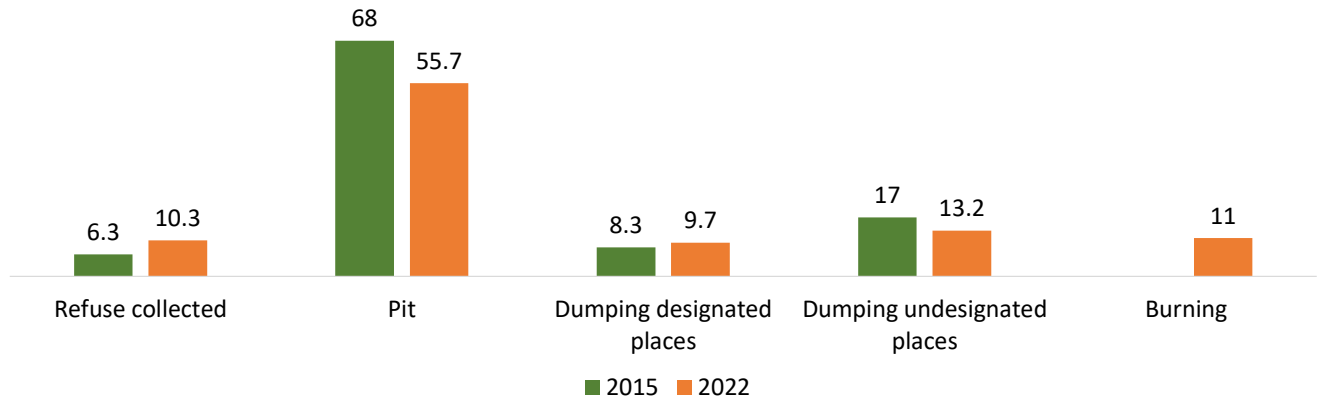
Table 14.13: Percentage Distribution of Households by Main Type of Garbage Disposal, Rural/Urban, Stratum and Province, Zambia 2022

Rural/Urban, Stratum and Province	Refuse Collected	Pit	Dumping In Designated Places	Dumping In Unde-signated Places	Burning	Other	Total	Total Households
Total Zambia	**10.3**	**55.7**	**9.7**	**13.2**	**11**	**0**	**100**	**3,861,557**
Residence								
Rural	0.4	58.9	9.7	17.4	13.5	0	100	2,278,255
Urban	24.6	51	9.7	7.1	7.5	0.1	100	1,583,301
Stratum								
Small Scale	0.2	58.6	9.7	17.9	13.6	0	100	1,726,146
Medium Scale	0.3	55.7	10.8	17	16.2	0	100	190,671
Large Scale	1.4	63.9	10.9	12.1	11.8	0	100	15,154
Non-Agric	1.3	62	9.2	15.8	11.7	0	100	346,285
Low Cost	23.9	50.1	10.3	7.9	7.7	0	100	1,289,650
Medium Cost	25.8	58.3	5.1	2.9	7.9	0	100	166,174
High Cost	30	50.8	9.3	4.5	4.7	0.6	100	127,478
Province								
Central	0.9	70.8	12	10.3	5.9	0	100	434,850
Copperbelt	9.9	64.4	10.5	4.4	10.7	0.1	100	532,323
Eastern	0.3	46.4	5.2	22.3	25.7	0	100	527,710
Luapula	0.1	79.7	4.2	10.2	5.7	0	100	295,761
Lusaka	50.1	18.2	10.2	11.6	9.7	0.1	100	628,772
Muchinga	0	67.1	9	11	12.9	0	100	181,762
Northern	0.1	82.5	5.6	5.6	6.2	0	100	313,883
North Western	2.3	71.1	4.1	16.4	6.1	0	100	226,853
Southern	4	47.3	16.2	20.9	11.6	0	100	461,927
Western	0.2	55.6	17.7	19	7.4	0	100	257,716

Figure 14.13 shows the percentage distribution of households by main method of garbage disposal in 2015 and 2022. The most common method of garbage disposal both in 2015 and 2022 was pitting at 55.7 and 68 percent, respectively. Refuse collection increased from 6.3 percent in 2015 to 10.3 percent of households in 2022.

Similarly, the proportion of households that dumped garbage in undesignated places went up from 13.2 percent in 2015 to 17 percent in 2022.

Figure 14.13: Percentage Distribution of Households Main type of Garbage Disposal, by Rural/Urban, Zambia 2015 and 2022



14.4. Access to Facilities

This section presents findings related to household access to various socio-economic facilities. Access is discussed in terms of usage and proximity of households to the nearest facility.

14.4.1. Use of Amenities

During the Survey, households were asked to indicate whether they knew the location of the nearest facility by type. Table 14.14 shows the proportion of households by knowledge of location of the nearest facility by rural/urban in 2022.

At national level, 79.1 percent of the households knew where the nearest food market was located representing the largest proportion followed 69.1 percent who indicated that they knew where the nearest health facility was located. Further, 2.4 percent of the households knew the location of the nearest internet café.

In rural areas, 71.1 percent of the households indicated knowing the location of a hammer mill reflecting the largest proportion while the largest proportion of households in urban areas indicated that they knew where the nearest food market was located at 93.7percent.

Table 14.14: Proportion of Households with Knowledge of nearest Facility by Rural/Urban, Zambia 2022

Knowledge of Nearest Facility	Rural	Urban	All Zambia	Total number of households who know of this facility
Food Market	68.9	93.7	79.1	3,054,535
Post Office/postal agency	7.0	20.2	12.4	478,943
Community School	12.2	22.3	16.3	630,648
Lower Basic school (1-4)	8.1	15.3	11.1	427,611
Middle Basic School (1-7)	30.2	27.3	29.0	1,119,369
Upper Basic School (1-9)	47.7	45.8	46.9	1,811,711
High School	5.8	19.1	11.3	434,638
Secondary School	31.2	52.4	39.9	1,540,382
Health facility (Health post/ center/ clinic/ hospital)	66.3	73.2	69.1	2,668,422
Hammer mill	71.1	48.5	61.8	2,387,250
Input market (for seeds, fertilizer, agricultural implements)	14.0	11.5	13.0	500,263
Police station/post	21.1	66.8	39.8	1,537,984
Bank	7.0	23.8	13.9	536,424
Public transport (road, or rail, or water transport)	27.1	58.4	39.9	1,541,212
Public phone	0.2	0.5	0.3	12,832
Internet cafe	0.6	5.0	2.4	92,525

Of the households who knew where the nearest identified facility was located, another question was asked to establish if that household used that facility. Table 14.15 shows the proportion of households by type of nearest facility used disaggregated by rural/urban in 2022. At national level, the most widely used facility was a health facility at 94.2 percent followed by a food market at 92.0 percent. The least used facility was post office at 13.5 percent.

Analysis by residence shows that the most widely used facility in rural areas was a hammer mill at 96.6 percent, followed by health facility at 95.4 percent. The least was post office at 10.6 percent. In urban areas, the most widely used facility was food market at 97.0 percent, followed by health facility at 92.7 percent. The least used facility in urban areas was public phone at 9.4 percent.

Table 14.15: Proportion of Households who use the nearest Facility by Rural/Urban, Zambia 2022

Health Facility	Rural	Urban	Total	Total Number of Households who used the Facility
Health facility (Health post/ center/ clinic/ hospital)	95.4	92.7	94.2	2,514,110
Food Market	87.4	97.0	92.0	2,811,220
Public transport (road, or rail, or water transport)	85.6	94.0	90.6	1,396,883
Hammer mill	96.6	66.7	87.0	2,075,780
Upper Basic School (1-9)	58.1	47.0	53.7	972,220
Middle Basic School (1-7)	60.0	42.7	53.4	597,367
Input market (for seeds, fertilizer, agricultural implements)	59.5	38.4	51.8	259,286
Lower Basic school (1-4)	59.8	36.6	46.6	199,470
Bank	26.4	49.4	42.6	228,458
Police station/post	30.8	43.6	39.6	609,174
Internet cafe	33.5	37.3	36.8	34,033
Secondary School	31.6	30.9	31.2	481,337
Community School	39.1	21.5	29.3	184,470
High School	31.3	24.2	26.3	114,495
Post Office/postal agency	10.6	20.5	17.2	82,343
Public phone	21.9	9.4	13.5	1,736

14.4.2. Proximity to Facilities

This section analyses proximity of households to the nearest facilities by type. Of the households that indicated they knew where the location of the nearest identified facility was, they were further asked how far their housing unit (homestead) was to that specific facility. Table 14.16 shows the percentage distribution of households by proximity to the nearest facility by type disaggregated by rural/urban in 2022.

In rural areas, 56.7 percent of the households indicated that a community school was less than 1km from their homestead representing the largest proportion. Further, 54.4 and 50 percent of the households indicated that a public transport facility and middle basic school were within less than 1km from their homestead, respectively. In urban areas, except for the internet cafe (26%), hammer mill (37.7%) and police station/post (39,1%), higher proportions of households indicated that the other remaining facilities were within less than 1km.

Further, within the distance of 2-5 km, a minimum of 40.9 percent of the households indicated that a hammer mill, input market (for seed, etc.,), police station/post and internet café were within 2-5 km distance from their residence.

Table 14.16: Percentage Distribution of Households by Proximity to Facilities, Zambia 2022

Nearest Distance	Less than 1 km	2 - 5 km	6 - 15 km	16+ km	Don't Know	Total House-holds	Less than 1 km	2 - 5 km	6 - 15 km	16+ km	Don't Know	Total House-holds	% of Users
Facility Type	Rural						Urban						
Food Market	31.7	33.6	15.4	9.8	9.4	1,570,432	70	19.1	1.8	1.6	7.6	1,484,102	79.1
Post Office	28.6	38.8	17.4	5.3	9.9	1,509,857	61.9	24.5	3.1	1.3	9.2	1,158,565	69.1
Community School	56.7	27.1	6.5	2.5	7.2	1,619,987	77.5	10.9	1.7	1.6	8.4	767,263	61.8
Lower Basic	47.3	35.9	6.9	2.3	7.7	1,086,381	68	19.9	1.3	1.6	9.2	725,330	46.9
Middle Basic (1-7)	50	23.4	14	5.2	7.4	617,025	82.8	8.8	0.5	0.9	7	924,187	39.9
Upper Basic Sch(1-9)	30.9	35.1	14.3	9.1	10.7	710,263	57.4	28.3	2.2	2.3	9.8	830,119	39.9
High School	19.9	24.7	21.4	23.6	10.3	479,721	60.1	27.1	2.4	2.1	8.3	1,058,263	39.8
Secondary School	45.6	35.1	7.4	2.8	9	687,740	65.5	21.1	0.8	1.9	10.7	431,630	29.0
Health facility.	36.4	44	10.1	2.5	7	277,152	68.6	16.9	1.0	1.5	12.1	353,495	16.3
Hammer mill	8.7	16.6	23.9	40.8	9.9	159,325	37.7	44.7	8.1	2.5	7	377,099	13.9
Input market (for seeds, etc.	14.4	21.4	26.4	25.5	12.2	318,176	47	40.9	3.8	2.4	5.9	182,087	13.0
Police station/post	17.8	26.4	17.2	27.8	10.9	159,095	39.1	43.8	7.6	2.5	6.9	319,848	12.4
Bank	29.2	28.6	15.9	9.4	6.9	131,959	55.9	27.2	2.7	1.8	12.3	302,678	11.3
Public transport (rd, or rail, or water)	54.4	31.6	6.5	3.2	4.4	185,354	66.8	19.5	2.3	0.9	10.5	242,257	11.1
Public phone	35.8	28.6	19.9	15.2	0.5	13,472	65.0	25.7	1.6	3.2	4.5	79,053	2.4
Internet cafe	13.5	21.5	60.1	2.9	2.0	4,222	26.0	56.8	12.3	5.0	0.0	8,610	0.3

Chapter 15: CHILD HEALTH AND NUTRITION

15.1. Introduction

This chapter presents an analysis on the nutrition and health status of children under the age of 5 years The nutrition and health status of a child can be a direct indicator of the wellbeing and poverty status of the household. It further reflects on the community's nutritional status and is also widely regarded as an important basic indicator of welfare in an economy. Optimal nutrition is a prerequisite for national development of any given country as well as improvement of individual welfare. Although problems related to poor nutrition affect the entire population, women and children are especially vulnerable because of their unique physiology and socio-economic characteristics. Adequate nutrition is critical to children's growth and development. The period from birth to age 2 is especially important for optimal all round and balanced growth and health development of the child. Unfortunately, this period is often marked by macro and micronutrient deficiencies that interfere with optimal growth.

Specific issues discussed in this chapter include child nutrition based on anthropometric measurements, infant and young child feeding practices, and immunisation.

15.2 Breastfeeding and Complementary Feeding

Feeding practices play a critical role in child development. Poor feeding practices can adversely affect the health and nutritional status of children, which in turn has dire consequences for their mental and physical development. A child's nutritional future begins before conception with the mother's nutritional status prior to pregnancy. The damaging effects of malnutrition can pass from one generation to the next and so can the benefits of good nutrition. Therefore, giving a child a solid nutritional start has an impact for life on her or his physical, mental and social development. Poor nutritional status weakens the immune system, making a child susceptible to disease, increasing severity of illness and impeding recovery. Therefore, the pattern of infant feeding has an important influence on both the child and the mother.

Feeding practices are the principal determinants of the child's nutritional status. Poor nutritional status in young children exposes them to great risks of morbidity.

15.2.1 Breastfeeding Status

UNICEF and WHO recommend that children be exclusively breastfed during the first 6 months of their life and that they be given age-appropriate solid or semi-solid complementary foods in addition to continued breastfeeding from the age of 6 months to at least the age of 24 months (WHO/UNICEF, 2002; PAHO/WHO, 2004).

The National Food and Nutrition Strategic Plan 2011-2015 (National Food and Nutrition Commission [NFNC], 2011), the First 1,000 Most Critical Days Programme 2013-2015 (NFNC, 2013), and the National Health Strategic Plan 2011-2015 (MoH, 2011) promote exclusive breastfeeding from birth through to the age of 6 months and, thereafter, the introduction of semi-solid or solid foods along with continued breast milk until the child is at least 2 years Introducing breast milk substitutes to infants before 6 completed

months can contribute to breastfeeding failure. Substitutes, such as milk formula, other kinds of milk, and porridge, lack important nutrients such as fatty acids and antibodies required specially to improve on the health of the baby.

Furthermore, possible contamination of these substitutes exposes infants to the risk of illness. Zambia's Statutory Instrument No. 48 of 2006 promotes and protects breastfeeding and regulates the unauthorised or unsolicited sale and distribution of breast milk substitutes (Government of Zambia, 2006). After six completed months, a child requires adequate complementary foods for normal growth. Lack of appropriate complementary feeding may lead to malnutrition and frequent illnesses, which in turn may lead to death. However, even with complementary feeding, the child should continue to be breastfed for two years or more.

Table 15.1 shows the proportion of children under 5 years who were being breastfed at the time of the survey by rural/urban, sex and age-group in 2022. Results show that 38 percent of the children were being breastfed. The proportion of children who were being breastfed was higher in rural areas (40.4 %) than in urban areas (34.1%).

Analysis by age-group shows that the proportion of children who were being breastfed decreases steadily with age upto 16 months. Between the age 16 to 21 months, the proportion of children who were being breastfed dropped from 59.2 percent to 38.1 percent and continued to markedly drop upto 33 months of age.

Further, of the children in the age range 0-3 months, 98.5 percent were being breastfed compared to 93.9 percent of the children aged 10-12 months and 16.7 percent of children aged 22- 24 months.

Table 15.1: Proportion of Children (under 5-years) who were currently being Breastfed by Sex of Child, Age-group and Rural/Urban, Zambia 2022

Sex and Age-group	All Children	Rural	Urban	Total number of children under 5 years
Total Zambia	**38.0**	**40.4**	**34.1**	**1,913,880**
Sex				
Male	39.7	41.1	37.2	935,418
Female	36.4	39.6	31.3	978,462
Age in months				
0 - 3	98.5	98.4	98.7	141,222
4 - 6	99.7	99.5	100.0	85,654
7 - 9	99.0	98.3	100.0	87,724
10 - 12	93.9	94.9	92.0	131,886
13 - 15	90.8	92.2	87.8	119,996
16 - 18	59.2	65.8	50.7	71,063
19 - 21	38.1	47.8	24.8	72,502
22 - 24	16.7	21.2	11.2	174,327
25 - 27	15.3	20.8	5.6	94,871
28 - 30	7.6	7.9	7.1	69,890
31 - 33	4.9	3.6	8.6	64,560
34 - 36	7.8	8.5	6.8	201,446
37 and above	7.7	7.4	8.0	598,739

Figure 15.1 shows the proportion of children under 5 years who were being breastfed disaggregated by rural/urban and age-group in 2022. Results show marginal differences in breastfeeding status of children in lower age-groups for rural and urban areas. However, after the age of 15 months up to 30 months, breastfeeding status declines more in urban than in rural areas.

Figure 15.1: Proportion of Children Currently being Breastfed by Age-group (Months) and Rural/ Urban, Zambia 2022

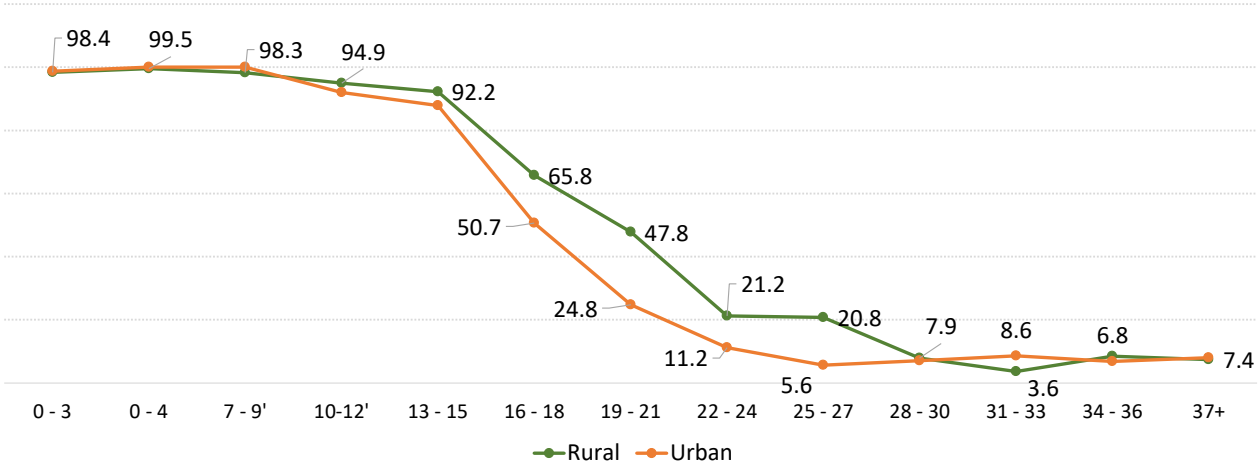


Table 15.2 presents information on the distribution of children aged 0-6 months by breastfeeding status, age-group, rural/urban and province in 2022. The table gives additional information on children who were being breastfed i.e. whether they were exclusively breastfed, or received water in addition to breast milk, or any supplements.

According to LCMS, food supplements are defined as one or more of the following:

- Any milk other than breast milk (e.g. S26, lactogen, promil or baby formula. fresh milk, soya milk, goat's milk, etc.)
- Solid foods (e.g. Custard, cerelac or other cereal, vitaso, porridge, nshima, etc.)
- Other fluids

Table 15.2 depicts infant and young child feeding (IYCF) indicators on breastfeeding status in Zambia between 2006 and 2022. At national level, 76 percent of children in the age range 0-6 months were exclusively breastfed. Results further show that 16.7 percent of the children received supplements in addition to breast milk in the first 6 months of life while 7.3 percent received plain water in addition to breast milk.

Disaggregated by rural/urban, results show that the proportion of children who were exclusively breastfed was more in urban areas (77.4 percent) than in rural areas (75.4 per cent).

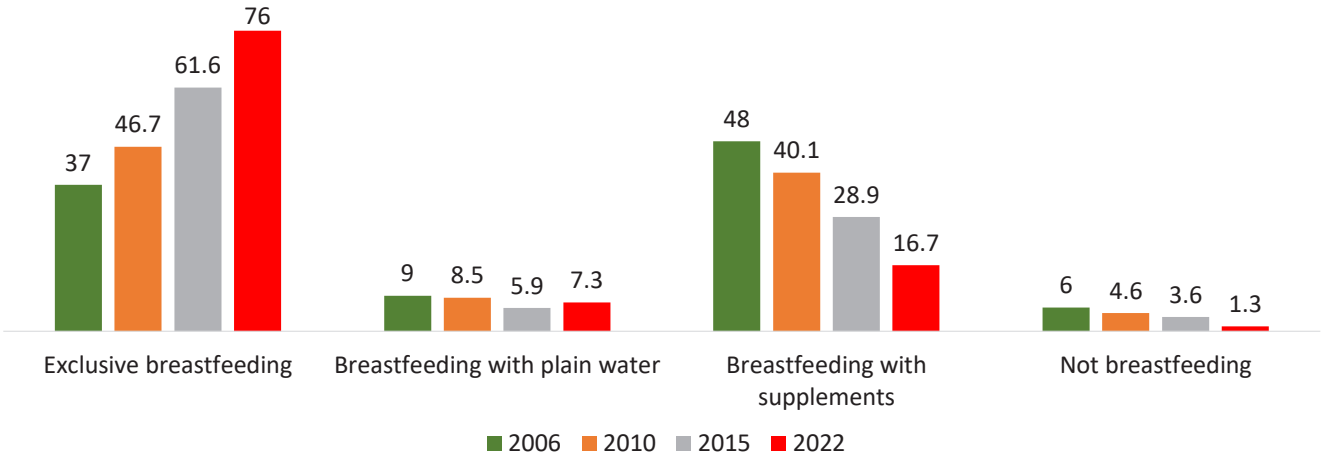
Analysing breastfeeding status for children 0-6 months, results show that 86.2 percent of the children of age range 0-3 months were exclusively breastfed relative to those of age range 4-6 months at 47.5 percent. Further, higher proportions of children of age range 4-6 months in urban areas were breastfed with plain water and plain water with supplements in addition to being breastfed with milk at 18.2 and 34.3 percent, respectively.

Analysed by province, results show that Lusaka and Western province had the highest proportion of exclusively breastfed children of aged 0-6 months at 94.5 and 94.3 percent, respectively, followed by Southern (92.4%) and Central Province (80.6%). North-western Province had the lowest percentage of children who were exclusively breastfed at 51.9 percent.

Table15.2: Proportion of Children (0-5 months) by Breastfeeding status, Sex of Child, Age-group, Rural/ Urban and Province, Zambia 2022

	Not breastfeeding	Exclusively breastfeeding	Breastfeeding with plain water	Breastfed with Plain Water Sup-plements	Total number of children aged 0-6 months
Total	**1.3**	**76**	**7.3**	**16.7**	**190,962**
Sex					
Male	2.2	76.8	4.4	18.8	85,502
Female	0.5	75.4	9.5	15.1	105,460
Age in Months					
0 - 3	1.5	86.2	3.3	10.5	141,222
4 - 6	0.6	47.5	18.2	34.3	49,740
Rural	1.4	75.4	6.5	18.1	130,130
Urban	1	77.4	8.8	13.8	60,832
Province					
Central	0.9	80.6	5.1	14.3	19,654
Copperbelt	0	66.8	12.2	21.1	27,683
Eastern	5.3	73.8	12.7	13.6	26,113
Luapula	0	56.9	8.8	34.3	22,351
Lusaka	2.2	94.5	0	5.5	26,885
Muchinga	4.9	61.8	0	38.2	6,135
Northern	0	74	5.4	20.6	16,061
North Western	0	51.9	25.9	22.2	12,028
Southern	0	92.4	0.8	6.7	26,141
Western	0	94.3	0	5.7	7,912

Figure 15.2: Infant and Young Child Feeding (IYCF) Indicators on Breastfeeding status, Zambia 2006-2022



15.1 Child Nutritional Status

The nutritional status of children under age 5 is an important proxy measure of children's health. The anthropometric data on height and weight collected in the 2022 LCMS permit the measurement and evaluation of the nutritional status of young children in Zambia. This evaluation allows identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development, and death.

15.1.1 Measurement of Nutritional Status for under 5 Children

The 2022 LCMS collected data on the nutritional status of children by measuring the height and weight of all children under the age of five (5) in selected households. These measurements allow the calculation of three anthropometric indices:

- Height-for-age,
- Weight-for-height, and
- Weight-for-age

Indicators of the nutritional status of children were calculated using growth standards published by the World Health Organization in 2006. These growth standards were generated through data collected in the WHO Multicentre Growth Reference Study (WHO, 2006). The findings of that study, which sampled 8,440 children in six countries (Brazil, Ghana, India, Norway, Oman, and the United States), representing all continents, demonstrated how children should grow under optimal conditions. The WHO child growth standards can therefore be used to assess children all over the world, regardless of ethnicity, social and economic influences, or feeding practices. The 2006 growth standards replaced the previously used NCHS/CDC/WHO reference standards.

It should be noted that the WHO child growth standards are not comparable to the previously used NCHS/CDC/WHO standards. When the WHO standards are used instead of the previous standards, several changes are evident (WHO, 2006):

- The level of stunting is higher.
- The level of wasting in infancy is substantially higher.
- The level of underweight is substantially higher during the first half of infancy (0-6 months) and decreases thereafter.
- The level of overweight/obesity is higher.

The three (3) anthropometric indices are expressed in standard deviation units from the Multicentre Growth Reference Study median. The height-for-age index is an indicator of linear growth retardation and cumulative growth deficits in children. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the WHO reference population are considered short for their age (stunted), or chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the reference median are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and can also be affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of undernutrition in a population and is not sensitive to recent, short-term changes in dietary intake. The weight-for-height

index measures body mass in relation to body height or length and describes current nutritional status. Children with Z-scores below minus two standard deviations (-2 SD) from the reference population median are considered thin (wasted) or acutely malnourished.

Wasting represents the failure to receive adequate nutrition in the short time period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition.

Children with a weight-for-height index below minus three standard deviations (-3 SD) from the reference median are considered severely wasted. The weight-for-height index also provides data on overweight and obesity. Children more than two standard deviations (+2 SD) above the weight-for-height median are considered overweight or obese. Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both chronic and acute undernutrition.

Children whose weight-for-age is below minus two standard deviations (-2 SD) from the reference population median are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the reference median are considered severely underweight.

15.1.2 Data Collection

Measurements of height and weight were obtained for all children born in the five-year period preceding the survey in the subsample of households selected for the male survey and listed in the Household Questionnaire. Children who were not biological children of the women interviewed in the survey were included. Each team of interviewers carried a scale and measuring board. Measurements were made using lightweight SECA scales (with digital screens) designed and manufactured under the authority of the United Nations Children's Fund (UNICEF).

The following analysis focuses on children for whom complete and credible anthropometric data and valid age data were collected.

15.1.3 Measures of Child Nutritional Status

Height-for-age

Table 15.7 and Figure 15.1 present the nutritional status of children under the age of 5 by various background characteristics. Nationally, 42.5 percent of children under age 5 were stunted. Analysis by age-group shows that stunting was highest (53.8 percent) in children age 18-23 months and lowest (23.8 percent) in children less than 6 months of age. Stunting was higher in male than in female children (45.3 percent vs 40 percent, respectively).

At the provincial level, Eastern Province had the highest proportion of stunted children (58.7 percent), while North-western Province the lowest proportions with 39.1 percent. Generally, stunting levels tends to reduce with increase in education level attained by the mother of the child (Mother's level of education generally has an inverse relationship with stunting levels); stunting ranged from a low of 28.9 percent among children whose mother had completed higher education to a high of 49.9 percent among those whose mothers had merely completed secondary school education. Further, the higher the poverty level

of the household becomes, the higher the likelihood that children belonging to that household are likely to be stunted. Children in the poorest households are much more likely to be stunted (47.3 percent) than children in the `non-poor households (37.5 percent).

Weight-for-height

Table 15.7 also shows the nutritional status of children less than the age of 5 as measured by weight-for-height. Overall, results show that 4.7 percent of the children were wasted. Analysis by age-group shows that wasting ranges from 9.7 percent among children age 6-8 months to 3.6 percent among those in the age range 48-59 months.

Analysed by age-group, results show that stunting is highest (53.8 percent) in children of age 18-23 months and lowest (23.8 percent) in children less than 6 months of age. Stunting is higher in male than in female children (45.3 percent and 40 percent, respectively).

By province, wasting was highest among children in North-western (6.8%) and lowest among children in Eastern (2.9 percent). There was no major variation in wasting by mother's education or household wealth.

Weight-for-age

Table 15.7 shows the proportion of children (3-59 months) classified as Stunted, Underweight and Wasted by mother's education and poverty status by rural/urban and province in 2022. Results show that 9.4 percent of the children under the age of 5 were underweight (low weight-for-age). The proportion of underweight children was highest among those in the age range 12-17 months (11 percent). Male children were more likely to be underweight than female children (11.3% vs 7.6%).

Analysis by rural/urban shows that rural children were more likely to be underweight (10.3%) than urban children (8%). At provincial level, Central (12.6%), Northern (12.5%) and Luapula (12.1%) had the highest percentage of underweight children, while Copperbelt had the lowest percentage at 6.8 percent.

As with stunting, mother's education and household poverty status are inversely associated with underweight. The proportion of children who are underweight ranges from a low of 1.0 percent among those whose mothers have Higher education to a high of 11.9 percent among those whose mothers have completed secondary education. In addition, children in the extremely poor households were more likely to be underweight (10.1 percent) compared with children from non-poor households and moderately poor households (8.6% vs 9%).

Table 15.7: Proportion of Children (3-59 months) classified as Stunted, Underweight and Wasted by Mother's Education and Poverty Status, Rural/Urban, Province, Zambia 2022

Mother's Education and Poverty Status		Stunting	Under-weight	Wasting	Total number of children of children aged 3-59 months
Age in Months	**Total**	**42.5**	**9.4**	**4.7**	**1,516,589**
	3-5	23.8	7.5	3.3	55,696
	6-8	24.3	8.5	9.7	67,170
	9-11	39.8	9.8	3.8	76,686
	12-17	41.8	11	7	178,741
	18 - 23	53.8	9.1	7	134,069
	24 - 35	48.7	9	3.8	335,910
	36 - 47	39.7	9.8	4.1	354,705
	48 - 59	42.6	9	3.6	313,612
Sex	**Total**	**42.5**	**9.4**	**4.7**	**1,516,589**
	1. Male	45.3	11.3	5.8	722,224
	2. Female	40	7.6	3.7	794,365
Residence	Rural	47.3	10.3	4.3	921,934
	Urban	35.1	8	5.4	594,655
Province	Central	53.2	12.6	4.2	118,706
	Copperbelt	33.5	6.8	5.2	219,305
	Eastern	58.7	9.7	2.9	193,349
	Luapula	50	12.1	4.8	127,836
	Lusaka	38.8	8.9	5.1	245,500
	Muchinga	49.2	10.3	5.1	72,072
	Northern	41	12.5	3.5	138,501
	North -Western	31.9	7	6.8	116,299
	Southern	36.9	7.2	5.9	185,117
	Western	38.3	10.2	3.6	99,904
Mother's Education	No Education	41.6	11.3	6.7	214,832
	Not Completed Primary	49.9	10.1	4.4	355,030
	Completed Primary	42.8	9.5	2.6	213,865
	Not Completed Sec.	41.9	8.4	4.1	419,989
	Completed Secondary	37.1	11.9	8.3	178,008
	Higher	28.9	1	2.5	64,147
	Not stated or mother not in household	37.3	7	3.2	70,719
Poverty status	Non-poor	37.5	8.6	4.7	626,393
	Moderately poor	43.8	9.7	3.6	214,555
	Extreme poor	47.3	10.1	5	649,620

Chapter 16: COMMUNITY DEVELOPMENT

16.1. Introduction

Social and economic facilities are important indicators of economic development as well as reflecting improvements in the welfare of any given community. Availability of facilities vary countrywide and are also dependent on the needs of the community. The survey collected data on social and economic facilities that households desired to be provided or improved in their respective communities. Further, data on projects or changes that occurred in 12 months prior to the survey was collected. Additionally, households were asked to state the extent to which projects in their communities had contributed to an improvement in their welfare or livelihood.

16.2. Social and Economic Projects Desired by Households.

Table 16.1 and Figure 16.1 show the percentage share of households by type of project/facility desired to be provided in 2022. Regardless of residence, the largest proportion of households desired an agricultural project/facility followed by 10.1 percent who expressed desire for a project or facility that would create an opportunity for employment. Further, at least 9 percent of the households desired a road, health or education project/facility.

Analysed by rural/urban, results show that almost three times as much as the proportion of households in urban areas desired an agricultural project or facility among rural households i.e. (rural 43.9% against urban 15%). Further, higher proportions of households in urban areas desired a project/facility that would respond to their need for employment (18.9%), roads (12.3%) and education at 11.3 percent, respectively. Notably, a transport project/ facility was one of the least desired project regardless of residence.

Table 16.1: Percentage Share of Households by Type of Project/Facility Desired to be Provided, Rural/Urban, Zambia 2022

Type of project/facility to be provided	All Zambia	Residence	
		Rural	Urban
Number of Households	**3,861,367**	**2,278,066**	**1,583,301**
Agriculture	32.0	43.9	15.0
Employment	10.1	4.0	18.9
Roads	9.7	8.0	12.3
Health	9.3	9.9	8.4
Education	9.2	7.7	11.3
Water Supply	8.7	9.7	7.2
Food and Other consumer Goods	4.6	4.6	4.5
Electricity	3.4	4.8	1.4
Police/Security	3.0	1.0	5.9
Credit	2.7	1.4	4.6
Sanitation	2.2	0.6	4.6
Other	2.0	1.0	3.0
Hammer Mill	1.7	2.4	0.7
Housing	1.0	0.6	1.6
Transport	0.6	0.7	0.5

Figure 16.1: Proportion of Households by Desired Project/Facility to be Provided, Zambia 2022

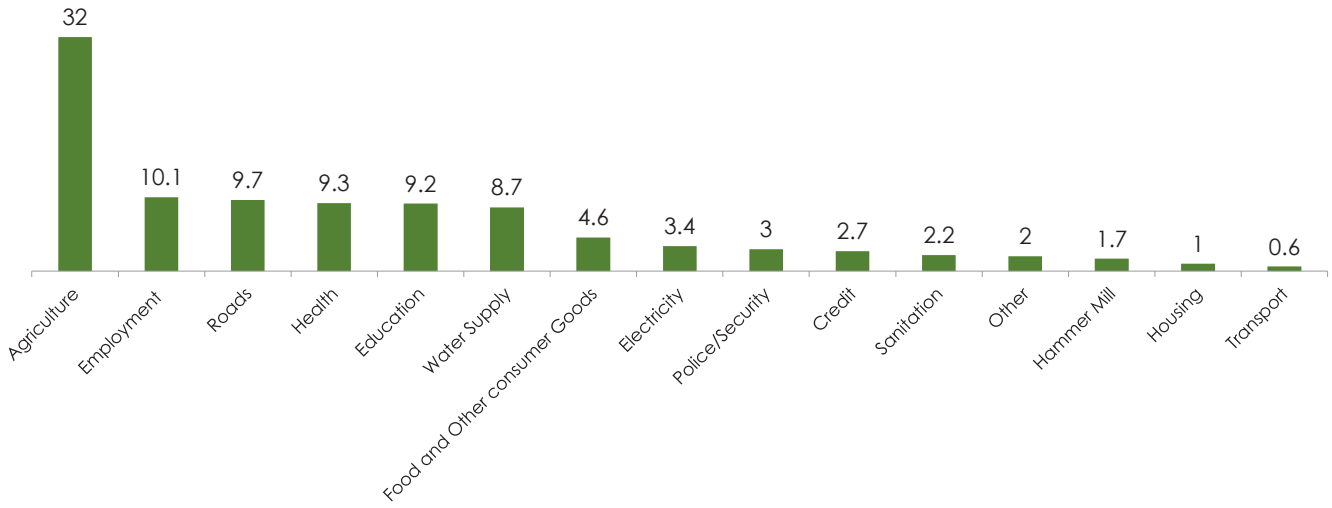


Figure 16.2 shows proportion of households by project/facility desired to be provided in rural areas in 2022. Results show that the most desired project/facility to be provided in rural areas was agricultural related at 43.9 percent, followed by Health at 9.9 percent and Water supply at 9.7 percent while the least desired project/facility to be provided was sanitation at 0.6 percent.

Figure 16.2: Proportion of Households by Desired Project/Facility to be Provided, Rural Zambia 2022

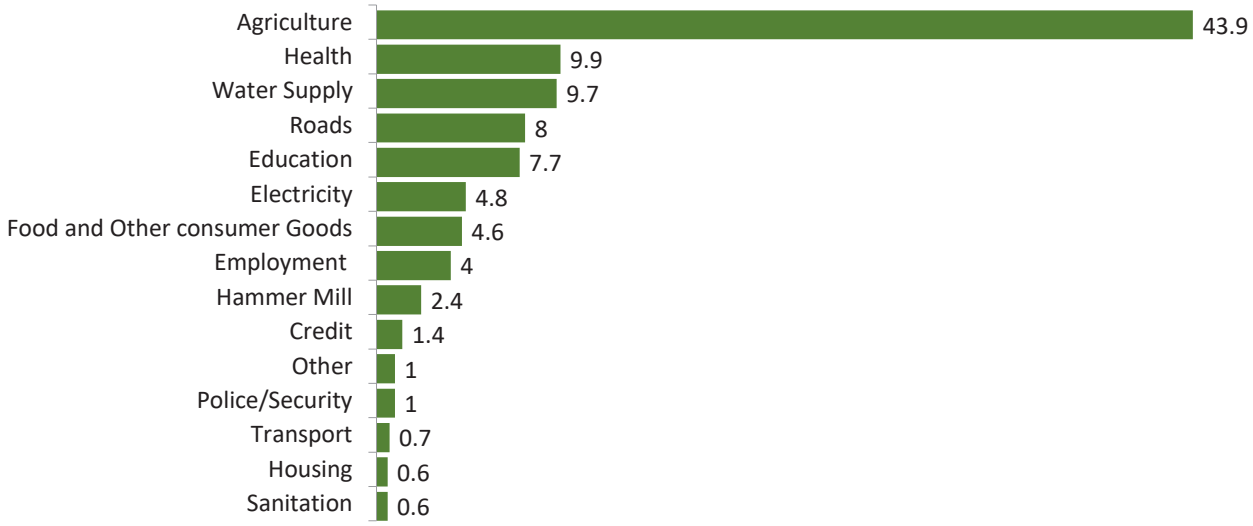


Figure 16.3 shows proportion of households by project/facility desired to be provided in urban areas in 2022. The most desired project/facility by households in urban areas was employment related at 18.9 percent, followed by agriculture 15 percent and roads at 12.3 percent while transport related project/facility was the least desired at 0.5 percent.

Figure 16.3: Proportion of Households by Project/Facility Type Desired to be Provided, Urban Zambia 2022

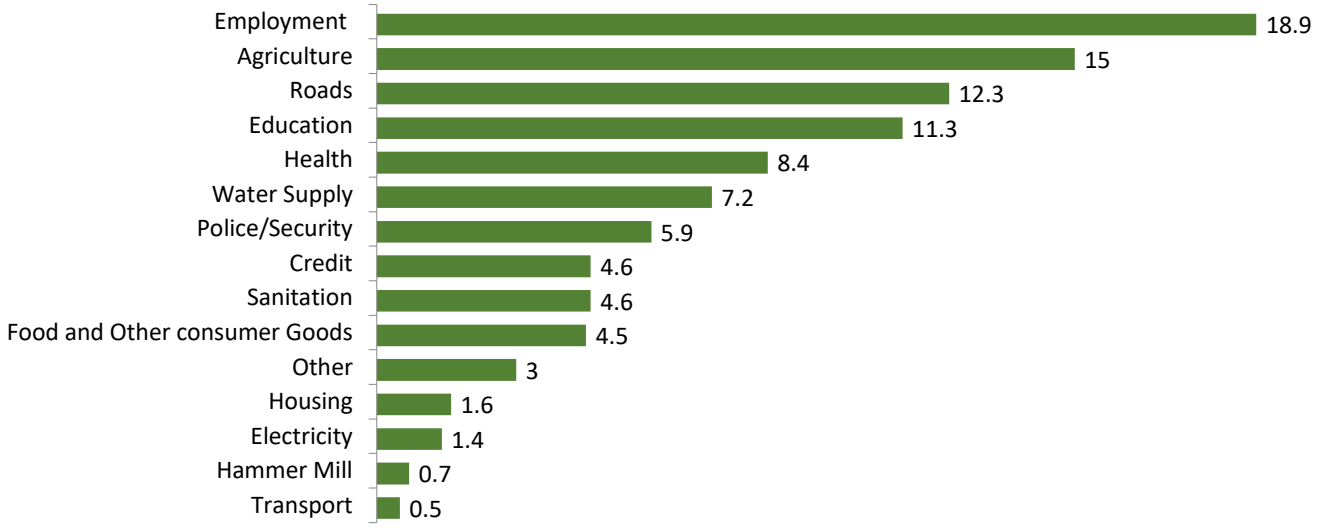
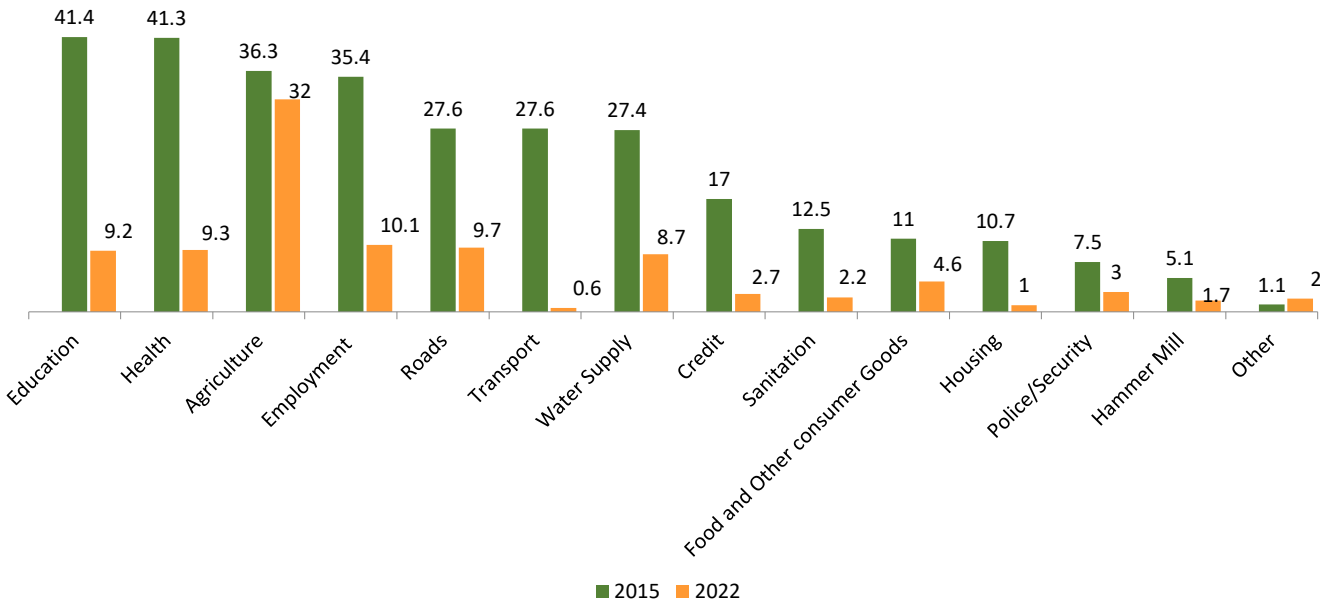


Figure 16.4 shows the proportional distribution of households by type of project/facility desired to be provided in their community in 2015 and 2022. The most desired projects/facilities by households in 2015 was an education and health project/facility at 41.4 and 41.3 percent, respectively while the most desired projects/facilities in 2022 were agricultural and employment at 32 and 10.1percent, respectively.

However, the least desired project or facility in 2015 was a hammer mill at 1.7 percent while the least desired project or facility in 2022 was a transport project or facility.

Figure 16.4: Proportional Distribution of Households by Type of Project/Facility desired to be provided, Zambia 2015-2022



16.2.1 Social and Economic Facilities/Services Desired by Households.

During the 2022 LCMS survey, each household was asked to indicate at least 4 specific projects/facilities of socio-economic nature that each household desired to be provided in order of importance.

Table 16.2 reflects the percentage share of households by the top 20 projects/facilities households desired to be provided in 2022. At national level, results show that agricultural marketing facilities were the most desired accounting for 10 percent of the households, followed by roads and free agricultural inputs at 9.7 and 9.4 percent, respectively, while the least desired projects or facilities by households were buyers or market for farm produce and water wells both at 1 percent each.

Table16.2: Percentage Share of Households by the Top 20 Projects/Facilities Desired to be Provided, Zambia 2022

No.	Type of project/facility to be provided	All Zambia
	Number of Households	3,861,557
1	Agricultural marketing facilities	10
2	Roads	9.7
3	Free agricultural inputs	9.4
4	Employment opportunities	9.2
5	Agricultural inputs	9.1
6	Boreholes	7.5
7	Health centres/clinics	4.9
8	Hospitals	3.6
9	Electricity	3.4
10	Primary schools	3
11	Market where to buy food and other items	2.8
12	Credit facilities	2.7
13	Secondary schools	2.7
14	Sanitation	2.1
15	Hammer mills	1.7
16	Police services	1.6
17	Security	1.4
18	Colleges	1.2
19	Buyers or market for farm produce	1
20	Water wells	1
21	Other	12.1

Table 16.3 reflects the percentage share of households by the top 20 projects/facilities households desired to be provided in rural areas in 2022. In rural areas, the most desired projects or facilities were agricultural marketing facilities accounting for 13.7 percent of the households, followed by households desiring free agricultural inputs and agricultural inputs provided through market forces of demand and supply at 13.1 and 12.7 percent, respectively.

Notably, veterinary services, higher prices of farm produce to make profit, agricultural extension services, college and police services were among the last 5 of the 20 highly desired projects or facilities in rural areas in 2022.

Table 16.3: Percentage Share of Households by the Top 20 Projects/Facilities Desired to be Provided, Rural Zambia 2022

No.	Type of project/facility to be provided	Rural
	Number of Households	1,583,379
1	Agricultural marketing facilities	13.7
2	Free agricultural inputs	13.1
3	Agricultural inputs	12.7
4	Boreholes	9
5	Roads	8
6	Health centres/clinics	5.7
7	Electricity	4.8
8	Hospitals	3.6
9	Employment opportunities	3.5
10	Market where to buy food and other items	2.8
11	Secondary schools	2.7
12	Primary schools	2.7
13	Hammer mills	2.4
14	Credit facilities	1.4
15	Buyers or market for farm produce	1.2
16	Veterinary services	1.1
17	Higher prices of farm produce to make profit	1.1
18	Agriculture extension services	0.9
19	Colleges	0.8
20	Police services	0.8
21	Other	7.7

Table 16.4 shows the percentage share of households by the top 20 projects/facilities households desired to be provided in urban areas in 2022. Unlike rural areas, the most desired project or facility in urban areas was an employment opportunity accounting for 17.5 percent of the households, followed by households desiring a road project at 12.3 percent, boreholes 5.4 percent and credit and agricultural marketing both at 4.6 percent.

Notably, among the last 5 of the 20 top most desired projects or facilities was a college project (1.8%), salary/wage (1.4%), water (1.4%), electricity (1.4%) and services offered at the hospital or healthy facility at 1.3 percent.

Table 16.4: Percentage Share of Households by the Top 20 Projects/Facilities Desired to be Provided, Urban Zambia 2022

No.	Type of project/facility to be provided	Urban
	Number of Households	2,278,178
1	Employment opportunities	17.5
2	Roads	12.3
3	Boreholes	5.4
4	Credit facilities	4.6
5	Agricultural marketing facilities	4.6
6	Sanitation	4.3
7	Free agricultural inputs	4.2
8	Agricultural inputs	3.8
9	Health centres/clinics	3.7
10	Hospitals	3.5
11	Primary schools	3.5
12	Security	3.1
13	Market where to buy food and other items	2.8
14	Police services	2.7
15	Secondary schools	2.6
16	Colleges	1.8
17	Salaries/wages	1.4
18	Water wells	1.4
19	Electricity	1.4
20	Services offered at health facility or facilities	1.3
21	Other	14.3

16.3. Households' Desired Project/Facility to be improved

The 2022 LCMS survey collected data on projects or facilities that households desired to be provided if those projects were not existent in their community but for projects or facilities already existing, household were asked whether they desired that the project or facility be improved to meet the expectations of the communities.

Table 16.5 shows the proportion of household by type of project/facility desired to be improved by rural/urban in 2022. At national level, the largest proportion of households desired an improvement of an agriculture project/facility at 21.7 percent followed by improvement of an education project/facility at 18.1 and Health at 15 percent, respectively. The least desired project/facility to be improved was in transport at 1.1 percent.

In rural areas, the three (3) most desired projects/facilities by households to be improved were in agriculture (28.5%), education (20.5%) and Health at 12.7 percent. While the two (2) least desired projects/facilities to be improved were sanitation (0.8%) and housing at 0.5 percent, respectively.

In urban areas, households were of the view that the three (3) most desired projects/facilities to be improved should be a health project/facility (18.5%), followed by education (15.1%) and employment opportunities at 11.9 percent. While the two (2) least desired projects/facilities to be improved for urban households were hammer Mills (1%) and Transport at 0.8 percent, respectively.

Table 16.5: Proportion of Households by Project/Facility Desired to be Improved, Rural/Urban, Zambia 2022

No.	Type of project/facility to be Improved	All Zambia	Residence	
			Rural	Urban
	Number of Households	3,860,307	2,277,005	1,583,301
1	Agriculture	21.7	28.5	11.8
2	Education	18.1	20.2	15.1
3	Health	15.0	12.7	18.5
4	Roads	11.6	11.7	11.5
5	Employment	7.2	4.0	11.9
6	Water Supply	5.1	5.3	4.7
7	Food and Other consumer Goods	4.1	3.9	4.3
8	Police/Security	3.8	2.1	6.2
9	Hammer Mill	2.8	4.2	1.0
10	Credit	2.6	2.1	3.4
11	Sanitation	2.1	0.8	4.1
12	Electricity	1.9	2.2	1.5
13	Other	1.5	0.5	3.0
14	Housing	1.3	0.5	2.4
15	Transport	1.1	1.4	0.8

Figure 16.5 shows the proportion of households by project/facility desired to be improved in rural areas in 2022. Results show that the most desired project/facility to be improved was an agriculture project/facility at 28.5 percent, followed by Education (20.2%) and Health at 12.7 percent while the least desired was a housing project/facility at 0.5 percent.

Figure 16.5: Proportion of Households by Project/Facility Desired to be Improved, Rural Zambia 2022

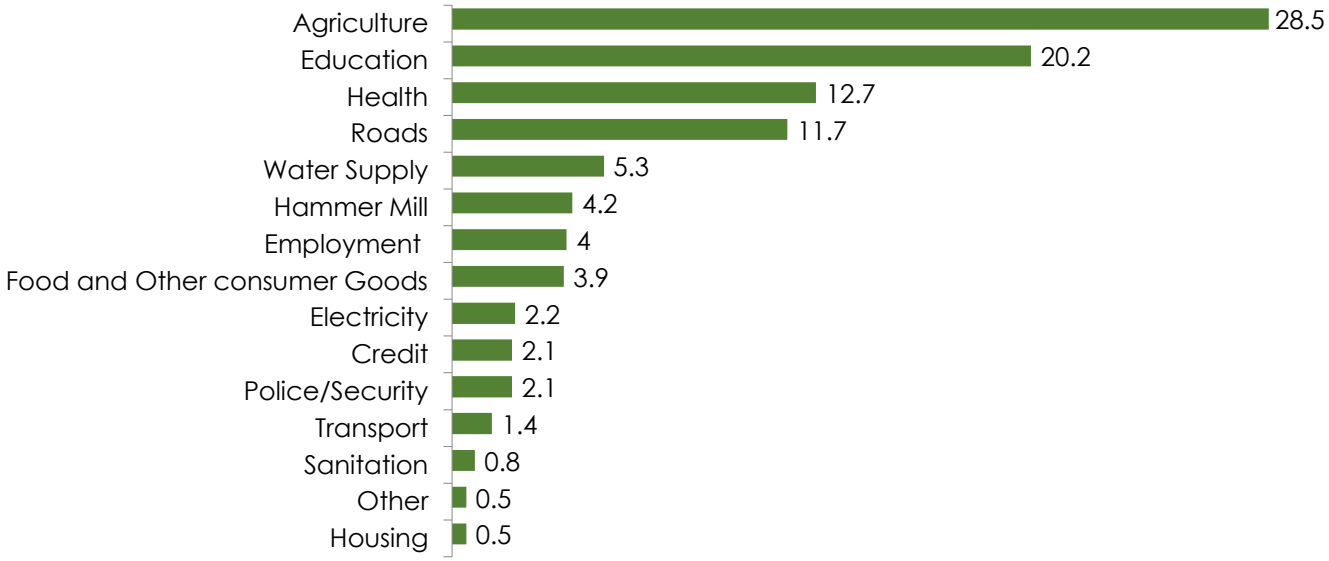


Figure 16.6 shows proportion of households by project/facility desired to be improved in urban areas in 2022. Among households in urban areas, the top 5 projects/facilities that households thought should be prioritised, in descending order, were health (18.5%), education (15.1%), employment (11.9%), agriculture (11.8%) and roads at 11.5 percent. However, a transport project was the least desired by urban households at 0.8 percent.

Figure 16.6: Proportion of Households by Project/Facility Desired to be Improved, Urban Zambia 2022.

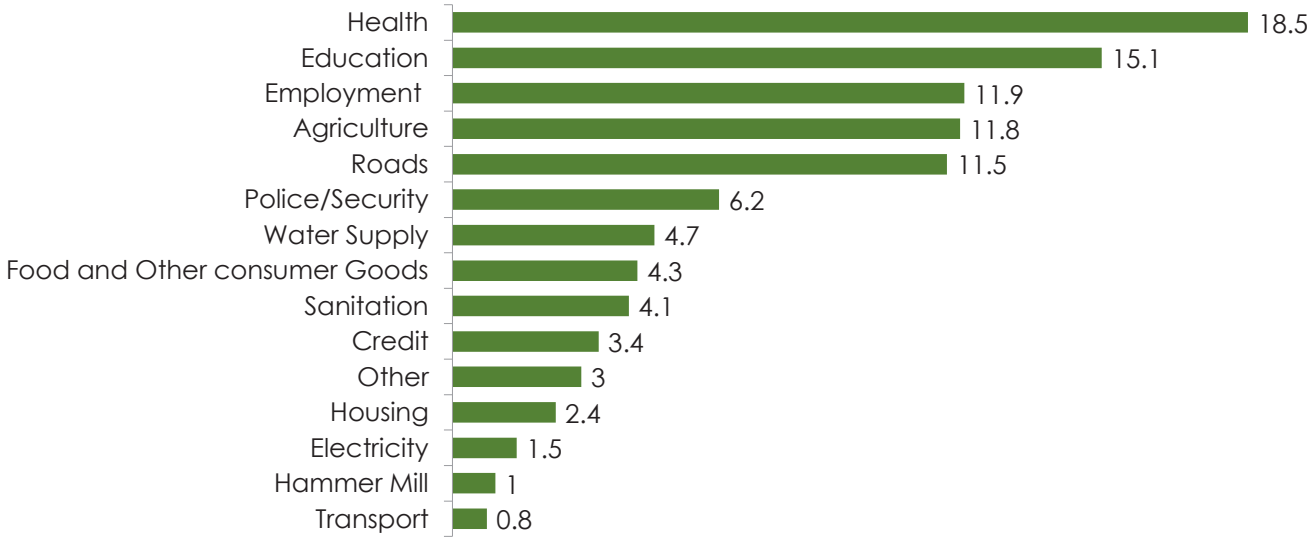
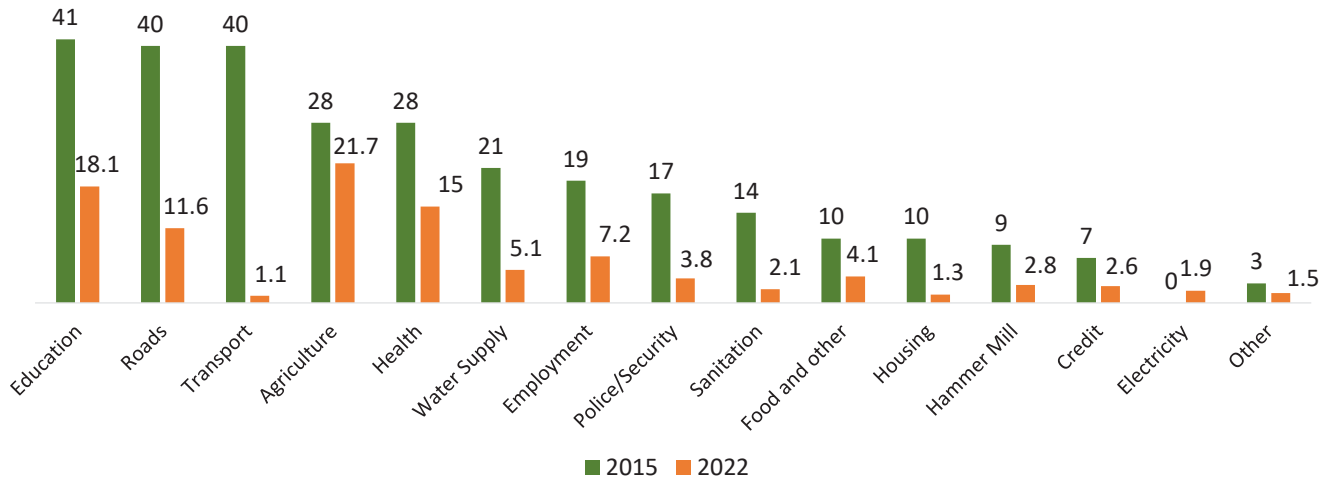


Figure 16.7 shows the proportion of households by project/facility desired to be improved in 2015 and 2022.

Overall, regardless of project/facility under consideration, the proportions of households that desired that an existing project/ facility be improved in 2015 were higher than those in 2022. The top four (4) projects/facilities desired to be improved in 2015 were in education (41%), roads (40%), transport (40%), agriculture (28%) and health (28%) while the top four (4) projects/facilities in 2022 were agriculture (21.7%), education (18.1%), health (15.0%) and roads (11.6%).

Further, while a credit facility was the least desired project/facility to be improved in 2015 at 7 percent, the least desired project/facility to be improved in 2022 was transport at 1.1 percent in 2022.

Figure 16.7: Proportion of Households by Project/Facility Desired to be Improved, Zambia 2015 and 2022



16.3.1 Households' Specific Desired Project/Facility to be improved by Type

The survey further collected data on projects/facilities already existing that a household desired to be improved by type in 2022. The desire to improve an existing project/facility is premised on the fact that the project/facility in its current state is unable to meet community expectations in terms of service delivery.

Table 16.6 shows the percentage distribution of household by type of project/facility desired to be improved in 2022. At national level, the largest proportion of households desired improvement of a road project at 11.5 percent, followed a primary school at 7.3 percent, a health centre/clinic at 6.6 percent and an employment opportunity at 5.9 percent, respectively.

However, electricity was one of the least desired facilities/services to be improved at 1.9 percent.

Table 16.6: Percentage Distribution of Households by Type of Project/Facility Desired to be Improved, Zambia 2022

Project/Facility to be Improved		Households
		3,861,557
No.	Type	Percent Share
1	Roads	11.5
2	Primary schools	7.3
3	Health centres/clinics	6.6
4	Employment opportunities	5.8
5	Agricultural inputs	5.2
6	Services offered at health facility.	4.9
7	Secondary schools	4.5
8	Agricultural marketing facilities	4.5
9	Free agricultural inputs	4
10	Boreholes	3.9
11	Hospitals	3.6
12	Hammer mills	2.8
13	Credit facilities	2.6
14	Primary school places	2.4
15	Higher prices of farm produce to make profit	2.2
16	Buyers or market for farm produce	2.2
17	Veterinary services	2.1
18	Sanitation	2
19	Police services	2
20	Electricity	1.9
21	Other	17.9

Table 16.7 shows the percentage distribution of households by the top 20 facilities/services desired to be Improved by type in rural areas of Zambia in 2022.

Survey results show that the 3 top most types of facilities/services desired to be improved by households in rural areas were as follows; 11.5 percent of the households desired a road facility/service, 9.5 percent a primary schools and 6.9 percent of the households desired agricultural inputs.

However, among the least desired facilities /services to be improved were agriculture extension services and credit facilities at 2.2 and 2.1 percent, respectively.

Table 16.7: Percent Distribution of Households by Top 20 Desired Facility/Service to be Improved by Type, Rural Zambia 2022

No.	Project/Facility to be Improved	Rural Households
	Total	1,583,379
	Type	Percentage Share
1	Roads	11.5
2	Primary schools	9.5
3	Agricultural inputs	6.9
4	Health centres/clinics	6.5
5	Agricultural marketing facilities	5.9
6	Free agricultural inputs	4.9
7	Secondary schools	4.8
8	Boreholes	4.4
9	Hammer mills	4.2
10	Employment opportunities	3.6
11	Hospitals	3.2
12	Higher prices of farm produce to make profit	3.1
13	Services offered at health facility or facilities	3
14	Buyers or market for farm produce	2.8
15	Primary school places	2.8
16	Veterinary services	2.7
17	Electricity	2.2
18	Agriculture extension services	2.2
19	Credit facilities	2.1
20	Other	13.7

Table 16.8 shows the percentage distribution of households in urban areas of Zambia by the top 20 facilities/services desired to be improved by households in their community in 2022. Results show that the three (3) top most facilities/services desired to be improved were as follows; 11.5 percent of the households desired a road, followed by 9.0 percent desiring an employment opportunity and 7.0 percent who desired a health facility while the two (2) least desired facilities/services to be improved were secondary school places and colleges both at 1.6 percent each.

Table 16.8: Percent Distribution of Households by Top 20 Desired Facility/Service to be Improved, Urban Zambia 2022

No.	Project/Facility to be Improved	Urban Households
		2,278,178
	Type	Percentage Share
1	Roads	11.5
2	Employment opportunities	9
3	Services offered at health facility or facilities	7.7
4	Health centres/clinics	6.7
5	Primary schools	4.2
6	Hospitals	4.1
7	Secondary schools	4
8	Sanitation	3.9
9	Security	3.4
10	Credit facilities	3.4
11	Boreholes	3.1
12	Salaries/wages	2.9
13	Police services	2.8
14	Free agricultural inputs	2.7
15	Agricultural inputs	2.6
16	Agricultural marketing facilities	2.5
17	Primary school places	1.9
18	Market where to buy food and other items	1.8
19	Secondary school places	1.6
20	Colleges	1.6
21	Other	18.7

16.4. Projects or Changes that have taken place in the Community

Of the projects or changes that had taken place in their community 12 months prior to the survey, households were asked to indicate the extent to which that project or change contributed to an improvement in their livelihood. Table 16.9 shows the percentage distribution of households by type of project or change that had taken place in the community by rural/urban in 2022. Of the total 3,861,557 households, 65.9 percent of the households indicated that a project or change had taken place in their community which translates into 2,545,421 households in absolute terms.

At national level, the top 10 projects/changes that had taken place in the communities, in descending order, included the following; extension of existing school (10.1%), building of new school (9.5%), sinking of a borehole (9.1%), building of new gravel road (8.6%), building of new health facility (7.7%), rehabilitation of existing school (4.9%), rehabilitation or grading or resurfacing or extension of existing gravel road (3.9%), building of new tarred road (3.9%), extension of existing health facility (3.4%) and piping of water at 3.3 percent, respectively.

However, households that indicated that television reception or agricultural inputs were now more readily available reflected the least proportions at 0.5 percent each.

Table 16.9: Percentage Distribution of Households by Project or Change that had taken place in the Community by Rural/Urban, Zambia 2022

No	Projects/Changes	Residence					
		Rural		Urban		All Zambia	
		Count	Percent	Count	Percent	Count	Percent
1	Extension of existing school	174,059	11.4	83,370	8.2	257,428	10.1
2	Building of new school	159,116	10.4	83,088	8.2	242,204	9.5
3	Sinking of borehole	183,637	12.0	48,065	4.7	231,703	9.1
4	Building of new gravel road	159,050	10.4	60,948	6	219,998	8.6
5	Building of new health facility	121,470	7.9	75,606	7.5	197,076	7.7
6	Rehabilitation of existing school	79,150	5.2	45,523	4.5	124,674	4.9
7	Rehabilitation or extension of existing gravel road	70,652	4.6	29,719	2.9	100,371	3.9
8	Building of new tarred road	41,276	2.7	57,394	5.7	98,670	3.9
9	Extension of existing health facility	46,140	3.0	40,700	4	86,840	3.4
10	Piping of water	20,799	1.4	62,202	6.1	83,001	3.3
11	Digging of well	50,621	3.3	24,102	2.4	74,722	2.9
12	Rehabilitation of existing health facility	40,151	2.6	30,568	3	70,719	2.8
13	Provision of mobile phone network	45,158	2.9	18,521	1.8	63,679	2.5
14	Police services now available or improved	17,144	1.1	45,866	4.5	63,010	2.5
15	Rehabilitation or resurfacing of existing tarred road	27,777	1.8	34,218	3.4	61,995	2.4
16	Provision of harmer mill (s)	37,379	2.4	16,656	1.6	54,035	2.1
17	Transport services provided or improved	25,041	1.6	28,504	2.8	53,544	2.1
18	Extension of existing tarred road	17,685	1.2	29,571	2.9	47,256	1.9
19	Water supply rehabilitated or improved	19,402	1.3	27,051	2.7	46,453	1.8
20	Radio Reception improved	24,126	1.6	19,898	2	44,024	1.7
21	Radio reception provided	19,371	1.3	18,331	1.8	37,702	1.5
22	Building of a shopping mall/centre or shops nearby	10,451	0.7	26,987	2.7	37,438	1.5
23	More employment opportunities available	12,081	0.8	22,554	2.2	34,635	1.4
24	Agricultural inputs provided on a subsidized basis	24,691	1.6	4,253	0.4	28,944	1.1
25	Sanitation provided or improved	7,020	0.5	22,046	2.2	29,065	1.1
26	Buyers of agricultural produce available/improved	20,265	1.3	4,095	0.4	24,360	1.0
27	Other construction development nearby (e.g. a housing estate.	11,141	0.7	13,729	1.4	24,870	1.0
28	Agricultural extension service available or improved	16,608	1.1	2,159	0.2	18,767	0.7
29	Television reception provided	3,021	0.2	12,528	1.2	15,549	0.6
30	Veterinary services now provided or improved	14,051	0.9	1,332	0.1	15,383	0.6
31	Agricultural inputs provided on credit	12,442	0.8	3,179	0.3	15,621	0.6
32	Credit facility now being provided	8,822	0.6	6,457	0.6	15,279	0.6
33	Television reception improved	3,841	0.3	9,965	1	13,806	0.5
34	Agricultural inputs now more readily available	9,708	0.6	2,892	0.3	12,600	0.5

Table 16.10 shows the proportions of households in rural areas by extent to which the project or change in their community had improved their way of life in 2022.

In rural areas, the top 10 projects/changes that had taken place in the communities included; sinking of borehole (12%), extension of an existing school (11.4%), building of new school (10.4%), building of new gravel road (10.4%), building of new health facility (Hospital, Clinic, Health centre or post(7.9%), rehabilitation of existing school (5.2), rehabilitation or grading or resurfacing or extension of existing gravel road (4.6%), digging of well (3.3%), extension of existing health facility (3%) and provision of mobile phone network (2.9%). The least two projects/changes that had taken place in the communities were improvement in television reception (0.3%) and provision of television reception at 0.2 percent.

Of the projects/changes that had taken place in their community, these rural households were further asked to rank each project or change to determine its contribution to an improvement in their lives. The following was the ranking of each project or change in terms of its contribution: Extremely; Moderately; Little effect; No effect and Not applicable.

Results show that at least 59 out of every 100 households in rural areas were of the view that provision of radio reception and improvement of the already existing radio reception had extremely contributed to improvement to their way of life followed by almost 47 out of every 100 households who cited improvement of television reception. Further, 44 out of every 100 households were of the view that extension of an existing tarred road had extremely contributed to improvement to their way of life. Furthermore, at least 37 out of every 100 households thought rehabilitation or resurfacing of existing tarred road, building of a shopping mall or shopping centre or shops nearby and building of new tarred road had extremely contributed to an improvement to their way of life.

On the other hand, at least 50 out of every 100 households were of the view that provision or improvement of transport services and rehabilitation or extension of the existing gravel road had moderately contributed to an improvement to their way of life. Further, among the projects/ changes that households thought had little effect included extension of an existing health facility (almost 41 out of every 100) and rehabilitation or resurfacing of existing tarred road (29 out of every 100).

However, almost 29 out of very 100 households in rural areas were of the view that the project or change had no effect on their lives.

Table 16.10: Percentage Distribution of Households by Extent to which a given Project/Change has Contributed to an Improvement to their Way of Life, Rural Areas, Zambia 2022

No	Project/Change	Extremely	Moderately	Little	No effect	Not Applicable	Total
1	Radio reception provided	59	21	18.7	1.3	0	100
2	Radio reception improved	58.5	21.4	9.4	8.1	2.6	100
3	Television reception improved	46.7	27.5	25.8	0	0	100
4	Extension of existing tarred road	44	23.4	25.2	4.2	3.2	100
5	Rehabilitation or resurfacing of existing tarred road	41.7	27.8	29.1	1.3	0	100
6	Building of a shopping mall or shopping centre or shops nearby	41.5	19.5	0	39	0	100
7	Building of new tarred road	36.5	30.1	20.1	11.7	1.5	100
8	Building of new school	36.4	39.6	19.3	4	0.7	100
9	Building of new health facility	33.7	42.6	17.7	4.2	1.9	100
10	Rehabilitation of existing health facility	32.1	31.5	25.5	10.9	0	100
11	Building of new gravel road	32.1	32.4	25.1	9.9	0.6	100
12	Rehabilitation/Ext of existing gravel road	28.5	51.3	15.6	4.4	0.1	100
13	Provision of mobile phone network	28	31.2	27.6	10.5	2.7	100
14	More employment opportunities available	26.1	28.6	16.5	28.8	0	100
15	Extension of existing health facility	22.5	24.3	40.8	9.1	3.4	100
16	Transport services provided or improved	18.1	52.6	24.3	5.1	0	100

Table 16.11 shows the proportions of households in urban areas by extent to which the project or change had contributed to an improvement to their way of life in 2022.

In urban areas, the top 10 projects/changes that had taken place in the communities included; Extension of an existing school (8.2%), building of new school (8.2%), new health facility (Hospital, Clinic, Health centre or post(7.5%), piped water (6.1%), rehabilitation or grading or resurfacing or extension of existing gravel road (6.0%), new tarred road(5.7%), sinking a borehole (4.7%), rehabilitation of existing school (4.5%) and extension of existing health at 4 percent. The least two projects/changes that had taken place in the communities were improvement in agricultural extension service (0.2%) and veterinary services now provided or improved at 0.1 percent.

Of the projects/changes that had taken place in their community, these urban households were further asked to rank each project or change to determine its contribution to an improvement in their lives. The following was the ranking of each project or change in terms of its contribution: Extremely; Moderately; Little effect; No effect and Not applicable.

The top 5 projects or changes that households identified to have contributed immensely (extremely) to an improvement in their way of life (in descending order) were: building of new health facility (at least 44 out of 100 households), building of new tarred road(at least 37 out of 100 households), radio reception improved(at least 31 out of 100 households), provision of mobile phone network(30 out of 100 households) and building of new school (29 out of 100 households).

Further, the top 5 projects or changes that households identified to have moderately contributed to an improvement in their way of life (in descending order) were: television reception improved (at least 68 out of 100 households), building of new tarred road(67 out of 100 households), radio reception improved(58 out of 100 households), provision of mobile phone network (at least 55 out of 100 households) and building of new school (53 out of 100 households).

On the other hand, the following projects or changes were identified to be among the top 5 contributing little to an improvement to the way of life of urban households(in descending order): Extension of existing health facility (at least 31out of 100 households); Building of new gravel road (at least 27 out of 100 households); More employment opportunities available(at least 25 out of 100 households); Rehabilitation or grading or resurfacing or extension of existing gravel road(22 out of 100 households) and extension of existing tarred road(18 out of 100 households).

Table 16.11: Percentage Distribution of Households by Extent to which a given Project/Change has Contributed to an Improvement to their Way of Life, Urban Areas, Zambia 2022

No	Project/Change	Extremely	Moderately	Little	No effect	Not Applicable	Total
1	Building of new health facility (Hospital, Clinic, Health centre or post, etc.)	43.6	42.3	9.7	3.8	0.6	100
2	Building of new tarred road	36.7	41.2	11.4	9	1.7	100
3	Radio Reception improved	30.7	49.2	12.6	4.9	2.7	100
4	Provision of mobile phone network	30.2	58.2	10	1.6	0	100
5	Building of new school	29.4	54.8	14.8	0	1	100
6	Radio reception provided	28.8	47.3	13.5	5.6	4.8	100
7	Transport services provided or improved	28.3	49.4	18.1	4.2	0	100
8	Building of a shopping mall or shopping centre or shops nearby	27.2	33.5	10.5	28.2	0.6	100
9	Extension of existing tarred road	25.3	47	18.4	9.4	0	100
10	Rehabilitation or resurfacing of existing tarred road	24.4	52.6	16.4	6.7	0	100
11	Extension of existing health facility	24	40.7	30.5	4.7	0.1	100
12	More employment opportunities available	21.9	32.5	24.7	16.7	4.2	100
13	Building of new gravel road	16.8	51.5	27.2	4.5	0	100
14	Rehabilitation of existing health facility	15.2	67.2	15.5	2.1	0	100
15	Television reception improved	9.8	67.6	13.9	7	1.7	100
16	Rehabilitation or grading or resurfacing or extension of existing gravel road	9.7	53.4	22.2	14.7	0	100

Chapter 17: HOUSEHOLD FOOD CONSUMPTION AND SECURITY

17.1 Introduction

Food security is commonly said to exist when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences that enables them to lead an active and healthy life (World Food Summit, 1996). Food security is anchored on four (4) pillars: availability, access, utilisation and stability.

Food access statistics is one of the four key pillars in the definition of food security. Food access encompasses various dimensions, including spatial accessibility to food, affordability, and availability of diverse and nutritious options. Some households, especially those with low-income, face greater challenges in accessing healthy and affordable food, ultimately leading to compromised dietary quality and food security. It is against this background that the 2022 LCMS closely looked at access to food in Zambia as it is one of the countries facing serious food security challenges.

Food access statistics, therefore, provides cardinal information on the household's capability to acquire sufficient and nutritious foods, through own production, purchase, and other sources. Food access as a pillar of food security is an essential component used to comprehensive analyse food systems.

The relationship between food consumption, food access, and food security is intricate and multifaceted as it plays a critical role in shaping the overall well-being of individuals and communities. Food consumption refers to the intake of nutrients through eating, influenced by factors such as dietary habits, cultural preferences, and socio-economic status of households. Therefore, having reliable food consumption statistics is crucial in helping anyone to understand the dietary patterns and nutritional needs of any population, as well as informing evidence-based policies and interventions aimed at promoting food security, improving public health outcomes, and addressing socio-economic disparities. Food consumption statistics provide valuable insights into the quantity, quality, and diversity of foods consumed by individuals and households, helping policymakers identify areas of concern and target interventions effectively.

The 2022 Living Conditions Monitoring Survey collected data on household food purchases, expenditures, and consumption patterns. The survey collected information on expenditures on various food items, quantities, and source (purchased, own produced and gifts). By analysing data from the LCMS, policymakers can assess trends in food consumption over time, identify vulnerable populations with inadequate access to nutritious foods, and understand the drivers of food insecurity and malnutrition. This chapter presents on commonly consumed food items and their sources.

17.2 Consumption of Selected Foods

Table 17.1 shows the percentage share of households by type of food consumed by province in 2022. At national level, results show that 99.2 percent of the households consumed vegetables followed by those who consumed cereals, roots and tubers at 96.2 percent. The smallest proportion of households consumed sorghum at 1.2 percent.

Analysed by province, household consumption patterns at provincial level were similar to those at national level. At least 90.2 percent of the households in each province consumed cereals, roots and tubers and vegetables. Further, Maize, a staple food in Zambia, with approximately 85 percent of the households consuming it countrywide, had the largest and second largest shares of households on the Copperbelt and in Lusaka provinces at 95.2 and 90.7 percent, respectively. However, Muchinga Province accounted for the smallest percentage share of households who consumed maze at 66.4 percent.

Bread consumption was reported by 44 percent of households nationwide, with Lusaka province exhibiting the highest proportion at 72.1 percent and Muchinga the lowest at 12.9 percent. Millet and sorghum consumption remained relatively low nationally, at 2.1 and 1.2 percent, respectively. However, Northern province stood out with the highest proportion consuming millet at 9.7 percent, while Western province led in sorghum consumption at 3.6 percent. Nearly all households across the nation reported high vegetable consumption. Alcohol consumption among households in Zambia averaged 12.2 percent nationally, with the Copperbelt province reporting the highest proportion at 18.9 percent and the Western province the lowest at 6.8 percent.

Table 17.1: Percentage Share of Households by Type of Food Consumed by Province, Zambia 2022

Food Item	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North western	Southern	Western	Zambia
Vegetables	99.4	99.9	99.5	97.7	99.5	98.2	99.7	99.2	99.3	97.8	99.2
Cereals roots and Tubers	94.4	98.4	90.2	97.5	98.0	91.0	98.2	98.4	98.2	96.9	96.2
Oil	89.1	95.4	86.5	80.0	95.6	66.7	83.9	89.0	89.6	76.3	87.7
Maize	72.1	95.2	74.7	88.6	90.7	66.4	85.0	87.2	89.2	89.0	84.8
Fish	77.7	85.8	62.9	85.3	87.9	60.5	87.7	91.0	78.0	85.5	80.4
Sugar	83.4	93.7	71.8	58.0	94.4	48.2	68.2	73.6	83.7	59.7	78.1
Pulses	67.3	83.7	73.1	70.2	77.0	62.5	85.7	81.6	75.3	50.0	74.1
Sweet Potatoes	66.0	78.8	66.6	76.6	75.1	48.8	82.3	81.6	78.6	49.6	72.0
Meat	75.4	79.4	71.0	49.8	84.8	43.3	51.4	66.9	74.9	47.6	69.1
Beans	55.7	79.2	59.6	62.7	69.1	53.0	77.9	69.2	53.8	33.3	62.9
Eggs	63.4	79.0	61.0	46.6	81.2	36.5	41.3	62.1	58.6	32.2	61.0
Chicken	69.1	73.3	55.1	44.2	74.7	33.8	40.9	55.4	64.3	34.9	59.2
Fruit	34.7	62.6	37.8	40.2	66.3	26.9	40.6	54.8	40.7	33.3	46.5
Bread	38.2	63.8	36.0	24.5	72.1	12.9	28.1	43.2	45.0	20.4	43.8
Rice	15.6	40.5	23.0	24.9	46.7	17.5	28.8	26.9	15.7	32.0	28.8
Milk	23.0	37.2	20.4	9.5	47.5	5.4	11.0	19.3	42.5	25.0	28.0
Cassava	5.9	12.0	2.7	55.8	3.7	29.3	47.9	35.1	1.6	36.8	17.6
Potatoes	9.1	26.9	16.9	3.1	33.6	7.6	7.7	12.1	10.7	4.3	16.0
Alcohol	11.9	18.2	9.3	9.0	13.4	10.2	16.7	13.2	9.9	6.8	12.2
Millet	0.0	0.4	0.0	0.6	2.2	8.8	9.7	0.2	0.5	4.8	2.1
Sorghum	0.0	0.5	0.0	0.2	2.7	2.4	0.4	0.0	2.8	3.6	1.2

Table 17.2 depicts the percentage share of households by type of food consumed disaggregated by rural/urban in 2022. Notably, 94.9 percent of the rural households relative to 98.1 percent of the urban households consumed cereals, roots, and tubers, indicating a slight disparity. Maize consumption was common in both settings, with 79.6 percent of the rural households and 92.2 percent of urban households reporting consumption.

Further, results show that bread consumption was more common among urban households with two and half times as much as the proportion in rural areas consuming bread in town i.e (urban: 68.1% against 26.9%: rural) households. Traditional grains such as millet and sorghum registered minimal consumption across both rural and urban regions. Vegetable consumption remained consistently high across both settings, with 98.9 percent of rural households and 99.7 percent of urban households reporting consumption. Alcohol consumption, while modest overall, exhibits a slight increase in urban areas, with 14.2 percent of urban households indulging compared to 10.9 percent in rural areas.

Table 17.2: Percentage Share of Households by Type of Food Consumed by Rural/Urban, Zambia 2022

Selected Food	Rural	Urban	National
Bread	26.9	68.1	43.8
Maize	79.6	92.2	84.8
Rice	17.9	44.4	28.8
Millet	3.1	0.6	2.1
Sorghum	1.9	0.3	1.2
Sweet Potatoes	70.9	73.5	72.0
Potatoes	5.5	31.1	16.0
Beans	56.9	71.6	62.9
Cassava	21.9	11.3	17.6
Eggs	48.4	79.3	61.0
Sugar	67.3	93.5	78.1
Fish	75.5	87.4	80.4
Chicken	49.9	72.5	59.2
Vegetables	98.9	99.7	99.2
Fruit	33.7	64.9	46.5
Milk	18.0	42.3	28.0
Meat	60.4	81.5	69.1
Cereals roots and Tubers	94.9	98.1	96.2
Pulses	70.8	78.8	74.1
Oil	82.8	94.7	87.7
Alcohol	10.9	14.2	12.2

Table 17.3 shows the percentage share of households disaggregated by type of food consumed and stratum in 2022. Overall, bread consumption varies across different strata, with higher consumption rates observed in High-cost stratum (83.9 %) compared to Small-scale (25.5%) and Medium-scale stratum at 34.4 percent. Similarly, maize consumption remains widespread across all strata, with slightly lower rates in Large-scale stratum (75.5%) and Non-agricultural stratum (85.0%) compared to High-cost stratum (94.0%). Notably, lower proportions of households consumed traditional grains like millet and sorghum across all strata, though amongst these Medium scale households accounted for the highest proportion at 5.6 percent. Vegetable consumption, however, remains consistently high across all strata, with almost universal consumption (minimum 97.6%) reported. Conversely, alcohol consumption shows modest variations across different strata, with slightly higher rates among households in High-cost stratum (21.8 %) compared to other strata. Overall, these consumption patterns offer valuable insights into dietary preferences and consumption behaviour across diverse socio-economic groups.

Table 17.3: Percentage Share of Households by Type of Food Consumed by Stratum, Zambia 2022

Selected Food	Small Scale	Medium Scale	Large Scale	Non-Agric	Low Cost	Medium Cost	High Cost	Total
Bread	25.5	34.4	44.1	29.2	65.9	72.9	83.9	43.8
Maize	78.8	77.6	75.5	85	92.2	91.1	94	84.8
Rice	16.3	23.9	32.7	21.7	41.3	58	57.7	28.8
Millet	3	5.6	3.6	1.7	0.5	0.3	1.4	2.1
Sorghum	1.9	2.5	0	1.2	0.3	0.2	0.6	1.2
Sweet Potatoes	71.4	68.3	70.3	69.9	75.2	63.4	69.7	72
Potatoes	4.7	8.5	14.1	7.4	28.3	35.6	52.8	16
Beans	56.9	58.2	53.8	56.2	71.3	68.7	78.4	62.9
Cassava	22.6	21.4	20	18.8	10.9	14.1	11.8	17.6
Eggs	48	51.5	61.5	47.7	77.5	86.5	87.9	61
Sugar	66.8	70.1	80.6	68.1	92.9	96.2	96.3	78.1
Fish	75	80.8	73.2	75	86.5	89.5	92.9	80.4
Chicken	49.6	60.7	67.1	44.6	69.7	82.9	86.5	59.2
Vegetables	99.2	97.7	100	97.6	99.8	98.8	100	99.2
Fruit	32.6	38	44.4	35.9	62.1	75.6	78.7	46.5
Milk	15.9	31.2	32.9	20.6	39.2	52.3	60.2	28
Meat	60.2	70.9	77	54.6	79.6	88	91.4	69.1
Cereals roots and Tubers	94.5	96	94.7	96.2	98	97.7	99.8	96.2
Pulses	71.3	73	73.6	66.8	78.7	76.5	83.1	74.1
Oil	83.5	83	84.2	79.2	94.3	96.3	97.2	87.7
Alcohol	11	10.6	10.7	10.1	13.2	15.9	21.8	12.2

Table 17.4 shows the percentage share of households by type of food consumed disaggregated by poverty status in 2022. The 2022 LCMS survey amongst other things looked at consumption dynamics of selected foods by poverty statuses to understanding of variation in consumption patterns. Results reveal notable bread consumption bread patterns, with markedly higher rates among the Non-poor (68.3%) relative to Moderately poor (36.7%) and Extreme poor (18.4 %) households.

Although the proportions of households that consumed maize has persistently remined high, its consumption rates among the extreme poor has slightly diminished to 78.3 percent relative to moderately and non-poor households at 84.6 and 90.4 percent, respectively. Further, a minimum of 64.5 percent of the moderately and non-poor households consumed essential foods like sweet potatoes and beans. However, although households generally consumed more sweet potatoes than beans, extremely poor households accounted for an even lower proportion consuming beans i.e (sweet potatoes: 64.5% against 49.2%: beans)

Moreover, vegetable consumption remained uniformly high across all poverty strata. Conversely, alcohol consumption displayed minor variations, with higher prevalence among the non-poor (15.7%) relative to the moderately poor (12.5%t) and extreme poor (8.2%) categories.

Table 17.4: Percentage Share of Households by Type of Food Consumed by Poverty Status, Zambia 2022

Selected Food	Non-poor	Moderately poor	Extreme poor	Total
Bread	68.3	36.7	18.4	43.8
Maize	90.4	84.6	78.3	84.8
Rice	45.9	23.1	11.2	28.8
Millet	1.2	1.9	3.1	2.1
Sorghum	0.6	1.4	1.8	1.2
Sweet Potatoes	77.6	74.9	64.5	72.0
Potatoes	30.3	8.2	2.5	16.0
Beans	74.3	65.0	49.2	63.0
Cassava	15.4	18.3	19.8	17.6
Eggs	79.8	58.7	40.5	61.0
Sugar	93.2	79.4	60.3	78.1
Fish	89.0	80.9	70.4	80.4
Chicken	76.4	54.1	41.3	59.2
Vegetables	99.6	99.7	98.5	99.2
Fruit	67.3	38.6	25.4	46.5
Milk	46.2	19.1	10.3	28.0
Meat	85.3	65.9	51.6	69.1
Cereals roots and Tubers	98.5	96.1	93.5	96.2
Pulses	82.4	77.2	63.4	74.1
Oil	94.7	91.7	78.2	87.7
Alcohol	15.7	12.5	8.2	12.2

Table 17.5 shows the percentage share of household heads by type of food onsumed, Zambia 2022. Results show minimal variation in bread consumptions patterns between males and females i.e (44.7% against (41.7%), averaging at 43.8 percent Similarly, maize consumption remained steady across households with a slightly higher proportion of females consuming maize at 85.6 percent relative to 84.4 percent among males, with an overall rate of 84.8 percent. Consistently, higher proportions of households consumed sweet potatoes than beans with little variation between male and female-headed households. Consumption of vegetable which is crucial for a balanced diet, remained universally regardless of sex of household head with a minimum of 99.4 percent culminating in an overall rate of 99.2 percent. However, notable differences arose in alcohol consumption, with a higher prevalence among households led by males (14.5 %) compared to those led by females (6.7 %).

Table 17.5: Percentage Share of Household Heads by Type of Food Consumed, Zambia 2022

Selected Food	Male	Female	Total
Bread	44.7	41.7	43.8
Maize	84.4	85.6	84.8
Rice	29.4	27.2	28.8
Millet	2.3	1.5	2.1
Sorghum	1.1	1.5	1.2
Sweet Potatoes	72.0	72.0	72.0
Potatoes	16.6	14.6	16.0
Beans	63.8	60.9	62.9
Cassava	17.8	16.9	17.6
Eggs	63.1	56.0	61.0
Sugar	79.5	74.5	78.1
Fish	81.7	77.2	80.4
Chicken	61.5	53.4	59.2
Vegetables	99.1	99.4	99.2
Fruit	46.4	46.6	46.5
Milk	28.8	26.0	28.0
Meat	71.4	63.2	69.1
Cereals roots and Tubers	96.3	95.8	96.2
Pulses	74.8	72.4	74.1
Oil	87.9	87.3	87.7
Alcohol	14.5	6.7	12.2

17.3 Foods Consumed from Own Produce

The importance of own produced food in Zambia is pivotal for ensuring food security, yet it also underscores the vulnerability to crop failure and the impacts of climate change. With a substantial portion of the population reliant on agriculture for sustenance and livelihoods, local food production plays a critical role to ensure continued access to adequate and nutritious food supplies.

However, the risks of crop failure due to unpredictable weather patterns, prolonged droughts, and erratic rainfall pose significant challenges to food security in Zambia. In this section, we highlight findings from the 2022 LCMS on household consumption of food from their own produce. It is possible to consume food from more than one source. Nonetheless, for the purpose of this analysis, we particularly look at maize, rice, beans, cereals, roots & tubers, cassava and sorghum consumed from "own produce" by households.

Table 17.6 shows the proportion of households by type of food item consumed from their own Produce by Province in 2022. Results show notable disparities in consumption patterns across different regions. Survey results show that 63.9 percent of the households in Eastern Province consumed maize from their own production reflecting the largest proportion while Lusaka Province accounted for the least proportion at 5.2 percent. Similarly, rice consumption from own produce was minimal across most provinces, with notable exceptions in Muchinga (19.9 percent) and Western (22.0 percent) provinces. Beans consumption from own produce showed considerable variability, with relatively higher proportions in Northern and Luapula provinces at 43.1 and 42.5 percent, respectively.

Further, higher proportions of households in Muchinga, Northern, Luapula, North-western and Western provinces consumed cassava with Muchinga and Northern accounting for 80 and 82.9 percent, respectively. Similarly, 68.7 and 66 percent of the households in Muchinga and Northern provinces consumed cereals, roots and tubers representing the largest and second largest proportions.

Notably, sorghum consumption from own produce was most prevalent in provinces like Muchinga (100.0 percent) and Western (70.7 percent), while being negligible in others.

Table 17.6: Proportion of Households by Type of Food Item Consumed from Own Produce by Province, Zambia 2022

Province	Maize	Rice	Beans	cereal roots and tubers	Cassava	Sorghum
Central	39.8	0.0	7.1	49.5	63.2	0.0
Copperbelt	13.7	0.3	4.4	18.1	14.9	48.7
Eastern	63.9	3.8	15.6	64.8	60.0	0.0
Luapula	39.8	1.5	42.5	58.9	67.1	0.0
Lusaka	5.2	0.4	1.5	9.8	4.3	93.9
Muchinga	57.3	19.9	35.0	68.7	80.0	100.0
Northern	43.1	14.9	43.1	66.0	72.9	45.9
North western	40.3	2.4	23.2	51.0	64.1	0.0
Southern	40.0	0.0	5.5	46.2	20.5	45.5
Western	40.1	22.0	17.3	57.9	52.3	70.7
Zambia	**33.6**	**4.2**	**15.4**	**43.6**	**59.1**	**72.4**

Table 17.7 shows the proportion of households by type of food item consumed from own produce by rural/urban in 2022. Maize consumption from own produce was substantially high in rural areas (54.9 %) compared to urban areas (7.2 %). Similarly, rice consumption from own produce is more prevalent in rural settings (10.5 %) than in urban environments (0.6 %). Further, household consumption of beans from own production was higher in rural areas (26.5 %) than in urban areas (2.7 %). Additionally, 67.5 percent of the households in rural areas consumed cereal roots and tubers, compared to urban settings (10.4 percent). Sorghum consumption from own produce follows a similar pattern, with a substantially higher proportion in rural areas (76.5 percent) compared to urban areas (39.3 percent).

Table 17.7: Proportion of Households by Type of Food Item Consumed from Own Produce by Rural/Urban, Zambia 2022

Rural/Urban	Maize	Rice	Beans	cereal roots and tubers	Cassava	Sorghum
Rural	54.9	10.5	26.5	67.5	73.5	76.5
Urban	7.2	0.6	2.7	10.4	18.7	39.3
Total	**33.6**	**4.2**	**15.4**	**43.6**	**59.1**	**72.4**

Table 17.8 shows the proportion of households by type of food item consumed from own produce by stratum, in 2022. Results show that small-scale households were substantially dependent on own-produced maize (60.8 %), rice (11.2 %), and beans (29.4 %). Similarly, high consumption rates were recorded for cereal roots and tubers such as cassava (73.6 %) and sorghum (76.6 %). Medium-scale households also showed higher consumption rates from own produce, particularly maize (61.7 %) and rice (13.9 percent). Further, results show that larger proportions of households heavily relied on own produced maize (73.7 %) and cassava at 81.0 percent. In contrast, non-agricultural households reported substantially lower consumption rates from own produce across all food categories, indicating a lower level of self-sufficiency. Low-cost households displayed minimal reliance on own-produced food items, particularly on maize (7.6%) and rice (0.7 %), indicating higher dependence on external food sources. Medium and high-cost households also reported minimal consumption from own produce, underscoring potential disparities in access to homegrown food items across different socio-economic strata.

Table 17.8: Proportion of Households by Type of Food Item Consumed from Own Produce by Stratum, Zambia 2022

Stratum	Maize	Rice	Beans	cereal roots and tubers	Cassava	Sorghum
1. Small Scale	60.8	11.2	29.4	73.6	77.9	76.6
2. Medium Scale	61.7	13.9	28.2	71.4	66.4	98.9
3. Large Scale	73.7	20.1	32.5	76.4	81.0	.
4. Non-Agric	22.0	4.7	10.0	33.7	50.7	47.2
5. Low Cost	7.6	0.7	2.9	10.8	21.3	49.7
6. Medium Cost	5.4	0.3	1.7	9.4	9.8	0.0
7. High Cost	5.7	0.1	2.3	7.7	8.4	0.0
Total	**33.6**	**4.2**	**15.4**	**43.6**	**59.1**	**72.4**

Table 17.9 depicts the proportion of households by type of food item consumed from own produce by socio-economic status, in 2022. Among the non-poor households, results show lower reliance on own-produced food items, with maize at 19.3 percent, rice at 1.4 percent, and beans at 7.6 percent. Moderately poor households displayed higher levels of self-sufficiency, with greater proportions consuming own-produced maize (41.4 %), rice (7.4 %), and beans (18.1 %). Extreme poor households exhibited the highest reliance on own-produced food items, with maize consumption at 49.5 percent, rice at 14.9 percent, and beans at 27.4 percent.

Across all poverty statuses, consumption of cereal roots and tubers by households, particularly cassava, ranging from 25.3 percent among the non-poor households to 74.1 percent among extreme poor households. Sorghum consumption from own produce was also prominent across all poverty statuses, with percentages ranging from 55.7 percent among non-poor households to 78.7 percent among extreme poor households.

These findings underscored the varying degrees of self-sufficiency in food production across different poverty statuses, with the most vulnerable households relying more heavily on own-produced food items for their dietary needs.

Table 17.9: Proportion of Households by Type of Food Item Consumed from Own Produce by socio-economic Status, Zambia 2022

Poverty Status	Maize	Rice	Beans	cereal roots and tubers	Cassava	Sorghum
Non-poor	19.3	1.4	7.6	25.3	40.5	55.7
Moderately poor	41.4	7.4	18.1	53.8	63.6	74.0
Extreme poor	49.5	14.9	27.4	62.0	74.1	78.7
Total	**33.6**	**4.2**	**15.4**	**43.6**	**59.1**	**72.4**

Table 17.10, shows the proportion of households by type of food item consumed from own produce by sex of household head in 2022. Both male and female-headed households showed similar levels of reliance on own-produced food items. For instance, maize consumption from own produce stood at 33.9 percent for male-headed households and 32.9 percent for female-headed households. Rice consumption from own produce was reported at 4.4 percent for male-headed households and 3.8 percent for female-headed households. Similarly, beans consumption from own produce was 16.2 percent for male-headed households and 13.2 percent for female-headed households. For cereal roots and tubers, particularly cassava, 44.2 percent among male-headed households relative to 54.8 percent among female-headed households relied on own produce. Sorghum consumption from own produce

was also notable, with male-headed households reporting 65.1 percent and female-headed households reporting 85.6 percent. Overall, the findings suggest a relatively balanced reliance on own-produced food items across households headed by both males and females.

Table 17.10: Proportion of Households by Type of Food Item Consumed from Own Produce by Sex of Household Head, Zambia 2022

Sex	Maize	Rice	Beans	cereal roots and tubers	Cassava	Sorghum
1. Male	33.9	4.4	16.2	44.2	60.7	65.1
2. Female	32.9	3.8	13.2	42.3	54.8	85.6
Total	**33.6**	**4.2**	**15.4**	**43.6**	**59.1**	**72.4**

17.4 Top twenty Consumed Food Items

Table 17.11 shows the percentage share of households of the top twenty items consumed by type and rural/urban, in 2022. Notably, salt emerged as one of the most consumed items across all categories, with a national consumption rate of 94.0 percent, followed closely by tomatoes at 91.1 percent. Further, while tomatoes held the top spot in urban areas with a consumption rate of 98.4 percent, salt remained closely in the second position at 95.1 percent.

Conversely, in rural regions, salt maintained its dominance with a consumption rate of 93.2 percent, slightly higher than tomatoes at 86.1 percent. Cooking oil also ranked consistently high across all segments, with an average national consumption rate of 87.0 percent, slightly dipping to 82.6 percent in rural areas and maintaining a strong presence at 93.3 percent in urban settings.

Table 17.11: Percentage Share of Households of the Top twenty Items Consumed by Type and Rural/Urban, Zambia 2022

Item	National	Item	Rural	Item	Urban
Salt	94.0	Salt	93.2	Tomatoes	98.4
Tomatoes	91.1	Tomatoes	86.1	Salt	95.1
Cooking Oil	87.0	Cooking Oil	82.6	Sugar	93.5
Rape	83.5	Rape	78.8	Cooking Oil	93.3
Sugar	78.1	Sugar	67.3	Onion	92.6
Onion	72.9	Sweet potato	65.7	Rape	90.2
Sweet potato	67.2	Onion	59.3	Eggs	79.3
Dried beans	62.9	Dried beans	56.9	Dried beans	71.6
Eggs	61.0	Chicken (Fresh)	48.6	Sweet potato	69.3
Chicken (Fresh)	53.2	Eggs	48.4	Tea leaves/tea bags	62.3
Cabbages	47.8	Hammer mealie meal	45.2	Breakfast mealie meal	60.8
Kapenta (dried)	46.4	Cabbages	43.9	Kapenta (dried)	60.3
Kalembula/Sweet Potato leaves	36.4	Kapenta (dried)	36.7	Chicken (Fresh)	59.9
Tea leaves/tea bags	35.5	Pumpkin leave	33.1	Cabbages	53.4
Pumpkin leave	33.3	Kalembula/Sweet Potato leaves	31.2	Bread/ Bread	53.3
Hammer mealie meal	33.2	Other fish	29.5	Impwa	46.5
Okra	32.3	Groundnuts shelled	28.2	Kalembula/Sweet Potato leaves	44.0
Impwa	31.3	Okra	27.2	Bananas	43.2
Bread/ Bread rolls	31.0	Maize grain	25.6	Okra	39.5
Breakfast mealie meal	29.6	Munkoyo	23.5	Milk (fresh)	37.7

17.5 Consumption of Breakfast Mealie Meal – Refined Mazie

Recent debates surrounding refined maize, particularly in the context of breakfast mealie meal in Zambia, have centered on its impact on public health and food security. Health experts and policymakers have raised concerns about the prevalence of refined maize products in the Zambian diet and their potential contribution to the country's nutrition-related challenges. There's a growing recognition of the need to address the overconsumption of refined maize and promote the consumption of whole, nutrient-dense foods to improve public health outcomes. Additionally, discussions have emerged regarding the economic implications of Zambia's dependence on refined maize, with calls for greater support for small-scale farmers producing diverse crops to enhance food sovereignty and resilience in the face of climate change and other challenges. These debates underscore the complex interplay between diet, health, economics, and sustainability, prompting stakeholders to explore holistic approaches to address the disadvantages associated with refined maize consumption.

Table 17.12 shows the percentage share of households who consumed refined Maize by province, rural/urban, stratum, poverty status and sex of household head in 2022.

At national level, results show that almost double the proportion of households countrywide reported consuming unrefined maize at 65.1 percent compared to 34.9 percent that reported refined maize at 34.9 percent. Further disaggregated by sex of household head, similar to the pattern at national level, among male-headed households, 36.1percent consumed refined maize relative to 63.9 percent that consumed unrefined maize. Among female-headed households, 32.1 percent consumed refined maize relative to 67.9 percent who consumed unrefined maize.

Analysed by poverty status, results show that larger proportions of non-poor households (57.4%) consumed refined maize while comparatively larger proportions of moderately and extremely poor households consumed unrefined maize at 80.6 and 88.7 percent, respectively.

Analysed by rural/urban, 90 percent of the households in rural areas consumed unrefined maize while 65.1 percent of the households in urban areas consumed refined maize.

Analysed by province, households in Lusaka and Copperbelt provinces accounted for the largest and second largest proportions of households that consumed refined maize at 73.3 and 61.9 percent, respectively while households in the remaining provinces consumed unrefined maize with Luapula and Northern having the largest and second largest proportions at 91.6 and 89.8 percent, respectively.

Table 17.12: Percentage Distribution of Households who Consumed Refined Maize by Sex of Household Head, Poverty Status, Rural/Urban, Stratum and Province, Zambia 2022

Sex of Household Head, Poverty Status, Rural/Urban, Stratum and Province	Breakfast Mealie Meal (refined maize)	Unrefined maize (Whole grain)
National	**34.9**	**65.1**
Sex of Head		
Male	36.1	63.9
Female	32.1	67.9
Poverty Status		
Non-poor	57.4	42.6
Moderately poor	19.4	80.6
Extreme poor	11.3	88.7
Residence		
Rural	10.0	90.0
Urban	65.9	34.1
Stratum		
Small Scale	7.6	92.4
Medium Scale	8.9	91.1
Large Scale	11.7	88.3
Non-Agric	21.9	78.1
Low Cost	63.2	36.8
Medium Cost	73.3	26.7
High Cost	83.1	16.9
Province		
Central	26.5	73.5
Copperbelt	61.9	38.1
Eastern	26.7	73.3
Luapula	8.4	91.6
Lusaka	73.4	26.6
Muchinga	15.4	84.6
Northern	10.2	89.8
North-western	26.0	74.0
Southern	15.2	84.8
Western	17.3	82.7

ANNEX 1: ESTIMATING A CONSISTENT POVERTY AND INEQUALITY TREND IN ZAMBIA

2015-2022 Poverty and Inequality Trend Methodological Note
Zambia Statistics Agency and World Bank
September 2023

Introduction

This note presents results of the poverty trend estimates for the period 2015-2022 drawing on the data collected in the 2015 and 2022 Living Conditions Monitoring surveys. This period covers an initial phase of slow economic growth (2015-2018), negative growth during 2019 and 2020, followed by a recovery in 2021 and 2022. All in all, real GDP per capita has fallen by 2.7 percent between 2015 and 2022 (ZamStats[1]), highlighting that GDP growth remained below population growth over the period .

Given the 7-year lapse between the last and preceding LCM surveys, there are bound to be differences across the two. Guidelines and best practices evolve over time, and it is expected that newer surveys adopt these recommendations. For the purpose of poverty and inequality measurement, changes can be driven by differences in survey design (e.g., extended field-work period, adoption of CAPI), questionnaire design (e.g., updated item list, different recall period), or in computation of the consumption aggregate (e.g., methodology to impute rent). Any of these changes compromises the comparability of the estimates and therefore needs to be properly addressed. Differences driven by a revised methodology can often be addressed by re-estimating past numbers following the new approach. Changes in survey or questionnaire design, on the other hand, often require adopting different statistical methods.

There are two main differences between the 2015 and 2022 LCMS which led to adoption of revised statistical methods to estimate the 2015-2022 trend. First, the food module adopted a different recall period. In 2015, the recall period was fixed (i.e., while the period changed across items, all respondents reported about the same period). In 2022, the reference period of the initial incidence question (i.e., did you purchase/consume/receive...?) was fixed, but respondents were then allowed to select the relevant reference period for the follow-up questions on quantities and value. This change was adopted following ZamStats years of experience in data collection, in order to allow respondents to change the recall period depending on the type of food item and frequency of purchase. Second, due to a typo in the programming of the CAPI questionnaire, the reference period for frequent non-food items changed from 4 weeks to 12 months[2].

1 Real GDP pc (K), National Accounts: 2015 – 8,078.3 K/pc ; 7,860.5 K pc.

2 Another difference across surveys which is not directly dealt with in this work is the field work period. Annex 9 documents available evidence on seasonality patterns.

To restore comparability, two alternative estimation methods to measure the poverty trend and one for the inequality trend were rigorously employed. Both strategies rely on identifying a subset of the consumption aggregate that is comparable across surveys and on the assumption that the underlying relationship between the comparable and non-comparable portions is stable over time. The comparable portion of consumption includes health, a subset of education, clothing, financial services, durables, and housing. In 2015, this comparable portion accounts for 33.7% of total consumption and has a correlation of 0.987 with total consumption. More concretely, the first method – SWIFT – trains a consumption model using actual 2015 Survey data and then uses the model to estimate the 2022 consumption aggregate. The methodology uses multiple imputation and machine learning techniques to train the model. The SWFT approach was first created in 2014 and has since been implemented in numerous countries to either restore comparability between surveys, increase frequency of official statistics, conduct rapid poverty monitoring in crises contexts, among others[3]. The second method is the approach taken by Deaton 2003 to restore comparability between the National Sample Survey (NSS) rounds in India. This method consists of estimating the probability that a household falls below the poverty line. It does so by relying on the relationship between the comparable portion of household consumption and total household consumption. Both models also use additional household characteristics and food consumption dummies.

To compute the comparable portion of household consumption, this paper follows the official poverty methodology adopted in the 2015 LCMS report (ZamStats 2015). This includes methodological choices regarding imputations of rents, water, electricity and durable goods, among others. The construction of prices indices including the temporal and spatial adjustment factors, also follows the 2015 approach. Lastly, the analysis uses the 2015 poverty line expressed in 2022 prices using national CPI[4].

The objective of this paper is to produce 2022 poverty and inequality estimates that can be compared to the 2015 estimates and thereby assess progress over time. In 2022, the World Bank published revised guidelines for measuring poverty (see Mancini and Vecchi 2022). Additionally, the 2022 questionnaire collected new information that cannot be used for the estimation of trends because it was not available in 2015. A separate paper will therefore be published later with the new 2022 poverty and inequality estimates based on the revised methodology. These new point estimates will provide a baseline for future poverty trend assessments.

The rest of the note is structure as follows: Section II describes the differences and commonalities across both surveys; Section III describes the estimation strategies; Section IV presents the results; and Section V concludes.

Differences and commonalities between 2015 and 2022 surveys

Changes in the questionnaire

This section analyses the changes to the recall period that were implemented in the two modules of the

3 For more details see WB 2022.

4 This is the only part of the 2015 methodology that was not retained. In 2015, the food component of the 2010 poverty line was updated separately using food inflation, and then the non-food component was added later based on the average share of non-food consumption around the poverty line. If poverty increases, as it appears to have done between 2015 and 2022, the non-food component is likely to decrease, which could lead to an underestimation of poverty.

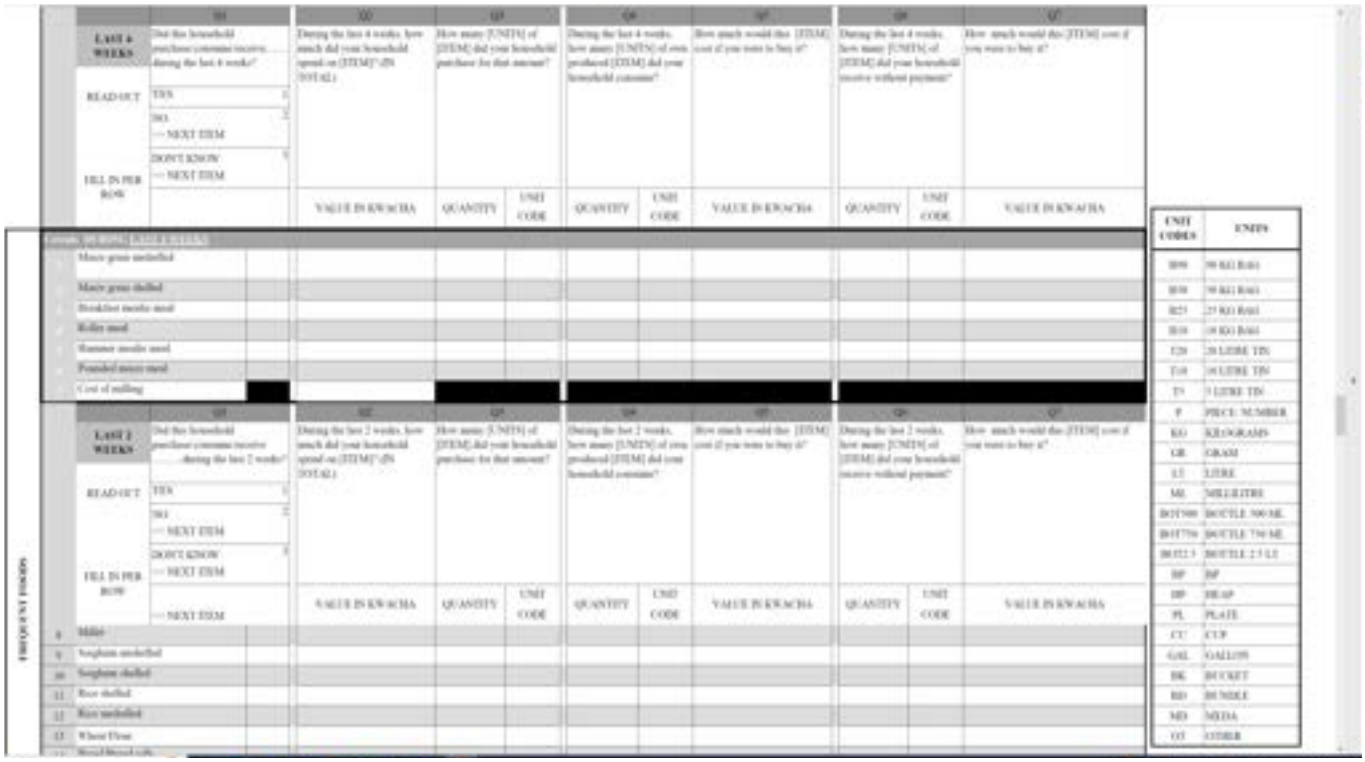
questionnaire: food and frequent non-food. It is well documented in the literature that changing the recall period affects household's reported consumption, and therefore may make results non-comparable. On the one hand, a longer recall period is better able to capture infrequent or less structured consumption, but it can also lead to underestimation of consumption because memory tends to decline over time (Backny-Yetna et al. 2014, Deaton 2001). On the other hand, a shorter recall period facilitates the recall process, but it is more likely to miss goods that are consumed more infrequently. Shorter recall periods can also induce a phenomenon known as telescoping, where people tend to report goods consumed just outside of the reference period (Deaton and Grosh, 1998). The final impact of moving the recall period will therefore depend on the type of good and on household's consumption patterns. In practice, evidence generally finds that a shorter recall period is associated with higher mean consumption[5].

Food module

In 2015, the food module (section 11.a) had two reference periods depending on the type of good (item) and the identified frequency of purchase of the item. A few items which are usually purchased I bulk, such as cereals, have a 4-week reference period. The rest has a 2-week reference period. Most importantly, the period was fixed across all respondents. In 2022, the recall period for the initial binary question (did you consume item X?) was kept unchanged at 4 weeks, but then a supplementary question was introduced after each purchase/ own-consumption/gift question to document whether the purchase/ own-consumption/gift took place in the last 7 days/ 2 weeks/ 4 weeks. In effect, this amounts to letting the respondent choose his/her preferred recall period (Figure 1).

Figure 1: 2015 vs 2022 LCMS questionnaires, food module

2015 Questionnaire



5 See Backiny-Yetna et al. 2014; Beegle et al. 2012; Deaton and Kozel 2005; Deaton 2001; Friedman et al. 2016; Gibson 2005; Visaria 2000.

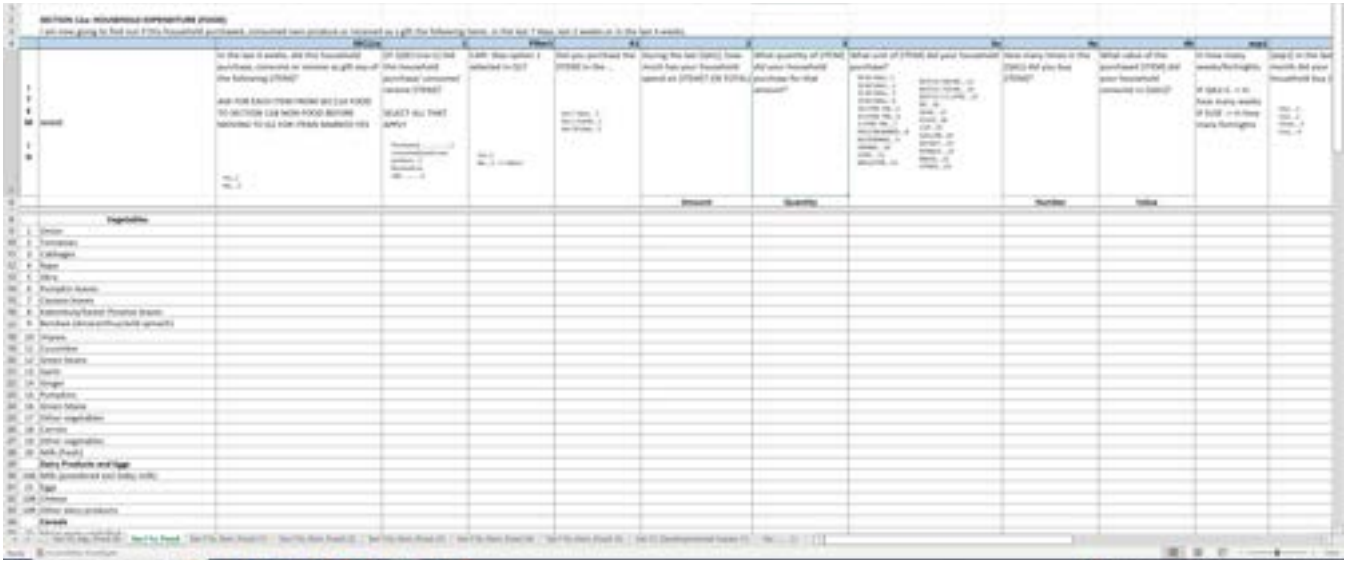


Table 1 shows the frequency of self-selected recall periods by area of residence and education of the household head across all items. It shows that less educated households tended to select shorter recall periods than more educated households. Annex 1 shows similar findings using a regression framework that controls for area of residence, province, household size, type of item (perishable vs non-perishable), source of consumption (purchased, own production, gift), education of the household head, and log of non-food consumption. Households with a more educated household head were more likely to select a 4-week reference period. Since the model controls for non-food consumption, this effect was not entirely driven by the fact that more educated heads were more likely to live in non-poor households. Similarly, findings show that higher non-food consumption increased the likelihood of choosing the longer 4-week recall period[6].

Table 1: Frequency of response for food purchase (%), all items

Area of residence	7 days	2 weeks	4 weeks	All
Rural	45.5	24.5	29.9	100
Urban	42.9	24.2	32.9	100
Total	44.3	24.4	31.3	100
Education of household head				
Incomplete primary	48.47	25.73	25.81	100.00
Complete primary	48.50	24.29	27.20	100.00
Incomplete secondary	46.16	24.64	29.21	100.00
Complete secondary	41.99	23.11	34.90	100.00
Post-secondary	33.65	23.42	42.92	100.00

6 To our knowledge, the implementation of self-reported recall period is very unique. Therefore, there isn't any evidence to assess whether this pattern of selection is common in other settings, what could the drivers be (e.g., different purchase patters or cognitive processes), or evidence trying to establish the implications in terms of accuracy of reporting. Initial exploratory analysis with the 2022 LCMS shows that the pattern of selection of recall periods holds within each specific item, suggesting that the pattern is not driven by a systematic difference in the perishable/non-perishable composition of household consumption across socio-economic status. Another hypothesis is that it may reflect the ability of richer households to purchase in bulk. A simple comparison of purchased quantities in the selected reference period do not support this hypothesis because quantities do not increase proportionally to the length of the recall period. However, the questionnaire has additional questions on frequency of purchase in the last month which may shed additional light on this question. Further analysis of the 2022 questionnaire will be done in the process of estimating the new 2022 baseline estimates.

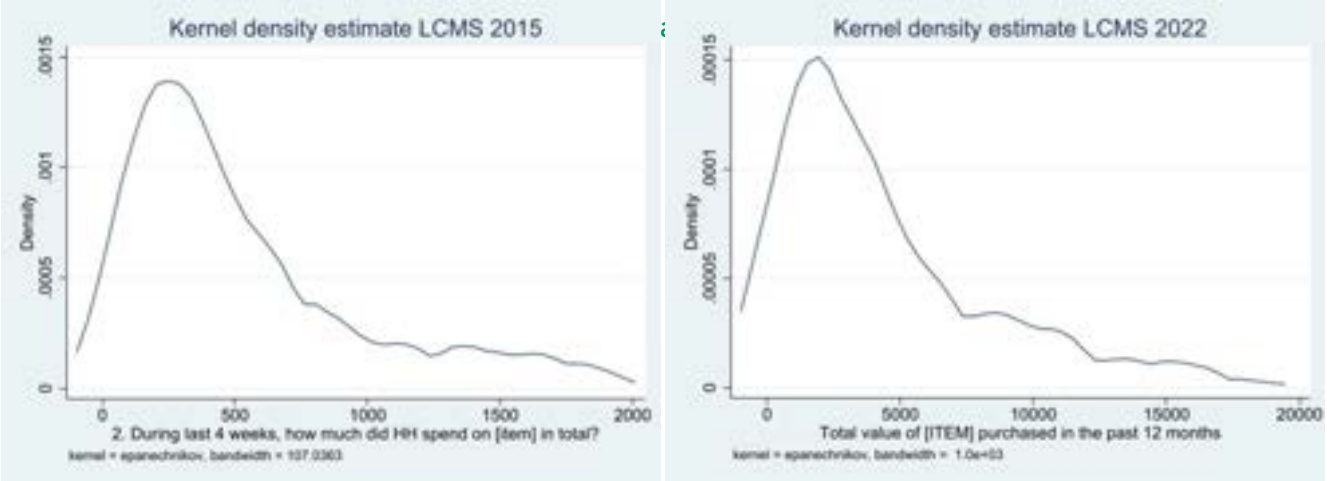
Source. Authors' calculations using XXX.

Evidence from the literature can be used to conjecture the potential direction of the bias to be expected in poverty and inequality estimates based on the 2022 questionnaire. Concretely, since poorer (low education) households tended to use shorter recall periods, the survey was more likely to overestimate the consumption of poor households compared to the 2015 survey. On the other hand, for non-poor (high education) households that used longer recall periods, consumption was likely to be under-estimated compared to the 2015 Survey. The Survey was therefore likely to overestimate poverty and underestimate inequality. Exploratory analysis of the data confirms these patterns of over- and under-reporting. A regression analysis shows a systematic over-reporting (under-reporting) for the 7-day (4-week) recall period relative to the 14-day recall period (which is the one used in 2015). Propensity score matching for select items confirms this finding. This was also validated when comparing reported consumption with the predicted consumption described in section 2, which was estimated to be consistent with the flat 14-day recall across all items and for all households. Details results presented in Annex 2.

Frequent Non-food

The CAPI questionnaire has a reference period of 12 months, which is a big change relative to the 4-weeks implemented in 2015. This change, however, was unintentional. The paper version had the traditional 4-weeks. Amidst this inconsistency, it was important to establish which of the two reference periods was effectively implemented in the field. It is possible that the training emphasized 4-weeks, and that some (or most) interviewers asked about 4 weeks. In that event, part of the data could have been comparable across rounds.

The first check was to assess consistency across enumerators. The analysis suggests that the 12-month question was consistently applied across enumerators, items, week of data collection, and enumeration areas. Across all these categories, the share of extreme values compared to 2015 was consistently around 30% of responses, which suggests that the misreporting is consistent across items. Extreme values were identified based on 2015 thresholds for outliers, taking into account inflation between 2015 and 2022. Furthermore, there is no double peak in the distribution of values, as could be expected if different recall periods (4 weeks/12 months) had been used (Figure 2). The example below for vehicle maintenance shows that the distribution of values looks similar in 2015 and 2022, although the scale is different. The same pattern is observed for other items.



The second check was to assess whether the reported values were more likely to be 4-week or 12-month reports (Table 2). Total reported nominal household consumption values for frequent non-food items were, on average, around 5 times larger than in 2015. As reference, average unweighted inflation for those items over this period was 105%, and real expenditure on infrequent non-food items (which are comparable across both years) fell by 6%. The reported increases for frequent non-food items are thus too large to be plausibly attributed to inflation or increased consumption, suggesting that they do not correspond to a 4-week reference period.

Table 2: Median household consumption reported in 2015/2022 (frequent non-food items)

Item description	2015	2022	Inflation
158. Garbage collection (solid waste)	15.1	75.0	60%
159. Gas	74.3	629.2	3%
160. Keroscene/ fuel for cooking/ lighting	3.9	58.3	104%
161. Coal, excl charcoal	8.2	116.3	74%
162. Batteries, lightbulbs, lighters, matches, candles	3.8	20.0	200%
163. Other housing expenses	35.5	80.7	104%
164. Bath/ hand-washing soap	4.6	50.0	186%
165. Laundry detergent	5.3	71.4	142%
166. Toothpaste and toothbrushes	2.6	33.3	133%
167. Sanitary towels	5.0	45.0	81%
168. Toilet paper and other tissues	4.3	50.0	122%
169. Cosmetics (e.g. lotion, creams, glycerine, make-up, petroleum jellies etc)	8.5	66.7	102%
170. Hair care (eg perming, braiding hair, conditioning, shampooing, haircuts,	22.4	62.5	210%
171. Laundry services (eg dry cleaning, washing at the laundry, etc.)	36.9	75.0	41%
172. baby diapers	12.4	83.3	100%
173. Cleaning agents, (excluding soap and laundry detergents)	12.5	87.5	104%
174. Insecticides	5.6	41.9	104%
175. Other hygiene expenses	32.5	42.0	104%
176. Public transport to and from work	51.1	166.7	206%
177. Public transport to & from school incl boarding and abroad	49.1	131.0	206%
178. Other public transport (eg to/from church, visits)	28.4	100.0	206%
179. Petrol/ diesel/ oil	209.6	762.5	218%
180. Vehicle maintenance and repairs	230.5	625.0	60%
181. Motorbike repairs	64.1	125.0	37%
182. Bicycle repairs (tyres, tubes, solution, etc)	9.2	40.0	158%
183. Boat/ canoe repairs	12.8	33.3	37%
184. Other private transport	34.7	126.8	104%
185. Mobile phones (connection fees, air time ecl cost of phone)	35.9	66.7	12%
186. Landline phones(connection fees, pre paid & post paid)	26.0	75.0	8%
187. Internet (connection and subscription fees)	62.2	120.0	62%
188. Postal expenses	20.2	100.0	17%
189. Other communication expenses	18.3	83.3	104%
190. Entertainment (eg cinema, disco/watching soccer/boxing)	107.0	325.0	111%
191. Domestic servants	185.3	875.0	50%
192. Stationery (excluding stationery for education)	15.7	40.0	104%
193. Typing services, filling in official forms	18.7	26.8	104%
194. Other expenses	73.3	50.0	104%
Total	**20.9**	**57.1**	**104%**

Source: LCMS 2015/2022. Item-specific inflation provided by ZamStats' CPI team.

Drawing from the literature, this change would likely result in significant under-reporting of consumption, and therefore an overestimation of the poverty rate. Indeed, 2022 consumption is nowhere near 12 times 2015 consumption – a coarse estimate of annualized 2015 estimates. Similarly, the share of frequent non-food consumption in total non-food decreased from 31% in 2015 to 20% in 2022.

Policy-induced comparability challenges. Education expenditures

In terms of questionnaire design, school expenditures fall under the comparable portion of household expenditures. However, public secondary school fees were eliminated in 2022. If those savings are reallocated to the non-comparable components of the consumption aggregate (food and frequent non-food expenditures), they will alter the share of comparable to non-comparable consumption between the two surveys. This invalidates the critical assumption underlying the prediction models: that the relation between comparable and non-comparable consumption is consistent over time, such that the former can be used to predict the latter across surveys. The comparable portion of household expenditure therefore excludes fees and PTA contributions from education expenditures[7].

Table 3 shows that average per capita expenditures on education have decreased by 25% in nominal terms since 2015. However, the decrease is not limited to households with children enrolled in public secondary schools. In fact, educational expenditures decreased almost as much in households where no one was enrolled in public secondary school. Furthermore, while the proportion of children enrolled in public secondary schools increased during this period, there was also an increase in out-of-school children for this age-group (14-17, see Table 4). This suggests that the decrease in educational expenditures reflects, at least in part, a negative welfare impact. For these reasons, it is challenging to disentangle welfare-enhancing decreases in educational expenditures that are due to public subsidies, from decreases in educational expenditures that are due to negative welfare effects. If all education expenses were to be considered comparable, the model would implicitly consider the entire decrease in education expenditures as resulting from negative welfare effects. Everything else equal, this would be expected to overestimate the 2022 poverty rates. Results including all education expenses are presented in the annex as robustness checks.

Table 3: Nominal monthly per capita expenditures on education (K), by type of school

	Total 2015	Excluding fees 2015	Total 2022	Excluding fees 2022
No one in primary/secondary school	1.4	0.3	2.5	0.7
None in public secondary	24.2	4.4	18.7	6.1
Some in public secondary	36.0	7.7	26.2	10.4
All in public secondary	27.0	6.6	16.5	9.3
Total	**24.3**	**5.0**	**18.0**	**6.8**

7 The elimination of school fees would have not been a problem if 2015 and 2022 questionnaires were the same, at least under the assumption of a marginal propensity to consume of a 100%. Savings on schooling would have been allocated to other areas, leaving total household consumption unchanged.

Table 4: School status of children aged 14-17 (%), by area of residence and year

	In public secondary schools	In other schools (primary/ tertiary or private)	Out-of-school	All children aged 14-17
Rural 2015	60.7%	15.9%	23.4%	100%
Urban 2015	74.9%	9.6%	15.5%	100%
National 2015	67.0%	12.9%	20.1%	100%
Rural 2022	61.6%	10.7%	27.8%	100%
Urban 2022	79.1%	3.6%	17.3%	100%
National 2022	68.7%	7.5%	23.9%	100%

Estimating the comparable component

The remaining components of the consumption aggregate can be consistently estimated in both rounds. The questionnaire remained the same, and therefore an application of the 2015 methodology would deliver comparable results. This includes the following non-food expenditures: health, a sub-set of education, clothing, financial services, durables, and housing. In total, they account for 33.7% of total expenditures in 2015 (Table 5). For details about how these sub-components were estimated, including the methodology behind imputed rent and the user value of durable goods consult ZamStats 2015 report. Similarly, that document also describes the construction of the spatial and temporal price indexes used in the analysis. For the comparable portion, this work replicates the official poverty methodology implemented in 2015.

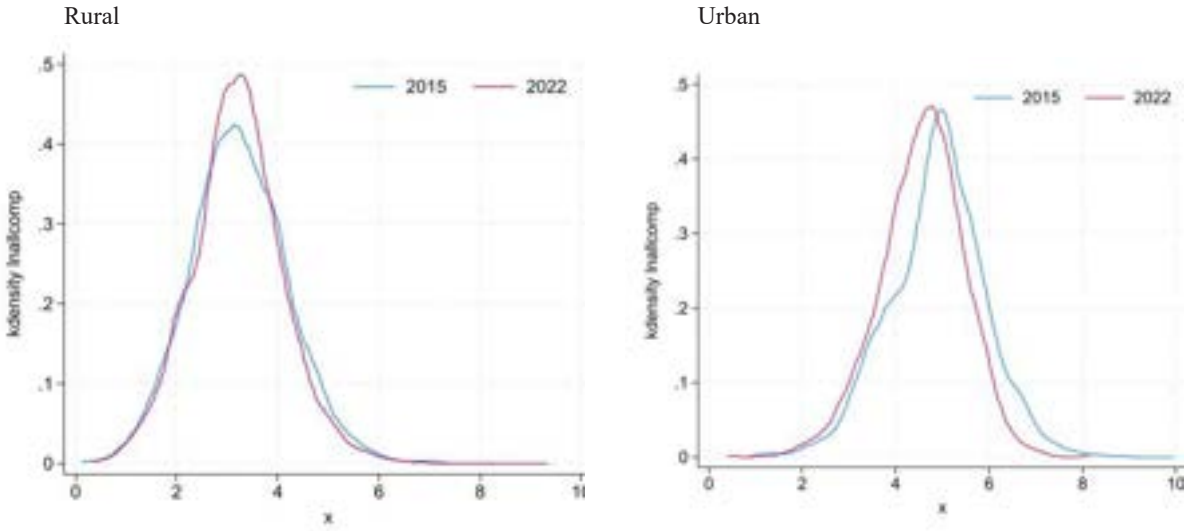
Table 5. Brake-down of expenditures into comparable and non-comparable components

Expenditure component	% of total expenditures in 2015
Food (non-comparable)	40.6%
Frequent non-food (non-comparable)	19.1%
Education fees and PTA (non-comparable)	6.6%
Comparable (total)	33.7%
Comparable (housing)	22.9%
Comparable (furniture)	3.8%
Comparable (other)	7.0%

Figure 3 shows the distribution of the comparable component of the consumption aggregate in 2015 and 2022, deflated to 2015 prices. From the graphs, it is very clear that the distribution of the urban consumption aggregates has shifted markedly leftwards since 2015, meaning that consumption has decreased in real terms. For the rural component, the picture is less clear, as the distributions overlap. There may have been a slight narrowing of the distribution, indicating a slight reduction in intra-rural inequality to the detriment of better-off rural households. Since more than 50% of the population is poor in Zambia, the poverty line falls in the top half of the distribution (214 K/per adult equivalent. in 2015 prices, corresponding to a natural logarithmic value of 5.36). Consequently, this may translate into

a slight increase in the rural poverty headcount rate, even if inequality appears to have decreased and the depth of poverty has not visibly worsened.

Figure 3: Distribution of the comparable component of the consumption aggregate in 2015/2022, by area of residence



Estimation strategies

To overcome the comparability challenges, this paper relies on statistical methods to estimate poverty and inequality trends. The first method is SWIFT, which involves predicting the consumption level of the household based on a number of observable factors that are known to be comparable across surveys and have a stable correlation with the dependent variable over time. The new simulated consumption vector can then be used to estimate various poverty and inequality indices. The SWIFT program was created in 2014 and it has evolved and improved since. It has various applications, one of which is to restore comparability between household surveys[8] . A detailed description of the method is available in Yoshida et al. (2022a).

As a way to further validate the results the paper also implements the approach described in Deaton (2003). This approach was used to recover a comparable poverty trend in India following the change in recall period between the National Sample Survey rounds. This method consists of predicting poverty status based on the comparable subset of the consumption aggregate, under the assumption that this relationship has remained stable over the period of analysis. This method can only be implemented to estimate poverty trends.

Zambia has gone through significant events in the period 2015-2022, including weather shocks, the COVID-19 pandemic, periods of 2-digit inflation, a debt restructuring process[9], among others. While direct evidence that the stability assumption behind the models hold cannot be provided, SWIFT has been shown to perform well over extended periods of time and to capture the effects of shocks[10]. The

8 See for example Lain et al. 2022 for an application in Nigeria and Uochi and Kim 2022 for an application in Mongolia. ZIMSTAT has also used swift to estimate official poverty estimates in Zimbabwe in 2019 following the implementation of a hybrid survey.

9 https://www.mofnp.gov.zm/?p=7444

10 See for example Christiaensen et al. 2012 for evidence in Vietnam, Inner Mongolia, Kenya, and Russia; Douidich et al. 2013 for evidence on Morocco; Yoshida et al. 2022b for evidence on Afghanistan, Albania, Malawi, Romania, Rwanda, Sri Lanka, and Uganda.

stability of the ratio of comparable (infrequent non-food) and non-comparable (food and frequent non-food) behind the Deaton approach is likely to be less robust, as households tend to adapt their consumption patterns in the events of negative shocks (see Buhaug et al., 2015, and Skoufias, 2003).

SWIFT method

SWIFT imputes household expenditure or income data using models trained by a household survey that includes household expenditure or income data (the variable to explain) and also a set of poverty correlates. The imputed household expenditures or income data are comparable to those in the household survey data used to train models.

For Zambia, a model (equation 1) is trained using the 2015 LCMS dataset:

$$\ln y_h = x_h{}'\beta + u_h$$

In equation 1, $\ln y_h$ represents the natural logarithm of per adult equivalent household expenditure for household h. x_h is a vector of poverty correlates for household h with dimensions (k×1). ß is a vector of coefficients for poverty correlates with dimensions (k×1), where k represents the number of variables. u_h refers to the residual for household h[11].

The distributions of ß and u_h are estimated using Ordinary Least Squares (OLS) with the 2015 LCMS dataset. To impute $\ln y_h$ for the 2022 LCMS dataset, Equation 1 is applied with x_h from the 2022 LCMS dataset and ß and u_h randomly drawn from their distributions estimated with the 2015 LCMS dataset. The imputation process follows the multiple imputation technique developed by Rubin (1987) and Schafer (1999), with 20 random draws as recommended by STATA Corp (2021). For further details, refer to Yoshida et al. (2022a).

The selection of variables included in x_h is performed using stepwise regression. To address overfitting problem, the threshold p-value for the stepwise regression is determined through cross-validation. The results of this analysis can be found in Annex 4. Furthermore, to minimize bias in poverty estimation due to model instability, fast-changing variables are included in x_h . The justification and validation of this variable selection process are provided in Yoshida et al. (2022a).

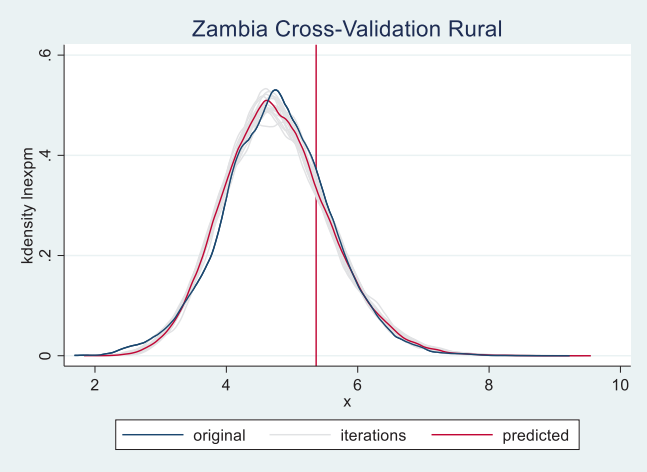
The selected variables in x_h include household composition, education levels, assets, labor market status of household members, food consumption dummies, and the log of the comparable non-food component. Food items were grouped into 13 food types (meat, vegetables, etc.), and dummies were aggregated for each type, thus indicating how many times of a specific food type the household had consumed. To ensure comparability with the 2015 Survey, food items were restricted to those where at least 70% of the 2022 sample selected the recall period from 2015 (Annex 3). Consumption dummies for frequent non-food expenditures were not used, as they would have been affected by the same recall-period comparability issues as the consumption aggregates: the likelihood of buying a given item in the past 12 months is higher than in the past 4 weeks. The final rural and urban models are presented in Annex 4. At 0.91, the R2 of the urban model is larger than the 0.80 R2 of the rural, suggesting that the predictors are able to explain a larger portion of the variation in total expenditure among urban households than among rural households.

11 For this analysis, the distribution of residual is assumed to be normal. But the annex includes the poverty estimation assuming a more flexible distribution assumption using STATA's command "MI PMM."

Their predictive power vis a vis the LCMS 2015 training dataset can be visualized in Figure 5. In grey is each of the 20 consumption vectors estimated at each iteration. In red is highlighted the average across all the iterated predictions.

Figure 5: Distribution of predicted vs. actual log of consumption in 2015

Rural



Urban

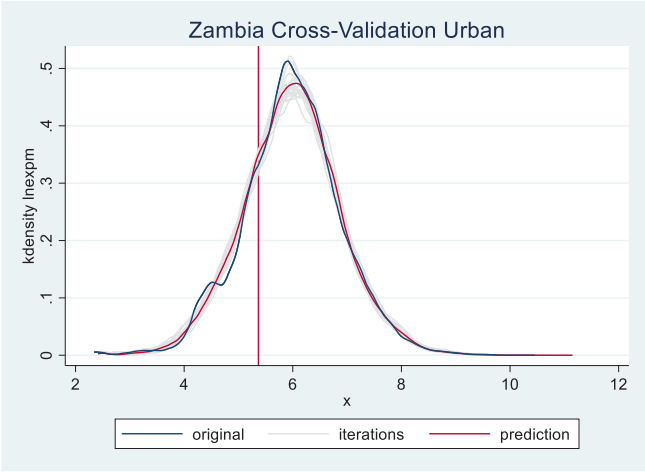
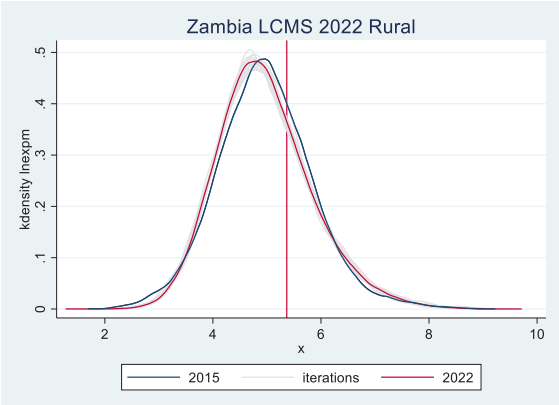


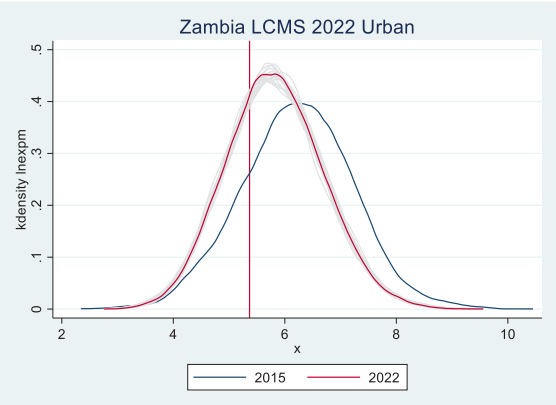
Figure 6 shows the predicted distributions of consumption using the comparable predictors available in LCMS 2015 and 2022, using the parameters estimated from the LCMS 2015 data. Once again, the grey lines show the result of each iteration and the red line shows the average across them[12]. The results show a marked shift to the left for predicted urban consumption, indicating a decrease in consumption at all levels of the distribution. The leftward shift for rural consumption is less pronounced but still visible.

Figure 6: Predicted distribution of the swift models for 2015 and 2022 (log of consumption per adult equivalent), by area of residence

Rural



Urban



12 The average distribution is shown for illustration purposes. To compute poverty rates, for example, we estimate the poverty rate associated with each of the 20 vectors, and then report the average poverty rate across the 20 estimations. A similar process is followed for any statistic produced with the predicted consumption data.

Deaton method

The method proposed by Deaton (2003) allows to compare poverty headcount rates across surveys using a comparable subset of the consumption aggregate. The method involves estimating the probability of a household being above or below the poverty line, conditional on the comparable component of the consumption aggregate being m. The probability is estimated using a logit regression function, such that:

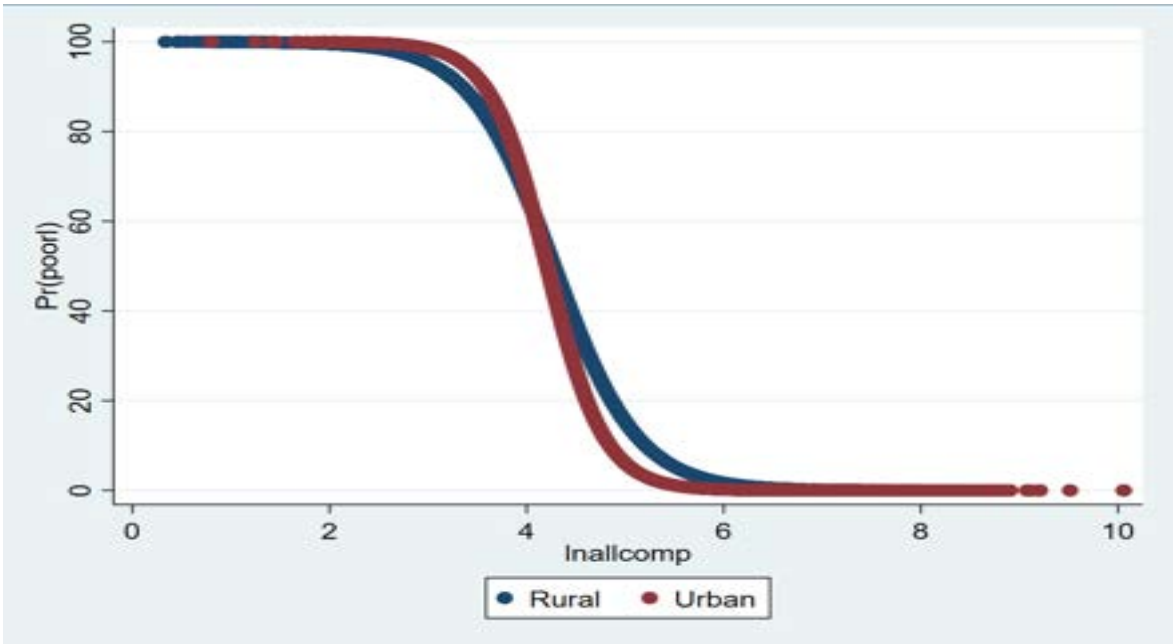
$$P_{15} = \int_0^{\infty} F(z|m)g(m)d(m)$$

Where P_{15} represents the 2015 poverty status of the household, F(.) is the cumulative distribution of total consumption, z, conditional on the comparable element m, and g(m) is the density function of the logarithm of comparable consumption. In addition, we include control variables, such as household size, gender composition, labor market status and province. The model is estimated for urban and rural areas separately.

The comparable element of the consumption distribution is higher than in the original Deaton (2003) paper, in which this represented around 20% of overall household consumption. However, there is a difference between urban areas, where the comparable component accounts for 41.8% of total household consumption, and rural areas, where it accounts for only 27.6%. This suggests that the method is likely to be more reliable for urban areas. The correlation between the comparable component and total consumption in 2015 is 0.987, and statistically significant at the 1% level.

Figure 7 shows the predicted probability of being below the poverty line in 2015, conditional on the comparable component of the consumption aggregate. The associated regression model is shown in Annex 5. The steeper probability curve in urban areas reflects the higher level of certainty of the predictions, which in turn, is due to the higher share of the comparable component of the consumption aggregate.

Figure 7: Predicted conditional probability of being below the poverty line in 2015



The conditional probability, $\hat{P}_{22}$, of being below the poverty line in 2022 is estimated based on the comparable component of the 2022 consumption aggregate, using the following formula:

$$\hat{P}_{22} = \int_0^\infty \hat{F}_{15}(z|m)\, g_{22}(m) dm$$

Model Performance. Predicting Poverty and Inequality in 2015

Both models predict national, rural, and urban poverty incidence with high accuracy (Table 6). Poverty rates are predicted exactly up to the second decimal point, and the level of accuracy remains equally strong at other poverty lines (Annex 6). In both cases, the standard error around the rural poverty rate is smaller than around the urban poverty rate, which is consistent with the level of accuracy from the original data. Across the two models, swift consistently has smaller standard errors than Deaton. For inequality, Swift also predicts the Gini coefficient up to the third decimal point.

Table 6. Model predictions for 2015

	Poverty incidence, 2015							Gini coefficient, 2015				
Area	Official		Swift OLS		Deaton			Official		Swift OLS		Deaton
	Point est.	SE	Point est.	SE	Point est.	SE		Point est.	SE	Point est.	SE	
Nation	54.4	1.55	54.4	0.69	54.4	1.50		0.546	.0120	0.546	.0042	-
Rural	76.6	0.95	76.6	0.68	76.6	0.74		0.434	.0069	0.434	.0054	
Urban	23.4	2.05	23.4	1.03	23.4	1.97		0.476	.0178	0.476	.0063	-

Results

Poverty

Table 7 shows the comparable poverty estimates obtained using both models. The stars indicate the level of significance in the difference compared to 2015.

Both models concord in showing that the national poverty rate increased between 5.2 and 5.6 percentage points between 2015 and 2022. The poverty increase is statistically significant at least at the 10% level. The increase in poverty is driven first and foremost by a significant increase in urban poverty between 8.3 and 8.5 percentage points. This increase is significant, at least at the 5% level. The rural poverty rate did not change in a statistically significant manner. Both models show a small increase in rural poverty of 1.6 or 2.2 percentage points. However, none of the differences are statistically significant. Province-level estimates are shown in Annex 7.

Table 7. Official poverty incidence in 2015, and Predicted poverty incidence in 2022, by estimation method and region

	2015	2022		
	Official	Swift OLS	Deaton	Non-comparable
Nation	54.4	60.0***	59.6*	63.1***
Rural	76.6	78.8	78.2	81.2***
Urban	23.4	31.9***	31.7**	36.0***

Statistical significance: * 10%, ** 5%, *** 1%. Difference compared to official 2015 estimate.

It is also worth noting that the results are not driven by the decision to exclude education expenses from the comparable component of the consumption aggregate (Annex 6). If education is included, both models predict a 2022 poverty rate that is between 3 to 3.5 percentage points higher. The difference is slightly larger in urban areas (3.5 to 4 percentage points) than in rural areas (2.7 to 3.1 percentage points). An overestimation of 2022 rates is consistent with the fact that the observed decline in education expenses between 2015 and 2022 is fully attributed to welfare changes without accounting for the elimination of the fees.

The non-comparable national poverty incidence is 63.1 percent. Therefore, relying on the 2022 data without accounting for the differences in design across surveys would overestimate the increase in poverty by about 3.3 percentage points. The bias is significantly larger in urban areas, where 4 percentage points represent an overestimation of about 13 percent. This result suggests that the likely overestimation of food consumption coming from the frequently selected 7-day recall period is higher than the likely underestimation of frequent non-food consumption coming from the implementation of the 12-month recall period.
The predicted poverty rates for each model under different poverty lines are not as close to each other as with the official poverty line, but the overall message remains: poverty increased in urban areas and remained stagnant in rural areas (Annex 6). The only case where the increase in rural poverty is marginally significant at the 10% levels is when evaluating the incidence at the food poverty line and using the Swift OLS model.

Figure 8. Poverty trend estimates at different poverty lines, by estimation method and region

Inequality

Table 8 shows that inequality measured by the Gini coefficient has decreased by 3.9 points from .546 to .507 since 2015, according to the Swift model. The decrease in inequality is statistically significant at the 1% level. The decrease in inequality is driven largely by a decrease in the rural/urban gap due to the rapid deterioration in urban living standards. There was also a statistically significant decrease in intra-urban inequality, as the crisis could have disproportionately affected better-off urban households.

Table 8. Official Gini coefficient in 2015, and Predicted Gini coefficient in 2022, by estimation method and region

		2015		2022	
		Official		Swift OLS	Non-comparable
Nation		**0.546**		**.507*** **	**0.473*** **
Rural		0.434		0.444	0.406*
Urban		0.476		.440**	0.418**

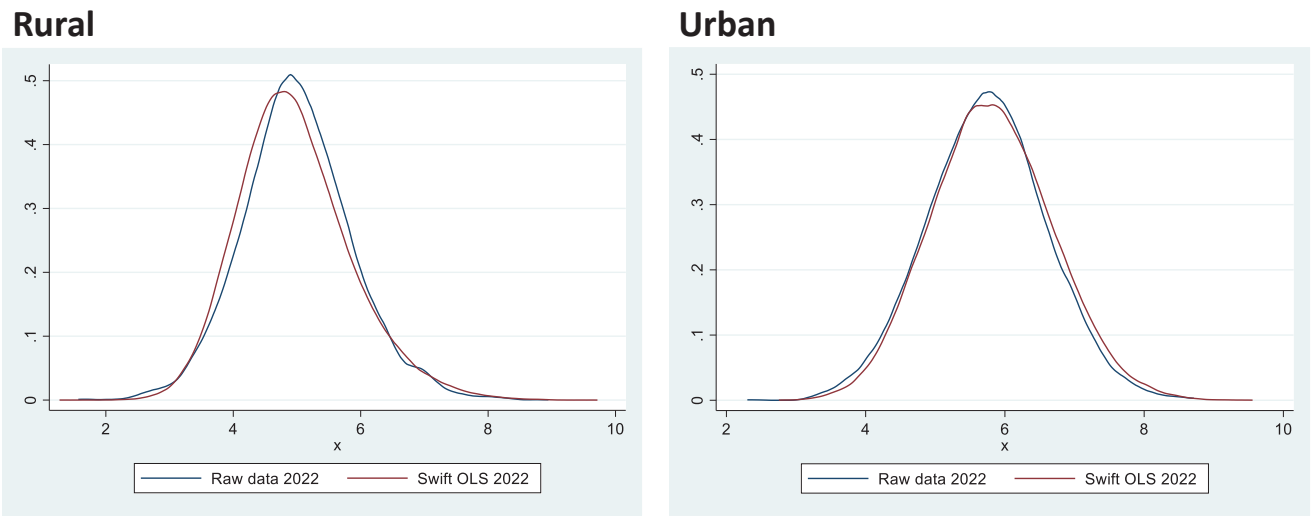
Statistical significance: * 10%, ** 5%, *** 1%. Difference compared to same model 2015 estimate.

If education expenses were assumed to be comparable across rounds, the 2022 national Gini coefficient would be 0.6 points higher (.513), thereby slightly underestimating the decline in inequality (Annex 6).

The raw data underestimates the 2022 Gini coefficient by 3.4 points, and thus over-estimates the decrease in inequality by a factor of 2. This is consistent with the under/over-estimation of food consumption explained in section II. The observed pattern of selection of recall periods for food consumption indicates that food consumption is likely to be over-estimated for poorer households and under-estimated for better-off households in the raw data. The decline in within-urban inequality is over-estimated by a similar factor. Within-rural inequality, in turn, is predicted to decrease, instead of the non-statistically significant increase suggested by the swift model.

The issue is visible in Figure 9 below, which shows that the bottom half of the raw 2022 rural distribution (blue line) is tilted to the right compared to the consumption level predicted by the Swift model (red line). In contrast, the right-end tail of the actual distribution is below that of the Swift model, meaning fewer households with a high consumption level above ln(6). In urban areas, the underestimation of consumption dominates, as households tend to have a higher income. Therefore, the entire raw 2002 urban distribution (blue line) is shifted to the left, compared to the predicted Swift OLS distribution (red line). This is consistent with the findings in table 1 above, which showed that urban households were more likely to choose longer recall periods.

Figure 9: Predicted (Swift OLS) vs. actual (Raw data) distribution in LCSM 2022



Additional robustness check. As a way to confirm the estimated trends Annex 8 presents the results that arise when inverting the direction of the prediction using swift. That is, (a) if raw 2022 estimates are taken as baseline, (b) the Swift model is re-estimated to model the 2022 consumption distribution, and (c) the estimated model is used to predict comparable 2015 poverty and inequality rates. Results are very consistent. National poverty is predicted to have increased by 5.5 percentage points (2.4 in rural areas and 8.1 in urban areas), and the Gini coefficient is predicted to have declined by 5.7 points (1.5 in rural areas and 5.3 in urban areas). This provides further reassurance that the assumption that the underlying relationship between total consumption and the covariates selected in the model did indeed remain the same over the study period.

Conclusions and recommendations

The analysis presented in this paper indicates that the proportion of people living under the poverty line increased by around 5.5 percentage points between 2015 and 2022. The higher poverty incidence was driven primarily by the surge in the urban poverty rate, which rose by about 8.5 percentage points. The slight increase in the rural poverty rate is not statistically significant.

At the same time, consumption inequality measured by the Gini coefficient decreased by 4.5 points over this period. The decrease in national inequality reflects the decrease in the urban/rural poverty gap, resulting from the disproportionate deterioration in urban living conditions. Intra-urban inequality decreased by 3.6 points, whereas the 1-point increase in intra-rural inequality was not statistically significant.

The changes in questionnaire between 2015 and 2022 make raw estimates non-comparable with each other. Failure to account for these changes would result in an over-estimation of the increase in the poverty incidence and an over-estimation of the decline in inequality. These are driven by the likely over-estimation of reported consumption among the lower segments of the distribution and an under-estimation of reported consumption among the higher segments of the distribution relative to 2015.

This paper provided some evidence on the potential implications of adopting a self-selected recall period for the food module. Given the innovation of the approach, it is advisable to run a proper randomized evaluation to assess the new questionnaire and advise the design of future surveys.

A separate document that is currently under preparation will publish the new 2022 poverty and inequality estimates that result from adopting the latest methodological guidelines. These new estimates should be used as baseline moving forward.

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ANNEX II: DETERMINANTS OF LIKELIHOOD TO CHOOSE LONGER/SHORTER RECALL PERIODS

To estimate the factors that determine the choice of recall period, we use a multinomial logit regression, where the recall period is the dependent variable coded 1=7 days; 2=2 weeks, 3=4 weeks. The following control variables are used on the right-hand side of the regression: Area of residence (urban/rural); Province; Household size (and squared household size). The regression can be written as:

$$\Pr(p_i) = \gamma z_i + \varepsilon_i$$

Where $\Pr(p_i)$ denotes the probability that household i will choose recall period p . z is a vector of variables describing household characteristics, as well as relevant control variables described below.

The dataset used for this analysis is the food consumption module of the LCMS. Consequently, it includes information on every single purchase/ consumption made by the household (155,000+ observations).

Poorer households are likely to eat more carbohydrates and more from own production. As recall periods may vary depending on the type of item (e.g. perishable vs. Non-perishable) and depending on the source of consumption (e.g. purchase vs. own-production), we need to control for differences in consumption patterns. This is done by including dummy variables describing the source of consumption (1=purchase; 2=own consumption; 3=gift), as well as dummies for each item purchased/consumed.

The determinants of specific interest in this analysis are the education level of the household head, which is treated as a categorical variable (1=less than primary; 2=complete primary; 3=incomplete secondary; 4=complete secondary; 5=post-secondary). We also include the natural logarithm of total real per-adult non-food consumption (including frequent non-food consumption, since we are not concerned about comparability with 2015 estimates), as well as the square of that variable to account for non-linearities.

Figure 10 shows the coefficients representing the effect of education of the household head on the probability of choosing the longer/ shorter recall periods. The results show that higher levels of education (secondary/ post-secondary) are associated with a significantly higher probability of choosing the 4-week recall period and a correspondingly lower probability of choosing the shorter recall periods[13] . These results control for differences in total non-food consumption between households, so they are not due solely to the fact that more educated households tend to be better-off (and thus have higher non-food consumption).

13 The error terms reported in the graph are slightly under-estimated, as it was not possible to include survey design specifications while using the 2-week recall period as the base value for the multinomial logit regression. The inclusion of survey design does not change the conclusions for high education, but makes the effect of low education statistically insignificant.

Figure 10. Coefficients on the effect of education of head of household on the probability of choosing 7 days versus 4 weeks recall periods

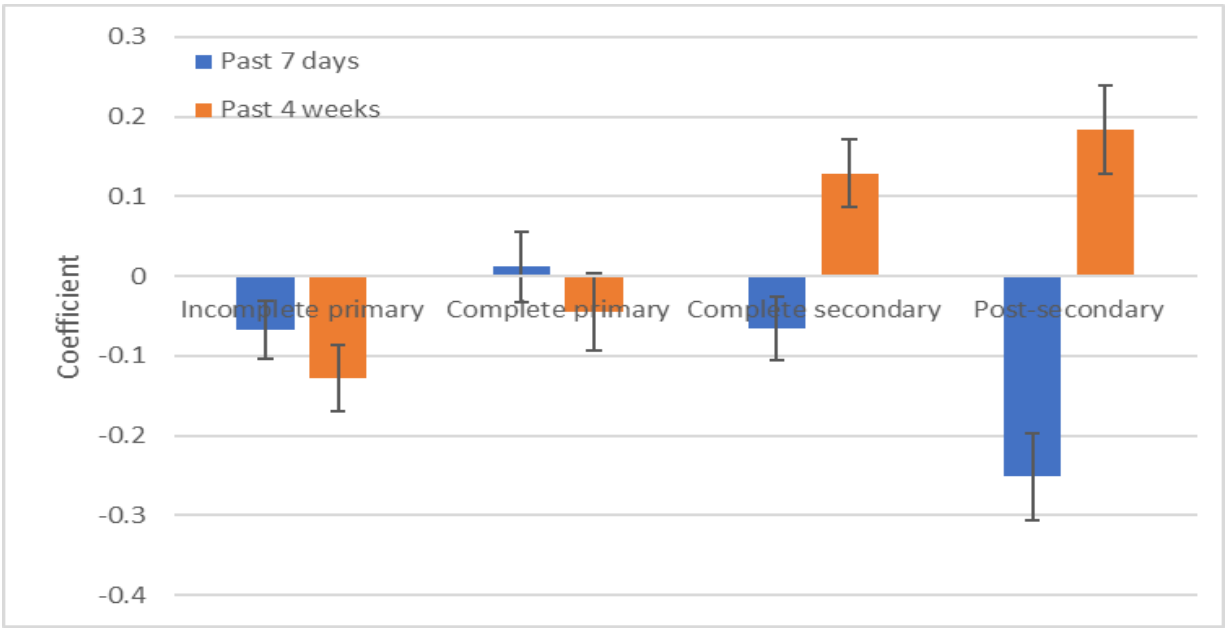
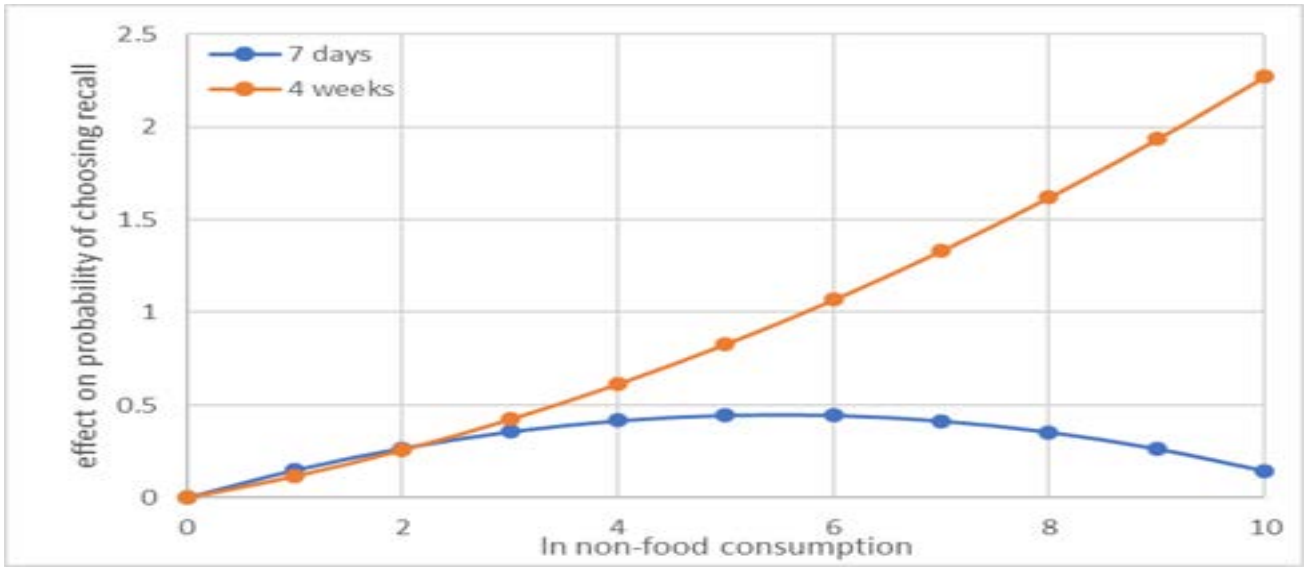


Figure 11 shows the relation between the total real per-adult non-food consumption and the conditional probability of choosing longer/shorter recall periods. This is based on the regression coefficients obtained for the log of non-food consumption, as well as the squared variable. As discussed above, the regression controls for differences in geographic location, as well as consumption patterns and education of the head of household.

The results show that higher non-food consumption increases the likelihood of choosing the longer 4-week recall period. High non-food consumption (above ln(6) or ZKW 403 per adult/month) is also associated with a slightly lower likelihood of choosing the one-week recall period. Both effects are statistically significant at the 5% level.

Figure 11. Relation between non-food consumption and the conditional probability of choosing



ANNEX III: ESTIMATED OVER-/UNDER-REPORTING DUE TO THE CHOICE OF RECALL PERIOD

This annex presents the results of the tests that were carried out to estimate the magnitude of over-/ under-reporting caused by the self-selected recall period. The over-/ under-reporting is measured against the case in which households report consumption over a 2-week recall period, which was the standard recall period for nearly all items in the LCMS 2015. Over-/ under-reporting with respect to the 2-week recall benchmark undermines comparability with the 2015 estimates, and therefore affects the trend analysis. Note that we are not able to determine whether the short/ longer recall periods lead to over-/ under-reporting compared to the true household consumption level, and therefore the analysis does not judge the accuracy of the self-selected recall period versus fixed period. That analysis would require a randomized test that compares each version to a benchmark, such as a diary.

i) Reported vs. imputed consumption

First, this section compares total household consumption expenditures imputed by the SWIFT model with those reported by the household in the LCMS 2022. Since the imputed expenditures are comparable to those reported in the LCMS 2015, the imputed expenditures would correspond to household expenditures if the 2-week recall period were adopted in the LCMS 2022 data. Therefore, the difference between the imputed and reported household expenditures in the LCMS 2022 represents the impact of changes in the survey since 2015, including the introduction of a self-selected recall period of the LCMS 2022 on the reporting of household expenditures compared to the 2-week recall of the LCMS 2015. The other change that might affect total reported consumption is the change from a 4-week to 12-months recall for frequent non-food.

For each household, i , we computed a ratio of reported to imputed consumption expenditures such that: $r_i = \frac{y_i}{\overline{y}_i}$, where y_i represents total reported consumption (real monthly per adult equivalent) for household ***i*** and $\overline{y}_i$ represented the SWIFT-imputed consumption for the same household. If $r_i > 1$ or the reported household expenditure of this household is bigger than the imputed one, then the self-selected recall period leads to over-reporting of household expenditure. If $r_i < 1$, the self-selected recall period leads to under-reporting of household expenditure. Since the self-selection of recall period is applied to only food consumption, this comparison should be done only for food consumption. However, since the imputed household expenditures are available only for full consumption including both food and nonfood consumption, we conduct this analysis using comparisons of full consumption data.

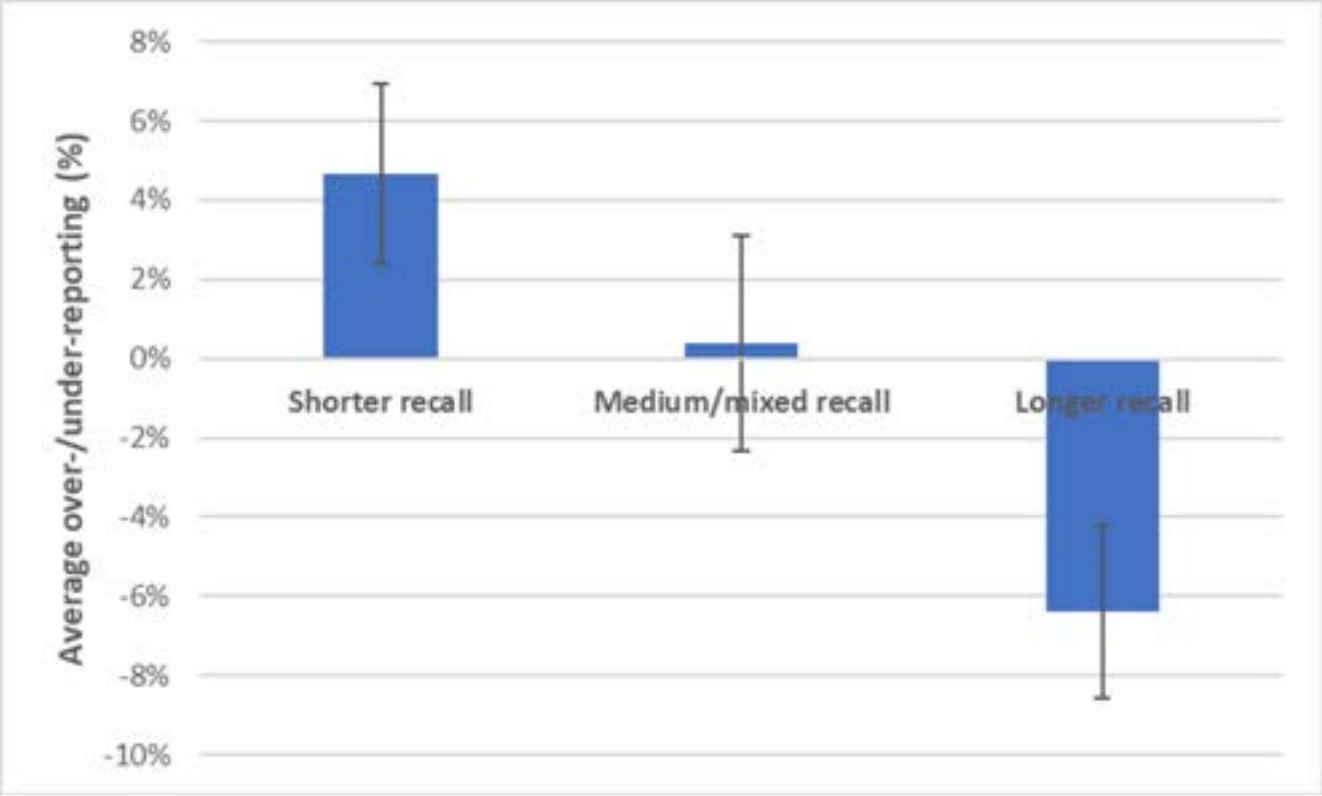
Households are grouped according to the share of total monthly food consumption value that was reported in short or long recall periods. Since long recall periods tend to be used to report more expensive goods and larger purchases, it is natural that they will constitute a larger share of total reported food consumption. To obtain groups of similar sizes, we therefore classify households into the three following groups:

1. **A group of households with longer recall periods:** Households that reported more than 50% of food consumption using a 4-week recall and less than 25% using a 7-day recall (3173 obs.).
2. **A group of households with shorter recall periods:** Households that reported more than 25% of food consumption using a 7-day recall and less than 50% using a 4-week recall (3308 obs.)
3. **Other households:** All other households (2006 obs.).

The analysis shows that those who tended to use the shorter recall periods reported 4.5 percent higher household expenditures than those imputed by the SWIFT model (Figure 12). Those who used a 4 week recall period for the majority of their purchases, on the other hand, reported 6.4 percent lower household expenditures than those imputed by the SWIFT model. The differences are statistically significant at the 5% level.

Since annex 1 showed that richer and more educated households were more likely to choose the longer recall periods, this implies that the LCMS 2022 is likely to under-estimate consumption at the top end of the distribution, and over-estimate consumption at the bottom. This can explain why the inequality estimate of household expenditures reported in the LCMS 2022 is lower than that of imputed expenditures by the SWIFT model.

Figure 12. Average under-/over-reporting, by share of food consumption reported in short/long recall periods



While compelling, the above-presented descriptive evidence does not control for differences in household characteristics or consumption patterns that could explain the differences in reported vs. imputed consumption between households. Therefore, the imputed and reported consumption expenditures can differ not due to the selection of a shorter or longer recall period than the 2-week recall period of the LCMS 2015, but due to consumptions patterns and household characteristics. In particular, these results may reflect the fact that richer households, that tend to choose longer recall periods, are also likely to have a higher share of non-food expenditures, which is also under-reported due to the erroneous introduction of a 12-months recall period for frequent non-food items.

ii) Regression analysis

This section studies whether reported household expenditures tend to be over-reported for households tend to choose shorter recall periods once household characteristics and consumption patterns are controlled for. This is estimated by running an OLS regression on the log of total reported food consumption, y_^f on a share of food consumption expenditures in a certain recall period, p_i, consumption patterns of households (e.g. share of own-produced food, or share of tomatoes, maize, etc.), x_i, and other household characteristics, z_i like the education attainments of household head and total non-food consumption expenditures. The regression is written as follows:

$$y_i^f = \alpha + \beta p_i + \lambda x_i + \gamma z_i + \varepsilon_i$$

Two types of regressions are conducted. To see how a shorter recall period (i.e., 7 days recall) affects reported total food expenditures, the first regression analysis defines p_i as a share of food expenditures in a 7-day recall period. After controlling for other household characteristics, if the coefficient of this variable is positive, this implies that a shorter recall period tends to increase the reporting of food consumption expenditures. The first column of Table 9 confirms that this is indeed the case. The regression coefficient of p_i is 0.253, which is statistically significant at one percent.

To see how a longer recall period (i.e., four weeks recall) affects total food consumption expenditures, the second regression defines p_i as a share of food expenditures in a four-week recall period. If the coefficient of this share is negative, this implies that a longer recall period tends to reduce the reporting of food consumption expenditures. The second column of Table 9 confirms that this is the case. The coefficient of p_i is -0.158, which is statistically significant at one percent.

These outcomes lend support to the hypothesis that households opting for shorter recall periods tend to report higher food expenditures compared to those selecting longer recall periods, all else being equal.

Table 9. Regression analysis: estimated under-/over-reporting due to choice of recall period

	7-day recall	4-week recall
Obs.	8284	8284
R2	.7205***	.7188***
Coefficient ß (recall share)	.2529***	-.1576***
Note. *** refers to "statistically significant at 1 percent level".		

Propensity score matching

Finally, we examine whether the consumption of a specific item changes by the selection of recall period. To control for household characteristics and consumption patterns, propensity score matching was adopted by including the same variables as the previous regression analysis in the propensity score estimation. The test was run for all 10 food items for which there were more than 5000 observations (reported consumption instances) available in the food module.

The results of the propensity score matching test show similar patterns for item-specific consumption. Only two items (Rape and sweet potato) achieved balanced treatment /control groups when testing the effect of using long recall periods. For those two items there is a strong negative effect (i.e., under-reporting) associated with longer recall period. The effect is statistically significant at the 1% level. For

all other items tested, the coefficients were also negative and statistically significant at the 10% level or more in 29 out of 30 tests.

For the 7-day recall period, we only achieved balance for one item (eggs). This test showed a strong and statistically significant (at 1%) positive coefficient associated with short recall periods, indicating that households using shorter recall periods tended to over-report consumption. The only item for which no significant effect was found was cooking oil, which is often bought in bulk.

Table 10. Propensity score matching: estimated under-/over-reporting due to choice of recall period

		Short recall period (7-days)			Long recall period (4 weeks)			
	Balanced blocks (Treatment obs.)	Neighb.	Stratif.	Kernel	Balanced blocks (Treatment obs.)	Neighb.	Stratif.	Kernel
Onions	4/7 (4427)	0.27***	0.26	0.23***	5/7 (762)	-0.16***	-0.21***	-0.12***
Tomatoes	9/12 (5977)	0.27***	0.27***	0.27***	2/5 (602)	-0.11*	-0.14***	-0.08*
Rape	4/9 (5675)	0.47***	0.46***	0.49***	8/8 (443)	-0.29***	-0.3***	-0.31***
Eggs	8/8 (1802)	0.49***	0.48***	0.42***	7/8 (1843)	-0.42***	-0.41***	-0.35***
Sweet potatoes	4/6 (3096)	0.54***	0.52***	0.51***	9/9 (891)	-0.48***	-0.49***	-0.46***
Dried beans	3/5 (1598)	0.34***	0.33***	0.31***	5/6 (2376)	-0.12***	-0.14***	-0.1***
Sugar	7/8 (2313)	0.3***	0.26***	0.22***	9/10 (2543)	-0.29***	-0.3***	-0.25***
Salt	4/6 (2854)	0.48***	0.46***	0.45***	6/7 (3004)	-0.48***	-0.46***	-0.44***
Cooking oil	6/8 (2648)	0	0.01	-0.04	5/8 (3000)	-0.08***	-0.08***	-0.03

ANNEX IV: FREQUENCY OF RECALL PERIODS (%)

Item	last 7 days	last 2 weeks	last 4 weeks	Total
1. Onion	73.17	14.22	12.61	100
2. Tomatoes	79.3	12.67	8.03	100
3. Cabbages	48.81	34.89	16.3	100
4. Rape	82.57	10.9	6.53	100
5. Okra	54.52	31.11	14.37	100
6. Pumpkin leaves	51.53	32.55	15.92	100
7. Cassava leaves	47.81	29.48	22.71	100
8. Kalembula/Sweet Po	58.49	28.3	13.21	100
9. Bondwe (Amaranthus	48.94	32.11	18.95	100
10. Impwa (Eggplant)	48.55	34.05	17.4	100
11. Cucumber	44.32	31.86	23.82	100
12. Green beans	45.06	31.82	23.12	100
13. Garlic	41.34	24.02	34.64	100
14. Ginger	43.93	24.96	31.11	100
15. Pumpkins	39.57	27.25	33.18	100
16. Green Maize	43.89	28.51	27.6	100
18. Carrots	44.37	30.11	25.52	100
19. Other vegetables	46.36	24.93	28.71	100
20. Milk (fresh)	55	25.49	19.51	100
21. Eggs	35.89	27.29	36.82	100
22. Maize grain unshelled	24.39	22.62	52.99	100
23. Maize grain shell	22.34	23.61	54.05	100
24. Breakfast meal	9.71	16.59	73.7	100
25. Roller meal	14.14	16.55	69.31	100
26. Hammer mealie meal	19.77	25.75	54.49	100
27. Pounded maize meal	28.96	17.37	53.67	100
29. Sorghum unshelled	8.82	29.41	61.76	100
30. Sorghum shelled	25.86	27.59	46.55	100
31. Rice shelled	24.03	23.53	52.44	100
32. Rice unshelled	19.02	21.72	59.26	100
33. Wheat/Flour	15.15	18.79	66.06	100
34. Millet	30.1	20.92	48.98	100
35. Bread/ Bread roll	73.41	13.97	12.62	100
36. Buns/ scones	65.62	20.73	13.65	100
37. Fritters	70.07	19.15	10.78	100
38. Other cereal/ bre	21.88	28.13	50	100
39. Sweet potatoes un	56.71	26.85	16.44	100
40. Sweet potatoes pe	51.82	29.75	18.43	100
41. Potatoes unpeeled	26.98	32.19	40.83	100
42. Potatoes peeled	38.89	28.4	32.72	100
43. Cassava (tubers)	46.79	25.82	27.38	100
44. Cassava (Flour)	36.01	23.17	40.81	100
45. Other roots/ tube	26.67	60	13.33	100
46. Fresh beans (excl	37.5	25.78	36.72	100
47. Fresh beans (excl	44.83	17.24	37.93	100
48. Sunflower shelled	26.67	26.67	46.67	100
49. Soya beans shelled	25.74	31.68	42.57	100
50. Dried beans	29.67	26.21	44.12	100
51. Groundnuts unshelled	39.23	28.86	31.9	100
52. Groundnuts shelled	38.82	28.21	32.97	100
53. Bambara nuts shelled	33.72	27.91	38.37	100

Item	last 7 days	last 2 weeks	last 4 weeks	Total
54. Cowpeas unshelled	19.54	35.63	44.83	100
55. Peas	26.92	34.62	38.46	100
56. Other pulses and	50	12.5	37.5	100
57. Oranges	56.9	24.61	18.49	100
58. Apples	50.14	25.78	24.08	100
59. Mangoes	62.07	13.79	24.14	100
60. Bananas	53.36	26.25	20.39	100
61. Water melons	36.22	31.7	32.08	100
62. Lemons	59.51	24.16	16.33	100
63. Pineapples	39.46	29.25	31.29	100
64. Pears	27.27	59.09	13.64	100
66. Guavas	50.18	23.81	26.01	100
67. Naarjies (Natches)	52.88	28.85	18.27	100
68. Avocadoes	46.94	27.21	25.85	100
69. Other Fruits	48.24	17.65	34.12	100
70. Kapenta (fresh)	31.82	31.31	36.87	100
71. Kapenta (frozen)	30.15	18.38	51.47	100
72. Kapenta (dried/smoked	29.67	27.7	42.63	100
73. Bream (fresh)	29.53	29.47	40.99	100
74. Bream (frozen)	24.2	26.11	49.68	100
75. Bream (dried/smoke	20.27	29.29	50.45	100
76. Buka Buka (fresh)	26.39	35.83	37.78	100
77. Buka Buka (frozen	28.19	23.94	47.88	100
78. Buka Buka (dry/sm	17.79	35.57	46.64	100
79. Other fish (fresh	44.63	26.53	28.84	100
80. other fish (froze	52.44	18.29	29.27	100
81. Other fish (dry/s	33.29	28.74	37.97	100
82. Other fish products	38.5	23.01	38.5	100
83. Chicken (Fresh)	24.25	27.7	48.05	100
84. Chicken (Frozen)	27.66	26.11	46.23	100
85. Chicken (dry/Smoked)	10.26	33.33	56.41	100
86. Other Poultry (fr)	24.49	27.21	48.3	100
87. Other poultry(Fr)	19.05	28.57	52.38	100
88. Other poultry (dr)	14.29	14.29	71.43	100
89. Beef (Fresh)	27.52	31.74	40.74	100
90. Beef (Frozen)	27.23	24.37	48.4	100
91. Beef (dried or smoked	34.25	30.14	35.62	100
92. Pork (Fresh)	33.15	31.75	35.1	100
93. Pork (Frozen)	29.15	34.67	36.18	100
94. Pork (dried/smoke	41.38	27.59	31.03	100
95. Goat meat (Fresh)	23.33	32.56	44.11	100
96. Goat meat (Frozen	26.58	36.71	36.71	100
97. Goat meat (dried/	17.5	35	47.5	100
98. Sheep meat (Fresh	21.43	35.71	42.86	100
99. Sheep meat (Froze	25	0	75	100
100. Sheep meat (Drie	100	0	0	100
101. Game meat (Fresh	21.82	21.82	56.36	100
102. Game meat (Froze	33.33	0	66.67	100
103. Game meat (dried	14.94	26.44	58.62	100
104. Other meat	26.58	17.72	55.7	100
106. Milk (powdered e	28.66	16.72	54.63	100
108. Cheese	24.29	37.14	38.57	100

Item	last 7 days	last 2 weeks	last 4 weeks	Total
109. Other dairy prod	35.8	32.1	32.1	100
110. Butter	17.66	27.55	54.79	100
111. Margarine	17.92	35.26	46.82	100
112. Peanut butter	15.49	24.93	59.58	100
113. Other fats excl	40	20	40	100
114. Sugar	35.84	24.73	39.43	100
115. Honey	23.21	26.67	50.12	100
116. Jam	16.35	27.38	56.27	100
117. Cocoa and Chocol	19.47	16.81	63.72	100
118. Cremora	13.89	18.52	67.58	100
119. Other sweets	67.92	13.21	18.87	100
120. Tea leaves/tea b	36.36	21.84	41.8	100
121. Coffee (fresh bl	16.22	21.79	61.99	100
122. Drinking Chocola	11.11	25	63.89	100
123. Juice	22.61	28.67	48.72	100
124. Soft drinks	54.64	23.32	22.04	100
125. Mineral water	42.75	20.07	37.17	100
126. Munkoyo	51.56	28.31	20.13	100
127. Maheu	53.57	30.8	15.63	100
128. Spirits	60.85	19.05	20.11	100
129. Wines	36.84	24.21	38.95	100
130. Ciders	47.92	20.83	31.25	100
131. Clear beer	57.75	19.79	22.46	100
132. Opaque beer	58.99	17.27	23.74	100
133. Traditional brew	68.13	15.42	16.46	100
134. Other alcoholic	55.81	20.93	23.26	100
135. Baby foods (eg C	34.05	23.24	42.7	100
136. Food from kiosks	47.92	18.75	33.33	100
139. Salt	36.6	25	38.4	100
140. Spices	21.88	22.49	55.62	100
141. Cooking Oil	36.65	21.95	41.4	100
142. Other non freque	25	22.22	52.78	100
Total	**44.31**	**24.36**	**31.33**	**100**

ANNEX V: SWIFT REGRESSION MODELS

4.1. The selection of optimal p-value for the stepwise regressions

The SWIFT methodology employs stepwise regression to select variables for a model, ensuring that only those with statistically significant coefficients below a certain threshold are included. Despite this selection process, the resulting model remains susceptible to both overfitting and model instability. Overfitting occurs when a model performs well within the training dataset but poorly outside of it, limiting its generalizability. On the other hand, model instability refers to significant fluctuations of model parameters over time, leading to biased poverty predictions.

To counter the overfitting concern, the SWIFT methodology incorporates cross-validation (CV), which helps validate the model's performance on unseen data. By doing so, it reduces the risk of over-reliance on the training dataset and enhances the model's ability to perform well in real-world scenarios.

Additionally, to minimize bias stemming from model instability, the SWIFT methodology includes fast-changing variables in the model. These variables can account for dynamic factors and help maintain the model's relevance over time.

In summary, the SWIFT methodology addresses potential issues of overfitting and model instability through the inclusion of cross-validation and fast-changing variables, ensuring a more robust and reliable poverty prediction model.

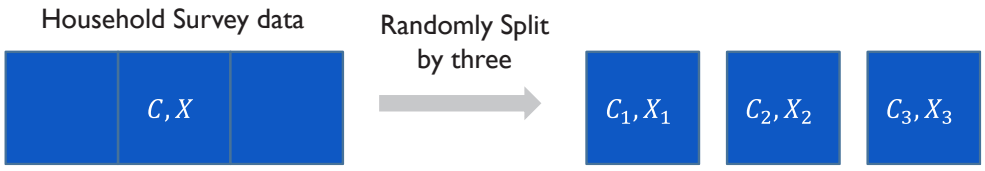
(i) Cross-validation (CV) in SWIFT

In the SWIFT methodology, cross-validation is performed using a 10-fold CV approach (Yoshida et al., 2015). Initially, the training dataset is randomly divided into ten subsamples, each referred to as a "fold." Subsequently, a model is estimated using nine of these folds through STATA's stepwise selection package (see Figure A1). The performance of the model is evaluated using the remaining fold, which was not involved in the model's training. This evaluation in the remaining fold ensures that all performance indicators are not affected by the over-fitting problem, thereby enhancing the model's credibility.

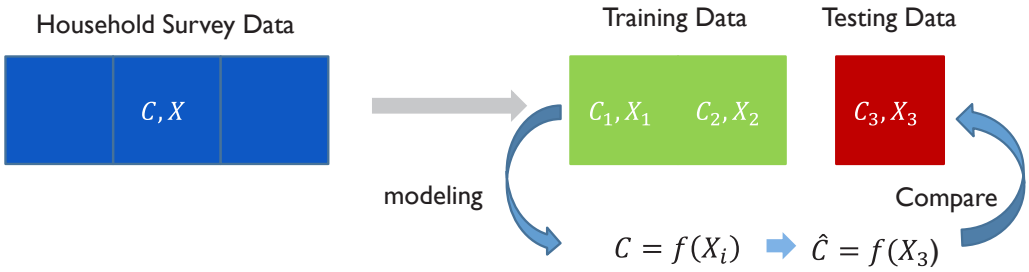
Furthermore, this CV process can also assist in identifying any outliers that may have an excessive influence on the model, helping to improve the model's robustness and reliability.

Figure A1. Illustration of 3-Fold Cross-Validation

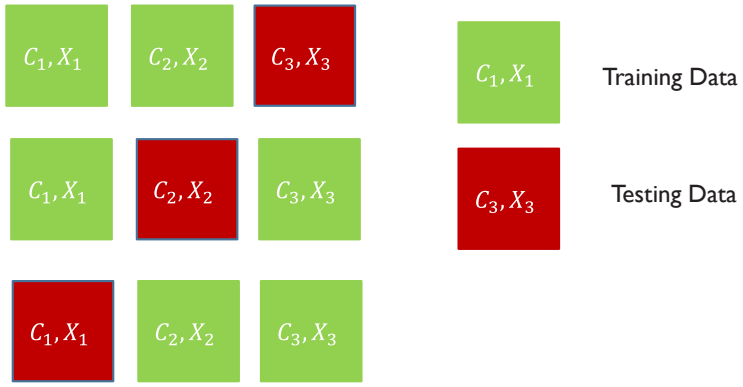
Step 1: Randomly split data into three folds (C refers to consumption; X refers to non-consumption data)



Step 2: Select two folds as training data, develop a model there, and test model performance in the last fold used as testing data



Step 3: Repeat the above procedure three times by changing the folds used for training and testing data



Source. Yoshida et al. (2022a).

The selection of an optimal significance level

In the SWIFT methodology, cross-validation (CV) determines the optimal threshold for the significance level in stepwise regressions. During CV, two key testing statistics are computed: (1) the absolute value of the difference between the actual and projected poverty rates and (2) the Mean Squared Error (MSE). These statistics are calculated for various significance levels, ranging from 0.5 percent to 10 percent.

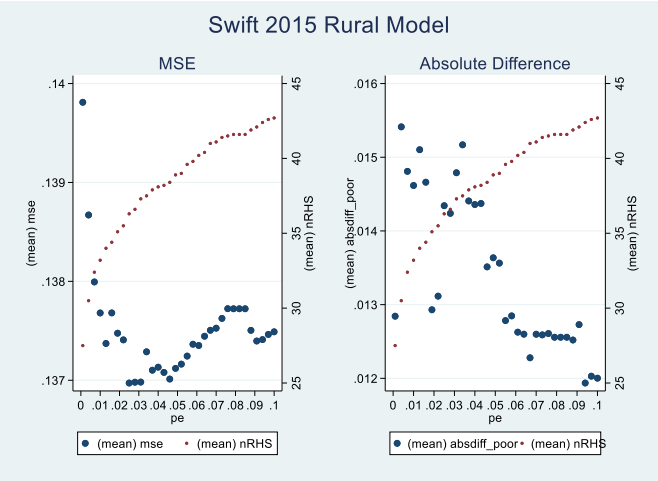
To identify the optimal significance level, the first statistic, representing the absolute difference between the actual and projected poverty rates, is minimized. This ensures enhanced accuracy in predicting poverty rates. However, in cases where the MSE is minimized at a significance level smaller than the one where the absolute difference between the actual and projected poverty rates is minimized, the former value (the lowest significance level) is chosen as the optimal threshold. This approach effectively prevents overfitting, enabling the model to generalize well to new data.

Figure A2 displays the results of the cross-validation exercise conducted for the Zambia trend analysis, involving separate models estimated for urban and rural areas. Each area's selected model minimizes mean square errors for predicting per adult equivalent consumption and mean absolute error for predicting the poverty rate. As a result of the cross-validation exercise, the optimal significance thresholds are found to be 0.055 for rural areas and 0.091 for urban areas.

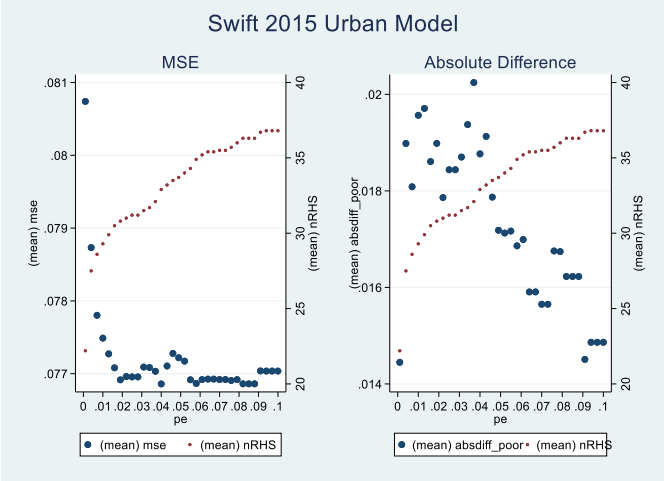
To maximize the predictive power of the model, the final coefficients are estimated using the full 2015 sample, utilizing the selected variables determined by the stepwise regression with the specified threshold p-values mentioned above. This rigorous process ensures that the SWIFT methodology provides reliable and accurate predictions of poverty rates in both urban and rural areas of Zambia.

Figure A2: Mean square error and mean absolute difference for consumption and poverty headcount, by per threshold

Rural



Urban



Source. Authors' estimation using the 2015 LCMS dataset

(ii) Inclusion of fast-changing variables

For SWIFT to produce accurate poverty estimates, it relies on the assumption of a stable correlation between model variables and poverty status over time. However, this stability can be disrupted during economic downturns, potentially leading to biased poverty estimates. In the past, the SWIFT model primarily relied on household demographics, housing conditions, and asset ownership as variables, which tend to remain unchanged during economic downturns. Consequently, SWIFT failed to predict an increase in poverty during such periods.

To rectify this issue and enhance the accuracy of poverty predictions, SWIFT implemented a significant methodological update (Yoshida et al., 2022a). The new approach involved incorporating fast-changing variables that are more responsive to economic downturns and upturns. Examples of these variables include consumption of food items and economic sentiments. By including these dynamic indicators, SWIFT can better adapt to challenging economic periods and provide more accurate poverty estimates.

Case studies conducted for Afghanistan (2011-2016) and Gaza (2011-2016) support the effectiveness of incorporating fast-changing variables into the SWIFT model. In Afghanistan, during the period from 2011 to 2016, the national poverty rate rose by 16 percentage points due to large foreign aid withdrawals and worsening employment conditions. Similarly, the poverty rate in Gaza increased by 14 percentage points over the same period. Despite not much visible change in housing conditions and asset ownership in the summary statistics, households reported a deteriorating economic situation and decreased consumption over time.

In the Afghanistan study, when fast-changing variables were not included in the model, the model predicted almost no change in poverty incidence between 2011 and 2016. However, after incorporating economic sentiments, perceptions of security situations, and consumption dummies into the model, the revised model accurately predicted the large increase in poverty incidence (see the left panel of Table A3).

For Gaza, the SWIFT estimation was done backward, using 2016 data to estimate poverty rates in 2011. The official poverty rates showed a significant increase in poverty between 2011 and 2016. However, if fast-changing variables were not included in the model, the poverty estimation by the model showed almost no change in poverty incidence over time. In contrast, when these variables were included in the model, the poverty estimation by the model reflected a large increase in poverty incidence over the same period (see the right panel of Table A3). This improvement in accuracy is attributed to the quick responsiveness of economic sentiments, perceptions, and consumption dummies to the economic downturn.

Overall, the inclusion of fast-changing variables in the SWIFT model has significantly enhanced its ability to capture and predict changes in poverty status during economic downturns, providing more reliable and relevant poverty estimates.

Table A3. Comparison of model performance with and without fast changing variables

	Afghanistan (2011 - 2016)			Gaza (2011-2016)		
	Official Estimates	Not including fast changing variables	Including fast changing variables	Official Estimates	Not including fast changing variables	Including fast changing variables
2011	38.3%			38.8%	46.7%	41.3%
2016	54.5%	39.4%	53.5%	53.0%		

Source: Yoshida et al. (2022a).

4.2. Swift regression models

Table 11: Rural model

Linear regression

Number of obs	6,524
F(38, 6485)	409.75
Prob > F	0.0000
R-squared	0.8003
Root MSE	.36427

lnexpm	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
auto_1	.0698721	.0243155	2.87	0.004	.0222057	.1175384
auto_10	.3699666	.1607489	2.30	0.021	.0548458	.6850875
_Iprov_3	-.0882051	.0202943	-4.35	0.000	-.1279886	-.0484217
_Iprov_4	-.1051198	.0226027	-4.65	0.000	-.1494285	-.0608111
_Iprov_6	-.1043145	.0202623	-5.15	0.000	-.1440353	-.0645937
_Iprov_7	-.2153263	.0227713	-9.46	0.000	-.2599656	-.170687
self_poor	-.0293845	.0103984	-2.83	0.005	-.0497688	-.0090003
purch_8	.0784739	.023147	3.39	0.001	.0330982	.1238496
purch_12	.1100289	.01945	5.66	0.000	.0719004	.1481573
hhsize	-.1195298	.0097074	-12.31	0.000	-.1385595	-.1005
hhsize2	.004174	.0006345	6.58	0.000	.0029301	.0054178
auto_2	.0779703	.0084577	9.22	0.000	.0613905	.0945501
AFA0_0plus	-.002097	.0004381	-4.79	0.000	-.0029557	-.0012382
self_meals	.0595024	.0120792	4.93	0.000	.0358232	.0831815
empl_agri	-.0230626	.0075511	-3.05	0.002	-.0378653	-.00826
auto_5	.0263238	.0118248	2.23	0.026	.0031434	.0495042
auto_3	.0831539	.0084742	9.81	0.000	.0665416	.0997662
empl_form	.1489636	.023906	6.23	0.000	.1021	.1958272
auto_4	.0624956	.0038671	16.16	0.000	.0549147	.0700765
purch_10	.1236288	.027131	4.56	0.000	.0704431	.1768145
purch_11	.0864178	.0115896	7.46	0.000	.0636983	.1091373
demo_old	-.02797	.0140792	-1.99	0.047	-.0555699	-.0003701
demo_fem	-.0468537	.0156695	-2.99	0.003	-.0775711	-.0161363
lnallcomp	.2797643	.036518	7.66	0.000	.2081769	.3513516
livest_cattle	.0300882	.0097444	3.09	0.002	.010986	.0491904
purch_4	.0614614	.0044891	13.69	0.000	.0526613	.0702615
purch_3	.0909461	.011407	7.97	0.000	.0685846	.1133077
livest_chicken	.0135326	.0053699	2.52	0.012	.0030059	.0240594
self_meat	.0366833	.0034428	10.65	0.000	.0299342	.0434324
auto_11	.0442621	.017	2.60	0.009	.0109365	.0775876
lnallcompsq	.0238811	.0049868	4.79	0.000	.0141054	.0336568
asset_hoe	.0315324	.0116894	2.70	0.007	.0086172	.0544476
self_veg	.0224144	.0056086	4.00	0.000	.0114197	.0334091
asset_fishhunt	.0317504	.0119246	2.66	0.008	.0083742	.0551266
auto_8	.1057852	.0266447	3.97	0.000	.0535528	.1580175
auto_6	.0678761	.0267992	2.53	0.011	.0153409	.1204114
purch_1	.0473992	.0083626	5.67	0.000	.0310057	.0637926
purch_2	.0501802	.0128962	3.89	0.000	.0248995	.075461
_cons	3.373264	.0970467	34.76	0.000	3.18302	3.563507

Variable description	Variable name	Mean 2015	Mean 2022
Number of own-produced items consumed: Cereal	auto_1	0.05	0.03
Number of own-produced items consumed: Sweets	auto_10	0.001	0.002
Eastern province	_Iprov_3	0.17	0.19
Luapula province	_Iprov_4	0.1	0.11
Muchinga province	_Iprov_6	0.08	0.07
Northern province	_Iprov_7	0.12	0.1
Self-assessment: 1=not poor, 3=very poor	self_poor	2.46	2.47
Number of items purchased: Dairy	purch_8	0.07	0.11
Number of items purchased: Alcohol	purch_12	0.11	0.16
Household size	hhsize	5.24	5.16
Household size (squared)	hhsize2	33.96	32.82
Number of own-produced items consumed: Tubers	auto_2	0.55	0.64
Average intensity of MODA deprivations	AFA0_0plus	27.38	27.6
Number of meals eaten per day	self_meals	2.4	2.24
Number of household members employed in agriculture	empl_agri	1.2	0.62
Number of own-produced items consumed: Fruits	auto_5	0.15	0.24
Number of own-produced items consumed: Pulses	auto_3	0.53	0.59
Number of household members formally employed	empl_form	0.05	0.06
Number of own-produced items consumed: Veg.	auto_4	2.71	1.45
Number of items purchased: Sweets	purch_10	0.04	0.04
Number of items purchased: Beverages	purch_11	0.26	0.2
Proportion of household members aged 65+	demo_old	0.19	0.18
Proportion of females in the household	demo_fem	0.23	0.28
Log of comparable real consumption (Kwz/adult eq./month)	lnallcomp	3.3	3.3
Number of livestock owned (ln): Cattle	livest_cattle	0.28	0.26
Number of items purchased (ln): Vegetables	purch_4	1.89	2.77
Number of items purchased (ln): Pulses	purch_3	0.29	0.53
Number of livestock owned (ln): Chicken	livest_chicken	0.92	0.79
Household consumed meat in past week	self_meat	3.95	3.63
Number of own-produced items consumed: Beverages	auto_11	0.11	0.01
Square of ln consumption	lnallcompsq	11.91	11.85
Number of assets owned (ln): hoes	asset_hoe	1.06	0.88
Days in which household consumed vegetables in the past week	self_veg	6.62	6.37
Number of assets owned (ln): fishing/hunting gear	asset_fishhunt	0.06	0.03
Number of own-produced items consumed: Dairy	auto_8	0.05	0.06
Number of own-produced items consumed: Fish	auto_6	0.07	0.05
Number of items purchased: Cereal	purch_1	0.58	0.43
Number of items purchased: Tubers	purch_2	0.18	0.42

Table 12: Urban model

Linear regression

Number of obs	=	5,621	
F(35, 5585)	=	885.69	
Prob > F	=	0.0000	
R-squared	=	0.9117	
Root MSE	=	.26867	

lnexpm	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
purch_3	.0503192	.0084627	5.95	0.000	.0337291	.0669093
_Iprov_2	.0294705	.0154304	1.91	0.056	-.0007791	.0597201
_Iprov_3	-.0699869	.0206871	-3.38	0.001	-.1105416	-.0294321
purch_11	.0343593	.00788	4.36	0.000	.0189115	.0498071
_Iprov_6	-.0691077	.0219424	-3.15	0.002	-.1121234	-.026092
_Iprov_7	-.0844103	.0245095	-3.44	0.001	-.1324585	-.0363622
_Iprov_8	-.055607	.0180139	-3.09	0.002	-.0909212	-.0202928
auto_11	.0874431	.0251289	3.48	0.001	.0381808	.1367055
auto_3	.056578	.0164918	3.43	0.001	.0242478	.0889083
hhsize	-.0915534	.0080843	-11.32	0.000	-.1074018	-.075705
hhsize2	.0024537	.0005708	4.30	0.000	.0013347	.0035727
auto_4	.0241443	.0063054	3.83	0.000	.0117832	.0365054
purch_2	.0291685	.0086323	3.38	0.001	.0122459	.0460912
purch_4	.0173537	.0033661	5.16	0.000	.0107548	.0239525
purch_1	.0344854	.0084141	4.10	0.000	.0179905	.0509803
lnallcompsq	.0289975	.0041493	6.99	0.000	.0208632	.0371317
empl_inactiv	.0205326	.0052109	3.94	0.000	.0103173	.030748
empl_form	.0567042	.0098836	5.74	0.000	.0373286	.0760799
empl_self	-.021889	.0079399	-2.76	0.006	-.0374543	-.0063238
self_poor	-.0419154	.0101944	-4.11	0.000	-.0619003	-.0219304
lnallcomp	.3460192	.044589	7.76	0.000	.2586073	.433431
demo_old	-.0742913	.0158378	-4.69	0.000	-.1053395	-.0432431
auto_2	.0878312	.0188166	4.67	0.000	.0509434	.124719
AFA0_0plus2	-.0000657	.0000261	-2.52	0.012	-.0001168	-.0000146
self_meat	.0326988	.0038077	8.59	0.000	.0252342	.0401633
purch_8	.1149581	.0134325	8.56	0.000	.0886252	.1412909
purch_5	.0286652	.0056708	5.05	0.000	.0175483	.0397821
livest_chicken	.0183453	.0082231	2.23	0.026	.0022249	.0344657
purch_10	.0796798	.0147508	5.40	0.000	.0507624	.1085971
auto_10	.2336039	.1159284	2.02	0.044	.0063391	.4608687
purch_12	.0715644	.0179163	3.99	0.000	.0364415	.1066873
self_meals	.0283489	.012861	2.20	0.028	.0031363	.0535615
asset_tool	.0392881	.0140083	2.80	0.005	.0118264	.0667498
asset_fishhunt	-.1123921	.060431	-1.86	0.063	-.2308603	.0060761
asset_plough	.0954484	.0558794	1.71	0.088	-.014097	.2049939
_cons	3.459525	.1301043	26.59	0.000	3.20447	3.71458

Variable description	Variable name	Mean 2015	Mean 2022
Number of items purchased: Pulses	purch_3	0.8	1.05
Central province	_Iprov_2	0.28	0.28
Eastern province	_Iprov_3	0.03	0.06
Number of items purchased: Beverages	purch_11	0.83	0.74
Muchinga province	_Iprov_6	0.03	0.02
Northern province	_Iprov_7	0.04	0.05
North-Western province	_Iprov_8	0.03	0.06
Number of own-produced items consumed: Beverages	auto_11	0.04	0.01
Number of own-produced items consumed: Pulses	auto_3	0.08	0.1
Household size	hhsize	4.99	4.95
Household size (squared)	hhsize2	30.57	30.44
Number of own-produced items consumed: Veg.	auto_4	0.51	0.33
Number of items purchased: Tubers	purch_2	0.62	1.09
Number of items purchased: Vegetables	purch_4	5.45	5.51
Number of items purchased: Cereal	purch_1	1.21	1.03
Square of ln consumption	lnallcompsq	26.72	23.11
Number of inactive household members	empl_inactiv	1.63	2.41
Number or formally employed household members	empl_form	0.31	0.22
Number of self-employed household members	empl_self	0.7	0.56
Self-assessment: 1=non-poor, 3=very poor	self_poor	1.98	2.06
Log of comparable real consumption (Kwz/adult eq./month)	lnallcomp	5.05	4.72
Proportion of household members aged 65+	demo_old	0.11	0.15
Number of own-produced items consumed: Tubers	auto_2	0.06	0.09
Average intensity of MODA deprivations (squared)	AFA0_0plus2	187.22	241.33
Days in which household consumed meat in past week	self_meat	5.06	4.48
Number of items purchased: Dairy	purch_8	0.33	0.36
Number of items purchased: Fruits	purch_5	0.84	1.21
Number of livestock owned: Chicken	livest_chicken	0.11	0.16
Number of items purchased: Sweets	purch_10	0.18	0.15
Number of own-produced items consumed: Sweets	auto_10	0.004	0.001
Number of items purchased: Alcohol	purch_12	0.14	0.24
Number of meals eaten per day	self_meals	2.73	2.47
Number of assets owned (ln): Tools	asset_tool	0.17	0.12
Number of assets owned (ln): fishing/hunting gear	asset_fishhunt	0.006	0.007
Number of assets owned (ln): Ploughs	asset_plough	0.009	0.003

ANNEX VI: DEATON REGRESSION MODEL

Table 13: Regression coefficients for logistic regression model

	Rural	Urban
N	6250	5621
F	69.04	40.49
Poorl	**Coefficient**	**Coefficient**
lnallcomp	1.0924**	3.7987***
lnallcompsq	-0.4826***	-0.8933***
Hhsize	0.4048***	0.6300***
hhsize2	-0.0114***	-0.0238***
Females	0.0832	0.1865
depratio	-0.0604	-1.9629***
Province		
Copperbelt	0.0077	-0.0694
Eastern	0.0134	-0.6992**
Luapula	0.3912	-0.8846*
Lusaka	0.5321**	0.3265
Muchinga	-0.0004	-0.2810
Northern	0.2977	-0.9229**
North Western	0.1393	-0.0945
Southern	0.6395***	0.3412
Western	0.8013***	-0.2269
_cons	1.7816**	-1.9334

ANNEX VII: DETAILED ESTIMATION RESULTS FOR DIFFERENT POVERTY LINES

Model performance at different poverty lines, excluding or including education expenditures in the comparable component of consumption. All point estimates are the same up to the 4th decimal point. Models only differ in the confidence intervals.

Table 14. Model predictions for 2015 (by estimation method, poverty line, and region)

	official 2015	Predicted 2015					
		Models assume school fees are non-comparable			Models assume school fees are comparable		
		Swift (OLS)	Swift (PMM)	Deaton	Swift (OLS)	Swift (PMM)	Deaton
NATIONAL							
Food poverty line	40.80%	40.80%	40.80%	40.80%	40.80%	40.80%	40.80%
Lower poverty line	54.40%	54.40%	54.40%	54.40%	54.40%	54.40%	54.40%
Upper poverty line	74.00%	74.00%	74.00%	74.00%	74.00%	74.00%	74.00%
Gini-coeff.	0.546	0.546	0.546		0.546	0.546	
RURAL							
Food poverty line	60.80%	60.80%	60.80%	60.80%	60.80%	60.80%	60.80%
Lower poverty line	76.60%	76.60%	76.60%	76.60%	76.60%	76.60%	76.60%
Upper poverty line	92.10%	92.10%	92.10%	92.10%	92.10%	92.10%	92.10%
Gini-coeff.	0.434	0.434	0.434		0.434	0.434	
URBAN							
Food poverty line	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Lower poverty line	23.40%	23.40%	23.40%	23.40%	23.40%	23.40%	23.40%
Upper poverty line	48.80%	48.80%	48.80%	48.80%	48.80%	48.80%	48.80%
Gini-coeff.	0.476	0.476	0.476		0.476	0.476	

Table 15: Poverty and inequality estimates for 2022 at different poverty lines (models assume school fees are non-comparable), by estimation method and region

	2015 official	2022			
		Non-comparable	Swift (OLS)	Swift (PMM)	Deaton
NATIONAL					
Food poverty line	40.80%	47.60%	46.10%	44.30%	44.10%
Lower poverty line	54.40%	63.10%	60.00%	58.80%	59.60%
Upper poverty line	74.00%	82.40%	79.40%	78.80%	80.50%
Gini-coeff.	0.546	0.473	0.507	0.503	
RURAL					
Food poverty line	60.80%	64.80%	64.60%	62.60%	61.90%
Lower poverty line	76.60%	81.20%	78.80%	77.90%	78.20%
Upper poverty line	92.10%	94.60%	92.70%	92.70%	93.20%
Gini-coeff.	0.434	0.406	0.444	0.41	
URBAN					
Food poverty line	12.80%	21.90%	18.30%	16.90%	17.40%
Lower poverty line	23.40%	36.00%	31.90%	30.20%	31.70%
Upper poverty line	48.80%	64.00%	59.40%	58.00%	61.50%
Gini-coeff.	0.476	0.418	0.44	0.457	

Table 16: Poverty and inequality estimates for 2022 at different poverty lines (models assume school fees are comparable), by estimation method and region

	2015 official	2022			
		Non-comparable	Swift (OLS)	Swift (PMM)	Deaton
NATIONAL					
Food poverty line	40.80%	47.6%	50.10%	48.30%	47.40%
Lower poverty line	54.40%	63.1%	63.50%	62.10%	62.60%
Upper poverty line	74.00%	82.4%	81.50%	80.50%	82.40%
Gini-coeff.	0.546	0.473	0.513	0.511	
RURAL					
Food poverty line	60.80%	64.8%	69.10%	67.30%	65.60%
Lower poverty line	76.60%	81.2%	81.90%	80.80%	80.90%
Upper poverty line	92.10%	94.6%	93.70%	93.60%	94.30%
Gini-coeff.	0.434	0.406	0.451	0.454	
URBAN					
Food poverty line	12.80%	21.9%	21.60%	19.70%	20.10%
Lower poverty line	23.40%	36.0%	35.90%	34.00%	35.20%
Upper poverty line	48.80%	64.0%	63.00%	60.80%	64.60%
Gini-coeff.	0.476	0.418	0.444	0.437	

ANNEX VIII: POVERTY ESTIMATES AT THE PROVINCE LEVEL

	National		
	2015	2022*	pp change
Zambia	**54.4**	**60.0**	**5.6*** **
Rural	76.6	78.8	2.2
Urban	23.4	31.9	8.5***
Central	56.2	67.5	11.2**
Copperbelt	30.8	35.9	5.1
Eastern	70.0	76.4	6.4*
Luapula	81.1	77.3	-3.8
Lusaka	20.2	27.0	6.8*
Muchinga	69.3	82.6	13.3***
Northern	79.7	78.0	-1.7
North Western	66.4	61.6	-4.8
Southern	57.6	63.5	5.9
Western	82.2	78.6	-3.6

*Estimates based on the SWIFT OLS model.

ANNEX IX: TREND ESTIMATES WITH INVERTED SWIFT MODEL (USING LCMS 2022 AS TRAINING DATA)

Table 17. Poverty and inequality estimates at different poverty lines (models assume school fees are non-comparable), by estimation method and region

	Food poverty line	Lower poverty line	Upper poverty line	Gini-coeff.	Food poverty line	Lower poverty line	Upper poverty line	Gini-coeff.
	2015	2015	2015	2015	2022	2022	2022	2022
NATIONAL								
Swift (OLS)	44.00%	57.60%	77.00%	0.53	47.70%	63.10%	82.40%	0.473
Swift (PMM)	41.80%	56.10%	76.30%		47.70%	63.10%	82.40%	
RURAL								
Swift (OLS)	63.80%	78.80%	93.20%	0.421	64.80%	81.20%	94.70%	0.406
Swift (PMM)	60.60%	77.30%	93.20%	0.41	64.80%	81.20%	94.70%	0.406
URBAN								
Swift (OLS)	16.40%	27.90%	54.40%	0.471	22.00%	36.00%	64.10%	0.418
Swift (PMM)	15.50%	26.40%	52.60%	0.457	22.00%	36.00%	64.10%	0.418

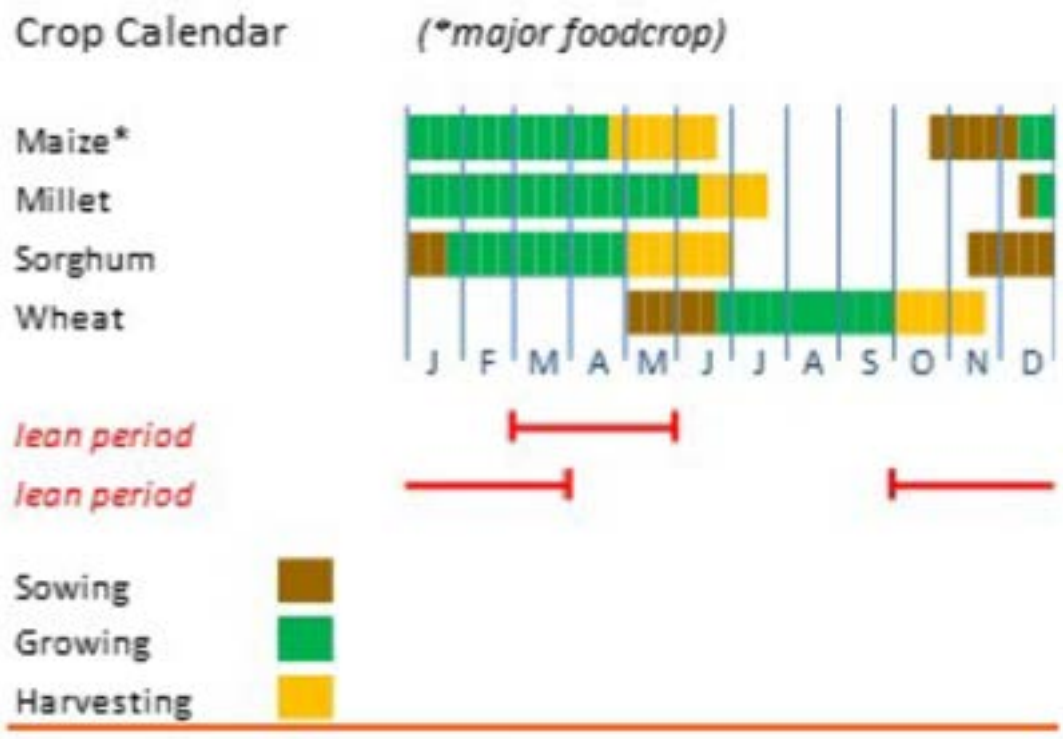
Table 18. Poverty and inequality estimates at different poverty lines (models assume school fees are comparable), by estimation method and region

	Food poverty line	Lower poverty line	Upper poverty line	Gini-coeff.	Food poverty line	Lower poverty line	Upper poverty line	Gini-coeff.
	2015	2015	2015	2015	2022	2022	2022	2022
NATIONAL								
Swift (OLS)	41.8%	55.7%	75.4%	0.531	47.7%	63.1%	82.4%	0.473
Swift (PMM)	39.6%	53.8%	74.7%		47.7%	63.1%	82.4%	
RURAL								
Swift (OLS)	61.0%	76.7%	92.2%	0.424	64.8%	81.2%	94.7%	0.406
Swift (PMM)	57.8%	75.0%	92.2%	0.454	64.8%	81.2%	94.7%	0.434
URBAN								
Swift (OLS)	15.0%	26.2%	51.9%	0.471	22.0%	36.0%	64.1%	0.418
Swift (PMM)	14.2%	24.1%	50.2%	0.437	22.0%	36.0%	64.1%	0.476

ANNEX X: SEASONALITY

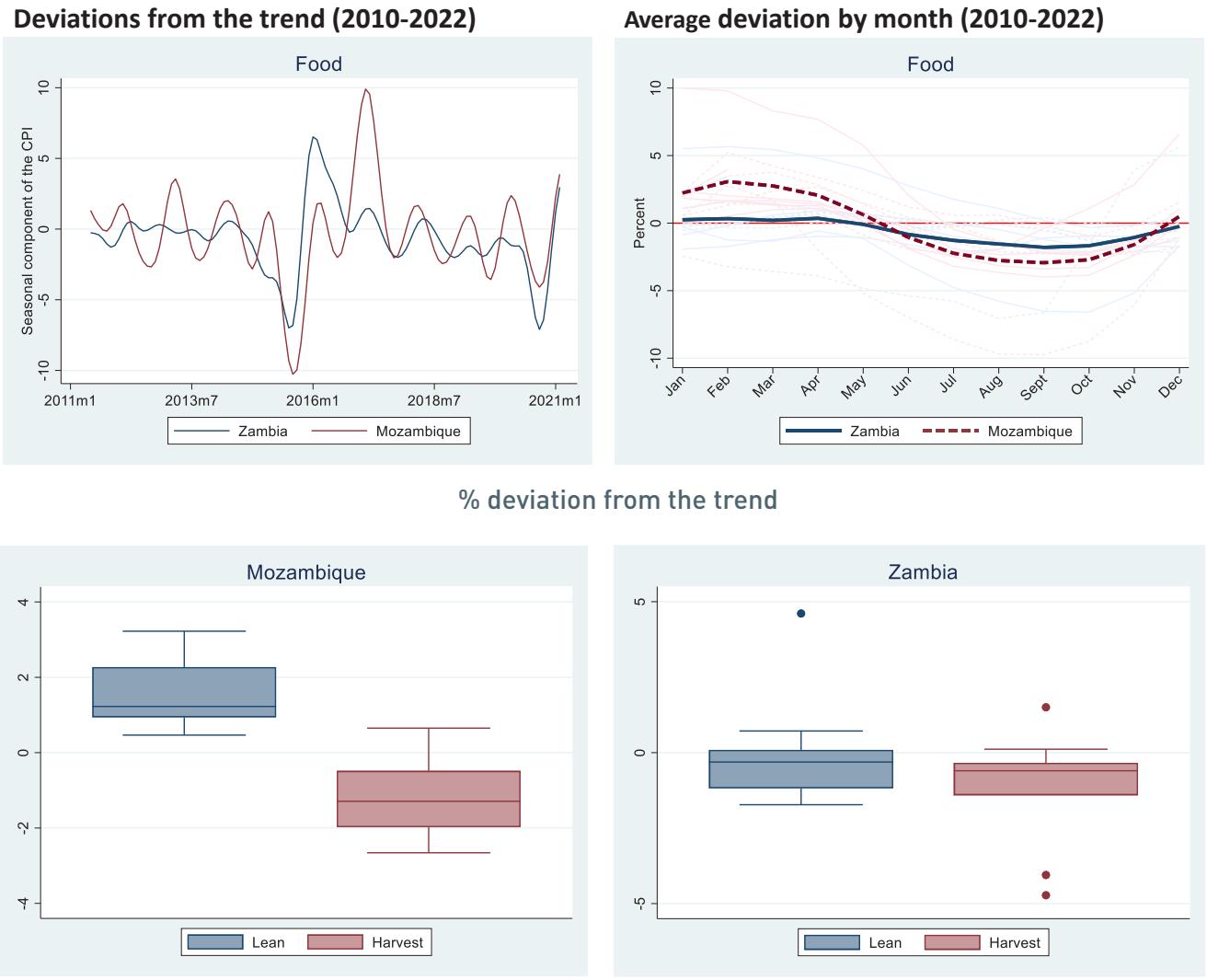
The 2015 LCMS was implemented in April/May, while the 2022 LCMS went to the field in June/July. Based on the Zambia crop calendar (Figure 9), this implies that 2015 was fielded at the end of the pre-harvest and early harvest season, while 2022 was at the end of the harvest and the beginning of the post-harvest season.

Figure 13. Calendar of major crops in Zambia



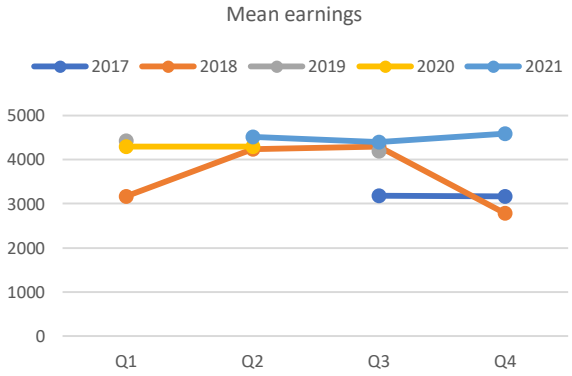
While the implications of this change cannot be properly accounted for, available evidence suggests that Zambia does not seem to have the predictable seasonal patterns observed in other countries. Figure 10 shows that there isn't a clear seasonal variation in prices, but instead, variations in prices are year-specific. Between-year price variability, resulting from idiosyncratic shocks, trumps recurring seasonal variability in prices.

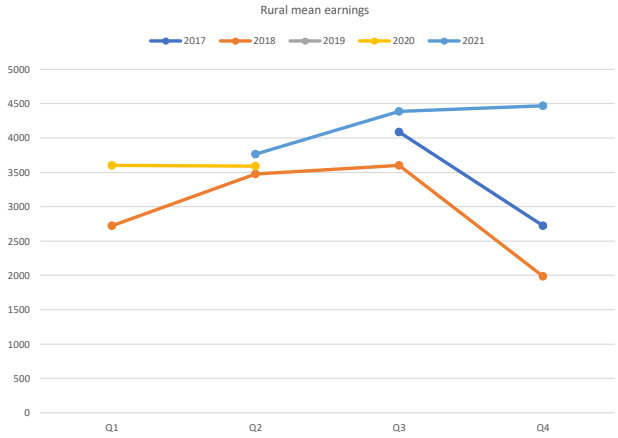
Figure 14: Evidence of price seasonality (Zambia and Mozambique)

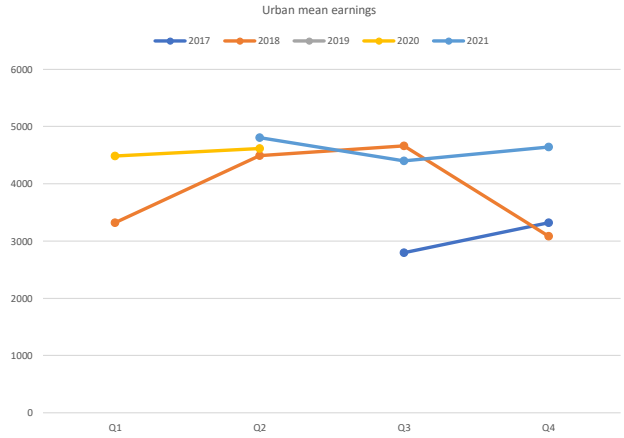


Additional evidence from the quarterly labor force survey can be gathered, though this data should be taken cautiously. Not only are earnings known to be noisy, but the field months of each quarter are not the same every year. Nonetheless, available point estimates also confirm the lack of a predictable pattern across the years (Figure 11). Data from the 2022 LFS is not yet available.

Figure 15: Evidence of income seasonality based on LFS data







ANNEX XI: SWIFT IMPUTATIONS

Comparability of LCMS 2015 and 2022

There are two main differences between the 2015 and 2022 LCMS, which led to adoption of revised statistical methods to estimate the 2015-2022 trend. First, the food module adopted a different recall period. In 2015, the recall period was fixed (i.e., while the period changed across items, all respondents reported about the same period for a given item). In 2022, the reference period of the initial incidence question (i.e., did you purchase/consume/receive…?) was fixed, but respondents were then allowed to select the relevant reference period for the follow-up questions on quantities and values. This change was adopted following ZamStats years of experience in data collection, in order to allow respondents to change the recall period depending on the type of food item and frequency of purchase. Second, due to a typo in the programming of the CAPI questionnaire, the reference period for frequent non-food items changed from 4 weeks to 12 months.

Diagnostic analysis carried out by the World Bank showed that (a) the choice of recall period was strongly correlated with education and household income (richer households tended to choose longer recall periods), and (b) that longer recall periods were, after controlling for differences in household socio-economic status and composition, associated with under-reporting of food expenditures, while shorter recall periods were associated with over-reporting. Taken together, these findings imply that consumption estimates are likely to be systematically under-reported for richer/ higher-education households in the LCMS 2022 compared to 2015, while consumption for lower income households is likely to be over-reported. These discrepancies impact the accuracy of consumption estimates, thereby affecting the comparability of data across different recall periods and across surveys and skewing inequality estimations.

The SWIFT method

In order to restore comparability with the LCMS 2015 poverty /inequality estimates, the decision was taken to implement a so-called Survey of Well-Being via Instant and Frequent Tracking (SWIFT) imputation model.

The SWIFT methodology, centered on stepwise regression, aims to select variables with statistically significant coefficients below a specified threshold for modeling poverty. However, this approach can lead to overfitting and model instability. Overfitting restricts a model's applicability beyond the training dataset, while instability results in biased poverty predictions. To address these concerns, SWIFT integrates cross-validation (CV) and fast-changing variables.

Cross-validation in SWIFT involves a 10-fold process, dividing the data randomly into subsets for model training and evaluation. This method assesses model performance on unseen data, enhancing its generalizability and identifying influential outliers. CV also determines the optimal significance level for stepwise regressions by minimizing the difference between actual and projected poverty rates and Mean Squared Error (MSE). This approach prevents overfitting, yielding robust poverty predictions for different regions.

One weakness of traditional SWIFT model has been their over-reliance on semi-static markers of wellbeing, such has housing conditions and assets. This can make it difficult for the model to identify economic shocks in periods of economic fluctuation. To address this weakness, an enhanced variant, called SWIFT-plus, was developed, which incorporates time-variant variables, like consumption patterns and economic self-assessments. Case studies in Afghanistan and Gaza demonstrate that SWIFT-plus models enhanced accuracy in predicting poverty rates by accounting for economic changes, despite stable housing and asset statistics. Notably, the model accurately forecasts poverty increases when fast-changing variables are included, compared to predictions without them.

The SWIFT method comprises three key steps:

1. Training model using training dataset: predict total per adult consumption in the training dataset (LCMS 2015) using a stepwise OLS regression.
2. Cross-validation: cross-validate the model to ensure external validity of the model and reduce over-specification.
3. Predictions in target dataset: estimate predicted consumption and poverty rate in the LCMS 2022 dataset using multiple imputation method.

For a full description of the SWIFT methodology, refer to Yoshida et al. (2015) .

How to use the SWIFT estimates

One challenge with the SWIFT method is that it uses a multiple imputation approach to improve prediction accuracy. The Multiple Imputation (MI) approach involves three primary steps: (1) Imputation phase (filling missing data iteratively), (2) Analysis phase (applying statistical methods to each imputed dataset), and (3) Pooling phase (combining results across multiple imputations). Stata offers commands specifically designed for analyzing multiple imputed datasets, accommodating various models and statistics. The MI dataset structure includes imputation IDs and counts for each household, allowing for analysis across iterations (for a detailed description of the MI method and how to use MI datasets, see Farfan et al. 2023).

This means that for each missing observation, it will generate 20 different imputations. The final reported value is thus actually an average of 20 different predictions. Practically, this implies that we have 20 different observations of each household in the survey, and thus 20 different consumption vectors and poverty estimates instead of one. This makes it difficult to cross-tab poverty with other indicators, or to disaggregate by poverty status, as the same household can have different poverty statuses in different MI vectors. To enable disaggregations by poverty status, we have created a single proxy consumption vector, that approximates the official result in terms of poverty and inequality. The proxy is contained in a datafile called SWIFT_SingleVector.dta and should only be used for disaggregations/ cross-tabs. The file contains the following proxy variables:

- **Swift_cons:** Total household consumption per adult-equivalent/month in K at June/July 2022 prices.
- **proxy_poor:** Poverty status of the household (1= poor, 0= non-poor).
- **proxy_povstatus:** 1= extreme poor; 2= moderately poor; 3 = non-poor.
- **proxy_quintile:** household ranking based on swift_cons (1=poorest,..., 5=richest)
- **proxy_decile:** household ranking based on swift_cons (1=poorest,...,10=richest)

Table 1: How to use the SWIFT proxy variables for disaggregations/ cross-tabs?

Action	Command	Comment
Open the dataset	use "Path-to-folder-location-on-your-computer/SWIFT_SingleVector.dta", clear	
Survey set the data	svyset cluster [pw=popweight], strata(stratum)	
Cross-tab variable XXXX with poverty status	tab XXXX proxy_povstatus, m	
Disaggregate variable XXXX by quintile	svy: mean XXXX, over(proxy_quintile)	

In order to replicate the official SWIFT model poverty estimates published in the LCMS report, the 20 vectors have to be used with the MI estimation commands in STATA. The full SWIFT predictions are contained in a separate datafile SWIFT.dta, containing the following variables with 20 observations per household:

- swift_cons: Total household consumption per adult-equivalent/month in K at June/July 2022 prices
- swift_poor: SWIFT-predicted probability of household being poor based on observed assets/ consumption patterns.
- Lnexpm: log of total consumption

To replicate the official poverty estimates, follow these steps:

Table 2: How to use the full SWIFT estimates to replicate official poverty statistics?

Action	Command	Comment
Open the dataset	use "Path-to-folder-location-on-your-computer/SWIFT.dta", clear	
Survey-set the dataset	mi svyset cluster [pw=popw], strata(stratum)	
Type estimation command	mi estimate: svy: mean swift_poor, over(region)	

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