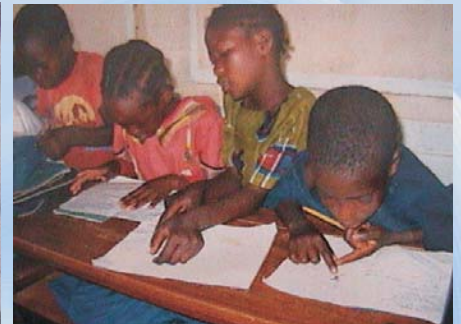
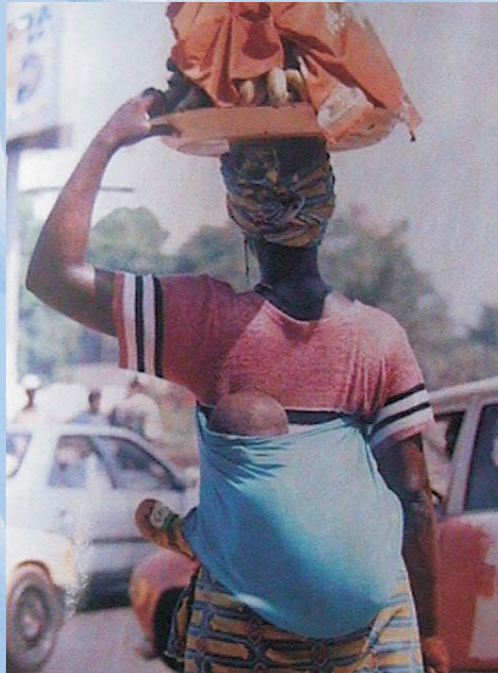




Republic of Zambia

**Central Statistical Office**

# **LIVING CONDITIONS MONITORING SURVEY REPORT 2006 and 2010**



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# LIVING CONDITIONS MONITORING SURVEY REPORT 2006 and 2010

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# Foreword

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In recent years a number of developing countries have undergone major changes in both their political and economic systems. In order to monitor the effects of these changes on the living conditions of the population, Living Conditions Monitoring Surveys are conducted to provide the necessary statistical monitoring indicators.

In Zambia, the need to monitor the living conditions of the people became more pronounced during the 1990s when the country vigorously started implementing the Structural Adjustment Programmes (SAP). The Government and its cooperating partners realized that a segment of the population was adversely affected by these policies and programmes meant to reform the economy. Deteriorating socio-economic conditions in the country further prompted the Government and donor community to reassess various development and assistance strategies from the point of view of poverty alleviation. The reassessment culminated into the development of the Poverty Reduction Strategy Paper (PRSP) in 2001. However, the successful implementation of such policy-oriented strategies requires institutionalisation of monitoring framework both at household and community levels.

The Central Statistical Office (CSO) has been conducting the household based Living Conditions Monitoring Surveys (LCMS) since 1996 for monitoring various Government and donor policies and programmes. The LCMS surveys evolved from the Social Dimensions of Adjustment Priority Surveys conducted in 1991 (PSI) and 1993 (PSII). So far, five LCMS Surveys have been conducted.

These are: -

- (i) The Living Conditions Monitoring Survey I of 1996
- (ii) The Living Conditions Monitoring Survey II of 1998
- (iii) The Living Conditions Monitoring Survey III of 2002/2003
- (iv) The Living Conditions Monitoring Survey IV of 2004
- (v) The Living Conditions Monitoring Survey of 2006

The Living Conditions Monitoring Survey 2010 (or Indicator Monitoring Survey) was conducted between January 2010 and April 2010 covering the whole country. The major objective was to provide poverty estimates, and provides a platform for comparing with previous poverty estimates derived from cross-sectional survey data. Using similar survey design to that earlier conducted in 1998, the poverty estimates from the 2004 survey are comparable to the survey of 1998 and 1996. It should be noted that, although the Central Statistical Office conducted another survey for 12 months during 2002/2003, the poverty results could not be compared to the 1998 Living Conditions Survey that was used to provide baseline poverty estimates for reports that include the Poverty Reduction Strategy Paper (PRSP) of 2002-4 and the Millennium Development Goals. The poverty results of the LCMS 2010 and LCMS 2006 cannot be compared to the results of the 2004, 1998, 1996, PSII 1993 and PSI 1991. This is because the results of the LCMS 2006 and 2010 used year specific angle ratios to derive the food share while the rest used a fixed angle. The 2006 LCMS and 2010 LCMS used items prices to update the poverty lines.

The main objectives of the LCMSVI Survey are to:

- Monitor the impact of Government policies, programmes and donor support on the well being of the Zambian population
- Monitor and evaluate the implementation of some of the programmes envisaged in the Poverty Reduction Strategy Paper (PRSP)
- Monitor poverty and its distribution in Zambia
- Provide various users with a set of reliable indicators against which to monitor development

- Identify vulnerable groups in society and enhance targeting in policy formulation and implementation

The Living Conditions Monitoring Survey 2010 collected data on the living conditions of households and persons in the areas of education, health, economic activities and employment, child nutrition, death in the households, income sources, income levels, food production, household consumption expenditure, access to clean and safe water and sanitation, housing and access to various socio-economic facilities and infrastructure such as schools, health facilities, transport, banks, credit facilities, markets, etc.

The Living Conditions Monitoring survey Report 2010 highlights some key aspects of the living conditions of the Zambian population. Therefore, the results presented in this report are by no means exhaustive on any topic covered but only attempt to highlight salient aspects of living standards among various population subgroups at national, provincial and location level. A separate report on poverty is been compiled alongside this main report. Additional tabulations and analyses not included in this report can be provided to users on request. Also obtainable on demand are the LCMSVI data sets for those who wish to do further analysis.



John Kalumbi  
**ACTING DIRECTOR OF CENSUS & STATISTICS**

17 November 2011



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# List of Abbreviations

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AES	-	Adult Equivalent scale
BCG	-	Bacillus Calmete Guerin (Vaccination against Tuberculosis)
CSA	-	Census Supervisory Area
CSO	-	Central Statistical Office
CSPRO	-	Census and Survey Processing
DPT	-	Diphtheria, Pertussis and Tetanus
PHANIS	-	Food Security, Health, Agricultural and Nutrition Information System
FGT	-	Foster, Greer and Thorbecke
GDP	-	Gross Domestic Product
ILO	-	International Labour Office
LCMS	-	Living Conditions Monitoring Survey
LCMB	-	Living Conditions Monitoring Branch
NAC	-	National AIDS Council
NAR	-	Net Attendance Ratio
PRSP	-	Poverty Reduction Strategy Paper
NFNC	-	National Food and Nutrition Commission
PIC	-	Price and Income Commission
PS	-	Priority Survey
PPS	-	Probability Proportional to Size
SAP	-	Structural Adjustment Programme
SAS	-	Statistical Analysis System
SEA	-	Standard Enumeration Area
TB	-	Tuberculosis
ZAMSIF	-	Zambia Social Investment Fund

# Executive Summary

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## OVERVIEW ON ZAMBIA

### 1.0. Introduction

Zambia is a landlocked sub-Saharan country sharing boundaries with Malawi, Mozambique to the east; Zimbabwe, Botswana, Namibia to the South; Angola to the west, Democratic Republic of Congo and Tanzania to the North. The country covers a land area of 752,612 square kilometers. It lies between 8° and 18° degrees South latitudes and longitudes 22° and 34° degrees East. About 58 percent of Zambia's total land area of 39 million hectares is classified as having medium to high potential for agricultural production, but less than half of potential arable land is cultivated. The country is prone to drought due to erratic rainfall, as its abundant water resources remain largely untapped. Zambia has some of the largest copper and cobalt deposits in the world.

### 1.1. Land and the People

The population of Zambia increased from 5.7 million in 1980 to 7.8 million in 1990. It then increased from 9.9 million in 2000 to 13.1 million in 2010. This gives an annual growth rate of 2.8 percent between 2000 and 2010, down from 3.2 per cent between 1980 and 1990. The country's average population density is 17.3 persons per square kilometer, while Lusaka Province (hosting the capital city of Lusaka) has the highest average of 100.4 persons per sq km.

Although Zambia is endowed with many languages, derived from 73 ethnic groups, there are seven major languages that are used besides English, which is the official language. These are Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga.

### 1.2. Politics and Administration

Politically, Zambia has undergone phases of both multi-partism and one party rule. The country, which is a former British colony, gained its independence in 1964. Administratively, the country is divided into nine provinces namely Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, Northwestern, Southern and Western. These provinces are further sub-divided into 72 districts.

### 1.3. Economy

Zambia's economy is heavily dependent on the copper mining industry. However, the majority of the population (65 percent) live in rural areas and is dependent on subsistence agriculture for its livelihood. Zambia has in the recent past intensified its economic diversification from copper dependence to other sectors, especially agriculture. Zambia has spelt out its development agenda in the Sixth National Development Plan (SNDP) (2011-2015). Zambia visualizes becoming a prosperous middle income country by the year 2030 (Vision 2030). This is to be achieved through a private sector-led broad-based economic growth. Thus Zambia has embarked on the Private Sector Development



Program (PSDP) which is meant to attract both domestic and foreign investment in the various sectors of the economy. This is to be achieved through Zambia's broad macro-economic and social policies which include pro-poor economic growth, achieve low inflation, stable exchange rates and financial stability.

Zambia's main export is copper, accounting for over 70 percent of the country's export earnings. GDP growth has averaged 6.4 percent for the period between 2006 and 2010. Overall inflation declined from 35.2 percent at the end of 1996 to 7.9 percent at the end of 2010.

**Table 1.1: Gross Domestic Product (GDP), Inflation and Exchange Rates (1996-2010)**

Year	GDP at current Prices (K' Billions)	GDP at Constant 1994 Prices (K' Billions)	Per capita GDP at current Prices (K'000)	Per capita GDP at Constant 1994 Prices (K'000)	GDP growth rate (%)	Annual Inflation Rate (%)	Exchange Rate
1996	3,950.2	2,328.1	418	246.0	6.9	35.2	1,213
1997	5,140.2	2,404.9	526	246.0	3.3	18.6	1,321
1998	6,027.9	2,360.2	597	233.0	-1.9	30.6	1,765
1999	7,477.7	2,412.7	733	236.0	2.2	20.6	2,417
2000	10,121.3	2,497.6	1,033.6	242.0	3.5	30.1	3,170
2001	13,193.7	2,619.8	1,307.6	248.0	4.9	18.7	3,581
2002	16,324.4	2,706.7	1,568.2	260.0	3.3	26.7	4,307
2003	20,551.1	2,845.5	1,912.7	264.8	5.1	17.2	4,735
2004	25,993.1	2,999.3	2,343.9	270.5	5.4	17.5	4,775
2005	32,041.5	3,159.5	2,800.5	276.1	5.3	15.9	4,463
2006	38,560.8	3,356.1	3,268.2	284.5	6.2	8.2	3,602
2007	46,194.4	3,564.0	3,798.7	293.1	6.2	8.9	4,003
2008	54,839.4	3,766.5	4,378.7	300.7	5.7	16.6	3,746
2009	64,615.6	4,007.7	5,010.2	310.7	6.4	9.9	5,046
2010	77,679.4	4,312.6	5,954.0	330.6	7.6	7.9	4,831

Source: Central Statistical Office-National Accounts & Price Statistics

#### 1.4. Developments in the Social Sectors

Education indicators have improved over the recent years, with increases in primary school enrolment and declines in drop-out rates. For instance, gross enrolment ratios (GER) for grades 1-9 rose from 75.1 percent in 2000 to 115.8 percent in 2009, while net enrolment ratios (NER) rose to 102.1 percent in 2009 from 68.1 percent in 2000. The completion rate for Grade 9 was 52.7 percent in 2009 while that for Grade 12 was 19.8 in 2009. These improvements partly reflect the introduction of free primary schooling in 2002 (2009 Educational statistical Bulletin).

Health indicators have also shown some improvement since the early 1990's. Both rural and urban infant mortality rate fell considerably between 1990 and 2000. The Zambia Demographic and Health Survey of 2007 found the HIV and AIDS prevalence to be 14 percent (ZDHS, 2007).

Maternal mortality worsened during the period 1996 to 2002. There were 649 maternal deaths per 100,000 live births in 1996 (ZDHS, 1996). This figure increased to 729 maternal deaths per 100,000 live births in the period 2001/2002 (ZDHS, 2002). It however improved in 2007 as it fell to 591 maternal deaths per 100,000 live births (ZDHS, 2007). Although still high, child mortality has shown signs of decline. Infant mortality was 109 deaths per 1,000 live births in 1996; it declined to 95 deaths per 1,000 live births in 2001/2002 and further to 70 deaths per 1,000 live births in 2007 (ZDHS, 2007). Under five mortality was 197 deaths per 1,000 live births in 1996 but fell to 168 deaths per 1,000 live births in 2001/2002 and it even fell further to 119 deaths per 1,000 in 2007 (ZDHS, 2007).

# SURVEY BACKGROUND AND SAMPLE DESIGN METHODOLOGY

## 2.1. Survey background

In 1991, the Government of Zambia introduced the Structural Adjustment Programme (SAP) as the main developmental programme to reform the economy. It had its own successes and shortcomings. Some components of the programme such as privatisation were implemented at record pace. Others such as liberalization of agricultural marketing did not completely take root. A substantial segment of the population is still adversely affected by the cost of reforming the Zambian economy. It is from this realisation that the Zambian government and its cooperating partners decided to put in place a monitoring and evaluation mechanism in 1991, which was implemented through conducting the *Social Dimensions of Adjustment Surveys* (SDAs). These surveys were called Priority Surveys I and II (PSI and PSII). PSI was conducted in 1991 while PSII was conducted in 1993. These surveys evolved into the Living Conditions Monitoring Surveys (LCMS). The Central Statistical Office undertook two Living Conditions Monitoring Surveys during the SAP period namely:

- The Living Conditions Monitoring Survey I of 1996
- The Living Conditions Monitoring Survey II of 1998

The Zambian government adopted the Transitional National Development Plan (TNDP) in 2002 covering the period 2002 to 2005. This was also the period of the Poverty Reduction Strategy Paper (PSRP) 2002 to 2004. As part of the monitoring and evaluation process of these policies, the Central Statistical Office undertook the following surveys:

- The Living Conditions Monitoring Survey III of 2002/2003
- The Living Conditions Monitoring Survey IV of 2004

When the LCMS 2006 and LCMS 2010 were done, the Fifth National Development Plan (FNDP) was Zambia's main economic developmental programme for the period 2006 to 2010. FNDP was part of the longer term programme, Vision 2030, whose theme is to make Zambia into "A prosperous and middle-income nation by 2030". The theme of the FNDP was "Broad based wealth and job creation through citizenry participation and technological advancement". In December 2006 and January 2010, the Central Statistical Office conducted the LCMS surveys. The results of the LCMS will be used to monitor the impact of the FNDP at micro level, focusing on poverty levels, welfare and the general living conditions of the Zambian population at the beginning of the FNDP and the end period. The sixth National Development Plan (SNDP) is the current main developmental programme for the period 2011 to 2015. The SNDP is the successor to the FNDP and aims to build on the gains of the FNDP in the process of attaining Vision 2030. The theme of the SNDP is "sustained economic growth and poverty reduction" and the specific objectives are to accelerate: infrastructure development; economic growth and diversification; rural investment, poverty reduction and enhance human development. Again the LCMS 2010 data will be very vital to measure these objectives at individual and household level as this provides the information at the beginning of the SNDP. Future LCMS

surveys will be used to measure the impact of the SNDP on the general living conditions the Zambian population.

## **2.2. Objectives of the Living Conditions Monitoring Surveys**

Since 1991, the Central Statistical Office has been utilizing cross-sectional sample data to monitor the well-being of the Zambian population. However, in 2002/2003 a longitudinal methodology was employed to collect data. This survey was designed to collect data for a period of 12 months.

The LCMS surveys were intended to highlight and monitor the living conditions of the Zambian society in the two reference periods of 2006 and 2010. The surveys included a set of priority indicators on poverty, welfare and living conditions which have been repeated from previous surveys.

The main objective of the LCMS surveys was to provide the basis for comparison of poverty estimates derived from cross-sectional survey data between 2006 and 2010.

In addition, the survey provides a basis on which to:

- Monitor the impact of government policies on the well being of the Zambian population.
- Monitor the level of poverty and its distribution in Zambia.
- Provide various users with a set of reliable indicators against which to monitor development.
- Identify vulnerable groups in society and enhance targeting in policy implementation.

For the purpose of computing indicators to meet the stated objectives, the LCMS questionnaires included the following topics:

- Demography and migration
- Orphan hood
- Health
- Education
- Economic Activities
- Income
- Household Expenditure
- Household Assets
- Household Amenities and Housing Conditions
- Household Access to facilities
- Self-assessed poverty and household coping strategies, and
- Household Agricultural production

## **2.3. Sample design and coverage**

The LCMS covered the entire nation on a sample basis. It covered both rural and urban areas in all the nine provinces. The survey was designed to provide data for each and every district in Zambia. A sample of 1,000 Standard Enumeration Areas (SEAs) was drawn to cover approximately 20,000 households.

### 2.3.1. Sample stratification and allocation

The sampling frame used for the LCMS VI was developed from the 2000 Census of Population and Housing. The country is administratively demarcated into 9 provinces, which are further divided into 72 districts. The districts are further subdivided into 150 constituencies, which are in turn divided into wards. For the purposes of conducting CSO surveys, Wards are further divided into Census Supervisory Areas (CSA), which are further subdivided into Standard Enumeration areas (SEAs). For the purposes of this survey, SEAs constituted the Primary Sampling Units (PSUs).

In order to have reasonable estimates at district level and at the same time take into account variation in the sizes of the districts, the survey adopted the Square Root sample allocation method, (Leslie Kish, 1987). This approach offers a compromise between equal and proportional allocation i.e. small sized strata (Districts) are allocated larger samples compared to proportional allocation. However, it should be pointed out that the sample size for the smallest districts is still fairly small, so it is important to examine the confidence intervals for the district-level estimates in order to determine whether the level of precision is adequate. The allocation of the sample points to rural and urban strata was done in such a way that it was proportional to their sizes in each district. Although this method was used, it was observed from the LCMS 2006 that the coefficient of variation (CV) of the poverty estimates was highest in districts which are predominantly urban and lowest in rural districts. This means that the sample size in some urban districts may have been inadequate to measure poverty with a good level of precision. That is, given the higher variability in the urban districts, a larger sample size would be required. Also some districts had very low CV estimates, indicating a higher level of precision for the poverty estimates. In order to try and improve the precision of the poverty estimates for the urban districts, the initial distribution of the sample was adjusted. It was necessary to increase the number of PSUs for some districts without increasing the budget and at the same time not compromising significantly the precision of the poverty estimates for rural areas. Rural districts which had the lowest CVs in the 2006 LCMS results had their sample size reduced, and these were in turn distributed to districts with the highest CVs. The distribution of the sample for the LCMS 2006 and LCMS 2010 were initially the same but changed after the later was adjusted. Table 2.1 shows the allocation of PSUs in the two surveys.

**Table 2.1: Total number of selected SEAs by province, rural/urban, Zambia, 2006 and 2010**

Province	Rural		Urban		Total	
	2006	2010	2006	2010	2006	2010
Central	56	55	30	41	86	96
Copperbelt	44	48	100	114	144	162
Eastern	98	76	24	24	122	100
Luapula	64	54	22	22	86	76
Lusaka	28	32	78	84	106	116
Northern	106	97	38	47	144	144
North Western	60	62	24	28	84	90
Southern	100	93	44	53	144	146
Western	62	48	22	22	84	70
Total Zambia	618	565	382	435	1000	1000

### 2.3.2. Coverage

In the LCMS 2010, all the 1000 sampled SEAs were enumerated representing 100 percent coverage at national level. However, in the LCMS 2006 only 988 SEAs were covered out the 1000 selected. North Western Province had the highest number of cluster nonresponse with 9 SEAs not enumerated and 1 each from Copperbelt, Eastern and Southern provinces.

The household response rate was calculated as the ratio of originally selected households with completed interviews over the total number of households selected. The household response rate was also generally very high with a national average of 98 percent of the originally selected households for both survey periods.

The non coverage of SEAs (LCMS 2006) in most cases was due to inaccessibility of some areas due to floods and washed away bridges especially in North Western Province. Post stratification adjustment of the weights was done in order to compensate for non coverage of SEAs. The household selection technique allows for systematic method of replacing non-responding households.

**Table 2.2: Total number of selected and covered SEAs and household response rate by province, Zambia, 2006 and 2010**

Province	Covered SEAs		Selected SEAs		Percent covered SEAs		Household response rate (%)	
	2006	2010	2006	2010	2006	2010	2006	2010
Central	86	96	86	96	100	100	97	98
Copperbelt	143	162	144	162	99	100	97	97
Eastern	121	100	122	100	99	100	98	99
Luapula	86	76	86	76	100	100	97	98
Lusaka	106	116	106	116	100	100	97	98
Northern	144	144	144	144	100	100	97	98
North Western	75	90	84	90	89	100	99	99
Southern	143	146	144	146	99	100	99	98
Western	84	70	84	70	100	100	98	100
Total Zambia	988	1000	1000	1000	99	100	98	98

### 2.3.3. Sample selection

The LCMS VI employed a two-stage stratified cluster sample design whereby during the first stage, 1000 SEAs were selected with Probability Proportional to Estimated Size (PPES) within the respective strata. The size measure was taken from the frame developed from the 2000 Census of Population and Housing. During the second stage, households were systematically selected from an enumeration area listing. The survey was designed to provide reliable estimates at the district, provincial, rural/urban and national levels. However, the reliability for some indicators may be limited for the smaller districts, given the limited sample size. This will be determined by the tabulation of sampling errors and confidence intervals.

### 2.3.4. Selection of Standard Enumeration Areas (SEAs)

The SEAs in each stratum were selected as follows:

- (i) Calculating the sampling interval (I) of the stratum.

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

Where:

$\sum_i M_i$  = is the total stratum size

$a$  = is the number of SEAs allocated to the stratum

- (ii) Calculate the cumulated size of the cluster (SEA)



- (i) Calculate the sampling numbers  $R, R+I, R+2I, \dots, R+(A-1)I$ , where  $R$  is the random start number between 1 and  $I$ .
- (iv) Comparing each sampling number with the cumulated sizes

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

### 2.3.5. Selection of households

Listing of all the households in the selected SEAs was done before a sample of households to be interviewed was drawn. In the case of rural SEAs, households were stratified and listed according to their agricultural activity status. Therefore, there were four explicit strata created at the second sampling stage in each rural SEA namely, the Small Scale Stratum (SSS), the Medium Scale Stratum (MSS), the Large Scale Stratum (LSS) and the Non-agricultural Stratum (NAS). For the purposes of the LCMS VI, Seven, five and three households were selected from the SSS, MSS and NAS, respectively. The large scale households were selected on a 100 percent basis. The urban SEAs were explicitly stratified into low cost, medium cost and high cost areas according to CSO's and local authority classification of residential areas.

From each rural and urban SEA, 15 and 25 households were selected, respectively. However, the number of rural households selected in some cases exceeded the prescribed sample size of 15 households depending on the availability of large scale farming households.

The selection of households from various strata was preceded by assigning fully responding households sampling serial numbers. The circular systematic sampling method was used to select households. The method assumes that households are arranged in a circle (G. Kalton, 1983) and the following relationship applies:

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 SEA

$k$  = The sampling interval in a given SEA calculated as  $k=N/n$ .

## 2.4. Data collection

Data collection was done by way of personal interviews using a structured questionnaire. The questionnaire was designed to collect information on the various aspects of the living conditions of the households.

## 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 (one for each stage of selection).

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

$$P_{hi}^1 = \frac{a_h M_{hi}}{\sum_i M_{hi}}$$

Where:

$P_{hi}^1$  = the first selection probability of SEAs

$a_h$  = The number of SEAs selected in stratum h

$M_{hi}$  = The size (in terms of the population count) of the ith SEA in stratum h

$\sum_i M_{hi}$  = The total size of the stratum h

The selection probability of the household was calculated as follows:

$$P_{hi}^2 = \frac{n_{hi}}{N_{hi}}$$

Where:

$P_{hi}^2$  = the second selection probability of selecting households

$n_{hi}$  = the number of households selected from the i<sup>th</sup> SEA of h stratum

$N_{hi}$  = Total number of households listed in a SEA

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

$$W'_{hi} = \frac{1}{P_{hi}^1 \times P_{hi}^2}$$

$W'_{hi}$  is called the PPS sample weight. In the case of rural SEAs which have more than one second stage stratum, the first selection probability is multiplied with separate stratum-specific second stage selection probabilities. Therefore, the number of weights in each rural SEA depends on the number of second stage strata available.

### 2.5.2. Post Stratification Adjustment

The LCMS 2006 and LCMS 2010 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 district, province, rural/urban and national level for which this survey was designed for. The expression to get the Population is given below

$$\hat{Y} = \sum_h \sum_i \sum_j w'_{hi} * y_{hij}$$

Where  $Y$  = The Population

$w'_{hi}$  = weight of the sample households in the  $i$ -th SEA of stratum  $h$

$y_{hij}$  = household size (y) of the  $j$ -th sample household with the  $i$ -th SEA of stratum  $h$

The weighted results generated by both the LCMS 2006 and LCMS 2010 under-estimated the total population when compared to the CSO projected population. One of the main reasons is because of problems with the coverage of the listing. This is partly due to having the listing exercise in the field done concurrently with the questionnaire interviews by the same enumerators, which might have lead to work overload that can contribute greatly to the listing problems. The other major listing problem is boundaries which no longer exist, i.e. the features used in 2000 have changed or have completely disappeared altogether. These frame problems will only be solved after the finalization of the new frame based on the Census 2010 and continuous frame updating thereafter.

The solution for now is the adjustment of the weights to reflect the 2006 and 2010 population projections i.e. post-stratification of the weights or population weighting. The current Preliminary Census 2010 results were not available at the time the weights were generated. It should be pointed out that the preliminary census results were based on the concept of de facto population (usual members present and visitors), and institutional population was also included in these results. The population estimate from the surveys uses the concept of de jure (usual household members). This is the same concept used to generate the sampling frame and the population projections. This procedure is used for all national household surveys done by CSO. The procedure for adjusting the weights based on population projections is given below.

$$k = \frac{Y_{proj}}{\hat{Y}}$$

where  $k$  = adjustment factor

$Y_{proj}$  = Projected Population of the domain (district) from the Census 2000 Projections Report

$$w_{hi} = w'_{hi} * k$$

where  $w_{hi}$  = adjusted final household weight .

### 2.5.3. Estimation process

In order to correct for differential representation, all estimates generated from the LCMS VI data are weighted expressions. Therefore, if  $y_{hij}$  is an observation on variable  $Y$  for the  $j$ th household in the  $i$ th SEA of the  $h$ th stratum, then the estimated total for the  $h$ th stratum is expressed as follows:

$$Y_{hT} = \sum_{i=1}^{a_h} w_{hi} \sum_{j=1}^{n_h} y_{hij}$$

Where:

$Y_{ht}$  = the estimated total for the  $h^{\text{th}}$  stratum

$i = 1$  to  $a_h$ : the number of selected clusters in the stratum

$j = 1$  to  $n_h$ : the number of sample households in the stratum

The national estimate is obtained using the following estimator:

$$Y_T = \sum_{k=1}^{72} Y_{hT}$$

Where:

$Y_T$  = the national total estimate

$k = 1$  to  $72$ : the total number of strata (i.e. 72 districts).

## 2.6. Data processing and analysis

The Living Conditions Monitoring Survey data were entered using CPro version 4.0 software. The major difference between the data entry systems for the two LCMS applications is that single entry was used for the LCMS 2006 and double entry for LCMS 2010. The 2010 data entry was done by two teams, one team in the Provinces and another one at CSO headquarters. The data were then compared and matched by a team of matchers. Errors identified by matchers were corrected as a way of completing data entry. The major advantage of double entry (verification) is that data entry errors generated by the data entry operator are greatly minimized. The data were then exported to SAS, SPSS and Stata formats for data cleaning, validation and analysis.

# GENERAL CONCEPTS & DEFINITIONS

### 3.0. Introduction

The 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 Survey.

### 3.1. General Concepts and Definitions

**Building** - A building was defined as 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 the purpose of the survey partially completed structures were considered as buildings if they were used for living purposes. Also, in rural areas, huts belonging to one household and grouped on the same premises were considered as one building.

**Housing Unit** - In this survey any structure, which was occupied by one or more households at the time of the survey, was treated as a housing unit. A housing unit was defined as an independent place of abode intended for habitation by one or more households.

**Household** -A household was defined as a group of persons who normally eat and live together. These people may or may not be related by blood, but make common provision for food and other essentials for living. A household may comprise several members and in some cases may have only one member.

**Usual member of the Household** - In the LCMS VI, the de jure approach was adopted for collecting data on household composition as opposed to the de facto approach which only considers those household members present at the time of enumeration. The de jure definition relies on the concept of usual residence.

A usual member of a household was considered to be one who had been living with a household for at least six (6) months prior to the survey. Newly married couples were regarded as usual members of the household even if one or both of them had been in the household for less than six months. Newly born babies of usual members were also considered as usual members of the household.

Members of the household who were 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, were included in the list of usual members of the household.

**Head of Household** - This is the person all members of the household regard as the head and who normally makes day-to-day decisions concerning the running of the household. The head of the household could be male or female.

In cases of shared accommodation and the persons or families sharing were identified as separate households, the enumerator had to find out who the head of the separate households were. 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 to the most senior wife's household if the wives were identified as separate households. This was done to avoid double counting. In this case the second spouse automatically became the head of her household.

**Background Variables-** The analysis in this report uses seven (7) main background variables, namely:

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

**Residence** - Urban area: Central Statistical Office defines an urban area mainly by two criteria which are:

- (i) *Population size*
- (ii) *Economic activity*

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

**Stratum** - Survey households were classified into strata, based on the type of residential area in urban areas and based on agricultural activities in the rural areas. The urban areas were pre-classified while the rural strata were established during the listing stage at the level of each household. These same groupings were used to stratify urban and rural households during the sampling process, urban strata being defined at the first stage and rural households at the second stage.

The presentation of results in this report uses 7 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 7 groups are mutually exclusive, and hence any given household belongs to one and only one stratum. The reader should note that within urban areas these are sampling domains which refer to areas rather than individual households.

**Socio-Economic Group** - All persons 12 years and above were assigned a socio-economic status. The socio-economic grouping was based on main current economic activity, occupation, employment status and sector of employment.

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 agricultural and fishery workers, ISCO codes 6111-4, market oriented animal producers, ISCO codes 6121-29, market oriented crop and animal producers, ISCO code 6130.
- Government employees, comprising both Central and Local Government employees.
- Parastatal employees.
- Formal sector private employees, i.e. those whose employment status was private employee, and whose employment was in the formal sector, meaning that they were entitled to paid leave or pension or other social security or more than 5 people were employed at their work place.
- Informal sector employees, i.e. those whose employment status was private employee, and whose employment was in the informal sector, meaning that they were not entitled to paid leave and pension and that less than 5 people were employed at their work place.
- Self-employed outside agriculture, i.e. their employment status was self-employed and their main current economic activity was running a non-farming business.
- Unpaid family worker, based on employment status.
- 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.
- Inactive persons were those whose main current activity was full time student, full time home maker, retired or unable to work because of old age or for reasons of ill health or disability.

There is no one to one relationship between the classification of agricultural activities in the variable 'stratum' and the variable 'socio-economic group'. In the case of 'stratum' the households were classified during the listing stage into three agricultural strata according to certain criteria. In the case of 'socio economic group' the person was classified according to the main current economic activity and occupational code, based on information from each individual.

Even though most subsistence farming households were classified as belonging to the small-scale farming stratum, individuals from the small-scale farming stratum do not necessarily engage in subsistence farming only. They can even do some market oriented farming. Likewise, commercial farmers may be drawn from all the four farming strata formed during the listing. It cannot be deduced that being classified as a commercial farmer in the socio economic groupings is the same as belonging to the medium scale and large scale farming strata.

**Poverty Status** - All households and household members were assigned a poverty status based on the household expenditure and/or consumption. Each member of a household had the same poverty status as assigned to the household poverty status.

The households and individuals were classified as non-poor, moderately poor and extremely poor. The construction of the different poverty lines is described in detail in the Poverty Chapter.

### 3.2. Conventions

The following conventions are adopted for this publication.

- Most percentages and proportions are presented to the first decimal place in the 2010 LCMS. However in some previous LCMS the general rounding rules were applied. Thus, when summing up percentages, the total will not always be 100 percent.
- When obtaining total population and household figures, the numbers are rounded to the nearest 1000, following the general rounding rules.
- In the 2010 LCMS we included a missing values column in the tables.
- - Means no observation.

# DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

## 4.0. 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 socio-economic situation.

Furthermore, data on the demographic characteristics of the population provides background information necessary for the understanding of other aspects of the population, including economic activity. For instance, the information on all aspects of the living conditions of the population is made useful when disaggregated by demographic characteristics such as age, sex and geographical areas.

The LCMS 2010 collected data on the following demographic characteristics of the population:

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

## 4.1. Population Size and Distribution

Table 4.1 shows the population distribution by province and by rural and urban areas. The population of Zambia is estimated at 13 million representing an increase of 1.35 million people since the previous LCMS conducted in Zambia in 2006.

Of the provinces, the Copperbelt province has the highest proportion of population, with an estimated 15 percent of the population residing there. The province with the lowest population was North Western province, with an estimated 6 percent of the population living there.

At the national level, the proportion of the population living in rural areas is over 65 percent, a proportion that has remained almost unchanged since 2006. A trend towards urban living between 2006 and 2010 can be observed in the North-Western province, where the proportion of those living in urban areas has increased from 15 to 19 percent. The more urbanized provinces are Copperbelt and Lusaka, where 80 and 83 percent live in urban areas respectively. The least urbanised provinces with

approximately 90 percent of the population living in rural areas are Eastern and Luapula (see Figure 4.1).

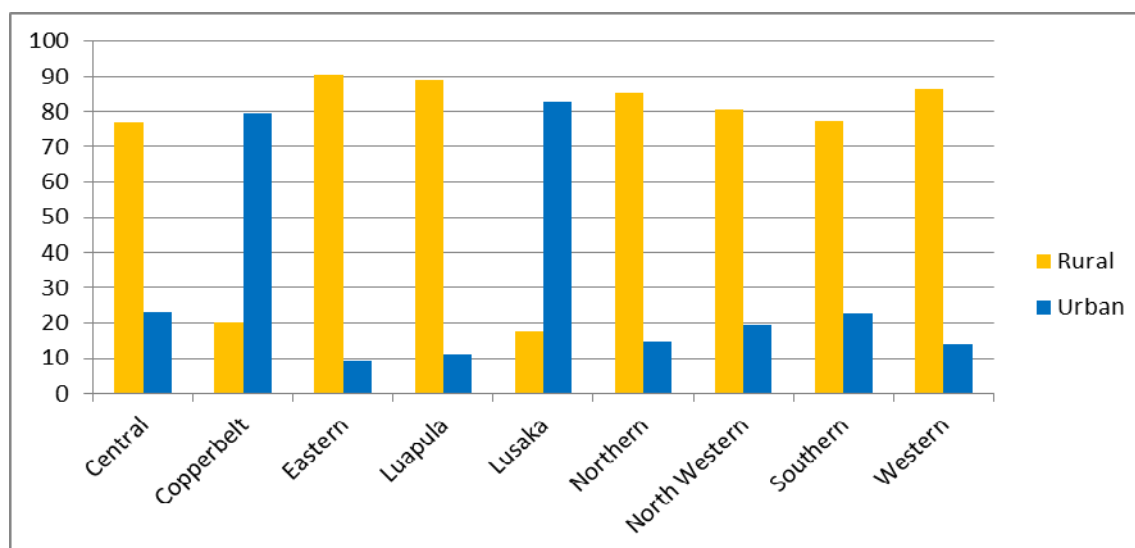
**Table 4.1: Population Distribution<sup>1</sup> by Province, Rural and Urban Areas, Zambia 2010 and 2006**

Population Distribution, 2010					
Province	Number of persons (000s)	Percentage Share	Rural (%)	Urban (%)	Total
Central	1,387	10.6	76.8	23.2	100
Copperbelt	1,956	15.0	20.4	79.6	100
Eastern	1,792	13.7	90.6	9.4	100
Luapula	1,064	8.1	89.0	11.0	100
Lusaka	1,768	13.5	17.5	82.5	100
Northern	1,662	12.7	85.4	14.6	100
North Western	758	5.8	80.7	19.3	100
Southern	1,687	12.9	77.4	22.6	100
Western	989	7.6	86.3	13.7	100
All Zambia	13,064	100.0	65.3	34.7	100

Population Distribution, 2006					
Province	Number of persons (000s)	Percentage Share	Rural (%)	Urban (%)	Total
Central	1,222	10	78	22	100
Copperbelt	1,783	15	21	79	100
Eastern	1,604	14	92	8	100
Luapula	929	8	88	12	100
Lusaka	1,641	14	15	85	100
Northern	1,483	13	84	16	100
North Western	709	6	85	15	100
Southern	1,453	12	78	22	100
Western	887	8	86	14	100
Total Zambia	11,711	100	65	35	100

**Figure 4.1: Population Distribution by Province, Zambia 2010**



<sup>1</sup> Sampling frame based on 2000 Census of population and Housing. Thus figures are likely to differ from the population estimates from the 2010 Census.

## 4.2. Age and Sex Distribution of the Population

Table 4.2 shows the distribution by 5-year age group across male and female populations.<sup>2</sup> The distribution across ages has the expected pyramidal shape, with the largest proportion of the population concentrated in the younger cohorts (see figure 4.2). Indeed, 66 percent of the population are below the age of 25 including, and over 30 percent are between the ages of 5 and 15. These trends are similar to those found in the 2006 LCMS.

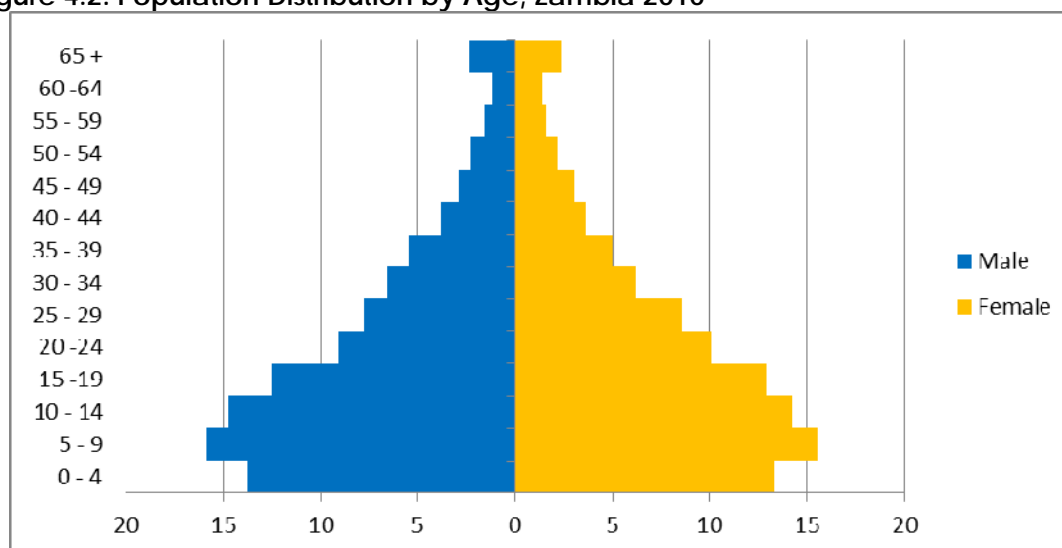
**Table 4.2: Percentage Distribution of Population by Age Group and Sex, Zambia, 2010 and 2006**

Age group	Sex			Number of Persons (000s)
	Male	Female	Both	
0 - 4	13.7	13.3	13.5	1,766
5 - 9	15.9	15.5	15.7	2,051
10 - 14	14.7	14.2	14.4	1,887
15 -19	12.5	12.9	12.7	1,660
20 -24	9.1	10.1	9.6	1,257
25 - 29	7.8	8.6	8.2	1,071
30 - 34	6.6	6.2	6.4	832
35 - 39	5.5	5.0	5.2	684
40 - 44	3.8	3.6	3.7	482
45 - 49	2.9	3.0	2.9	385
50 - 54	2.3	2.2	2.3	296
55 - 59	1.6	1.6	1.6	206
60 -64	1.2	1.4	1.3	171
65 +	2.4	2.4	2.4	315
Total	100	100	100	13,064

Age group	Sex			Number of Persons (000s)
	Male	Female	Both	
0 - 4	13	13	12	1,514
5 - 9	16	15	15	1,858
10 - 14	15	15	15	1,723
15 -19	12	12	13	1,417
20 -24	9	11	11	1,200
25 - 29	8	9	8	982
30 - 34	7	7	7	780
35 - 39	5	5	5	600
40 - 44	4	4	4	434
45 - 49	3	3	3	343
50 - 54	2	2	2	239
55 - 59	2	2	2	184
60 -64	1	1	1	147
65 +	3	2	2	288
Total	100	100	100	11,711

<sup>2</sup> There are substantially fewer 0-4 year olds than 5-9 year olds (around 300,000). This is a phenomenon noted in both the 2006 and 2010 LCMS surveys. It is possible this may have arisen from a coding error during the survey whereby in some instances the unit of measurement was purported to be years when the age was in fact recorded in months. Another likely cause is babies not being fully reported to the enumerators during fieldwork.

**Figure 4.2: Population Distribution by Age, Zambia 2010**



**Figure 4.3: Gender Distribution of the Population by Age, Zambia 2010**

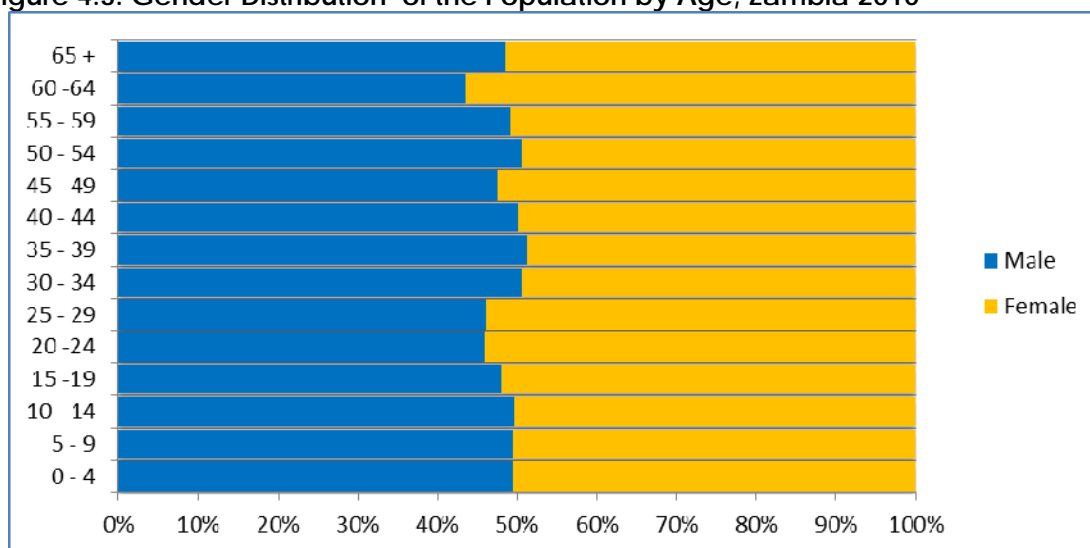


Table 4.3 shows the population distribution by socio-economic strata and residence. The table shows that small scale farmers make up 59 percent of the total population while persons from households engaging in medium and large scale farming constitute less than 3 percent of the entire population. In the cities, the majority of the urban population lives in low cost areas. Of the entire population, this accounts for 26 percent. People living in medium or high cost areas make up 9 percent of the total population.

The population distribution in rural areas has remained largely unchanged since 2006; however, in urban areas there is a slight trend towards higher cost areas. In 2006, 7 percent lived in medium or high cost areas, whereas 9 percent did so in 2010.

**Table 4.3: Population Distribution by Stratum, Zambia, 2010 and 2006**

Residence	Stratum	Number of Persons ('000s)	Percentage Share
Rural	Total	8,535	65.3
	Small scale	7,702	59.0
	Medium scale	306	2.3
	Large scale	10	0.1
	Non Agricultural	515	3.9
Urban	Total	4,529	34.7
	Low Cost	3,353	25.7
	Medium cost	771	5.9
	High cost	405	3.1
All Zambia		13,064	100

Residence	Stratum	Number of Persons ('000s)	Percentage Share
Rural	Total	7,612	65
	Small scale	6,981	59.6
	Medium scale	268	2.3
	Large scale	9	0.1
	Non Agricultural	354	3
Urban	Total	4,099	35
	Low Cost	3,295	28.1
	Medium cost	489	4.2
	High cost	315	2.7
All Zambia		11,711	100

Table 4.4 presents the population distribution further disaggregated by rural/urban and age group. It shows that 51 percent of the population are female and 49 percent are male, both in urban and rural areas.

**Table 4.4: Population Distribution by rural and urban areas and age group, Zambia, 2010**

Age group	Rural						Urban					
	Male		Female		Total		Male		Female		Total	
	%	Number ('000s)	%	Number ('000s)	%	Number ('000s)	%	Number ('000s)	%	Number ('000s)	%	Number ('000s)
0 – 4	48.9	610	51.1	637	100.0	1,247	50.9	264	49.1	255	100.0	519
5 – 9	50.2	728	49.8	723	100.0	1,451	47.8	287	52.2	313	100.0	600
10 – 14	50.2	642	49.8	636	100.0	1,278	48.3	294	51.7	315	100.0	609
15 – 19	48.9	516	51.1	538	100.0	1,053	46.3	281	53.7	326	100.0	607
20 – 24	46.6	347	53.4	398	100.0	745	45.2	232	54.8	281	100.0	513
25 – 29	46.5	291	53.5	334	100.0	624	45.7	204	54.3	242	100.0	446
30 – 34	49.4	242	50.6	248	100.0	490	52.1	179	47.9	164	100.0	343
35 – 39	50.7	211	49.3	206	100.0	417	52.1	139	47.9	128	100.0	267
40 – 44	46.3	140	53.7	162	100.0	301	56.4	102	43.6	79	100.0	181
45 – 49	47.6	119	52.4	131	100.0	250	47.3	64	52.7	71	100.0	135
50 – 54	50.5	95	49.5	94	100.0	189	50.4	54	49.6	53	100.0	107
55 – 59	47.0	63	53.0	71	100.0	133	52.9	39	47.1	34	100.0	73
60 – 64	40.9	49	59.1	71	100.0	121	50.1	25	49.9	25	100.0	50
65 +	48.7	114	51.3	121	100.0	235	48.0	39	52.0	42	100.0	80
Total	48.8	4,167	51.2	4,368	100.0	8,535	48.6	2,202	51.4	2,328	100.0	4,529

Table 4.5 shows the population distribution by relationship of the individual to the head of household. The results show that there were about 2.5 million heads of

households and this accounted for 19 percent of the total population. The majority of household members are categorized as children of the household head, accounting for half of the population.

**Table 4.5: Population Distributions by Relationship to the Household Head, Zambia, 2010 and 2006**

Relationship to the head of household, 2010	Number of persons (000s)	Percentage Share
Head	2,488	19.0
Spouse	1,781	13.6
Own Child	6,303	48.2
Step child	130	1.0
Adopted child	19	0.1
Grand Child	989	7.6
Brother/Sister	319	2.4
Cousin	74	0.6
Niece/Nephew	564	4.3
Brother/Sister in law	176	1.3
Parent	52	0.4
Parent in law	29	0.2
Other Relative	73	0.6
Maid/Nanny/House Servant	13	0.1
Non Relative	43	0.3
Missing Relationship	13	0.1
All Zambia	13,064	100.0

Relationship to the head of household, 2006	Number of persons (000s)	Percentage Share
Head	2,283	19.5
Spouse	1,631	13.9
Own Child	5,743	49
Step Child	115	1
Adopted Child	11	0.1
Grand Child	807	6.9
Brother/Sister	312	2.7
Cousin	60	0.5
Niece/Nephew	429	3.7
Brother/Sister-in-law	147	1.3
Parent	43	0.4
Parent-in-law	26	0.2
Other Relative	71	0.6
Maid/Nanny/House Servant	9	0.1
Non-Relative	25	0.2
Total Zambia	11,711	100

The distribution of male and female populations across rural and urban areas tends to be broadly similar across provinces with marginally larger female populations in most provinces, and substantially larger female population in Southern and Western provinces (see Figure 4.4). The exception to this trend is found in the rural areas of the more urbanized provinces – Lusaka and Copperbelt – where in the rural areas the male population is more in line with the female population. Table 4.6 details the results shown in Figure 4.4. The total female population is slightly larger than the male in 2010.

Figure 4.4: Population Distribution by Sex and Rural/Urban Area, Percent

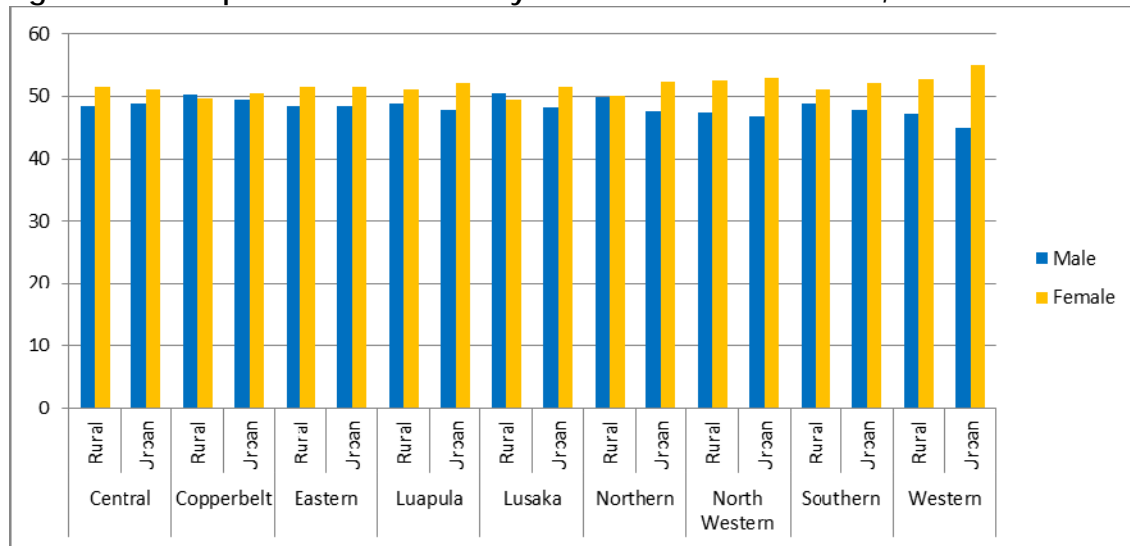


Table 4.6: Population Distribution by Province, Rural and Urban Areas, and Sex, Zambia, 2010 and 2006

Residence	Rural/Urban	Male	Female	Total	population
Central	Total	48.7	51.3	100	1,387
	Rural	48.6	51.4	100	1,064
	Urban	48.9	51.1	100	322
Copperbelt	Total	49.8	50.2	100	1,956
	Rural	50.3	49.7	100	399
	Urban	49.6	50.4	100	1,558
Eastern	Total	48.5	51.5	100	1,792
	Rural	48.5	51.5	100	1,623
	Urban	48.6	51.4	100	169
Luapula	Total	48.9	51.1	100	1,064
	Rural	49.0	51.0	100	947
	Urban	47.8	52.2	100	118
Lusaka	Total	48.8	51.2	100	1,768
	Rural	50.4	49.6	100	309
	Urban	48.4	51.6	100	1,459
Northern	Total	49.6	50.4	100	1,662
	Rural	49.9	50.1	100	1,420
	Urban	47.6	52.4	100	242
North Western	Total	47.3	52.7	100	758
	Rural	47.4	52.6	100	612
	Urban	46.9	53.1	100	146
Southern	Total	48.7	51.3	100	1,687
	Rural	49.0	51.0	100	1,307
	Urban	47.8	52.2	100	380
Western	Total	46.9	53.1	100	989
	Rural	47.2	52.8	100	854
	Urban	44.8	55.2	100	136
All Zambia	Total	48.7	51.3	100	13,064
	Rural	48.8	51.2	100	8,535
	Urban	48.6	51.4	100	4,529



Residence	Rural/Urban	Male	Female	Total	Population (000s)
Central	Total	50	50	100	1,222
	Rural	50	50	100	950
	Urban	50	50	100	272
Copperbelt	Total	50	50	100	1,783
	Rural	51	49	100	371
	Urban	49	51	100	1,412
Eastern	Total	49	51	100	1,604
	Rural	50	50	100	1,473
	Urban	49	51	100	131
Luapula	Total	50	50	100	929
	Rural	50	50	100	815
	Urban	47	53	100	115
Lusaka	Total	49	51	100	1,641
	Rural	50	50	100	254
	Urban	49	51	100	1,387
Northern	Total	49	51	100	1,483
	Rural	49	51	100	1,242
	Urban	49	51	100	240
North Western	Total	48	52	100	709
	Rural	48	52	100	602
	Urban	51	49	100	107
Western	Total	49	51	100	1,453
	Rural	49	51	100	1,139
	Urban	49	51	100	314
Southern	Total	47	53	100	887
	Rural	47	53	100	766
	Urban	47	53	100	121
All Zambia	Total	49	51	100	11,711
	Rural	49	51	100	7,612
	Urban	49	51	100	4,099

### 4.3. Household Distribution, Size, and Headship

Table 4.7 shows the distribution of households by province and rural/urban. At the time of the survey, there were around 2,491,000 households in Zambia, of which 64 percent were living in rural areas and the other 36 percent in urban areas. This is 208,000 households more than in 2006. Copperbelt and Lusaka, the most urbanized of the provinces, have the highest number of households - 15 percent each. North Western province contains the smallest proportion, just 5.5 percent of all Zambian households.

Lusaka, the most urbanized of all provinces, has slightly decreased its urbanization level over the 4 years between surveys, from 85 to 82 percent. In contrast, most of the predominantly rural provinces (except Luapula and Northern) have displayed a modest trend towards urbanization.

**Table 4.7: Distribution of Households by Province and Rural and Urban Areas, Zambia, 2010 and 2006**

Residence			Household		
Province	Number of Households (000s)	Percentage Share	Rural	Urban	Total
Central	250	10.0	75.1	24.9	100
Copperbelt	369	14.8	20.8	79.2	100
Eastern	342	13.7	90.1	9.9	100
Luapula	191	7.7	89.0	11.0	100
Lusaka	366	14.7	17.8	82.2	100
Northern	318	12.8	85.7	14.3	100
North Western	138	5.5	80.0	20.0	100
Southern	311	12.5	74.5	25.5	100
Western	205	8.2	86.6	13.4	100
All Zambia	2,491	100.0	64.2	35.8	100

Residence			Household		
Province	Number of Households (000s)	Percentage Share	Rural	Urban	Total
Central	226	10	76	24	100
Copperbelt	338	15	22	78	100
Eastern	320	14	92	8	100
Luapula	178	8	88	12	100
Lusaka	333	15	15	85	100
Northern	296	13	85	15	100
North Western	131	6	84	16	100
Southern	284	12	77	23	100
Western	176	8	88	12	100
All Zambia	2,283	100	65	35	100

Table 4.8 shows the distribution of households by residence and strata. The table shows that 57 percent of all households were categorized as small scale farming households. Some 5 percent of households resided in rural areas but did not engage in agriculture. Households residing in cities constituted 36 percent of all households, with the largest share being located in low cost areas, 26 percent.

**Table 4.8: Distribution of Households by Stratum, Zambia, 2010 and 2006**

Residence	Stratum	Number of households ('000s)	Percentage Share
Rural	Total	1,600.3	64.2
	Small Scale	1,425.5	57.2
	Medium Scale	41.0	1.6
	Large Scale	1.2	0.0
	Non Agric	132.6	5.3
Urban	Total	890.6	35.8
	Low Cost	658.6	26.4
	Medium Cost	148.6	6.0
	High Cost	83.4	3.3
All Zambia		2,491	100

Residence	Stratum	Number of households ('000s)	Percentage Share
Rural	Total	1,484	65
	Small Scale	1,351	59.2
	Medium Scale	36	1.6
	Large Scale	1	0
	Non Agric	96	4.2
Urban	Total	800	35
	Low Cost	649	28.4
	Medium Cost	86	3.8
	High Cost	65	2.8
All Zambia		2,283	100

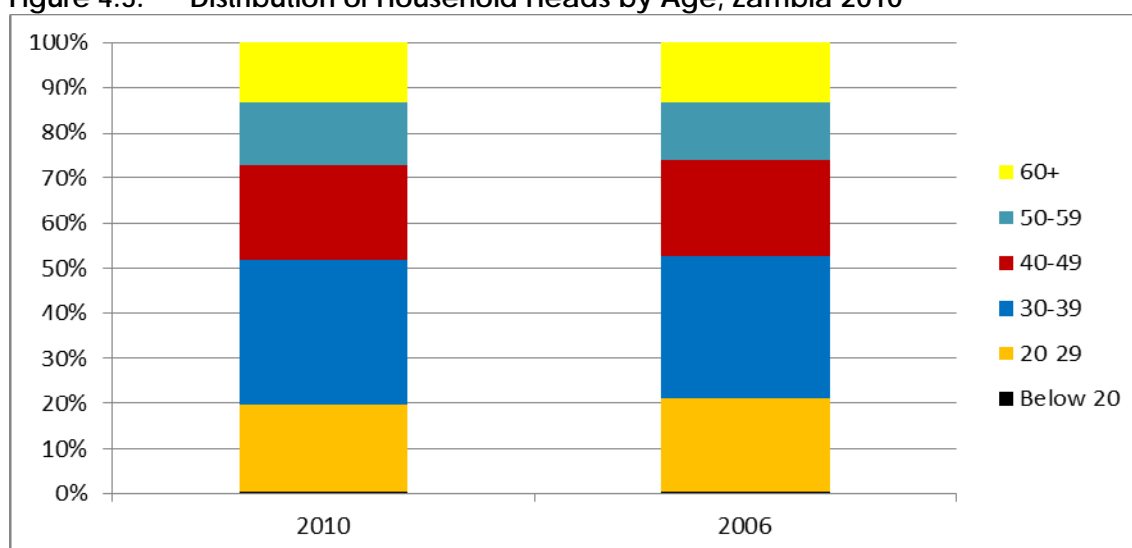
Table 4.9 shows the distribution of the heads of households by age group. Most households – over 68 percent - are headed by an individual aged between 25 and 49. Households headed by the elderly, i.e. those aged 65 years and older, comprised 9 percent. Only 5.3 percent have heads of households below the age of 25.

**Table 4.9: Distribution of Household Heads by Age Groups, Zambia, 2010 and 2006**

Age of household head	Number of household heads (000s)	Percentage Share
Below 15	0.1	0.0
15 -19	8.8	0.4
20 - 24	123.0	4.9
25 - 29	360.4	14.5
30 - 34	411.0	16.5
35 - 39	381.7	15.3
40 - 44	292.9	11.8
45 - 49	234.9	9.4
50 - 54	198.4	8.0
55 - 59	147.2	5.9
60 -64	113.5	4.6
65 +	215.1	8.6
Missing information on head	8.3	0.3
All Zambia	2,491	100

Age of household head	Number of household heads (000s)	Percentage Share
Below 15	0.4	0
15 - 19	8	0.4
20 - 24	142	6.2
25 - 29	332	14.5
30 - 34	384	16.8
35 - 39	340	14.9
40 - 44	263	11.5
45 - 49	217	9.5
50 - 54	167	7.3
55 - 59	127	5.6
60 - 64	99	4.3
65 +	204	8.9
All Zambia	2,283	100

**Figure 4.5: Distribution of Household Heads by Age, Zambia 2010**



Average household size by province and rural/urban location is presented in table 4.10. Households tend to be larger in rural areas with an average size of 5.3 members in all rural Zambia compared with an average size of 5.1 in urban Zambia. Only Copperbelt, Northern and Western have slightly larger sized urban households than rural.

Households whose head is male tend to be larger than those headed by a female. Where the average male headed household contains 5.5 members, the average household with a female head has one fewer member with a mean of just 4.4 members. The results from the 2010 LCMS survey are broadly similar to those of the 2006 LCMS survey.

**Table 4.10: Average Household Size by Province, Rural and Urban Areas, Zambia, 2010 and 2006**

Province	Residence			Sex of head		Number of households
	Average household size	Rural	Urban	Male	Female	
Central	5.6	5.7	5.2	5.8	4.6	250
Copperbelt	5.3	5.2	5.3	5.4	4.8	369
Eastern	5.2	5.3	5.0	5.5	4.3	342
Luapula	5.6	5.6	5.6	5.8	4.7	191
Lusaka	4.8	4.8	4.8	5.0	4.3	366
Northern	5.2	5.2	5.3	5.6	4.0	318
North Western	5.5	5.5	5.3	5.9	4.2	138
Southern	5.4	5.6	4.8	5.8	4.4	311
Western	4.8	4.8	4.9	5.1	4.2	205
All Zambia	5.2	5.3	5.1	5.5	4.4	2,491

Province	Residence			Sex of head		Number of households
	Average household size	Rural	Urban	Male	Female	
Central	5.5	5.6	5	5.7	4.8	226
Copperbelt	5.3	5	5.4	5.5	4.5	338
Eastern	5	5	5.2	5.2	4.3	320
Luapula	5.2	5.2	5.5	5.4	4.4	178
Lusaka	4.9	5.1	4.9	5	4.7	333
Northern	5	4.9	5.6	5.2	3.8	296
North Western	5.4	5.5	5.1	5.7	4.3	131
Southern	5.1	5.2	4.7	5.4	4.3	284
Western	5	4.9	5.7	5.5	4.2	176
All Zambia	5.1	5.1	5.1	5.4	4.4	2,283

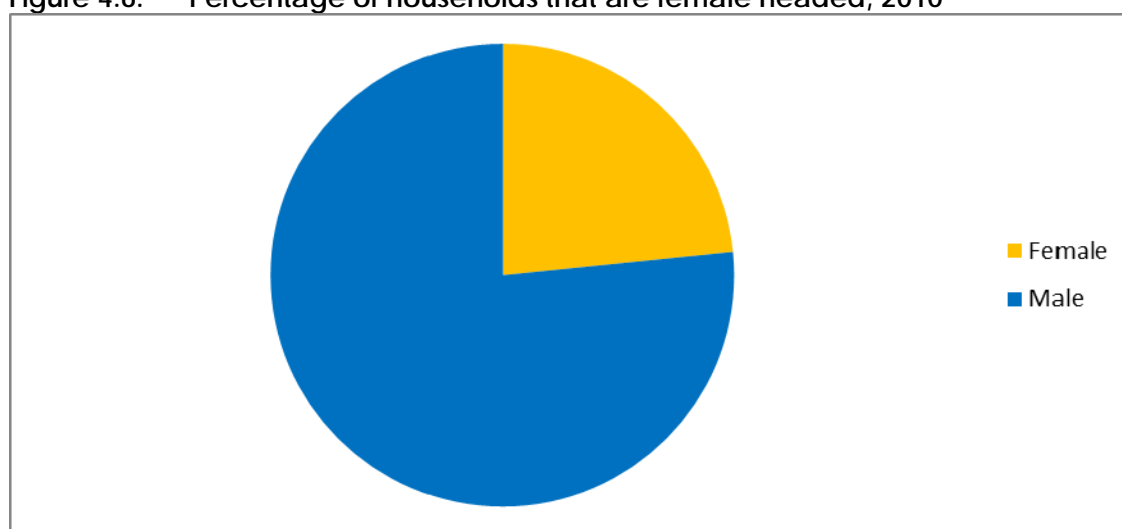
Table 4.11 shows that the percentage of female headed households in Zambia is 23 percent. It is highest in Western province where over 35 percent of households are headed by a female member of the household, this is true in both rural and urban areas. This figure is smallest in the rural areas of Lusaka and Luapula where it falls to around 19 percent.

**Table 4.11: Female Headed Households by Province, Rural and Urban Areas, Zambia, 2010 and 2006**

Province	Percentage of female headed households, 2010	Rural	Urban	Number of Households ('000s)
Central	21.7	21.6	22.0	250
Copperbelt	21.4	22.0	21.2	369
Eastern	23.5	23.4	23.5	342
Luapula	19.6	18.8	26.0	191
Lusaka	22.0	19.1	22.6	366
Northern	20.7	20.5	21.6	318
North Western	23.8	23.5	24.8	138
Southern	25.7	25.9	25.0	311
Western	35.3	35.2	36.1	205
All Zambia	23.4	23.7	22.9	2,491

Province	Percentage of female headed households, 2006	Rural	Urban	Number of Households ('000s)
Central	23	23	24	226
Copperbelt	19	20	19	338
Eastern	24	25	23	320
Luapula	20	21	20	178
Lusaka	24	23	24	333
Northern	19	18	21	296
North Western	23	25	19	131
Southern	22	22	23	284
Western	34	35	32	176
All Zambia	23	23	22	2,283

**Figure 4.6: Percentage of households that are female headed, 2010**



#### 4.4. Marital Status

Table 4.12 shows the percentage distribution of persons aged 12 years and above by marital status. 44 percent of the Zambian population are married with just 5 percent separated or divorced and 5 percent widowed. 46 percent were never married.

The table indicates that, in the age group 12-14, the proportion of those never married is 96 percent. As people get older, this proportion decreases to 91 and 61 percent for age groups 15-19 and 20-24, respectively. At the age of 25-29, only 31 percent were never married and this decrease to 2 percent for people above the age of 50.

The results of the 2010 LCMS suggest that women are getting married at a younger age than men, with 49 percent of women married by the time they reach 20 – 24 compared to only 18 percent of men in that age group.

Figure 4.7 shows the proportion of males and females who are never married. Nearly 80 percent of males have never married by the age of 20-24, this figure is only 44 percent among women.

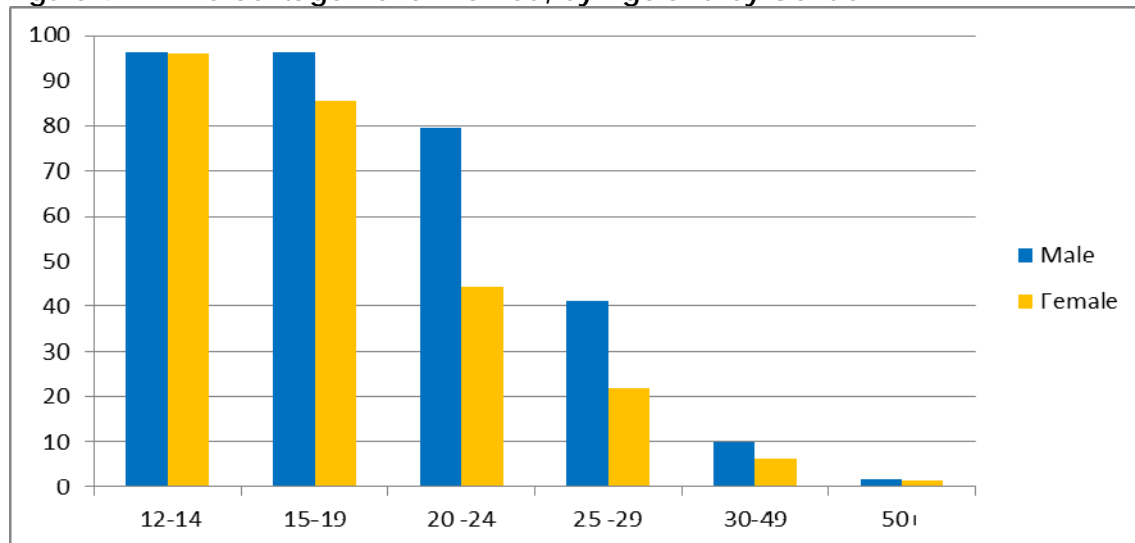
The patterns in marriage observed in the 2010 LCMS are broadly similar to those emerging from the 2006 survey. However, the proportion of men and women who are marrying at young ages has fallen between 2006 and 2010. In 2006, 22 percent of men aged 20-24 were married; in 2010, this has decreased to 18 percent. Likewise, the proportion of women aged 20-24 that are married has fallen slightly, from 51 to 49 percent.

**Table 4:12: Percentage Distribution of Persons Aged 12 Years and Above by Marital Status, Zambia, 2010 and 2006**

	Marital status						Missing information	Total	Persons aged 12 years and above (000s)
	Never Married	Married	Separated	Divorced	Widowed	Co-habiting			
Male	50.9	44.7	0.9	1.4	1.2	0.1	0.9	100	4,094
Female	40.9	43.1	2.2	4.5	8.4	0.2	0.7	100	4,385
Age Group									
12-14	96.2	1.3	0.1	0.0	0.0	0.0	2.3	100	1,120
15-19	90.8	7.0	0.2	0.3	0.1	0.1	1.5	100	1,660
20-24	60.5	34.9	1.7	1.8	0.2	0.3	0.6	100	1,258
25-29	30.8	61.2	2.6	3.6	1.4	0.1	0.2	100	1,071
30-49	8.0	77.7	2.4	5.7	5.8	0.2	0.2	100	2,383
50+	1.6	64.9	2.0	4.9	26.3	0.1	0.2	100	988
Male									
12-14	96.4	1.2	0.0	0.0	0.0	0.0	2.4	100	551
15-19	96.4	1.9	0.0	0.1	0.0	0.0	1.7	100	797
20-24	79.4	18.3	0.5	0.7	0.0	0.3	0.8	100	578
25-29	41.1	54.8	1.5	1.4	0.8	0.0	0.3	100	495
30-49	9.7	84.9	1.4	2.6	1.1	0.1	0.1	100	1,195
50+	1.7	87.1	1.5	2.9	6.5	0.1	0.2	100	478
Female									
12-14	96.1	1.5	0.2	0.0	0.0	0.0	2.2	100	569
15-19	85.6	11.7	0.4	0.6	0.2	0.3	1.3	100	864
20-24	44.3	49.1	2.7	2.8	0.4	0.3	0.4	100	679
25-29	21.9	66.8	3.5	5.5	1.9	0.2	0.2	100	576
30-49	6.3	70.5	3.3	8.9	10.5	0.2	0.2	100	1,187
50+	1.6	44.1	2.4	6.8	44.8	0.2	0.1	100	510
Extremely poor									
12-14	96.0	1.6	0.1	0.0	0.0	0.0	2.3	100	527
15-19	91.1	6.7	0.3	0.5	0.0	0.2	1.2	100	705
20-24	61.3	32.5	2.4	2.8	0.2	0.2	0.6	100	426
25-29	27.0	62.4	3.4	5.2	1.8	0.1	0.1	100	343
30-49	6.0	80.2	2.2	5.6	5.6	0.2	0.2	100	941
50+	1.9	65.7	1.6	3.9	26.4	0.2	0.2	100	435
Moderately poor									
12-14	96.5	1.5	0.0	0.0	0.0	0.0	2.0	100	199
15-19	86.8	9.8	0.3	0.3	0.3	0.1	2.3	100	293
20-24	50.8	44.3	1.6	2.3	0.4	0.2	0.4	100	226
25-29	22.8	69.1	2.6	3.7	1.2	0.3	0.3	100	186
30-49	6.8	78.4	2.5	6.2	5.9	0.1	0.1	100	409
50+	1.1	67.2	2.3	5.5	23.8	0.0	0.2	100	189
Non poor									
12-14	96.4	0.9	0.1	0.0	0.0	0.0	2.6	100	394
15-19	92.1	6.1	0.1	0.2	0.0	0.1	1.4	100	663
20-24	63.4	33.2	1.2	1.0	0.2	0.4	0.7	100	606
25-29	36.0	57.8	2.1	2.5	1.3	0.1	0.3	100	541
30-49	10.3	75.2	2.5	5.7	6.0	0.2	0.2	100	1,033
50+	1.5	62.8	2.3	5.8	27.4	0.1	0.1	100	363
All Zambia	45.8	43.9	1.5	3.0	4.9	0.1	0.8	100	8,479

Sex/Age Group	Marital status					Total	Persons aged 12 years and above (000s)
	Never Married	Married	Separated	Divorced	Widowed		
Male	51	45	1	1	1	100	3,711
Female	40	44	2	4	9	100	3,896
Age Group							
12-14	99	0	0	0	0	100	1,024
15-19	92	8	0	0	0	100	1,409
20-24	57	38	2	2	2	100	1,194
25-29	30	61	2	4	0	100	976
30-49	7	77	3	5	7	100	2,149
50+	1	67	1	5	26	100	854
Male							
12-14	100	0			0	100	502
15-19	98	2	0	0	0	100	698
20-24	76	22	1	0	0	100	544
25-29	41	55	1	2	1	100	467
30-49	9	84	2	3	2	100	1,073
50+	1	88	1	3	7	100	427
Female							
12-14	99	0	0	0	0	100	522
15-19	85	14	1	0	0	100	711
20-24	42	51	2	4	1	100	650
25-29	20	67	3	6	3	100	509
30-49	6	70	3	8	13	100	1,076
50+	2	45	2	6	45	100	427
All Zambia	46	45	2	3	5	100	7,607

Figure 4.7: Percentage Never Married, by Age and by Gender





#### 4.5. Orphanhood

The prevalence and levels of orphanhood are a direct consequence of prevailing mortality pattern among adults in a population.

Orphans are usually classified into three categories, namely '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 can often affect a child's development by increasing the risk of missing out on education opportunities, living in a home which is food insecure, suffering from anxiety or depression, as well as other factors.

Like in previous years, the 2010 LCMS identified an orphan as any person aged 20 years or below who had lost at least one parent. The 20 years cut off point was used because after this age, people are usually considered old enough to fend for themselves.

Table 4.13 shows the distribution of orphans by age, residence, strata, province and type of orphan. The table shows that orphanhood is still a major problem in Zambia as 16 percent of young people aged between 0-20 years lost at least one parent. Representing 20 percent of the population in rural areas compared to 14 percent in urban areas orphans represent a sizeable part of the population in this age group. Orphanhood prevails in urban areas at considerably higher rates than in rural locations across all urban strata; however, medium cost areas have the highest proportion of orphans of all strata, at 22 percent.

The proportion of orphans differs significantly across provinces. In Eastern and North-Western provinces, the rates are relatively low, at 11 and 12 percent, respectively. Particularly high rates above 18 percent can be found in Copperbelt, Lusaka, Southern and Western. Given the combination of its high rate of orphans and its large population, Copperbelt accounts for the highest total number of orphans, above 200,000 in this province alone.

Orphan type also varies significantly across provinces and strata. Of all orphans, 29 percent have lost both parents, 15 percent lost their mother only and 57 percent lost their father. Urban areas, in addition to having higher rates of orphans overall, have higher proportions of "double orphans" where both parents died, compared to rural areas, 32 as compared to 27 percent. Of the orphans across different provinces, the highest proportion of "double orphans" can be found in Copperbelt (31 percent), Lusaka (32 percent) and Northern (32 percent) provinces.

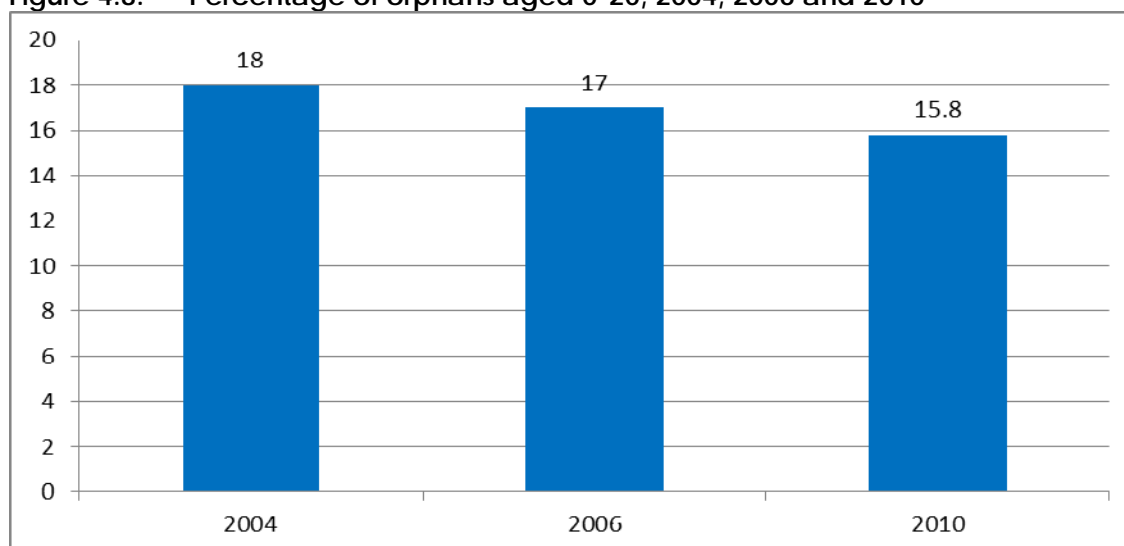
**Table 4.13: Orphans by Type, Rural Urban Area, Age Group, Stratum, and Province, Zambia, 2010 and 2006**

	Number of Orphans (000s)	Percent of population orphans	Orphan Type			Total	Number of Persons Aged 0 – 20 ('000s)
			Mother only dead	Father only dead	Both parents dead		
Rural	710	13.8	15.2	58.2	26.6	100	5,148
Urban	483	19.9	14.2	54.0	31.8	100	2,422
Age Group							
0-5	92	4.3	18.9	66.8	14.4	100	2,119
6-9	197	11.7	15.3	58.1	26.6	100	1,675
10-14	366	19.6	14.3	57.6	28.1	100	1,871
15-18	368	27.3	14.5	53.8	31.8	100	1,351
19-20	170	30.7	13.6	52.8	33.6	100	554
Stratum							
Small Scale	634	13.6	15.2	58.0	26.7	100	4,671
Medium Scale	26	13.6	19.1	54.9	26.0	100	193
Large Scale	1	13.8	9.6	59.4	31.0	100	6
Non Agric	49	17.7	12.1	63.0	24.9	100	277
Low Cost	358	19.6	13.6	53.9	32.5	100	1,823
Medium Cost	89	22.1	17.4	54.0	28.6	100	401
High Cost	36	18.2	12.9	54.6	32.4	100	197
Province							
Central	131	16.0	13.1	64.3	22.6	100	816
Copperbelt	204	19.2	13.9	54.9	31.2	100	1,060
Eastern	117	10.9	14.0	57.6	28.4	100	1,076
Luapula	94	14.0	16.7	56.1	27.2	100	667
Lusaka	166	18.1	14.7	53.0	32.3	100	915
Northern	145	14.2	13.6	54.7	31.7	100	1,023
North Western	53	11.6	13.0	67.0	20.0	100	455
Southern	180	18.1	18.1	53.5	28.4	100	995
Western	105	18.6	14.7	57.2	28.1	100	563
All Zambia	1,192.7	15.8	14.8	56.5	28.7	100	7,569

	Number of Orphans (000s)	Percent of population orphans	Orphan Type			Total	Number of Persons Aged 0 – 20 ('000s)
			Mother only dead	Father only dead	Both parents dead		
Rural	675	15	15	60	24	100	4,515
Urban	471	21	13	59	28	100	2,214
Age Group							
0-5	96	5	14	68	18	100	1,831
6-9	209	14	16	62	22	100	1,506
10-14	357	21	15	60	25	100	1,706
15-18	327	28	14	57	29	100	1,164
19-20	156	30	13	57	30	100	522
Stratum							
Small Scale	619	15	15	61	24	100	4,162
Medium Scale	22	14	20	50	30	100	162
Large Scale	0.7	14	16	71	12	100	5
Non Agric	33	18	10	57	33	100	186
Low Cost	378	21	12	60	27	100	1,815
Medium Cost	55	23	21	54	25	100	246
High Cost	37	24	13	51	36	100	153
Province							
Central	135	19	14	62	24	100	710
Copperbelt	183	19	16	56	27	100	971
Eastern	145	15	15	62	23	100	940
Luapula	78	14	18	57	25	100	569
Lusaka	196	23	11	62	27	100	870
Northern	119	14	10	60	30	100	878
North Western	37	9	14	62	24	100	427
Southern	143	17	18	56	26	100	848
Western	109	21	15	61	24	100	516
All Zambia	1,145	17	14	60	26	100	6,729

The proportion of the populations who are orphaned has decreased slightly between 2004, 2006 and 2010 (see Figure 4.8). However, the proportion of orphans who have lost both parents was higher in 2010 than in the two preceding surveys.

**Figure 4.8: Percentage of orphans aged 0-20, 2004, 2006 and 2010**



#### 4.6. Death in the Household

The 2010 LCMS collected information on the occurrence of deaths in the household 12 months prior to the survey. Table 4.14 shows that 8 percent of households experienced a death in this time period. The table then disaggregates these by the age of the deceased.

Households in rural areas are more likely to have experienced a death, this result may be driven by the age demographic of those in rural areas (58 percent of those over the age of 65 live in rural areas, compared to just 42 percent in urban areas). Indeed 17 percent of the deaths in rural areas were those above the age of 65 compared to just 11 percent of deaths in urban areas. Deaths in urban areas were concentrated among those between the ages of 30 and 44. This trend can be similarly observed in the disaggregation by province where households in Copperbelt and Lusaka have experienced more deaths in the 30-44 age range.

The lowest percentage of households experiencing a death was recorded in Lusaka and North Western provinces, with 6 percent in both cases. By far the highest percentage of households experiencing the death of a member was found in Luapula (13 percent).

Table 4.14 shows different age patterns of the deceased across the different provinces. In Luapula and Eastern provinces, a proportion of more than 30 percent of the deaths recorded were deaths of a household's member under the age of 5. In 2006, 10 percent of the population had experienced a death in the 12 months preceding the survey. In urban areas, the highest occurrence of deaths in 2006 was also reported in the age group 30-44 with 27 percent, but in rural areas the highest was reported in age-group 1-4 at 20 percent. Overall, it appears that the deaths at younger ages have reduced slightly since 2006 while deaths of older people have risen.

**Table 4.14: Percentage Distribution of Deaths within the Household in the 12 Months Preceding the Survey, by Age Group, Zambia, 2010 and 2006**

Residence	Proportion of households that experienced a death	Age of deceased (years)								Total	Persons Who Died (000's)
		Below 1	1-4	5-14	15-24	25-29	30-44	45-64	65+		
Rural	9.1	10.8	15.1	9.7	9.2	7.3	15.7	15.7	16.5	100	177
Urban	6.5	8.5	9.4	7.9	11.0	8.1	26.8	17.5	10.7	100	66
Central	9.1	6.3	17.5	3.9	15.6	15.0	16.2	15.1	10.4	100	28
Copperbelt	7.4	6.1	11.1	4.1	9.9	7.3	28.3	20.1	13.1	100	31
Eastern	9.1	18.9	18.5	15.4	6.9	1.9	11.9	7.2	19.2	100	39
Luapula	13.3	11.6	20.0	9.7	8.3	8.0	16.9	16.1	9.3	100	32
Lusaka	5.9	13.8	4.9	8.9	8.1	7.1	24.9	19.5	12.9	100	25
Northern	7.5	7.7	10.2	13.2	10.4	6.1	14.8	22.4	15.3	100	26
North Western	5.7	11.1	12.0	5.2	16.2	1.9	14.0	20.5	19.0	100	9
Southern	8.0	9.6	14.2	8.9	4.9	3.3	23.3	16.8	19.1	100	30
Western	9.0	2.6	7.3	9.5	13.3	17.7	16.7	14.1	18.7	100	22
Extremely Poor	9.5	9.8	15	10.8	7.1	7.7	18.6	15.3	15.6	100	103
Moderately Poor	8.9	12.8	15.7	8.9	9.4	6.7	17.8	12.6	16	100	48
Non Poor	6.8	9.2	10.8	7.7	12.7	7.7	19.4	19	13.5	100	92
All Zambia	8.2	10.2	13.6	9.2	9.7	7.5	18.7	16.2	14.9	100	243

Residence	Proportion of households that experienced a death	Age of deceased (years)								Total	Persons Who Died (000's)
		Below 1	1-4	5-14	15-24	25-29	30-44	45-64	65+		
Rural	11	14	20	10	10	8	14	12	11	100	162
Urban	8	7	10	9	14	12	27	12	9	100	64
Central	9	9	24	5	12	9	15	19	7	100	21
Copperbelt	9	17	11	8	11	8	23	13	9	100	32
Eastern	8	6	22	9	8	6	16	16	18	100	26
Luapula	15	24	29	11	8	7	7	8	7	100	27
Lusaka	8	5	10	6	16	15	25	10	11	100	26
Northern	13	12	18	13	15	8	13	10	11	100	40
North Western	9	11	7	17	16	5	26	6	13	100	11
Southern	9	10	14	17	7	11	17	15	9	100	25
Western	11	8	17	5	12	12	22	11	13	100	19
All Zambia	10	12	17	10	11	9	18	12	11	100	227

Table 4.15 illustrates the causes of death by location and gender. In 2010, fever/malaria represents the most common cause of death reported, particularly among females and in rural households, with an overall 22 percent of all recorded deaths. The next most common cause of death reported are cough/cold and tuberculosis. Considerably more men died in accidents, 5 as compared to 1 percent of deaths reported.

**Table 4.15: Causes of Death by Rural Urban Area, Sex, Zambia, 2010 and 2006**

Cause of Death	All Zambia	Residence		Sex	
		Rural	Urban	Male	Female
Fever/Malaria	21.7	22.6	19.3	19.8	24.1
Cough/Cold/Chest Infection	7.1	7.7	5.5	8.9	5.3
Tuberculosis	7.0	6.3	8.9	8.1	5.7
Cerebral Malaria <sup>3</sup>	5.2	5.3	5.0	6.2	4.4
Lack of blood/Anaemia	3.8	3.4	4.9	3.5	4.3
Abdominal pains	3.5	3.8	2.6	3.1	4.0
Pneumonia/Chest Pain	3.4	3.5	3.1	3.5	3.4
Headache	3.3	3.5	2.7	3.0	3.7
Diarrhoea without blood	2.9	2.9	2.7	3.2	2.5
Accident	2.9	2.5	3.9	4.6	1.2
Diarrhoea and vomiting	2.6	2.6	2.6	2.4	2.9
Hypertension	2.6	2.2	3.5	1.6	3.8
Asthma	2.3	2.4	2.1	1.6	3
Vomiting	1.9	2.3	0.8	1.2	2.7
Stroke	1.9	1.1	3.9	1.9	1.9
Cancer of any kind	1.9	2.1	1.3	2.2	1.4
Liver infection/Side pain	1.6	1.6	1.7	2.1	1.1
Constipation/Stomach Upset	1.4	1.6	1.0	2.1	0.8
Meningitis	1.4	1.1	2.1	1.3	1.5
Murdered	1.3	1.3	1.3	1.6	1.0
Diabetes/Sugar disease	1.1	1.1	1.1	1.0	1.3
Diarrhoea with blood	1.0	1.0	1.0	1.0	1.1
Paralysis of any kind	0.6	0.7	0.4	0.5	0.8
Boils	0.5	0.5	0.6	0.2	0.9
Bronchitis	0.4	0.4	0.3	0.3	0.5
Skin rash/Skin infection	0.4	0.5	0.3	0.2	0.6
Suicide	0.4	0.2	1.0	0.6	0.1
Piles/Haemorrhoids	0.3	0.5	0.0	0.2	0.5
Jaundice/Yellowness	0.2	0.2	0.2	0.4	0.1

<sup>3</sup> More “types” of causes of deaths were included in the questionnaire in 2010 than in 2006, e.g cerebral malaria

Cause of Death	All Zambia	Residence		Sex	
		Rural	Urban	Male	Female
Shingles/Herpes/Zoster	0.1	0.0	0.4	0.1	0.2
Measles	0.1	0.1	0.0	0.0	0.2
Other	8.1	8.6	6.9	7.8	8.7
Don't Know	6.0	6.0	6.0	5.9	6.2
Total	100	100	100	100	100

Cause of Death	All Zambia	Residence		Sex	
		Rural	Urban	Male	Female
Fever/Malaria	23.4	24	22	23.8	23
Tuberculosis	8.8	5.6	16.5	9	8.7
Cough/Cold/Chest Infection	6.1	6.2	6	6	6.3
Abdominal pains/Constipation/Stomach Upset	5.3	6	3.7	5.3	5.3
Diarrhoea and vomiting	5.1	5.4	4.3	5.3	4.9
Lack of blood/Anaemia	5.1	5.5	4.1	4.9	5.3
Diarrhoea without blood	5	5.5	4	5.1	4.9
Bronchitis/Pneumonia/Chest Pain	4.1	4.4	3.5	3.8	4.4
Headache	3.8	4.4	2.5	3.6	4
Diarrhoea with blood	2.5	3	1.3	2.6	2.5
Accident	2.5	2.1	3.3	2.6	2.3
Asthma	1.6	1.6	1.4	1.6	1.6
Vomiting	1.4	1.5	1.4	1.3	1.5
Stroke	1.2	0.9	1.7	1.1	1.3
Liver infection/Side pain	1.1	0.9	1.5	1.2	1
Diabetes /Sugar disease	1.1	0.7	2	1	1.1
Hypertension	1	0.6	2	1	1
Murdered	0.9	0.8	1	0.8	0.9
Cancer	0.8	0.4	1.8	0.8	0.9
Paralysis of any kind	0.6	0.3	1.3	0.6	0.5
Measles	0.6	0.6	0.5	0.6	0.5
Skin rash/Skin infection	0.5	0.7	0.1	0.4	0.7
Jaundice/Yellowness	0.5	0.6	0.4	0.5	0.5
Boils	0.4	0.5	0.1	0.3	0.5
Shingles/Herpes/Zoster	0.4	0.5	0	0.5	0.2
Suicide	0.3	0.2	0.5	0.4	0.3
Piles/Haemorrhoids	0.2	0.2	0.2	0.1	0.2
Other	7.6	7.7	7.3	7.5	7.7
Don't Know	8	9.1	5.5	8.2	7.9
Total	100	100	100	100	100

Table 4.16 shows causes of death by province. Malaria, whilst still the most common cause of death in Zambia in 2010, was less prevalent in Lusaka and the Western province, where it represented 14 and 17 percent of deaths respectively. This compares to highs of 27 and 26 percent of all deaths in Central and North Western provinces respectively. Deaths due to accidents were particularly frequent in the Central province, at 8 percent, compared to the national average of 3 percent of reported deaths.

**Table 4.16: Causes of Death by Province, Zambia, 2010 and 2006**

Cause of Death	Province									
Cause of Death	Total	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western
Fever/Malaria	21.7	26.5	20.9	24.3	21.7	13.8	23.7	26.0	21.9	17.3
Cough/Cold/Chest Infection	7.1	6.2	7.3	6.1	12.0	4.2	7.3	7.3	7.5	5.1
Tuberculosis	7.0	11.9	9.1	2.9	2.7	10.6	2.3	6.7	8.2	10.7
Cerebral Malaria	5.2	2.3	5.7	6.4	7.7	4.9	6.5	4.7	3.8	3.5
Lack of blood/Anaemia	3.8	5.2	3.9	9.1	2.9	5.4	1.3	1.4	0.8	0.3
Abdominal pains	3.5	1.7	3.2	5.1	4.4	1.8	4.3	0.2	6.2	0.5
Pneumonia/Chest Pain	3.4	1.5	3.8	3.5	3.5	2.0	4.0	1.7	2.5	7.8
Headache	3.3	4.0	3.4	2.1	2.6	3.7	2.0	4.2	1.9	7.7
Diarrhoea without blood	2.9	2.1	1.9	1.3	3.3	1.4	2.8	4.1	3.7	7.4
Accident	2.9	7.9	2.4	0.2	1.7	4.1	3.9	2.8	0.8	4.4
Diarrhoea and vomiting	2.6	1.3	1.6	1.2	2.5	2.4	2.8	4.1	7.6	1.0
Hypertension	2.6	2.6	2.7	0.1	0.7	2.8	3.0	1.7	2.1	9.8
Asthma	2.3	3.7	1.6	5.5	1.0	2.2	1.2	0.6	1.3	1.3
Vomiting	1.9	2.1	0.5	5.8	0.2	1.0	1.2	0.5	3.3	0.0
Stroke	1.9	1.5	1.8	1.0	0.0	5.6	1.7	1.0	2.4	1.9
Cancer of any kind	1.9	4.7	0.4	1.8	1.9	2.0	1.8	1.0	2.6	0.0
Liver infection/Side pain	1.6	3.1	2.3	0.1	0.6	1.8	1.0	3.1	3.6	0.0
Constipation/Stomach Upset	1.4	0.0	1.3	1.5	3.2	1.9	2.4	0.0	0.0	1.5
Meningitis	1.4	2.5	0.7	0.9	1.1	2.5	0.5	1.0	1.1	2.5
Murdered	1.3	0.1	1.4	1.2	3.4	1.0	0.9	0.0	1.3	1.8
Diabetes/Sugar disease	1.1	0.8	1.3	0.7	1.8	1.6	1.4	0.3	1.6	0.0
Diarrhoea with blood	1.0	0.1	0.2	0.1	0.5	1.7	3.4	0.2	1.1	2.2
Paralysis of any kind	0.6	0.1	0.2	2.7	0.0	0.0	0.4	0.9	0.7	0.0
Boils	0.5	0.0	0.8	0.0	2.7	0.0	0.3	0.0	0.0	0.5
Bronchitis	0.4	0.1	0.0	1.2	0.0	0.7	1.2	0.0	0.0	0.0
Skin rash/Skin infection	0.4	0.8	0.1	0.0	0.4	0.0	0.0	2.8	0.2	1.5
Suicide	0.4	1.3	0.8	0.0	0.0	0.6	0.3	1.1	0.0	0.0
Piles/Haemorrhoids	0.3	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.5	0.0
Jaundice/Yellowness	0.2	0.0	0.8	0.0	0.4	0.0	0.0	1.5	0.0	0.0
Shingles/Herpes/Zoster	0.1	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0
Measles	0.1	0.0	0.0	0.0	0.5	0.0	0.4	0.0	0.0	0.0
Other	8.1	4.5	13.5	11.1	9.2	4.3	7.2	11.8	6.2	4.3
Don't Know	6.0	1.7	5.9	4.3	7.4	8.7	9.0	9.5	3.9	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Cause of Death	Province									
					Luapula	Lusaka	Northern	North West ern	Southern	Western
Fever/Malaria	23.4	24.4	23.4	19.2	31.4	17.9	24	36.6	22.9	15.4
Tuberculosis	8.8	15.1	10.3	7.6	3.2	22	2.5	2.1	7.1	10.3
Cough/Cold/Chest Infection	6.1	5.9	5	6.4	10.4	5.2	3.8	4.9	6.2	7.9
Abdominal pains/Constipation/ Stomach Upset	5.3	3.4	5.9	3.7	8.7	3.5	6.7	4.9	4.6	4.3
Diarrhoea and vomiting	5.1	7.2	5	4.4	4.8	3.9	6.1	4.6	3.8	6.1
Lack of blood/Anaemia	5.1	5	5.1	6.3	4.5	1.6	12.5	0.3	2.4	2.2
Diarrhoea without blood	5	5.1	4.4	2.5	9.3	3.1	4.6	2.3	6	6.9
Bronchitis/Pneumonia/ Chest Pain	4.1	2.9	2.7	7.1	4.2	0.9	6.5	3.1	4.8	3.5
Headache	3.8	5.5	3.7	5.1	1.7	2.1	5.7	1.5	4.4	3.3
Diarrhoea with blood	2.5	1.9	0.5	1.7	3.3	2.1	1.1	5.6	4.2	5.7
Accident	2.5	0.2	1	3.7	1.7	7.9	0.9	2.2	4.1	0.8
Asthma	1.6	0.6	1.5	2.2	1.1	1	1.3	0.1	1	5.4
Vomiting	1.4	0	0.2	2.8	3.3	3	1.5	0	0.6	0.9
Stroke	1.2	0.2	0.3	0.9	1.1	1.5	2.1	1.3	2.6	0
Liver infection/Side pain	1.1	0.4	2.3	1.6	0.1	0.4	0.3	0	2.7	1.1
Diabetes/Sugar disease	1.1	0	0.9	1.4	0.1	2.7	1.2	0	0.7	2.3
Hypertension	1	0.5	2	0.7	0.5	0.2	0.5	1.2	2.3	0.9
Murdered	0.9	0.3	1.2	0	0	1	0.5	6.5	0.3	1
Cancer	0.8	0.9	2.5	1.1	0.6	0.5	0.2	0.1	0.6	0.2
Paralysis of any kind	0.6	0	0.3	0.4	0	3	0.3	0.5	0.7	0.1
Measles	0.6	0.6	0	1	0.9	0.9	0.3	0.8	1	0
Skin rash/Skin infection	0.5	0.2	0.1	0.9	0.8	0	1.1	0	0.7	0.6
Jaundice/Yellowness	0.5	0	0.3	0	0	0	1.2	2.6	1.4	0
Boils	0.4	0	0.2	1.1	0	0	1.1	0	0	0.8
Shingles/Herpes/Zoster	0.4	0	1	0	0	0	0.9	1.1	0	0.1
Suicide	0.3	0	1	0	0.1	1.3	0	0	0	0
Piles/Haemorrhoids	0.2	0	0	0	0	0	0.5	0	0.5	0.3
Other	7.6	8.1	11.4	11.6	2.2	6.8	4.3	3.5	7.2	12.4
Don't Know	8	11.8	7.8	6.5	6	7.6	7.9	14.3	7	7.8
Total	100	100	100	100	100	100	100	100	100	100



# MIGRATION

### 5.1. Introduction

As pointed out in the 2006 LCMS report migration is one of the three components of population change, complementing fertility (births) and mortality (deaths). Migration can be either internal, changes in residence within the country, or international.

This chapter analyses migration flows using data for each household member aged 1 year and above based on the following characteristics;

- remained in the same dwelling or district in last 12 months (non-migration)
- moved from a different district or province in last 12 months (internal migration)
- moved from a different country in last 12 months (international migration)

As in the 2006 report, the ensuing analysis focuses primarily on **internal migration** and is considered from both individual and household level perspectives. Those individuals aged less than 12 months at the time of the survey were excluded from the analysis as, by definition, they were not born twelve months previously. These infants are categorised as 'not applicable' in the relevant tables of this chapter.

Individual migration is defined in this chapter as the movement of an individual member of a household from one clearly defined geographical area to another (i.e. district, province or between countries) regardless of whether the head of the household moved with that individual or not.

Household migration is highly influenced by the movement of the head of the household to a different residence. In order to establish the migration status of a household in this survey it is assumed that the migration of the head of the household meant that the whole household had migrated. Consequently, a migrant household is defined in this report as one where the head of household has migrated.<sup>1</sup>

### 5.2. Individual migration

Table 5.1 shows the percentage distribution of individuals in the population by type of migration and by residence, stratum, and province for 2010 and 2006.

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<sup>1</sup> If the head of household has migrated, he/she is also counted as an individual migrant

**Table 5.1: Percentage distribution of individuals by type of migration, rural/urban, stratum and province, 2010 and 2006**

		Non-migration			Internal migration		International migration	Not applicable	Total
		Same dwelling	Different dwelling, same locality, same district	Different locality, same district	Different district, same province	Different province, same country	Different country		
Rural/Urban	Rural	88.1	5.5	1.1	0.8	0.6	0.1	3.9	100
	Urban	79.4	11.9	2.8	1.2	1.7	0.1	2.9	100
Stratum	Small Scale	88.5	5.4	0.9	0.7	0.5	0.0	4.0	100
	Medium Scale	90.8	4.5	0.6	0.3	0.8	0.1	3.0	100
	Large Scale	91.1	1.2	0.1	0.5	4.1	0.0	3.0	100
	Non Agric	79.5	8.7	3.4	2.6	1.4	0.1	4.2	100
	Low Cost	78.6	12.7	2.7	1.2	1.5	0.1	3.2	100
	Medium Cost	81.3	9.5	3.4	1.1	2.3	0.2	2.2	100
	High Cost	82.2	9.5	2.5	1.0	2.1	0.3	2.5	100
Province	Central	84.6	9.1	1.0	0.9	1.3	0.0	3.0	100
	Copperbelt	81.8	10.4	2.3	1.6	1.1	0.1	2.9	100
	Eastern	88.8	4.0	1.5	0.4	0.7	0.2	4.4	100
	Luapula	85.2	6.4	1.9	0.9	0.7	0.0	5.0	100
	Lusaka	78.6	13.4	2.8	0.6	1.6	0.1	3.0	100
	Northern	85.0	7.9	1.1	1.1	0.9	0.0	4.0	100
	North Western	89.7	4.4	1.7	0.4	0.6	0.0	3.3	100
	Southern	86.0	7.1	1.0	1.1	1.0	0.0	3.8	100
All Zambia	Western	91.6	2.2	1.6	0.9	0.4	0.0	3.3	100
	All Zambia	85.1	7.8	1.7	0.9	1.0	0.1	3.6	100
	All Zambia - Number (000s)	11,085	1,010	219	120	124	8	468	13,034
	Missing information (000s)								29
Total popn estimate (000s)									13,064

		Non-migration			Internal migration		International migration	Not applicable	Total
		Same dwelling	Different dwelling, same locality, same district	Different locality, same district	Different district, same province	Different province, same country	Different country		
Rural/Urban	Rural	87	9	1	1	1	0	2	100
	Urban	83	11	1	1	2	0	2	100
Stratum	Small Scale	87	9	1	1	1	0	2	100
	Medium Scale	91	6	1	1	0	0	1	100
	Large Scale	88	7	0	0	4	0	1	100
	Non Agric	78	13	3	4	2	0	1	100
	Low Cost	82	12	1	1	2	0	2	100
	Medium Cost	89	7	1	1	1	0	1	100
	High Cost	87	7	2	1	2	0	1	100
All Zambia	All Zambia	86	10	1	1	1	0	2	100

The data suggest that overall, the percentage distribution of individuals by type of migration did not change significantly over time; at around 85 percent by far the largest proportion of individuals in both years remained in the same dwelling in the 12 months prior to the survey taking place in 2010. A further 9.5 percent of individuals in 2010 moved dwellings but remained in the same district, down marginally, from 11 percent in 2006 meaning that only around 2 percent of individuals migrated, either internally or internationally with the remainder being children under 12 months.

Table 5.2 shows how *internal* migrants were distributed across residence, stratum and province for 2010 and 2006.

**Table 5.2: Migrants and non-migrants 12 months prior to the survey by rural/urban, stratum and province, 2010 and 2006**

		Migration Status				Total	
		Migrants		Non-Migrants			
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Rural/Urban	Rural	113	1.4	8,068	98.6	8,181	100
	Urban	131	3.0	4,246	97.0	4,377	100
Stratum	Small Scale	89	1.2	7,295	98.8	7,384	100
	Medium Scale	3	1.1	293	98.9	296	100
	Large Scale	0	4.8	10	95.2	10	100
	Non Agric	21	4.2	470	95.8	491	100
	Low Cost	93	2.9	3,140	97.1	3,233	100
	Medium Cost	26	3.4	725	96.6	751	100
	High Cost	12	3.2	381	96.8	394	100
Province	Central	31	2.3	1,312	97.7	1,343	100
	Copperbelt	51	2.7	1,845	97.3	1,895	100
	Eastern	20	1.2	1,686	98.8	1,706	100
	Luapula	16	1.6	995	98.4	1,011	100
	Lusaka	37	2.2	1,667	97.8	1,704	100
	Northern	33	2.1	1,560	97.9	1,593	100
	North Western	8	1.0	723	99.0	731	100
	Southern	34	2.1	1,586	97.9	1,620	100
All Zambia	Western	13	1.4	941	98.6	955	100
	All Zambia	244	1.9	12,315	98.1	12,559	100

		Migration Status				Total	
		Migrants		Non-Migrants			
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Rural/Urban	Rural	112	1.5	7,372	98.5	7,484	100
	Urban	97	2.4	3,938	97.6	4,035	100
Stratum	Small Scale	89	1.3	6,774	98.7	6,863	100
	Medium Scale	3	1.2	261	98.8	264	100
	Large Scale	0	3.7	9	96.3	9	100
	Non Agric	20	5.7	329	94.3	349	100
	Low Cost	74	2.3	3,165	97.7	3,239	100
	Medium Cost	11	2.4	473	97.6	484	100
	High Cost	11	3.5	300	96.5	311	100
Province	Central	27	2.3	1,179	97.7	1,206	100
	Copperbelt	31	1.8	1,736	98.2	1,767	100
	Eastern	26	1.6	1,550	98.4	1,576	100
	Luapula	26	2.8	878	97.2	904	100
	Lusaka	37	2.3	1,570	97.7	1,607	100
	Northern	20	1.4	1,436	98.6	1,456	100
	North Western	12	1.8	688	98.2	700	100
	Southern	21	1.5	1,410	98.5	1,431	100
All Zambia	Western	9	1.0	864	99.0	873	100
	All Zambia	209	1.8	11,310	98.2	11,519	100

It appears that although the number of internal migrants increased from 209,000 in 2006 to 244,000 in 2010 there was no noticeable change in how migrants were distributed across residence, stratum and province. In both years, the proportion of migrants living in urban areas was roughly double the proportion living in rural areas; there was little variation in how migrants were distributed among urban strata. Within rural areas the percentage of migrants living in large-scale areas was marginally higher than non-agricultural areas in 2010 whereas in 2006, the percentage of migrants living in non-agricultural areas was the highest; both were significantly higher than those living in small and medium scale areas. Differences between the inhabitants of different provinces were typically much less marked. However as figure 5.1 shows in 2010 the percentage of migrants living in Copperbelt province was

marginally higher than for other provinces whilst in 2006 the province with the highest proportion of migrants was Luapula.

The number of international migrants in 2010 totalled 8,000.

**Figure 5.1: Percentage distribution of migrants in the last 12 months prior to the survey by province, 2010 and 2006**

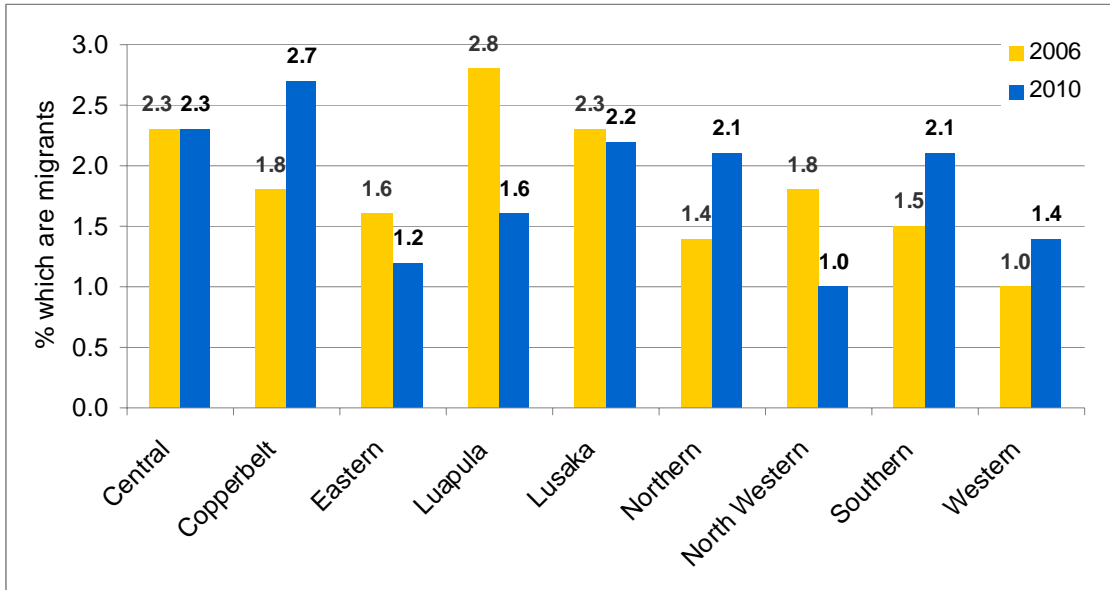


Table 5.3 shows how *internal* migrants were distributed across age group for 2010 and 2006.

The number and proportion of male and female migrants in Zambia in 2010 was broadly similar, with 123,000 men and 121,000 women, 2.0 percent and 1.9 percent respectively of the total. Peak migration for both sexes occurred during their twenties, with a slightly higher proportion of men migrating than women (3 percent compared to 2.7 percent) in the 25-29 age group.

Between 2006 and 2010 there was a noticeable increase in migration for both men and women between the ages of 20 and 29 (see figure 5.2). Otherwise there was little difference in how migrants were distributed across age groups or between the sexes.

**Table 5.3: Migrants and non-migrants 12 months prior to the survey by age group and sex, 2010 and 2006**

			Migration Status				Total	
			Migrants		Non-Migrants			
			Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Sex	Male		123	2.0	6,002	98.0	6,125	100
	Female		121	1.9	6,313	98.1	6,434	100
Age group	1-11 yrs	Both sexes	78	1.9	4,027	98.1	4,106	100
		Male	42	2.1	1,999	97.9	2,042	100
		Female	36	1.7	2,028	98.3	2,064	100
	12-19 yrs	Both sexes	52	1.9	2,719	98.1	2,771	100
		Male	22	1.7	1,322	98.3	1,344	100
		Female	30	2.1	1,397	97.9	1,427	100
	20-24 yrs	Both sexes	34	2.7	1,218	97.3	1,252	100
		Male	16	2.7	560	97.3	576	100
		Female	18	2.7	658	97.3	676	100
	25-29 yrs	Both sexes	30	2.8	1,038	97.2	1,068	100
		Male	15	3.0	479	97.0	494	100
		Female	15	2.7	559	97.3	574	100
	30-39 yrs	Both sexes	29	1.9	1,483	98.1	1,512	100
		Male	17	2.2	752	97.8	769	100
		Female	12	1.7	730	98.3	743	100
	40-49 yrs	Both sexes	12	1.4	853	98.6	864	100
		Male	7	1.6	416	98.4	423	100
		Female	5	1.1	436	98.9	441	100
	50-59 yrs	Both sexes	4	0.9	496	99.1	500	100
		Male	2	1.0	247	99.0	249	100
		Female	2	0.8	249	99.2	251	100
	60-64 yrs	Both sexes	0	0.2	170	99.8	171	100
		Male	0	0.4	74	99.6	74	100
		Female	0	0.1	96	99.9	96	100
	65 yrs+	Both sexes	3	1.0	312	99.0	315	100
		Male	1	0.9	151	99.1	153	100
		Female	2	1.1	160	98.9	162	100
All Zambia	All Zambia		244	1.9	12,315	98.1	12,559	100

			Migration Status				Total	
			Migrants		Non-Migrants			
			Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Age group	1-11 yrs	Both sexes	70	1.8	3,801	98.2	3,871	100
		Male	36	1.9	1,902	98.1	1,938	100
		Female	34	1.8	1,899	98.2	1,933	100
	12-19 yrs	Both sexes	46	1.9	2,399	98.1	2,445	100
		Male	17	1.4	1,188	98.6	1,206	100
		Female	28	2.3	1,211	97.7	1,239	100
	20-24 yrs	Both sexes	24	2.0	1,175	98.0	1,199	100
		Male	11	1.9	535	98.1	546	100
		Female	13	2.1	640	97.9	653	100
	25-29 yrs	Both sexes	23	2.3	960	97.7	983	100
		Male	11	2.4	459	97.6	470	100
		Female	12	2.3	502	97.7	513	100
	30-39 yrs	Both sexes	29	2.1	1,352	97.9	1,381	100
		Male	15	2.2	678	97.8	693	100
		Female	14	2.0	675	98.0	688	100
	40-49 yrs	Both sexes	10	1.3	768	98.7	778	100
		Male	6	1.5	380	98.5	386	100
		Female	4	1.1	388	98.9	393	100
	50-59 yrs	Both sexes	3	0.7	422	99.3	425	100
		Male	2	1.0	215	99.0	217	100
		Female	1	0.5	206	99.5	207	100
	60-64 yrs	Both sexes	1	0.9	147	99.1	148	100
		Male	1	1.5	60	98.5	61	100
		Female	0	0.5	86	99.5	87	100
	65 yrs+	Both sexes	3	0.9	286	99.1	288	100
		Male	1	0.5	150	99.5	151	100
		Female	2	1.3	136	98.7	138	100
All Zambia	All Zambia		209	1.8	11,310	98.2	11,519	100

Figure 5.2: Percentage distribution of migrants in the last 12 months prior to the survey by age group, 2010 and 2006

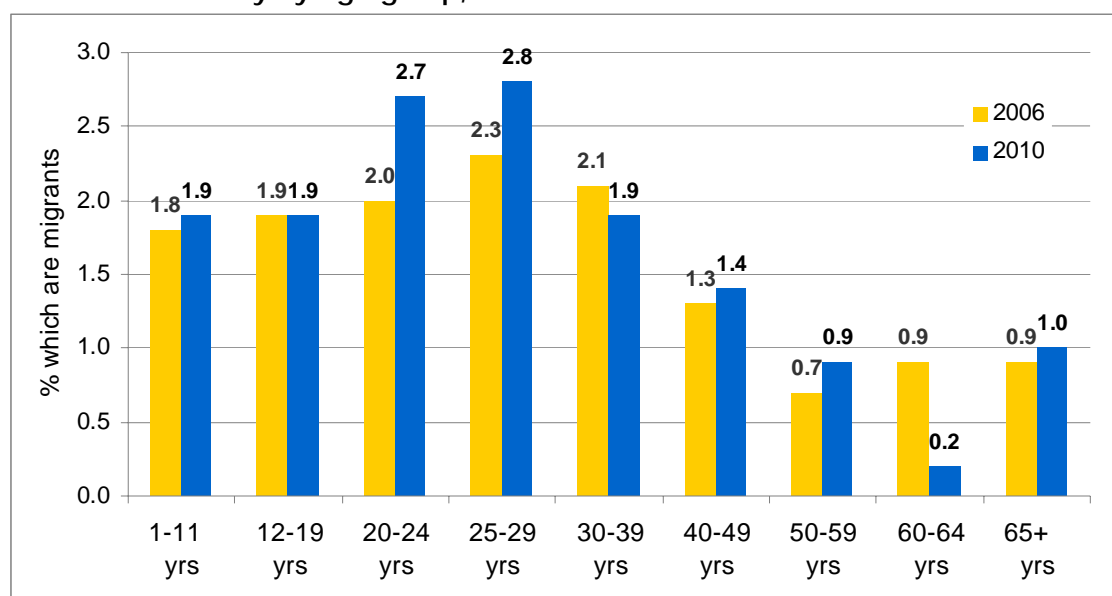


Table 5.4 shows how *internal* migrants were distributed by poverty status for 2010 and 2006.

The data suggest that in 2010, the number of non-poor individuals who migrated internally was far higher than the number of extremely poor and moderately poor migrants; around 3 percent of non poor individuals migrated, more than double the proportion of extremely poor and non poor individuals which migrated.

Table 5.4: Migrants and non-migrants 12 months prior to the survey by poverty status, 2010

		Migration Status				Total	
		Migrants		Non-Migrants			
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Poverty status	Extremely poor	58	1.1	5,241	98.9	5,300	100
	Moderately poor	33	1.4	2,246	98.6	2,279	100
	Non poor	152	3.1	4,828	96.9	4,980	100
All Zambia	All Zambia	244	1.9	12,315	98.1	12,559	100

The percentage distribution of individual migrants by province and direction of migration flow for 2010 and 2006 are shown in table 5.5.

**Table 5.5: Percentage distribution of individual migrants by province and direction of migration flow, 2010 and 2006**

Direction 2010	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	Total
Rural to Rural	35.8	8.8	31.7	18.0	3.2	43.3	21.3	25.2	51.5	24.1
Rural to Urban	10.3	25.3	3.2	9.6	25.5	9.7	24.9	8.5	10.3	14.9
Urban to Rural	27.7	11.4	33.7	63.5	8.0	23.8	10.8	34.9	15.3	23.9
Urban to Urban	26.2	54.6	31.4	8.9	63.3	23.3	43.0	31.5	22.9	37.1
Total	100	100	100	100	100	100	100	100	100	100
Number (000s)	29	49	19	16	31	33	7	34	13	230
Number (000s) - Missing residence information										14
Number (000s) – Individual migrants										244

Direction 2006	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	Total
Rural to Rural	25	6	49	40	9	26	20	50	49	27
Rural to Urban	10	13	6	6	39	6	25	11	10	15
Urban to Rural	41	7	34	42	15	36	17	24	30	26
Urban to Urban	24	75	12	12	37	33	38	16	11	31
Total	100	100	100	100	100	100	100	100	100	100

The 2010 survey data indicate that the largest proportion of migrants (accounting for 37 percent) were those moving from one urban area to another; this increased from 31 percent in 2006.

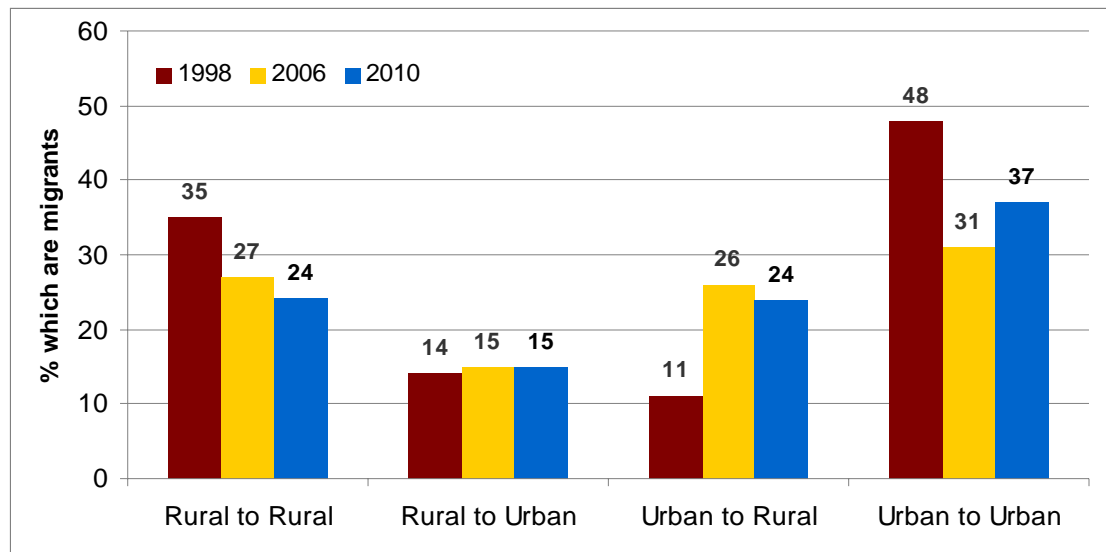
The province with the highest proportion of migrants moving from urban area to urban area in 2010 was Lusaka, estimated at 63 percent; substantially higher than the equivalent figure of 37 percent in 2006. The province with the second highest proportion of migrants moving from urban to urban areas in 2010 was Copperbelt, which declined from 75 percent in 2006 to 55 percent in 2010; this was the province with the highest proportion of such migrants in 2006.

Lusaka, Copperbelt and North-Western provinces had similar proportions of migrants moving from rural to urban areas in 2010, varying between 25 to 26 percent. However there were different trends over the four year period with Lusaka declining from 39 percent in 2006, whilst Copperbelt increased from 13 percent. North-Western province remained unchanged over the period.

In 2010 Western province had the highest proportion of migrants moving from rural area to rural area (52 percent); this was only a marginal increase over 2006.

Luapula province at 64 percent had the highest proportion of migrants moving from urban to rural areas in 2010, increasing from 42 percent recorded in 2006.

**Figure 5.3: Percentage distribution of individual migrants by direction of migration flow, 2010, 2006 and 1998**



As in previous LCMS rounds the 2010 survey asked members of the household who had migrated in the 12 months prior to the survey to state the reasons behind their actions. These reasons are shown in table 5.6 by age group for 2010 and 2006 respectively;

**Table 5.6: Reasons for individual migration by age group, 2010 and 2006**

Reason for migrating <sup>2</sup> 2010	Age Group									Total
	1-11 yrs	12-19 yrs	20-24 yrs	25-29 yrs	30-39 yrs	40-49 yrs	50-59 yrs	60-64 yrs	65+ yrs	
Transfer of head of household	31.7	28.6	16.6	18.1	20.9	22.3	5.8	3.5	3.5	24.5
Decided to resettle	21.6	6.4	16.4	21.0	29.3	19.6	27.4	7.4	20.3	18.4
Other	13.0	7.0	9.9	5.3	11.3	10.7	4.5	0.0	51.7	10.3
For school	6.2	22.7	8.9	2.8	0.2	0.7	0.0	11.8	0.0	8.5
Death of parent/guardian	10.7	15.9	2.9	4.2	1.3	1.2	1.2	0.0	4.8	8.0
To start work/business	1.5	1.9	14.1	15.4	11.6	12.3	7.2	0.0	0.0	6.9
To seek work/business	2.0	1.0	10.2	14.7	11.8	13.5	5.6	31.0	2.1	6.4
Previous household could not afford to keep him/her	5.0	4.9	6.4	3.1	1.4	1.0	11.8	4.3	17.4	4.6
Found new agricultural land	3.3	5.3	2.8	3.1	1.1	11.3	20.8	0.0	0.0	4.0
Acquired own/different accommodation	2.0	1.9	2.1	4.2	4.1	0.5	1.2	0.0	0.0	2.4
Got married	0.1	1.4	5.8	2.3	1.1	2.7	2.7	0.0	0.0	1.8
New household	2.6	1.8	0.5	0.8	0.1	0.0	0.0	9.7	0.0	1.4
Back from school/studies	0.1	1.1	3.2	3.9	0.3	0.0	0.0	0.0	0.0	1.3
Retrenchment	0.3	0.2	0.4	1.1	5.1	3.0	0.5	0.0	0.0	1.1
Retirement	0.0	0.0	0.0	0.0	0.4	1.3	11.5	32.4	0.3	0.4
Refugee/asylum seeker	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total	100	100	100	100	100	100	100	100	100	100

<sup>2</sup> Percentages apply only to internal migrants



Reason for migrating 2006	Age Group									Total
	1-11 yrs	12-19 yrs	20-24 yrs	25-29 yrs	30-39 yrs	40-49 yrs	50-59 yrs	60-64 yrs	65+ yrs	
Transfer of head of household	34	24	16	18	21	25	22	7	15	25
Decided to resettle	17	17	18	15	22	21	16	24	4	18
Other	20	19	13	8	15	15	20	6	30	17
To start work/business	2	2	6	12	11	13	9	19	0	6
Acquired own/different accommodation	4	5	5	7	8	7	5	0	1	6
To seek work/business	1	2	7	17	5	10	18	3	0	5
Previous household could not afford to keep him/her	5	8	3	2	1	0	0	3	40	5
Found new agricultural land	5	3	6	3	9	1	1	18	0	5
Death of parent/guardian	5	8	3	1	1	2	5	0	5	4
Got married	0	4	10	9	3	1	0	0	0	4
For school	2	6	4	3	1	1	0	10	4	3
New household	3	2	7	4	2	2	2	5	0	3
Back from school/studies	0	1	2	1	0	0	0	0	0	1
Retirement	0	0	0	0	0	0	3	4	1	0
Retrenchment	0	0	0	1	1	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100

In 2010 the largest proportion of migrants, 25 percent, did so in response to the transfer of the head of household; this being a particularly prominent reason among the younger respondents. Other important reasons were 'to resettle', with 18 percent of all migrants specifying this, increasing to around 30 percent in the 30-39 age group. Around 9 percent of all migrants did so for reasons of schooling; an increase from 3 percent in 2006.

The proportion stating 'transfer of head of household' remained unchanged between 2006 and 2010. The proportions corresponding to most other reasons remained at similar levels with the exception of 'death of parent/guardian' which doubled from 4 percent in 2006 to 8 percent in 2010.

Table 5.7 shows the reasons for individual internal migration by direction of migration flow, for 2010 and 2006 respectively;

**Table 5.7: Reasons for individual migration by direction of migration flow, 2010 and 2006**

Reason for moving <sup>3</sup> 2010	Direction of movement				Total
	Rural to Rural	Rural to Urban	Urban to Rural	Urban to Urban	
Transfer of head of household	12.3	18.9	16.8	39.9	24.5
Decided to resettle	28.5	19.1	22.1	9.6	18.4
Other	14.6	11.7	8.1	8.5	10.3
For school	6.8	11.4	11.0	7.0	8.5
Death of parent/guardian	10.4	6.1	8.2	5.6	8.0
To start work/business	6.5	4.7	8.5	7.2	6.9
To seek work/business	3.4	13.6	2.3	8.2	6.4
Previous household could not afford to keep him/her	1.8	8.7	6.7	3.5	4.6
Found new agricultural land	9.1	0.1	7.4	0.2	4.0
Acquired own/different accommodation	1.3	0.0	2.1	4.4	2.4
Got married	2.2	2.2	2.7	0.7	1.8
New household	2.1	1.9	1.1	1.0	1.4
Back from school/studies	0.7	1.1	1.0	1.9	1.3
Retrenchment	0.4	0.1	1.8	1.5	1.1
Retirement	0.0	0.5	0.2	0.7	0.4
Refugee/asylum seeker	0.0	0.1	0.1	0.0	0.1
Total	100	100	100	100	100

Reason for moving 2006	Direction of movement				Total
	Rural to Rural	Rural to Urban	Urban to Rural	Urban to Urban	
Transfer of head of household	21	23	25	31	25
Decided to resettle	25	11	18	12	18
Other	15	19	22	14	17
To start work/business	3	9	7	5	6
Acquired own/different accommodation	2	5	2	12	6
To seek work/business	3	12	3	6	5
Previous household could not afford to keep him/her	6	5	6	2	5
Found new agricultural land	9	2	5	0	5
Death of parent/guardian	4	4	3	5	4
Got married	5	2	2	4	4
For school	2	4	3	4	3
New household	4	3	3	3	3
Back from school/studies	1	0	1	1	1
Retirement	0	0	0	0	0
Retrenchment	0	1	0	1	0
Total	100	100	100	100	100

In both 2006 and 2010 the proportion of migrants stating 'transfer of head of household' was largest for those moving from urban area to urban area, 31 percent and 40 percent respectively. For other types of migration flow quoting this reason the proportions decreased over time.

The reason 'decided to resettle' was one of the most important reasons among migrants moving to rural areas in both years. For those moving from rural area to rural area the proportion stating this reason increased from 25 percent in 2006 to 29 percent in 2010; for those who had moved from an urban to a rural area the proportion increased from 18 percent in 2006 to 22 percent in 2010.

In 2010, the proportions of those who moved 'for school' were larger for migrants moving to a different area, i.e. rural to urban and urban to rural. In 2006 there was not much variation in the proportions stating this reason among types of migrant

<sup>3</sup> Percentages apply only to internal migrants

flow, similarly for those stating 'death of parent/guardian'; in 2010 the highest proportion stating this reason moved from rural to rural areas, followed by those who had moved from urban to rural areas.

To 'seek work/business' was a significant reason among migrants moving from rural to urban areas in both years and remained at a similar level over time, 14 percent in 2010 compared to 12 percent in 2006.

### 5.3. Household migration

Table 5.8 shows how migrant households were distributed across residence, stratum and province for 2010 and 2006 respectively.

In 2010, as with individual migration, the proportion of migrant households living in urban areas was roughly double the proportion living in rural areas. Central, Copperbelt and Southern provinces had the highest proportions of migrant households.

**Table 5.8: Migrant and non-migrant households 12 months prior to the survey by residence, stratum and province, 2010 and 2006**

2010		Migration Status				Total	
		Migrants		Non-Migrants			
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Rural/Urban	Rural	23	1.4	1,575	98.6	1,598	100
	Urban	24	2.7	864	97.3	888	100
Stratum	Small Scale	16	1.2	1,408	98.8	1,424	100
	Medium Scale	0	0.5	41	99.5	41	100
	Large Scale	0	4.8	1	95.2	1	100
	Non Agric	7	4.9	125	95.1	131.9	100
	Low Cost	16	2.4	641	97.6	657	100
	Medium Cost	5	3.3	143	96.7	148	100
	High Cost	3	3.8	80	96.2	83	100
Province	Central	7	2.8	242	97.2	249	100
	Copperbelt	9	2.4	360	97.6	369	100
	Eastern	4	1.3	337	98.7	342	100
	Luapula	3	1.4	189	98.6	191	100
	Lusaka	6	1.6	358	98.4	364	100
	Northern	6	1.8	312	98.2	317	100
	North Western	2	1.1	136	98.9	138	100
	Southern	8	2.5	303	97.5	311	100
	Western	3	1.7	201	98.3	205	100
All Zambia	All Zambia	47	1.9	2,439	98.1	2,486	100
All Zambia	Number (000s) - International migration/not applicable/missing information					5	
	Total household number estimate (000s)					2,491	

2006		Migration Status				Total	
		Migrants		Non-Migrants			
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Rural/Urban	Rural	21	1.4	1,464	98.6	1,485	100
	Urban	18	2.2	781	97.8	799	100
Stratum	Small Scale	16	1.2	1,337	98.8	1,353	100
	Medium Scale	0	1.3	36	98.7	36	100
	Large Scale	0	0.0	1	100.0	1	100
	Non Agric	5	5.2	90	94.8	95	100
	Low Cost	14	2.1	635	97.9	648	100
	Medium Cost	2	2.1	84	97.9	86	100
	High Cost	2	3.3	62	96.7	65	100
	Province	Central	4	1.9	220	98.1	224
Copperbelt		6	1.7	332	98.3	338	100
Eastern		5	1.5	317	98.5	322	100
Luapula		4	2.4	176	97.6	180	100
Lusaka		7	2.0	326	98.0	333	100
Northern		4	1.4	292	98.6	296	100
North Western		2	1.5	129	98.5	131	100
Southern		5	1.8	279	98.2	284	100
Western		2	1.3	174	98.7	176	100
All Zambia	All Zambia	39	1.7	2,245	98.3	2,284	100

Table 5.9 shows the percentage distribution of migrant households by province and direction of migration flow for 2010 and 2006.

**Table 5.9: Percentage distribution of migrant households by province and direction of migration flow, 2010 and 2006**

Direction 2010	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	Total
Rural to Rural	44.9	10.2	35.3	25.1	6.0	36.5	7.5	19.2	49.8	25.6
Rural to Urban	5.6	18.8	3.2	10.1	29.1	9.2	26.4	14.8	10.0	13.8
Urban to Rural	31.2	13.1	32.6	57.1	4.2	26.0	0.5	34.7	18.2	24.4
Urban to Urban	18.3	58.0	29.0	7.7	60.6	28.4	65.5	31.3	22.0	36.2
Total	100	100	100	100	100	100	100	100	100	100
Number (000s)	7	8	4	3	5	6	1	8	3	46
Number (000s) - Missing residence information										1
Number (000s) - Migrant households										47

Direction 2006	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	Total
Rural to Rural	39	5	57	33	6	46	17	50	51	32
Rural to Urban	10	11	8	9	18	6	25	7	10	11
Urban to Rural	28	7	18	44	8	34	29	26	29	23
Urban to Urban	23	77	18	14	68	15	29	17	10	34
Total	100	100	100	100	100	100	100	100	100	100

In 2010 the largest proportion of migrant households (accounting for 36 percent) were those moving from one urban area to another; this marginally increased from 34 percent in 2006.

The province with the highest proportion of migrant households moving from urban to urban areas in 2010 was North-Western, estimated at 66 percent; this increased from 29 percent in 2006. Copperbelt and Lusaka also had high proportions of migrant households moving from urban to urban areas in 2010. Lusaka also had the highest proportion of households migrating from rural to urban areas in 2010; the proportion having risen from 18 percent in 2006 to 29 percent in 2010.

In both years, Luapula was the province with the highest proportion of migrant households moving from urban to rural areas, with the proportion increasing from 44 percent in 2006 to 57 percent in 2010. Western province had the highest proportion of migrant households moving from rural to rural areas in 2010, decreasing only marginally over time from 51 to 50 percent; in 2006, Eastern province had the highest proportion of household migration of this type but has declined somewhat over time, from 57 percent in 2006 to 35 percent in 2010.

In 2010, households where the head was aged between 20 and 24 years had the highest proportion of migrant households, although these formed a very small minority of all migrant households. This is a similar picture to that of 2006.

**Table 5.10: Migrant households 12 months prior to the survey by age of the head of household, 2010 and 2006**

Head of Household Age Group	2006		2010	
	Number (000s)	Percent	Number (000s)	Percent
1-11 yrs	0	0	0	0.0
12-19 yrs	1	9	0	3.8
20-24 yrs	4	3	6	4.6
25-29 yrs	9	3	13	3.5
30-39 yrs	15	2	17	2.1
40-49 yrs	6	1	8	1.4
50-59 yrs	2	1	3	0.8
60-64 yrs	1	1	0	0.3
65 yrs+	1	0	1	0.5
All Zambia	39	2	47	1.9

## CHAPTER 6

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# EDUCATION

### 6.1 Introduction

This section presents and describes statistical information on educational characteristics obtained from the LCMS survey. Studies consistently show that education attainment has a substantial effect on the population and social economic issues such as health, poverty levels, employment earnings and nutrition. The survey collected data on education attainment from the population. Generally the 2010 LCMS shows an increase in the number of person attending school as compared to the pervious LCMS.

Emphasis was placed on collecting data on formal education. Formal education in Zambia is based on a three-tier system: primary education consisting of 7 years, junior secondary school consisting of 2 years, and senior secondary school consisting of 3 years. Upon completion of secondary school someone may choose to further his/her education by attending tertiary education either at a university, college, vocational or technical institute.

The survey collected data on each household member on the following;

- Whether one is currently attending school
  - The grade being attended
  - The type of school being attended
- Whether one has ever attended school, if they are not currently attending school
  - Highest grade attained
  - Main reason for leaving school or never having attended

As in the 2006 report, the ensuing analysis focuses primarily on formal education; lower primary school (grades 1-4), upper primary school (grades 5-7), junior secondary school (grades 8-9), and senior secondary school (grades 10-12).

Sections 6.2, 6.3 and 6.4 look at the following education indicators:

- **School attendance rate:** the percentage of the population by age group attending school (grades 1-12) at the time of the survey.
- **Gross attendance rate:** the number of individuals attending a specific education level, as a percentage of the total population whose ages correspond to that level.

- **Net attendance rate:** the number of individuals who are attending an education level corresponding to their age, as a percentage of the total population whose ages also correspond to that level.

6.5 looks at school attendance by type of school and level, and section 6.6 considers the characteristics of individuals not in education at the time of the survey.

## 6.2 School attendance rate

The school attendance rate is the percentage of the population by age group attending school (grades 1-12) at the time of the survey. This indicator does not explicitly take into account age-grade mismatches; an individual in a specific age group may not necessarily be attending the 'correct' grade given their age.

The age groups for which attendance rates were calculated were selected to correspond with the levels of formal education stated below;

- Lower primary grades 1, 2, 3 and 4 correspond to pupils of ages 7 to 10 years
- Upper primary grades 5, 6 and 7 correspond to pupils of ages 11 to 13 years
- Junior secondary grades 8 and 9 correspond to pupils of ages 14 to 15 years
- Senior secondary grades 10, 11 and 12 correspond to pupils of ages 16 to 18 years

In addition, the report also considers individuals of pre-school age (5 to 6 years) and those of higher education age (19 to 22 years) who are reported to be attending school (grades 1-12). At this point, it is emphasised again that although the age groups were selected to correspond to formal levels of education, an individual in a specific age group may be attending a grade which does not correspond to their age group.

Table 6.1 shows school attendance rates by residence/stratum for years 2010 and 2006;

**Table 6.1 School attendance rates by age group, rural/urban, stratum and sex, 2010 and 2006**

Rural/Urban/Stratum/Sex 2010			Pre- primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1-12
			5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Rural/Urban	Rural	Total	13.5	73.0	90.2	86.7	66.4	28.6	79.5	75.2	2,607
		Male	13.6	70.9	90.3	85.9	75.4	43.5	78.2	80.1	1,350
		Female	13.4	75.0	90.0	87.5	57.7	16.0	80.6	70.3	1,257
	Urban	Total	32.9	86.8	95.3	91.1	73.4	24.8	90.3	80.8	1,443
		Male	31.8	86.0	95.5	92.1	78.5	29.3	89.9	84.2	697
		Female	33.9	87.5	95.1	90.2	69.0	20.8	90.6	78.0	747
Stratum	Small Scale	Total	12.7	72.6	90.0	86.4	66.1	29.4	79.2	74.9	2,356
		Male	12.5	70.2	90.1	85.7	75.2	45.1	77.7	79.9	1,225
		Female	12.9	75.0	89.9	87.2	57.1	16.1	80.6	69.9	1,131
	Medium Scale	Total	17.5	76.8	94.4	89.9	73.2	35.7	84.3	80.1	115
		Male	15.0	72.2	93.5	89.2	77.0	44.5	81.3	82.0	60
		Female	20.4	81.9	95.4	90.5	69.0	26.3	87.7	78.1	55
	Large Scale	Total	36.3	73.6	86.5	98.6	84.2	28.4	79.0	90.1	4
		Male	23.1	76.2	91.2	97.7	85.0	29.6	81.9	90.7	2
		Female	43.8	70.2	82.1	100.0	83.3	26.1	75.7	89.4	2
	Non Agric	Total	23.5	76.5	89.0	88.5	65.1	15.5	81.0	75.3	132
		Male	27.7	83.3	91.3	86.9	78.5	22.2	86.0	82.2	62
		Female	17.0	71.3	87.4	89.5	56.6	10.7	77.2	70.9	70
	Low Cost	Total	28.8	84.5	94.1	90.0	73.0	24.5	88.3	80.2	1,052
		Male	27.9	83.1	94.3	90.8	78.4	30.7	87.5	83.7	510
		Female	29.8	85.7	94.0	89.3	68.3	19.2	88.9	77.2	542
	Medium Cost	Total	48.4	95.7	98.6	92.7	73.6	26.4	97.0	81.7	264
		Male	47.8	97.3	98.6	95.5	77.2	28.4	97.8	84.8	128
		Female	48.9	94.1	98.5	90.5	70.5	24.6	96.1	79.2	136
	High Cost	Total	46.4	93.4	98.5	97.4	76.3	23.3	95.7	84.2	127
		Male	45.6	92.9	99.4	97.1	81.6	21.4	95.9	86.9	59
		Female	47.2	93.8	97.6	97.6	71.5	25.0	95.5	82.1	68
All Zambia	All Zambia	Total	19.1	77.1	91.8	88.2	69.0	27.1	82.8	77.2	4,050
		Male	18.7	75.3	92.0	87.9	76.5	37.8	81.7	81.5	2,046
		Female	19.5	78.8	91.7	88.5	62.0	17.9	83.8	73.2	2,004

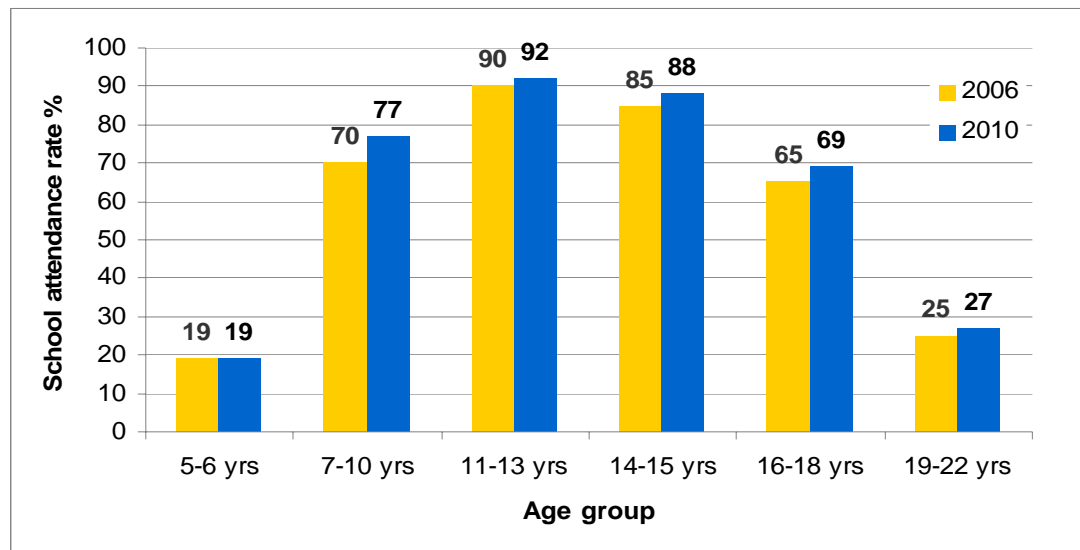


Rural/Urban/Stratum/Sex 2006			Pre- primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1-12
			5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Rural/Urban	Rural	Total	14	67	89	84	64	24	75	73	2,122
		Male	14	66	87	85	73	36	74	78	1,119
		Female	14	67	90	83	55	14	76	68	1,003
	Urban	Total	42	84	93	89	68	26	88	77	1,293
		Male	43	83	92	89	74	36	87	81	641
		Female	42	86	94	89	63	19	89	75	652
Stratum	Small Scale	Total	14	66	89	84	65	25	75	73	1,950
		Male	14	66	88	84	73	37	74	78	1,030
		Female	13	67	90	83	56	14	76	68	920
	Medium Scale	Total	15	78	91	92	58	28	84	74	94
		Male	13	77	93	98	79	45	83	90	50
		Female	18	79	90	84	44	13	84	59	44
	Large Scale	Total	47	80	90	78	55	10	84	66	3
		Male	22	99	100	100	71	16	100	81	2
		Female	68	63	84	69	38	6	73	55	2
	Non Agric	Total	20	72	84	85	53	10	76	68	75
		Male	15	72	78	95	68	16	74	81	37
		Female	23	73	92	75	40	6	79	56	38
	Low Cost	Total	38	83	92	88	66	25	87	76	1,018
		Male	39	81	92	87	71	34	86	78	505
		Female	38	84	93	88	62	18	88	74	513
	Medium Cost	Total	78	96	96	97	79	28	96	87	171
		Male	79	95	92	99	90	40	94	94	86
		Female	78	97	99	96	70	17	98	80	85
	High Cost	Total	72	96	97	95	75	40	96	82	104
		Male	70	96	94	93	78	41	96	84	51
		Female	75	96	99	97	72	39	97	81	53
All Zambia	All Zambia	Total	19	70	90	85	65	25	78	74	3,415
		Male	19	69	88	86	73	36	77	79	1,760
		Female	19	71	91	84	57	15	79	69	1,655

The overall estimated number of individuals aged 5-22 years attending grades 1-12 increased from 3,415,000 in 2006 to 4,050,000 in 2010; in both years the overall number of males attending school was marginally higher than that of females, although they both made up roughly the same proportions of the overall number.

Figure 6.1 shows an inverted u-shape in school attendance rates across age groups in 2010 and 2006; in 2010, the overall rate was initially low for the pre-school age group (19 percent) and peaked at 92 percent for individuals aged 11-13 years (upper primary age). Overall school attendance was estimated at 27 percent for 19-22 year olds. Figure 6.1 also demonstrates that school attendance rates from the age of 7 onwards increased slightly over time.

Figure 6.1 School attendance rates by age group, 2010 and 2006



The largest difference between 2006 and 2010 occurred in the 7-10 year age group (lower primary school age); overall school attendance increased from 70 percent in 2006 to 77 percent in 2010. This appears to be attributable to a rise in rural school attendance in this age group, particularly for females (67 percent in 2006 to 75 percent in 2010). Otherwise for other age groups, overall school attendance rates were at very similar levels.

*In both 2010 and 2006, the difference between overall male and female attendance rates was very small for individuals aged 5-15 years but from 16 years of age onwards, the data exhibit a tendency in both years for overall male school attendance to be much higher than that of females.*

The difference between the overall male and female rates in terms of percentage points remained more or less the same from 16 years of age onwards; for example, the male attendance rate was 15 percentage points higher than the female attendance rate in 2010 for those aged 16-18 years (77 and 62 percent respectively), and the male attendance rate was 16 percentage points higher than the female attendance rate in 2006 for those in the same age group (73 and 57 percent respectively).

*Some large differences between male and female school attendance rates in certain rural and urban strata for ages 14-18 years (secondary school age) appear to have lessened over time.*

For example, in 2006 large differences between male and female rates were particularly noticeable in rural medium, large-scale and non-agricultural areas for the age group 14-18 years; in 2010 the difference between male and female rates had decreased substantially, with male and female attendance rates at similar levels in rural medium and large-scale areas. For those aged 19-22 years, in both 2010 and 2006 the male attendance rates were much higher than female rates in rural small and medium-scale areas, but in some urban strata the differences

diminished somewhat over time; for example, in urban medium-cost areas the male attendance rate was 23 percentage points higher than the female rate in 2006 (40 and 17 percent respectively), while in 2010 it was 3 percentage points higher (28 and 25 percent respectively).

*Similarly to 2006, rural school attendance rates in 2010 were consistently lower than urban attendance rates across all age groups.*

The exception to this was for those aged 19-22 years in 2010; 29 percent in rural areas and 25 percent in urban areas. In this age group, the male attendance rate increased in rural areas from 36 percent in 2006 to 44 percent in 2010, whilst it declined in urban areas from 36 percent in 2006 to 29 percent in 2010. In both years, urban rates were much higher than rural rates for age groups 5-6 and 7-10 years but for ages 11-18 years, although the urban rates were still higher the difference was much smaller. As mentioned above, the largest increase observed from 2006 to 2010 was for the age group 7-10 years in rural areas; from 67 percent in 2006 to 73 percent in 2010.

*Among rural strata in 2010, rural medium-scale areas had the highest overall school attendance rates for those of primary school age (7-13 years) whilst rural large-scale areas had the highest overall school attendance rates for those of secondary school age (14-18 years).*

Rural medium-scale areas continued to have the highest overall school attendance rate among rural strata for those of primary school age (7-13 years); this was estimated at around 84 percent in both years. In 2010, the attendance rates for other rural strata for this age group varied between 79 and 81 percent; it appears that for rural large-scale, the rate had dropped around 5 percentage points over time while for rural small-scale and rural non-agricultural, the rate increased by around 4 to 5 percentage points. In addition, in rural large-scale areas the school attendance rate for those of pre-school age (5-6 years) had declined from 47 percent in 2006 to 36 percent in 2010, driven by a large drop in the female attendance rate over time (although it was still almost double the male rate in 2010). In 2010, rural large-scale had the highest overall school attendance rate among rural strata for those of secondary school age (14-18 years). This is in contrast to 2006 when this stratum had one of the lowest rates for this age group (66 percent compared to 90 percent in 2010). The school attendance rate for those aged 19-22 years also increased over time by around 18 percentage points in rural large-scale areas (from 10 to 28 percent).

*Among the urban strata in 2010, urban medium and high cost areas had the highest overall school attendance rates for those of primary school age (7-13 years) whilst there was little variation in school attendance rates across urban strata for those of secondary school age (14-18 years).*

In 2010, school attendance rates in medium and high-cost areas for those of primary school age (7-13 years) were estimated at around 97 and 96 percent respectively, while the rate for urban low-cost was 88 percent; there had been only marginal or no change in these rates over time. The school attendance rates for those of pre-

school age were much higher in urban medium and high-cost areas (48 and 46 percent respectively) than in urban low-cost areas (29 percent); there appears to have been a large decline in these rates over time, dropping from 78 percent in urban medium-cost and from 72 percent in urban high-cost areas. For those of secondary school age in 2010 (14-18 years), the school attendance rate varied very little; from 80 percent in urban low-cost to 84 percent in urban high-cost areas. It appears that urban medium-cost areas had the highest rate in 2006 among urban strata, but declined from 87 percent in 2006 to 82 percent in 2010. The school attendance rate for those aged 19-22 years in urban high-cost areas dropped from 40 percent in 2006 to 23 percent in 2010.

Table 6.2 shows school attendance rates by province for years 2010 and 2006;

**Table 6.2 School attendance rates by age group, province and sex, 2010 and 2006**

Province/Sex 2010			Pre- primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1- 12
			5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Province	Central	Total	14.6	75.7	94.5	94.2	74.2	32.4	82.7	83.7	461
		Male	13.7	73.4	95.0	92.7	80.9	44.3	81.3	86.6	231
		Female	15.7	78.0	94.0	95.7	68.0	22.0	84.0	80.8	230
	Copperbelt	Total	30.2	86.7	94.6	91.3	71.3	25.9	90.0	79.7	635
		Male	26.8	86.4	94.1	93.3	74.7	29.7	89.6	82.2	308
		Female	33.9	87.0	95.2	89.8	68.3	22.5	90.4	77.6	327
	Eastern	Total	8.9	60.8	82.2	81.8	57.4	21.5	69.1	67.8	457
		Male	9.3	55.9	82.8	79.8	71.5	38.1	67.2	75.1	243
		Female	8.6	65.1	81.6	84.0	42.3	8.1	70.9	59.9	214
	Luapula	Total	9.1	71.4	89.4	82.9	70.4	30.5	78.1	75.5	319
		Male	8.7	68.6	93.0	83.6	76.0	48.6	77.2	78.9	163
		Female	9.5	74.2	86.4	82.2	64.0	16.0	79.0	72.0	156
	Lusaka	Total	34.7	84.5	95.3	89.2	68.8	19.5	88.7	77.3	518
		Male	35.5	84.9	96.7	89.6	74.1	24.4	89.4	80.2	254
		Female	33.9	84.0	94.0	88.9	64.1	15.3	88.0	74.9	264
	Northern	Total	20.3	78.9	92.8	88.8	68.1	30.1	84.2	76.9	543
		Male	19.9	79.2	93.2	91.7	77.8	45.3	84.3	84.2	287
		Female	20.7	78.5	92.5	85.3	59.2	18.0	84.1	69.4	255
	North-Western	Total	18.4	74.5	91.3	91.1	77.6	43.9	80.8	83.1	263
		Male	13.9	71.5	89.9	90.8	83.6	53.8	78.8	86.5	129
		Female	22.1	77.5	92.8	91.3	72.4	34.8	82.9	80.3	134
	Southern	Total	17.9	81.8	94.8	85.7	70.0	26.0	86.9	76.8	543
		Male	19.9	77.5	92.0	83.9	76.8	37.2	83.0	80.1	275
		Female	16.0	86.0	97.2	87.8	63.5	15.9	90.6	73.3	268
	Western	Total	15.5	79.8	91.5	87.4	66.4	29.8	84.3	75.5	312
		Male	15.9	79.7	94.4	84.5	79.6	42.9	85.8	81.9	156
		Female	15.1	79.9	88.5	90.0	56.7	19.6	83.0	70.4	156
All Zambia	All Zambia	Total	19.1	77.1	91.8	88.2	69.0	27.1	82.8	77.2	4,050
		Male	18.7	75.3	92.0	87.9	76.5	37.8	81.7	81.5	2,046
		Female	19.5	78.8	91.7	88.5	62.0	17.9	83.8	73.2	2,004

Province/Sex 2006			Pre- primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1- 12
			5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Province	Central	Total	17	73	93	88	68	27	81	77	376
		Male	17	75	92	85	70	33	81	77	194
		Female	18	72	94	90	66	21	81	77	182
	Copperbelt	Total	42	85	96	90	70	28	89	79	605
		Male	44	89	95	89	77	37	91	82	310
		Female	41	81	96	91	64	20	87	76	295
	Eastern	Total	16	56	83	74	58	24	67	65	383
		Male	21	53	82	75	71	33	65	73	205
		Female	10	59	84	73	46	17	69	57	178
	Luapula	Total	16	60	92	92	74	26	73	82	264
		Male	16	59	92	96	79	49	72	86	138
		Female	15	60	92	89	67	7	73	79	125
	Lusaka	Total	37	84	92	87	59	25	87	71	468
		Male	37	83	91	87	64	32	86	74	231
		Female	36	85	92	86	55	18	88	69	237
	Northern	Total	7	67	87	84	59	19	75	72	416
		Male	8	64	86	88	75	32	72	81	216
		Female	6	71	88	81	44	7	77	64	200
	North-Western	Total	22	71	90	85	72	33	78	79	221
		Male	16	68	91	90	80	44	76	85	110
		Female	28	74	88	83	66	22	80	74	111
	Southern	Total	13	75	91	87	68	24	81	77	439
		Male	12	73	88	90	78	40	79	84	229
		Female	15	76	95	84	59	11	82	70	210
	Western	Total	11	67	85	79	62	19	74	69	243
		Male	10	67	80	79	73	28	72	75	127
		Female	12	67	89	78	48	13	76	61	115
All Zambia	All Zambia	Total	19	70	90	85	65	25	78	74	3,415
		Male	19	69	88	86	73	36	77	79	1,760
		Female	19	71	91	84	57	15	79	69	1,655

In both 2010 and 2006, Copperbelt and Lusaka had the highest overall school attendance rates for those of primary school age (7-13 years); 90 and 89 percent respectively in 2010, compared to 89 and 87 percent respectively in 2006.

In 2010, Central and North-Western had the highest overall school attendance rates for those of secondary school age (14-18 years), estimated at 84 and 83 percent respectively; while North-Western also had one of the highest school attendance rates for those of secondary school age in 2006 (79 percent), Luapula actually had the highest rate, estimated at 82 percent. Copperbelt also had a school attendance rate of 79 percent for this age group.

The data suggest that Luapula was the only province to experience a decline in overall school attendance in the 14-18 year age group over time (from 82 percent in 2006 to 76 percent in 2010), while the largest increases for this age group occurred in Central and Western provinces (increases of around 7 percentage points). The largest increase in school attendance for those aged 7-13 years (primary age) occurred in Western province also, from 74 to 84 percent.

In 2010, Copperbelt appeared to have the smallest difference between male and female school attendance rates in the age groups 16-18 and 19-22 years, the male attendance rates being 6 and 7 percentage points higher respectively. These

differences were larger for this province in 2006, with the male attendance rates being 13 and 17 percentage points higher than the female attendance rates for each age group respectively.

Eastern province had the lowest school attendance rates for both those of primary and secondary school age, in both years 2006 (primary: 67 percent, secondary: 65 percent) and 2010 (primary: 69 percent, secondary: 68 percent).

Table 6.3 shows school attendance rates by poverty status for years 2010 and 2006;

**Table 6.3 School attendance rates by age group and poverty status, 2010 and 2006**

Poverty status/rural/urban/sex 2010		Pre-primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1-12
		5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Extremely poor	Total	11.5	69.3	88.4	84.4	66.0	30.1	76.5	74.2	1,743
	Male	11.4	66.9	88.8	83.4	74.8	42.3	75.4	78.6	912
	Female	11.6	71.5	87.9	85.5	56.8	18.2	77.6	69.4	831
	Rural	11.0	69.1	88.4	84.4	65.6	30.4	76.4	74.0	1,553
	Urban	15.4	70.4	88.0	83.9	69.5	27.5	77.3	75.6	190
Moderately poor	Total	13.1	78.2	91.9	88.9	65.1	28.2	83.3	75.2	721
	Male	12.0	77.5	92.4	87.8	73.5	40.8	82.9	79.7	363
	Female	14.3	78.9	91.5	90.0	57.5	17.6	83.7	71.1	358
	Rural	11.0	76.1	90.9	88.9	63.2	28.4	81.5	74.1	506
	Urban	18.9	83.8	94.3	89.1	69.7	27.7	87.9	77.8	215
Non poor	Total	34.0	88.4	96.5	92.6	73.8	24.2	91.7	81.5	1,586
	Male	33.7	87.1	96.4	94.3	80.0	32.6	90.8	85.9	771
	Female	34.4	89.7	96.6	91.1	68.7	17.8	92.5	77.9	815
	Rural	24.0	83.2	95.3	91.9	71.8	24.8	87.8	79.8	548
	Urban	41.6	91.8	97.2	92.9	74.9	23.9	94.0	82.4	1,038
All Zambia	Total	19.1	77.1	91.8	88.2	69.0	27.1	82.8	77.2	4,050
	Male	18.7	75.3	92.0	87.9	76.5	37.8	81.7	81.5	2,046
	Female	19.5	78.8	91.7	88.5	62.0	17.9	83.8	73.2	2,004
	Rural	13.5	73.0	90.2	86.7	66.4	28.6	79.5	75.2	2,607
	Urban	32.9	86.8	95.3	91.1	73.4	24.8	90.3	80.8	1,443

Poverty status/sex 2006		Pre- primary age	Primary school age		Secondary school age		Higher education age	Primary school age	Secondary school age	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1- 12
		5-6 yrs	7-10 yrs	11-13 yrs	14-15 yrs	16-18 yrs	19-22 yrs	7-13 yrs	14-18 yrs	
Extremely poor	Total	11	63	87	82	64	23	73	72	1,741
	Male	11	61	85	85	70	34	70	77	911
	Female	11	66	88	79	56	13	75	67	830
Moderately poor	Total	22	77	91	84	65	26	82	74	504
	Male	20	75	89	83	74	37	80	78	262
	Female	23	79	93	86	57	17	85	70	241
Non poor	Total	35	83	96	90	68	26	88	77	1,170
	Male	36	86	95	88	80	38	90	83	587
	Female	34	80	96	92	58	17	86	73	583
All Zambia	Total	19	70	90	85	65	25	78	74	3,415
	Male	19	69	88	86	73	36	77	79	1,760
	Female	19	71	91	84	57	15	79	69	1,655

In both years, school attendance rates for those of primary school age (7-13 years) increased as individuals became less poor; for those of secondary school age (14-18 years), school attendance rates were similar for extremely and moderately poor individuals and were highest for non-poor individuals. Increases over time were small; among the largest, the school attendance rate of non-poor females of primary age 7-10 years increased from 80 percent in 2006 to 90 percent in 2010, while the rate of non-poor females of senior secondary age 16-18 years increased from 58 to 69 percent. The school attendance rate of moderately poor individuals aged 5-6 years declined from 22 percent in 2006 to 13 percent in 2010.

In 2010, urban school attendance rates tended to be higher than rural school attendance rates for all levels of poverty status, for both individuals of primary and secondary school age; these differences were slightly more pronounced for moderately poor and non-poor individuals. The largest difference between rural/urban school attendance rates by poverty status occurred for non-poor individuals of pre-school age (5-6 years), with the urban rate being 18 percentage points higher than the rural rate (42 and 24 percent respectively).

### 6.3 Gross attendance rate

The gross attendance rate is the number of individuals attending a specific education level, as a percentage of the total population whose ages correspond to that level. It follows that it is possible to obtain gross attendance rates greater than 100, as the numerator includes individuals attending a specific level regardless of their age (*within the age limits specified in the previous section, i.e. 5- 22 years of age*).

Table 6.4 shows gross attendance rates by residence/stratum for years 2010 and 2006;

**Table 6.4 Gross attendance rates by grade, rural/urban, stratum and sex, 2010 and 2006**

Rural/Urban/Stratum/Sex 2010			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1-12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Rural/Urban	Rural	Total	108.7	106.5	81.0	27.9	107.9	102.4	50.9	2,607
		Male	109.8	113.6	84.3	32.6	111.2	105.6	55.5	1,350
		Female	107.6	99.6	77.5	23.4	104.6	99.2	46.4	1,257
	Urban	Total	104.8	112.3	104.5	74.1	107.9	107.1	86.8	1,443
		Male	107.1	113.4	108.9	76.6	109.7	109.5	90.0	697
		Female	102.7	111.4	100.8	71.9	106.3	104.9	84.1	747
Stratum	Small Scale	Total	108.6	106.8	79.2	26.7	108.0	102.1	49.5	2,356
		Male	109.4	113.6	82.5	31.7	111.0	105.0	54.3	1,225
		Female	107.8	100.2	75.6	21.8	105.0	99.2	44.6	1,131
	Medium Scale	Total	115.7	111.4	94.4	39.6	113.9	109.6	62.2	115
		Male	110.7	117.5	102.8	34.8	113.6	111.3	62.2	60
		Female	121.4	104.5	86.1	44.7	114.2	107.7	62.1	55
	Large Scale	Total	103.0	122.5	107.1	53.2	111.2	110.3	75.5	4
		Male	93.0	162.0	99.8	37.9	119.3	114.5	65.7	2
		Female	116.1	85.1	118.6	70.4	101.8	105.1	88.0	2
	Non Agric	Total	104.8	95.3	103.4	40.1	101.4	101.8	67.7	132
		Male	116.5	108.4	107.4	53.5	113.7	112.6	77.3	62
		Female	95.7	86.2	100.7	31.5	92.2	93.9	61.6	70
	Low Cost	Total	104.6	114.8	102.5	63.7	108.6	107.2	80.1	1,052
		Male	107.2	115.8	104.1	68.3	110.6	109.2	83.4	510
		Female	102.3	113.8	101.2	59.7	106.8	105.5	77.2	542
	Medium Cost	Total	107.5	108.7	106.2	97.2	108.0	107.5	101.0	264
		Male	107.5	111.9	113.1	98.5	109.5	110.3	104.5	128
		Female	107.5	105.7	100.7	96.2	106.6	105.0	98.1	136
	High Cost	Total	101.4	99.2	118.4	108.2	100.4	104.8	112.0	127
		Male	105.0	95.8	147.7	97.0	100.8	111.1	114.3	59
		Female	98.5	102.4	98.1	118.4	100.2	99.6	110.2	68
All Zambia	All Zambia	Total	107.5	108.4	89.2	44.8	107.9	103.9	63.8	4,050
		Male	109.0	113.5	92.3	48.1	110.8	106.8	67.2	2,046
		Female	106.1	103.5	86.3	41.8	105.1	101.1	60.6	2,004

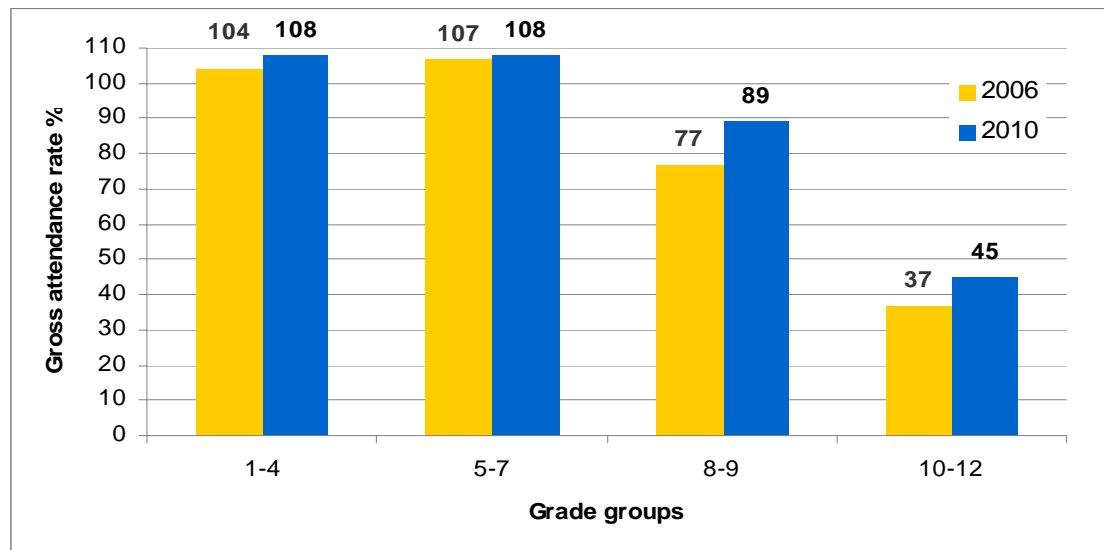
Rural/Urban/Stratum/Sex 2006			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 5- 22 yrs old attending grades 1-12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Rural/Urban	Rural	Total	106	104	65	22	105	97	41	2,122
		Male	108	107	73	25	107	101	46	1,119
		Female	104	101	56	18	103	93	35	1,003
	Urban	Total	99	111	101	62	104	104	79	1,293
		Male	98	113	106	69	104	105	85	641
		Female	100	109	97	56	104	102	74	652
Stratum	Small Scale	Total	106	104	63	21	105	97	40	1,950
		Male	108	106	72	24	107	100	45	1,030
		Female	104	101	55	17	103	93	34	920
	Medium Scale	Total	117	127	82	32	121	112	53	94
		Male	121	132	88	34	125	116	58	50
		Female	113	122	76	29	117	106	49	44
	Large Scale	Total	128	102	73	46	117	106	58	3
		Male	124	149	57	50	133	117	52	2
		Female	133	70	84	40	103	98	63	2
	Non Agric	Total	100	87	75	25	95	90	46	75
		Male	95	87	83	36	93	91	57	37
		Female	104	86	67	18	97	90	36	38
	Low Cost	Total	99	112	96	55	104	102	73	1,018
		Male	97	114	102	61	104	104	78	505
		Female	100	110	91	50	104	101	68	513
	Medium Cost	Total	108	105	128	85	107	112	102	171
		Male	107	103	133	96	105	112	112	86
		Female	110	106	122	75	108	111	93	85
	High Cost	Total	91	116	117	92	101	105	102	104
		Male	92	121	108	101	104	105	104	51
		Female	90	111	126	85	99	106	101	53
All Zambia	All Zambia	Total	104	107	77	37	105	99	55	3,415
		Male	105	109	85	41	106	102	60	1,760
		Female	103	104	71	32	103	96	50	1,655



The data suggest that overall, gross attendance rates increased slightly over time for primary grades 1-7, from 105 percent in 2006 to 108 percent in 2010. The secondary gross attendance rate (grades 8-12) increased from 55 to 64 percent over time.

Figure 6.2 shows the overall gross attendance rates by each primary and secondary grade group for both 2006 and 2010. As well as gross attendance rates increasing over time, figure 6.2 demonstrates that gross attendance rates were generally higher for primary school grades than secondary school grades; the difference in gross attendance rate between primary grade groups 1-4 and 5-7 appears to have disappeared over time whilst in both years, gross attendance rates were much higher for secondary grades 8-9 than secondary grades 10-12.

**Figure 6.2 Gross attendance rates by grade group, 2010 and 2006**



Although it was the general case in 2010 that gross attendance rates were higher for primary grades 1-7 than secondary grades 8-12, in urban high-cost areas the secondary rate was higher than the primary rate for this year, 112 percent compared to 100 percent.

*In both years, overall male gross attendance rates were consistently higher than those of females over all grade groups.*

For grades 8-9 (junior secondary school) in 2006, the male gross attendance rate was 85 percent, 14 percentage points higher than the female rate (71 percent) – this was the largest overall male/female variation. It appears that for this grade group the female rate increased faster than the male rate over time so that in 2010, the difference had diminished and the male gross attendance rate was 92 percent, only 6 percentage points higher than the female rate (86 percent).

*In 2010, the largest variations in male/female gross attendance rates occurred in rural strata.*

For upper primary grades 5-7, the male rate was substantially higher than the female rate in rural large-scale areas, 162 percent and 85 percent respectively. In 2010, female gross attendance rates were actually higher than those of males for lower primary grades 1-4 in rural medium and large-scale areas.

*In both years 2010 and 2006, overall rural and urban gross attendance rates were the same or similar for primary grades 1-7 whilst for secondary grades 8-12, urban gross attendance rates were much higher than rural rates.*

Rural and urban overall gross attendance rates were the same in 2010 for primary grades 1-7, both estimated at around 108 percent; in 2006, the rural rate was higher only by 1 percentage point (105 and 104 percent respectively). For secondary grades 8-12 in 2010, the urban rate was around 36 percentage points higher than the rural rate (87 and 51 percent respectively); in 2006 the urban rate was around 38 percentage points higher than the rural rate (79 and 41 percent respectively).

Among rural strata and in both years, rural medium-scale areas had the highest overall gross attendance rates for primary grades 1-7 (114 percent in 2010, 121 percent in 2006). Rural large-scale areas had the highest overall gross attendance rates for secondary grades 8-12 in both years (76 percent in 2010, 58 percent in 2006).

Urban low and medium-cost areas continued to have the highest overall gross attendance rates for primary grades 1-7 among urban strata, rising slightly over time from 107 to 109 percent in urban low-cost areas and from 104 to 108 percent in urban medium-cost areas. The gross attendance rate in urban high-cost areas for secondary grades 8-12 was the highest among urban strata in 2010 (112 percent); it was also one of the highest in 2006 for this grade group (102 percent) together with urban medium-cost (102 percent).

Table 6.5 shows gross attendance rates by province for years 2010 and 2006;

**Table 6.5 Gross attendance rates by grade, province and sex, 2010 and 2006**

Province/Sex 2010			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 5- 22 yrs old attending grades 1-12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Province	Central	Total	99.3	126.3	88.5	49.5	109.3	104.5	67.9	461
		Male	99.5	136.9	90.7	49.9	113.1	107.7	69.6	231
		Female	99.2	116.7	86.2	49.2	105.7	101.4	66.3	230
	Copperbelt	Total	104.0	115.2	104.6	64.1	108.7	107.7	81.2	635
		Male	105.6	115.1	108.8	65.2	109.6	109.4	82.9	308
		Female	102.5	115.3	101.2	63.1	107.8	106.1	79.7	327
	Eastern	Total	101.1	84.1	59.5	22.4	94.5	88.1	38.3	457
		Male	108.2	86.4	65.6	26.0	99.1	92.6	43.3	243
		Female	94.7	81.5	52.4	18.6	90.1	83.5	32.9	214
	Luapula	Total	113.8	90.4	91.5	28.2	105.1	102.4	54.0	319
		Male	112.3	101.6	102.3	34.8	108.6	107.4	60.0	163
		Female	115.3	81.1	82.2	20.6	101.9	98.0	47.8	156
	Lusaka	Total	105.2	110.4	97.8	70.9	107.2	105.1	82.1	518
		Male	109.6	110.8	110.2	72.0	110.1	110.1	87.1	254
		Female	100.9	110.0	88.5	70.0	104.5	100.6	78.0	264
	Northern	Total	115.9	111.5	86.4	31.9	114.2	108.7	54.9	543
		Male	116.6	126.2	85.8	36.5	120.1	112.8	59.0	287
		Female	115.1	98.2	87.0	27.6	108.4	104.5	50.7	255
	North-Western	Total	113.0	114.2	88.5	44.0	113.4	108.2	62.3	263
		Male	111.0	105.1	93.8	51.2	108.7	105.9	68.4	129
		Female	114.9	124.7	84.3	37.8	118.4	110.6	57.1	134
	Southern	Total	110.0	114.0	90.2	42.4	111.6	107.0	63.1	543
		Male	105.8	128.4	82.6	48.8	114.3	106.8	64.4	275
		Female	114.3	101.3	99.4	36.2	109.0	107.1	61.8	268
	Western	Total	110.8	113.1	93.1	32.9	111.7	107.5	59.0	312
		Male	115.8	112.7	103.9	37.9	114.5	112.1	68.4	156
		Female	106.7	113.5	83.3	29.2	109.1	103.3	51.4	156
All Zambia	All Zambia	Total	107.5	108.4	89.2	44.8	107.9	103.9	63.8	4,050
		Male	109.0	113.5	92.3	48.1	110.8	106.8	67.2	2,046
		Female	106.1	103.5	86.3	41.8	105.1	101.1	60.6	2,004

Province/Sex 2006			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 5-22 yrs old attending grades 1- 12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Province	Central	Total	104	114	81	32	108	102	53	376
		Male	104	117	85	30	109	104	54	194
		Female	104	111	77	33	107	101	52	182
	Copperbelt	Total	104	116	103	59	109	108	78	605
		Male	106	119	105	63	112	110	81	310
		Female	101	113	100	55	106	105	75	295
	Eastern	Total	95	83	57	21	90	83	37	383
		Male	97	81	62	25	91	85	42	205
		Female	92	84	51	17	89	82	32	178
	Luapula	Total	113	93	71	20	105	98	44	264
		Male	114	104	85	23	110	105	49	138
		Female	112	83	58	18	100	91	38	125
	Lusaka	Total	99	108	93	55	103	100	71	468
		Male	96	108	101	62	101	101	78	231
		Female	101	108	86	48	104	100	65	237
	Northern	Total	106	105	56	29	106	95	41	416
		Male	108	104	66	41	107	98	52	216
		Female	104	105	47	18	105	92	31	200
	North-Western	Total	108	122	76	33	113	105	53	221
		Male	102	128	89	38	111	107	60	110
		Female	114	116	67	29	115	103	47	111
	Southern	Total	105	117	81	32	109	104	54	439
		Male	108	121	88	38	113	108	60	229
		Female	103	112	74	27	106	100	47	210
	Western	Total	108	104	66	26	106	98	42	243
		Male	111	108	76	26	110	103	46	127
		Female	104	101	57	26	103	93	39	115
All Zambia	All Zambia	Total	104	107	77	37	105	99	55	3,415
		Male	105	109	85	41	106	102	60	1,760
		Female	103	104	71	32	103	96	50	1,655

Northern and North-Western province had the highest gross attendance rates for primary grades 1-7 in 2010, 114 and 113 percent respectively. North-Western also had the highest rate for this grade group in 2006 (113 percent).

In 2010, Copperbelt and Lusaka had the highest gross attendance rates for secondary grades 8-12, 81 percent and 82 percent respectively. These provinces also had the highest rates in 2006, 78 and 71 percent respectively; that of Lusaka increased by 9 percentage points over time.

The overall gross attendance rate for primary grades 1-7 in Northern province increased from 106 to 124 percent over time, the largest rise in this grade group. For secondary grades 8-12 the largest increase over time occurred in Western province, from 42 to 59 percent.

As with school attendance rates, Eastern province had the lowest gross attendance rates, for both primary grades 1-7 and secondary grades 8-12, in both years 2006 and 2010.

Table 6.6 shows gross attendance rates by poverty status for years 2010 and 2006 respectively;

**Table 6.6 Gross attendance rates by grade and poverty status, 2010 and 2006**

Poverty status/rural/urban/sex 2010		Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>a</sup> estimate (000s) Persons 5- 22 yrs old attending grades 1-12
		1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Extremely poor	Total	107.3	104.5	72.2	20.7	106.2	99.4	43.6	1,743
	Male	109.4	111.2	73.9	24.3	110.1	102.5	46.6	912
	Female	105.3	97.5	70.3	17.0	102.4	96.2	40.5	831
	Rural	108.2	104.0	70.4	19.2	106.6	99.3	42.1	1,553
	Urban	100.0	108.9	86.2	31.8	103.4	99.8	55.1	190
Moderately poor	Total	105.2	112.4	90.6	37.7	107.9	104.4	60.1	721
	Male	105.7	116.9	101.5	41.8	109.8	108.1	67.5	363
	Female	104.8	108.4	80.3	34.1	106.2	100.9	53.4	358
	Rural	106.3	112.4	85.1	30.7	108.5	103.7	54.0	506
	Urban	102.5	112.4	104.2	54.6	106.4	105.9	75.3	215
Non poor	Total	109.2	111.8	109.4	73.4	110.3	110.1	88.2	1,586
	Male	110.4	115.3	113.3	79.4	112.3	112.5	93.4	771
	Female	108.2	108.6	106.0	68.4	108.4	107.8	83.8	815
	Rural	113.2	109.4	112.0	49.2	111.7	111.8	74.2	548
	Urban	106.7	113.1	108.1	85.8	109.4	109.1	95.1	1,038
All Zambia	Total	107.5	108.4	89.2	44.8	107.9	103.9	63.8	4,050
	Male	109.0	113.5	92.3	48.1	110.8	106.8	67.2	2,046
	Female	106.1	103.5	86.3	41.8	105.1	101.1	60.6	2,004
	Rural	108.7	106.5	81.0	27.9	107.9	102.4	50.9	2,607
	Urban	104.8	112.3	104.5	74.1	107.9	107.1	86.8	1,443

Poverty status/sex 2006		Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>a</sup> estimate (000s) Persons 5- 22 yrs old attending grades 1-12
		1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Extremely poor	Total	104	101	58	19	103	94	37	1,741
	Male	106	104	65	22	105	97	41	911
	Female	102	97	52	16	100	90	33	830
Moderately poor	Total	106	113	87	36	109	104	58	504
	Male	102	115	105	38	107	107	66	262
	Female	110	111	71	33	110	101	50	241
Non poor	Total	102	114	106	61	107	107	80	1,170
	Male	103	115	114	72	108	109	89	587
	Female	101	113	100	53	106	104	72	583
All Zambia	Total	104	107	77	37	105	99	55	3,415
	Male	105	109	85	41	106	102	60	1,760
	Female	103	104	71	32	103	96	50	1,655

In both 2010 and 2006, overall gross attendance rates for secondary grades clearly increased as individuals became less poor, but differences between levels of poverty were much less pronounced for primary school grades.

The largest increase over time occurred for extremely poor individuals attending junior secondary grades 8-9; the gross attendance rate increased from 58 percent in 2006 to 72 percent in 2010. In addition, the gross attendance rate for non poor individuals attending senior secondary grades 10-12 increased from 61 percent in 2006 to 73 percent in 2010.

Across all levels of poverty status in 2010, rural gross attendance rates were slightly higher than urban rates for primary grades 1-7. For secondary grades 8-12 urban gross attendance rates were much higher than rural rates, with the differences more pronounced for moderately and non-poor individuals.

#### 6.4 Net attendance rate

The net attendance rate is the number of individuals who are attending an education level corresponding to their age, as a percentage of the total population whose ages also correspond to that level. It follows that in the following tables we consider only individuals aged 7 to 18 years.

Table 6.7 shows net attendance rates by residence/stratum for years 2010 and 2006;

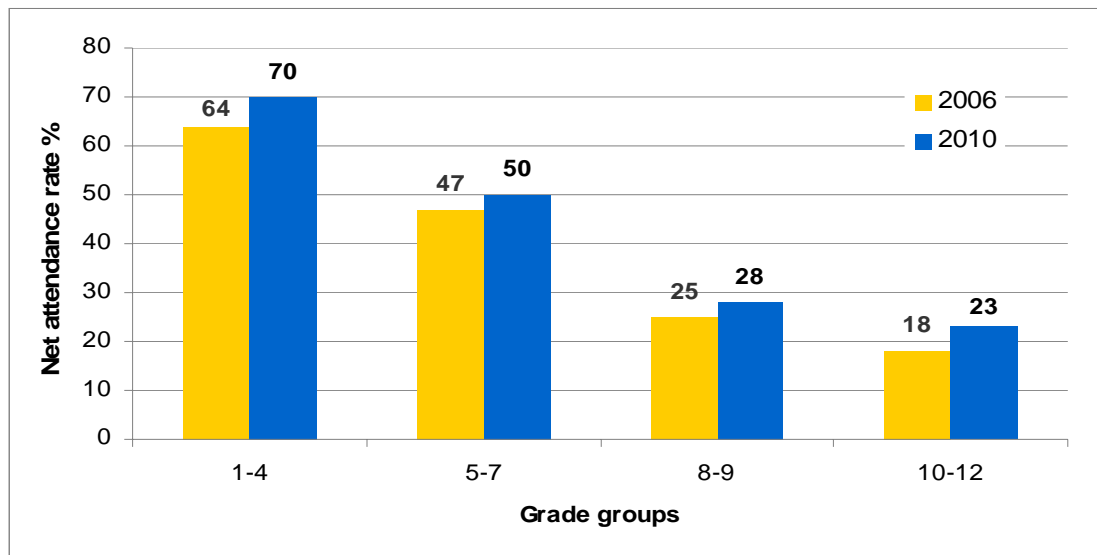
**Table 6.7 Net attendance rates by grade, rural/urban, stratum and sex, 2010 and 2006**

Rural/Urban/Stratum/Sex 2010			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 7-18 yrs old attending grades 1-12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Rural/Urban	Rural	Total	68.7	44.3	21.0	12.9	78.2	80.3	34.4	2,338
		Male	66.7	43.2	18.4	14.3	77.2	79.2	34.3	1,177
		Female	70.6	45.5	23.7	11.6	79.1	81.3	34.5	1,161
	Urban	Total	73.5	60.6	41.4	40.5	83.9	86.4	62.1	1,258
		Male	73.6	59.4	41.1	42.7	84.0	87.5	62.4	601
		Female	73.3	61.8	41.7	38.6	83.9	85.5	61.9	658
Stratum	Small Scale	Total	68.6	43.8	19.8	12.1	78.1	80.0	33.3	2,117
		Male	66.3	42.4	17.6	13.9	76.9	78.7	33.5	1,071
		Female	70.8	45.3	22.2	10.3	79.2	81.3	33.2	1,046
	Medium Scale	Total	69.8	49.7	23.2	20.9	81.3	84.6	41.9	102
		Male	65.9	51.9	17.8	13.2	78.4	82.2	37.8	53
		Female	74.1	47.2	28.6	29.0	84.5	87.2	46.1	50
	Large Scale	Total	56.5	37.0	27.5	36.2	71.8	80.8	53.2	3
		Male	60.6	39.9	21.5	21.1	75.5	82.7	44.3	2
		Female	51.2	34.3	36.9	53.1	67.5	78.6	64.7	1
	Non Agric	Total	70.4	49.1	42.3	21.0	78.1	81.5	47.6	116
		Male	75.5	51.6	39.9	27.3	82.9	85.9	49.4	52
		Female	66.4	47.3	43.9	16.9	74.4	78.3	46.5	64
	Low Cost	Total	73.3	60.2	40.5	35.4	83.8	85.9	58.3	923
		Male	72.9	58.6	39.4	37.5	83.6	86.3	58.4	440
		Female	73.6	61.7	41.5	33.6	84.0	85.5	58.3	483
	Medium Cost	Total	76.7	64.4	43.7	51.1	85.6	89.0	70.0	226
		Male	79.1	64.4	43.6	54.3	86.5	91.9	70.3	110
		Female	74.3	64.5	43.8	48.3	84.7	86.3	69.8	117
	High Cost	Total	68.8	56.2	44.4	58.4	81.2	86.3	76.8	109
		Male	69.3	55.7	52.2	58.7	81.5	89.2	79.4	51
		Female	68.4	56.7	38.9	58.0	81.0	83.8	74.7	58
All Zambia	All Zambia	Total	70.1	49.6	28.2	23.0	79.9	82.2	44.4	3,597
		Male	68.7	48.3	25.8	24.3	79.2	81.7	43.8	1,778
		Female	71.5	50.9	30.5	21.8	80.6	82.7	44.9	1,819

Rural/Urban/Stratum/Sex 2006			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 7- 18 yrs old attending grades 1- 12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Rural/Urban	Rural	Total	62	39	17	9	73	76	27	1,910
		Male	61	36	16	10	73	75	28	984
		Female	63	42	17	8	74	76	25	926
	Urban	Total	69	60	40	33	82	85	55	1,143
		Male	68	60	39	34	81	84	56	557
		Female	70	61	40	32	82	86	54	586
Stratum	Small Scale	Total	62	39	16	9	73	75	26	1,757
		Male	61	36	15	10	72	75	28	906
		Female	63	42	17	8	74	76	24	851
	Medium Scale	Total	72	45	20	12	81	84	33	82
		Male	72	42	17	11	81	85	33	43
		Female	72	48	23	14	81	83	34	40
	Large Scale	Total	80	43	22	24	88	85	42	3
		Male	89	49	5	34	97	96	39	2
		Female	69	38	34	11	79	75	33	1
	Non Agric	Total	62	32	28	12	70	73	32	68
		Male	61	30	35	20	70	73	44	34
		Female	62	34	21	7	70	73	23	34
	Low Cost	Total	69	61	37	29	81	84	51	906
		Male	68	61	36	30	81	83	52	441
		Female	70	60	37	28	81	85	50	465
	Medium Cost	Total	74	60	51	47	84	91	69	148
		Male	73	56	50	47	82	91	71	73
		Female	75	65	52	48	86	92	68	75
	High Cost	Total	64	58	48	50	82	89	70	90
		Male	63	60	47	55	83	88	71	43
		Female	65	55	49	46	81	89	69	47
All Zambia	All Zambia	Total	64	47	25	18	76	79	37	3,053
		Male	63	44	24	19	75	78	38	1,542
		Female	65	49	25	17	77	79	36	1,512

The data suggest that overall, net attendance rates increased over time; the largest overall increase is by 6 percentage points and occurred for lower primary grades 1-4, from 64 percent in 2006 to 70 percent in 2010. The next largest increase was for senior secondary grades 10-12, from 18 percent in 2006 to 23 percent in 2010. In both years, overall net attendance rates were lower for secondary grades than for primary grades as figure 6.3 demonstrates.

**Figure 6.3 Net attendance rates by grade group, 2010 and 2006**



In both 2010, overall female net attendance rates were marginally higher than male rates for both primary grades 1-7 and secondary grades 8-12. This was also the case in 2006 for primary grades 1-7, but not for secondary grades 8-12 where the male rate was marginally higher

*The largest variations between male and female net attendance rates in both years 2010 and 2006 occurred in rural large-scale areas.*

For example, in 2006 for senior secondary grades 10-12, the male net attendance rate was 34 percent, 23 percentage points higher than the female rate at 11 percent. In 2010 for this grade group, the male rate declined to 21 percent whilst the female rate increased to 53 percent. Another prominent difference in 2010 occurred for junior secondary grades 8-9 in urban high-cost areas, where the male net attendance rate was 52 percent, 13 percentage points higher than the female rate at 39 percent; in 2006, the female rate was 49 percent, 2 percentage points higher than the male rate of 47 percent.

*As in 2006, net attendance rates were consistently lower in rural areas than urban areas in 2010.*

In both years the difference was smallest for lower primary grades 1-4 (the urban rate was 74 percent and the rural rate 69 percent in 2010, and the urban rate was 69 percent and the rural rate 62 percent in 2006). From grades 5-7 onwards, the difference between the overall rural and urban rates varied between 16 to 28 percentage points in 2010, and between 21 to 24 percentage points in 2006. The largest increases over time were both for lower primary grades 1-4 in rural areas and for senior secondary grades 10-12 in urban areas where the net attendance rate increased from 33 to 41 percent.



Among rural strata in 2010, rural large-scale areas had the lowest net attendance rate for primary grades 1-7 (72 percent), while there was little variation in net attendance rates in rural small-scale, medium-scale and non-agricultural areas (78 to 81 percent). However, rural large-scale areas had the highest overall net attendance rate for secondary grades 8-12 in 2010 (53 percent).

This is in contrast to 2006 when rural large-scale areas had both the highest net attendance rate for primary school grades 1-7 (88 percent), and secondary grades 8-12 (42 percent). Rural small-scale areas had the lowest net attendance rates for secondary grades 8-12 in both years 2006 and 2010, although increasing from 26 percent to 33 percent over time.

In 2010, urban medium-cost areas had the highest net attendance rate for primary school grades 1-7 (86 percent) but urban high-cost areas had the highest net attendance rate for secondary grades 8-12 (77 percent).

In 2006, there was little variation across urban strata in net attendance rates for primary grades 1-7, and urban medium and low-cost areas had the highest rates for secondary grades 8-12, 69 and 70 percent respectively.

Table 6.8 shows net attendance rates by province for years 2010 and 2006;

**Table 6.8 Net attendance rates by grade, province and sex, 2010 and 2006**

Province/Sex 2010			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 7- 18 yrs old attending grades 1- 12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Province	Central	Total	68.6	53.2	30.7	24.2	80.5	84.1	47.1	411
		Male	65.9	54.2	28.3	24.6	79.6	82.9	45.8	201
		Female	71.1	52.3	33.1	23.8	81.2	85.3	48.4	210
	Copperbelt	Total	72.8	59.7	41.5	36.6	83.4	86.7	58.3	561
		Male	74.0	57.1	40.4	38.5	83.3	87.9	57.0	271
		Female	71.7	62.1	42.4	34.9	83.6	85.6	59.4	290
	Eastern	Total	57.3	33.2	13.9	10.9	67.6	70.7	25.2	418
		Male	52.7	32.2	11.8	11.3	66.3	69.0	26.5	215
		Female	61.4	34.3	16.2	10.5	68.8	72.4	23.7	202
	Luapula	Total	68.8	33.3	18.5	12.6	77.1	78.4	36.8	286
		Male	66.2	29.5	18.6	14.4	76.1	77.8	37.3	141
		Female	71.3	36.4	18.4	10.6	78.0	79.0	36.2	145
	Lusaka	Total	72.9	60.7	37.5	37.2	83.2	85.0	58.6	449
		Male	74.0	60.6	37.0	39.2	84.2	87.0	59.1	216
		Female	71.8	60.8	37.9	35.4	82.2	83.3	58.1	233
	Northern	Total	74.7	50.5	21.2	15.6	82.6	84.4	36.3	478
		Male	75.0	48.4	18.8	16.5	83.3	85.0	36.6	248
		Female	74.5	52.4	24.0	14.8	82.0	83.8	35.9	230
	North-Western	Total	70.3	44.9	25.7	20.8	78.4	81.4	40.4	230
		Male	66.3	43.6	24.3	25.8	76.8	79.5	42.5	112
		Female	74.1	46.4	26.8	16.5	80.2	83.3	38.6	118
	Southern	Total	74.1	54.3	26.1	21.2	84.6	84.9	44.9	485
		Male	70.7	53.1	22.6	23.1	80.9	81.7	42.3	238
		Female	77.4	55.3	30.4	19.4	88.2	88.1	47.6	247
	Western	Total	74.5	51.1	30.7	16.1	83.0	84.1	41.7	278
		Male	75.3	53.5	29.3	16.2	84.2	84.8	43.6	135
		Female	73.7	48.6	32.0	16.1	82.0	83.5	40.1	143
All Zambia	All Zambia	Total	70.1	49.6	28.2	23.0	79.9	82.2	44.4	3,597
		Male	68.7	48.3	25.8	24.3	79.2	81.7	43.8	1,778
		Female	71.5	50.9	30.5	21.8	80.6	82.7	44.9	1,819

Province/Sex 2006			Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>n</sup> estimate (000s) Persons 7- 18 yrs old attending grades 1- 12
			1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Province	Central	Total	65	48	22	18	77	80	35	337
		Male	65	43	22	16	76	78	33	170
		Female	65	53	23	19	78	81	37	167
	Copperbelt	Total	71	62	39	31	83	87	54	534
		Male	73	62	38	30	85	88	54	271
		Female	69	61	40	32	82	87	54	264
	Eastern	Total	52	34	15	8	64	66	25	346
		Male	48	31	14	10	62	64	28	181
		Female	55	39	16	6	67	68	22	165
	Luapula	Total	57	33	17	7	72	76	27	237
		Male	56	31	18	6	71	76	25	119
		Female	59	34	17	9	72	76	29	118
	Lusaka	Total	68	58	36	25	80	83	48	412
		Male	67	59	36	27	79	82	51	200
		Female	70	56	36	23	80	84	45	212
	Northern	Total	64	39	17	16	75	78	28	381
		Male	64	36	17	21	74	78	34	193
		Female	65	43	17	11	75	78	22	188
	North-Western	Total	64	44	24	14	77	79	34	193
		Male	61	43	19	14	75	78	34	94
		Female	68	45	27	14	79	80	34	99
	Southern	Total	70	49	24	15	79	82	37	394
		Male	69	46	23	17	79	82	39	200
		Female	71	52	24	14	80	82	35	194
	Western	Total	65	39	15	14	74	76	30	219
		Male	67	35	15	14	75	75	32	114
		Female	63	43	16	14	73	76	27	105
All Zambia	All Zambia	Total	64	47	25	18	76	79	37	3,053
		Male	63	44	24	19	75	78	38	1,542
		Female	65	49	25	17	77	79	36	1,512

In 2010 for lower primary grades 1-4, there was little variation in net attendance rates over all provinces with the exception of Eastern province, with the lowest rate in both years although increasing from 52 percent in 2006 to 57 percent in 2010. Luapula experienced one of the largest increases over time for this level, from 57 percent in 2006 to 69 percent in 2010.

For all remaining grade groups, Copperbelt and Lusaka had the highest net attendance rates in both years 2006 and 2010, whilst Eastern province again had the lowest rates.

The largest increases over time for secondary school occurred for Western province, rising from 15 to 31 percent for junior secondary grades 8-9, and for Lusaka where the net attendance rate increased from 25 to 37 percent for senior secondary grades 10-12. Western province also saw a large increase from 39 to 51 percent for upper primary grades 5-7, as did Northern province for primary school grades; from 64 to 75 percent for lower primary grades 1-4 and from 39 to 51 percent for upper primary grades 8-9.

Table 6.9 shows net attendance rates by poverty status for years 2010 and 2006;

**Table 6.9 Net attendance rates by grade and poverty status, 2010 and 2006**

Poverty status/rural/urban/sex 2010		Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>a</sup> estimate (000s) Persons 7- 18 yrs old attending grades 1-12
		1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Extremely poor	Total	65.9	40.1	17.7	9.5	75.5	77.8	29.3	1,579
	Male	63.9	38.4	13.9	10.8	74.4	76.6	28.4	807
	Female	67.9	41.8	21.8	8.2	76.7	78.9	30.3	771
	Rural	66.0	39.2	16.6	8.5	75.5	77.8	27.9	1,407
	Urban	65.4	48.0	26.7	17.3	75.5	77.9	40.3	171
Moderately poor	Total	72.0	52.5	27.9	18.3	81.9	83.7	41.5	644
	Male	71.1	51.7	28.6	18.4	81.8	83.4	43.3	316
	Female	72.9	53.1	27.3	18.3	82.0	84.0	39.9	328
	Rural	71.4	48.7	22.9	13.5	80.7	82.5	36.5	452
	Urban	73.8	61.3	40.4	30.0	85.0	87.0	53.9	192
Non poor	Total	75.4	61.4	41.1	39.3	85.3	87.7	62.6	1,374
	Male	74.9	61.4	41.1	43.1	85.2	88.4	63.8	655
	Female	75.9	61.4	41.2	36.2	85.5	87.0	61.6	719
	Rural	75.3	57.8	34.0	24.6	84.8	86.6	51.9	479
	Urban	75.5	63.3	44.5	46.9	85.7	88.3	67.9	895
All Zambia	Total	70.1	49.6	28.2	23.0	79.9	82.2	44.4	3,597
	Male	68.7	48.3	25.8	24.3	79.2	81.7	43.8	1,778
	Female	71.5	50.9	30.5	21.8	80.6	82.7	44.9	1,819
	Rural	68.7	44.3	21.0	12.9	78.2	80.3	34.4	2,338
	Urban	73.5	60.6	41.4	40.5	83.9	86.4	62.1	1,258

Poverty status/sex 2006		Schooling grades				Primary	Primary and junior secondary	Secondary	Pop <sup>a</sup> estimate (000s) Persons 7- 18 yrs old attending grades 1-12
		1-4	5-7	8-9	10-12	1-7	1-9	8-12	
Extremely poor	Total	60	38	15	8	72	74	25	1,571
	Male	59	35	16	9	70	73	26	805
	Female	62	41	15	7	73	75	24	766
Moderately poor	Total	68	48	24	16	78	81	38	452
	Male	66	47	27	15	77	79	41	231
	Female	70	48	22	18	80	83	36	221
Non poor	Total	71	61	41	32	83	86	55	1,031
	Male	71	60	38	37	84	87	59	506
	Female	70	62	43	29	82	86	51	525
All Zambia	Total	64	47	25	18	76	79	37	3,053
	Male	63	44	24	19	75	78	38	1,542
	Female	65	49	26	17	77	79	36	1,512

In both years, net attendance rates increased as individuals became less poor across all grade groups. Increases over time were small; among the largest, the net attendance rate for extremely poor individuals attending lower primary grades 1-4 increased from 60 percent in 2006 to 66 percent in 2010, while the rate for non-poor individuals attending senior secondary grades 10-12 increased from 32 to 39 percent. In 2010, female rates were noticeably higher than male rates for extremely poor individuals in grade groups 1-4, 5-7 and 8-9; this was also the case for primary grade groups 1-4 and 5-7 in 2006.

The data suggest that in 2010 there was little variation between rural and urban net attendance rates across all levels of poverty status for primary grades 1-7. However, the urban rate was much higher than the rural rate for secondary grades 8-12, with similar differences in terms of percentage points across all levels of poverty status.

## 6.5 School attendance by type of school and level

This section considers individuals attending university and above in addition to those attending formal school grades 1-12. Table 6.10 shows school attendance by type of school and level for years 2010 and 2006;

**Table 6.10 School attendance rates by type of school and level, 2010 and 2006**

Type of school/Level 2010	Type of school						Total
	Central Govt	Local Govt	Mission/ Religious	Industrial	Private	Other	
Primary	86.2	1.8	2.4	0.2	6.9	2.6	100
Secondary	90.1	1.0	2.8	0.1	5.9	0.1	100
College	56.3	0.3	3.6	1.5	37.3	1.1	100
University & above	70.3	0.2	3.5	2.4	22.2	1.5	100
All levels	86.6	1.5	2.5	0.2	7.3	1.8	100

Type of school/Level 2006	Type of school						Total
	Central Govt	Local Govt	Mission/ Religious	Industrial	Private	Other	
Primary	85.4	3.2	2.7	0.0	5.7	2.9	100
Secondary	86.6	3.4	4.0	0.1	5.8	0.2	100
College	57.1	0.0	8.6	0.0	34.3	0.0	100
University & above	62.3	0.8	3.7	2.5	30.6	0.1	100
All levels	85.3	3.2	3.1	0.1	6.2	2.2	100

Central government remained a major provider of education; around 87 percent of all persons in education (including college and university) indicated that they were attending a central government institution in 2010, compared to 85 percent in 2006.

In 2010, about 70 percent of persons attending university/above were attending a central government institution; this is an increase from 62 percent in 2006. The percentage of persons attending university/above at private institutions declined from 31 percent in 2006 to 22 percent in 2010.

## 6.6 Characteristics of individuals not in education at time of survey

The remaining tables focus on individuals who were not attending any form of education at the time of the survey being undertaken (with the exception of those who were attending adult literacy classes).

Table 6.11 shows the percentage distribution of those individuals not in education at the time of the survey being undertaken, for years 2010 and 2006;

**Table 6.11 Percentage distribution of population 5 years and above who are not in education at time of survey, by highest level of education attained, rural/urban, age group and sex, 2010 and 2006**

Rural/Urban/Age group/Sex 2010		None	Highest level of education obtained						Total	Pop <sup>n</sup> estimate (000s) Persons 5+ yrs currently not in education
			Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12 (O-Level)	Grade 12 (A-Level)/ Certificate/ Diploma (undergraduate)	Degree (postgraduate) & above		
Rural	Total	30.6	14.5	30.3	14.7	7.5	2.2	0.2	100	4,524
	Male	28.7	11.9	29.2	16.5	10.5	3.0	0.2	100	2,117
	Female	32.3	16.8	31.3	13.2	4.9	1.5	0.1	100	2,407
Urban	Total	11.8	5.3	18.8	20.5	30.4	11.3	1.9	100	2,357
	Male	10.4	3.8	14.1	18.9	37.0	13.0	2.8	100	1,137
	Female	13.0	6.7	23.3	21.9	24.3	9.7	1.1	100	1,220
Age group	5-9 yrs	98.4	1.4	0.1	0.0	0.0	0.0	0.0	100	921
	10-14 yrs	56.5	28.9	11.8	2.3	0.4	0.0	0.0	100	170
	15-19 yrs	12.2	14.1	36.8	21.7	14.9	0.4	0.0	100	503
	20-24 yrs	7.5	9.2	29.1	24.7	25.9	3.5	0.2	100	978
	25-29 yrs	7.6	10.5	29.6	21.7	21.8	8.0	0.8	100	1,015
	30-39 yrs	9.4	10.0	32.2	22.2	16.9	8.4	1.0	100	1,474
	40-49 yrs	10.3	11.5	34.6	17.5	16.4	8.0	1.7	100	847
	50-59 yrs	14.1	15.1	31.5	12.0	17.2	8.1	2.1	100	494
	60+ yrs	31.7	27.6	21.0	8.3	7.0	3.7	0.7	100	478
All Zambia	Total	24.1	11.3	26.4	16.7	15.4	5.3	0.8	100	6,881
	Male	22.3	9.1	23.9	17.4	19.7	6.5	1.2	100	3,254
	Female	25.8	13.4	28.6	16.1	11.4	4.3	0.4	100	3,627

Rural/Urban/Age group/Sex 2006		None	Highest Level of education obtained						Total	Pop <sup>n</sup> estimate (000s) Persons 5+ yrs currently not in education
			Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12 (O-Level)	Grade 12 (A-Level)/ Certificate/ Diploma (undergraduate)	Degree (postgraduate) & above		
Rural	Total	35.3	15.6	29.6	11.2	6.8	1.5	0.0	100	4,488
	Male	33.6	13.2	28.7	13.2	9.2	2.1	0.1	100	2,125
	Female	36.9	17.7	30.5	9.4	4.5	0.9	0.0	100	2,363
Urban	Total	14.7	5.5	20.9	19.9	29.5	9.0	0.5	100	2,282
	Male	13.6	4.0	15.9	18.7	36.0	10.8	0.9	100	1,102
	Female	15.7	6.9	25.6	20.9	23.4	7.2	0.2	100	1,181
Age group	5-9	98.7	1.1	0.1	0.0	0.0	0.0	0.0	100	1,058
	10-14	62.4	24.5	11.2	1.2	0.0	0.0	0.0	100	204
	15-19	17.9	15.3	37.3	16.7	12.5	0.4	0.0	100	493
	20-24	9.4	12.7	32.7	20.2	22.5	2.4	0.0	100	1,048
	25-29	9.0	10.4	33.4	20.8	20.3	6.0	0.2	100	965
	30-39	10.2	11.0	33.7	20.6	17.5	6.7	0.3	100	1,372
	40-49	13.7	11.9	33.6	13.6	19.4	7.3	0.4	100	773
	50-59	16.2	18.0	29.7	11.9	16.4	7.0	0.7	100	422
	60+	37.2	30.7	19.9	5.1	5.3	1.6	0.2	100	438
All Zambia	Total	28.4	12.2	26.7	14.1	14.4	4.0	0.2	100	6,770
	Male	26.8	10.0	24.3	15.1	18.4	5.1	0.3	100	3,227
	Female	29.8	14.1	28.9	13.3	10.8	3.0	0.1	100	3,544

The number of individuals who were not in education at the time of survey increased over time (from 6,700,000 in 2006 to 6,881,00 in 2010), with the exception of males living in rural areas and individuals aged 5 to 14 years and 20 to 24 years.

The proportion of individuals who have never attended school decreased marginally over time, from 28 percent in 2006 to 24 percent in 2010. The urban percentage declined from 15 percent in 2006 to 12 percent in 2010, and the rural percentage from 35 percent in 2006 to 31 percent in 2010. In both years, the female percentage was slightly higher than the male percentage in both rural and urban areas.

The most notable declines in the proportion of individuals who have never attended school occurred for those aged 10 to 19 years old.

Among those who were not attending school at the time of survey but had attended school in the past, the largest change over time occurred for the proportion which had attained grades 8-9, from 14 percent in 2006 to 17 percent in 2010; for other grades attained, changes over time in the proportion of individuals attaining these grades have been marginal.

Table 6.12 shows the percentage distribution of those individuals who were not in education at time of survey but who have been to school in the past, by highest level obtained and reasons for leaving, for years 2010 and 2006;

**Table 6.12 Percentage distribution by highest level obtained and reasons for leaving, 2010 and 2006**

Reason for leaving 2010	Highest level of education obtained						Total
	Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12 (O-Level)	Grade 12 (A-Level) /Certificate/ Diploma (undergraduate)	Degree (postgraduate) & above	
Lack of financial support	43.5	44.3	45.5	19.9	2.7	0.8	36.2
Completed studies	0.2	0.3	0.4	63.3	83.2	85.2	19.5
Not selected/failed/couldn't get a place	1.0	18.2	23.3	2.2	0.2	0.1	12.1
Pregnancy	2.0	5.8	11.5	4.1	0.2	0.1	5.7
No need to continue school	11.7	6.6	3.1	1.2	0.5	1.3	5.0
School not important	13.2	6.0	2.4	0.6	0.0	0.0	4.8
Got married	3.8	5.3	5.0	2.2	0.4	0.0	4.0
Too far	7.2	3.1	0.8	0.3	0.1	0.0	2.4
Started working/business	0.5	0.8	1.2	3.1	11.6	12.2	2.2
Too expensive	2.8	2.6	2.3	1.2	0.4	0.0	2.1
Needed to help out at home	5.7	2.2	0.9	0.4	0.2	0.0	1.9
Illness/injury/disability	4.1	2.5	1.3	0.5	0.2	0.0	1.9
Other	2.0	0.9	0.8	0.3	0.3	0.4	0.9
Made girl pregnant	0.1	0.5	1.2	0.5	0.1	0.0	0.6
Unsafe to travel to school	2.1	0.7	0.1	0.1	0.0	0.0	0.6
Expelled	0.3	0.3	0.4	0.3	0.0	0.0	0.3
Total	100	100	100	100	100	100	100

Reason for leaving 2006	Highest level of education obtained						Total
	Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12 (O-Level)	Grade 12 (A-Level) /Certificate/ Diploma (undergraduate)	Degree (postgraduate) & above	
Lack of financial support	42.7	42.5	42.9	15.3	1.6	0.8	34.7
Completed studies	0.4	0.5	0.5	67.9	87.6	83.6	19.1
Not selected/failed/couldn't get a place	0.9	20.6	24.3	2.4	0.1	1.3	13.1
Pregnancy	2.1	6.4	10.7	4.3	0.4	0.0	5.8
No need to continue School	11.6	6.4	3.5	1.1	0.1	0.0	5.3
School not important	13.0	5.4	2.4	0.6	0.0	0.0	4.8
Got married	4.4	6.0	5.5	2.0	0.5	1.8	4.5
School too far	8.5	2.8	0.9	0.1	0.1	0.0	2.7
Started working/business	1.2	1.1	2.4	3.3	8.8	8.0	2.3
Needed to help out at home	5.2	2.4	0.8	0.4	0.3	0.0	2.0
Illness/injury/disability	4.2	2.0	1.3	0.6	0.2	0.0	1.9
Too expensive	1.6	1.3	1.4	0.7	0.3	0.0	1.2
Other	1.9	1.0	1.3	0.2	0.1	0.9	1.0
Made girl pregnant	0.4	0.7	1.3	0.5	0.0	0.0	0.7
Unsafe to travel to school	1.5	0.5	0.2	0.1	0.0	0.0	0.5
Expelled	0.4	0.5	0.6	0.5	0.0	3.5	0.5
Total	100	100	100	100	100	100	100

There was little change over the period 2006 to 2010 in the reasons given for leaving school.

In 2010, the first major reason for leaving school among persons who have attended school in the past was 'lack of financial support' estimated at 36 percent; in 2006 this was estimated at 35 percent and was also the first major reason for leaving. In both years this was also the most predominant reason among individuals whose highest grade attained was between 1 and 9.

The second major reason for leaving school was 'completed studies', estimated at 20 percent in 2010 and 19 percent in 2006. In both years this was the most predominant reason among individuals who had attained at least grade 10.

Again the third major reason for leaving school was the same in both years; 'not having been selected or failed exam' and was highest among individuals whose highest grade attained was between 8 and 9. In 2010 the proportion stating this reason was estimated at 12 percent, and 13 percent in 2006.

Table 6.13 shows the percentage distribution of those individuals who were not in education at time of survey and who had never attended school, by age group and reasons for never having attended, for years 2010 and 2006;

**Table 6.13 Percentage distribution by age group and reason for never having attended school, 2010 and 2006**

Reason for never having attended school 2010	Age Group									Total
	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-29 yrs	30-39 yrs	40-49 yrs	50-59 yrs	60+ yrs	
Under-age	72.4	14.3	2.6	1.6	0.8	1.1	1.0	0.5	1.0	40.9
Was never enrolled	19.7	50.3	36.8	41.1	38.6	35.6	44.2	47.5	46.4	30.1
No financial support	3.6	19.5	32.6	30.1	32.9	29.9	28.8	19.7	18.7	13.6
School not important	0.2	3.4	12.0	15.5	13.6	13.1	12.9	16.1	20.8	6.4
School too far	1.0	0.3	4.9	3.6	3.6	6.8	5.6	10.2	6.6	3.0
Couldn't get a place	1.7	2.4	1.3	1.1	1.6	0.7	0.1	0.2	1.9	1.5
Illness/injury/disability	0.2	3.2	2.9	2.8	1.6	5.0	4.0	1.0	0.7	1.3
Expensive	0.5	2.1	2.7	2.4	4.6	3.7	0.7	0.9	0.5	1.2
Other	0.2	2.8	2.5	1.6	0.9	3.2	1.4	2.8	1.6	1.1
Unsafe to travel to school	0.6	1.7	1.8	0.4	1.9	0.8	1.3	1.0	2.0	0.9
Total	100	100	100	100	100	100	100	100	100	100

Reason for never having attended school 2006	Age Group									Total
	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-29 yrs	30-39 yrs	40-49 yrs	50-59 yrs	60+ yrs	
Under-age	71.2	8.3	5.6	1.9	2.2	1.0	0.5	0.9	0.2	39.8
Was never enrolled	21.7	52.3	40.2	42.5	40.9	38.4	47.0	46.3	49.0	32.3
No financial support	2.6	18.0	31.4	28.8	31.9	34.1	26.5	22.0	13.7	12.8
School not important	0.3	5.6	11.7	14.2	12.3	10.7	11.5	14.2	18.3	5.8
School too far	1.2	4.0	4.7	5.3	5.7	6.7	8.5	9.3	11.1	3.9
Couldn't get a place	1.6	3.6	1.7	0.6	0.2	1.3	0.4	0.3	1.5	1.5
Illness/injury/disability	0.5	3.1	2.1	2.6	2.5	3.4	0.9	1.8	1.0	1.3
Unsafe to travel to school	0.5	1.6	1.0	0.7	0.9	0.6	0.9	3.1	1.9	0.9
Other	0.1	2.0	0.9	1.6	1.4	1.5	2.5	1.1	2.2	0.9
Expensive	0.2	1.5	0.8	1.7	2.2	2.2	1.4	1.0	1.1	0.8
Total	100	100	100	100	100	100	100	100	100	100

There was little change over the period 2006 to 2010, in the reasons given for never having attended school.

In 2010 and 2006, the most significant reasons for never having attended school were 'under-age' and 'was never enrolled'. Not surprisingly, being under-age was the most prominent reason among 5-9 years olds. The third major reason overall for never having attended school in both years was 'no financial support', estimated at 14 percent in 2010 and 13 percent in 2006.

The reason 'school not important' seems to be more prominent for older individuals; for those aged 60+ years, this was the second most stated reason for never having attended school in both years.



# HEALTH

### 7.1 Introduction

The 2010 LCMS collected information on the health status of individuals in Zambia. Health is a very important component of living conditions. Information on health consultations and health facilities visited was obtained from all persons in the survey who reported illness. The reference period was the two week period prior to the survey. The following indicators are presented in this chapter:

- The prevalence of illness
- The most common illness
- Health consultation status
- Type of health care provider / personnel consulted
- Cost on consultation, medication, etc
- Method of payment

### 7.2 Prevalence of illness or injury

Respondents were asked whether the household members were being sick or injured during a period preceding two weeks of the survey. Table 7.1 shows the proportion of persons suffering from illness or injury during the reporting period.

The proportion of individuals in the population reporting either illness or injury (or both) is 15 percent. People living in rural areas are more likely to report illness or injury than those in urban areas, 16 percent as compared to 12 percent. Rates are highest in the Eastern province, followed by Luapula. Relatively low prevalence rates can be found in Lusaka. Small scale farmers are the most likely to report an illness or injury in the two-week period preceding the survey.

Compared to 2006, prevalence rates have increased significantly. In the two weeks preceding the previous round of the LCMS, only 9 percent of respondents reported being ill or injured. However, historical comparison with earlier versions of the LCMS show that illness/injury prevalence rates fluctuate heavily across different points in time. Common characteristics that can be observed in historical comparison are that the rural population have higher illness/injury rates than the urban; and that relatively low rates can be found in Lusaka.

**Table 7.1 Proportion of persons reporting illness/injury in the two-week period preceding survey, by rural/urban, stratum, and province for 2010 and 2006**

2010		Reporting illness or injury				Total number ('000s)
		Not ill or injured	Ill/Injured	Missing data	Total	
Rural/Urban	Rural	83.0	16.1	0.8	100	8,535
	Urban	87.8	11.6	0.6	100	4,529
Stratum	Small Scale	82.9	16.3	0.8	100	7,702
	Medium Scale	85.9	13.5	0.6	100	306
	Large Scale	86.7	12.5	0.9	100	11
	Non Agric	83.8	15.4	0.8	100	515
	Low Cost	87.2	12.2	0.5	100	3,353
	Medium Cost	88.5	10.4	1.1	100	771
	High Cost	91.1	8.6	0.4	100	405
Province	Central	88.9	11.0	0.2	100	1,387
	Copperbelt	84.7	14.9	0.5	100	1,956
	Eastern	74.9	24.3	0.9	100	1,792
	Luapula	78.9	19.0	2.1	100	1,064
	Lusaka	90.1	9.2	0.7	100	1,768
	Northern	87.0	12.2	0.8	100	1,662
	North Western	88.2	11.3	0.5	100	758
	Southern	84.6	14.5	0.9	100	1,687
	Western	86.7	12.7	0.6	100	989
Poverty status	Extremely Poor	84.3	14.8	0.9	100	5,517
	Moderately Poor	83.6	15.7	0.7	100	2,374
	Non Poor	85.6	13.8	0.6	100	5,173
All Zambia	All Zambia	84.7	14.6	0.8	100	13,064

2006		Reporting illness or injury		Total number ('000s)
		Not ill or injured	Ill/Injured	
Rural/Urban	Rural	89.7	10.3	7,612
	Urban	92.9	7.1	4,099
Stratum	Small Scale Farmer	89.6	10.4	6,981
	Medium Scale Farmer	93	7	268
	Large Scale Farmer	88.7	11.3	9
	Non Agricultural Households	89.1	10.9	354
	Low Cost Areas	92.3	7.7	3,295
	Medium Cost Areas	95.3	4.7	4,883
	High Cost Areas	95.7	4.3	315
	Small Scale Farmer	89.6	10.4	6,981
Province	Central	92.9	7.1	1,222
	Copperbelt	92.8	7.2	1,783
	Eastern	88.8	11.2	1,604
	Luapula	84.8	15.2	929
	Lusaka	92.5	7.5	1,641
	Northern	89.7	10.3	1,483
	North-Western	91.2	8.8	709
	Southern	91	9	1,453
	Western	92.1	7.9	887
All Zambia	All Zambia	90.8	9.2	11,711

Figure 7.1 is a graphical presentation of illness/injury rates across the different provinces. The proportion of individuals ill or injured in the two-week period preceding the interview ranges from 7 to 15 percent. Lusaka has the lowest proportion of individuals reporting an illness or injury.

**Figure 7.1: Proportion of Persons Reporting Illness /Injury in the Two-Week Period Preceding the Survey by Province, Zambia, 2010**

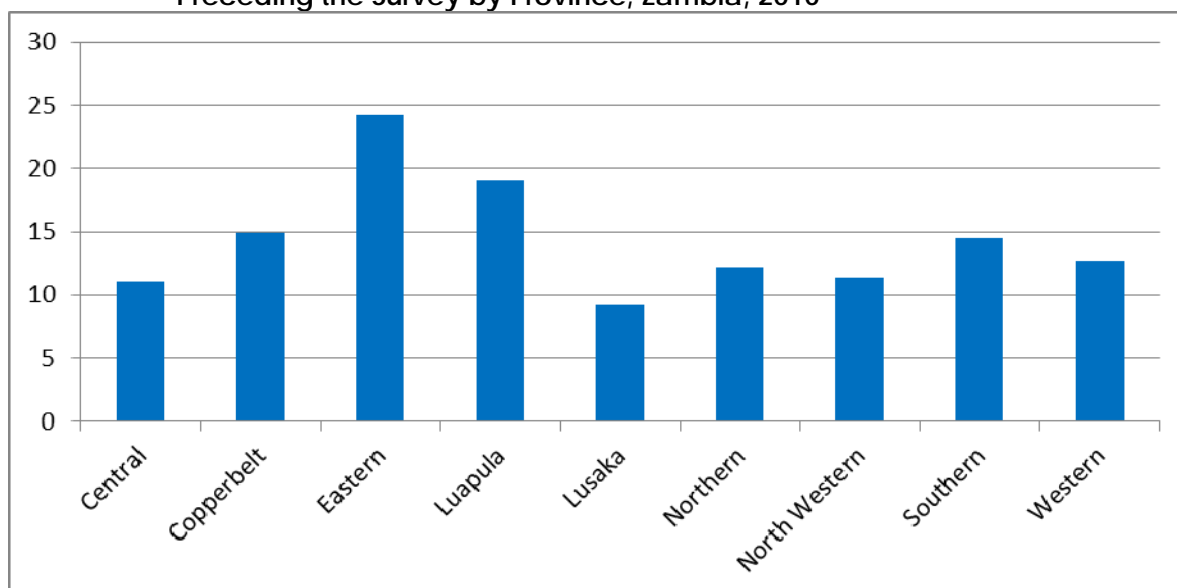


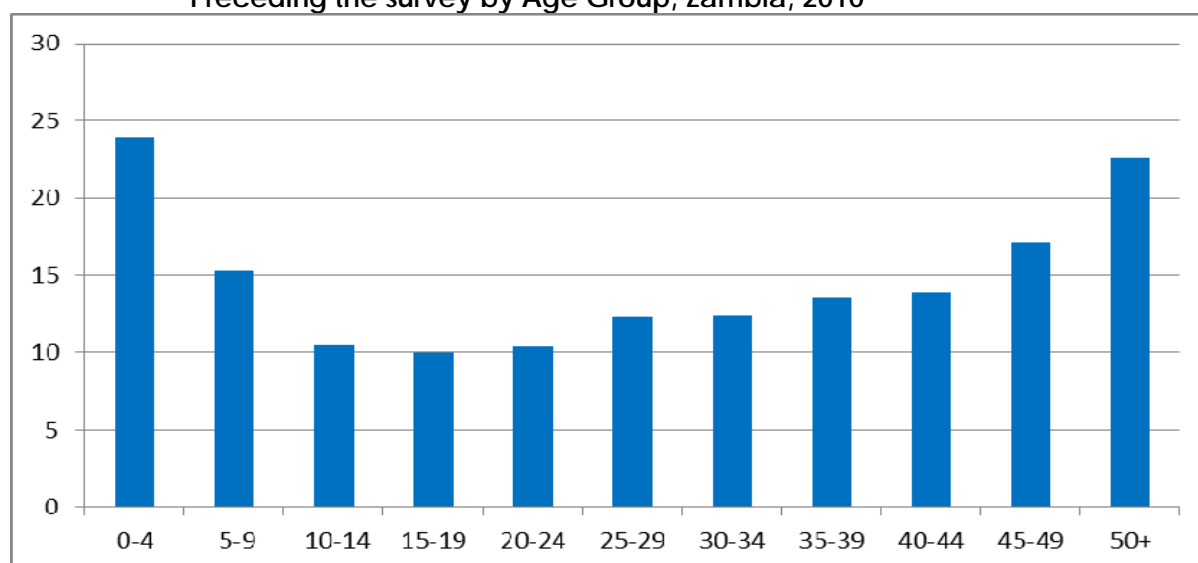
Table 7.2 presents the prevalence of illness or injury in the Zambian population, by sex and age group of the individual. Women are slightly more likely to have suffered from an illness or injury in the two weeks preceding the interview. Higher incidences of illness or injury were observed among high-risk groups, i.e. the elderly and children under the age of 5. Analysis of illness/injury by age displays a clear pattern of high incidence rates after birth, decreasing with age up to an age of 10-24 years, and then increasing again with age. This can be seen in the graphical presentation of figure 7.2.

**Table 7.2 Percentage Distribution of Persons Reporting Illness/Injury in the two week period preceding the survey, by sex and age, Zambia, 2010 and 2006**

2010		Reporting illness or injury				Total number ('000s)
		Not ill or injured	Ill/Injured	Missing data	Total	
Sex	Male	85.7	13.6	0.8	100	6,368
	Female	83.7	15.5	0.8	100	6,696
Age Group	0-4	75.0	23.9	1.1	100	1,621
	5-9	83.9	15.3	0.7	100	2,196
	10-14	88.7	10.5	0.8	100	1,887
	15-19	89.2	10.0	0.9	100	1,660
	20-24	88.7	10.4	0.9	100	1,258
	25-29	87.3	12.3	0.4	100	1,071
	30-34	86.9	12.4	0.7	100	832
	35-39	85.8	13.6	0.6	100	684
	40-44	85.5	13.9	0.6	100	482
	45-49	82.4	17.1	0.5	100	385
	50+	76.9	22.6	0.5	100	988
All Zambia	All Zambia	84.7	14.6	0.8	100	13,064

2006		Reporting illness or injury		Total Population ('000s)
		Not ill or injured	Ill/Injured	
Sex	Male	89.7	8.5	5,750
	Female	92.9	9.9	5,938
Age Group	0-4	89.6	17	1,510
	5-9	93	7	1,852
	10-14	88.7	5	1,719
	15-19	89.1	5	1,414
	20-24	92.3	7	1,198
	25-29	95.3	8	980
	30-34	95.7	11	780
	35-39	89.6	10	600
	40-44	92.9	13	434
	45-49	92.8	12	342
	50+	88.8	17	858
	All Zambia	90.8	9	11,687

**Figure 7.2: Percent of Persons Reporting Illness/Injury in the Two Weeks Period Preceding the survey by Age Group, Zambia, 2010**



### 7.3 Main illness

Persons who reported an illness were further asked to name the main illness that they had suffered from in the two weeks prior to the survey.<sup>1</sup> Enumerators were advised to probe for the main illness underlying specific symptoms. For example, if the person had a cough/cold and also a fever, they were advised to record cough/cold, as fever can be merely a symptom of another illness. However, it is clear that differentiating between different illnesses and/or symptoms is difficult.

In order to interpret the following tables, it is crucial to note that respondents that were ill were only asked to report on their main illness. As a consequence, individuals affected by several illnesses in the two weeks preceding the interview selected the illness that affected them most.

Table 7.3 presents the proportion of ill people affected by specific illnesses/symptoms, by rural/urban. The most frequently reported (main) illness during the two weeks preceding the survey was malaria/fever, with approximately half of those respondents reporting any illness/injury reporting this specific disease. Prevalence in rural areas is slightly higher than

<sup>1</sup> Answer choices in the 2006 and 2010 questionnaires were similar, but two new answer choices were included in the 2010 questionnaire: "cancer of any kind" and "meningitis".

in urban areas. The next most frequent illnesses reported are cough/cold, followed by headache and diarrhoea.

**Table 7.3 Proportion of persons reporting illness, by rural/urban and type of main illness reported for 2010 and 2006**

2010	Rural	Urban	All Zambia	Total number of persons reporting illness ('000s)
Fever/Malaria	47.0	50.6	47.9	803
Cough/Cold/Chest infection	18.0	17.3	17.9	299
Headache	6.9	5.7	6.6	110
Diarrhoea without blood	3.9	2.8	3.6	60
Abdominal Pains	3.7	2.7	3.4	58
Backache	2.4	1.5	2.2	37
Toothache/Mouth infection	2.0	1.8	1.9	32
Eye infection	1.8	0.6	1.5	25
Skin rash/Skin infection	1.2	1.4	1.3	21
Constipation/Stomach upset	1.3	0.9	1.2	20
Asthma	0.9	1.1	0.9	16
Diarrhoea and Vomiting	0.8	1.2	0.9	15
Pneumonia/chest pains	0.9	0.6	0.8	14
Tuberculosis (TB)	0.7	0.9	0.7	12
Vomiting	0.8	0.6	0.7	12
Hypertension	0.6	1.2	0.7	12
Diarrhoea with blood	0.5	0.3	0.5	8
Lack of blood/Anemia	0.6	0.3	0.5	9
Boils	0.5	0.6	0.5	8
Bronchitis	0.3	0.3	0.3	4
Paralysis of any kind	0.3	0.2	0.3	4
Stroke	0.2	0.4	0.3	5
Ear infection	0.3	0.3	0.3	5
Diabetes/sugar Disease	0.1	0.6	0.2	3
Jaundice/Yellowness	0.2	0.0	0.2	3
Liver infection/Side pains	0.1	0.1	0.1	2
Piles/Haemorrhoids	0.1	0.1	0.1	1
Shingles/Herpes Zoster	0.1	0.1	0.1	2
Measles	0.1	0.1	0.1	2
Cancer of any kind	0.1	0.2	0.1	2
Meningitis	0.1	0.0	0.1	2
Other	3.2	4.4	3.6	60
Missing data	0.3	1.1	0.5	9
Total	100	100	100	1,675

2006	Rural	Urban	All Zambia
Fever/malaria	40	46	42
Cough/cold/chest infection	15	15	15
Headache	7	5	6
Diarrhea without blood	4	4	4
Abdominal pains	4	3	4
Skin rash/skin infection	3	2	3
Toothache/mouth infection	3	2	3
Backache	3	1	3
Tuberculosis (TB)	1	2	2
Diarrhea and vomiting	2	2	2
Eye infection	1	2	2
Asthma	1	1	1
Pneumonia/chest pain	2	1	1
Diarrhea with blood	1	1	1
Constipation/stomach upset	1	1	1
Lack of blood/anemia	1	0	1
Boils	1	0	1
Paralysis of any kind	1	1	1
Hypertension	1	1	1
Ear infection	1	1	1
Bronchitis	0	0	0
Vomiting	1	0	0
Liver infection/side pain	0	0	0
Piles/hemorrhoids	0	0	0
Shingles/herpes zoster	0	0	0
Stroke	0	0	0
Diabetes/sugar disease	0	1	0
Measles	0	0	0
Jaundice/yellowness	0	0	0
Other illnesses	5	6	5
Total	100	100	100

Table 7.4 presents main illness by poverty status of the affected individual. The types of illnesses reported differ only slightly for groups with different poverty status. For all groups, Malaria and cough/cold/chest infection are by far the most commonly reported illness.

**Table 7.4 Proportion of persons reporting illness, by poverty status and type of main illness reported for 2010**

2010	Extremely Poor	Moderately Poor	Non Poor	All Zambia	Total number of persons reporting illness ('000s)
Fever/Malaria	48.1	47.0	48.2	47.9	803
Cough/Cold/Chest infection	16.9	18.9	18.5	17.9	299
Headache	7.2	6.1	6.1	6.6	110
Diarrhoea without blood	4.0	3.9	2.9	3.6	60
Abdominal Pains	3.8	2.9	3.3	3.4	58
Backache	2.2	2.5	2.1	2.2	37
Toothache/Mouth infection	1.7	1.5	2.4	1.9	32
Eye infection	1.9	1.6	1.1	1.5	25
Skin rash/Skin infection	1.1	1.2	1.5	1.3	21
Constipation/Stomach upset	1.1	1.5	1.2	1.2	20
Asthma	1.0	0.5	1.0	0.9	16
Diarrhoea and Vomiting	1.0	1.1	0.8	0.9	15
Pneumonia/chest pains	0.7	0.9	1.0	0.8	14
Tuberculosis (TB)	0.6	0.9	0.9	0.7	12
Vomiting	1.0	0.4	0.6	0.7	12
Hypertension	0.6	0.5	1.1	0.7	12
Diarrhoea with blood	0.3	0.9	0.4	0.5	8
Lack of blood/Anemia	0.7	0.6	0.3	0.5	9
Boils	0.6	0.4	0.4	0.5	8
Bronchitis	0.2	0.3	0.3	0.3	4
Paralysis of any kind	0.3	0.3	0.2	0.3	4
Stroke	0.3	0.2	0.3	0.3	5
Ear infection	0.2	0.5	0.3	0.3	5
Diabetes/sugar Disease	0.0	0.2	0.4	0.2	3
Jaundice/Yellowness	0.3	0.0	0.1	0.2	3
Liver infection/Side pains	0.2	0.1	0.1	0.1	2
Piles/Haemorrhoids	0.1	0.0	0.1	0.1	1
Shingles/Herpes Zoster	0.0	0.1	0.3	0.1	2
Measles	0.2	0.0	0.1	0.1	2
Cancer of any kind	0.0	0.2	0.1	0.1	2
Meningitis	0.2	0.0	0.0	0.1	2
Other	3.0	4.6	3.6	3.6	60
Missing data	0.7	0.2	0.6	0.5	9
Total	100	100	100	100	1,675

Table 7.5 presents main illness by age group of the affected individual. Different illnesses are experienced to a varying extent by members of the different age groups. Children are affected most by fevers and diarrhoea, whereas adults experience headaches and the elderly also suffer from backaches and toothaches. However, given the overwhelming prevalence of fever/malaria among people with illnesses, this specific illness can be found across all age groups.

**Table 7.5 Proportion of persons reporting illness, by age group, and type of main illness reported, Zambia, 2010 and 2006**

2010	0-4	5-9	10-14	15-19	20-29	30-39	40-49	50+	All Zambia	Total number of persons reporting illness ('000s)
Fever/Malaria	51.6	57.4	53.1	52.1	46.7	43.2	41.4	29.8	47.9	803
Cough/Cold/Chest infection	22.7	19.1	20.0	16.9	11.5	18.1	15.5	14.7	17.9	299
Headache	0.6	4.2	8.2	10.2	13.4	10.4	7.5	5.5	6.6	110
Diarrhoea without blood	7.7	2.6	2.3	1.9	3.2	1.6	1.9	2.9	3.6	60
Abdominal Pains	1.3	3.7	3.9	3.7	5.5	3.7	3.7	3.6	3.4	58
Backache	0.0	0.4	0.7	1.1	1.9	2.9	4.8	8.9	2.2	37
Toothache/Mouth infection	0.3	0.7	1.3	0.9	3.1	3.8	4.9	3.1	1.9	32
Eye infection	2.3	1.4	1.0	1.4	1.2	0.9	0.7	2.2	1.5	25
Skin rash/Skin infection	2.4	1.7	0.9	0.4	1.0	0.5	0.6	0.8	1.3	21
Constipation/Stomach upset	0.6	1.0	1.1	2.0	2.0	1.9	1.4	0.4	1.2	20
Asthma	0.1	0.5	0.4	1.0	1.0	0.9	1.3	3.2	0.9	16
Diarrhoea and Vomiting	2.3	0.9	0.8	0.2	0.5	0.4	0.1	0.5	0.9	15
Pneumonia/chest pains	0.2	0.3	0.6	0.5	0.8	1.4	1.8	2.1	0.8	14
Tuberculosis (TB)	0.3	0.2	0.3	0.4	0.8	1.7	2.1	1.4	0.7	12
Vomiting	1.0	1.3	0.5	0.6	0.1	0.2	1.1	0.4	0.7	12
Hypertension	0.1	0.0	0.0	0.1	0.4	0.7	2.0	3.7	0.7	12
Diarrhoea with blood	0.9	0.4	0.2	0.4	0.5	0.3	0.0	0.5	0.5	8
Lack of blood/Anemia	1.2	0.3	0.5	0.3	0.3	0.7	0.2	0.3	0.5	9
Boils	0.4	0.6	0.2	0.1	0.8	0.5	0.7	0.5	0.5	8
Bronchitis	0.7	0.1	0.0	0.5	0.0	0.0	0.1	0.3	0.3	4
Paralysis of any kind	0.0	0.1	0.1	0.5	0.1	0.3	0.3	1.0	0.3	4
Stroke	0.0	0.0	0.0	0.0	0.2	0.0	0.3	1.9	0.3	5
Ear infection	0.2	0.3	0.1	0.4	0.1	0.1	0.3	0.6	0.3	5
Diabetes/sugar Disease	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.4	0.2	3
Jaundice/Yellowness	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.2	3
Liver infection/Side pains	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.2	0.1	2
Piles/Haemorrhoids	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	1
Shingles/Herpes Zoster	0.0	0.1	0.1	0.0	0.2	0.0	0.1	0.6	0.1	2
Measles	0.3	0.1	0.3	0.0	0.0	0.1	0.0	0.0	0.1	2
Cancer of any kind	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4	0.1	2
Meningitis	0.0	0.3	0.0	0.4	0.1	0.0	0.0	0.1	0.1	2
Other	1.6	1.7	2.3	3.4	3.9	4.6	6.2	8.0	3.6	60
Missing data	0.4	0.6	0.9	0.4	0.7	0.5	0.2	0.6	0.5	9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,675

2006	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	All Zambia
Fever/malaria	48.8	49.5	45.3	41.4	43.2	40.8	37.2	40.3	39.5	31.8	26.9	41.7
Cough/cold/chest infection	17.6	18.6	14.3	13.5	15.8	13.4	13	13.1	9.9	13.7	14.3	15.2
Headache	1.2	4.8	9	12.4	10.2	11.1	9.3	8.8	8.6	6.2	5.1	6.4
Diarrhoea without blood	9.7	2.7	2	2.1	2.8	4.3	2.2	1.7	0.5	3.3	1.7	4.1
Abdominal pains	1.8	1.7	4.7	6.2	6.8	4.6	5.7	3.5	7.1	3.2	3.7	3.9
Backache	0.2		0.2	0.8	1.7	0.7	5	3.6	4	9	10.9	2.9
Toothache/mouth infection	0.5	0.7	0.9	3.2	4.6	4.1	5.1	4.5	6.9	2.9	3.9	2.8
Skin rash/skin infection	4.5	5.2	4.2	4.2	0.3	1.2	0.9	0.5	1.1	1	1	2.7
Diarrhoea and vomiting	4.1	2.2	0.6	0.8	1.3	0.5	1.4	0.6	0.7		0.3	1.7
Tuberculosis (TB)	0.2	0.4	0.5	0.8	1.1	2.1	4	2.2	2.6	2	2.9	1.5
Eye infection	1.5	1.1	1.6	3.6	0.9	0.8	0.4	1.4	1.9	1.7	2	1.5
Pneumonia/chest pain	0.2	0.6	1.3	0.4	0.6	1.6	2.6	2.2	2.1	3.8	3.1	1.4
Asthma	0.7	0.9	2.5	1.1	0.6	1.9	0.8	1.3	0.7	1.5	2.5	1.3
Constipation/stomach upset	0.4	1.1	0.9	1.4	1.3	1.6	2.3	2	1.7	0.4	1.2	1.1
Diarrhoea with blood	2	0.7	0.6	0.5	0.5	0.1	0.8	1.6	1.5	0.6	0.2	1
Boils	0.5	0.5	0.3	1	1	2.3	1.6	1	0.8	1	0.6	0.8
Paralysis of any kind	0.5		0.6	0.4	0.1	0.1	0.7	1.6	1.2	0.5	1.9	0.7
Hypertension				0.2	0.1	0.9	0.8	0.6	0.5	2.4	3.3	0.7
Ear infection	0.6	1.4	0.5	0.6	0.8	0.2	0.5		0.3	0.9	0.6	0.6
Lack of blood/anemia	0.9	0.4	0.8		0.6		0	1.1	0.5	0.3	0.1	0.5
Vomiting	0.6	0.4	0.1	0.5	0.7	0	0.2	0.6		0.3	0.5	0.4
Diabetes/sugar disease			0.1				0.1	0.4	0.8	3.8	1.3	0.4
Bronchitis	0.3	0.9	1.3	0.1		0.1			0.8	0.1	0.1	0.3
Liver infection/side pain	0	0.1	0.3	0.2	0.2	0.2	0.1	0.8	0.2	1.8	1	0.3
Stroke			0.1	0.5			0.1	0.2	0.8	1	1.1	0.3
Shingles/herpes zoster	0.1	0.2	0.1	0.3	0.2	0.3	0.4	0.4	0.8	0	0.2	0.2
Measles	0.4	0.6	0.9	0.1							0	0.2
Piles/hemorrhoids	0	0.1	0.3					0.6	0.3		0	0.1
Jaundice/yellowness	0.1	0.4	0.5		0.3		0.3					0.1
Other illnesses	5.1	5.6	3.9	4.3	7.1	4.4	5.4	4.2	6.8	9.5	5.1	2.5
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table 7.6 presents main illness by province. The table shows that fever/malaria was by far the most common illness reported across all the provinces. The highest proportion of persons reporting fever/malaria during the two weeks prior to the survey was on the Copperbelt and Eastern provinces, with above 60 percent. The second most commonly reported symptom/illness was cold/cough/chest infection.

**Table 7.6 Proportion of persons reporting illness, by province, and type of main illness reported , Zambia, 2010 and 2006**

2010	Central	Copper-belt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	All Zambia	Total number of persons reporting illness ('000s)
Fever/Malaria	33.7	61.1	60.2	44.9	39.0	46.1	42.6	32.2	38.6	47.9	803
Cough/Cold/Chest infection	32.3	14.6	11.9	15.4	21.3	20.2	26.2	23.9	11.2	17.9	299
Headache	4.3	4.5	7.0	7.0	6.6	4.3	2.4	11.4	7.5	6.6	110
Diarrhoea without blood	5.2	1.9	2.5	5.4	3.1	4.4	2.3	3.6	7.1	3.6	60
Abdominal Pains	3.1	1.8	3.5	5.8	3.9	5.0	2.7	2.8	2.6	3.4	58
Backache	1.7	1.1	1.7	3.1	2.6	1.7	2.8	3.5	3.3	2.2	37
Toothache/Mouth infection	1.9	2.0	0.9	1.2	2.5	1.3	2.8	2.9	4.6	1.9	32
Eye infection	2.1	0.4	1.3	2.3	0.7	1.0	1.5	2.3	3.4	1.5	25
Skin rash/Skin infection	0.4	1.0	1.1	1.1	1.9	1.5	0.4	1.9	1.8	1.3	21
Constipation/Stomach upset	1.2	0.6	1.0	1.6	2.1	0.8	0.3	1.9	1.4	1.2	20
Asthma	1.4	0.4	0.3	0.6	1.8	1.2	0.4	2.0	1.1	0.9	16
Diarrhoea and Vomiting	0.9	0.8	0.7	1.0	1.8	0.7	0.8	1.0	1.2	0.9	15
Pneumonia/chest pains	0.3	0.2	0.7	1.1	0.9	1.3	1.2	0.9	1.4	0.8	14
Tuberculosis (TB)	0.4	0.9	0.2	0.5	1.5	0.7	0.8	0.7	2.3	0.7	12
Vomiting	1.0	0.5	1.1	0.5	0.8	0.8	0.1	0.6	0.2	0.7	12
Hypertension	1.0	0.8	0.4	0.8	1.1	0.7	1.0	0.8	1.0	0.7	12
Diarrhoea with blood	0.1	0.2	0.3	0.5	0.2	0.6	0.0	1.0	1.5	0.5	8
Lack of blood/Anemia	0.4	0.5	0.6	1.3	0.3	0.6	0.7	0.2	0.0	0.5	9
Boils	0.8	0.3	0.2	0.3	0.7	0.8	0.6	0.5	1.3	0.5	8
Bronchitis	0.3	0.0	0.2	0.0	0.3	0.6	0.9	0.1	0.5	0.3	4
Paralysis of any kind	0.4	0.2	0.3	0.1	0.5	0.0	0.2	0.3	0.4	0.3	4
Stroke	1.1	0.4	0.2	0.0	0.1	0.2	0.0	0.0	0.7	0.3	5
Ear infection	0.7	0.1	0.1	0.3	0.4	0.5	0.8	0.2	0.0	0.3	5
Diabetes/sugar Disease	0.1	0.1	0.1	0.1	1.0	0.1	0.5	0.2	0.1	0.2	3
Jaundice/Yellowness	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.2	3
Liver infection/Side pains	0.0	0.1	0.1	0.2	0.1	0.2	0.0	0.1	0.0	0.1	2



2010	Central	Copper-belt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	All Zambia	Total number of persons reporting illness ('000s)
Piles/Haemorrhoids	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.3	0.1	1
Shingles/Herpes Zoster	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.1	2
Measles	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	2
Cancer of any kind	0.0	0.4	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.1	2
Meningitis	0.4	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1	2
Other	3.1	3.9	2.7	4.0	4.3	2.7	6.9	3.0	5.3	3.6	60
Missing data	0.4	0.9	0.1	0.1	0.2	2.0	0.7	0.5	0.9	0.5	9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,675

2006	Central	Copper-belt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western	All Zambia
Fever/malaria	37.4	53.3	39.7	47.4	41.7	45.6	43.4	28.6	34.9	41.7
Cough/cold/chest infection	16.9	14.9	15.8	17	15.1	14.5	7.9	16.5	14.5	15.2
Headache	6.1	3.6	6.6	7.8	5.8	5.4	5.5	10	6.6	6.4
Diarrhea without blood	3.8	1.9	3.6	4.7	3.7	4.5	4	5.9	4.3	4.1
Abdominal pains	4.3	2	3.5	3.8	3	6	5.8	3.8	2.6	3.9
Backache	1.6	1.2	4.7	2.1	1.1	3.3	4.7	4.2	2.5	2.9
Toothache/mouth infection	4.9	1.6	3.7	2	2.8	2.1	1.5	2.8	3.9	2.8
Skin rash/skin infection	3.6	1.2	1.3	2.3	3	3.1	3.1	4.9	3.1	2.7
Diarrhea and vomiting	1	2.1	1.3	0.8	1.8	1.1	1.2	2	5.7	1.7
Tuberculosis (TB)	2.7	1.8	0.8	0.5	1.7	0.5	2.9	1.2	3.7	1.5
Eye infection	1.3	1.7	1.5	1.8	1.4	1.5	1.1	1.4	1.3	1.5
Pneumonia/chest pain	0.3	1	2.4	1.6	1.4	0.9	1.7	1.6	0.8	1.4
Asthma	0.6	0.9	0.3	0.8	1.2	2.1	2	2.6	1	1.3
Constipation/stomach upset	1.3	0.7	1.5	0.6	0.4	1.2	0.8	2.1	1.7	1.1
Diarrhea with blood	1.1	0.2	1.1	0.9	1.8	0.7	0.3	1.3	1.1	1
Boils	1.2	0.4	1.1	0.6	0.8	0.7	1.9	0.7	0.8	0.8
Paralysis of any kind	0.4	0.7	0.5	0.3	0.7	0.8	0.6	0.9	1.3	0.7
Hypertension	1	1.1	0.3	0	1.5	0.4	0.5	1.2	1.2	0.7
Ear infection	0.1	0.2	0.7	0.40%	0.9	0.9	0.1	1.2	0.6	0.6
Lack of blood/anemia	0.2	0.3	0.3	0.8	0.5	1.1	0.2	0.3	0.1	0.5
Vomiting	0.4	0.4	0.1	0.7	0.3	0.6	0.7	0.1	0.9	0.4
Diabetes/sugar disease	1.3	1	0.2	0.1	0.3	0.1	0	0.5	0	0.4
Bronchitis	0.3	0.4	0.5	0.3	0.3	0.5	0	0.4		0.3
Liver infection/side pain	0.5	0.1	0.7	0.6	0	0.4	0.3	0.2		0.3
Stroke		0.7	0.3	0.3	0.1	0.1	0.7	0.4		0.3
Shingles/herpes zoster	0.2	0.2	0.5		0.4	0.1		0.2	0.6	0.2
Measles	0.2	0.1		0	1	0.2	1.1		0.2	0.2
Piles/hemorrhoids			0.1			0.1	0.3	0.3		0.1
Jaundice/yellowness		0	0.2	0		0	0.8	0.2	0.5	0.1
Other illnesses	7.1	6.4	6.8	1.7	7.3	1.6	6.8	4.6	6	2.5
Total	100	100	100	100	100	100	100	100	100	100

## 7.4 Health Consultations

People reporting an illness were asked whether they consulted a health institution or used self-administered medicine. A health consultation is one where a person has approached or sought medical advice/attention from any health institution/personnel, or healer, whether at a public or private health institution or merely by calling a medical officer on a private engagement. If a person took medicine that was bought without consultation or was available in the home, then that was regarded self-administered medicine. If this medicine did not work and consultation was done later, then the respondent was considered as having consulted.

Table 7.7 presents medical consultation status by sex and age group for people that reported illness preceding the survey. A majority of 69 percent of respondents consulted some sort of health institution or personnel. 21 percent used self-administered medicine without consultation and 9 percent did neither.

Men and women display similar behaviour when it comes to consulting a health institution, which can be seen in figure 7.3; women are only slightly more likely to consult than men, whereas men are more likely to use self-administered medicine only. More women than men neither consult nor use self-administered medicine.

The likelihood of consulting some sort of health institution is particularly high for ill children, and decreases up to the age of 10, from where it remains more or less constant over the remaining age groups.

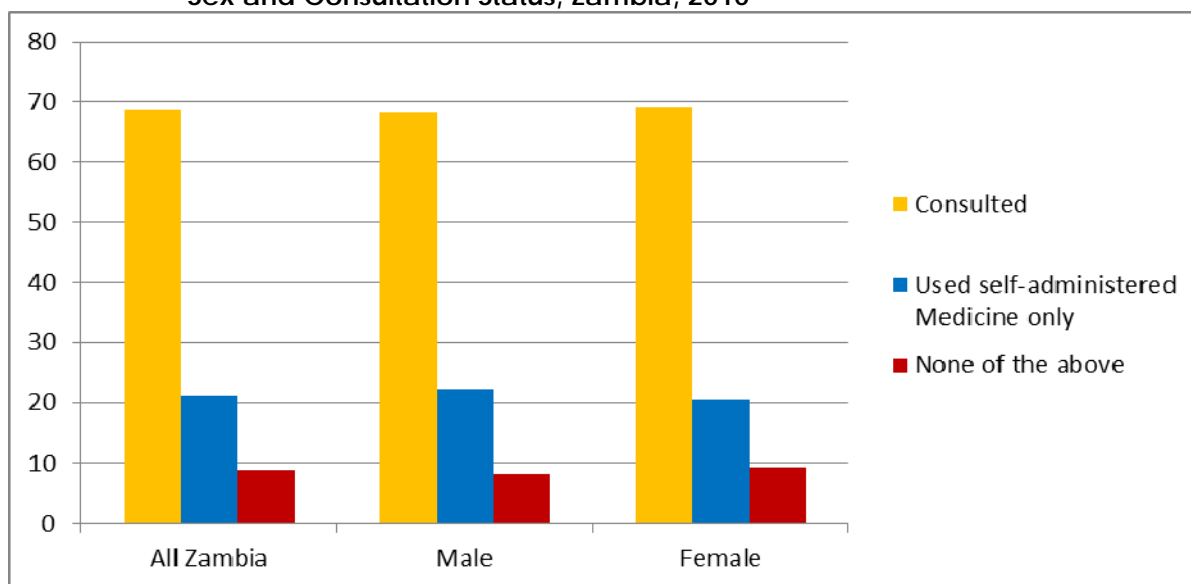
Compared to 2006, consulting a health institution has become significantly more popular, from 57 to 69 percent, and less people are using self-administered medicine only or not doing any of the above.

**Table 7.7 Proportion of persons reporting illness in the last two weeks prior to the survey, by sex, age group and consultation status for 2010 and 2006**

2010		Medical consultation status				Total	Total number of ill persons ('000s)
		Consulted	Used self-administered medicine only	None of the above	Missing data		
Sex	Male	68.3	22.2	8.3	1.2	100	757
	Female	69.1	20.4	9.4	1.1	100	919
Age Group	0-4	79.5	13.8	5.6	1.1	100	360
	5-9	71.7	19.8	7.4	1.1	100	301
	10-14	65.8	24.1	9.2	1.0	100	162
	15-19	64.2	26.4	8.1	1.3	100	134
	20-24	63.6	22.9	11.6	1.9	100	112
	25-29	64.2	25.3	9.0	1.5	100	114
	30-34	63.2	25.9	10.1	0.9	100	89
	35-39	68.6	21.6	9.4	0.4	100	80
	40-44	62.9	27.7	7.7	1.7	100	58
	45-49	64.5	23.2	11.9	0.4	100	58
	50+	61.6	22.9	14.5	1.0	100	207
Poverty status	Extremely Poor	67.8	20	10.7	1.5	100	725
	Moderately Poor	70.2	19	10.4	0.4	100	336
	Non Poor	69.1	23.9	6	1	100	614
All Zambia	All Zambia	68.7	21.2	8.9	1.1	100	1,675

2006		Medical consultation status			Total	Total number of ill persons ('000s)
		Consulted	Used self-administered Medicine only	None of the above		
Sex	Male	56	28	15	100	487
	Female	58	27	15	100	589
Age Group	0-4	68	19	13	100	250
	5-9	52	32	16	100	135
	10-14	54	31	15	100	78
	15-19	50	34	16	100	67
	20-24	51	32	17	100	87
	25-29	52	28	20	100	76
	30-34	57	30	13	100	82
	35-39	58	32	11	100	59
	40-44	58	31	12	100	56
	45-49	56	33	12	100	40
	50+	57	26	18	100	146
All Zambia	All Zambia	57	28	15	100	1,076

**Figure 7.3: Persons reporting illness in the two-week Period Preceding the Survey, by Sex and Consultation Status, Zambia, 2010**



**Figure 7.4: Persons reporting illness in the two-week Period preceding the Survey, by Age and Consultation Status, Zambia, 2010**

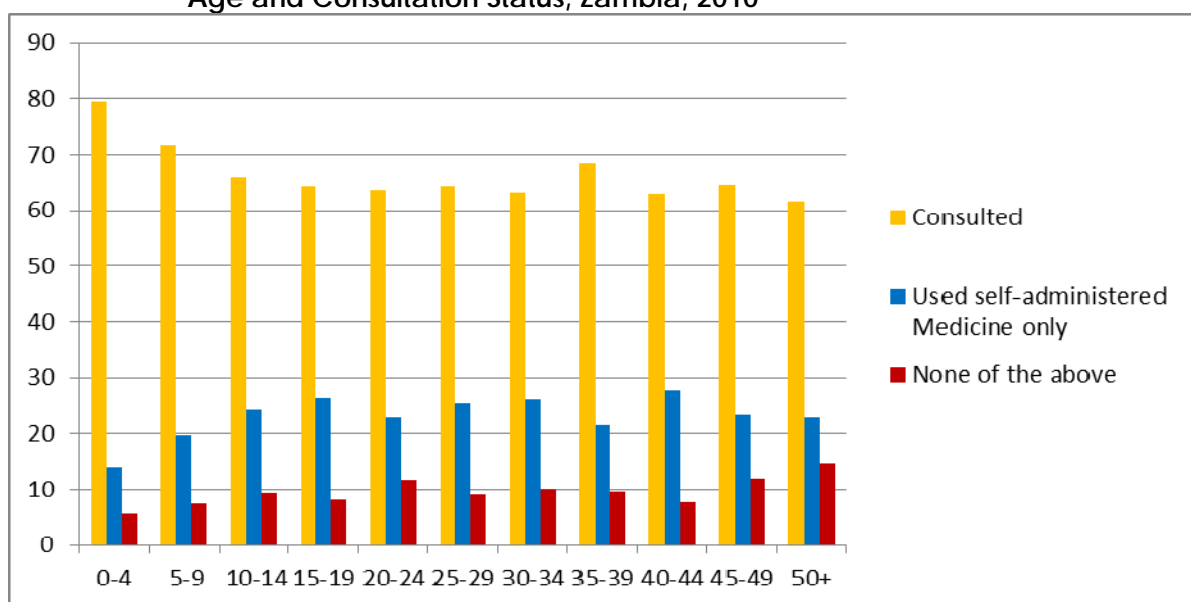


Table 7.8 shows medical consultation status by rural/urban and province. Noteworthy differences can be found. People living in rural areas are more likely to consult over an illness, 70 as compared to 65 percent. However, it is the people living in urban areas that are less likely to do nothing about an illness, a fact that can be explained by the high proportion of people using self-administered medicines only. This is at 26 percent, as compared to 19 percent in rural areas. This might be explained by a better availability of medicines in urban areas, possibly combined with higher cost of treatment in urban areas. Consulting a health institution or personnel over an illness is lowest in Lusaka compared with other provinces and Lusaka has the highest proportion of persons using self-administered medicine. Consultation rates are highest in the Western, Eastern and Copperbelt provinces.

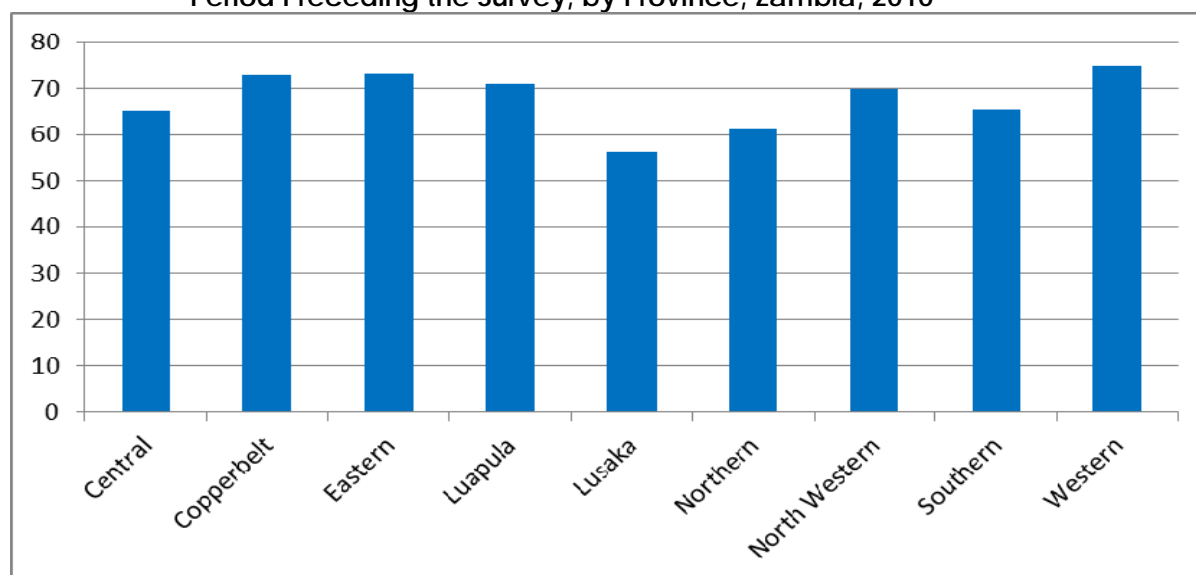
Compared to 2006, consulting has become more popular in all provinces except Lusaka and North-Western. In the latter, less people consulted over an illness compared to 4 years earlier. The rural/urban pattern changed over the four years between surveys. In contrast to 2010, it was the urban population that was more likely to consult than the rural population in 2006.

**Table 7.8 Proportion of persons reporting Illness in the last two weeks prior to the survey, by province, rural/urban and consultation status for 2010 and 2006**

2010		Medical consultation status				Total	Total number of ill persons ('000s)
		Consulted	Used self-administered medicine only	None of the above	Missing data		
Rural/Urban	Rural	70.0	19.4	9.6	1.0	100	1,232
	Urban	65.4	26.2	7.0	1.4	100	443
Province	Central	65.2	22.8	11.6	0.4	100	124
	Copperbelt	73.0	18.8	6.3	1.8	100	258
	Eastern	73.2	21.3	4.5	1.0	100	423
	Luapula	70.9	16.5	12.3	0.3	100	172
	Lusaka	56.1	34.1	9.2	0.7	100	136
	Northern	61.2	25.2	11.9	1.7	100	165
	North Western	69.8	15.9	12.8	1.5	100	68
	Southern	65.6	20.6	12.3	1.4	100	218
	Western	74.9	14.4	10.0	0.7	100	111
All Zambia	All Zambia	68.7	21.2	8.9	1.1	100	1,675

2006		Medical consultation status			Total	Total number of ill persons ('000s)
		Consulted	Used self-administered Medicine only	None of the above		
Rural/Urban	Rural	56	28	16	100	790
	Urban	60	28	12	100	287
Province	Central	55	35	10	100	88
	Copperbelt	60	29	11	100	129
	Eastern	55	32	14	100	181
	Luapula	52	29	19	100	141
	Lusaka	58	29	14	100	123
	Northern	47	33	20	100	152
	North western	75	14	11	100	62
	Southern	64	21	15	100	132
	Western	65	18	16	100	70
All Zambia	All Zambia	57	28	15	100	1,076

**Figure 7.5: Proportion of Persons Who Had Consulted Over Their Illness in the Two-Week Period Preceding the Survey, by Province, Zambia, 2010**



### 7.4.2 Medical Institutions Visited

During the survey, persons who reported to have consulted over an illness two weeks prior to the survey were asked which type of institution they visited. Table 7.9 shows the percentage distribution of persons who visited a health institution by type of institution visited, residence, stratum and province.

The table shows that of those consulting, 85 percent visited a government institution. Out of these, the ones visited most were government clinics, followed by government hospitals and, to a lesser degree, government health posts.

Another 6 percent of those consulting visited mission institutions, although use of these is almost entirely limited to rural areas. Conversely 9 percent of those consulting in urban areas make use of private institutions, whereas this type of institution is almost negligible in rural areas.

Traditional, faith, spiritual and church healers account for only around 1 percent of the consultations. These are most popular in the Western province.

Use of institutions varies between rural and urban areas. Government hospitals are more commonly used in urban areas whereas government clinics are used more frequently in rural areas – reflecting the differing availability of these institutions in different areas. Health posts are used almost exclusively in rural areas. The differences are also reflected in the estimates for different provinces. Mission institutions are most commonly found in North Western province. Government clinic use is highest in Eastern and Luapula provinces. Government hospitals are frequently used in Central province, but rarely in the Eastern province.

Analysis by stratum shows that for rural residents, health facility use varies strongly with stratum. The larger scale a farming household operates, the more likely it is to prefer a government hospital over a government clinic. The same is true for urban residents. The more expensive the residential location, the more likely it is to prefer a government hospital over a government clinic. In addition, it is the urban medium and high cost population that makes use of private health institutions, with 13 and 20 percent consulting these, respectively.

Compared to 2006, more and more people switch from visiting government hospitals to government clinics, and this is true for both urban and rural dwellers. However, this pattern is strongly inverted in Central province, where government hospital use has increased and clinic use has decreased over time.

**Table 7.9 Percentage distribution of persons who consulted a health institution in the last two weeks prior to the survey by type of institution visited, by rural/urban, stratum and province for 2010 and 2006**

2010		Institution Visited												Total	Total number of persons that consulted ('000s)
		Government Hospital	Government Health Centre/clinic	Government Health Post	Mission Institution	Industrial Institution	Private Institution	Institution outside Zambia	Medical Personnel	Traditional Healer	Faith/Spiritual/Church Healer	Other	Missing data		
Rural/Urban	Rural	25.9	56.5	2.6	7.3	0.3	1.6	0.0	0.6	1.1	0.1	0.7	3.3	100	862
	Urban	41.1	43.4	0.4	1.3	1.8	8.8	0.0	0.1	0.1	0.0	0.1	2.9	100	290
Stratum	Small Scale	25.3	57.0	2.7	7.3	0.2	1.4	0.0	0.7	1.2	0.1	0.7	3.3	100	791
	Medium Scale	28.4	53.6	2.0	8.1	0.4	1.9	0.0	0.1	0.3	0.0	0.1	5.1	100	24
	Large Scale	49.1	33.3	0.0	0.0	4.1	6.1	0.0	0.0	3.7	0.0	0.0	3.7	100	1
	Non Agric	35.6	50.0	0.7	5.6	0.9	3.8	0.0	0.0	0.4	0.0	1.4	1.5	100	47
	Low Cost	39.8	47.0	0.4	1.3	1.1	7.4	0.0	0.1	0.2	0.0	0.1	2.6	100	233
	Medium Cost	46.0	32.7	0.1	0.8	3.4	12.7	0.0	0.0	0.0	0.0	0.5	3.7	100	41
	High Cost	47.1	17.0	0.5	2.0	7.2	20.1	0.3	0.6	0.0	0.0	0.0	5.1	100	15
Province	Central	46.9	37.1	1.5	2.0	0.7	3.5	0.0	4.0	1.0	0.0	0.9	2.3	100	81
	Copper belt	32.9	54.1	0.5	1.1	2.6	5.9	0.0	0.0	0.0	0.0	0.4	2.7	100	188
	Eastern	18.1	66.1	2.7	7.4	0.0	1.4	0.0	0.2	0.7	0.1	0.9	2.2	100	310
	Luapula	25.0	60.9	2.4	2.4	0.0	2.5	0.0	0.1	0.3	0.0	0.3	6.1	100	122
	Lusaka	34.6	40.3	0.8	2.1	1.0	14.2	0.1	0.7	0.4	0.0	1.3	4.5	100	76
	Northern	33.4	49.0	1.7	8.5	1.1	1.1	0.0	0.0	1.7	0.0	0.5	3.1	100	101
	North Western	34.7	42.1	1.5	15.3	0.1	3.0	0.0	0.0	0.7	0.0	0.5	2.0	100	48
	Southern	33.2	43.9	3.2	10.3	0.2	3.1	0.0	0.9	1.6	0.0	0.0	3.6	100	143
	Western	38.4	46.8	2.9	5.5	0.0	0.1	0.0	0.0	2.5	0.4	0.0	3.3	100	83
All Zambia	All Zambia	29.7	53.2	2.0	5.8	0.7	3.4	0.0	0.5	0.9	0.1	0.6	3.2	100	1,152

2006		Institution Visited												Total number ('000s)
		Govt Hospital	Govt Clinic	Govt Health post	Mission	Industry	Private	Outside Zambia	Med Personnel	Trad Personnel	Spiritual personnel	Other	Total	
Rural/Urban	Rural	33	51	2	9	.	2	.	.	2	.	1	100	444
	Urban	44	36	1	2	2	13	.	1	1	.	.	100	173
Stratum	Small scale farms	33	51	2	9	.	2	.	.	2	.	1	100	410
	Medium scale farm	43	45	1	4	.	2	.	.	3	.	1	100	11
	Large scale farmers	22	31	1	28	.	2	.	.	16	.	.	100	0.4
	Non-agricultural	37	49	2	8	.	1	.	1	2	.	1	100	22
	Low-cost areas	43	38	1	2	2	12	.	1	1	0	.	100	147
	Medium cost areas	50	33	.	3	2	11	.	.	1	0	.	100	16
	High cost areas	42	14	.	1	4	38	.	1	.	0	1	100	10
Province	Central	25	64	2	4	.	4	.	.	1	0	1	100	48
	Copperbelt	41	41	1	2	4	8	.	1	1	0	2	100	77
	Eastern	37	42	.	12	.	3	.	1	2	0	1	100	99
	Luapula	18	66	4	4	.	4	.	.	3	0	1	100	73
	Lusaka	35	45	.	.	1	17	.	1	1	0	.	100	71
	Northern	47	40	5	2	.	2	.	.	3	0	.	100	71
	North western	44	36	3	16	.	1	.	.	1	0	1	100	47
	Southern	39	42	1	11	1	3	.	.	3	0	.	100	85
	Western	41	49	2	7	.	1	.	.	1	.	.	100	46
All Zambia	All Zambia	36	47	2	7	.	5	.	.	2	.	1	100	617

### 7.4.3 Personnel Consulted

Respondents who reported having been ill two weeks prior to the survey and sought medical advice were also asked what type of medical personnel attended to them at the time of their illness. Table 7.10 shows this.

**Table 7.10 Proportion of persons who consulted a health institution in the last two weeks prior to the survey, by province and type of personnel consulted during the first visit for 2010 and 2006**

2010		Personnel Consulted									Total number of persons that consulted ('000s)
		Medical doctor	Clinical Officer	Nurse/Mid wife	Community Health worker	Traditional Healer	Spiritual Healer	Other	Missing data	Total	
Rural/Urban	Rural	10.1	46.8	32.5	5.9	0.9	0.0	0.6	3.2	100	862
	Urban	27.9	40.1	28.2	0.4	0.1	0.0	0.2	3.0	100	290
Stratum	Small Scale	9.9	47.4	31.8	6.0	0.9	0.0	0.6	3.2	100	791
	Medium Scale	13.3	46.0	30.4	4.8	0.2	0.0	0.4	4.9	100	24
	Large Scale	8.6	72.9	14.8	0.0	3.7	0.0	0.0	0.0	100	1
	Non Agric	11.6	35.9	45.9	3.5	0.4	0.0	1.1	1.7	100	47
	Low Cost	26.2	40.9	29.6	0.4	0.1	0.0	0.1	2.7	100	233
	Medium Cost	31.8	41.1	22.6	0.0	0.0	0.0	0.6	3.9	100	41
	High Cost	44.5	25.9	22.9	1.2	0.0	0.0	0.9	4.7	100	15
Province	Central	14.5	42.4	32.0	4.8	1.0	0.0	2.8	2.5	100	81
	Copperbelt	23.8	36.9	35.8	0.7	0.0	0.0	0.0	2.9	100	188
	Eastern	11.4	56.3	26.4	2.9	0.7	0.1	0.0	2.2	100	310
	Luapula	4.1	48.9	26.7	12.3	0.1	0.0	1.5	6.3	100	122
	Lusaka	35.4	35.0	25.2	1.0	0.3	0.0	0.4	2.7	100	76
	Northern	9.8	45.7	34.7	4.0	1.4	0.0	1.2	3.1	100	101
	North Western	11.6	46.9	34.6	4.1	0.7	0.0	0.0	2.0	100	48
	Southern	15.3	37.9	33.8	8.0	1.3	0.0	0.3	3.5	100	143
	Western	8.3	39.1	42.4	5.2	0.9	0.0	0.1	3.9	100	83
All Zambia	All Zambia	14.6	45.1	31.4	4.5	0.7	0.0	0.5	3.1	100	1,152



2006		Personnel Consulted									Total number of persons ('000s)
		Doctor	Clinical Officer	Nurse / Midwife	Community Health Worker	Traditional Healer	Spiritual Healer	Church Healer	Other	Total	
Rural/Urban	Rural	12	53	26	5	2	0	1	0	100	444
	Urban	36	41	20	1	1	1	0	0	100	173
Stratum	Small scale farmers	12	53	26	6	2	0	1	0	100	411
	Medium scale farmers	14	51	29	3	3	0	0	1	100	11
	Large scale farmers	6	34	14	26	16	5	0	0	100	0.485
	Non-agricultural	14	54	26	2	2	1	0	0	100	22
	Low-cost areas	35	41	20	1	1	1	1	0	100	147
	Medium cost areas	32	46	21	0	1	0	0	0	100	16
	High cost areas	58	28	13	0	0	1	0	1	100	10
Province	Central	14	60	20	5	1	0	0	0	100	48
	Copperbelt	31	30	35	2	1	0	0	1	100	77
	Eastern	19	55	21	2	2	0	1	0	100	99
	Luapula	4	64	20	8	3	0	1	1	100	73
	Lusaka	42	42	14	0	1	1	1	0	100	71
	Northern	10	50	25	11	3	0	0	1	100	71
	North western	22	42.1	25.9	5.9	1.3	1	1.4	0.2	100	47
	Southern	18	45	32	1.8	2.8	0.3	0	0	100	85
	Western	7	62.3	24.5	4.1	0.6	0	0.5	1	100	46
All Zambia	All Zambia	19	50	24	4	2	0	1	0.4	100	617

The predominant use of government institutions is reflected in table 7.10. The vast majority of health personnel that ill respondents were seen by are either medical doctors, clinical officers, nurses/midwives or community health workers. Overall, 45 percent of ill people were seen by a clinical officer, another 31 percent by a nurse or midwife and 15 percent by a doctor.

The majority of people, both urban and rural, were attended by a clinical officer. An earlier table suggested that in urban areas, people are just as likely to visit a government hospital as they are to visit a government clinic. In rural areas however, the use of clinics prevails. In terms of personnel attending, the urban population is more likely to be seen by a doctor, 36 as compared to 12 percent. In contrast, rural dwellers are more likely to be attended by a clinical officer or a community health worker.

At provincial level the health personnel that people see varies a lot. In Lusaka, 35 percent of ill persons are seen by a doctor, whereas this is only the case in 4% of cases in Luapula. Copperbelt also has relatively high proportions of sick people seen by a doctor, 24 percent, whereas rates are below 10 percent in Northern and Western provinces.

Compared to 2006, doctors' attendance has decreased, from 19 to 15 percent, and nurse attendance has increased, from 24 to 31 percent.

#### **7.4.4 Mode of Payment for Consultation**

The survey also collected information on the mode of payment for medical consultation. Table 7.11 shows that at national level, 30 percent of the persons reporting illness and consultation pay for their treatment directly. 51 percent indicated that they did not pay for their treatment. 5 percent paid by some sort of pre-payment scheme. These are either individual or family schemes. The premium for a scheme defines whether it is considered low or high cost.

Payment patterns differ strongly between rural and urban areas. In cities, 52 percent of consulting people pay directly, as compared to 23 percent in rural areas. In contrast, 60 percent of rural dwellers that consult don't pay at all, as compared to only 24 percent of urban dwellers.

Pre-payment schemes can be found primarily in urban areas, although they do exist to a lesser degree in rural areas. Furthermore, they are especially popular in Central and Lusaka provinces. Health insurance is negligible all over Zambia.

Among the urban population in the high cost stratum, 8 percent of those consulting get treatment paid for by their employer.

**Table 7.11 Proportion of persons who consulted over the illness, by province and mode of payment used to pay for consultation for 2010 and 2006**

2010		Method of Payment										Total	Total number of persons that consulted ('000s)
		Pre-payment Scheme Low Cost	Pre-payment Scheme High Cost	Paid for by Employer	Paid by Insurance	Paid Part, other Part by Others	Paid direct	Didn't Pay	Paid for by Others	Not Applicable	Missing data		
Rural/Urban	Rural	3.5	0.0	0.1	0.0	0.0	22.8	60.4	0.5	4.0	8.6	100	862
	Urban	5.6	2.2	2.0	0.1	0.6	51.7	24.4	0.9	3.3	9.2	100	290
Stratum	Small Scale	3.2	0.0	0.1	0.0	0.0	22.5	61.2	0.5	3.9	8.6	100	791
	Medium Scale	2.0	0.2	0.7	0.0	0.2	23.3	55.1	0.3	5.7	12.5	100	24
	Large Scale	0.0	0.0	4.1	0.0	0.0	30.6	50.4	0.0	11.2	3.7	100	1
	Non Agric	9.6	0.0	0.2	0.0	0.0	28.4	50.3	0.3	4.7	6.6	100	47
	Low Cost	6.0	1.2	1.5	0.1	0.2	53.2	25.4	1.0	3.5	7.7	100	233
	Medium Cost	3.3	6.3	2.8	0.0	2.4	45.3	20.7	0.5	1.9	16.8	100	41
	High Cost	5.0	5.7	7.6	0.1	0.8	45.6	20.0	0.4	3.3	11.6	100	15
Province	Central	14.2	0.0	0.3	0.0	0.4	29.4	40.3	0.2	6.9	8.3	100	81
	Copperbelt	3.0	1.9	2.1	0.0	0.5	53.9	28.4	0.9	3.5	5.8	100	188
	Eastern	1.8	0.0	0.2	0.0	0.0	19.7	68.0	0.1	2.6	7.7	100	310
	Luapula	2.3	0.0	0.0	0.1	0.0	39.1	47.5	0.5	3.5	7.0	100	122
	Lusaka	17.2	3.1	2.1	0.3	0.3	34.8	24.9	0.3	3.3	13.8	100	76
	Northern	2.4	0.1	0.1	0.0	0.0	18.1	67.0	0.2	6.7	5.3	100	101
	North Western	3.3	0.5	0.2	0.0	0.0	22.0	59.3	0.7	3.3	10.7	100	48
	Southern	2.2	0.2	0.5	0.0	0.3	31.4	51.8	0.6	1.9	11.1	100	143
	Western	0.8	0.0	0.0	0.0	0.1	15.1	57.6	2.9	6.6	16.8	100	83
All Zambia	All Zambia	4.0	0.6	0.6	0.0	0.2	30.1	51.3	0.6	3.8	8.8	100	1,152

2006		Method of Payment								Total
		Pre Pay low cost	Pre pay high cost	Paid by employer	Paid by insurance	Paid part and others	Paid directly	Did not pay	Paid by others	
Rural/Urban	Rural	3	3	0	0	0	29	64	1	100
	Urban	13	4	2	1	11	47	31	1	100
Stratum	Small scale farmers	3	3	0	0	0	28	65	0.7	100
	Medium scale farmers	3	2	.	1		41	53	1	100
	Large scale farmers	0	6	.	0		62	32	0	100
	Non-agricultural	2	2	0	0		44	52	0	100
	Low-cost areas	13	4	2	0	0	48	32	2	100
	Medium cost areas	12	4	3			42	38	1	100
	High cost areas	15	10	5	2	2	54	11	0	100
Province	Central	3	7	1	0	1	45	43	0	100
	Copperbelt	6	6	3		0	43	4	1	100
	Eastern	1	3	1	1	1	27	67	0	100
	Luapula	0	1		1	0	33	64	1	100
	Lusaka	27	3	1	0	0	38	29	2	100
	Northern	2	3	.	0	0	29	65	1	100
	North Western	1	9	.		0	21	69	1	100
	Southern	6	0	0	0	0	47	45	1	100
	Western	2	1	0	0	.	20	75	1	100
All Zambia	All Zambia	6	3	1	0	0	34	55	1	100

#### 7.4.5 Average amount paid for consultation

The survey collected information on the average amount paid for consultation and/or medication over the two weeks preceding the survey. Table 7.12 presents these amounts as an average only of those that reported non-zero expenditure. This is a different way of presenting compared to 2006, which presents mean amount spent including those cases where expenditure may be zero. As a result, mean amounts for 2010 are significantly higher. This different way of presenting for 2010 is due to constraints in the 2010 data.

Table 7.12 shows that, for those that did spend some money on consultation and/or medication, the average amount spent over the past two weeks was 20,000 Kwacha. The amount spent differs by the type of personnel that attended. Considerably more money

was paid when seen by a doctor compared to a clinical officer. Average amounts spent on nurses/midwives did not differ strongly from those spent on a consultation by a clinical officer.

Average amounts spent on community health workers and traditional healers are also reported below; however, the sample sizes for these are extremely small, such that the estimates need to be treated with caution.

Average amounts spent on self-administered medicine are lower than those spent on a consultation, however, in rural areas they are only slightly lower than what was spent on consultation by a nurse,/midwife or clinical officer.

Spending differs across rural and urban areas. Significantly more money was spent on average on consultation and medication in urban areas, about twice as much for most types of personnel in those cases where a non-zero amount was paid for the consultation.

**Table 7.12 Mean amount (in Kwacha) spent on medication and/or consultation for persons that consulted or used self-administered medicine and reported non-zero expenditure, by persons consulted for 2010**

2010		Mean amount spent (K, 2010 prices)			Total number of persons with non-zero expenditure ('000s)
		Rural	Urban	Total	
Person Consulted	Did not consult, used self-administered medicine only	4,209	8,997	5,974	266
	Medical doctor	69,414	102,566	89,736	96
	Clinical Officer	5,588	14,867	9,626	181
	Nurse/Midwife	5,819	11,673	8,135	132
	Community Health worker	1,532	10,435	1,753	15
	Traditional Healer	128,428	180,704	130,090	6
	Other	55,207	35,761	52,483	4
	Missing data	30,819	14,325	26,214	10
All Zambia	All Zambia	13,090	30,196	20,125	710

**Table 7.13 Mean amount (in Kwacha) spent on medication and/or consultation, by persons consulted for 2006**

2006		Mean amount spent (K, 2006 prices)
Rural/Urban	Rural	3,245
	Urban	20,167
Person Consulted	Doctor	34,117
	Clinical Officer	3,845
	Nurse or midwife	2,606
	Community health worker	856
	Traditional healer	24,094
	Spiritual healer	81,324
	Church healer	4,036
	Other	4,633
All Zambia	All Zambia	7,926

# ECONOMIC ACTIVITIES OF THE POPULATION

## 8.1. Introduction

The wellbeing of both individuals and households in society largely depends on their participation in gainful economic activities. The desire to attain and sustain a certain acceptable level of consumption of goods and services has led individuals to engage in various economic activities. Engagement in these activities not only ensures a person's livelihood but also equips an individual with means of acquiring and sustaining the basic needs of life such as food, clothing and shelter. In a developing country like Zambia, it becomes imperative to constantly measure and monitor changes in levels of economic activities overtime as fluctuations in employment levels may have serious poverty implications.

The LCMS 2010 collected data for measuring the state of economic activities in the country. It adopted a similar methodology employed in the LCMS of 2006, hence reference will be made to the 2006 report in order to facilitate the process of monitoring.

The following topics have been covered:

- Main economic activity;
- Labour force participation;
- Employment and unemployment;
- Occupation and Industry of employment;
- Employment status;
- Sector of employment, formal versus informal;
- The prevalence of secondary jobs;
- Previous jobs held;
- Changing of jobs; and
- Income generating activities for those not currently working.

## 8.2. Concepts and definitions

The following concepts and definitions constituted the guiding principles for collecting, processing and analyzing economic activities and labour force data. Most of the concepts used in this chapter conform to the International Labour Organization (ILO) definitions of economic activity and labour force.

### 8.2.1. The economically active population (or Labour Force)

In the LCMS 2010, the economically active population relates to all persons aged 12 years and above of either sex whose main economic activity status was to supply their labour for the production of economic goods and services during the time of the survey. This comprised the employed and unemployed persons.

### **8.2.2. Labour force participation rate**

This refers to the proportion of the population aged 12 years and above who were in the labour force or were economically active at the time of the survey.

### **8.2.3. The employed population**

This comprises persons who performed some work or conducted business, for pay, profit or family gain.

### **8.2.4. Employment status**

Employment status of the working population was classified into the following categories:-

- **Employer:** A person who operated his or her own economic enterprise(s) and used hired labour.
- **Employee:** A person who worked for a public or private employer and received remuneration in wages, salaries either in cash or in-kind.
- **Self-employed:** Refers to a person who operated his or her own economic enterprise(s) and hired no employees.
- **Unpaid Family Worker:** Refers to a person who normally assisted in the family business or farm but did not receive any pay or profit for work performed.

### **8.2.5. Unemployed population**

This constituted persons who, at the time of the survey, were either looking for work/means to do business or were not looking for work/means to do business but were available for work/business.

### **8.2.6. Unemployment rate**

This refers to the number of the unemployed persons expressed as a percentage of the labour force or economically active population.

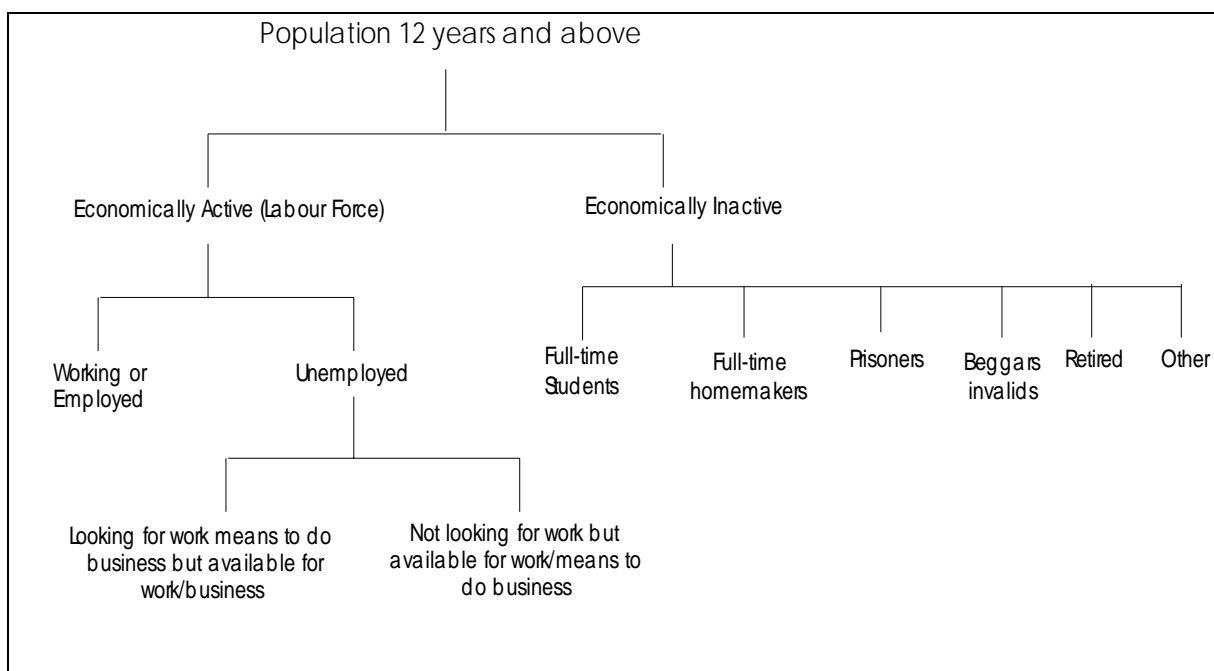
### **8.2.7. Inactive population**

This refers to persons aged 12 years and above who were not economically active. This includes full-time students, full-time home-makers, retired persons not doing any gainful work or business, vagabonds, the invalid, tramps, etc.

### **8.2.8. Diagrammatical representation of economic activity**

Below is the diagrammatical representation of the economic activity status of the population aged 12 years and above.

**Figure 8.1: Diagrammatic presentation of economic activity**



### 8.3. Economic activity status

The economic activity status of the population can be broken down into two categories: the labour force and the inactive population. The questions on economic activity are asked of everyone in the sample aged 12 years and over. This population of adults and young persons has increased over time, from an estimated 7.6 million in 2006 to 8.5 million in 2010. Paid workers, unpaid workers and the unemployed (as long as they are looking or available for work/business) are all classified as economically active and are therefore part of the labour force. The others are termed economically inactive. They are neither working nor looking for work, and are students, retired people, homemakers, or are too ill or disabled to work.

About 62 percent of the total population aged 12 years and above were in the labour force; this breaks down to 43 percent employed, 11 percent unpaid family workers and 8 percent unemployed. The inactive population accounted for about 37 percent of the respondents aged 12 years and above; this breaks down to 28 percent full-time students, 6 percent home makers and about 2 percent retired, too old or too young to work.

Between 2006 and 2010, the survey shows a rise in the number of economically active of around 308,000 people. Compared to 2006, there has been an increase in the numbers of people in paid work, and a decrease in unpaid family workers. There has also been an increase in the numbers of full-time students.

The patterns of change differ in rural and urban areas. Proportions of paid employment, while remaining constant at a national level, have decreased slightly in rural areas, from 47 to 46 percent. Likewise, in rural areas the proportion of unpaid family workers has decreased, from 18 to 16 percent. The reduced proportions of employed persons (paid or unpaid) in rural areas are met by an increase in the percentage of full-time students, from 26 to 28. In urban areas, paid employment has increased slightly, from 37 to 38 percent, and unemployment has decreased, from 19 to 16 percent.

The distribution of economic activity by strata shows that rural non-agricultural households differ from other rural households in that they have higher numbers of homemakers and unemployed, as well as lower numbers of unpaid family workers and full-time students. Tables 8.1 show a significant move of people from unemployment to paid work in urban high cost areas. The table also displays some significant changes for large scale farmers. Analysis by province shows that Lusaka and Copperbelt have the highest levels of unemployment. North-Western has relatively high levels of full-time students whereas in Eastern province they are rather low. In contrast, Eastern province displays a very high proportion of unpaid family workers. Paid employment is highest in the Northern and Western provinces.



**Table 8.1: Percentage Distribution of the Population Aged 12 years and Above, by Main Economic Activity Status, Sex, Rural/Urban, Stratum and Province, for 2010 and 2006**

2010		Economic Activity status									Total	Total number of persons 12 years and above (000's)
		Labour force				Inactive population						
		Paid employment	Unpaid family worker	Unemployed		Full-time student	Homemaker	Retired/Too young	Other	Missing information		
Sex	Male	51.3	5.8	7.9		30.6	0.9	1.8	0.8	0.9	100	4,094
	Female	35.6	14.8	8.3		26.1	11.5	2.5	0.5	0.8	100	4,385
Rural/Urban	Rural	46.2	15.9	3.3		27.9	3.8	1.7	0.5	0.7	100	5,303
	Urban	38.1	1.3	16.3		28.8	10.7	2.9	0.8	1.0	100	3,176
Stratum	Small Scale	46.4	16.6	3.0		28.1	3.1	1.6	0.5	0.7	100	4,765
	Medium Scale	37.3	18.0	3.0		36.3	2.8	1.0	0.8	0.8	100	196
	Large Scale	38.6	18.7	2.8		36.5	2.2	0.5	0.0	0.7	100	7
	Non Agric	47.9	4.6	7.1		20.7	15.0	2.9	1.0	0.8	100	336
	Low Cost	38.0	1.5	16.8		27.3	11.4	3.2	0.7	1.0	100	2,297
	Medium Cost	36.9	1.1	15.5		32.3	9.3	2.6	1.3	1.0	100	573
	High Cost	41.0	0.6	13.8		33.3	7.5	1.9	0.7	1.3	100	306
Province	Central	42.2	12.1	6.4		30.1	5.7	2.3	0.3	1.0	100	900
	Copperbelt	36.5	1.8	15.2		29.0	12.5	3.1	1.0	1.0	100	1,363
	Eastern	43.7	24.0	2.8		23.8	3.0	1.6	0.6	0.5	100	1,089
	Luapula	46.3	15.0	3.7		28.6	2.7	1.3	0.7	1.8	100	646
	Lusaka	40.6	2.5	16.8		26.5	9.4	2.8	0.8	0.6	100	1,245
	Northern	48.8	13.0	3.2		29.8	2.6	1.3	0.5	0.7	100	1,028
	North Western	44.5	7.2	5.3		33.0	6.1	2.5	0.7	0.7	100	483
	Southern	41.5	14.0	6.7		29.0	5.7	1.7	0.5	0.8	100	1,074
	Western	51.8	6.7	5.1		27.4	5.5	2.1	0.5	1.0	100	652
All Zambia	All Zambia	43.1	10.5	8.1		28.2	6.4	2.1	0.6	0.8	100	8,479

2006		Economic Activity status								Total number of persons 12 years and above (000's)
		Labour force				Inactive population				
		Paid employment	Unpaid family worker	Unemployed			Full time student	Home Maker	Retired/Too old	
Sex	Male	52.5	6.8	8.6		29.2	0.5	1.7	0.6	3,720
	Female	34.7	17.2	9.5		24.8	10.9	2.2	0.7	3,903
Rural/Urban	Rural	47.1	18.4	3.4		26.2	2.9	1.4	0.6	4,780
	Urban	37.3	1.6	18.6		28.2	10.8	2.8	0.7	2,843
Stratum	Small Scale	47.5	19.1	2.8		26.3	2.4	1.3	0.6	4,360
	Medium scale	37.1	20.9	4.0		34.6	1.8	1.3	0.3	177
	Large Scale	23.8	31.4	9.3		31.0	3.8	0.7	0.0	6
	Non Agric	47.5	3.4	14.0		18.1	12.5	3.4	1.0	237
	Low cost	37.6	1.8	18.3		27.2	11.6	2.9	0.7	2,232
	Medium cost	34.7	0.9	20.7		31.7	8.8	2.5	0.6	368
	High cost	38.4	1.1	17.8		31.6	7.2	2.5	1.5	243
Province	Central	36.7	20.6	6.3		28.9	4.6	2.0	0.9	799
	Copperbelt	37.2	1.2	17.4		29.3	11.4	2.8	0.7	1,237
	Eastern	39.4	33.7	1.8		22.4	1.0	1.2	0.5	1,004
	Luapula	62.3	3.1	2.2		29.1	1.9	0.9	0.6	565
	Lusaka	39.2	1.8	18.7		25.7	10.7	2.8	1.1	1,146
	Northern	42.2	24.3	3.9		25.8	1.8	1.6	0.4	940
	North-Western	50.3	5.5	7.9		29.2	3.1	3.3	0.6	438
	Southern	49.3	5.8	8.3		28.2	7.0	1.1	0.3	920
	Western	50.2	11.1	5.6		25.7	5.2	1.6	0.7	574
All Zambia	All Zambia	43.4	12.1	9.1		26.9	5.9	1.9	0.7	7,623

Figure 8.2 makes a comparison of the 2006 and 2010 survey data. A similar proportion of the population was in paid employment in the two years, 43 percent. The similar proportions translate into a higher total number of people in paid employment, due to the population the growth of the population. Less people were classified as unpaid family workers in 2010 compared to 2006. There was an increase in full-time students.

**Figure 8.2: Percentage Distribution of the Population aged 12 years and above by Economic Activity Status, for 2010 and 2006**

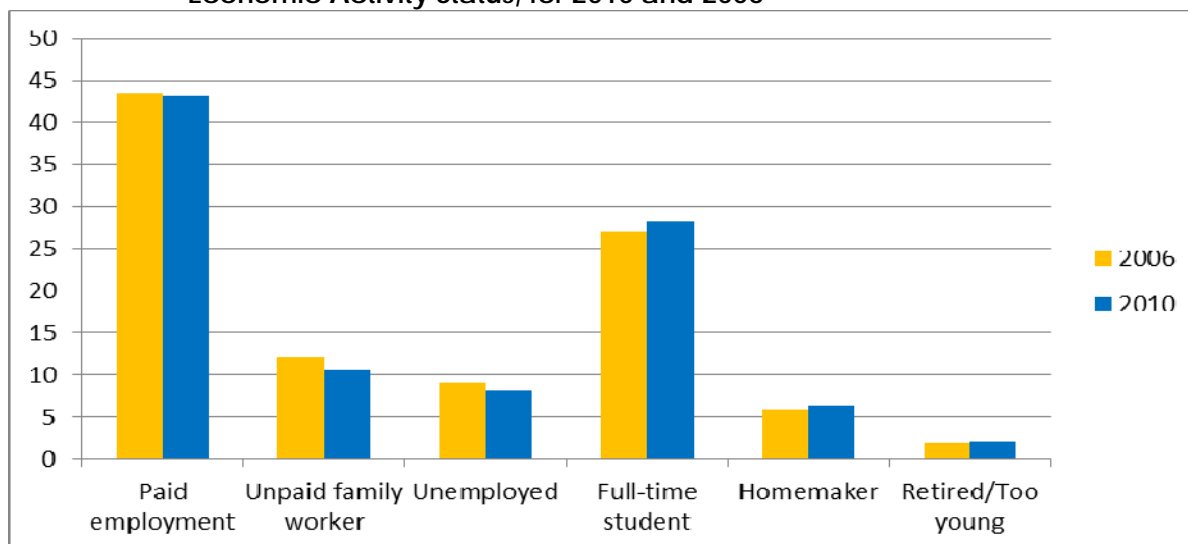
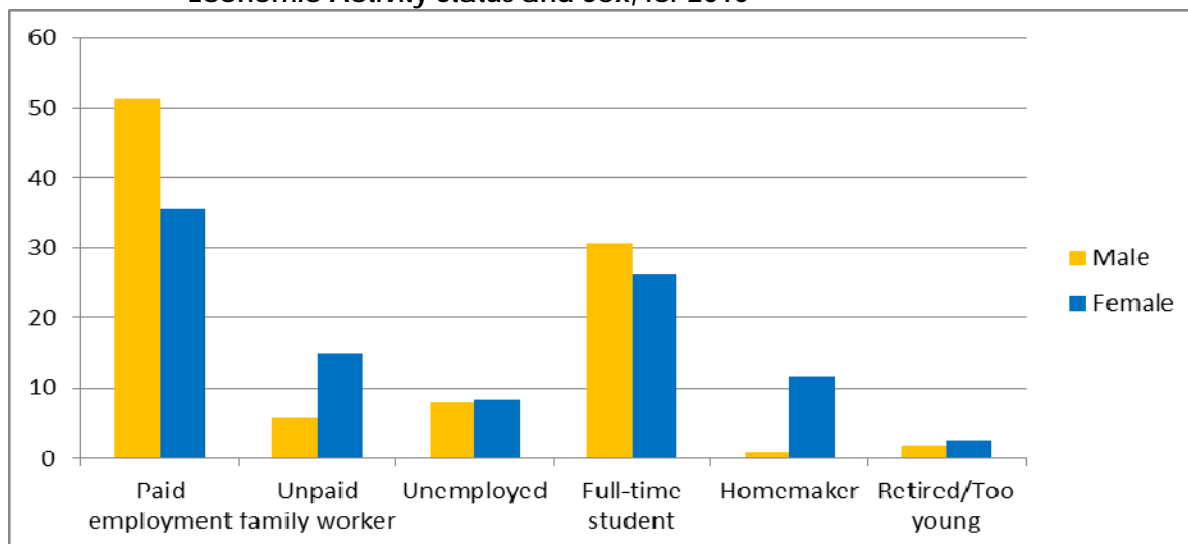


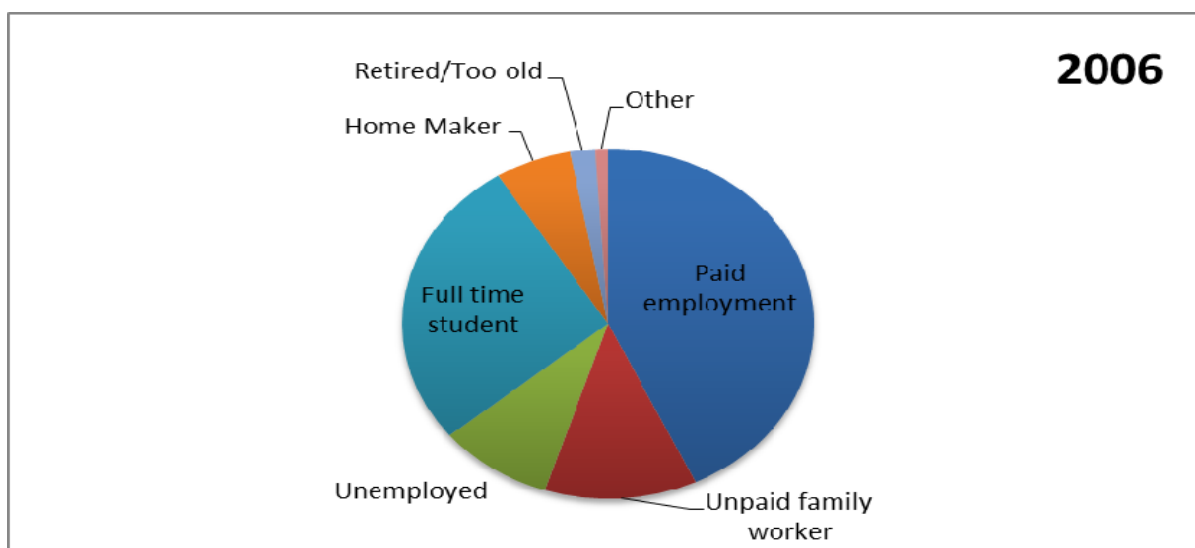
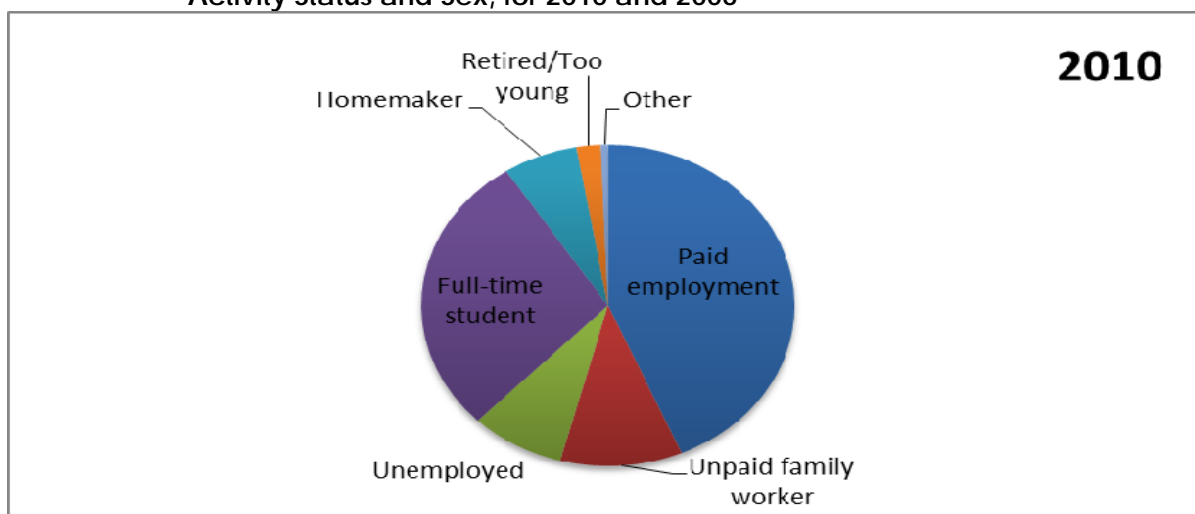
Figure 8.3 shows differences in economic activity status between men and women. While tables 8.1 show that the relative distributions between males and females have not changed much since 2006, the below figure shows that employment patterns differ significantly by gender. Men are more likely to be in paid employment or full-time students. It is mainly women that are unpaid family workers.

**Figure 8.3: Percentage Distribution of the Population Aged 12 Years and Above by Economic Activity Status and Sex, for 2010**



The two pie charts in figure 8.4 show the distribution of the population by economic activity status, for 2010 and 2006. Paid employed and full-time students constitute the majority of the population. The figures also reflect the changes seen in tables 8.1. Since 2006, the proportion of unemployed has slightly decreased, as has the proportion of unpaid family workers.

**Figure 8.4: Distribution of the Population aged 12 years and above by Economic Activity Status and Sex, for 2010 and 2006**



### 8.3.1. Labour Force Participation Rates

Labour force participation rates measure the proportion of the working age population (12 years and above) that is economically active. It distinguishes between those that are economically active (the employed, the unpaid workers and the unemployed) and those that are economically inactive (students, homemakers, retired, sick, incarcerated, etc). Low participation rates imply that a large proportion of individuals are not participating in the labour force, the reverse being true for high participation rates.

**Table 8.2: Labour Force Participation Rates Among Persons Aged 12 Years and above by Sex, Rural/Urban, Stratum and Province, for 2010 and 2006**

2010		Participation Rate			Number of persons 12 years and above (000's)
		Male	Female	Both Sexes	
Rural/Urban	Rural	65.6	66.0	65.8	5,303
	Urban	65.8	47.5	56.3	3,176
Province	Central	64.4	58.3	61.2	900
	Copperbelt	64.9	43.5	54.0	1,363
	Eastern	69.2	72.5	70.9	1,089
	Luapula	65.4	66.7	66.1	646
	Lusaka	68.7	52.5	60.3	1,245
	Northern	64.0	66.9	65.5	1,028
	North Western	60.5	54.6	57.4	483
	Southern	65.7	60.0	62.8	1,074
	Western	63.6	64.5	64.1	652
	All Zambia	65.6	59.1	62.3	8,479

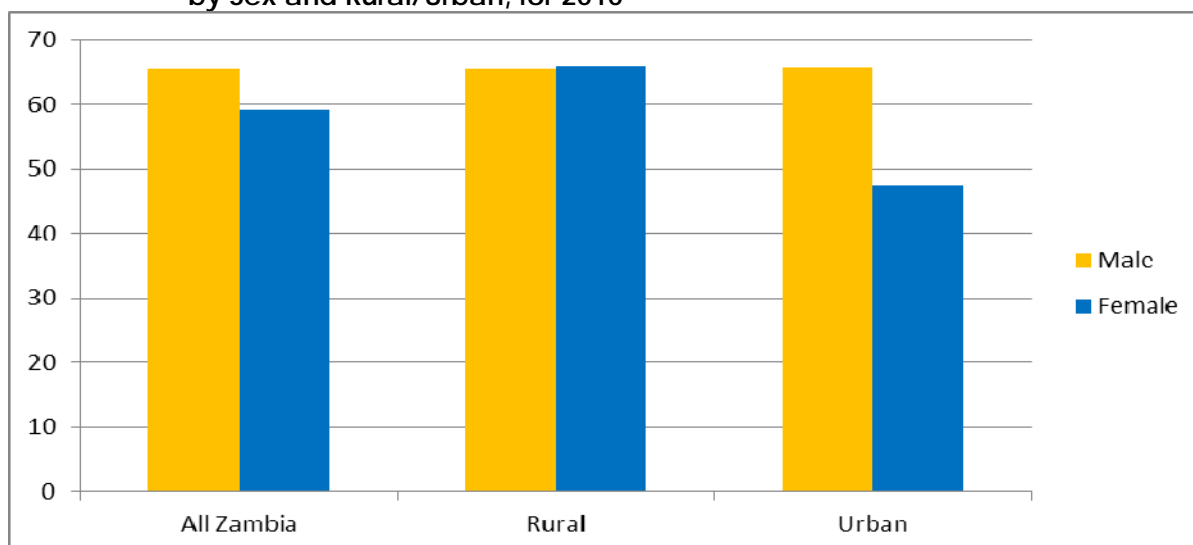
2006		Participation Rate			Number of persons 12 years and above (000's)
		Male	Female	Both Sexes	
Rural/Urban	Rural	68.5	69.3	68.9	4,780
	Urban	67.0	48.2	57.4	2,843
Province	Central	65.9	61.4	63.6	799
	Copperbelt	65.7	46.0	55.8	1,237
	Eastern	72.5	77.3	75.0	1,004
	Luapula	65.8	69.2	67.6	565
	Lusaka	69.7	50.2	59.7	1,146
	Northern	69.9	71.0	70.4	940
	North-Western	64.7	62.9	63.8	438
	Southern	67.0	59.8	63.3	920
	Western	66.8	66.9	66.9	574
	All Zambia	67.9	61.5	64.6	7,623

Table 8.2 shows that 62% of Zambians over 12 years participate in the labour force. Rates for males are overall higher than for females. This is driven by urban areas, where male participation rates are far higher than that of females, 66 as compared to 48 percent. In contrast, in rural areas, participation rates for men and women are very similar, even slightly higher for women, at around 66 percent. This finding is mirrored in figure 8.5 below. Female participation rates are particularly low in the Copperbelt Province, at 44 percent, and high in the Eastern province, 73 percent.

Further analysis by province shows that participation rates are highest in the Eastern, Luapula, Northern and Western provinces. They are particularly low in the Copperbelt and North-Western provinces.

Labour force participation is declining slowly from 65% in 2006, to 62% in 2010, and the rates are dropping most among the younger age groups, largely as a result of young persons staying in full-time education.

**Figure 8.5: Labour-Force Participation Rate among Persons Aged 12 Years and above, by Sex and Rural/Urban, for 2010**

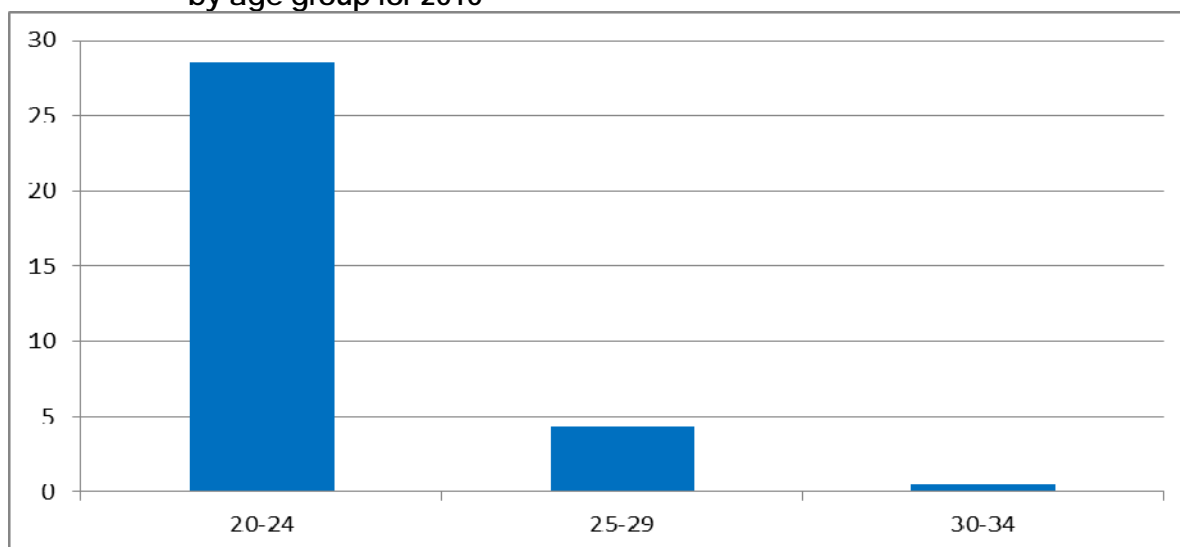


Tables 8.3 show participation rates by age group. The results show that above the age of 25, labour force participation is constantly above 80% for men and above 77% for women but significantly lower for people aged 12-24.

The general trend in labour force participation rates is an increase with age, peaking around the 30-49 age group, and declining in the higher age-groups. However, in rural areas, a significantly higher proportion of people over the age of 65 remain economically active than in urban areas, 78 as compared to 46 percent.

For the group of males aged 20-24 we find that labour force participation rates are more than 25% lower than that of the next male age group. This is due to a high proportion of men in that age group still being enrolled as full-time students (29%), as shown in Figure 8.6.

**Figure 8.6: Proportion of male persons aged 20-34 years enrolled as full-time students, by age group for 2010**



**Table 8.3: Labour Force Participation Rates Among Persons Aged 12 Years and above by Sex, Rural/Urban and Age Group, for 2010 and 2006**

2010		Participation Rates											Number of persons 12 years and above (000's)
		Total				Rural				Urban			
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	
Age group	12-19	16.5	21.3	19.0		18.0	25.5	21.8		13.4	14.1	13.8	2,780
	20-24	67.8	68.0	67.9		68.2	78.2	73.5		67.3	53.4	59.7	1,258
	25-29	93.5	77.7	85.0		94.3	86.4	90.0		92.5	65.7	78.0	1,071
	30-34	98.5	80.0	89.4		99.0	87.1	93.0		97.9	69.2	84.2	832
	35-39	98.5	83.8	91.3		98.6	91.6	95.2		98.4	71.2	85.3	684
	40-44	98.5	86.7	92.6		98.7	94.2	96.3		98.3	71.1	86.4	482
	45-49	98.5	86.5	92.2		98.9	93.5	96.1		97.8	73.6	85.0	385
	50-54	96.9	81.8	89.5		98.5	91.1	94.9		94.0	65.5	79.9	296
	55-59	90.2	82.9	86.5		94.9	94.1	94.5		82.7	59.5	71.8	206
	60-64	87.1	79.9	83.0		94.7	86.6	89.9		71.9	60.6	66.2	171
	65+	80.3	59.2	69.5		86.4	69.4	77.7		62.4	29.9	45.5	315
All Zambia	All Zambia	65.6	59.1	62.3		65.6	66.0	65.8		65.8	47.5	56.3	8,479

2006		Participation Rates										Number of persons 12 years and above (000's)	
		Total				Rural				Urban			
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female		Both Sexes
Age group	12-19	18.2	23.0	20.6		20.2	26.7	23.5		14.6	16.7	15.7	2,431
	20-24	75.8	73.4	74.5		76.8	83.1	80.2		74.4	58.8	65.7	1,195
	25-29	95.3	78.3	86.5		96.4	88.2	92.1		93.9	63.6	78.4	981
	30-34	98.4	83.5	90.8		98.6	92.7	95.6		98.1	69.0	83.5	779
	35-39	98.8	83.2	91.2		98.3	93.5	95.9		99.3	67.4	84.2	601
	40-44	98.8	85.5	92.2		99.1	93.7	96.3		98.2	70.8	85.6	435
	45-49	98.6	85.6	91.9		99.1	94.8	96.9		97.8	68.8	83.2	342
	50-54	96.5	83.5	90.4		98.7	93.6	96.2		92.4	62.6	79.1	239
	55-59	92.7	81.5	87.0		97.4	91.7	94.3		85.0	59.3	73.0	185
	60-64	90.8	81.0	85.0		98.0	89.3	92.6		75.1	44.8	61.3	148
	65+	82.2	64.6	73.8		88.9	74.1	81.8		58.6	30.9	45.4	287
All Zambia	All Zambia	67.9	61.5	64.6		68.5	69.3	68.9		67.0	48.2	57.4	7,623

### 8.3.3. Unemployment Rates

Unemployment rates describe the proportion of the economically active population of working age (labour force) that are not working, but who are either seeking work or would do so if jobs were available. The economically active population includes the employed, unpaid family workers and the unemployed. Unemployment can be seen as an indicator that assesses the performance of the labour market, as it shows the market's capacity to utilise available labour resource.

**Table 8.4: Unemployment Rates Among Persons Aged 12 Years and Above by Sex, Rural/Urban, Stratum and Province, for 2010 and 2006**

2010		Unemployment rate			Number of persons 12 years and above in the labour force (000's)
		Male	Female	Both sexes	
Rural/Urban	Rural	5.0	5.0	5.0	3,464
	Urban	24.3	35.6	29.2	1,770
Stratum	Small Scale	4.6	4.5	4.5	3,146
	Medium Scale	6.0	4.4	5.2	114
	Large Scale	3.9	5.4	4.6	4
	Non Agric	8.7	16.6	11.9	200
	Low Cost	24.6	36.8	29.9	1,295
Province	Medium Cost	24.5	34.4	28.9	306
	High Cost	21.3	29.0	24.9	169
	Central	8.7	12.3	10.5	545
	Copperbelt	24.5	33.9	28.3	729
	Eastern	4.1	3.9	4.0	768
	Luapula	6.0	5.3	5.6	419
	Lusaka	22.3	34.9	28.0	746
	Northern	4.9	4.9	4.9	668
	North Western	8.7	9.8	9.2	275
	Southern	9.4	12.2	10.8	669
All Zambia	Western	9.6	6.6	8.0	414
	All Zambia	12.2	14.2	13.2	5,234

2006		Unemployment rate			Number of persons 12 years and above in the labour force (000's)
		Male	Female	Both sexes	
Rural/Urban	Rural	5.0	5.0	5.0	3,294
	Urban	25.7	41.1	32.3	1,632
Stratum	Small Scale	4.0	4.1	4.1	3,026
	Medium scale	7.4	5.6	6.5	110
	Large Scale	12.7	15.7	14.4	4
	Non Agric	18.7	25.4	21.6	154
	Low cost	24.7	41.2	31.7	1,286
Province	Medium cost	31.1	43.9	36.8	207
	High cost	27.0	36.3	31.0	139
	Central	9.0	10.9	9.9	508
	Copperbelt	25.4	39.6	31.3	690
	Eastern	2.3	2.5	2.4	753
	Luapula	2.6	3.7	3.2	382
	Lusaka	24.3	40.6	31.3	685
	Northern	5.3	5.9	5.6	662
	North-Western	12.2	12.7	12.4	279
	Southern	11.7	14.5	13.0	583
All Zambia	Western	9.1	7.6	8.3	384
	All Zambia	12.6	15.5	14.0	4,926



Table 8.4 shows that unemployment in Zambia is at 13 percent.

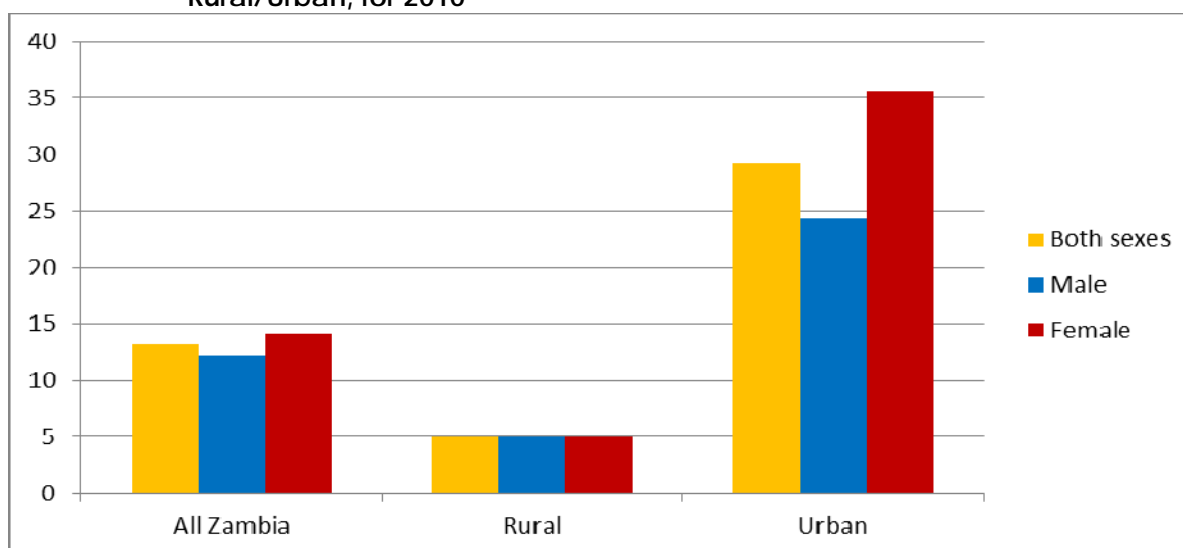
Copperbelt and Lusaka, which have by far the highest unemployment rates in 2006 and 2010 both show unemployment rates decreasing between the two surveys. The same decrease in unemployment rates can be seen in all other provinces, except for Eastern and Luapula, in which unemployment increased, from 3 to 6 and from 2 to 4 percent, respectively.

Unemployment is a very urban phenomenon. Rates are at 29%, as compared to 5% in rural areas. However, it is important to note that in rural areas there is typically a large amount of hidden unemployment or underemployment. Furthermore, unemployed people migrate to the major urban areas in search of formal or informal work. Both factors would exacerbate differences between urban and rural unemployment.

Females had higher unemployment rates than males. However, this is driven by urban areas. As can be seen in Figure 8.7, unemployment rates across the sexes are equal in rural areas, at 5 percent, but much higher for women in urban areas, 36 percent as compared to 24 percent for males.

Unemployment rates have decreased compared to 2006, from 14 to 13 percent. However, unemployment rates are still higher than they were in 2004. The decrease in unemployment rates is strongest for females residing in urban areas, however, it is noteworthy that it is exactly this group that suffered most when unemployment rose after 2004.

**Figure 8.7: Unemployment Rates Among Persons Aged 12 Years and Above by Sex and Rural/Urban, for 2010**



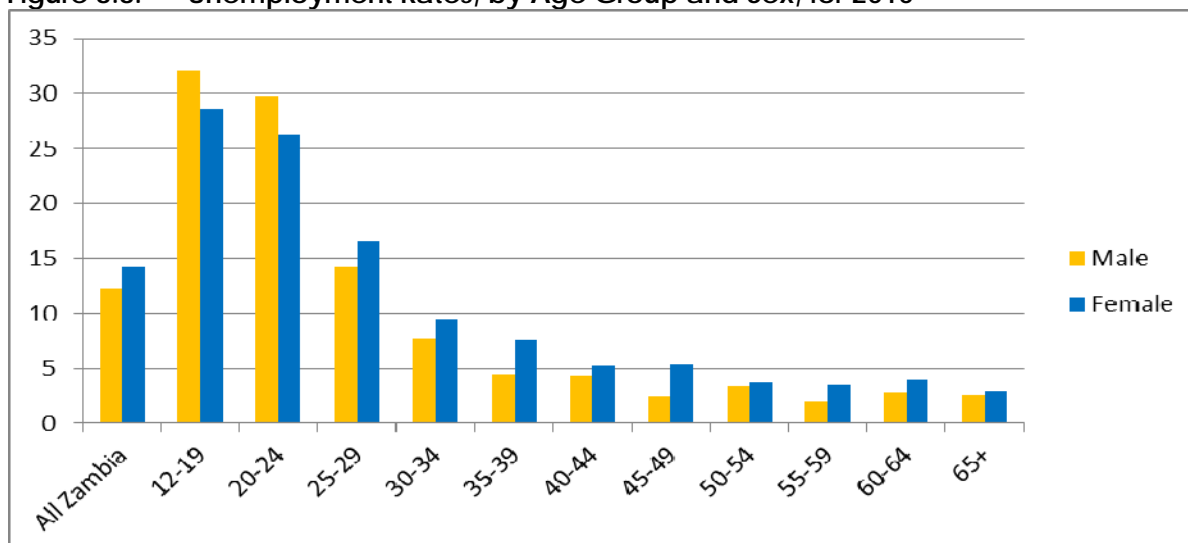
**Table 8.5: Unemployment Rates Among Persons Aged 12 Years and Above by Sex, Rural/Urban and Age Group, for 2010 and 2006**

2010		Unemployment rate									Number of persons 12 years and above in the Labour force (000's)		
		Total				Rural				Urban			
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male		Female	Both Sexes
Age Group	12-19	32.1	28.6	30.1		15.1	13.1	13.9		76.6	77.8	77.2	519
	20-24	29.8	26.2	27.8		12.7	9.3	10.8		55.7	61.7	58.6	845
	25-29	14.2	16.5	15.4		5.8	4.0	4.9		26.5	39.3	32.3	907
	30-34	7.8	9.5	8.5		2.6	3.6	3.1		14.9	20.6	17.1	741
	35-39	4.5	7.6	5.9		1.3	3.0	2.1		9.3	17.1	12.4	622
	40-44	4.3	5.2	4.7		0.9	1.0	1.0		9.1	16.7	11.8	445
	45-49	2.5	5.3	3.8		0.8	1.9	1.4		5.7	13.2	9.1	353
	50-54	3.4	3.7	3.5		1.1	1.3	1.2		7.7	9.7	8.5	264
	55-59	2.1	3.5	2.8		0.1	1.1	0.6		5.7	11.4	7.9	178
	60-64	2.8	4.0	3.5		0.7	0.9	0.8		8.5	16.6	12.2	141
	65+	2.6	2.9	2.7		0.7	0.7	0.7		10.3	17.3	12.7	218
All Zambia	All Zambia	12.2	14.2	13.2		5.0	5.0	5.0		24.3	35.6	29.2	5,234

2006		Unemployment rate									Number of persons 12 years and above in the Labour force (000's)		
		Total				Rural				Urban			
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male		Female	Both Sexes
Age Group	12-19	33.0	32.2	32.6		15.5	14.0	14.6		77.7	80.2	79.1	502
	20-24	29.5	26.8	28.0		12.3	9.0	10.5		57.8	64.9	61.3	891
	25-29	14.9	16.7	15.8		5.5	4.8	5.2		28.4	41.2	33.7	848
	30-34	6.2	10.7	8.3		1.7	2.6	2.2		13.0	27.9	19.2	708
	35-39	4.9	7.4	6.0		1.1	1.3	1.2		10.1	20.2	14.0	547
	40-44	3.7	7.5	5.4		1.1	1.2	1.1		7.4	22.3	13.1	401
	45-49	2.8	5.6	4.2		0.5	1.2	0.8		6.9	16.7	10.9	315
	50-54	1.8	2.9	2.3		0.5	1.1	0.7		4.3	8.8	5.9	216
	55-59	3.6	5.9	4.7		0.8	1.1	1.0		9.0	21.9	13.9	161
	60-64	1.4	1.7	1.6		0.0	0.9	0.5		5.4	9.1	6.6	126
	65+	1.3	2.3	1.7		0.1	0.8	0.4		7.4	15.0	9.9	212
All Zambia	All Zambia	12.6	15.5	14.0		5.0	5.0	5.0		25.7	41.1	32.3	4,926

Table 8.5 shows unemployment rates by age group and gender. For those people who are in the labour force (that excludes full-time students), unemployment decreases significantly with age for the first four age groups. It is above all the young people below the age of 30, living in urban areas, that are unemployed. This is also reflected in Figure 8.8 below, which presents unemployment rates by gender and age group.

**Figure 8.8: Unemployment Rates, by Age Group and Sex, for 2010**



#### 8.4. Employment Status, Industry and Occupation of Employed Persons

##### 8.4.1. Distribution of Employed Persons by Industry

The following section provides information on the type of industry that employed and self-employed persons are working in. Respondents were asked: "What sort of business/service is carried out by your employer/establishment/business?" Responses were then classified by the International Standard Industrial Classification of All Economic Activities (ISIC) code, which is a statistical international classification of industry. The ISIC code groups together enterprises if they produce the same type of goods or services or if they use similar processes (i.e. the same raw materials, process of production, skills or technology).

More than 3 million people work in the agricultural sector. In rural areas, more than 85% work in agriculture, and even in urban areas 14% do so. The proportions of all workers engaged in agriculture has fallen in comparison to both previous rounds of the survey, although actual numbers have risen. There have also been rises in the proportions working in trade and the construction industries; but there is a decline in the proportion working in manufacturing.

While workers in rural areas are concentrated in the agricultural sector, in urban areas, the distribution across industry groups is more even. The highest proportions of the urban population work in the trade and services sectors. Wholesale and retail trade is especially important as an employer for urban women, with more than 36% of them working in this industry, compared with 21% of males. The service sector employs around a fifth of workers in urban areas, while manufacturing employs 9% of male urban workers, the transportation sector 11% and construction another 8%.

**Table 8.6: Percentage Distribution of Employed Persons Aged 12 Years and Above by Industry, Rural/Urban and Sex, for 2010 and 2006**

2010		All Zambia				Rural				Urban			Total number of employed persons ('000's)
Type of Industry		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	
Agriculture, forestry and fishing		61.4	72.3	66.7		84.9	88.6	86.8		12.2	16.0	13.7	3,029
Mining and quarrying		2.5	0.3	1.4		0.5	0.1	0.3		6.6	1.0	4.4	66
Manufacturing		4.1	1.7	2.9		1.6	0.9	1.2		9.3	4.3	7.3	132
Electricity, gas & water		0.6	0.1	0.4		0.1	0.0	0.0		1.7	0.5	1.2	17
Construction		3.3	0.1	1.8		0.9	0.1	0.4		8.4	0.3	5.2	80
Wholesale and retail trade & repairs		9.2	11.5	10.3		3.6	4.2	3.9		20.8	36.7	27.1	468
Hotels and restaurants		0.9	1.1	1.0		0.2	0.2	0.2		2.2	4.2	3.0	44
Transportation & communication		4.3	0.8	2.6		1.1	0.4	0.7		10.9	2.2	7.4	117
Finance, insurance & real estate		0.7	0.4	0.5		0.1	0.0	0.0		1.9	1.8	1.9	25
Community, social and personal services		9.8	7.2	8.5		4.7	2.6	3.6		20.3	23.3	21.5	388
Other		1.6	1.9	1.8		0.4	0.3	0.4		4.2	7.5	5.5	80
No information		1.8	2.6	2.2		1.9	2.6	2.3		1.5	2.4	1.9	99
Total		100.0	100.0	100.0		100.0	100.0	100.0		100.0	100.0	100.0	4,544

2006		All Zambia				Rural				Urban			Total number of employed persons (000's)
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	
Type of Industry	Agric, Forest & Fisheries	63.9	78.7	71.0		87.2	93.3	90.4		12.7	21.0	15.8	3,006
	Mining and Quarry	2.8	0.4	1.6		0.5	0.2	0.4		7.8	0.9	5.2	69
	Manufacturing	5.0	2.6	3.8		1.6	1.5	1.5		12.4	7.1	10.4	163
	Electricity, gas & Water	0.6	0.1	0.4		0.2	0.0	0.1		1.6	0.4	1.1	15
	Construction	2.4	0.1	1.3		0.8	0.0	0.4		5.9	0.1	3.7	53
	Trade wholesale and Retail distribution	8.8	9.7	9.2		3.4	2.8	3.1		20.5	36.8	26.6	389
	Hotels and restaurants	1.0	0.7	0.8		0.3	0.1	0.2		2.5	2.9	2.7	35
	Transport and communication	3.5	0.3	2.0		0.8	0.1	0.5		9.3	1.1	6.3	84
	Finance, insurance and Real estate	2.8	1.1	2.0		0.8	0.3	0.5		7.2	4.5	6.2	85
	Community, social and personal Services	7.9	5.1	6.6		4.1	1.5	2.8		16.4	19.2	17.5	279
	Private household services	1.3	1.3	1.3		0.2	0.1	0.2		3.5	5.8	4.4	54
	International organisations	0.1	0.0	0.1		0.0	0.0	0.0		0.2	0.2	0.2	2
	Total	100.0	100.0	100.0		100.0	100.0	100.0		100.0	100.0	100.0	4,235

Figure 8.9 presents the distribution of urban workers by industry and gender. Employment patterns differ significantly between urban males and females for most industries. Wholesale and retail trade is dominated by women whereas construction, manufacturing and transportation employs mainly men. Community, social and personal services is an industry in which both men and women are employed at similar proportions.

**Figure 8.9: Distribution of Employed Persons by Industrial Sector in Urban Areas among Persons Aged 12 Years and Above, for 2010**

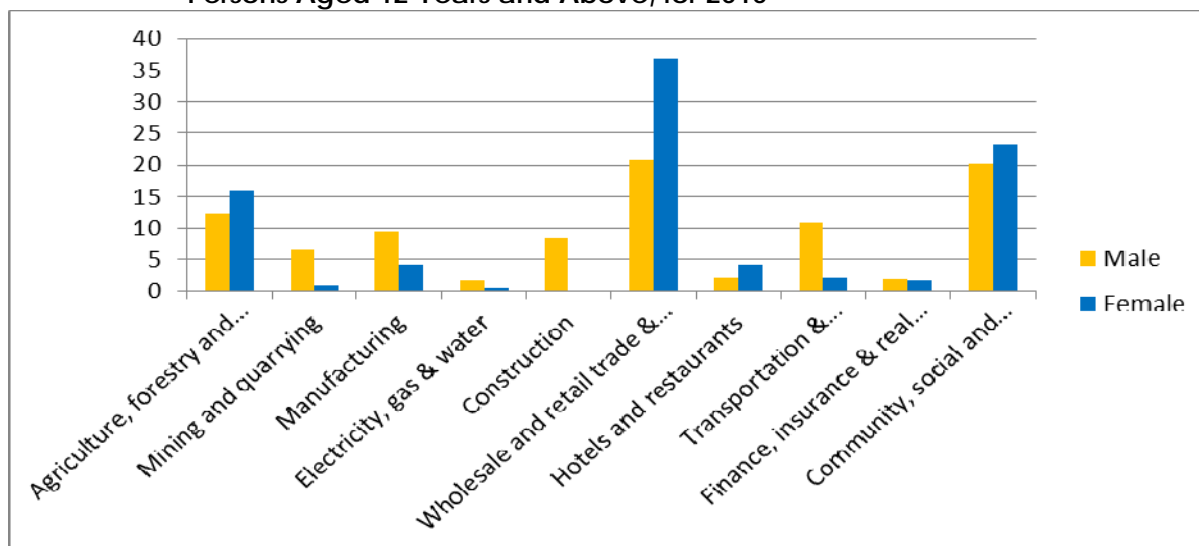
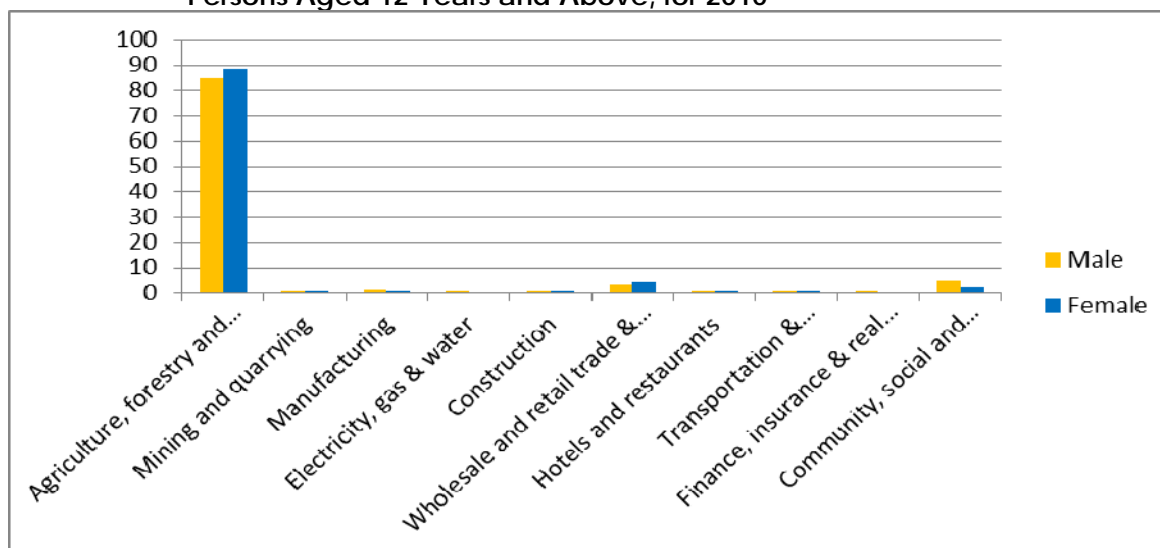


Figure 8.10, on the other hand, presents the distribution of rural workers by industry and gender. Both men and women in rural areas work almost exclusively in the agricultural sector.

**Figure 8.10: Distribution of Employed Persons by Industrial Sector in Rural Areas among Persons Aged 12 Years and Above, for 2010**



#### 8.4.2. Distribution of Employed Persons by Occupation

This section describes the type of job that an individual does, the survey question asked respondents “What type of job/business are you doing?” and the classification was done with the international classification by ISCO occupation codes used in the field by enumerators.

Table 8.7 presents the distribution across occupations for Zambian workers. As with industry in the section above, the largest proportion of the working population are employed in agriculture and related occupations. For the urban population, sales occupations are the largest category (28%). There is a clear gender difference in occupations, with more men working in craft and related trade occupations, and more women working in services/sales. This can also be seen in Figure 8.11, which presents the distribution of urban workers by occupation and gender.

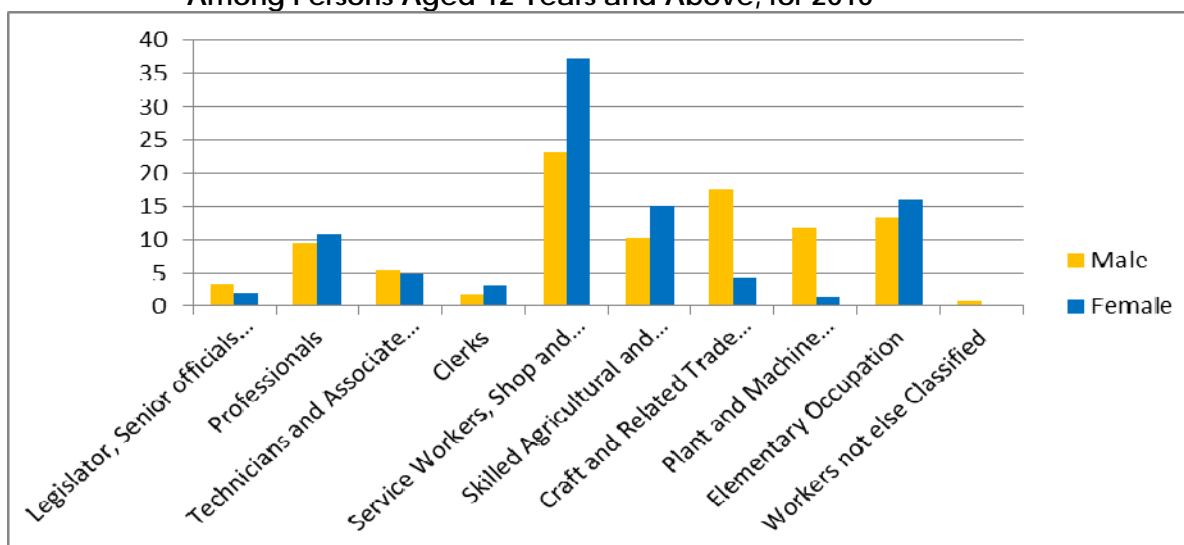
Since 2004, the number of people working in the professions has risen, whilst jobs in productive occupations have fallen.

**Table 8.7: Percentage Distribution of Employed Persons Aged 12 Years and Above by Occupation, Rural/Urban and Sex, for 2010 and 2006**

2010		All Zambia				Rural				Urban			Total number of employed persons (000's)
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	
Type of Occupation	Legislator, Senior officials and Managers	1.4	0.6	1.0		0.4	0.1	0.3		3.3	2.0	2.8	44
	Professionals	5.1	3.8	4.4		2.9	1.7	2.3		9.5	10.8	10.0	202
	Technicians and Associate Professionals	2.4	1.4	1.9		0.9	0.3	0.6		5.4	4.9	5.2	85
	Clerks	0.7	0.7	0.7		0.1	0.0	0.1		1.8	3.0	2.3	31
	Service Workers, Shop and Market Sales Workers	9.6	10.8	10.2		3.1	3.1	3.1		23.1	37.3	28.7	462
	Skilled Agricultural and Fisheries Workers	56.1	66.2	61.0		78.0	81.1	79.6		10.3	15.0	12.1	2,772
	Craft and Related Trade Workers	7.6	1.8	4.7		2.8	1.0	1.9		17.6	4.3	12.3	216
	Plant and Machine Operators and Assemblers	4.8	0.8	2.8		1.4	0.6	1.0		11.7	1.4	7.6	129
	Elementary Occupation	9.9	10.6	10.2		8.2	9.0	8.6		13.4	16.1	14.5	464
	Workers not else Classified	0.2	0.1	0.1		0.0	0.0	0.0		0.7	0.2	0.5	7
	No information	2.5	3.5	2.9		2.1	3.0	2.6		3.2	4.9	3.9	134
	Total	100.0	100.0	100.0		100.0	100.0	100.0		100.0	100.0	100.0	4,544

2006		All Zambia				Rural				Urban			Total number of employed persons (000's)
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	
Type of Occupation	Legislator, Senior officials and Managers	0.8	0.2	0.5		0.1	0.0	0.1		2.3	1.1	1.9	23
	Professionals	4.3	3.0	3.7		2.2	1.0	1.6		9.0	10.9	9.7	157
	Technicians and Associate Professionals	2.1	1.0	1.6		0.8	0.3	0.5		5.0	3.7	4.5	67
	Clerks	1.1	1.4	1.2		0.2	0.2	0.2		2.9	6.1	4.1	52
	Service Workers, Shop and Market Sales Workers	9.5	8.9	9.3		3.9	2.1	3.0		21.9	36.0	27.2	392
	Skilled Agricultural and Fisheries Workers	59.2	72.4	65.6		80.9	85.6	83.4		11.4	20.0	14.6	2,776
	Craft and Related Trade Workers	7.9	1.6	4.9		2.6	0.6	1.6		19.7	5.5	14.4	207
	Plant and Machine Operators and Assemblers	4.7	1.0	2.9		0.9	0.8	0.9		13.0	1.9	8.9	124
	Elementary Occupation	9.8	10.4	10.1		8.1	9.3	8.7		13.7	14.7	14.1	429
	Workers not else Classified	0.4	0.0	0.2		0.1	0.0	0.0		1.0	0.1	0.7	8
	Total	100.0	100.0	100.0		100.0	100.0	100.0		100.0	100.0	100.0	4,235

**Figure 8.11: Percentage Distribution of Employed Persons by Occupation in Urban Areas Among Persons Aged 12 Years and Above, for 2010**



#### 8.4.3. Distribution of Employed Persons by Employment Status

Table 8.8 shows the percentage distribution of employed persons by employment status. More than 53% of working Zambians are self-employed, where self-employment is defined as a person who operates his or her own economic enterprise(s) and hired no employees. The results show an increase in the proportions that are self-employed.

In addition, almost a quarter of workers are unpaid family workers, employed by the family on farms or in businesses for no pay. A comparison between the surveys shows that lower proportions of both men and women are working unpaid for the family than was the case in 2006.

The private sector is the next largest employer, employing 15% of men but only 5% of women. There is a marked difference between urban and rural private sector employment, in rural areas just 3.5% are employees in the private sector but this rises to 28% in urban areas. Moreover almost twice as many men (36%) as women (17%) are private sector employees in urban areas.

The public sector accounts for 6.7% of employees with most of these working for the Central Government. Higher proportions of men are employed in the public sector and this is particularly the case in rural areas. The findings suggest that women find it harder to access paid employment than men, with more than twice the proportion of men working as employees as women, a factor which rises dramatically in rural areas. This situation has changed little since the previous survey.

In contrast in urban areas, self-employment is more wide-spread among women, with half doing so (50%). Only 36% of urban men are self-employed, and in rural areas working for the family as an unpaid worker is much more common for women.



**Table 8.1 Percentage Distribution of Employed Persons Aged 12 Years and Above by Employment Status, Rural/Urban and Sex, for 2010 and 2006**

[illegible]

2006		All Zambia				Rural				Urban			
		Male	Female	Both Sexes		Male	Female	Both Sexes		Male	Female	Both Sexes	Total number of employed persons (000's)
Employment status	Self employed	57.2	41.6	49.8		66.3	39.6	52.6		36.5	50.0	41.5	2,107
	Central Government Employee	5.5	3.4	4.5		3.1	1.4	2.2		11.0	11.4	11.1	191
	Local Government Employee	0.6	0.2	0.4		0.2	0.0	0.1		1.4	0.8	1.2	16
	Parastatal Employee	1.9	0.4	1.2		0.2	0.1	0.1		5.8	2.0	4.4	52
	Private Sector Employee	13.2	4.2	8.9		4.3	1.3	2.8		33.6	16.0	27.0	378
	NGO Employee	0.3	0.3	0.3		0.2	0.1	0.1		0.7	1.1	0.8	13
	International Organisation Employee	0.1	0.1	0.1		0.0	0.1	0.1		0.3	0.1	0.2	5
	Employer/Partner	0.2	0.1	0.1		0.0	0.0	0.0		0.6	0.3	0.5	6
	Household Employee	1.2	1.1	1.2		0.4	0.1	0.3		3.1	4.8	3.7	49
	Unpaid family worker	17.4	47.6	31.8		23.8	56.3	40.5		2.9	12.5	6.5	1,348
	Pieceworker	2.0	0.9	1.5		1.3	0.9	1.1		3.7	0.9	2.6	63
	Other	0.2	0.1	0.2		0.1	0.0	0.1		0.5	0.2	0.4	7
	Total	100.0	100.0	100.0		100.0	100.0	100.0		100.0	100.0	100.0	4,234

**Table 8.9: Percentage Distribution of Employed Persons Aged 12 Years and Above by Employment Status and Industry, for 2010 and 2006**

[illegible][illegible]

## 8.5. Informal Sector Employment

Informal sector employment is defined in this report as employment where the employed persons were;

- not entitled to paid leave,
- not entitled to pension, gratuity and social security, and
- worked in an establishment employing 5 persons or less.

All three requirements had to be fulfilled in order to classify a person as working in the informal sector.

Table 8.10 shows the proportion of employed persons in the informal sector by residence and stratum. The results show that 83%, (about 3.7 million persons), of the employed persons were engaged in the informal sector in 2010. In 2006, this was 84% (about 3.5 million persons). The proportion working in the informal sector has thus changed little since 2006 but total numbers have. Employment among females (90% of female workers) in the informal sector is still higher than that of men (76%).

Of those employed in the informal sector, 77% work in agriculture (see Table 8.12). In rural areas, 90% of working people do so in establishments classified as informal agricultural, compared with just 21% in urban areas. More importantly, more than 2.9 million rural inhabitants work in the informal sector but only 0.7 million people from urban areas do so. It is estimated that the informal sector has grown in total numbers of workers since 2006, although this represents a declining proportion of the working population. The increases have been largely in the non-agricultural informal sector.

The distribution by province shows that informal sector employment is particularly high in Eastern, Luapula and Northern provinces. It is relatively low in Lusaka and the Copperbelt. The discrepancy between men and women working in the informal sector is particularly high in the Copperbelt, with 76 percent of women as compared to only 54% of men. This can also be seen in Figure 8.12.

**Table 8.10: Proportion of Persons Aged 12 Years and Above who were Employed in the Informal Sector, by Sex, Rural/Urban Stratum and Province, for 2010 and 2006**

2010		Employed in informal sector			
		Male	Female	Both Sexes	Total number of Persons employed (000's)
Rural/urban	Rural	87.9	95.4	91.8	3,291
	Urban	51.6	69.0	58.4	1,253
Stratum	Small Scale	90.3	96.2	93.5	3,002
	Medium Scale	86.6	92.8	89.8	108
	Large Scale	65.2	80.6	72.9	4
	Non Agric	57.4	77.0	64.7	176
	Low Cost	57.9	77.7	65.5	908
	Medium Cost	35.4	51.3	41.9	218
	High Cost	31.5	41.8	36.0	127
Province	Central	77.7	90.4	83.9	488
	Copperbelt	54.2	76.3	62.5	523
	Eastern	90.0	96.6	93.5	737
	Luapula	90.1	96.5	93.5	396
	Lusaka	52.9	66.3	58.3	537
	Northern	90.0	95.8	93.0	635
	North Western	80.7	91.4	86.1	250
	Southern	76.3	89.6	82.8	597
	Western	87.3	93.2	90.6	381
All Zambia	All Zambia	76.1	89.5	82.6	4,544

2006		Employed in informal sector			
		Male	Female	Both Sexes	Total number of Persons employed (000's)
Rural/urban	Rural	89.4	96.6	93.1	3,130
	Urban	51.2	70.9	58.6	1,105
Stratum	Small Scale	90.5	97.1	94.0	2,904
	Medium Scale	87.4	96.0	91.8	103
	Large Scale	64.4	88.7	78.1	3
	Non Agric	67.9	80.3	73.0	121
	Low Cost	56.0	77.6	63.9	878
	Medium Cost	33.3	51.3	40.4	131
	High Cost	29.8	41.6	34.6	96
Province	Central	81.7	90.5	86.0	458
	Copperbelt	54.9	77.8	63.2	475
	Eastern	89.2	96.8	93.2	735
	Luapula	89.8	95.6	92.8	369
	Lusaka	52.8	70.7	59.4	470
	Northern	87.7	97.0	92.5	625
	North Western	87.1	95.7	91.5	245
	Southern	78.3	91.9	84.7	507
	Western	92.1	95.7	94.0	352
All Zambia	All Zambia	77.0	91.3	83.9	4,235

Figure 8.12: Proportion of Persons Employed in the Informal Sector by Province Among Persons Aged 12 Years and Above, for 2010

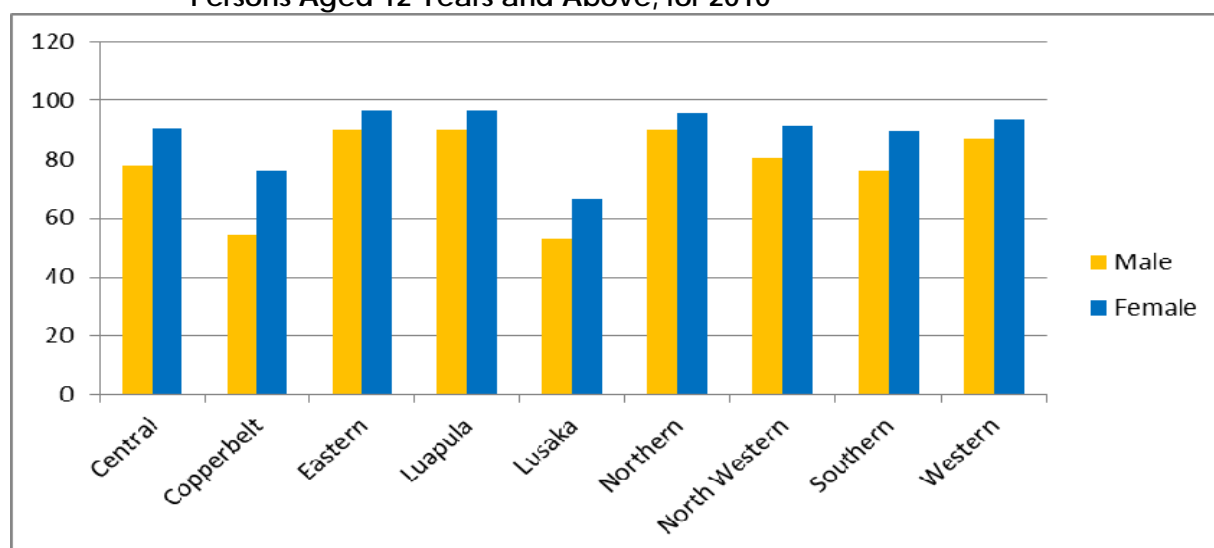


Table 8.11 adds to the above formal/informal sector distribution by gender and type of industry. It also presents total numbers for both sectors. Women are far less likely to work in the formal sector. The highest proportions of informal workers can be found in agriculture (95%) and trade (89%).

**Table 8.11: Percentage Distribution of Employed Persons by whether they are in Formal or Informal Sector, by Sex, Rural/Urban, Stratum, Province and Industry, for 2010 and 2006**

2010		Sector of Employment					Number of employed persons 12 years and above (000's)	
		Formal Sector			Informal Sector			
		Number of Persons (000's)	Per cent		Number of Persons (000's)	Per cent		Missing data (number of persons, 000's)
Sex	Male	549	23.9		1,750	76.1	39	2,339
	Female	228	10.5		1,938	89.5	40	2,206
Rural/Urban	Rural	267	8.2		2,970	91.8	55	3,291
	Urban	511	41.6		718	58.4	24	1,253
Stratum	Small Scale	193	6.5		2,759	93.5	50	3,003
	Medium Scale	11	10.2		96	89.8	2	108
	Large Scale	1	27.1		3	72.9	0	4
	Non Agric	61	35.3		113	64.7	2	176
	Low Cost	308	34.5		584	65.5	16	908
	Medium Cost	123	58.1		89	41.9	6	218
	High Cost	80	64.0		45	36.0	2	127
Province	Central	77	16.1		403	83.9	8	488
	Copperbelt	193	37.5		322	62.5	7	523
	Eastern	47	6.5		679	93.5	11	737
	Luapula	25	6.5		364	93.5	6	396
	Lusaka	221	41.7		308	58.3	9	537
	Northern	43	7.0		581	93.0	11	635
	North Western	34	13.9		212	86.1	4	250
	Southern	101	17.2		486	82.8	10	597
	Western	35	9.4		334	90.6	12	381
Type of industry	Agriculture, forestry and fishing	152	5.1		2,836	94.9	41	3,029
	Mining and quarrying	54	82.5		11	17.5	0	66
	Manufacturing	49	37.1		82	62.9	2	132
	Electricity, gas & water	15	91.3		1	8.7	1	17
	Construction	31	39.1		48	60.9	1	80
	Wholesale and retail trade & repairs	51	11.2		407	88.8	9	468
	Hotels and restaurants	23	53.3		20	46.7	1	44
	Transportation & communication	57	49.6		58	50.4	2	117
	Finance, insurance & real estate	17	71.8		7	28.2	1	25
	Community, social and personal services	297	77.5		86	22.5	4	388
	Other	19	23.4		61	76.6	1	80
	No information	12	15.3		69	84.7	17	99
All Zambia	All Zambia	777	17.4		3,688	82.6	79	4,544

2006		Sector of employment					
		Formal Sector			Informal Sector		
		Number of Persons (000's)	Percent		Number of Persons (000's)	Percent	
Rural/Urban	Rural	296	7.0		2,912	93.0	3,130
	Urban	1,800	42.5		635	57.5	1,105
Stratum	Small Scale	258	6.1		2,727	93.9	2,904
	Medium Scale	348	8.2		94	91.8	103
	Large Scale	929	21.9		3	78.1	3
	Non Agric	1,256	29.7		85	70.3	121
	Low Cost	1,573	37.1		552	62.9	878
	Medium Cost	2,574	60.8		51	39.2	131
	High Cost	2,791	65.9		33	34.1	96
Province	Central	601	14.2		393	85.8	458
	Copperbelt	1,587	37.5		297	62.5	475
	Eastern	291	6.9		684	93.1	735
	Luapula	306	7.2		343	92.8	369
	Lusaka	1,777	42.0		273	58.0	470
	Northern	320	7.5		578	92.5	625
	North Western	365	8.6		223	91.4	245
	Southern	657	15.5		428	84.5	507
Type of Industry	Western	260	6.1		330	93.9	352
	Agriculture and Fisheries	2,875	95.6		132	4.4	3,006
	Mining and Quarry	11	15.2		59	84.8	69
	Manufacturing	95	58.2		68	41.8	163
	Electricity and Water supply	2	10.9		13	89.1	15
	Construction	31	57.9		22	42.1	53
	Wholesale and Retail	345	88.6		44	11.4	389
	Hotel and Restraunt	14	39.1		21	60.9	35
	Transport and Communication	35	42.3		48	57.7	84
	Financial Services and real estate	35	41.4		50	58.6	85
	Public Services	46	16.4		233	83.6	279
	Private Household services	48	88.4		6	11.6	54
	International organisation	0.3	14.8		2	85.2	2
All Zambia	All Zambia	693	16.4		3,541	83.6	4,235

Table 8.12 presents the distribution of informal workers by working either in the agricultural sector or not. As seen in table 8.11 a large proportion of agricultural workers are classified as informal.. As a result, we find below that of those working in employment classified as informal, the majority of 77% work in the agriculture sector. This is a decrease from 2006, where 82% of informal workers were employed in agriculture. However, total numbers have not changed.

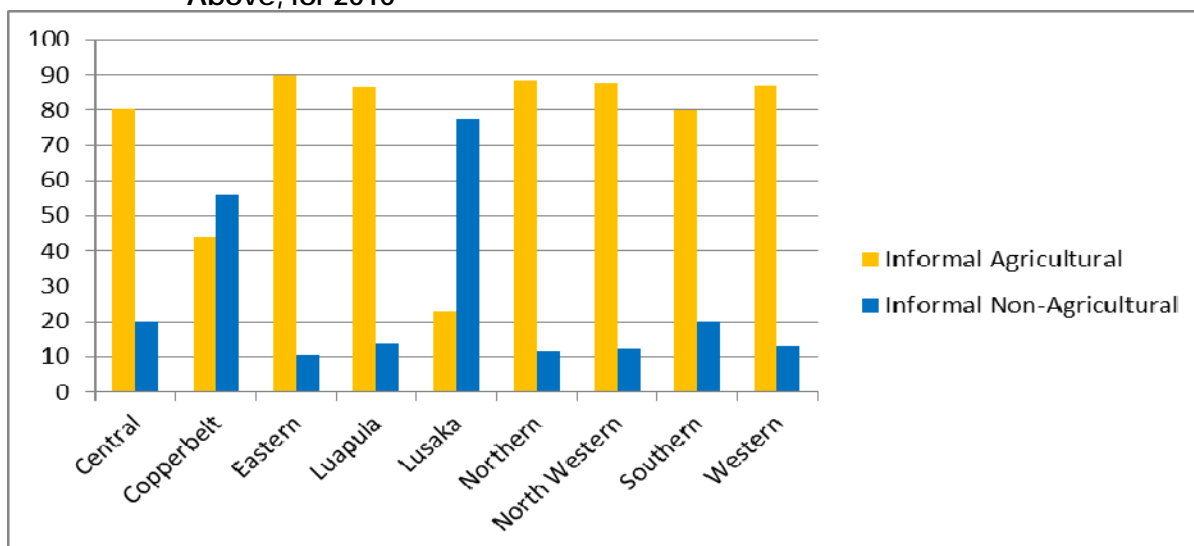
Generally, persons living in rural areas were more often in informal agricultural sector employment than those residing in urban areas, 91 percent as compared to 21 percent. The highest proportion of non-agricultural informal sector employment was found in urban medium and high cost areas, at around 86 percent.

**Table 8.12: Percentage Distribution of Informally Employed Persons by whether they are in Informal Agricultural or Informal Non-Agricultural Sector by Sex, Rural/Urban, Stratum and Province, for 2010 and 2006**

2010		Sector of Employment				Number of employed persons 12 years and above in the informal sector ('000s)
		Informal Agricultural		Informal Non-Agricultural		
		Number of Persons	Percent	Number of Persons	Percent	
Sex	Male	1,304	74.5	446	25.5	1,750
	Female	1,532	79.1	406	20.9	1,938
Rural/Urban	Rural	2,688	90.5	282	9.5	2,970
	Urban	149	20.7	569	79.3	718
Stratum	Small Scale	2,538	92.0	221	8.0	2,759
	Medium Scale	88	92.5	7	7.5	95
	Large Scale	3	93.0	0	7.0	3
	Non Agric	59	52.0	54	48.0	113
	Low Cost	130	22.2	455	77.8	584
	Medium Cost	13	14.6	76	85.4	89
	High Cost	6	13.5	39	86.5	45
Province	Central	323	80.1	80	19.9	402
	Copperbelt	142	44.0	180	56.0	322
	Eastern	609	89.7	70	10.3	679
	Luapula	314	86.2	50	13.8	364
	Lusaka	69	22.6	238	77.4	308
	Northern	514	88.5	67	11.5	581
	North Western	186	87.8	26	12.2	212
	Southern	389	80.0	97	20.0	486
	Western	291	87.0	43	13.0	334
All Zambia	All Zambia	2,836	76.9	852	23.1	3,688

2006		Sector of Employment				Number of employed persons 12 years and above in the informal sector ('000s)
		Informal Agricultural		Informal Non-Agricultural		
		Number of Persons ('000s)	Percent	Number of Persons ('000s)	Percent	
Sex	Male	1,334	78.5	366	21.5	1,700
	Female	1,563	84.4	289	15.6	1,851
Rural/Urban	Rural	2,731	93.7	183	6.3	2,914
	Urban	160	24.7	487	75.3	647
Stratum	Small Scale	2,591	95.0	137	5.0	2,728
	Medium Scale	92	97.7	2	2.3	94
	Large Scale	3	97.7	0	2.3	3
	Non Agric	40	45.2	48	54.8	88
	Low Cost	146	26.0	415	74.0	561
	Medium Cost	9	17.5	44	82.5	53
	High Cost	5	14.6	28	85.4	33
Province	Central	348	88.3	46	11.7	394
	Copperbelt	166	55.2	134	44.8	300
	Eastern	645	94.2	40	5.8	684
	Luapula	298	86.8	45	13.2	343
	Lusaka	67	24.0	212	76.0	280
	Northern	522	90.4	56	9.6	578
	North-Western	204	91.1	20	8.9	224
	Southern	354	82.4	75	17.6	429
	Western	293	88.7	37	11.3	331
All Zambia	All Zambia	2,897	81.6	654	18.4	3,551

**Figure 8.13: Percentage Distribution of Employed Persons in the Informal Agricultural and Non-Agricultural Sector, by Province Among Persons Aged 12 Years and Above, for 2010**



## 8.6. Secondary Jobs

Table 8.13 illustrates the proportion of the currently employed persons with secondary jobs by employment status in their first job and sex. About 11% of the employed persons held at least one secondary job. The results also show that a higher proportion of men have a secondary job than women, 15% as compared to 7%.

The probability of having a second job is not strongly related to employment status. Private sector workers, domestic and family workers are the least likely to have secondary jobs. Central Government employees are the most likely to have a second job, if only slightly more so in comparison with the self-employed. NGO and local government employees also display high rates; however, their total number is very small.

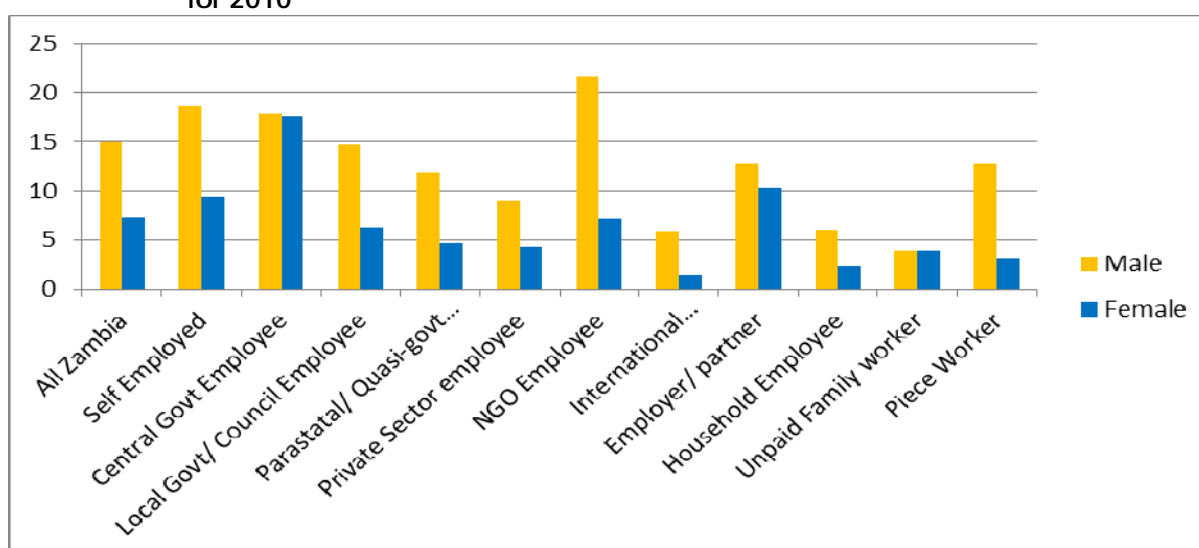
**Table 8.13: Proportion Of Employed Persons who held Secondary Jobs by Sex and Employment Status in first job, for 2010 and 2006**

2010	Secondary Job			Employed persons (000's)
	Male	Female	Both Sexes	
Self Employed	18.7	9.5	14.7	2,441
Central Govt Employee	17.9	17.7	17.8	254
Local Govt/ Council Employee	14.7	6.3	12.6	17
Parastatal/ Quasi-govt Employee	11.9	4.6	10.5	33
Private Sector employee	8.9	4.3	7.8	469
NGO Employee	21.7	7.1	15.0	20
International Organisation/Embassy Employee	5.9	1.5	3.8	3
Employer/ partner	12.7	10.3	12.0	16
Household Employee	6.0	2.3	4.0	64
Unpaid Family worker	3.9	3.9	3.9	1,071
Piece Worker	12.8	3.1	9.6	84
Other	23.0	0.6	16.0	9
No information	7.2	3.3	5.3	64
All Zambia	14.9	7.3	11.2	4,544



2006	Secondary Job			Employed persons (000's)
	Male	Female	Both Sexes	
Self Employed	18.8	11.0	15.7	2,107
Central Government Employee	24.2	16.8	21.5	191
Local Government Employee	20.3	1.1	15.9	16
Parastatal Employee	8.4	3.7	7.5	52
Private Sector Employee	8.8	5.3	8.0	378
NGO Employee	33.9	14.3	25.9	13
Embassy Employee	17.6	19.1	18.3	5
Employer/Partner	28.5	15.2	24.3	6
Household employee	9.8	3.0	6.7	49
Unpaid Family worker	4.9	5.0	5.0	1,349
Piece worker	7.7	5.2	6.9	63
Worker not else classified	0.0	0.0	0.0	0
Other	29.7	1.9	23.2	7

Figure 8.14: Proportion of Employed Persons with Secondary Jobs by employment status, for 2010



## 8.7. Reason for changing

Table 8.14: Percentage Distribution of Presently Employed Persons who Changed Jobs, by Reason of Changing and Sex, for 2010 and 2006

2010	Main reason for changing Job			Number of employees who changed jobs
	Male	Female	Both sexes	
Lack of profit	16.3	23.3	18.3	18,588
Low wage/ Salary	17.6	10.0	15.5	15,736
Was a temporary job	11.5	9.9	11.0	11,211
Contract Expired	8.5	2.9	6.9	7,045
Got Another Job	6.1	5.1	5.8	5,925
Poor working conditions	6.1	5.1	5.8	5,904
Fired/Dismissed	4.0	4.3	4.1	4,127
Retrenched /Declared Redundant	5.2	0.4	3.9	3,961
Enterprise closed	2.8	2.6	2.7	2,765
Retired	2.5	0.4	1.9	1,979
Bankruptcy	0.7	3.3	1.5	1,482
Enterprise Liquidated	0.3	0.6	0.4	367
Enterprise Privatised	0.2	0.0	0.2	180
Other	6.1	12.3	7.9	8,001
No information	12.0	19.8	14.2	14,436
Total	100.0	100.0	100.0	101,708

2006	Reason for changing Job			Number of employees who changed jobs
	Male	Female	Both Sexes	
Was a temporary job	27.5	23.5	27.5	20,494
Low wage/salary	21.4	20.9	21.4	15,931
Lack of profit	20.4	30.4	20.4	15,222
Got another job	6.6	4.7	6.6	4,899
Enterprise closed	5.8	2.7	5.8	4,329
Fired	4.4	3.8	4.4	3,246
Bankruptcy	2.7	1.3	2.8	2,004
Retired	2.7	3.9	2.7	2,054
Retrenched/declared redundant	2.4	0.5	2.4	1,803
Enterprise liquidated	0.5	0.5	0.5	367
Enterprise privatised	0.1	0.0	0.1	70
Other	5.6	7.8	5.6	4,163
Total	100	100	100	74,581

Table 14 shows the persons who changed jobs and the reasons for doing so. The total number is very small. The most common reason for changing jobs was either a lack of profit or a low salary. Men were more likely to change jobs because of a low salary whereas women were more likely to change jobs due to a lack of profits. This reflects an earlier finding that urban women are more likely to be self-employed than men.

The most significant change can be found in comparison to previous survey rounds. In 2004, more than a third of people who changed jobs did so because it was a temporary assignment. That proportion in 2006 was still 27%. However, this reason for changing was only stated by 11% of job-changing respondents in 2010 – an indicator that temporary employment could have decreased in 2010.

## 8.8. Income Generating Activities among Persons Presently Unemployed or Inactive

An attempt was made to find out whether persons who identified themselves as being inactive or unemployed performed any income generating activities. Strictly speaking any person who carries out any activity for profit or gain for himself or his family is considered economically active if this activity takes one hour or more per week. This question is necessary because some people do not consider these activities as constituting 'work'.

In 2004 only 1.7% of those aged 12 years and not currently reported as working declared any income generating activities. In 2006 this proportion was up to 3%. The result for 2010 in table 15 shows that about 3.2% of the inactive or unemployed were in fact engaged in some income generating activity, especially those aged 30 and above.

Of those engaged in income generating activities despite not being currently reported as working, 20% were petty vending at home, 15% were baking for sale, and 13% were doing piecework as main income generating activity.

**Table 8.2 Proportion Of Unemployed and Inactive Persons who were Engaged in Some Income Generating Activities by Sex, Age-Group Rural/Urban, Stratum and Main Economic Activity, for 2010 and 2006**

2010		Income Generating Activities	Number of unemployed and inactive Persons (000's)
		Proportion Engaged	
Sex	Male	2.5	1,717
	Female	3.7	2,142
Age group	12-19	0.7	2,371
	20-24	2.8	634
	25-29	6.0	299
	30-34	12.1	152
	35-39	13.7	95
	40-44	16.2	57
	45-49	17.9	43
	50-54	12.1	40
	55-59	16.6	33
	60-64	12.4	34
	65+	6.6	102
Rural/Urban	Rural	2.3	1,971
	Urban	4.0	1,887
Stratum	Small Scale	2.1	1,726
	Medium Scale	0.6	86
	Large Scale	5.2	3
	Non Agric	5.9	157
	Low Cost	4.3	1,364
	Medium Cost	3.7	349
	High Cost	2.9	174
Main economic activity	Inactive	2.2	3,169
	Unemployed	7.6	689
All Zambia	All Zambia	3.2	3,859

2006		Income Generating Activities	Number of unemployed and inactive Persons (000's)
		Proportion Engaged	
Sex	Male	1.5	1,512
	Female	2.4	1,876
Age group	12-19	1.1	2,093
	20-24	3.2	554
	25-29	5.4	266
	30-34	8.8	130
	35-39	11.1	86
	40-44	12.4	56
	45-49	14.1	41
	50-54	12.8	28
	55-59	11.2	32
	60-64	13.7	24
	65+	5.8	79
Rural/Urban	Rural	1.4	1,650
	Urban	2.7	1,738
Stratum	Rural Small Scale	1.3	1,457
	Rural Medium Scale	0.4	74
	Rural Large Scale	2.7	3
	Rural Non Agric	3.0	116
	Urban Low Cost	3.1	1,354
	Urban Medium Cost	1.2	237
	Urban High Cost	1.2	147
All Zambia	All Zambia	3.1	3,388

# HOUSEHOLD FOOD PRODUCTION

## 9.1. Introduction

This chapter analyses data collected by the 2010 LCMS on household agricultural activities;

- Number of households engaged in agricultural activities
- Quantities produced of major food crops, and the percentage of agricultural households producing them
- Ownership of livestock

In the 2010 LCMS, households were asked about food crop production in the agricultural season October 2008 to September 2009; subsequent references to 2010 therefore actually refer this season. Where 2006 production is referred to, the agricultural season in question started in October 2005 and ended in September 2006.

## 9.2. Agricultural households

An agricultural household was defined as one where at least one of its members was engaged in growing crops, livestock/poultry owning, or fish farming or a combination of any of these.

Table 9.1 shows the percentage of households engaged in agricultural activities by residence and province for both 2010 and 2006.

The data suggest that the number of agricultural households rose from 1,552,000 to 1,631,000 while the proportion of total households which are agricultural remained at a similar level over time; 68 percent in 2006 compared to 66 percent in 2010. The proportion of rural households engaged in agriculture dropped slightly from 94 percent in 2006 to 91 percent in 2010 while the proportion of urban households engaged in agriculture remained at 21 percent.

In both years 2006 and 2010, Eastern and Luapula provinces had the highest proportion of households which are agricultural, 91 and 89 percent respectively in 2010; in both of these provinces the number of agricultural households increased over time although the proportions declined slightly. Lusaka had the lowest proportion of agricultural households, estimated at 17 percent in 2010 and 18 percent in 2006.

For all provinces, it appears that the overall proportion of households which are agricultural declined slightly or remained at the same level with North-Western

province experiencing the largest decline, from 86 percent in 2006 to 77 percent in 2010.

**Table 9.1: Percentage of households engaged in agricultural activities by province and rural/urban, 2010 and 2006**

2010			All Households (000s)	Agricultural Households		Non-Agricultural Households	
				Number (000s)	Percentage	Number (000s)	Percentage
Province	Central	Total	250	185	74.1	65	25.9
		Rural	188	171	91.3	16	8.7
		Urban	62	14	22.2	48	77.8
	Copperbelt	Total	369	128	34.7	241	65.3
		Rural	77	66	86.1	11	13.9
		Urban	292	62	21.2	230	78.8
	Eastern	Total	342	311	90.7	32	9.3
		Rural	309	294	95.2	15	4.8
		Urban	34	17	49.1	17	50.9
	Luapula	Total	191	170	89.1	21	10.9
		Rural	170	157	92.3	13	7.7
		Urban	21	13	63.3	8	36.7
	Lusaka	Total	366	63	17.1	304	82.9
		Rural	65	44	68.2	21	31.8
		Urban	301	18	6.0	283	94.0
	Northern	Total	318	274	86.4	43	13.6
		Rural	272	251	92.1	21	7.9
		Urban	46	24	52.1	22	47.9
	North Western	Total	138	106	77.2	31	22.8
		Rural	110	98	89.3	12	10.7
		Urban	28	8	28.9	20	71.1
	Southern	Total	311	226	72.7	85	27.3
		Rural	232	211	90.9	21	9.1
		Urban	79	16	19.7	64	80.3
	Western	Total	205	167	81.3	38	18.7
		Rural	178	155	87.5	22	12.5
		Urban	27	11	41.5	16	58.5
All Zambia	All Zambia	Total	2,491	1,631	65.5	860	34.5
		Rural	1,600	1,448	90.5	152	9.5
		Urban	891	183	20.5	708	79.5

2006			All Households (000s)	Agricultural Households		Non-Agricultural Households	
				Number (000s)	Percentage	Number (000s)	Percentage
Province	Central	Total	224	176	78.3	49	21.7
		Rural	169	158	93.5	11	6.5
		Urban	55	17	31.5	38	68.5
	Copperbelt	Total	338	126	37.2	212	62.8
		Rural	74	69	93.0	5	7.0
		Urban	264	57	21.5	207	78.5
	Eastern	Total	320	299	93.5	21	6.5
		Rural	295	285	96.6	10	3.4
		Urban	25	14	57.2	11	42.8
	Luapula	Total	178	163	92.0	14	8.0
		Rural	157	152	96.5	5	3.5
		Urban	21	12	57.2	9	42.8
	Lusaka	Total	331	58	17.6	273	82.4
		Rural	53	42	78.6	11	21.4
		Urban	278	16	5.9	261	94.1
	Northern	Total	296	257	87.0	39	13.0
		Rural	253	237	93.9	15	6.1
		Urban	43	20	46.4	23	53.6
	North Western	Total	131	113	85.9	18	14.1
		Rural	110	106	95.8	5	4.2
		Urban	21	7	33.6	14	66.4
	Southern	Total	284	206	72.6	78	27.4
		Rural	218	195	89.7	22	10.3
		Urban	67	11	16.7	56	83.3
	Western	Total	176	153	87.0	23	13.0
		Rural	155	145	93.7	10	6.3
		Urban	21	8	37.8	13	62.2
All Zambia	All Zambia	Total	2,279	1,552	68.1	727	31.9
		Rural	1,485	1,389	93.6	96	6.4
		Urban	794	163	20.5	631	79.5

### 9.3. Food crop production

#### 9.3.1. Maize

Table 9.2 shows the percentage of agricultural households which produced maize of all types (hybrid and local) and the total estimated quantity produced, by province and residence and for both 2010 and 2006.

**Table 9.2: Percentage of agricultural households producing maize and quantity produced, by province and rural/urban, 2010 and 2006**

2010		Agricultural households (000s)	Percent growing maize (all types)	Percent growing local maize	Percent growing hybrid maize	Maize production (Mt 000s)	% change over time in quantity produced (from 2006 to 2010)
Province	Central	185	92.8	47.1	55.8	411	0.4
	Copperbelt	128	88.8	57.6	38.3	161	-21.7
	Eastern	311	97.3	85.8	28.6	456	4.7
	Luapula	170	58.2	50.3	9.6	58	-4.5
	Lusaka	63	81.3	42.2	44.8	74	-19.2
	Northern	274	65.2	41.4	26.3	269	36.0
	North Western	106	87.3	69.4	21.1	100	3.2
	Southern	226	89.4	59.2	39.5	402	17.2
	Western	167	87.9	76.8	12.1	100	-0.1
Rural/Urban	Rural	1,448	83.7	62.6	28.7	1,813	6.0
	Urban	183	80.0	45.2	40.3	219	-5.2
All Zambia		1,631	83.3	60.7	30.0	2,032	4.6

2006		Agricultural households (000s)	Percent growing local maize	Percent growing hybrid maize	Maize production (Mt 000s)
Province	Central	176	57	46	409
	Copperbelt	126	63	39	206
	Eastern	299	86	26	436
	Luapula	163	48	12	61
	Lusaka	58	44	51	92
	Northern	257	46	20	198
	North Western	113	67	20	97
	Southern	206	65	36	343
	Western	153	78	14	101
Rural/Urban	Rural	1,389	64	26	1,711
	Urban	163	57	41	231
All Zambia		1,552	64	27	1,942

The total quantity of maize produced increased over time from 1.9 million Mt in 2006 to 2.0 million Mt in 2010; the proportion of agricultural households producing local maize declined marginally from 64 percent in 2006 to 61 percent in 2010, while the proportion of agricultural households producing hybrid maize increased marginally from 27 percent to 30 percent. It is worth noting that urban areas experienced a decline in the proportion of agricultural households producing maize, in particular local maize (falling from 57 percent in 2006 to 45 percent in 2010). The total quantity produced in urban areas fell from 231,000 Mt to 219,000 Mt.

Eastern province had the largest proportion of agricultural households producing local maize in both 2006 and 2010, around 86 percent in both years. In 2010, Central province had the largest proportion of agricultural households producing hybrid maize, estimated at 56 percent; this increased from 46 percent in 2006 although the proportion producing local maize in this province fell from 57 to 47 percent over time in this province. The proportion of

agricultural households producing hybrid maize also rose notably in Northern province (from 20 to 26 percent), where the total production of maize increased from 198,000 Mt to 269,000 Mt.

In 2006, Lusaka had the highest proportion of agricultural households producing hybrid maize; this declined from 51 percent to 45 percent in 2010; this province experienced one of the largest declines in the quantity of maize produced over time, as well as Copperbelt province.

The LCMS does not explore the reasons for the choice of maize grown.

### **9.3.2. Cassava, millet, sorghum and rice**

Table 9.3 shows the percentage of agricultural households producing cassava (flour), millet (threshed), sorghum and rice (paddy), as well as the estimated quantities produced in 2010 and 2006, by province and residence.

**Table 9.3: Percentage of agricultural households producing cassava, millet, sorghum and rice, and quantities produced, by province and rural/urban, 2010 and 2006**

2010		Agricultural households (000s)	Cassava (flour)		Millet (threshed)		Sorghum		Rice (paddy)	
			Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 50kg bags (000s)	Percent growing crop	Production 90kg bags (000s)
Province	Central	185	11.4	132	5.2	27	1.0	8	0.4	1
	Copperbelt	128	3.1	16	0.4	1	1.1	10	-	-
	Eastern	311	3.9	64	1.1	7	0.8	14	3.5	49
	Luapula	170	87.6	1,059	4.0	11	1.7	11	0.7	6
	Lusaka	63	4.4	13	0.4	1	0.3	1	-	-
	Northern	274	64.2	1,517	29.8	223	2.4	30	7.2	170
	North Western	106	41.5	239	1.2	2	3.3	21	-	-
	Southern	226	0.3	2	1.8	12	6.8	124	-	-
	Western	167	43.6	284	3.5	20	2.5	6	16.6	130
Rural/Urban	Rural	1,448	32.0	3,225	7.7	294	2.6	216	4.0	338
	Urban	183	10.5	103	1.1	9	0.9	7	1.2	21
All Zambia		1,631	29.6	3,328	7.0	303	2.4	223	3.7	359
			% change over time in quantity produced (from 2006 to 2010)							
Rural				12.9		11.6		-4.5		18.3
Urban				17.6		-		-		-15.2
All Zambia				13.1		14.6		-3.0		15.6

2006		Agricultural households (000s)	Cassava (flour)		Millet (threshed)		Sorghum		Rice (paddy)	
			Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 50kg bags (000s)	Percent growing crop	Production 90kg bags (000s)
Province	Central	176	12	65	6	18	3	15	-	-
	Copperbelt	126	7	64	1	3	1	16	-	-
	Eastern	299	3	21	2	9	1	26	4	63
	Luapula	163	85	324	4	21	1	23	2	19
	Lusaka	58	2	8	-	-	-	-	-	-
	Northern	257	65	1,188	23	165	1	13	6	128
	North Western	113	41	149	1	3	4	22	-	-
	Southern	206	1	5	4	25	7	85	-	-
	Western	153	23	119	7	22	6	30	11	98
Rural/Urban	Rural	1,389	29	2,856	7	263	3	226	3	286
	Urban	163	11	88	-	-	1	4	2	25
All Zambia		1,552	28	2,943	7	264	3	230	3	311



The overall proportions of agricultural households growing the above food crops only changed marginally or not at all from 2006 to 2010.

**Cassava:** The total proportion of agricultural households growing cassava increased slightly from 28 percent in 2006 to 30 percent in 2010 with total production in terms of 90kg bags increasing from 2,943,000 in 2006 to 3,328,000 in 2010. In both years, Luapula had the highest proportion of agricultural households producing this crop (88 percent in 2010 and 85 percent in 2006). In 2010, the majority of cassava was produced in Northern (1.5 million 90 kg bags) and Luapula (1.1 million 90kg bags) provinces; the total amount of cassava produced in these two provinces accounted for around 77 percent of national production. In Western province the proportion of agricultural households producing cassava increased from 23 percent in 2006 to 44 percent in 2010, with production increasing from 119,000 to 284,000 90kg bags.

**Millet:** The overall proportion of agricultural households growing millet remained at the same level, although total household production increased from 264,000 90kg bags in 2006 to 303,000 90kg bags in 2010. Northern province was the most significant producer of millet in both years, with production increasing from 165,000 90kg bags in 2006 to 223,000 90kg bags in 2010.

**Sorghum:** The total proportion of agricultural households growing sorghum remained at the same level, with total production falling slightly over time. In 2010 agricultural households produced 223,000 50kg bags, compared to 230,000 50kg bags produced in 2006. Southern province has had the highest proportion of agricultural households producing sorghum, around 7 percent in both years. In 2006 Western province was the second most significant producer of sorghum; 6 percent of agricultural households were producing this crop. This proportion fell to 3 percent in 2010, with production falling from 30,000 50kg bags to 6,000 50kg bags over time.

**Rice:** The total proportion of agricultural households growing rice remained at a similar level over time, with total production increasing slightly from 311,000 90kg bags in 2006 to 359,000 90kg bags in 2010. In both 2006 and 2010, Western and Northern provinces had the largest proportion of agricultural households producing rice; the proportion in Western province increased from 11 percent in 2006 to 17 percent in 2010, while the proportion in Northern province increased slightly from 6 to 7 percent over time. Production in Western province increased from 98,000 90kg bags in 2006 to 130,000 in 2010, while in Northern province production increased from 128,000 to 170,000 90kg bags from 2006 to 2010.

### **9.3.3. Mixed beans, soya beans, sweet potatoes, Irish potatoes and groundnuts**

Table 9.4 shows the percentage of agricultural households producing the above crops, as well as the estimated quantities produced in 2010 and 2006, by province and residence.

**Table 9.4: Percentage of agricultural households producing mixed beans, soya beans, sweet potatoes, Irish potatoes and groundnuts, and quantities produced, by province and rural/urban, 2010 and 2006**

2010		Agricultural households (000s)	Mixed beans		Soya beans		Sweet potatoes		Irish potatoes		Groundnuts (shelled)	
			Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 25kg bags (000s)	Percent growing crop	Production 10kg bags (000s)	Percent growing crop	Production 80kg bags (000s)
Province	Central	185	11.4	49	5.5	106	22.3	1,300	2.0	75	28.7	332
	Copperbelt	128	12.1	24	0.7	7	24.0	680	1.2	59	21.8	80
	Eastern	311	7.1	37	7.5	89	9.8	634	1.8	157	53.2	743
	Luapula	170	18.8	37	1.0	4	30.7	784	0.1	2	36.6	198
	Lusaka	63	4.8	7	0.8	4	9.8	95	1.1	14	15.3	48
	Northern	274	37.3	260	3.3	17	27.3	1,584	0.9	74	41.9	292
	North Western	106	23.0	55	0.7	2	20.7	503	7.2	415	11.7	42
	Southern	226	3.3	15	0.3	1	20.4	987	0.5	59	27.1	261
	Western	167	1.3	6	-	-	5.2	102	-	-	6.6	49
Rural/Urban	Rural	1,448	14.8	460	3.1	221	20.2	6,290	1.5	797	33.3	1,935
	Urban	183	8.9	30	1.4	10	11.1	380	0.5	58	19.5	112
All Zambia	All Zambia	1,631	14.1	490	2.9	230	19.2	6,670	1.4	855	31.8	2,047
% change over time in quantity produced (from 2006 to 2010)												
	Rural			46.7		-10.7		403.1		-2.8		138.5
	Urban			37.6		49.4		379.3		5.4		17.0
	All Zambia			46.1		-9.2		401.6		-2.3		125.7

2006		Agricultural households (000s)	Mixed beans		Soya beans		Sweet potatoes		Irish potatoes		Groundnuts (shelled)	
			Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 90kg bags (000s)	Percent growing crop	Production 25kg bags (000s)	Percent growing crop	Production 10kg bags (000s)	Percent growing crop	Production 80kg bags (000s)
Province	Central	176	10	21	3	50	20	484	1	134	19	125
	Copperbelt	126	7	18	2	6	13	107	1	37	20	86
	Eastern	299	5	16	10	171	5	64	1	102	27	148
	Luapula	163	10	18	0	1	13	116	0	32	44	163
	Lusaka	58	4	4	2	3	4	21	1	20	12	24
	Northern	257	36	206	3	18	18	258	3	299	38	171
	North Western	113	14	21	-	-	7	41	4	249	5	12
	Southern	206	4	30	-	-	13	208	-	-	25	169
	Western	153	1	2	-	-	4	31	-	-	3	8
Rural/Urban	Rural	1,389	12	313	4	247	12	1,250	1	820	25	811
	Urban	163	6	22	1	6	7	79	1	55	18	95
All Zambia	All Zambia	1,552	11	335	3	253	11	1,330	1	875	24	907

**Mixed beans:** The overall proportion of agricultural households producing mixed beans increased from 11 percent in 2006 to 14 percent in 2010 with national production increasing from 335,000 to 490,000 90kg bags over the same period.. Northern province had the highest proportion of agricultural households producing this crop in both 2006 and 2010 (36 and 37 percent respectively), and in both years produced the largest share of the crop; in 2010 Northern province produced 260,000 90kg bags, compared to 206,000 90kg bags in 2006. Copperbelt, Luapula and North-Western provinces experienced notable increases in the proportion of agricultural households producing the crop.

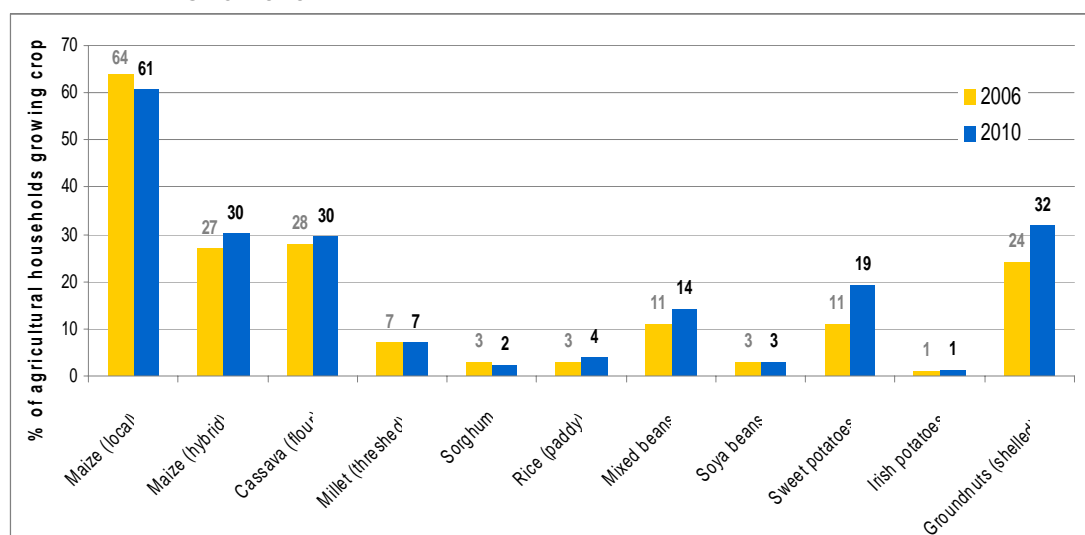
**Soya beans:** The total quantity of soya beans produced fell slightly between 2006 and 2010 from 253,000 to 230,000 90kg bags. In 2006, Eastern province was the major producer of this crop both in terms of quantity produced and the proportion of agricultural households producing the crop. However, by 2010 the quantity produced in Eastern province fell substantially from 171,000 to 89,000 90kg bags, with the proportion of agricultural households producing the crop declining from 10 percent to 8 percent. Central province approximately doubled its production of soya beans over time (from 50,000 to 106,000 90kg bags) with the proportion of agricultural households producing the crop increasing from 3 percent in 2006 to 6 percent in 2010.

**Sweet potatoes:** Between 2006 and 2010 total household production of sweet potatoes increased fivefold, from 1.3 million to 6.7 million 25 kg bags; the overall proportion of agricultural households producing sweet potatoes increased from 11 percent in 2006 to 19 percent in 2010. All provinces showed an increase in the proportion of agricultural households producing this crop, and in North Western, Lusaka and Luapula, the proportion more than doubled. In 2010 Northern province produced the largest share of sweet potatoes; production in 2010 was 6 times the level of production in 2006 (1.6 million 25kg bags compared to 258,000 25kg bags). Households in Central province produced the second highest quantity of sweet potatoes in 2010 (formerly the major producer in 2006) and increased production from 484,000 to 1.3 million 25 kg bags between 2006 and 2010. In Southern province, household production more than quadrupled from 208,000 to nearly 1 million 25 kg bags between 2006 and 2010.

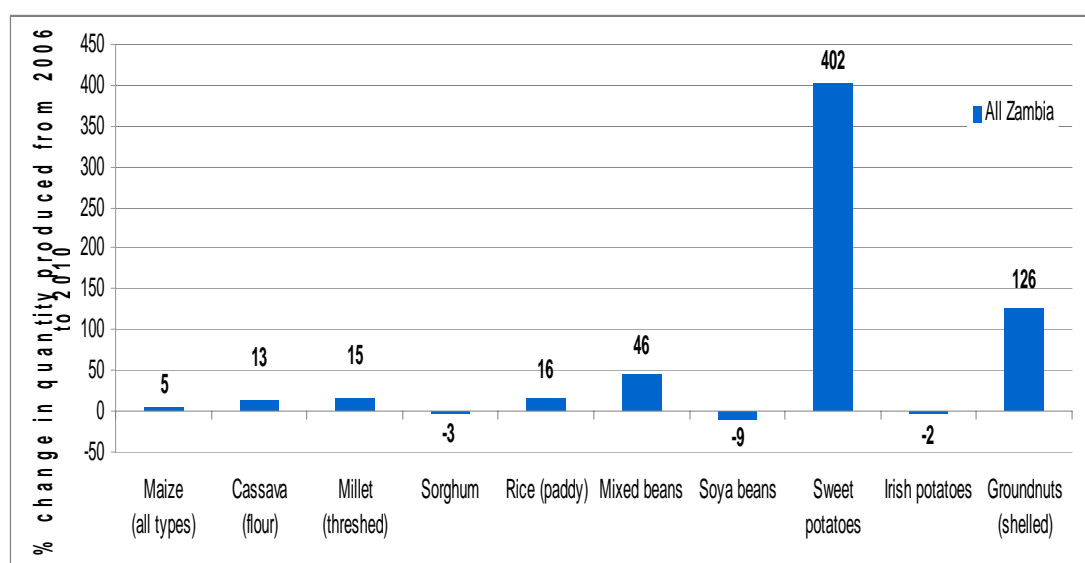
**Irish potatoes:** The total quantity of Irish potatoes produced fell slightly from 875,000 to 855,000 10kg bags between 2006 and 2010. In 2010, households in North-Western province produced the largest share of Irish potatoes, with production increasing from 249,000 10kg bags in 2006 to 415,000 10kg bags in 2010.

**Groundnuts:** The overall production of groundnuts more than doubled between 2006 to 2010 (from 907,000 to 2 million 80kg bags), with the proportion of agricultural households producing the crop increasing from 24 to 32 percent. Eastern province was the major producer in 2010 and made the most notable change from 2006 to 2010 both in terms of the proportion of agricultural households growing the crop (which rose from 27 percent in 2006 to 53 percent in 2010), and in terms of the quantity produced, which increased fivefold from 148,000 80kg bags in 2006 to 743,000 80kg bags in 2010.

**Figure 9.1: Percentage of agricultural households producing each crop, 2006 and 2010**



**Figure 9.2: Percentage change in quantity produced, all crops, from 2006 to 2010**



## 9.4. Livestock and poultry ownership

### 9.4.1. Livestock ownership (cattle, goats, pigs, sheep)

The overall number of agricultural households in Zambia owning livestock increased between 2006 and 2010, from 422,000 to 588,000. The largest increase was seen in Southern province, where the number of households owning livestock almost doubled from 80,000 to 144,000. In both 2006 and 2010, Eastern province had the highest number of households owning livestock.

The proportion of livestock-owning-households owning cattle and pigs declined from 62 in 2006 to 53 percent in 2010 for cattle, and from 43 to 30 percent for pigs. The largest decline in the proportion of livestock-owning-households owning cattle took place in Central province, whilst the largest declines in the percentage of livestock-owning-households owning pigs took place in Northern and North-Western provinces.

**Table 9.5: Percentage of livestock-owning-households by type of livestock, province and rural/urban, 2010 and 2006**

2010		Agricultural Households (000s)	Households owning livestock (000s)	Percent owning cattle	Percent owning goats	Percent owning pigs	Percent owning sheep
Province	Central	185	79	61.2	70.3	9.0	2.5
	Copperbelt	128	17	26.3	58.4	32.5	3.7
	Eastern	311	155	60.6	38.5	60.8	4.3
	Luapula	170	36	8.9	81.9	21.3	1.3
	Lusaka	63	15	49.8	67.7	12.6	1.3
	Northern	274	75	22.2	70.3	28.7	2.4
	North Western	106	28	18.8	85.7	8.3	1.3
	Southern	226	144	66.6	65.6	21.6	3.4
	Western	167	40	87.1	12.4	14.4	-
Rural/Urban	Rural	1,448	561	52.1	58.5	30.4	2.9
	Urban	183	28	63.2	46.3	23.6	3.8
All Zambia	All Zambia	1,631	588	52.6	57.9	30.1	2.9

2006		Agricultural Households (000s)	Households owning livestock (000s)	Percent owning cattle	Percent owning goats	Percent owning pigs	Percent owning sheep
Province	Central	176	48	78	73	13	3
	Copperbelt	126	15	36	47	32	-
	Eastern	299	106	58	48	59	4
	Luapula	163	31	4	79	30	4
	Lusaka	58	16	50	49	22	6
	Northern	257	65	30	62	47	5
	North Western	113	20	15	69	30	9
	Southern	206	80	65	47	26	1
	Western	153	41	80	11	19	-
Rural/Urban	Rural	1,389	396	62	59	43	3
	Urban	163	26	61	34	36	2
All Zambia	All Zambia	1,552	422	62	59	43	3

Table 9.6 shows the number and percentage distribution of livestock by type, for 2010 and 2006.

The number of cattle owned by agricultural households fell from 3 million to 2.6 million between 2006 and 2010, while the number of sheep owned by households declined from 167,000 to 116,000. During the same period the number of goats owned by households increased from 1.4 million to 2.1 million and the number of pigs also increased, from 682,000 in 2006 to 814,000 in 2010.

The largest decline in cattle ownership between 2006 and 2010 occurred in Southern province, where the number of cattle owned by households fell from 1.6 million to 979,000. However, during this period a large increase in cattle ownership was reported for Eastern province where cattle owned by households increased from 233,000 to 601,000.

The increase in goat ownership was mainly seen in Southern, Central and Eastern provinces. In Central province the number of goats owned more than doubled from 187,000 to 423,000 goats while in Southern province the number of goats owned increased from 459,000 to 703,000.

**Table 9.6: Number and percentage distribution of livestock by type, province and rural/urban, 2010 and 2006**

2010		Cattle		Goats		Pigs		Sheep	
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Province	Central	410	15.7	423	20.1	35	4.3	11	9.6
	Copperbelt	39	1.5	57	2.7	32	4.0	8	6.8
	Eastern	601	23.0	324	15.4	470	57.8	39	33.5
	Luapula	16	0.6	118	5.6	23	2.8	2	1.6
	Lusaka	67	2.6	98	4.6	13	1.6	2	1.8
	Northern	87	3.3	236	11.2	72	8.8	5	4.5
	North Western	60	2.3	128	6.1	14	1.8	1	0.8
	Southern	979	37.5	703	33.4	126	15.5	48	41.4
	Western	352	13.5	21	1.0	29	3.5	-	-
Rural/Urban	Rural	2,452	93.9	1,986	94.2	767	94.2	108	93.2
	Urban	158	6.1	122	5.8	47	5.8	8	6.8
All Zambia	All Zambia	2,610	100	2,108	100	814	100	116	100

2006		Cattle		Goats		Pigs		Sheep	
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Province	Central	241	8.1	187	13.1	31	4.5	20	12.1
	Copperbelt	101	3.4	60	4.2	32	4.6	14	8.3
	Eastern	233	7.8	194	13.6	290	42.6	26	15.3
	Luapula	19	0.6	86	6.0	41	6.0	63	37.5
	Lusaka	140	4.7	89	6.2	50	7.3	11	6.3
	Northern	126	4.2	245	17.2	65	9.6	12	7.2
	North Western	56	1.9	75	5.2	41	6.0	13	7.8
	Southern	1,650	55.1	459	32.2	97	14.2	9	5.5
	Western	430	14.4	33	2.3	36	5.3	-	-
Rural/Urban	Rural	2,795	93.3	1,307	91.5	620	91.0	154	92.2
	Urban	200	6.7	121	8.5	53	7.7	13	7.8
All Zambia	All Zambia	2,995	100	1,428	100	682	100	167	100

#### 9.4.2. Poultry ownership (chicken, ducks/geese, guinea fowl, other)

The number of agricultural households owning poultry increased from 881,000 to 1 million between 2006 and 2010. The majority of households owning poultry lived in rural areas; there was an increase in the number of rural households owning poultry from 749,000 in 2006 to 936,000 in 2010. In urban areas there was a fall in households owning poultry from 132,000 in 2006 to only 67,000 in 2010.

Eastern province experienced the largest increase in the number households owning poultry, from 107,000 in 2006 to 208,000 in 2010; it had the highest number of poultry owning households in 2010, while Northern province had the highest number in 2006.

Among agricultural households owning poultry, nearly all own chickens while a small proportion own other poultry such as ducks, geese and/or guinea fowl.

**Table 9.7: Percentage of poultry-owning-households by type of poultry, province and rural/urban, 2010 and 2006**

2010		Agricultural Households (000s)	Households keeping poultry (000s)	Percent owning chicken	Percent owning ducks/geese	Percent owning guinea fowl	Percent owning other poultry
Province	Central	185	128	99.0	7.3	8.0	4.6
	Copperbelt	128	58	99.0	7.3	1.2	2.8
	Eastern	311	208	97.2	8.4	5.8	3.9
	Luapula	170	104	98.4	9.3	2.2	1.1
	Lusaka	63	38	97.7	7.1	3.6	5.1
	Northern	274	176	98.4	5.8	0.6	1.1
	North Western	106	48	98.9	2.5	1.1	0.6
	Southern	226	178	99.3	6.2	7.0	6.9
	Western	167	64	97.8	2.7	0.5	1.8
Rural/Urban	Rural	1,448	936	98.7	6.2	4.2	3.3
	Urban	183	67	94.0	14.4	3.0	5.2
All Zambia		1,631	1,003	98.4	6.7	4.1	3.4

2006		Agricultural Households (000s)	Households keeping poultry (000s)	Percent owning chicken	Percent owning ducks/geese	Percent owning guinea fowl	Percent owning other poultry
Province	Central	176	131	99	8	16	16
	Copperbelt	126	51	98	15	6	6
	Eastern	299	107	98	7	5	6
	Luapula	163	95	96	12	4	2
	Lusaka	58	38	97	7	6	7
	Northern	257	170	98	6	3	6
	North Western	113	51	96	11	2	3
	Southern	206	159	99	3	20	14
	Western	153	79	99	6	2	1
Rural/Urban	Rural	1,389	749	99	6	8	9
	Urban	163	132	99	15	5	10
All Zambia		1,552	881	99	6	10	9

Table 9.8 shows the number and percentage distribution of poultry by type for 2010 and 2006.

Overall numbers of all types of poultry owned by agricultural households declined between 2006 and 2010; the number of chickens owned declined from 15.9 million to 14.4 million, the number of ducks/geese fell from 433,000 to 379,000 and the number of guinea fowl fell from 498,000 to 262,000.

While Southern, Lusaka, Northern, Central and Copperbelt all showed large declines in the number of chickens owned, in Eastern province the number increased from 1.5 million in 2006 to 2.5 million in 2010.

**Figure 9.8: Number and percentage distribution of poultry by type, province and rural/urban, 2010 and 2006**

2010		Chicken		Ducks/geese		Guinea fowl		Other	
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Province	Central	2034	14.1	48	12.6	77	29.3	64	14.1
	Copperbelt	934	6.5	24	6.4	1	0.5	10	2.2
	Eastern	2,457	17.0	88	23.2	77	29.5	155	34.6
	Luapula	781	5.4	59	15.5	11	4.2	16	3.5
	Lusaka	2,094	14.5	17	4.5	10	3.9	34	7.6
	Northern	2,049	14.2	74	19.5	4	1.7	11	2.5
	North Western	473	3.3	7	1.7	2	0.8	6	1.3
	Southern	3,034	21.0	54	14.3	78	29.7	137	30.6
	Western	568	3.9	9	2.3	1	0.5	16	3.7
Rural/Urban	Rural	10,722	74.3	307	81.1	240	91.7	393	87.4
	Urban	3,703	25.7	72	18.9	22	8.3	56	12.6
All Zambia		14,425	100	379	100	262	100	449	100

2006		Chicken		Ducks/geese		Guinea fowl		Other	
		Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent	Number (000s)	Percent
Province	Central	2,560	16	76	17	80	16	133	23
	Copperbelt	1,402	9	50	12	6	1	40	7
	Eastern	1,523	10	63	15	52	10	119	21
	Luapula	729	5	60	14	22	4	7	1
	Lusaka	2,601	16	29	7	12	2	30	5
	Northern	2,805	18	55	13	21	4	61	11
	North Western	360	2	26	6	6	1	18	3
	Southern	3,412	21	54	13	293	59	148	26
	Western	536	3	20	5	8	2	21	4
Rural/Urban	Rural	11,965	75	326	75	451	91	423	73
	Urban	3,964	25	107	25	47	9	153	27
All Zambia		15,929	100	433	100	498	100	576	100



# HOUSEHOLD INCOME AND ASSETS

## 10.1. Introduction

Household income and household assets play a vital role in the analysis of living conditions of households. Both contribute to poverty alleviation, as well as the well-being of the population. Income is used as a measure of welfare because the consumption of goods and services are 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 and health. The importance of assets in determining a household's well being is well established. The World Development Report (2000/01) states that *physical assets also lie at the core of whether an individual, household or group lives in poverty – or escapes it... assets are also central to coping with shocks and reducing the vulnerability that is a constant feature of poverty*"

The LCMS 2010 survey collected data on income for persons aged 5 years and above. The following incomes sources were included.

- Income from agriculture production
- Income for non-agricultural business
- Income in-kind
- Rental income from properties owned
- Income from remittances
- Income from pension, grants and interests
- Income from borrowing
- Income from interest or dividends on shares, bonds, securities, treasury bills, etc.
- Any other income that accrued to the person

Total household income was calculated by summing up all incomes from all sources of all income-earning members of the household. Data on the consumption of own-production was also collected and imputed to cash. Household income presented in this chapter is based on a sample survey of the estimated 2,490,907 households in Zambia. All the income values in this analysis are expressed relative to December 2010 prices.

Data on asset ownership was also collected. Household members were asked whether or not they owned any assets that were in working condition 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 and its perceived present value.

## 10.2. Concepts and definitions

The following concepts and definitions constituted the guiding principles for collecting, processing and analysing 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 representation 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.

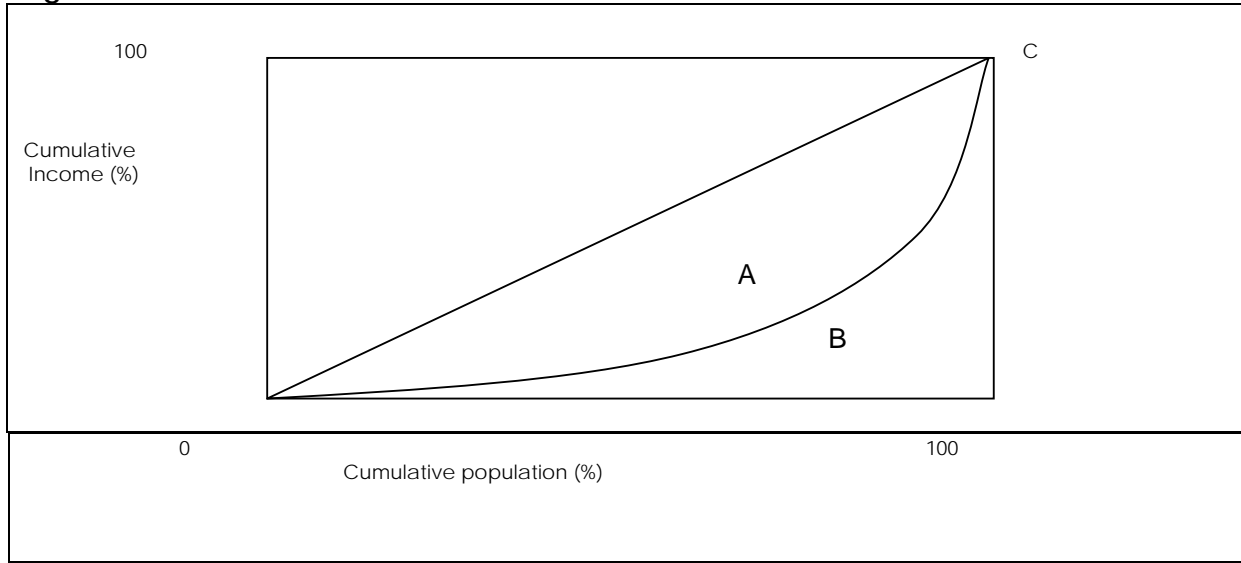
**Lorenz curve:** A Lorenz curve is a graphical representation of income distribution of a population. It shows the different proportions of total income going to different proportions of the population. The curve depicts income inequalities by the extent to which it diverges from an equi-income distribution 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 percent of the total income, 90 percent of the population receives 90 percent of the total income, and so on.

**Gini coefficient:** This measures 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 0, the straight line  $OC$  is the equi-income distribution line, while the curve  $OC$  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:

$$G = \frac{A}{(A + B)}$$

The Gini coefficient always ranges from 0 to 1. A coefficient of 0 represents total equality in income distribution, whilst 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.

Figure 10.1: Lorenz curve



### 10.3. Distribution of Income

Table 10.1 shows the distribution of household monthly income in kwacha by residence, stata and province. Residence is broken down into rural and urban localities. The table shows that the average monthly income for Zambian households was K1, 112,258.

Table 10.1: Percentage distribution of household income by geographical location, 2010

2010	Less than 50,000	50,000 - 150,000	150,001 - 300,000	300,001 - 450,000	450,001 - 600,000	600,001 - 800,000	800,001 - 1,000,000	1,000,001 - 1,200,000	1,200,000+	Total	Average Income	Number of Households ('000s)
Rural/Urban												
Rural	2.4	13.3	25.6	18.5	11.6	8.8	4.8	2.6	12.3	100	664,000	1,600
Urban	1.4	2.8	7.9	10.5	9.4	10.7	8.5	6.0	42.8	100	1,917,000	891
Stratum												
Rural Small Scale	2.4	14	26.8	18.8	11.6	8.7	4.7	2.6	10.6	100	616,000	1,426
Rural Medium Scale	0.4	2.5	11.9	11.9	12.4	16.8	7.5	5.6	30.9	100	1,356,000	41
Rural Large Scale	0.0	11.6	12.5	1.4	4.3	4.3	19.6	4.9	41.4	100	2,426,000	1
Rural Non Agric	3.7	9.5	16.7	17.7	12.1	7.9	5.8	1.6	25.1	100	961,000	133
Urban Low Cost	1.4	3.3	9.8	12.3	11.4	12.5	9.3	6.7	33.2	100	1,403,000	659
Urban Medium Cost	1.3	1.6	2.3	5.2	3.8	5.6	5.9	4.8	69.4	100	2,852,000	149
Urban High Cost	1.9	0.5	3.0	5.6	3.7	5.3	5.9	2.9	71.3	100	4,308,000	83
Province												
Central	1.5	5.4	13.5	16.9	13.5	10.9	8.1	5.8	24.4	100	1,003,000	250
Copperbelt	1.2	3.5	10.6	10.5	11.7	10.7	8.6	4.8	38.4	100	1,903,000	369
Eastern	1.5	13.3	28.7	18.4	10.8	10.6	3.9	2.2	10.6	100	607,000	342
Luapula	1.2	14.8	30.7	18	9.7	7.6	4.6	2.0	11.4	100	655,000	191
Lusaka	2.4	3.3	7.2	10.8	9.7	11.4	8.4	6.2	40.6	100	1,779,000	366
Northern	2.0	12.1	26.3	20.8	10.5	8.1	4.7	2.8	12.6	100	702,000	318
North Western	6.2	13.3	19.2	14.0	9.2	9.2	5.2	3.5	20.2	100	918,000	138
Southern	1.8	10.2	18.2	15.9	11.7	8.2	6.3	3.7	23.9	100	1,120,000	311
Western	3.0	18.0	27.3	17.6	9.6	6.3	3.1	2.0	13.1	100	654,000	205
All Zambia	2.1	9.6	19.2	15.6	10.8	9.5	6.1	3.8	23.2	100	1,112,000	2,491

There is an evident contrast between average rural and urban households. Urban households reported average monthly income that was more than twice that reported by rural households. While the average urban monthly income was K1,917,000, the average rural monthly income was only K664,000. Whilst 77% of urban households had an income in

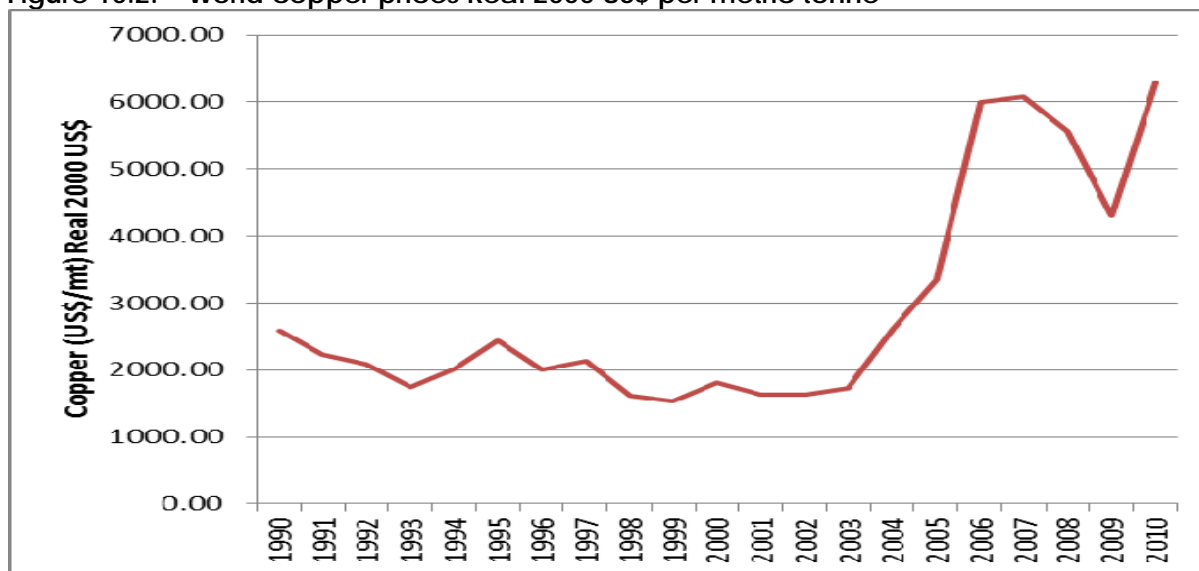
excess of K450,000, only 40% of rural households enjoyed such levels of monthly household income.

Within the rural strata, as would be expected, the highest level of average monthly income was enjoyed by large scale agricultural households, at K2,426,000. 74% of large scale had a monthly income exceeding K450,000. The lowest mean monthly income in the rural strata was in the small scale agricultural households, at K617,000. Only 38% of small scale agricultural households had a mean monthly income above K450,000.

Households in high cost residential areas reported the highest levels of mean monthly income in the urban strata, at K4,308,000, with the lowest mean monthly income levels reported in low cost residential areas, at K961,000. 89% of households in high cost and 73% of households in low cost residential areas reported mean monthly incomes higher than K450,000.

At the provincial level, Copperbelt province has overtaken Lusaka province as the province with the highest mean monthly income at K1,902,000 compared to K1,779,000 in Lusaka province. The Copperbelt produces about half of Zambia's copper, which reached a total of approximately 720,000 tonnes of finished copper in 2010<sup>1</sup>. As compared to oil production mines need a lot of consumables and relatively simple engineering works which local supplier companies often provide. Thus this result is likely a reflection of the bullish trend in world copper prices since 2005, which will have contributed to local multiplier effects, boosting incomes of those benefiting directly from the copper industry, as well as households working in ancillary industries. 0 illustrates the strong growth of world copper prices, which reached a 20 year high in 2010 at US\$6,248, following a sharp decline experienced in 2009.

**Figure 10.2: World copper prices Real 2000 US\$ per metric tonne<sup>2</sup>**



<sup>1</sup> Up from 425,000 tonnes in 2004

<sup>2</sup> World Bank Commodity Price Data (*Pink Sheets*)

Unsurprisingly the Copperbelt and Lusaka provinces also had significantly higher proportions of households in the upper income brackets as compared to the remaining provinces.

Eastern province reported the lowest mean monthly income at K607,259 followed by Western and Luapula provinces that reported mean monthly incomes of K654,000 and K655,000 respectively. As would be expected these provinces had the lowest concentrations of households in the upper income brackets.

### 10.3.1. Income distribution by age and sex

Table 10.2 reports the distribution of mean household monthly income by sex and age groups. Male-headed households continue to enjoy higher levels of mean monthly income as compared to female-headed households. A male headed household has a mean monthly income of K1,188,000, whilst a female-headed household has a mean monthly income of K861,000, only 77% of the Zambia national average.

**Table 10.2: Percentage distribution of household income by age and sex, 2010**

2010	Less than 50,000	50,000 – 150,000	150,001 – 300,000	300,001 – 450,000	450,001 – 600,000	600,001 – 800,000	800,001 – 1,000,000	1,000,001 – 1,200,000	1,200,000+	Total	Average Income	Number of Households ('000s)
<b>Sex of Household Head</b>												
Male Head	1.8	8.3	18.2	15.3	11.1	9.8	6.5	4.0	24.9	100	1,188,000	1,901
Female Head	2.9	13.6	22.5	16.8	10.0	8.6	4.7	3.2	17.6	100	861,000	582
Missing	4.2	12.1	26.3	10.8	1.4	0.0	11.9	9.3	23.9	100	1,274,000	8
<b>Age Group</b>												
12-19	0.0	52.8	15	15.7	6.9	4.6	0.0	0.0	5.1	100	253,000	4
20-29	2.4	10.5	22.7	19.4	11.3	9.3	4.8	3.1	16.5	100	794,000	419
30-39	1.9	8.8	16.8	15.5	10.4	9.8	6.4	3.6	26.6	100	1,170,000	803
40-49	1.4	8.2	17.6	14.1	10.4	9.9	7.0	4.2	27.2	100	1,332,000	547
50-59	2.2	9.3	18.4	12.9	11.1	9.0	6.1	4.6	26.4	100	1,328,000	357
60+	2.7	12.1	24.1	16.6	11.8	8.8	5.7	3.9	14.3	100	806,000	354
<b>All Zambia</b>	2.1	9.6	19.2	15.6	10.8	9.5	6.1	3.8	23.2	100	1,112,000	2,491

The economically active age groups range from 12 to 59 years old. Households whose head was aged between 40-49 had the highest level of mean monthly incomes at K1,332,000, whilst households with a head in the youngest age bracket of 12-19 had the lowest level of mean monthly incomes at K253,000.

### 10.3.2. Income distribution by highest level of education attained by household head

Table 10.3 reports the income distribution by level of completed education of the household head. Education is broken down into six sub-groups. 0 provides evidence for increasing returns to scale in Zambia, with mean monthly incomes increasing through each sub-group of education level.

**Table 10.3: Income distribution by level of education of household head, 2010**

2010	Less than 50,000	50,000 - 150,000	150,001 - 300,000	300,001 - 450,000	450,001 - 600,000	600,001 - 800,000	800,001 - 1,000,000	1,000,001 - 1,200,000	1,200,000+	Total	Average Income	Number of Households ('000s)
<b>Education Level</b>												
Not Stated	3.2	15.2	28	17.8	10.8	7.7	3.2	2	12.1	100	795,000	291
Grade 1-7	2.7	13	25.7	19.9	12.6	9.5	5.5	3.2	7.8	100	531,000	998
Grade 8-9	1.2	8.2	19.1	17.5	13.4	11.9	7.9	3.9	17	100	800,000	478
Grade 10-12	1.4	4.8	9.6	9.8	9.3	12.1	9	6.8	37.1	100	1,411,000	451
A-Level	0	4.4	7.8	0.1	0.3	0.6	4.9	11	70.8	100	2,011,000	4
Certificate/Diploma	0.8	1	2.2	3.6	2.6	2.9	3.6	2.8	80.5	100	3,273,000	221
Degree or Higher	2.3	1.3	0.7	4.3	1.3	1.4	1.9	2.1	84.6	100	5,894,000	41
<b>All Zambia</b>	<b>2.1</b>	<b>9.6</b>	<b>19.2</b>	<b>15.6</b>	<b>10.9</b>	<b>9.5</b>	<b>6.1</b>	<b>3.8</b>	<b>23.2</b>	<b>100</b>	<b>1,112,000</b>	<b>2,491</b>

The mean monthly income of households whose head has completed only Grades 1-7 was K531,000 or 48% of the national mean monthly income. This can be compared to households where the head had at least a degree or higher, and who reported mean monthly incomes of K5,894,000, or 53% of the national mean monthly income.

### 10.3.3. Income distribution by poverty status

In the 2010 LCMS households were asked to specify their poverty status in a purely subjective way based on the perception of the household being enumerated. 0 reports the mean monthly household income by self-assessed poverty category.

**Table 10.4: Income distribution by self-assessed poverty status, 2010**

2010	Less than 50,000	50,000 - 150,000	150,001 - 300,000	300,001 - 450,000	450,001 - 600,000	600,001 - 800,000	800,001 - 1,000,000	1,000,001 - 1,200,000	1,200,000+	Total	Average Income	Number of Households ('000s)
<b>Household level of poverty</b>												
Not Poor	1.8	4.9	8.8	9.7	6.2	7	5.7	4.3	51.5	100	2,441,000	366
Moderately Poor	1.6	7.8	16.4	14.1	10.7	10.7	7.4	4.5	26.7	100	1,158,000	1,169
Extremely Poor	2.7	13.5	26.6	19.8	12.7	9	4.7	2.9	8.1	100	546,000	950
Not Stated	6.2	6.5	37.6	4.1	14.3	9.2	1.4	5.8	14.8	100	658,000	5
<b>All Zambia</b>	<b>2.1</b>	<b>9.6</b>	<b>19.2</b>	<b>15.6</b>	<b>10.8</b>	<b>9.5</b>	<b>6.1</b>	<b>3.8</b>	<b>23.2</b>	<b>100</b>	<b>1,112,000</b>	<b>2,491</b>

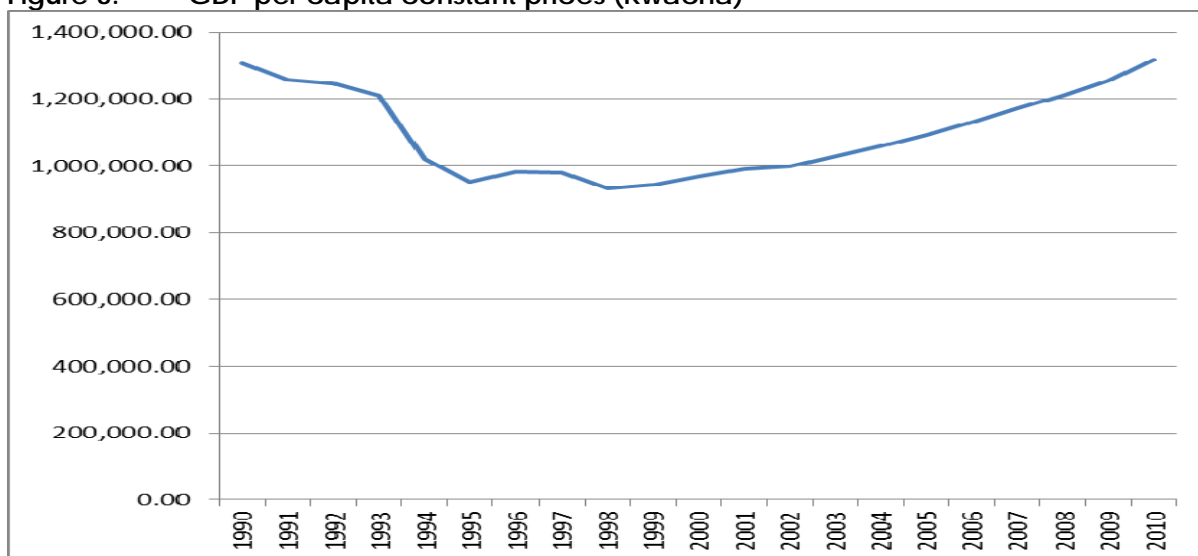
As would be expected those who considered themselves not poor reported the highest levels of mean monthly income at K2,441,000, whilst those who considered themselves extremely poor had the lowest levels of mean monthly income, at K546,000. 75% of households who considered themselves not poor had mean monthly incomes exceeding K450,000, whilst only 38% of self-reported extremely poor households enjoyed these levels of mean monthly incomes.

## 10.4. Per Capita Income

### 10.4.1. Per Capita Income by Sex of Household Head

Table 10.6 reports the average per capita monthly household income. Income is reported in 2010 prices, using the Consumer Price Index<sup>3</sup> as a deflator. The mean per capita monthly household income as defined by the total household income divided by the number of persons in the household, and was K269,497 in 2010. In real terms this would mean an increase in per capita income of 77%, over the per capita income reported in 2006 of K151,738. Such a dramatic increase seems unlikely especially once compared to the evolution of GDP per capita charted in 0, which grew by 17% between 2006 and 2010.

**Figure 3: GDP per capita constant prices (Kwacha)<sup>4</sup>**



Thus to make sense of this result 0 10.5 reports the real per capita income, expressed in 2010 prices for the last three years of the LCMS survey.

**Table 10.5: Real monthly per capita income (2010 prices)**

Year	Real Per Capita Income
2004	228,000
2006	154,000
2010	269,000

This shows that while per capita income appears to have grown 75% between 2006 and 2010, it has only grown by 18% between 2004 and 2010. This change compares favourably to movements in GDP per capita illustrated in 0, which show GDP per capita increasing by 24% between 2004 and 2010.

<sup>3</sup> Source: *Price and Consumption Studies Branch, CSO*

<sup>4</sup> Source: *World Economic Outlook Database, International Monetary Fund.*

**Table 10.1 Monthly per capita income by sex of head, rural/urban, stratum and province, 2010 and 2006 (2010 Prices)**

2010	Male Head	Female Head	Total	Number of Households ('000s)
<b>Rural /Urban</b>				
Rural	156,000	165,000	158,000	1,600
Urban	480,000	435,000	470,000	891
<b>Stratum</b>				
Rural Small Scale	137,000	149,000	140,000	1,426
Rural Medium Scale	221,000	157,000	212,000	41
Rural Large Scale	338,000	236,000	326,000	1
Rural Non Agric	344,000	314,000	335,000	133
Urban Low Cost	352,000	294,000	339,000	659
Urban Medium Cost	690,000	618,000	672,000	149
Urban High Cost	1,111,000	1,251,000	1,142,000	83
<b>Province</b>				
Central	213,000	240,000	219,000	250
Copperbelt	465,000	377,000	449,000	369
Eastern	147,000	137,000	144,000	342
Luapula	144,000	120,000	139,000	191
Lusaka	451,000	513,000	463,000	366
Northern	164,000	160,000	163,000	318
North Western	231,000	240,000	234,000	138
Southern	281,000	267,000	277,000	311
Western	176,000	164,000	171,000	205
<b>All Zambia</b>	<b>272,000</b>	<b>260,000</b>	<b>269,000</b>	<b>2,491</b>

2006	Male Head	Female Head	Total	Number of Households ('000s)
<b>Rural / Urban</b>				
Rural	84,000	76,000	82,000	1,484
Urban	287,000	264,000	282,000	800
<b>Stratum</b>				
Rural Small Scale	79,000	72,000	77,000	1,351
Rural Medium Scale	126,000	114,000	125,000	36
Rural Large Scale	369,000	342,000	369,000	1
Rural Non Agric	149,000	113,000	139,000	96
Urban Low Cost	219,000	194,000	213,000	649
Urban Medium Cost	401,000	401,000	401,000	86
Urban High Cost	758,000	811,000	767,000	65
<b>Province</b>				
Central	120,400	111,000	118,000	226
Copperbelt	251,000	221,000	246,000	338
Eastern	90,000	77,000	87,000	320
Luapula	93,000	90,000	92,000	178
Lusaka	298,000	317,000	302,000	333
Northern	95,000	95,000	95,000	296
Northwestern	99,000	88,000	97,000	131
Southern	143,000	120,000	139,000	284
Western	76,000	66,000	73,000	176
<b>All Zambia</b>	<b>154,000</b>	<b>143,000</b>	<b>152,000</b>	<b>2,283</b>

Typically urban households have a higher proportion of well-educated men and women work in professional and managerial occupations. Thus as would be expected urban households reported a higher level of per capita income of K470,000 as compared to rural households who had a mean per capita income of K158,000. At the level of the stratum, per capita monthly incomes compare with the total household incomes, with the large scale agriculture and non-agriculture strata reporting the highest per capita incomes out of the rural strata, at K326,000 and K335,000 respectively. In the Urban strata high cost producers also reported the highest per capita incomes of K1,142,000 per month.



The two richest provinces by total household income were Copperbelt and Lusaka. This remains the case when considering per capita household income, though in this case Lusaka has the highest levels at K463,000, followed by Copperbelt province at K449,000. This reflects the larger household sizes found in Copperbelt of 5.3 members, as compared to the average household size of 4.8 found in Lusaka. In terms of the poorest provinces - and identically to comparisons on total household income, Luapula and Eastern provinces where the poorest with per capita household incomes of K139,000 and K144,000, respectively.

A surprising result that can be derived from Table 10.1 is that female headed rural households have higher **per capita** monthly household incomes at K165,000, than male headed rural households at K156,000. This result seems to be driven by the small scale rural strata (which contained the majority of rural households), where female headed rural households earned an extra K9,000 monthly per capita as compared to male headed households. This is despite male headed households enjoying a higher total household monthly income than female headed households in rural areas.

To understand this result it is useful to consider the systematic differences between male and female households and the potential role played by remittances and migrant workers.

Demographically in rural areas female headed households are smaller, containing on average 4.3 members as compared to 5.6 members in male headed households.

Another significance difference was that the level of remittances enjoyed by female headed households was much higher than male headed households. Of households in rural areas, those headed by females received on average K24,000 per month in the form of remittances as compared with K8,000 per month in male headed households. Furthermore, whilst only 19% of rural male headed households reported receiving remittances, 33% of female headed households had received remittances in the reported time period. The importance of remittances in the higher rural per capita incomes in female headed households as a hypothesis is given further credence by comparing per capita incomes excluding remittances. Excluding remittances the per capita income in male headed rural households was K148,000 in 2010, compared to K142,000 for female headed rural households.

The data does not present the source of remittances but to help understand this it is useful to breakdown the marital status of those female headed households receiving remittances. Of female headed households who receive remittances in rural areas, in 10% of cases the female head is currently married. This suggests that migration plays a key role in these households and that increased remittances may be a consequence. However, a more important source may derive from the fact that of female headed households who receive remittances in rural areas, in 57.8% of cases the female head is widowed. This suggests that support from sons, daughters and other relatives may be more important.

## 10.5. Income inequality

Increases in average household income and average per capita income tell a useful story about changes in welfare over time, particularly as income is an important determinant of a household's ability to access key goods and services that increase a household's welfare. However, changes in per capita income on average cannot tell the whole story and in particular if this income is not evenly distributed across the population the welfare of poorer sections of society could be falling even, as the welfare of the richest sections of society increases.

By understanding the distribution of income we will come closer to understanding why the positive effects of income growth are not immediately felt by all households within Zambia. Table 10.7 reports how the monthly per capita income is distributed among households across the country in deciles. The first decile indicates the 10 percent of households that are in the lowest income group, whilst the tenth decile indicates the 10 percent of households falling into the highest income group.

**Table 10.7: Percentage distribution of households by per capita income decile and Residence, 2010 and 2006**

		Total Zambia		Rural		Urban	
2010	Cumulative % of Households	% 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	0.5	0.5	0.8	0.8	0.5	0.5
Second Decile	20	1.1	1.6	1.6	2.4	1.3	1.8
Third Decile	30	1.7	3.3	2.3	4.7	2.1	3.9
Fourth Decile	40	2.4	5.7	3.0	7.7	2.9	6.8
Fifth Decile	50	3.4	9.1	3.8	11.5	3.9	10.7
Sixth Decile	60	4.5	13.6	5.0	16.5	5.4	16.1
Seventh Decile	70	6.6	20.2	6.5	23.0	7.5	23.6
Eighth Decile	80	10.1	30.3	9.1	32.1	10.9	34.5
Ninth Decile	90	17.1	47.4	14.9	47.0	17.5	52.0
Tenth Decile	100	52.6	100.0	53.0	100.0	48.0	100.0
Gini Coefficient		0.65		0.60		0.60	

		Total Zambia		Rural		Urban	
2006	Cumulative % of Households	% 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	0.4	0.4	0.1	0.1
Second Decile	20	0.7	0.9	1.1	1.5	0.3	0.3
Third Decile	30	1.3	2.2	2.1	3.6	0.6	1.0
Fourth Decile	40	2.2	4.4	3.2	6.8	1.3	2.2
Fifth Decile	50	3.3	7.8	4.6	11.4	2.1	4.3
Sixth Decile	60	5.2	12.9	6.5	17.9	3.9	8.1
Seventh Decile	70	7.7	20.6	9.0	26.9	6.3	14.5
Eighth Decile	80	10.8	31.3	12.5	39.4	9.0	23.5
Ninth Decile	90	16.8	48.1	17.8	57.2	15.7	39.2
Tenth Decile	100	51.9	100.0	42.8	100.0	60.8	100.0
Gini Coefficient		0.60		0.54		0.66	

To illustrate the extent of the inequality of income distribution in Zambia it is useful to consider that in 2010 whilst the poorest 50% of households accounted for only 9.1% of total per capita income, the richest 10% accounted for 52.6% of total per capita income. In other words, and with reference to Table 10.8 the richest 240,090 households accounted for K1,400 billion per month, whilst the poorest 1.2 million households accounted for only K206 billion per month. From this type of calculation it is difficult to chart how income inequality has changed since 2006, when the poorest 50% of households accounted for 7.8% of per capita income but the richest 10% accounted for slightly less than in 2010 at 51.9% of total per capita income.

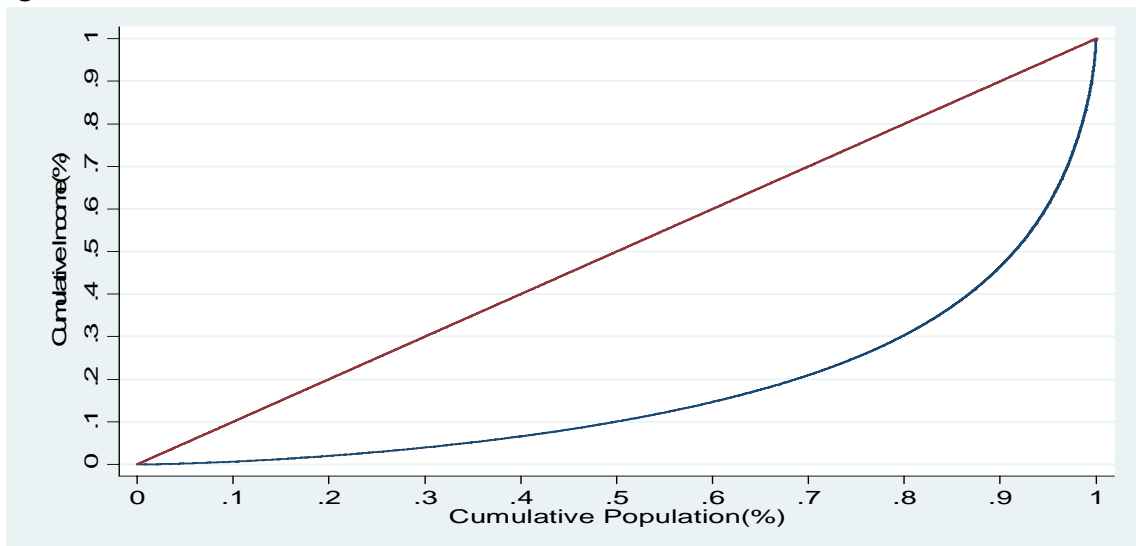
**Table 10.8: Income shares by residence, 2010 and 2006 (2010 prices)**

2010	Mean monthly household income (Kwacha)	Number of households ('000s)	Mean household size	Population		Total monthly household income	
				Number ('000s)	Percent	Amount	Percent
All Zambia	1,112,000	2,410	5.2	13,024	100%	2,674,511,831,000	100%
Rural	604,000	1,600	5.3	8,482	65.1%	967,229,926,000	36.2%
Urban	1,917,000	891	5.1	4,542	34.9%	1,707,281,905,000	63.8%
Decile							
First	126,000	241	6.4			5,349,024,000	0.20%
Second	266,000	241	6.1			18,721,583,000	0.70%
Third	374,000	241	5.7			34,768,654,000	1.30%
Fourth	491,000	241	5.3			58,839,261,000	2.20%
Fifth	635,000	241	5.0			88,258,891,000	3.30%
Sixth	834,000	241	4.8			139,074,616,000	5.20%
Seventh	1,198,000	241	4.7			205,937,411,000	7.70%
Eighth	1,830,000	241	4.8			288,847,278,000	10.80%
Ninth	2,845,000	241	4.4			449,317,988,000	16.80%
Tenth	6,102,000	241	3.7			1,388,071,641,000	51.90%

2006	Mean monthly household income (Kwacha)	Number of households ('000s)	Mean household size	Population		Total monthly household income	
				Number ('000s)	Percent	Amount	Percent
All Zambia	770,000	2,283	5.1	11,711	100%	1,754,903,800,000	100%
Rural	416,000	1,484	5.1	7,613	65.0%	617,712,240,000	35.0%
Urban	1,432,000	800	5.1	4,099	35.0%	1,137,191,560,000	65.0%

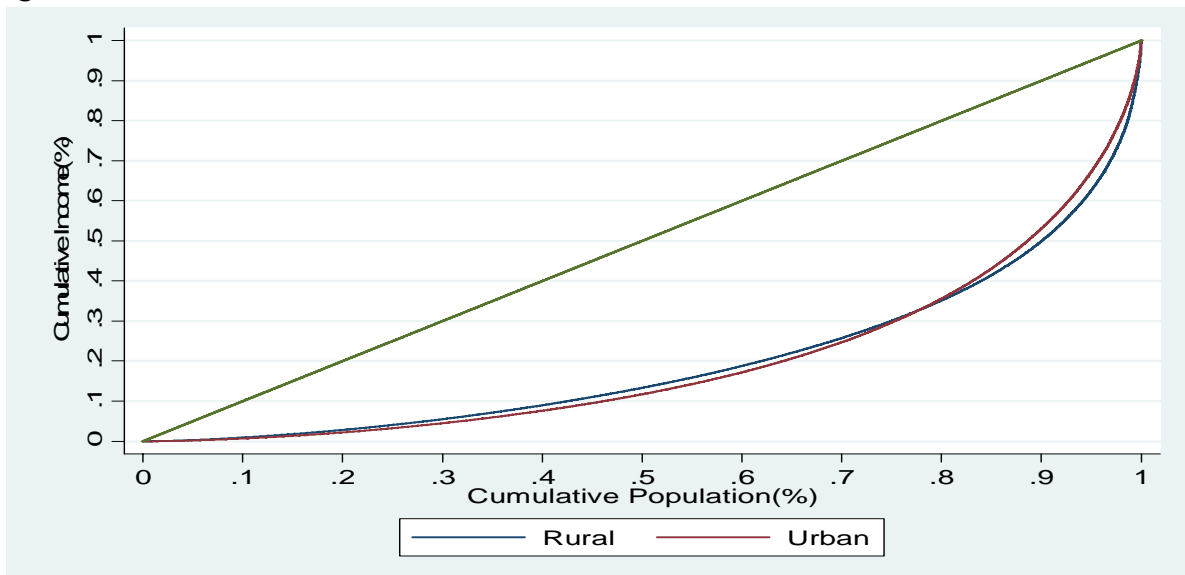
A more useful measure therefore to compare inequality over time and across geographical locations is the Gini as reported in 0 and illustrated by the Lorenz curve in 0. The Gini coefficient increased from 0.60 in 2006 to 0.65 which suggests an increase in income inequality over the four year period.

Figure 10.4: Lorenz curve, 2010



Income inequality within rural and urban areas was slightly lower, with a Gini-coefficient of 0.60 in both rural and urban areas. This is also illustrated in 0, which shows the rural and urban Lorenz curves crossing a sign that there is no clear dominance of one over the other. It is interesting to note that while income inequality in Zambia has increased since 2006, that this is a result of increased income inequality in rural areas where the Gini-coefficient increased from 0.54 in 2006 to 0.60 in 2010. In fact, income inequality fell in urban areas with the Gini-coefficient falling from 0.66 in 2006 to 0.60 in 2010.

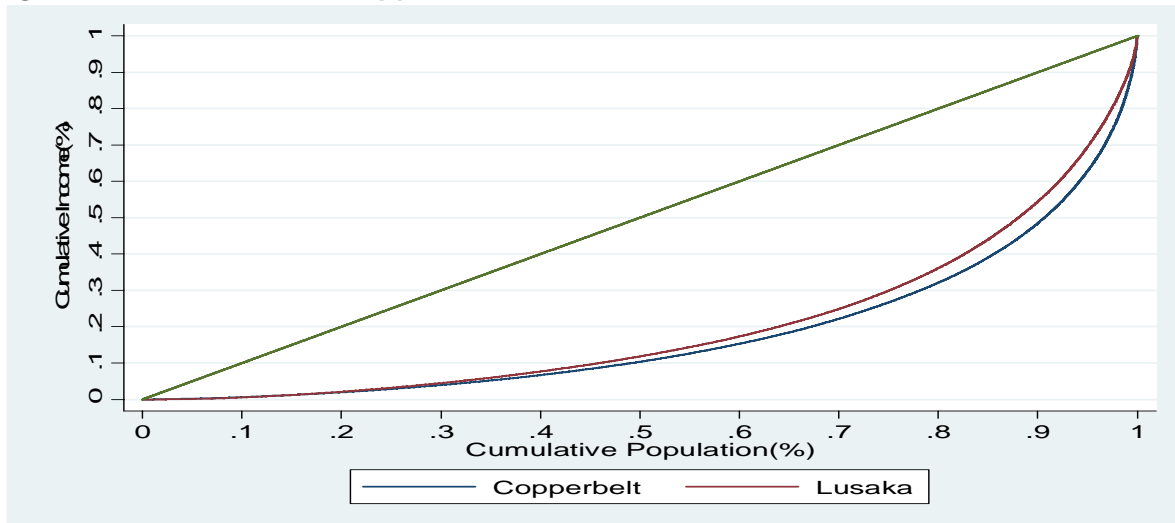
Figure 10.5: Rural and urban Lorenz curves, 2010



0 reports a significant result from the two richest provinces by per capita income, Lusaka and Copperbelt. At all points in 0 the Lorenz curve for Lusaka lies above that of Copperbelt, suggesting that income is more evenly distributed in Lusaka. This is an

important result given that the welfare of a household is not solely dependent on total per capita income, but also on how this is distributed.

**Figure 10.6: Lusaka and Copperbelt Lorenz curves, 2010**



### 10.5.2. Income distribution 1996-2010

0 reports how the distribution of income has changed over the period 1996 to 2010. In 1996 the poorest 50% of households claimed 11% of the total per capita income. In 2010 the poorest 50% of households claimed only 9.1% of total per capita income. This is further reflected by changes in the Gini-coefficient which increased from 0.61 in 1996, to 0.65 in 2010. The Gini-coefficient has fluctuated across the period 1996 to 2010, averaging at 0.61 across the period, suggesting that income inequality was slightly worse than the period average in 2010.

**Table 10.9: Percentage distribution of household per capita income deciles, 1996-2010**

Table 10.8: Percentage Distribution of Household Income, Historical Context													
		1996		1998		2002		2004		2006		2010	
	Cumulative % of Households	% 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	% 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	0.5	0.5	0.2	0.2	1.2	1.2	1.2	1.2	0.2	0.2	0.5	0.5
Second Decile	20	1.5	2	1	1.2	2.3	3.5	2.7	3.9	0.7	0.9	1.1	1.6
Third Decile	30	2.2	4.2	1.8	3	3.1	6.6	4.2	8.1	1.3	2.2	1.7	3.3
Fourth Decile	40	2.9	7.1	2.6	5.6	3.9	10.5	5.9	14	2.2	4.4	2.4	5.7
Fifth Decile	50	3.9	11	3.5	9.1	4.8	15.3	6.9	20.9	3.3	7.8	3.4	9.1
Sixth Decile	60	5.2	16.2	4.8	13.9	5.8	21.1	9.2	30.1	5.2	12.9	4.5	13.6
Seventh Decile	70	6.8	23	6.4	20.3	7.4	28.5	10.6	40.7	7.7	20.6	6.6	20.2
Eighth Decile	80	9.2	32.2	9	29.3	9.6	38.1	14.4	55.1	10.8	31.3	10.1	30.3
Ninth Decile	90	14.9	47.1	13.9	43.2	14.3	52.4	17.2	72.3	16.8	48.1	17.1	47.4
Tenth Decile	100	52.9	100	56.8	100	47.7	100.1	27.7	100	51.9	100	52.6	100
Gini Coefficient		0.61		0.66		0.57		0.57		0.6		0.65	

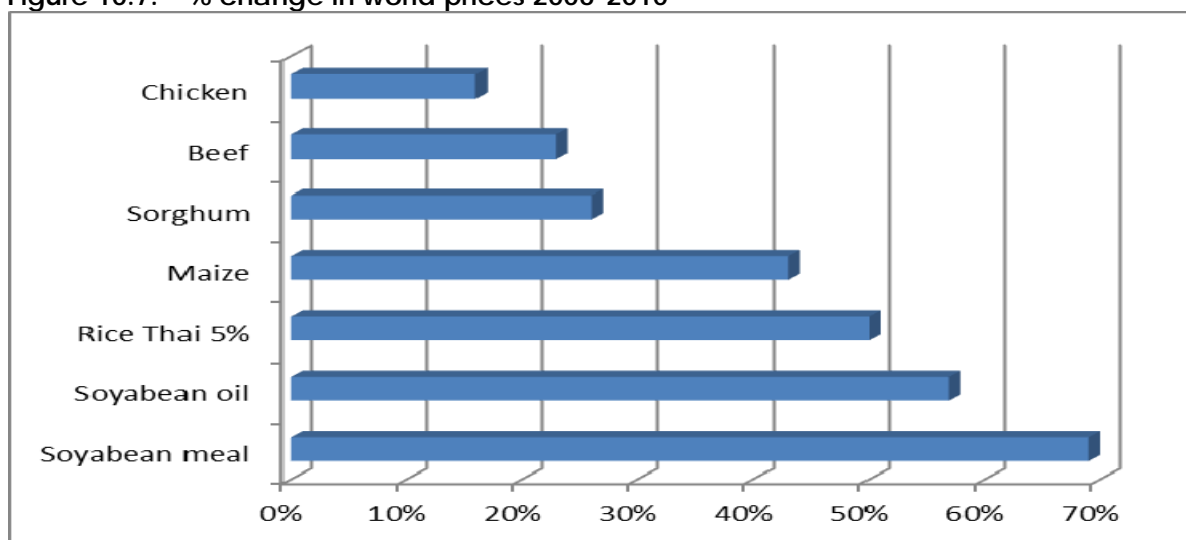
## 10.6. Ownership of household assets

Ownership of assets is another useful measure when considering changes in welfare of a household. Firstly as a proxy for ability to consume, but also as ownership of productive assets such as farming implements can determine a household's ability to generate further income. The most commonly owned asset was the hoe, with 81.4% of households reporting ownership, maintaining the 81.3% ownership level reported in 2006. Other commonly owned assets are residential including mattresses, beds and braziers which were owned by 71.8%, 71.5% and 65.6% of households in Zambia in 2010.

As would be expected ownership of agricultural machinery and equipment was much more prevalent in the rural areas than in the urban areas, in particular for items such as plough, crop sprayer, hammer mill, hoe and axe. For example whilst 95.3% of rural households owned a hoe, only 56.5% of urban households owned a hoe.

Furthermore ownership of livestock was also higher in rural areas. For example 8% of rural households reported ownership of at least one oxen compared to just 0.8% of urban households. It is also worth noting that ownership of oxen has fallen from 5.9% for all of Zambia in 2006 to 5.4% in 2010. This finding is reinforced by results reported in Chapter 9 which indicates that ownership of cattle has fallen from 53% of households in 2006 to 62% in 2010, and ownership of pigs has fallen from 43% of households in 2006 to 30% in 2010. 0 illustrates the relatively strong growth of global prices of some of the key food crops grown in Zambia. Global maize prices in particular, which was grown by 83% of agricultural households in 2010, have increased by 43% in the period 2006 to 2010. In comparison global beef prices have increased by only 23% and global chicken prices by only 16%. This change in the relative returns to food crops compared with meat products, may have contributed to a reallocation of resources within Zambian households from livestock to food crops, though it is not clear if the two trends are linked.

**Figure 10.7: % change in world prices 2006-2010<sup>5</sup>**



<sup>5</sup> Source: World Bank Commodity Price Data, Pink Sheets

Conversely ownership of electrical equipment such as electric stoves, electric iron and DVD/VCR players were much higher in urban areas than in rural areas. For example while 37.2% of urban households reported ownership of a DVD/VCR, this ownership rate fell to 5.9% for rural households. However, this finding is likely to be due to the differing levels of electricity connection found in rural and urban areas. In 2010 only 5% of rural households were directly connected to an electricity source, whilst 53% of urban households had direct access to electricity.

This trend also continues for telecommunication equipment, with urban households more likely to own cellular phones, satellite dish/decoder, television and radio. This is particularly dramatic for cellular phones where ownership rates are at 80% for urban households and just 32.4% for rural households. There has also been a dramatic increase in the average ownership rate for cellular phones from 24.2% in 2006 to 49.4% of households in 2010. This increase can be witnessed in both rural areas, where ownership was only 8.8% in 2006, and in urban areas, where ownership was only 53.1% in 2006. Ownership rates of satellite dishes/recorders also recorded strong increase from 3.6% in 2006 to 10.8% in 2010.

A result worth highlighting is the reported reduction in ownership of residential buildings from 70.3% in 2006 to 53.9% in 2010. Rates of residential building ownership remain higher in rural areas at 64.8% as compared to urban areas at 34.2%.

**Table 10.10: Percentage distribution of asset ownership, 2010 and 2006**

	2010			2006		
Assets	All Zambia	Rural	Urban	All Zambia	Rural	Urban
Plough	8.8	13	1.3	9.4	13.6	1.5
Crop sprayer	5.1	6.9	2.0	4.7	6.5	1.6
Boat	0.5	0.7	0.2	0.8	1.2	0.1
Canoe	2.0	3.0	0.3	3.6	4.9	1
Brazier/Mbaula	65.6	52.2	89.6	65	51.6	90
Fishing net	5.0	7.2	0.9	6.4	8.9	1.7
Bicycle	36.2	45.7	19.3	36.5	44.8	21.1
Motor cycle	0.5	0.6	0.4	0.4	0.3	0.4
Motor vehicle	4.2	1.0	10.0	2.9	0.7	7.1
4 wheel tractor	0.2	0.2	0.3	0.3	0.2	0.5
Television	29.7	12.3	60.9	24.1	7.8	54.6
DVD/VCR	17.1	5.9	37.2	10.5	2	26.5
Radio/stereo	47.4	42.6	56.0	55.6	50.1	65.8
Grinding/hammer mill (powered)	0.4	0.5	0.2	1.1	1	1.1
Electric iron	17.4	3.2	42.9	15.1	2.8	38.2
Non-electric iron	21.4	21.5	21.3	22.4	21.5	24
Refrigerator	9.0	1.4	22.6	6.9	1	18.1
Deep freezer	9.7	1.5	24.6	7.4	1	19.2
Land telephone	0.7	0.1	1.6	1.2	0.2	3.2
Cellular phone	49.4	32.4	80.0	24.2	8.8	53.1
Satellite dish/decoder	10.8	3.2	24.5	3.6	0.7	9
Sewing machine	3.0	2.0	5.0	3.6	2.4	6
Knitting machine	0.3	0.2	0.4	0.3	0.2	0.6
Electric stove	18.4	2.7	46.5	15.2	2.2	39.5
Gas stove	0.5	0.2	1.1	0.5	0.2	1
Non-residential building	2.6	2.6	2.5	1.7	1.5	2
Residential Building	53.9	64.8	34.2	70.3	84.8	43.2
Scotch cart	3.5	5.2	0.5	3.1	4.4	0.8
Donkey	0.1	0.1	0.0	0.4	0.5	0.1
Oxen	5.4	8.0	0.8	5.9	8.5	1
Computer	2.7	0.4	6.8	1.8	1.1	3.2
Hoe	81.4	95.3	56.5	81.3	96.1	53.5
Axe	62.9	82.0	28.5	61.4	79.7	27.2
Hunting gun	0.7	0.8	0.4	1.2	1.4	0.8
Table (dining)	21.3	15.8	31.2	19.3	12.9	31.3
Lounge suite/sofa	30.8	14.9	59.2	25.2	9.1	55.2
Bed	71.5	60.8	90.6	63.7	50.5	88.3
Mattress	71.8	59.8	93.3	61.7	46.5	90.1
Pick	12.6	11.8	14.1	10.6	10.3	11.2
Hammer	18.8	19.2	18.2	16.1	17.2	14.1
Shovel/spade	19.9	17.5	24.1	15.9	14.2	19
Wheel barrow	5.2	3.3	8.6	6	3.8	10
Small/hand-driven tractor	0.1	0.1	0.1	0.1	0	0.1
Private water pump	0.6	0.4	0.9	0.4	0.2	0.7
Hand hammer mill	1.7	1.3	2.3	1.5	1.7	1.2
Sheller	0.3	0.3	0.2	0.3	0.2	0.3
Rump presses/oil expellers	0.1	0.2	0.1	0.2	0.3	0.1
Hand saw	4.5	4.2	5.1	2.9	3	2.8
Carpentry plane	1.9	1.7	2.4	1.7	1.7	1.8

0 reports the ownership rates of the same household assets split by the sex of the head of the household. 0reports that male headed households have higher ownership of all households assets with exception of residential buildings and hand hammer mills. A similar pattern of asset ownership between the sexes is reported by the LCMS 2006. The ownership rate of residential buidlings was higher for female headed households at 57.2% as compared to male headed households at 52.9%.



**Table 10.11: Percentage distribution of asset ownership by sex of household head, 2010 and 2006**

Assets	2010			2006		
	All Zambia	Male	Female	All Zambia	Male	Female
Plough	8.8	10.0	4.9	9.4	10.7	5.1
Crop sprayer	5.1	5.9	2.4	4.7	5.5	2.1
Boat	0.5	0.6	0	0.8	1	0.1
Canoe	2.0	2.6	0.4	3.6	4.2	1.4
Brazier/Mbaula	65.6	67	61.2	65	67	58.3
Fishing net	5.0	6.1	1.2	6.4	7.7	2
Bicycle	36.2	42.4	16.1	36.5	42.4	16.7
Motor cycle	0.5	0.6	0.2	0.4	0.5	0.1
Motor vehicle	4.2	4.8	2.2	2.9	3.4	1.4
4 wheel tractor	0.2	0.3	0.1	0.3	0.4	0.1
Television	29.7	31.7	23.1	24.1	25.8	18.4
DVD/VCR	17.1	18.5	12.4	10.5	11.4	7.5
Radio/stereo	47.4	52.5	30.5	55.6	61.6	35.5
Grinding/hammer mill (powered)	0.4	0.5	0.1	1.1	1.2	0.4
Electric iron	17.4	18.1	14.9	15.1	15.8	12.8
Non-electric iron	21.4	22.5	17.8	22.4	23.6	18.4
Refrigerator	9.0	9.2	8.2	6.9	7.2	6.2
Deep freezer	9.7	10.4	7.6	7.4	7.8	5.9
Land telephone	0.7	0.7	0.5	1.2	1.3	1
Cellular phone	49.4	51.5	42.5	24.2	26	18.5
Satellite dish/decoder	10.8	11.7	7.9	3.6	4	2.3
Sewing machine	3.0	3.3	2.3	3.6	3.8	3
Knitting machine	0.3	0.3	0.2	0.3	0.3	0.3
Electric stove	18.4	19.1	16.1	15.2	15.8	13.3
Gas stove	0.5	0.6	0.4	0.5	0.5	0.3
Non-residential building	2.6	2.8	1.8	1.7	1.9	1
Residential Building	53.9	52.9	57.2	70.3	68.6	75.9
Scotch cart	3.5	4.1	1.6	3.1	3.5	1.9
Donkey	0.1	0.1	0.1	0.4	0.4	0.3
Oxen	5.4	6.0	3.5	5.9	6.6	3.6
Computer	2.7	3.0	1.7	1.8	2	1.2
Hoe	81.4	81.5	81.1	81.3	81.2	81.4
Axe	62.9	66.1	52.6	61.4	64.2	51.9
Hunting gun	0.7	0.9	0.1	1.2	1.4	0.5
Table (dining)	21.3	22.6	17.1	19.3	20.8	14.4
Lounge suite/sofa	30.8	32.6	24.7	25.2	26.8	20
Bed	71.5	73.3	65.7	63.7	66.1	55.5
Mattress	71.8	73.3	67.0	61.7	63.9	54.1
Pick	12.6	14.6	5.9	10.6	12	6
Hammer	18.8	22.2	7.7	16.1	18.9	6.6
Shovel/spade	19.9	22.2	12.3	15.9	17.8	9.4
Wheel barrow	5.2	5.8	3.2	6	6.7	3.6
Small/hand-driven tractor	0.1	0.1	0.0	0.1	0.1	0
Private water pump	0.6	0.6	0.5	0.4	0.5	0.2
Hand hammer mill	1.7	1.6	1.9	1.5	1.5	1.4
Sheller	0.3	0.3	0.0	0.3	0.3	0.3
Rump presses/oil expellers	0.1	0.2	0.1	0.2	0.3	0.1
Hand saw	4.5	5.5	1.2	2.9	3.5	0.9
Carpentry plane	1.9	2.4	0.5	1.7	1.7	0.2

## HOUSEHOLD EXPENDITURE

### 11.1. Introduction

Household consumption expenditure plays a vital function in the economy in several ways.

Firstly, it is closely associated with household poverty, well-being and living standards. In general, households are classified into different poverty classes on the basis of their expenditures on goods and services which include, among other things, basic human needs such as food, shelter, clothing, etc. Household well-being and living standards are judged by the quantity of goods and services that the household is able to access.

Secondly, household consumption expenditure constitutes a sizeable proportion of household final consumption expenditure (formerly private consumption) in the national accounts. Household final consumption expenditure (HFCE), which is the traditional consumer spending, is one of the indicators used all over the world to gauge the health and vitality of an economy, as well as those of individual households. It is the market value of all goods and services, including durable products (such as cars and home computers), purchased by households. It significantly affects aggregate demand, income and employment in an economy. In Zambia, HFCE is the largest component of Gross Domestic Product (GDP) by type of expenditure, accounting for about 60 percent of the total GDP.

#### Key Definitions

- **Household Monthly Expenditure:** This refers to a household member's 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.
- **Food:** Food was considered to include all food items that households consumed during the survey period.
- **Food Expenditure:** Food expenditure comprises expenses in monetary terms on purchased food items, the value of own produced food items and food items received in kind for consumption. To convert reported quantities of food items consumed and food items received in kind into monetary terms, the quantities were multiplied by their estimated market or actual prices. The product was treated as part of expenditure on food.
- **Non-food:** This refers to all goods and services purchased for use or for consumption by the household during the survey period. Also included under non-food items were own-produced goods and goods received in kind for use or for consumption. The only own-produced service included was owner-occupied housing. However, services received in kind were also included under non-food.
- **Non-Food Expenditure:** Non-food expenditure comprised expenses on purchased non-food items, value of own produced non-food items and non-food items received in kind for use or for consumption. Non-food items received in kind and own produced non-food items were valued by multiplying their estimated or actual market prices by the quantity consumed.
- **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

Thirdly, household consumption expenditure serve as a useful proxy for household income, which in many cases tends to be under-reported by most households. It is in this regard that government institutions, non-governmental organizations and individuals responsible for policy formulation and poverty reduction have a special need for household expenditure data.

The 2010 Living Conditions Monitoring Survey (LCMSV) collected data on the following household expenditures:

- **Expenditure on food:** Expenses on bread, meat, milk, nuts, etc, including own produce consumed
- **Expenditure on alcoholic and non-alcoholic beverages, cigarettes and tobacco.**
- **Expenditure on housing:** 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:** school fees, purchases of school uniforms, contributions to Parent, Teachers' Association, private tuition fees, expenses on school stationery etc,
- **Medical expenses:** expenses on medicines, fees to doctors, expenses under pre-payment schemes etc,
- **Expenditure on consumer goods:** purchase of clothing and footwear, etc,
- **Remittances in cash or in kind,**
- **Expenditure on public and private transport:** transport expenses to and from work or school, fuel and vehicle maintenance expenses, etc,
- **Expenditures on personal services:** laundry, entertainment, hairdressing expenses, 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 and food stuffs consumed by their respective unit prices.

The amounts were then added to the corresponding cash expenditure to give total expenditure on the items.

## 11.2. Total Average Monthly Household and Per Capita Expenditure

The average monthly household expenditure increased from K604,238 in 2006 to K969,250 in 2010. This translates into a daily household expenditure of K32, 308. Average household expenditure was relatively higher on non-food (K485, 792) than on food items (K469,863) for the 2010 household expenditure.

Analysis by residence shows that urban households had a higher average monthly expenditure on food and non-food items in 2010 (K1, 722,837) than their rural counterparts (K551, 359). This is an indication of high expenditure and income inequalities between rural and urban areas. Households in urban areas spent K674, 070 on food and K1, 022, 920 on non-food items while their rural counterparts spent K356 593 and K187,935 on food and non-food, respectively. In 2006, the pattern was similar, with the urban households having

a higher average monthly expenditure of K1,109,171 than their rural counterparts who had an average monthly expenditure of K334,358. These results are shown in Table 11.1.

Table 11.1 also shows that the average per capita expenditure was K226,128 in 2010 from K144,027 in 2006. Per capita expenditure was higher in urban areas (K408, 542) than in rural areas (K124, 973). Similar patterns were observed in 2006.

**Table 11.1: Average Monthly Household Expenditure (Kwacha) by Residence, Zambia, 2006 and 2010**

2010	Total	Food	Non-food	Average per capita expenditure	Number of households
All	969,250	469,863	485,792	226,128	2,481,485
Rural/Urban					
Rural	551,359	356,593	187,935	124,973	1,596,286
Urban	1,722,837	674,070	1,022,920	408,542	885,199

2006	Total	Food	Non-food	Average per capita expenditure	Number of households
All	604,238	253,187	341,626	144,027	2,268,186
Rural/Urban					
Rural	334,358	196,182	133,460	77,619	1,478,140
Urban	1,109,171	359,840	731,096	268,275	790,046

### 11.3. Total Average Monthly Expenditure by Stratum

Analysis by rural strata (i.e. by scale of household agricultural activities) shows dominance of average household expenditure on food over non-food. The small-scale, medium-scale and non-agricultural households spend more on food than on non-food. The analysis also reveals that large-scale agricultural households incurred more expenditure on non-food than on food.

The large scale households recorded the highest total average monthly expenditure, increasing from K2,513,407 in 2006 to K4,678,251 in 2010. This is followed by the rural medium scale households whose average expenditure increased from K688,578 in 2006 to K916,983 in 2010. The small scale agricultural households had the lowest average monthly expenditure.

In terms of per capita expenditure, Large-scale agricultural households had the highest per capita expenditure in 2010 (K760, 360) followed by non-agricultural households (K247, 489) and the medium scale agricultural households were at K139, 122. The least per capita expenditure (K112, 684) was recorded among small scale agricultural households. The pattern is similar for the 2006 per capita expenditure.

Expenditure patterns for households in the different urban strata revealed that households in High Cost stratum had the highest average monthly expenditure, while the Low Cost households had the least expenditure. All households in the urban strata spent more on non-food than on food items. Households in the High cost stratum recorded the highest average monthly expenditure on non-food (K2, 611, 437) compared to households in the low cost stratum with K688,928.

The high cost areas had the highest per capita expenditure (K958, 148), while households in low cost areas had the least per capita expenditure of K298, 502.

**Table 11.2: Average Monthly Household Expenditure (Kwacha) by Stratum, Zambia, 2006 and 2010**

2010	Total	Food	Non-food	Average per capita expenditure	Number of households
All	969,250	469,863	485,792	226,128	2,481,485
Stratum					
Rural Stratum					
Rural Small Scale	518,824	341,119	171,388	112,684	1,422,769
Rural Medium Scale	916,983	510,838	398,891	139,122	40,388
Rural Large Scale	4,678,251	1,578,445	3,073,050	760,360	1,176
Rural Non Agric	753,471	465,349	276,066	247,489	131,953
Urban Stratum					
Urban Low Cost	1,278,408	569,128	688,928	298,502	655,128
Urban Medium Cost	2,569,652	914,444	1,616,662	589,456	147,434
Urban High Cost	3,735,357	1,077,782	2,611,437	958,148	82,637

2006	Total	Food	Non-food	Average per capita expenditure	Number of households
All	604,238	253,187	341,626	144,027	2,268,186
Stratum					
Rural Strata					
Rural Small Scale	320,182	192,682	122,924	71,437	1,346,846
Rural Medium Scale	688,578	384,242	298,791	114,854	35,570
Rural Large Scale	2,513,407	1,125,463	1,383,378	501,152	1,004
Rural Non Agric	379,809	165,476	207,937	147,052	94,720
Urban Strata					
Urban Low Cost	841,933	306,961	518,489	204,546	634,570
Urban Medium Cost	1,834,220	508,413	1,310,638	387,906	84,778
Urban High Cost	2,638,400	656,307	1,944,443	696,838	70,698

#### 11.4. Total Average Monthly Expenditure by Province

Analysis by province shows that households in Lusaka Province had the highest average total expenditure in both 2006 and 2010. This was followed by households in Copperbelt Province. Households in North-Western Province moved from having the fifth largest average household expenditure in 2006 to the third largest average expenditure in 2010, surpassing Southern and Central provinces. Western province had the lowest average monthly expenditure.

Households in Lusaka Province had the highest per capita expenditure in 2010 (K478, 074) followed by households on the Copperbelt with K348, 361. Households in Luapula province had the lowest per capita expenditure (K105, 133). In 2006, the highest per capita expenditure was recorded in Lusaka Province while the least per capita expenditure was recorded in Western Province.

**Table 11.3: Average Monthly Household Expenditure (Kwacha) by Province, Zambia, 2010**

2010	Total	Food	Non-food	Average per capita expenditure	Number of households
All	969,250	469,863	485,792	226,128	2,481,485
Province					
Central	842,446	480,572	349,869	185,398	248,791
Copperbelt	1,525,468	647,958	852,944	348,361	367,577
Eastern	514,279	323,620	183,933	115,703	341,639
Luapula	498,681	317,681	173,639	105,133	190,576
Lusaka	1,930,089	674,980	1,228,231	478,074	365,038
Northern	558,174	347,440	199,279	125,408	316,497
North-Western	1,057,233	759,642	283,518	233,336	136,999
Southern	772,785	386,457	379,191	182,104	309,752
Western	482,355	278,273	201,697	121,275	204,616

2006	Total	Food	Non-food	Average per capita expenditure	Number of households
All	604,238	253,187	341,626	144,027	2,268,186
Province					
Central	473,491	227,163	236,844	106,080	223,260
Copperbelt	989,513	352,046	622,302	227,241	336,121
Eastern	336,488	177,823	154,520	80,094	319,352
Luapula	368,071	203,723	156,589	80,539	177,025
Lusaka	1,212,629	365,720	826,372	311,710	331,470
Northern	350,786	192,655	151,656	83,472	294,809
North-Western	434,637	240,134	190,848	97,299	129,383
Southern	522,465	262,416	253,404	121,702	282,393
Western	289,384	167,344	119,739	68,208	174,373

### 11.5. Mean Monthly Household And Per Capita Expenditure by Quintile Groups

Table 11.4 shows the average monthly expenditure by quintile groups in 2010. The survey reveals glaring differences between the households in the highest expenditure quintiles and the households in the lowest expenditure quintiles. On average, the highest quintile spends about 16 times more than the lowest quintile and three times more than the national average. In terms of percentage shares, the households in the highest quintile, with an average household size of 6 persons, accounted for 60.2 percent of the household expenditure, while the households in the lowest quintile, with an average household size of 4.2 persons, accounted for 3.9 percent of the total household expenditure.

**Table 11.4: Household expenditure by quintile (kwacha) 2010**

Quintile Group	Monthly average expenditure	Monthly Average per capita expenditure	percentage share of households	Percentage share of Expenditure	Average household size
Lowest	186,413	60,273	20	3.9	4.2
Second	336,610	89,288	20	7.0	5.0
Third	523,392	131,073	20	10.8	5.4
Fourth	882,706	216,199	20	18.2	5.6
Highest	2,923,324	635,115	20	60.2	6.0
Total	969,250	226,128	100	100.0	5.2

Table 11.5 shows the average monthly expenditure by quintile groups in 2006. On average, the highest quintile spent about 19 times more than the lowest quintile and three times more than the national average. In terms of percentage shares, the households in the highest quintile accounted for 60.9 percent of the household expenditure, while those in the lowest quintile accounted for 3.2 percent of the total household expenditure.

**Table 11.5 Household expenditure by quintile(kwacha), 2006**

Quintile Group	Monthly average expenditure	Monthly Average per capita expenditure	percentage share of households	Percentage share of Expenditure	Average household size
Lowest	95,904	32,048	20	3.2	4.0
Second	192,115	53,004	20	6.4	4.8
Third	321,931	80,320	20	10.6	5.4
Fourth	573,933	140,226	20	19.0	5.5
Highest	1,840,735	415,338	20	60.9	5.9
Total	604,971	144,198	100	100	5.1

### 11.6. Percentage Share of Household Expenditure on Food and Non-Food Items

Table 11.3 shows how household expenditure shares are distributed between food and non food. The table shows that households allocate a larger percentage of their expenditure to non-food than to food. The share of non-food has reduced from 58.1 percent in 2006 to 51.5 percent in 2010.

At rural/urban disaggregation, rural households spend more on food than on non-food items. This is the case in both 2006 and 2010. Food expenditure accounted for 58.7 percent in 2006, and increased to 64.6 percent in 2010. Urban households, on the other hand, spent 32.4 percent on food in 2006 and 39.1 percent in 2010.

Except for the large scale stratum, all households in the rural strata devoted more expenses to food than to non-food in 2010.

Small scale agricultural households had the largest percentage of their expenditure on food, accounting for 65.7 percent in 2010 and 60.2 percent in 2006. This was followed by non-agricultural households with expenditure shares of 61.7 percent on food in 2010. This is a significant increase from a share of 43.6 percent in 2006. The least expenditure share on food was recorded by large scale agricultural households whose share of expenditure was 33.7 percent in 2010, which was a reduction from 44.8 percent in 2006.

Urban strata analysis shows that most households spend more on non-food than on food expenses. Households in low cost areas devoted the largest share of their expenditure (44.5 percent) on food and the lowest on non-food (55.5 percent). This was followed by households in medium cost areas with 35.6 percent on food and 64.5 percent on non-food. High cost households spent the highest on non food at 71.2 percent and the lowest at 28.8 percent.

Analysis by province shows that 6 of the 9 provinces spent more on food than on non-food. These are Central, Eastern, Luapula, Northern, Northwestern and Western provinces. Households in Southern Provinces were equally likely to spend on food and non-food items, while those in Lusaka and the Copperbelt were more likely to spend on non-food items.

Households in Northwestern (71.8 percent) allocated the largest share of total expenditure on food while committing the lowest share to non-food (28.2 percent) in 2010. This was followed by households in Luapula province (63.7 percent on food and 36.3 percent on non-food). Households on the Copperbelt province (42.5 percent) and in Lusaka province (35.0

#### CONSTRUCTING THE FOOD CONSUMPTION EXPENDITURE AGGREGATE

Household expenditure for the 2010 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*. Food consumption consisted of food purchased in the market place, own-produced food, food items received as gifts, as relief food or as food-for-work from other households, and food taken/eaten outside the home. Data were collected on the total amount spent on purchased items, total amount consumed on home-produced items and how much the household received as gifts, relief food or food-for-work items. These were asked for two recall periods: the last 2 weeks and the last 4 weeks, depending on whether the items were frequently purchased or infrequently purchased.

Calculating the food purchases sub-aggregate involved converting all reported expenditure 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 home-produced food sub-aggregate was calculated by adding the reported value of consumption of each of the home-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, 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.

The 2010 LCMS also asked for the total value of meals taken outside the home by all household members, and this amount was likewise included in the food consumption aggregate. Consumption of tobacco was excluded in the food consumption aggregate but included in the non-food consumption aggregate.



percent) recorded the lowest expenditure shares on food and the highest shares on non-food.

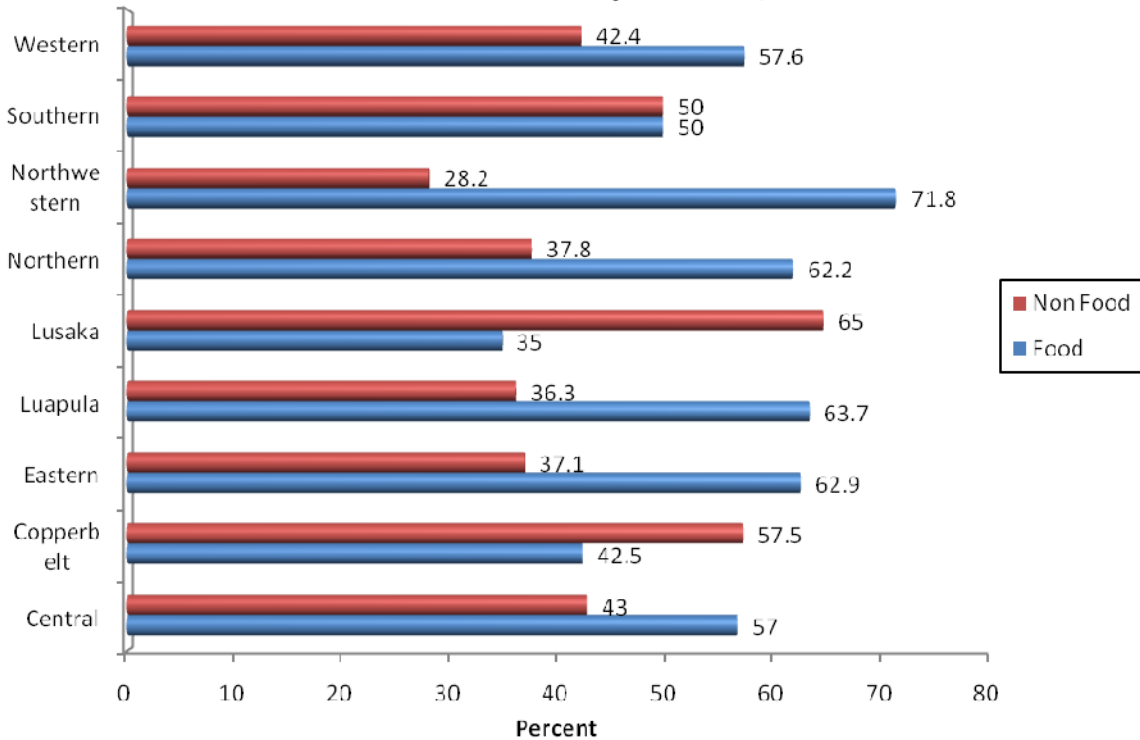
In 2006, Western Province had the highest of the total expenditure on food, followed by North-Western and Northern provinces. Lusaka Province had the lowest share

**Table 11.6: Percentage Share of Household Expenditure on Food and Non-Food by Residence, Stratum and Province, 2010**

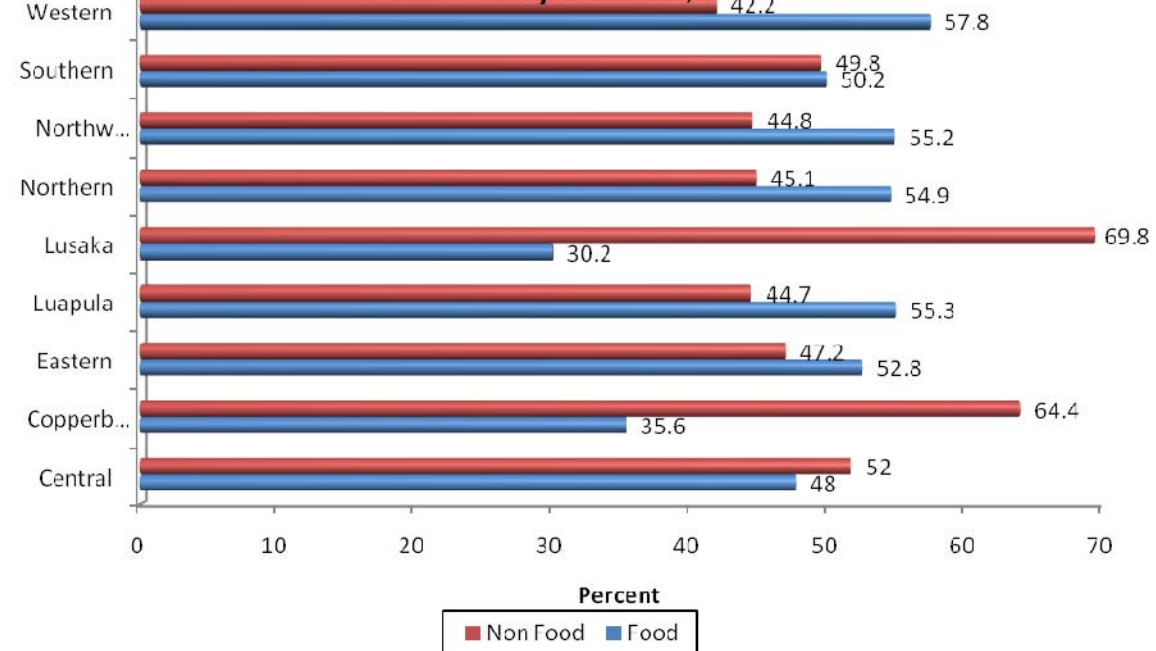
	2006			2010		
Expenditure items	Food	Non Food	Total	Food	Non Food	Total
<b>Zambia</b>	41.9	58.1	100	48.5	51.5	100
<b>Rural/urban</b>						
Rural	58.7	41.3	100	64.6	35.4	100
Urban	32.4	67.6	100	39.1	60.9	100
<b>Stratum</b>						100
Small Scale	60.2	39.8	100	65.7	34.3	100
Medium Scale	55.8	44.2	100	55.7	44.3	100
Large Scale	44.8	55.2	100	33.7	66.3	100
<b>Non Agric</b>	43.6	56.4	100	61.7	38.3	100
Low Cost	36.5	63.5	100	44.5	55.5	100
Medium Cost	27.7	72.3	100	35.6	64.4	100
High Cost	24.9	75.1	100	28.8	71.2	100
<b>Province</b>						
Central	48.0	52.0	100	57.0	43.0	100
Copperbelt	35.6	64.4	100	42.5	57.5	100
Eastern	52.8	47.2	100	62.9	37.1	100
Luapula	55.3	44.7	100	63.7	36.3	100
Lusaka	30.2	69.8	100	35.0	65.0	100
Northern	54.9	45.1	100	62.2	37.8	100
North Western	55.2	44.8	100	71.8	28.2	100
Southern	50.2	49.8	100	50.0	50.0	100
Western	57.8	42.2	100	57.6	42.4	100



**Figure 11.2: Percentage Share of Household Expenditure on Food and non -Food by Province, 2010**



**11.3 Percentage Share of Household Expenditure on Food and Non-Food by Province, 2006**



### 11.7. Percentage Share of Expenditure on Own Produced Food

Own-produced food is an important source of household consumption in Zambia. In addition to enabling households to raise their well-being and living standards by accessing goods and services through own production, consumption of own produce also reduces the need for cash, especially in rural areas where money may be less available.

The 2010 LCMS collected information on own produced food consumed by households. The quantities of own produced food consumed were converted into money terms by multiplying them by the estimated or actual market prices. The calculated value was then added to total household expenditure. The information in Table 11.6 and Figure 11.6 shows expenditure on own produce consumed.

Table 11.7 shows that 13.5 percent of total household expenditure in Zambia constituted consumption of own produced food in 2010. This is a reduction from the 29.5 percent for the households reported to have expenditure on own produce in 2006. Households in rural areas were more likely to spend on own produced food than their urban counterparts. In 2010, rural households spent 24.5 percent of total expenditure on own produced food compared to 3.1 percent of households in urban areas. This is a marked reduction from 2006 when 59.0 percent of the rural households consumed own produce compared to 14.3 percent of the households in the urban areas.

Comparisons among rural strata shows that medium scale agricultural households had the largest percentage share of expenditure on own produce with 27.3 percent in 2010. Large scale households were the ones with the largest share of expenditure of own produce in 2006. Non-agricultural households had the least percentage share (4.8 percent in 2010 and 30.6 percent in 2006).

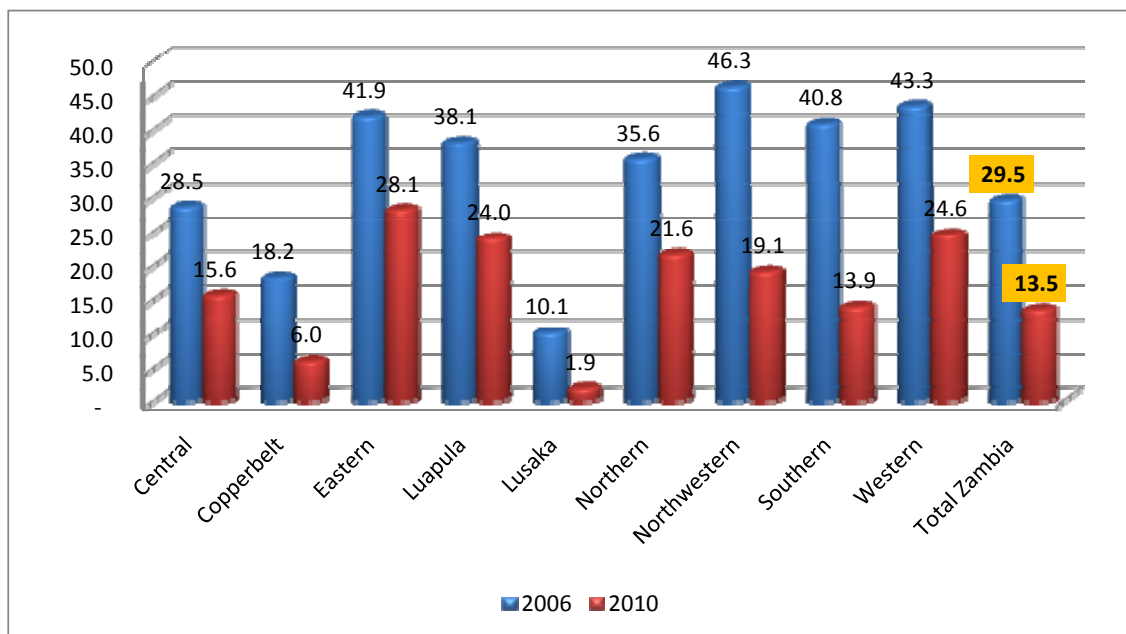
At provincial level, households in Eastern province had the highest percentage share of expenditures (28.1 percent) on own produced food in 2010. This was followed by households in Western and Luapula provinces with 24.6 percent and 24.0 percent respectively. Households in Lusaka province had the lowest percentage share (1.9 percent).

In 2006, North-western Province had the largest share of own produced food expenses, followed by Western and Eastern provinces.

**Table 11.7: Percentage Share of Total Expenditure on own Produced Food by Residence, Stratum, and Province, Zambia, 2006 and 2010**

	2006		2010	
	Own Produce Share	Number of Households	Own Produce Share	Number of Households
All Zambia	29.5	2,268,186	13.5	2 481 485
Rural	59.0	1,478,140	24.5	1 596 286
Urban	14.3	790,046	3.1	885 199
Small Scale	61.2	1,346,846	26.9	1 422 769
Medium Scale	62.8	35,570	27.3	40 388
Large Scale	76.2	1,004	19.6	1 176
Non Agric	30.6	94,720	4.8	131 953
Low Cost	14.6	634,570	3.9	655 128
Medium Cost	11.1	84,778	1.6	147 434
High Cost	16.8	70,698	1.7	82 637
Central	28.5	223,260	15.6	248 791
Copperbelt	18.2	336,121	6.0	367 577
Eastern	41.9	319,352	28.1	341 639
Luapula	38.1	177,025	24.0	190 576
Lusaka	10.1	331,470	1.9	365 038
Northern	35.6	294,809	21.6	316 497
North Western	46.3	129,383	19.1	136 999
Southern	40.8	282,393	13.9	309 752
Western	43.3	174,373	24.6	204 616

**Figure 11.4: Percentage Share of Total Expenditure on Own Produced Food by Province, Zambia, 2006 and 2010**



### 11.8. Percentage Share of Expenditure on Non Food

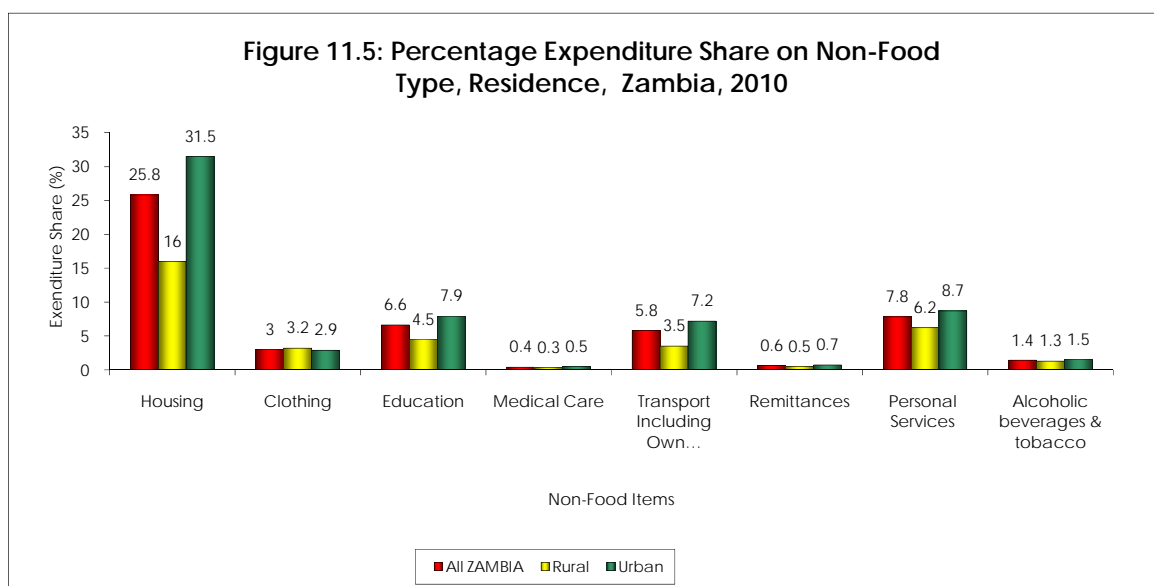
Table 11.8 and Figure 11.5 show percentage expenditure share on non-food by item type and residence. Non-food items took up 51.5 percent of total household expenditure with urban households recording a much higher share (60.9 percent) than rural households (35.4 percent). Housing accounted for the largest expenditure share of 25.8 percent at national level. Household expenditure in urban areas was 31.5 percent while households in rural areas accounted for only 16 percent. Other notable non-food items included personal services with 7.8 percent, education at 6.6 percent and transport at 5.8 percent. Expenditure share on medical care was the least with 0.4 percent.

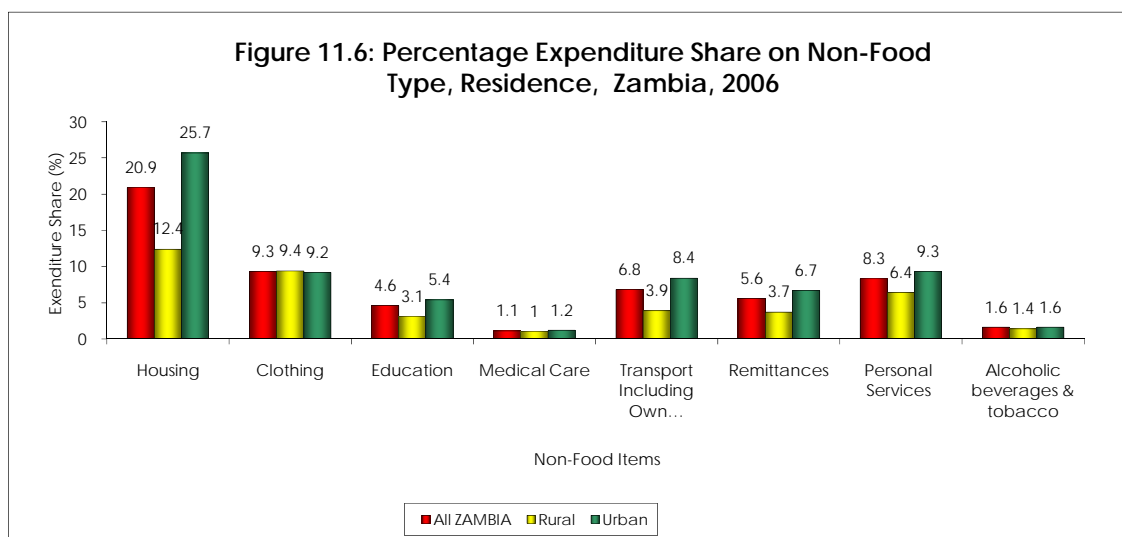
In 2006, non food share accounted for 58.1 percent with urban areas accounting for the largest share of 67.6 percent of total expenditure on non food items. Housing had the largest share of 20.9 percent followed by clothing at 9.3 percent. Urban households spent the highest on housing at 25.7 percent while rural households spent only 12.4 percent on housing. Health care accounted for the lowest expenditure item at 1.1 percent followed by alcoholic beverages and tobacco at 1.6 percent.

**Table 11.8: Percentage Expenditure share on Non-Food by Non-food Type and Residence, Zambia, 2006 and 2010**

Expenditure items	2006			2010		
	Zambia	Rural	Urban	Zambia	Rural	Urban
Total Non Food	58.1	41.3	67.6	51.5	35.4	60.9
Housing	20.9	12.4	25.7	25.8	16	31.5
Clothing	9.3	9.4	9.2	3	3.2	2.9
Education	4.6	3.1	5.4	6.6	4.5	7.9
Medical care	1.1	1	1.2	0.4	0.3	0.5
Transport	6.8	3.9	8.4	5.8	3.5	7.2
Remittances	5.6	3.7	6.7	0.6	0.5	0.7
Personal Services	8.3	6.4	9.3	7.8	6.2	8.7
Alcoholic beverages & Tobacco	1.6	1.4	1.6	1.4	1.3	1.5
Number of Households	2,268,186	1,478,140	790,046	2,481,485	1,596,286	885,199

**Figure 11.5: Percentage Expenditure Share on Non-Food Type, Residence, Zambia, 2010**





### 11.9. Percentage Expenditure Share on Non-Food by Non-Food Type and Stratum, Zambia

Table 11.8 and Figure 11.8 show expenditure share on non-food items by stratum. Among households in rural strata, large scale households spent the largest percentage of total expenditure (66.3 percent) on non-food, followed by medium scale agricultural households (44.3 percent). Non-food expenditure share was least among small scale agricultural households (34.3 percent). Housing had the highest expenditure share across all strata both in rural and urban areas. Personal services were the second largest expenditure items in all the strata except in the medium scale stratum where education was the second largest.

#### CONSTRUCTING THE NON-FOOD CONSUMPTION EXPENDITURE AGGREGATE

Unlike food items, most non-food items are too heterogeneous to permit the collection of quantities. Consequently, the 2010 LCMS only collected values of non-food items. Data collected for non-food items were only for purchases and gifts, except for charcoal and firewood where own-produce was reported. The data was collected at different recall periods: 12 months, 4 weeks and terms for education expenditures. Constructing the non-food aggregate entailed converting all those reported amounts to a uniform reference period of 12 months, aggregating across the various items, and then dividing by 12 to get a monthly non-food aggregate. Median expenditures on each item were computed to identify inconsistent data.

The estimate of the monthly value of expenditure on housing services was based on the data on the rental value of the dwelling. In the case of a household renting their dwelling, the value of expenditure on housing services was taken to be the monthly rental actually paid. With over half the households owning a residential building, most households do not pay actual rent. The rental value of their dwelling was thus imputed. Other households with free or subsidized housing had their rentals imputed as well. In cases where households having their own dwellings or having dwellings free of charge were providing ludicrous estimates of the rental value for their dwelling, the rental values were imputed by obtaining the median rental values of the dwellings with the similar construction materials for a particular location.

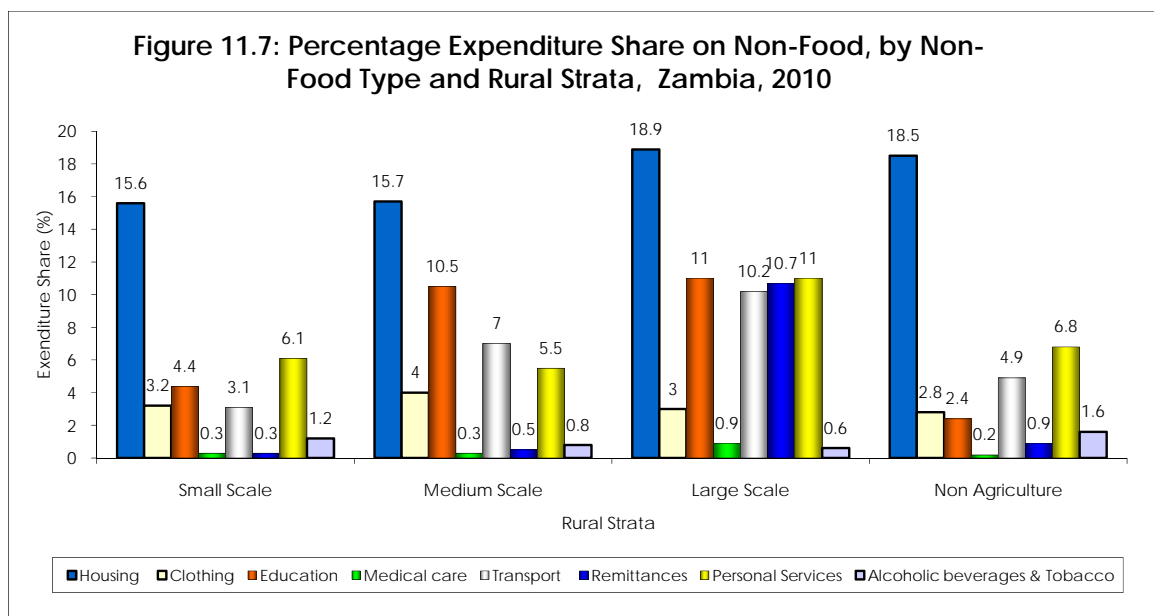
**Table 11.9: Percentage Expenditure share on Non-Food by Non-Food Type and Stratum, Zambia, 2010**

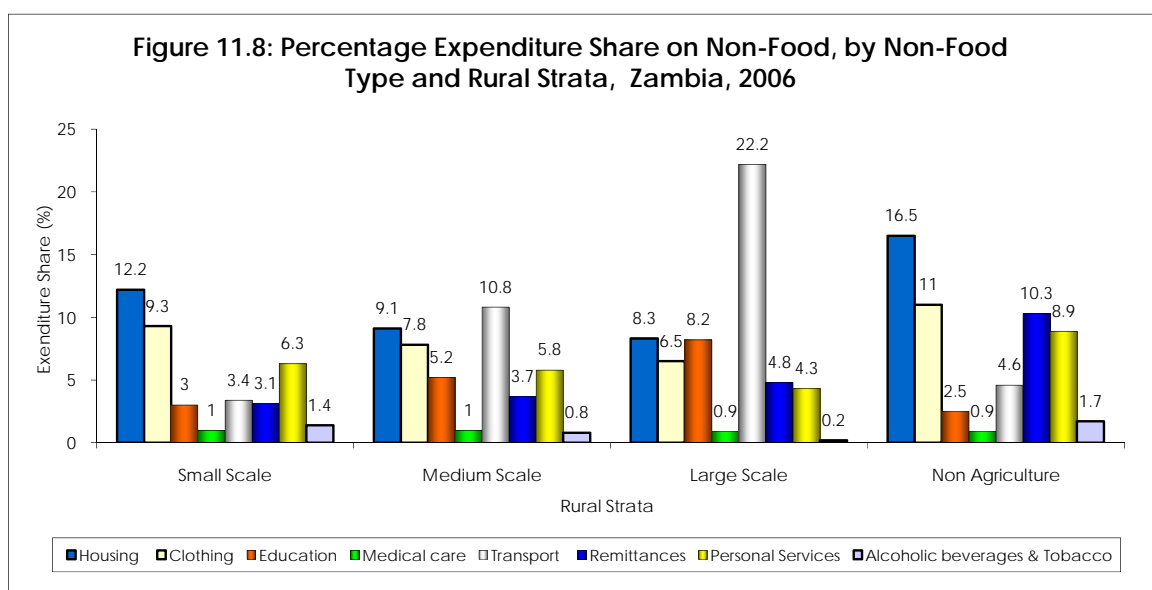
Expenditure items	Zambia	Small Scale	Medium Scale	Large Scale	Non Agric	Low Cost	Medium Cost	High Cost
Total Non Food	48.5	34.3	44.3	66.3	38.3	55.5	64.4	71.2
Housing	25.8	15.6	15.7	18.9	18.5	28.7	33.1	36.9
Clothing	3	3.2	4	3	2.8	2.9	3.3	2.6
Education	6.6	4.4	10.5	11	2.4	7.2	7.3	10.5
Medical care	0.4	0.3	0.3	0.9	0.2	0.4	0.4	0.7
Transport	5.8	3.1	7	10.2	4.9	6.2	8.8	8
Remittances	0.6	0.3	0.5	10.7	0.9	0.6	0.7	1.1
Personal Services	7.8	6.1	5.5	11	6.8	8	9.2	10.1
Alcoholic beverages & Tobacco	1.4	1.2	0.8	0.6	1.6	1.6	1.5	1.3
Number of Households	2,481,485	1,422,769	40,388	1,176	131,953	655,128	147,434	82,637

For 2006, the table shows that among the rural strata, large scale households (55.2 percent) had the largest share of the non-food expenditure; this was followed by medium scale households. For urban households, households in high cost areas had the highest expenditure at 75.2 percent followed by medium cost households (72.3 percent) and low cost households had the least at 63.5 percent.

**Table 11.10: Percentage Expenditure share on Non-Food by Non-Food Type and Stratum, Zambia, 2006**

Expenditure items	Zambia	Small Scale	Medium Scale	Large Scale	Non Agric	Low Cost	Medium Cost	High Cost
Total non Food	58.1	39.8	44.2	55.2	56.4	63.5	72.3	75.1
Housing	20.9	12.2	9.1	8.3	16.5	23.9	29.7	27.5
Clothing	9.3	9.3	7.8	6.5	11	9.3	11.3	7.4
Education	4.6	3	5.2	8.2	2.5	4.4	6.7	7.3
Medical care	1.1	1	1	0.9	0.9	1.2	0.8	1.3
Transport	6.8	3.4	10.8	22.2	4.6	7.8	8.3	10.4
Remittances	5.6	3.1	3.7	4.8	10.3	6.1	5.7	9.1
Personal Services	8.3	6.3	5.8	4.3	8.9	8.9	9.1	10.7
Alcoholic beverages & Tobacco	1.6	1.4	0.8	0.2	1.7	2	0.8	1.4
Number of Households	2268186	1346846	35570	1004	94720	634570	84778	70698





**Table 11.9 and figure 11.9** present data on percentage expenditure share on non-food by province. Households in Lusaka province had the largest expenditure share on non-food (65.0 percent), followed by households in Copperbelt Province with 57.5 percent. Households in North-Western Province had the least expenditure share on non-food with 28.2 percent.

Housing constituted the biggest expenditure share for all the provinces, with Lusaka and Copperbelt recording the highest share, while Northern and North-western had the least share.

**Table 11.11: Percentage Expenditure Share on Non-Food by Non-Food Type and Province, Zambia, 2010**

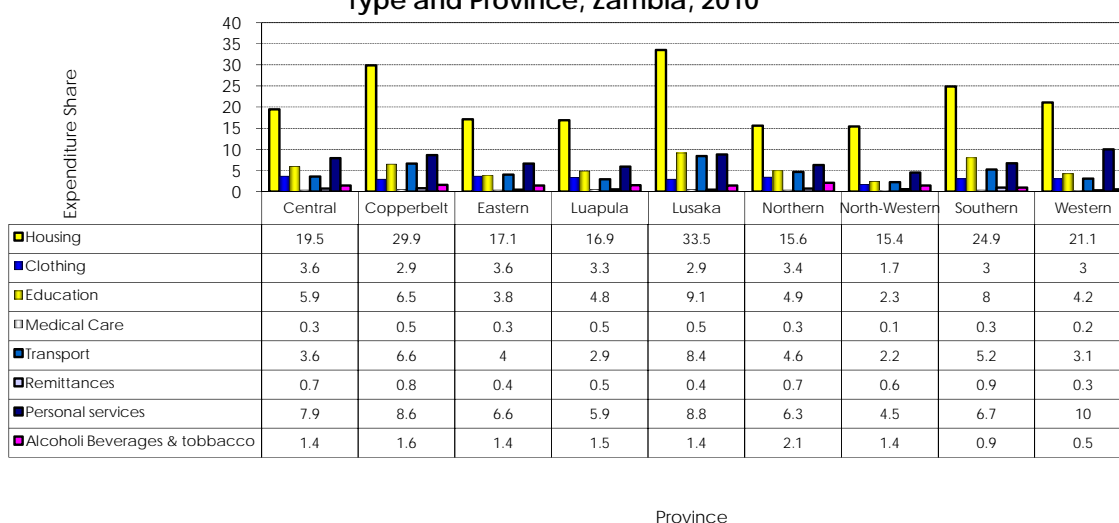
Expenditure items	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western
Total Non Food	51.5	43.0	57.5	37.1	36.3	65.0	37.8	28.2	50.0	42.4
Housing	25.8	19.5	29.9	17.1	16.9	33.5	15.6	15.4	24.9	21.1
Clothing	3	3.6	2.9	3.6	3.3	2.9	3.4	1.7	3	3
Education	6.6	5.9	6.5	3.8	4.8	9.1	4.9	2.3	8	4.2
Medical care	0.4	0.3	0.5	0.3	0.5	0.5	0.3	0.1	0.3	0.2
Transport	5.8	3.6	6.6	4	2.9	8.4	4.6	2.2	5.2	3.1
Remittances	0.6	0.7	0.8	0.4	0.5	0.4	0.7	0.6	0.9	0.3
Personal Services	7.8	7.9	8.6	6.6	5.9	8.8	6.3	4.5	6.7	10
Alcoholic beverages & Tobacco	1.4	1.4	1.6	1.4	1.5	1.4	2.1	1.4	0.9	0.5
Number of Households	2,481,485	248,791	367,577	341,639	190,576	365,038	316,497	136,999	309,752	204,616

The 2006 results show almost a similar picture in terms of expenditure pattern on housing. It shows that housing was the highest expenditure in Lusaka (26.6 percent) followed by the Copperbelt province (24.3 percent). Personal services were also highest in Lusaka Province (8.8 percent) followed by Copperbelt Province (8.6 percent).

**Table 11.12: Percentage Expenditure Share on Non-Food by Non-Food Type and Province, Zambia, 2006**

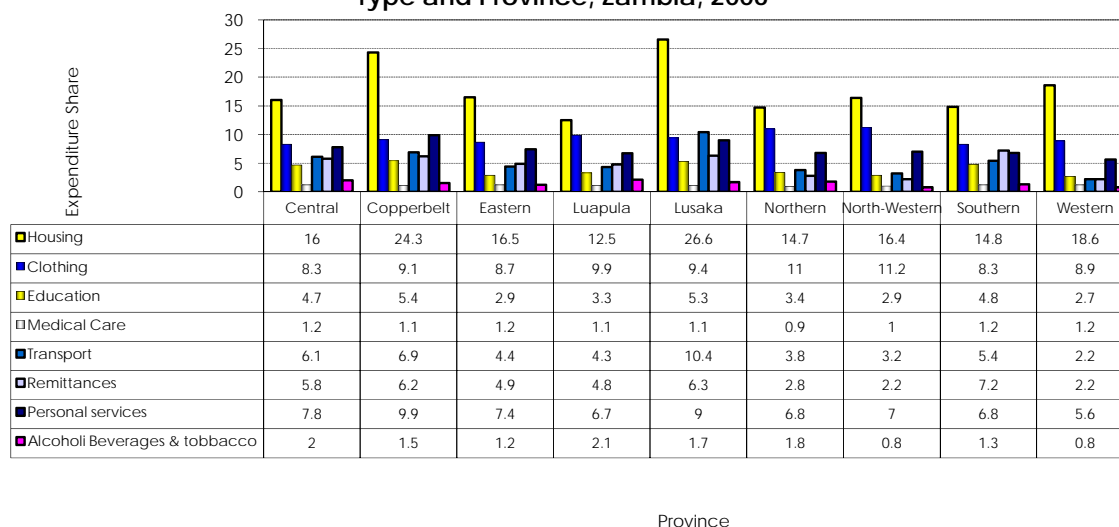
Expenditure items	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North Western	Southern	Western
Total non Food	58.1	52	64.4	47.2	44.7	69.8	45.1	44.8	49.8	42.2
Housing	20.9	16.0	24.3	16.5	12.5	26.6	14.7	16.4	14.8	18.6
Clothing	9.3	8.3	9.1	8.7	9.9	9.4	11	11.2	8.3	8.9
Education	4.6	4.7	5.4	2.9	3.3	5.3	3.4	2.9	4.8	2.7
Medical care	1.1	1.2	1.1	1.2	1.1	1.1	0.9	1	1.2	1.2
Transport	6.8	6.1	6.9	4.4	4.3	10.4	3.8	3.2	5.4	2.2
Remittances	5.6	5.8	6.2	4.9	4.8	6.3	2.8	2.2	7.2	2.2
Personal Services	8.3	7.8	9.9	7.4	6.7	9	6.8	7	6.8	5.6
Alcoholic beverages & Tobacco	1.6	2	1.5	1.2	2.1	1.7	1.8	0.8	1.3	0.8
Number of Households	2268186	223260	336121	319352	177025	331470	294809	129383	282393	174373

**Figure 11.9: Percentage Expenditure Share on Non-Food by Non-Food Type and Province, Zambia, 2010**





**Figure 11.10: Percentage Expenditure Share on Non-Food by Non-Food Type and Province, Zambia, 2006**



# POVERTY

### 12.1. Introduction

One of the major challenges facing Zambia today is to reduce poverty and economic inequality among the Zambian population. Despite the recent turn-around in the economy as shown by real GDP growth of more than 5 percent, the majority of Zambians have continued to live in poverty. It is important to note that a large segment of the population has for a long time been exposed to stringent economic reforms as well as callous weather conditions that monotonically increased their vulnerability to poverty over time. This prolonged exposure to both human and naturally induced hazards, such as the cost-sharing and market liberalisation economic adjustment-style policies, and the recurring drought spells of the 1990s, have entrenched poverty in the lives of many Zambians. The poverty Situation has been more precarious in rural than urban areas mainly because of recurring drought spells which persisted into the new millennium.

The government realised that some of the policies that were being implemented and indeed some occurrence of natural hazards had adversely affected the wellbeing of the people. This realisation prompted the timely initiation of poverty assessments in 1991 starting with a round of Social Dimensions of Adjustments Priority Surveys of 1991 and 1993. The Living Conditions Monitoring Surveys (LCMS) actually evolved from the priority Surveys. During the 1990s, levels of national poverty were sometimes more than 70 percent. During the same period rural poverty was persistently in excess of 80 percent. By 2004, levels of poverty were still high at about 67 percent.

Furthermore, since 2005 the Zambian economy has continued to register positive real GDP growth of not less than 5 percent. Much of this economic growth was observed during the implementation of the Fifth National Development Plans (FNDP), which covered the period 2006 to 2010. However, there has been no notable corresponding improvement in the wellbeing of the people especially in rural areas. The main objective of the FNDP was to reduce poverty through provision of gainful employment especially in key non-mining industries such as agriculture, manufacturing and tourism. This disparity has led to debates as to whether the current growth the country is experiencing is pro-poor. There is therefore definite need to evaluate the impact of the FNDP programmes on the wellbeing of the people in Zambia. There is also need to ascertain whether the economic growth the country is experiencing is pro-poor. Pro-poor growth is in this context understood to refer to the type of inclusive growth which is characterised by progressive redistribution of resources to the poor.

The 2010 living Conditions Monitoring Survey (LCMS) was partly designed to help evaluate the impact of the FNDP and its attendant growth on the wellbeing of the population. The survey was also designed to help assess whether the country is on course in terms of achieving the MDG goals, especially the first MDG goal of halving the 1990 levels of poverty by 2015. The Central Statistical Office (CSO) has been

carrying out comprehensive poverty assessments since 1991. Formally, measurement of poverty has always started with the identification of absolute poverty lines that have a strong nutritional anchor. In the case of Zambia, CSO has been using a basic food basket as a starting point, which is further supplemented by an allowance for non food needs (CSO, Various years). Much of the poverty assessments in the country have been based on the data from the Living Conditions Monitoring Survey (LCMS) rounds. Since 1996 CSO has successfully carried out six LCMS surveys starting with the LCMS survey of 1996, followed by the 1998, 2002/3, 2004, 2006 and 2010 surveys. The LCMS survey rounds differ from the SDA surveys in the sense that the former have been associated with a large sample and wider scope of living conditions related topics.

## **12.2. Improvements to Poverty Measurement Methodology**

The analysis of poverty in this chapter is based on the revised poverty estimation methodology which has been applied to the 2006 and 2010 LCMS survey data only. The Central Statistical Office (CSO) has since improved its poverty measurement methodology by incorporating some of the best practice guidelines aimed at producing reliable and time-consistent poverty estimates. The new CSO poverty methodology includes the following features:

- The use of current item prices to price update the 1991 food basket as opposed to the use of the Consumer Price Index (CPI),
- The use of year specific Engel ratios when deriving the moderate or overall basic needs basket or poverty line
- The inclusion of imputed rent for those households that have zero rent values.

The improvements to the poverty methodology were motivated by the CSO poverty manual which spells out international best practice guidelines in poverty estimation. The manual was developed in conjunction with Poverty experts from the Gottingen University with financial support from DFID and GIZ. Unlike the current poverty estimation methodology, earlier methods used a fixed Engel ratio of 70 percent when deriving the overall poverty line for all the years. This was done under the assumption that the consumption pattern of households did not change over time. In addition, the method did not include imputed rent values to the consumption expenditure aggregates of owner-occupiers, which led to some internal inconsistency in the welfare measure. With these improvements, the 2006 and 2010 poverty estimates are therefore not comparable to earlier poverty estimates that have already been published.

## **12.3. Objective of the 2006 and 2010 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 and across residence and provinces
- To identify possible correlates of poverty

- To measure the intensity and severity of poverty
- To measure the degree of inequality in the country
- To identify the salient characteristics of the poor
- To help monitor and evaluate the impact of governments' and its cooperating partners' policies and programs on the poor, and
- To help monitor progress towards the achievement of the FNDP goals and MDG targets.

It is envisaged that the results from the poverty analysis will help in targeting resources towards the needy in society and eventually help accelerate poverty reduction.

#### 12.4. Concepts and Definitions used in Poverty Analysis

Poverty is multidimensional and complex in nature and manifests itself in various forms; hence making its definition not always straight forward. No single definition can exhaustively capture all aspects of poverty. An individual is said to be poor if he/she suffers some levels of economic and/or social deprivation. The most commonly used indicator of poverty is income deprivation. 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 of the household.

The Central Statistical Office (CSO) has adopted the material well-being perception of poverty in which the poor are defined as those members of society who are unable to afford minimum basic human needs, comprising food and 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 considered necessary to satisfy an individual's basic needs. The poor have in this case typically been identified by comparing their measure of income (i.e. Consumption Expenditure) to some Absolute Poverty line. Since 1991, CSO has been using household consumption expenditure data from the LCMS series when measuring the welfare of the people.

##### 12.4.1. Absolute versus Relative Poverty

**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 Central Statistical Office (CSO) uses the 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 2/3 of the mean/median expenditure per capita has been used as a poverty line. This implies that all persons or households, whose consumption falls below this threshold, are considered poor. Some people have also used percentile cut-offs to define relative poverty line at, say, the bottom 20 percent of individuals in the distribution of income or expenditure.

## 12.5. Deriving Consumption Expenditure Aggregates

Just like many African countries that have been carrying out poverty assessments, the Central Statistical Office (CSO) has mainly been using the concept of income deprivation when measuring poverty. According to this concept, the poor are identified on the basis of the 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 expenditure data as a proxy for household income. For both theoretical and practical reasons, Consumption expenditure is seen to be much more reliable than income for the following reasons:

- 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 large segment of agricultural households are highly inaccurate compared to expenditure measurements

The Central Statistical Office (CSO) 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) and value of consumable gifts.

Traditionally, the consumption aggregates have always covered the following broad category of items:

- Food Expenditure including alcohol related expenses
- Health Expenditure
- Education Expenditure
- Housing Expenditure

- Transport Expenditure
- Expenditure on Personal Services, and
- Remittances

In addition, the 2006 and 2010 aggregates have also included imputed values of rent for all the households that had reported zero rent expenditure mainly comprising Owner-occupiers. The housing rent imputations have been done through a weighted Hedonic Housing Regression Model that essentially relates rental values of households with non-zero expenditure on rent to key housing and location variables. The model adopted the following specification:

$$\ln R_i = X_i\beta + \varepsilon_i$$

Where  $\ln R_i$  is the log of monthly expenditure on rent for household i

$X_i$  is a vector of housing and household characteristics (i.e. Building materials used, access to telephone, piped water, good sanitation, electricity, etc. including location dummies)

$\beta$  is a vector of parameter estimates

$\varepsilon_i$  is the error term

The final model was chosen via a stepwise process based on the explanatory power of each loaded variables. Using the parameters that were generated from the model, Imputed Rent values (IR) for owner-occupiers were estimated using the following equation:

$$IR = \exp(\beta X_i) + 0.5 \cdot MSE$$

It is important to note that the relative weight was calculated simply by rescaling the sample weights so that they add up to the number of observations that entered the model. Weighting of the model using a relative weight is necessary for purposes of correctly estimating the Mean Square Error (MSE). The rent equivalent values were imputed by exponentiating the log-normal model. Since the imputation was done using a log form, 50 percent of the MSE was added to the imputed values as a correction factor when getting back to levels (Demombyne, 2004). (Refer to appendix A and B for the variable names and estimated coefficients). Imputed rent values were then added to housing expenditures of households with zero rent values.

It is also common practice during poverty analysis to impute use-values of household non-productive durable goods such as television sets, radios, cars, fridges, etc. However, Imputed use-values for household durable goods were not included in the consumption expenditure aggregates mainly due to the fact that the 2006 LCMS survey did not have all the required information for deriving the imputations.

## 12.6. Concept of Adult Equivalent

Poverty assessment has always made more sense when measured at individual level. However, the Living Condition Monitoring Surveys (LCMS) collect consumption expenditure information at household and not individual level. Obviously household consumption expenditure can never constitute a good welfare measure of individuals because families with different household sizes will face different consumption requirements. In addition, different members of the same household have different age specific energy and protein requirements for them to live active lives.

A good poverty measure should therefore strive to take into account 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 CSO to normalise consumption for differences in household composition. (UN Statistics Division, 2005; CSO, 1997 & 2004). It is for this reason that CSO undertake poverty analysis using per adult equivalent monthly expenditure as opposed to per capita monthly expenditure. Table 12.1 below shows the Adult Equivalent scale that was used to convert household consumption expenditure into adult equivalent terms.

**Table 12.1: Adult Equivalent Expenditure Scale, Zambia 2006 - 2010**

Age Group	Member	Calorie Requirements per person	Adult Equivalents Scale
0 - 3 years	1	1,000	0.36
4 - 6 years	1	1,700	0.62
7 - 9 years	1	2,100	0.76
10 - 12 years	1	2,150	0.78
Adults (13+ years)	2	2,750	1.00
Total	6	12,450	4.52

Source: NFNC/CSO 1990 Report

## 12.7. Poverty Line Determination

In general, the Central Statistical Office (CSO) uses the Cost of Basic Needs (CBN) approach when measuring welfare outcomes of various households (Ravallion, 1994; CSO, 2004). This method essentially starts by determining the cost of a simple food basket that meets minimal nutritional requirements for a family of six. Table 12.2 below shows the composition of the basic food basket together with corresponding costs per household as well as in per Adult Equivalent (AE) terms. The cost of the food basket was obtained by price updating the 1991 food basket, which was constructed by the National Food and Nutrition and Price and income Commissions (NFNC/PIC), using December item-specific average prices of a respective year. In this case, the 2006 and 2010 food baskets were valued at K61, 007 and K96, 366 respectively. Therefore, the 2006 and 2010 absolute poverty lines correspond to the cost of the food baskets. For the purpose of this analysis, these lines have also been designated by CSO as Extreme poverty lines.

**Table 12.2: Food Basket for a Family of Six, 2004 - 2010**

FOOD BASKETS FOR A FAMILY OF SIX (Values in Zambian Kwacha)							
Consumption Items	QTY	Unit Price 2004	Cost 2004	Unit Price 2006	Cost 2006	Unit Price 2010	Cost 2010
Cooking oil Local 2.5Lt	1	19628	19628	17653	17653	28698	28698
Dried beans 1kg	2	4760	9520	6041	12082	8746	17492
Dried bream 1 Kg	1	21856	21856	22317	22317	30522	30522
Dried Kapenta 1 Kg	2	30062	60124	30336	60672	49225	98450
Fresh milk 500 ml	4	2005	8020	2186	8744	3298	13192
Onion 1kg	4	3040	12160	3864	15456	4765	19060
Shelled groundnut 1kg	3	5425	16275	5743	17229	7705	23115
Table salt 1kg	1	1880	1880	2424	2424	4516	4516
Tomatoes 1kg	4	1846	7384	2253	9012	3073	12292
White Roller 25Kg	3.6	25220	90792	26288	94637	47736	171849.6
Vegetables 1 Kg	7.5	1437	10777	2070	15525	2185	16388
<b>Total Cost</b>			<b>258,416</b>		<b>275,751</b>		<b>435,574</b>
POVERTY LINES IN ADULT EQUIVALENT (AE) TERMS AE scale=4.52							
Poverty Line			57172		61007		96366

Source: NFNC and PIC 1990 Report

It is a well documented fact that a person can not leave on food alone but also requires other essential goods and services for his or her wellbeing. The ultimate poverty line should therefore take into consideration other non-food requirements of life. In order to take into account other non food needs such as shelter, clothing, good health and education, the food poverty line derived from the cost of the food basket is further adjusted using an appropriate Engels ratio (Ravallion, 1994; Kakwani, 2003). Since 1991, CSO has relied on the procedure that was proposed by Kakwani when determining the Engels ratio. This method has also been recommended in the United Nations Poverty analysis handbook. The method starts by first identifying households whose per adult equivalent food expenditure is just around the food poverty line. In this case households whose expenditure equivalent was within 30 percent of the poverty line were chosen for this purpose. Secondly the average share of consumption expenditure on food is then estimated using these chosen households. This method is intuitively persuasive in the sense that it reveals typical non food requirements for households whose food expenditure corresponds to the food poverty line (extreme poverty line); hence it accounts for typically minimal non food requirements of a representative household.

It is important to note that before 2006, CSO was using a fixed Engels ratio of about 70 percent when accounting for non food requirements. This ratio implied that the household non food requirements accounted for about 30 percent of the basic needs. Indeed, the share of food for the majority of the households was quite high in the 1990s during lean period. Nearly all the cross-sectional LCMS surveys were carried out during this period. However, the 2006 and 2010 data have revealed reductions in the share of food. The 2006 and 2010 poverty estimates therefore are based on year specific Engel ratios of 61 and 66 percent respectively. This innovation of using year specific Engel ratios when deriving basic needs or moderate poverty lines is justified since consumption patterns have proved to be changing overtime. The high non-food share of 39 percent in 2006 (100 - 61) may partly be due to the fact that most of the non-food imported goods and services became very cheap to buy as a result of the strong appreciation of the local currency (kwacha) during that year.



Given the year specific Engels ratios, the 2006 and 2010 moderate poverty lines were simply obtained by dividing the food poverty lines by their corresponding ratios. In this case, the 2006 and 2010 moderate poverty lines came to K89, 717 and K146, 009 respectively. The overall poverty situation in the country was therefore evaluated based on these lines.

### **12.8. Characterisation of Poverty**

In nearly all the poverty assessments, the food poverty line, which corresponds to the cost of the food basket, has been designated by CSO as the extreme poverty line while the basic needs basket has been designated as the moderate poverty line. In the case of Zambia, households whose per adult equivalent expenditure is less than the extreme poverty line are classified as extremely poor, whilst households whose per adult equivalent expenditure is equal to the food poverty line (Extreme line) but falls below the moderate line are said to be moderately poor. Non poor households are those whose adult equivalent expenditure is greater or equal to the moderate line. It will always be shocking but true that there are households in this country whose total income can not deliver a basic food basket on the table; hence their classification as the extremely poor.

### **12.9. Foster-Greer-Thorbecke (FGT) Poverty Measures**

The Foster-Greer-Thorbecke (FGT) poverty measures summarise information on the prevalence, depth and severity of poverty. The P-alpha class of poverty measures developed by Foster, Greer and Thorbecke (FGT) in 1984 have been estimated during 2006 and 2010 LCMS data analysis (Foster, Greer, Thorbecke, 1984). The head-count ratio ( $P_{\alpha=0}$ ), which shows the incidence of poverty, is the most widely used indicator of poverty. It estimates the proportion of total households or population that is poor. Alternatively, it measures the percentage of the population whose expenditure falls below the poverty line. The headcount poverty measure is chiefly used for making welfare comparisons across different periods and areas – as in assessing overall progress in poverty reduction. It is often the starting point for social policy programming as it is sometimes used to obtain rough figures about the target population for some poverty reduction programmes.

The shortcoming of the head-count 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  $P_{\alpha=1}$ . 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 suggesting the amounts of money that would be required to be contributed by every individual/household (under the assumptions of perfect targeting of the poor) in order to eradicate poverty. On the other hand,  $P_{\alpha=2}$  is a measure of the square of the intensity of poverty. It measures the severity of poverty or income inequality amongst the poor themselves by giving greater weight to those further down the poverty line.

The Foster-Greer-Thorbecke (FGT) poverty measure takes the following form:

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^q \left( \frac{Z - Y_i}{Z} \right)^{\alpha}$$

Where

N is the population size

q the number of poor people

Z the poverty line,

Y<sub>i</sub> consumption per adult equivalent.

The FGT measure becomes Poverty headcount ratio (P<sub>0</sub>), when  $\alpha = 0$ , poverty gap ratio (P<sub>1</sub>), when  $\alpha = 1$ , and the poverty severity index (P<sub>2</sub>), when  $\alpha = 2$ . It is important to note that the Poverty Gap ratio (P<sub>1</sub>) and the Poverty Severity Index (P<sub>2</sub>) not only meet the focus axiom but also meet the monotonicity and weak transfer axioms of a good poverty measure (Kakwani, 2003; Sen, 1976). P<sub>1</sub> measures how far below the poverty line the poor are while P<sub>2</sub> measures resource inequality among the poor.

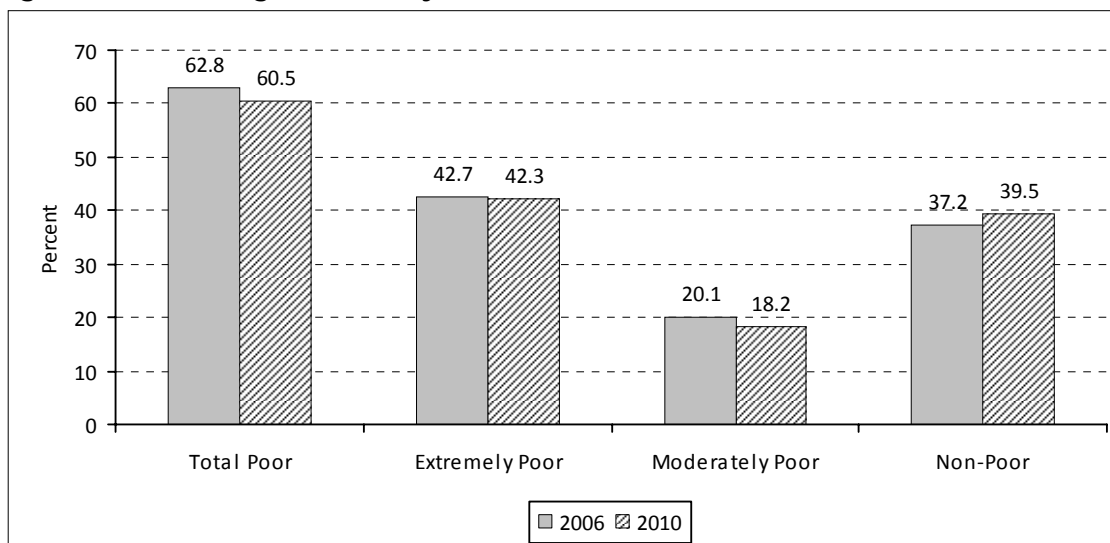
### 12.11. Poverty Results (2006 and 2010)

Because of the large sample of households used during the 2006 and 2010 Living Conditions Monitoring Survey (LCMS), the associated standard errors and their corresponding Coefficient of variation are very low; hence the poverty results from this analysis are quite precise given the narrower confidence interval at the 95 percent level. The standard errors were estimated using the Taylors Series of linearization method. The Reader can refer to appendix A tables A9 and A10 for details on the confidence intervals for the 2006 and 2010 poverty estimates.

#### 12.11.1. General Poverty Trends

Results from the two recent LCMS surveys indicate that poverty levels have remained persistently high despite recording a slight decline between 2006 and 2010. Figure 12.1 below shows that the proportion of the population falling below the poverty line reduced from 62.8 percent in 2006 to 60.5 percent in 2010. This reduction represents a 2.3 percentage point decline. It is important to note that overall poverty rate is simply obtained by summing the extreme and moderate poverty rates. Further characterisation of poverty by level of intensity reveals that the majority of the population are afflicted by extreme levels of poverty. In 2010, the extremely poor accounted for about 42 percent of the total population. The percentage of the extremely poor marginally declined from 42.7 percent to 42.3 percent, compared to moderate poverty, which reduced from 20.1 percent to 18.2 percent during the same period. These results indicate that a large segment of the population is still unable to afford the cost of a minimum food basket. The results also reveal that some of the moderately poor persons in Zambia could have escaped from poverty between 2006 and 2010; hence the increase in the percentage of the non-poor from 37.2 to 39.5 percent.

**Figure 12.1: Changes in Poverty levels, 2006 - 2010**



#### 12.11.2 Incidence of Poverty by Residence (Rural/Urban)

Figure 12.2 shows the percentage of the population that is poor by residence. Results in figure clearly show that poverty in Zambia has continued to be more of a rural than urban phenomenon. The level of rural poverty is more than twice that obtaining in urban areas. In 2006 rural poverty was estimated at 80.3 percent compared to urban levels of 29.7 percent. The same pattern was revealed in 2010 where headcount poverty was as high as 77.9 percent in rural areas compared to urban poverty levels of 27.5 percent. These results show that both rural and urban poverty declined roughly by 2 percentage points between 2006 and 2010, from 80.3 to 77.9 percent and from 29.7 to 27.5 percent, respectively.

**Figure 12.2: Changes in Poverty levels by residence, 2006 - 2010**

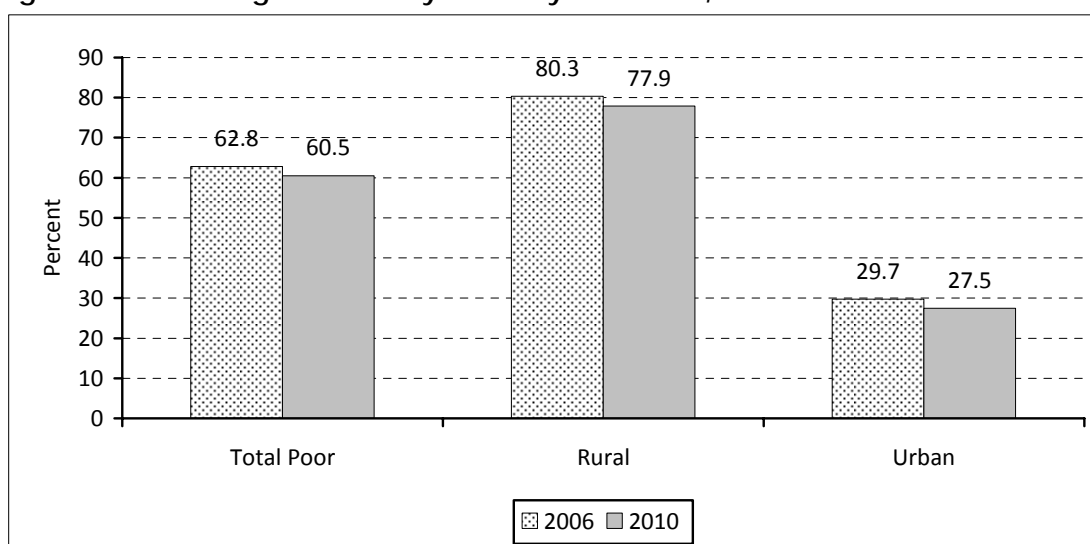


Figure 12.3 shows the percentage distribution of the rural poor by poverty status during the period under review. It is clear from the figure below that rural poverty had declined by 2.4 percentage points between 2006 and 2010, from 80.3 to 77.9 percent. Further analysis of the data reveals that more than half of the rural population (about 58 percent) continued to be afflicted by extreme levels of poverty. The proportion of the population that was facing extreme levels of poverty barely changed between 2006 and 2010, from 58.5 to 57.7 percent. In the same manner, the proportion of the population that was affected by moderate poverty marginally reduced from 21.8 percent in 2006 to 20.2 percent in 2010. These results clearly show that, despite the decline in overall poverty, the majority of the rural poor have continued to face extreme levels of poverty. These results reveal that some of the moderately poor persons in rural areas could have redeemed their poverty status between 2006 and 2010; hence the increase in the percentage of the non-poor from 19.6 to 22.1 percent.

**Figure 12.3: Changes in Rural Headcount Poverty, 2006 - 2010**

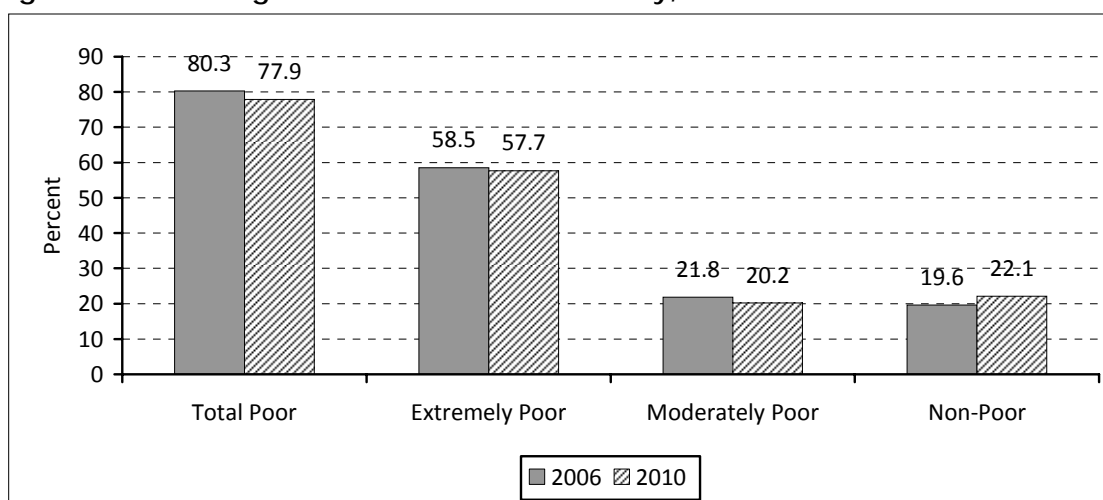
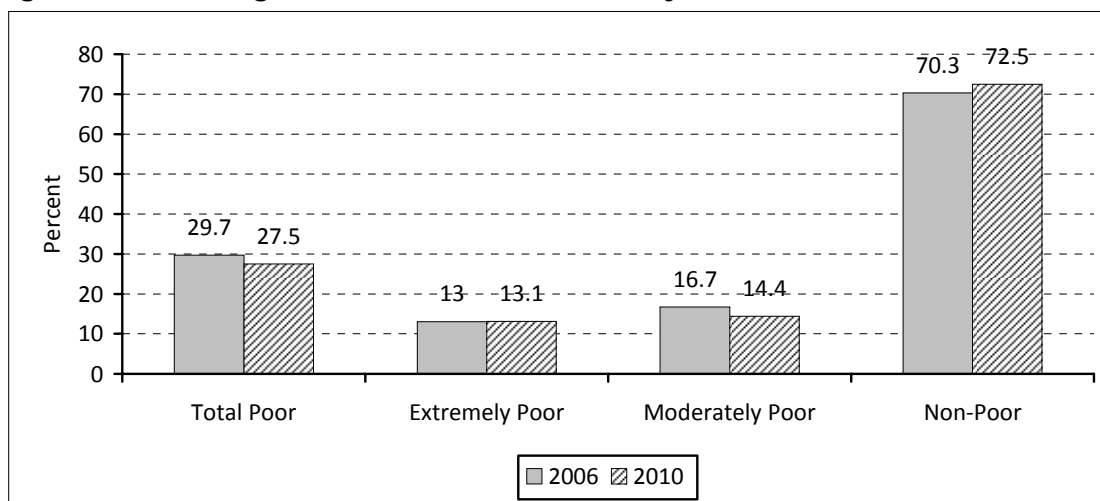


Figure 12.4 shows the percentage distribution of the urban poor by poverty status during the period under review. The figure shows that there was a slight decline in urban poverty between 2006 and 2010, from 29.7 to 27.5 percent, respectively. During the same period, levels of extreme poverty had remained at about 13 percent of the urban population. On the other hand, moderate poverty declined quite significantly from 16.7 percent to 14.4 percent between the same period. These results reveal that some of the moderately poor persons in urban areas could have graduated out of poverty between 2006 and 2010; hence the increase in the percentage of the non-poor from 70.3 to 72.5 percent.

**Figure 12.4: Changes in Urban headcount Poverty, 2006 - 2010**



### 12.11.3 Incidence of Poverty by Province

It is quite evident in this country that the bulk of the provinces have remained quite underdeveloped for more than 45 years after gaining independence. Apart from Lusaka and the Copperbelt provinces, the rest of the regions are fairly remote. The degree of remoteness increases the further away the province is mainly from the old line of rail. The remote provinces are characterised by a mono economy with poor infrastructure, poor access to social and economic amenities, poor water and sanitation conditions, low levels of economic activities, just to mention a few.

Further analysis of poverty by province reveals high levels of poverty in predominantly remote provinces, especially in Luapula, Western, Eastern and Northern provinces. Figure 12.5 shows that Lusaka followed by Copperbelt province has continued to record lower levels of poverty since 1991. With the exception of Luapula province, which recorded a substantial increase in the incidence of poverty from 73.9 to 80.5 percent between 2006 and 2010, all the remaining provinces registered some decline in poverty. Central province in particular recorded a drastic decline of nearly 10 percentage points, from 70.7 percent in 2006 to 60.9 percent in 2010. There is definitely need to investigate factors that could have contributed to the drastic decrease and increase in poverty in Central and Luapula provinces respectively.

**Figure 12.5: Poverty Changes by Province, 2006 - 2010**

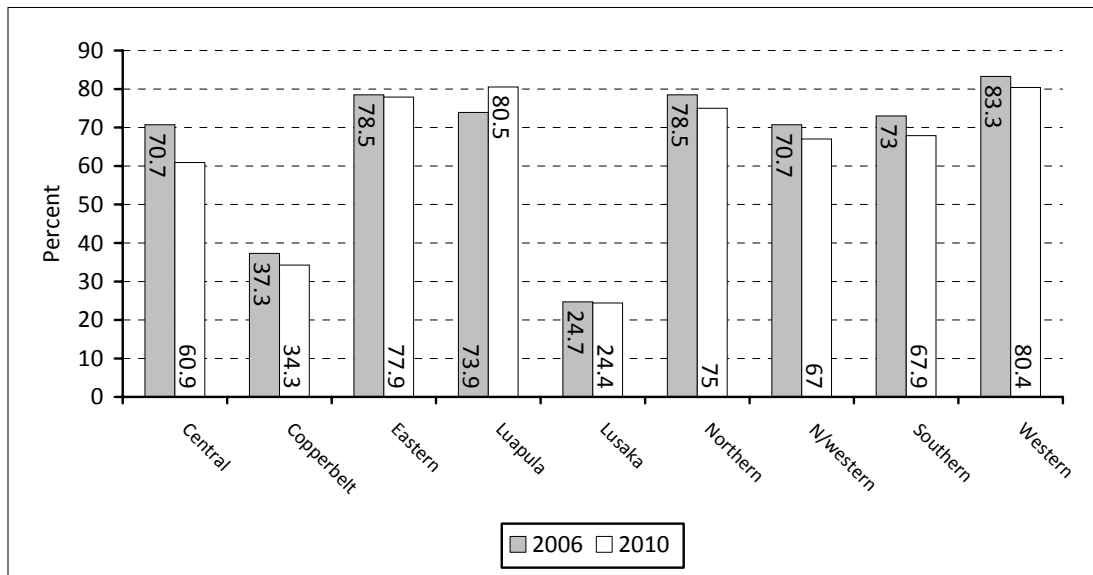


Figure 12.6 shows levels of extreme poverty by province. Levels of extreme poverty have continued to remain high especially in the predominantly rural provinces including Luapula, Western, Eastern and Northern provinces. Unlike the other regions, results show a sharp increase in extreme poverty in Luapula province between 2006 and 2010, from 53.6 to 64.9 percent. Eastern, North-western and Lusaka provinces also recorded some marginal increase in extreme poverty. The rest of the regions revealed declines in the levels of extreme poverty, particularly Central, followed by Southern provinces.

**Figure 12.6: Changes in Extreme Poverty by Province, 2006 - 2010**

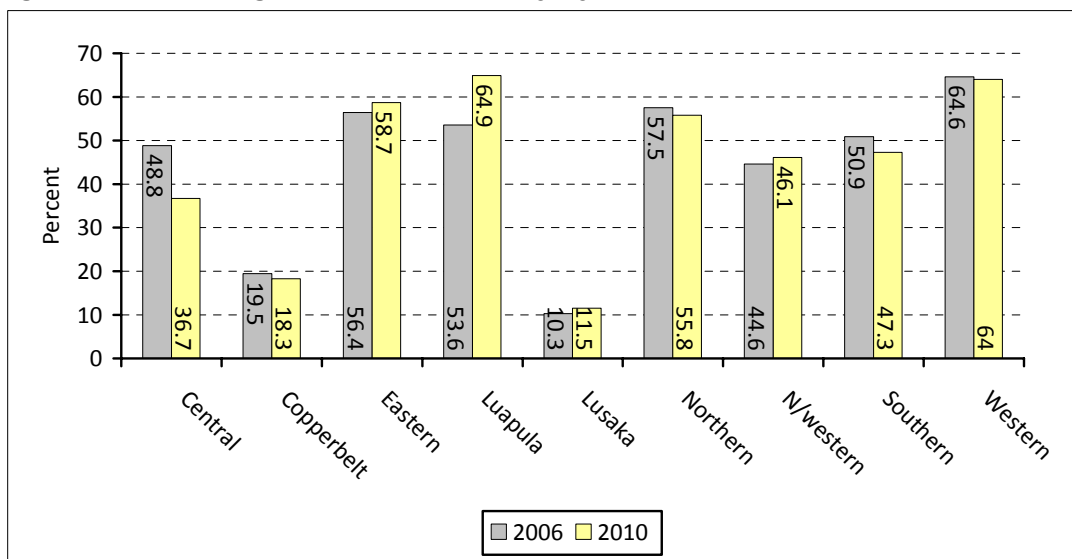
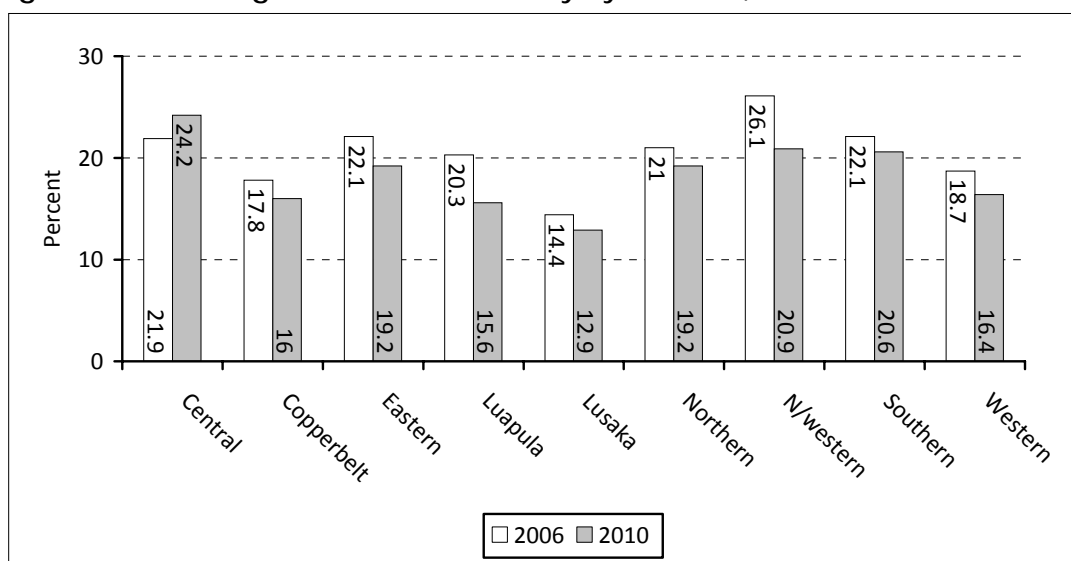


Figure 12.7 shows the distribution of moderate poverty by province during the period 2006 and 2010. The figure below reveals that moderate poverty has dropped between 2006 and 2010 across all the provinces except for Central Province. It is

important to note that the observed reduction in moderate poverty between 2006 and 2010 can be attributed to either an increase in the proportion of the extremely poor and/or increase in the non poor. However, the situation for Central province indicates that some people could have exited extreme levels of poverty by virtue of meeting the cost of the minimum food basket during the period under review.

**Figure 12.7: Changes in Moderate Poverty by Province, 2006 - 2010**



#### 12.11.4. Incidence of Poverty by Stratum

During the 2006 and 2010 Living Conditions Monitoring survey (LCMS), all households were explicitly stratified into groups based on the scale of their agricultural activities and type of residential area. Rural households were in this case divided into small scale holders, medium scale farming households, large scale farming households and non agricultural households. Conversely urban households were classified based on the local authorities' classification of residential areas, which is mainly determined by the degree of servicing of the area with paved roads, water and sanitation, plot size and population density.

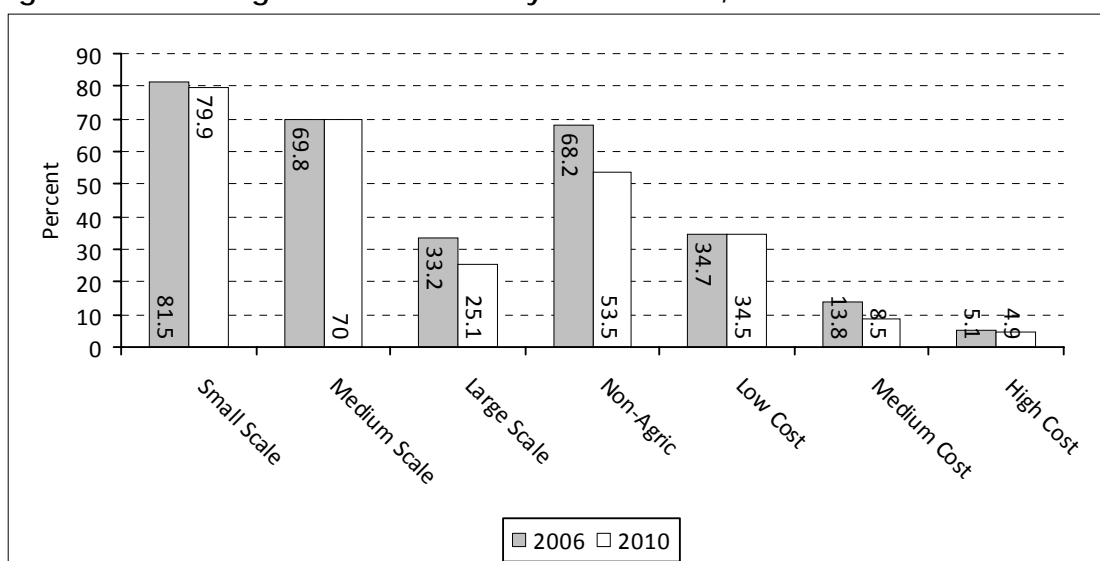
This stratification is motivated by the understanding that poverty estimates at the aggregate level tend to mask a lot of heterogeneity at the lower levels. The incidence of poverty at the subgroup level might even be higher than the overall poverty rate for rural or urban areas alike. Indeed, the rate of poverty among small scale and low cost households is extremely high compared to say among the large scale and high cost households of rural and urban areas, respectively.

Figure 12.8 shows the incidence of poverty among individuals in various strata. Results in the figure show that in rural areas, the incidence of poverty was generally higher among small scale farmers followed by medium scale farmers and non-agricultural households. The incidence of poverty was lowest among large scale farmers. In the case of urban areas higher levels of poverty were observed amongst households residing in low cost areas. The rate of poverty was lowest among households residing in high cost areas.

Results further reveal that the incidence of poverty barely changed among small scale farmers between 2006 and 2010, from 81.5 to 79.9 percent, while it almost remained static among medium scale farmers, at about 70 percent. However, the rate of poverty dropped quite drastically among non-agricultural and large scale farming households, from 68.2 to 53.5 percent and from 33.2 to 25.1 percent, respectively. In urban areas though, the incidence of poverty barely changed among households residing in low cost and high cost areas, almost remaining at the 2006 level of about 35 and 5 percent respectively. On the other hand, households in medium cost areas experienced quite significant poverty reduction of about 5 percentage points during the same period, from 13.8 to 8.5 percent.

These results demonstrate that there is a lot more that needs to be done in order to reduce poverty among small and medium scale farming households found in rural areas. In urban areas, more poverty reduction efforts should be targeted at households residing in low cost areas.

**Figure 12.8: Changes in Overall Poverty across Strata, 2006 - 2010**



It is important to note that overall poverty consist of extreme and moderate poverty. Figure 12.9 shows the incidence of extreme poverty by stratum. Results in the figure reveal that the levels of extreme poverty were highest among the rural small scale followed by medium scale farmers. Between 2006 and 2010, nearly 60 percent of the small scale farmers could not afford the cost of a basic food basket (i.e. were extremely poor). During the same period, over 40 percent of the medium scale farmers were afflicted by extreme poverty. The levels of extreme poverty were also high among non-agricultural households found in rural areas and least among large scale farmers. Results further show that the proportion of the extremely poor small scale farmers remained at the 2006 level of 59.7 percent during the period under review while that of the medium scale farmers increased from 44.9 to 48.2 percent during the same period. Notably, levels of extreme poverty barely changed among large scale farmers while non-agricultural households experienced some drastic reduction in extreme poverty, from 46.9 to 34.9 percent.



Conversely, the majority of urban households appear to have evaded extreme levels of poverty during the period under review. Results show that extreme poverty in urban areas was more prevalent among households residing in low cost areas than among those residing in medium and high cost areas. The incidence of extreme poverty is almost non-existent in high cost areas, where the observed figure of less than 2 percent probably relate to house servants, maids and other casual workers that happen to be residing in these areas. It is clear from the figure that households residing in low cost and high cost areas experienced some marginal increase in extreme poverty levels while those found in medium cost experienced some decline.

These findings clearly indicate that the problem of extreme poverty is more pronounced in rural than in urban areas and that it is more common among the small scale and medium scale farmers. Results also show that a significant proportion of households in low cost areas have remained victims of extreme poverty since 2006.

**Figure 12.9: Changes in Extreme Poverty across Strata, 2006 - 2010**

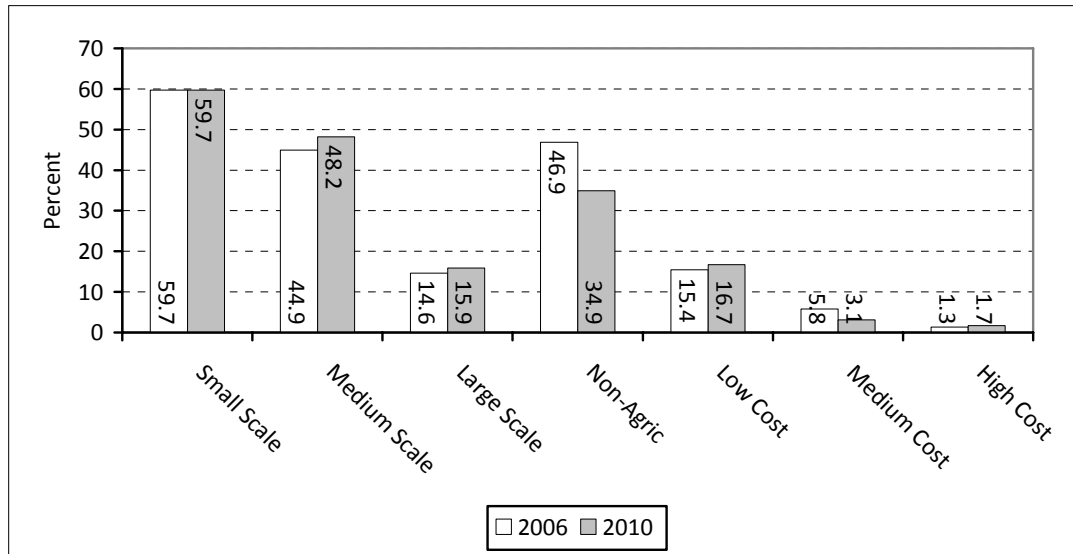
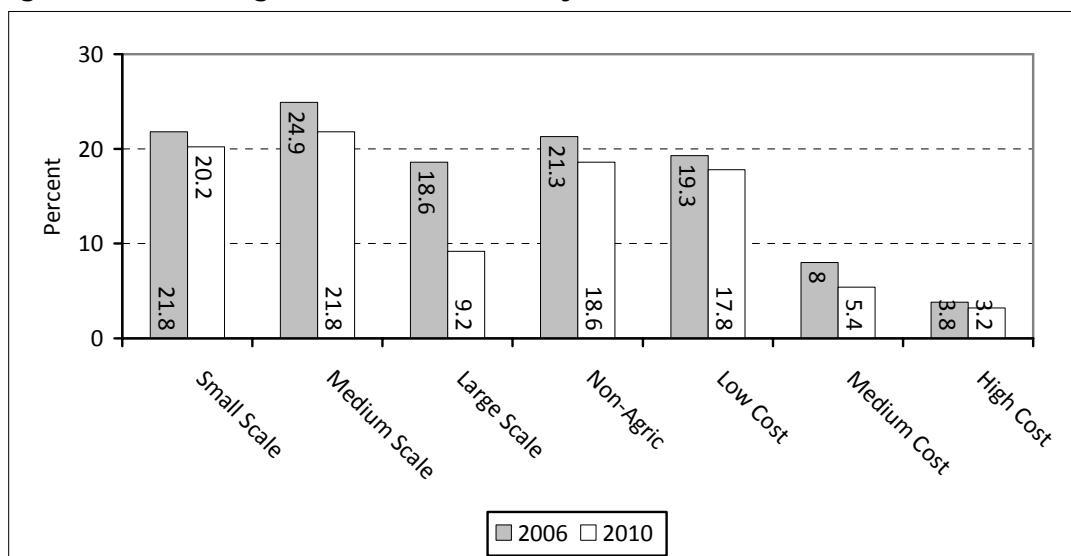


Figure 12.10 shows the incidence of moderate poverty by stratum. The figure clearly shows high levels of moderate poverty among medium scale followed by small scale and non- agricultural rural households. Levels of moderate poverty were also high among urban households residing in low cost areas. Results reveal some notable declines in moderate poverty across all strata, especially among large scale farmers.

Figure 12.10: Changes in Moderate Poverty across Strata, 2006 - 2010



## 12.12. Poverty and Household Characteristics

A number of studies including poverty mapping have shown strong correlation between incidence of poverty and various household characteristics such as the size of the household, age, sex, education and economic activity status of the household head. A large number of households have become increasingly vulnerable to poverty due to many factors such as inadequate social security or lack of old age social security scheme altogether, loss of breadwinner especially during the advent of HIV/AIDS, high dependency ratio or large families as a result of the orphan explosion, poor job opportunities as a result of poor education background and wide spread unemployment. Indeed many studies have also revealed that the majority of females attain their household headship as a result of inadvertent loss of a spouse to death or divorce, who in many instances, turnout to have been the breadwinner. This section looks at how poverty varies by household size, sex, age, education and economic activity of the household head. Results on the relationship between poverty and various household characteristics are summarised in table 12.3 and 12.4 below.

Table 12.3: Distribution of the population by overall and extreme poverty, household characteristics and residence, 2006 - 2010

Household Characteristics	2006						2010					
	Total		Rural		Urban		Total		Rural		Urban	
	Overall	Extreme	Overall	Extreme	Overall	Extreme	Overall	Extreme	Overall	Extreme	Overall	Extreme
<b>Age</b>												
15 – 24	57.6	33.6	69.1	41.3	20.3	8.6	55.0	29.4	66.5	35.9	15.8	6.8
25 – 34	56.4	36.9	75.2	52.3	19.7	6.6	53.2	34.1	70.3	47.6	21.3	8.8
35 – 44	60.6	40.7	81.4	59.0	27.8	11.9	60.0	43.1	79.1	60.8	26.3	12.0
45 – 54	64.7	45.8	83.1	63.7	32.8	14.7	63.6	46.9	81.9	64.9	29.2	13.2
55 – 64	69.1	46.2	84.7	60.7	40.8	20.0	65.5	46.5	83.1	62.2	35.2	19.6
65+	79.3	60.0	86.1	68.7	56.0	30.1	72.2	52.3	83.2	61.8	41.9	24.8
<b>Household Size</b>												
1 – 2	39.4	22.0	56.3	32.7	10.5	3.7	30.2	13.2	45.0	20.2	7.6	2.5
3 – 4	54.1	33.9	73.6	48.4	17.5	6.6	49.6	29.5	67.7	42.4	18.1	6.9
5 – 6	64.0	43.8	81.7	60.0	28.8	11.6	59.5	41.3	78.2	57.9	25.9	11.4
7 – 8	66.2	47.4	83.2	63.7	34.7	17.2	68.0	49.2	83.5	64.1	35.1	17.7
9+	70.9	49.2	87.0	66.0	42.0	19.0	69.4	53.8	85.6	70.1	35.6	19.4

**Table 12.4: Distribution of the population by overall and extreme poverty, education and employment status of household head and residence, 2010**

Household Characteristics	2010					
	Total		Rural		Urban	
	Overall Poverty	Extreme Poverty	Overall Poverty	Extreme Poverty	Overall Poverty	Extreme Poverty
<b>Education level of head</b>						
No education	83.5	64.2	88.4	69.9	55.6	31.5
Primary	79.3	58.7	84.6	64.5	53.8	31.0
Secondary	48.8	29.7	70.8	48.3	25.1	9.7
Tertiary	11.0	5.1	27.6	14.3	3.3	0.9
Not Stated	70.0	59.2	89.4	77.4	11.0	3.9
<b>Employment status</b>						
Wage employees	25.3	12.6	46.1	27.9	15.2	5.1
Self employed	42.0	23.5	65.2	41.1	30.6	14.8
Farming/fishing/Forestry	82.4	62.1	84.0	63.8	56.4	33.6
Unpaid/Piece worker	67.4	45.0	80.3	64.4	59.2	32.5
Unemployed	54.5	30.5	83.9	61.2	46.3	22.0
Inactive	43.2	28.6	79.6	59.2	26.9	14.9
Not Stated	52.7	24.0	92.7	41.1	34.5	16.2

### 12.12.1. Poverty and Sex of Household Head

Results from the survey clearly exhibit higher poverty levels among the population found in female than male headed households particularly in 2006. In 2006 headcount poverty among male headed households was estimated at 61.7 percent compared to 67.4 percent among female headed households. The same pattern is revealed when it comes to the incidence of extreme poverty where it was more pronounced in female than in male headed households. In 2006 nearly half of the individuals headed by females were facing extreme levels of poverty compared to 41 percent for those found in male headed households. These results clearly show that the majority of the poor can not even afford the cost of a basic food basket especially those found in female headed households.

Also notable from the results in figure 12.11 is the drastic decline in headcount poverty among female headed households, from 67.4 percent in 2006 to 62.4 percent in 2010. Conversely, overall poverty marginally declined among male headed households during the same period, from 61.7 to 60.1 percent. Results further reveal that the observed decline in overall poverty among female headed households was mainly on account of reduction in extreme levels of poverty, from 49.8 to 44.4 percent. Result further show declines in moderate poverty across all households' type of over 2 percent during the same period.

Figure 12.11: Poverty status and Sex of household head, 2006 - 2010

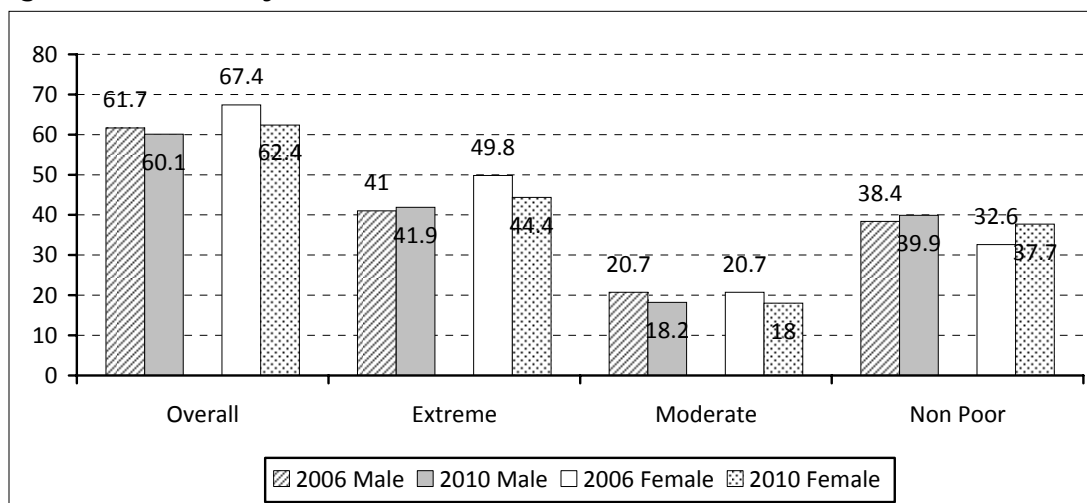


Figure 12.12 shows the distribution of rural population by poverty status and sex of household head. The figure below exhibits higher levels of poverty in rural areas among female than male headed households. In 2006 headcount poverty among rural households headed by females was as high as 84.5 percent compared to 79.4 percent for male headed households. In 2010 the same pattern was observed, with estimated overall poverty rates of 77.5 and 79.8 percent for male and female headed households respectively. Results in the figure also show that the majority of the population were afflicted by extreme levels of poverty especially in female headed households.

Results further show that headcount/overall poverty declined between 2006 and 2010 especially among female headed households. During this period, poverty levels dropped approximately by 2 and 5 percentage points among male and female headed households, from 79.4 to 77.5 percent and 84.5 to 79.8 percent, respectively. Notable from figure 12.12 is the drastic decline in extreme poverty among female headed households as compared to a marginal increase of the same among male headed households. In terms of moderate poverty, male headed households recorded a decline while female headed households experienced some increase in moderate poverty.

**Figure 12.12: Rural Poverty distribution by Sex of household head, 2006 - 2010**

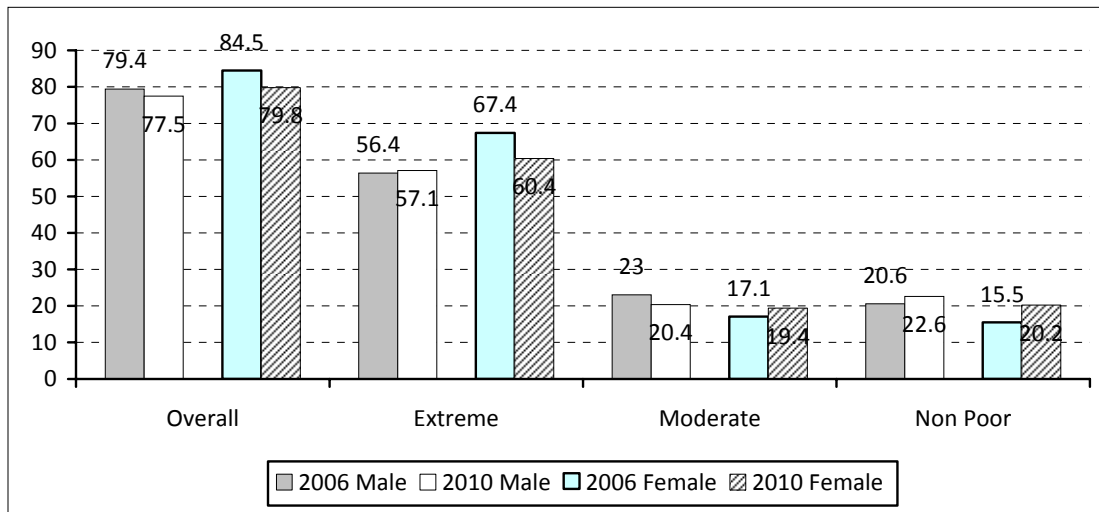
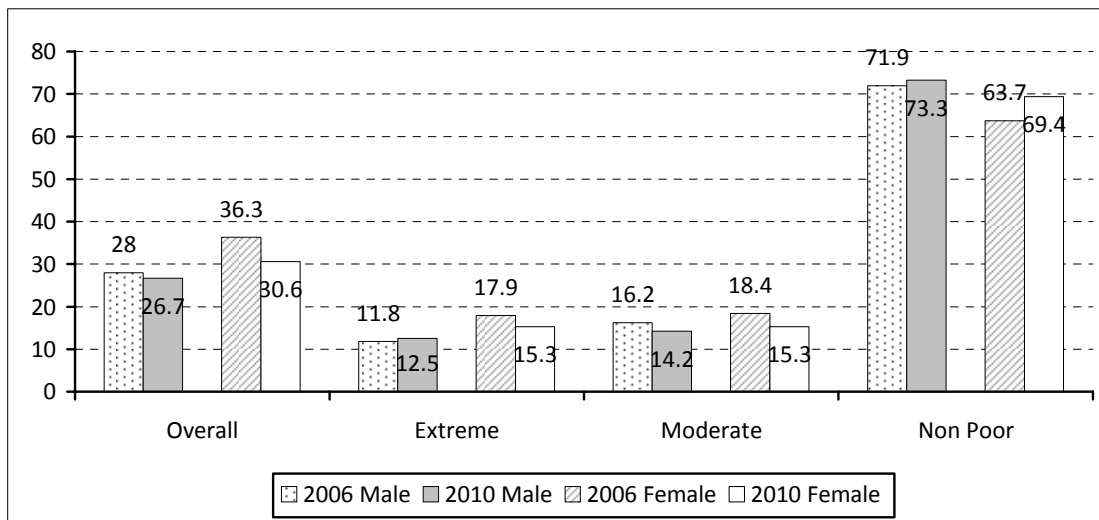


Figure 12.13 shows the distribution of urban population by poverty status and sex of household head. Results in the figure clearly reveal higher levels of poverty among female than male headed households particularly in 2006. In 2006, only 28 and 36.3 percent of the population found in male and female headed households were poor. The levels of poverty declined a bit in 2010 to 26.7 and 30.6 percent for male and female headed households respectively.

It is therefore clear from figure 12.12 and 12.13 that poverty in Zambia is indeed more of a rural than an urban phenomenon. What comes out of this analysis is that more than half of the rural population suffer from extreme levels of poverty, as compared to less than 20 percent of their urban counterpart.

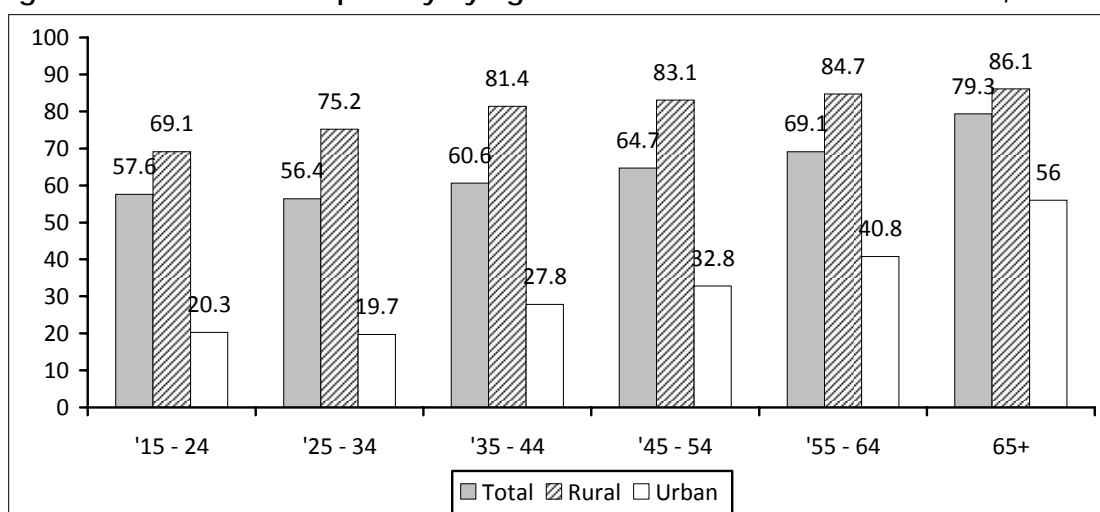
**Figure 12.13: Urban Poverty distribution by Sex of household head, 2006 - 2010**



### 12.12.2. Poverty by household size and Age of Household Head

Figure 12.14 and 12.15 show 2006 and 2010 poverty levels by age of household head and residence. Both figures show a progressive increase in poverty as the age of the household head increases. For instance, the rate of poverty among households headed by youthful persons (15 to 34 years) was much lower (less than 60 percent) compared to households headed by elderly persons, which was over 70 percent. In fact the rate of poverty was highest among rural households headed by elderly persons, over 80 percent, compared to that observed among similar households in urban areas, which was way below 60 percent.

**Figure 12.14: Headcount poverty by age of household head and residence, 2006**



**Figure 12.15: Headcount poverty by age of household head and residence, 2010**

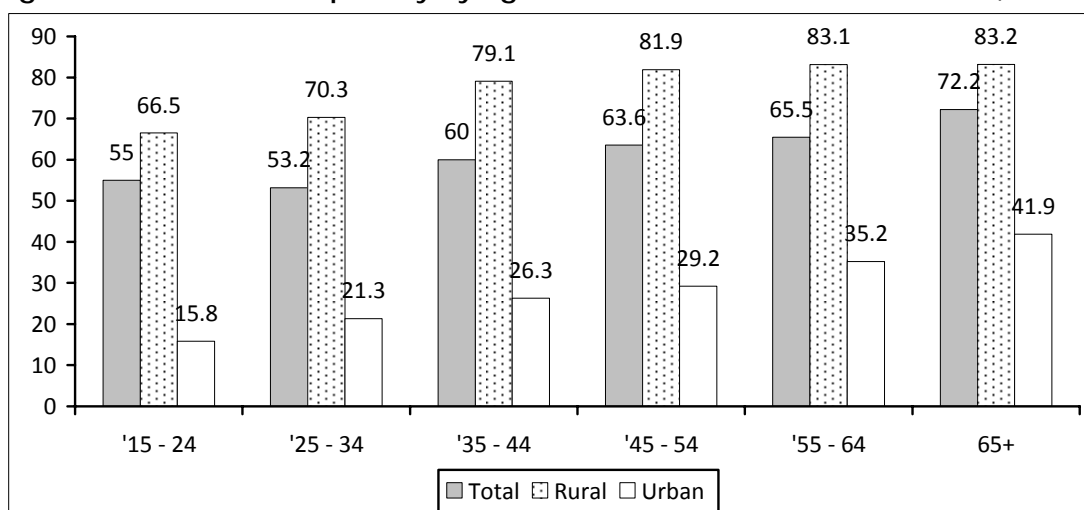
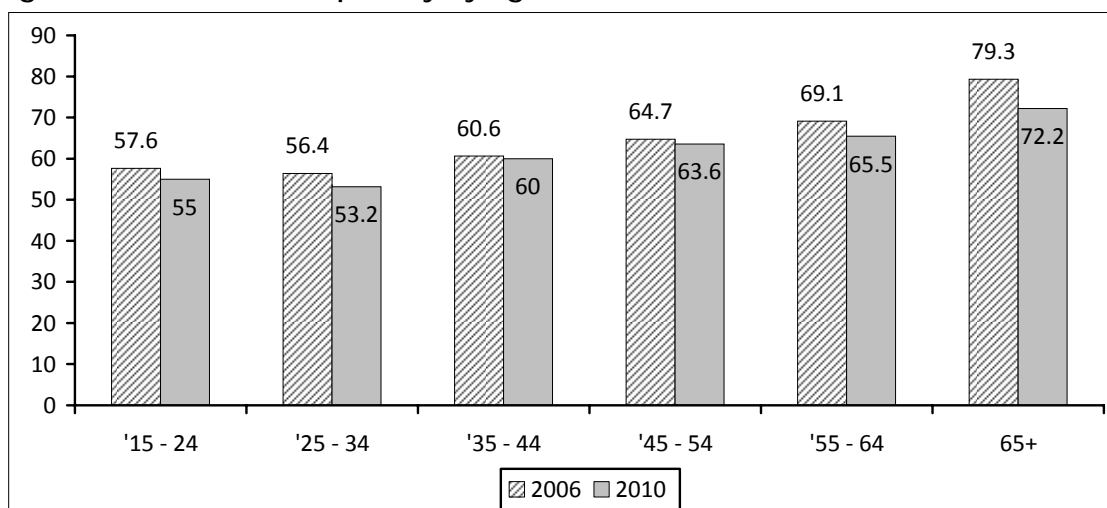


Figure 12.16 shows changes in poverty levels between 2006 and 2010. Results reveal some decline in the rate of poverty across all age groups. Significant poverty reductions were observed among households headed by persons between 15 and 34 years as well as among households headed by persons aged 55 years and older.

These results show that poverty increases with age of the household head. This analysis has also revealed that the problem of poverty is more rife among households headed by elderly persons in rural than in urban areas. These findings clearly dictate that some old age social protection scheme is put in place to help mitigate individuals' susceptibility to poverty as they grow older.

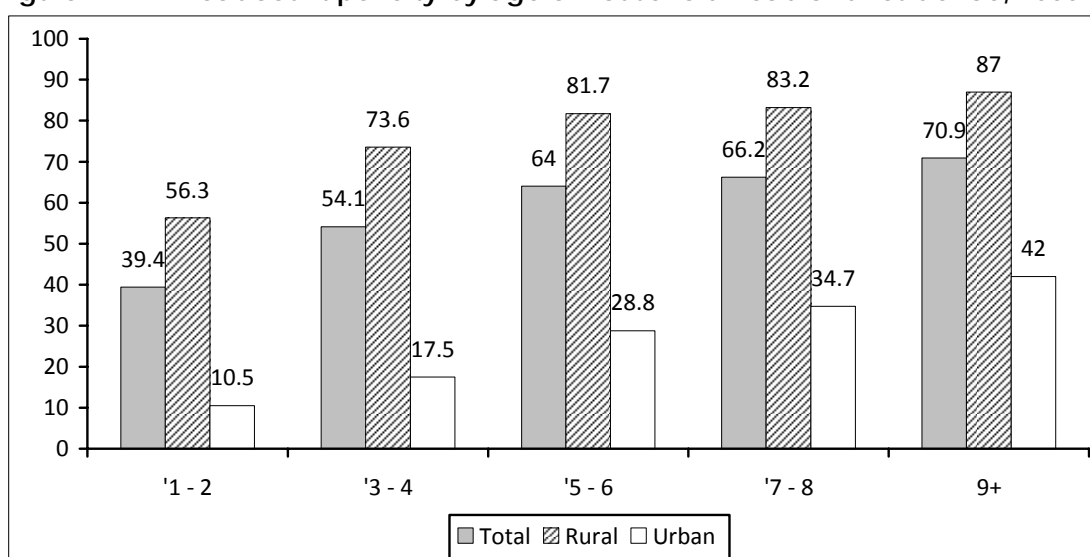
**Figure 12.16: Headcount poverty by age of household head, 2006-2010**



### 12.12.3 Poverty and Household Size

Figures 12.17 and 12.18 show 2006 and 2010 poverty levels by household size and residence. Both figures reveal high levels of poverty in rural than in urban parts of the country. The results also exhibit a positive relationship between poverty and household, with the rate of poverty increasing as the size of the household rises. The two figures also show that poverty levels had reduced across all household size except for those with 7 to 8 members.

**Figure 12.17: Headcount poverty by age of household head and residence, 2006**



**Figure 12.18: Headcount poverty by age of household head and residence, 2010**

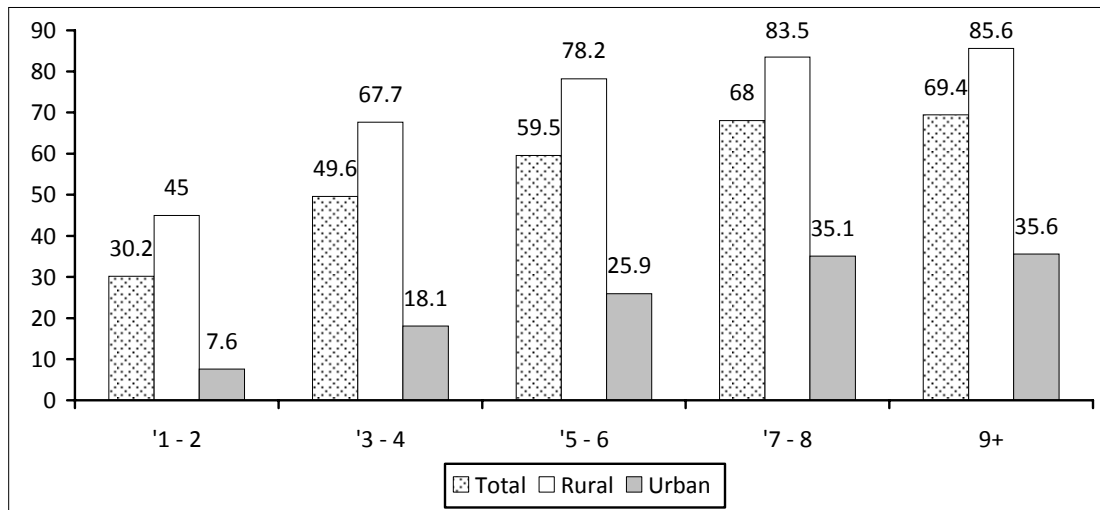
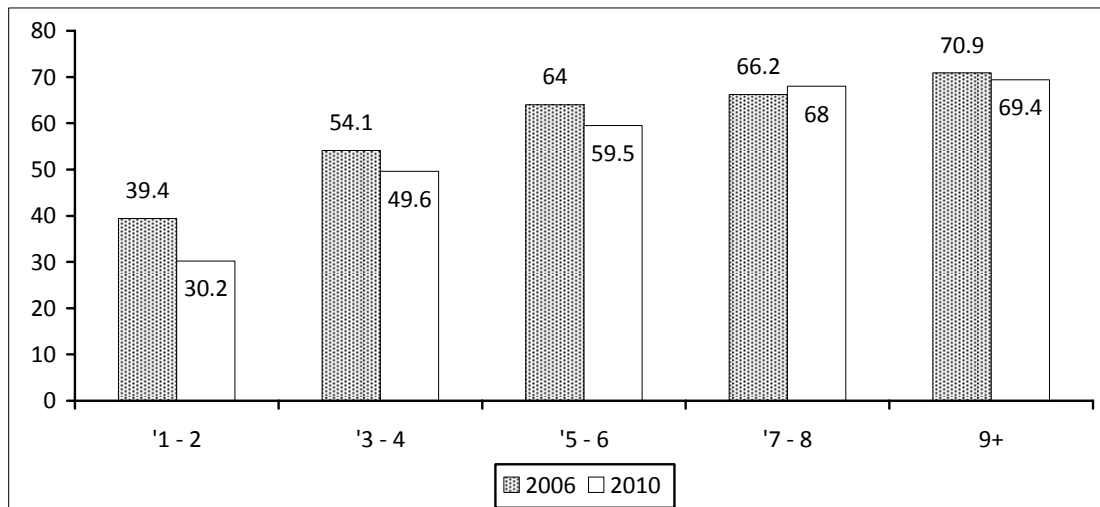


Figure 12.19 shows the incidence of poverty by household size. The figure reveals a steady increase in the rate of poverty as the size of the household increases from 1 to more than 9 members. Between 2006 and 2010, smaller households recorded quite some drastic reduction in poverty compared to larger families, which only recorded marginal decline. By 2010, poverty levels for larger households of more than 6 individuals were still over 60 percent. On the other hand, the rate of poverty for 3-4 member households was estimated at 49.6 percent.

**Figure 12.19: Headcount poverty by size of household and residence, 2006 - 2010**



#### 12.12.4 Poverty and Education level of Household Head

Education definitely plays a fundamental role in peoples livelihoods. Figure 12.20 shows the levels of headcount poverty by level of education attained by the head of household. The figure clearly reveals an inverse relationship between the level of education attained and poverty rate. The figure shows progressive decline in the rate of poverty as ones education level increases. Poverty is very much inconspicuous especially among urban households that are headed by individuals



with tertiary education. Notable also from the results below is the little difference that primary education makes on poverty when compared to those with no education background.

**Figure 12.20: Headcount poverty by Education level of head and residence, 2010**

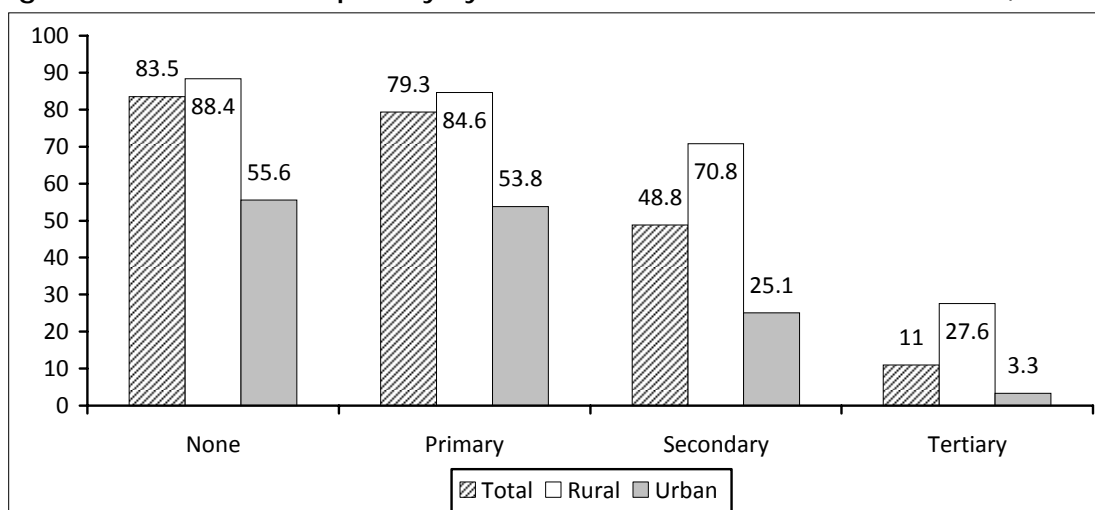
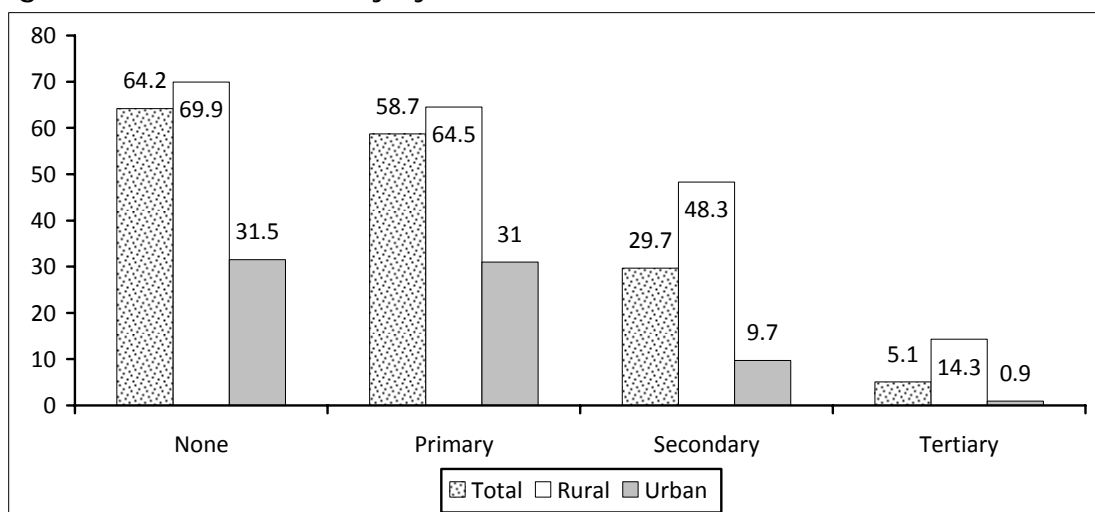


Figure 12.21 exhibits the same pattern that was observed in the case of overall poverty. The rate of extreme poverty progressively declines as one's education background becomes richer and higher. The proportion of the extremely poor in the no education category was almost twice that under the secondary education. Extreme poverty is almost none existent among tertiary education.

**Figure 12.21: Extreme Poverty by Education Level of Head and Residence, 2010**



#### 12.12.5 Poverty and Employment status of Household Head

Figure 12.22 shows the levels of poverty by employment status. Results clearly indicate high levels of poverty of more than 80 percent among rural farmers, unemployed and unpaid workers. In urban areas, unpaid/piece workers followed by

farmers and the unemployed are more likely to be impoverished than wage earners and the self-employed persons.

**Figure 12.22: Headcount poverty by Employment Status of head and residence, 2010**

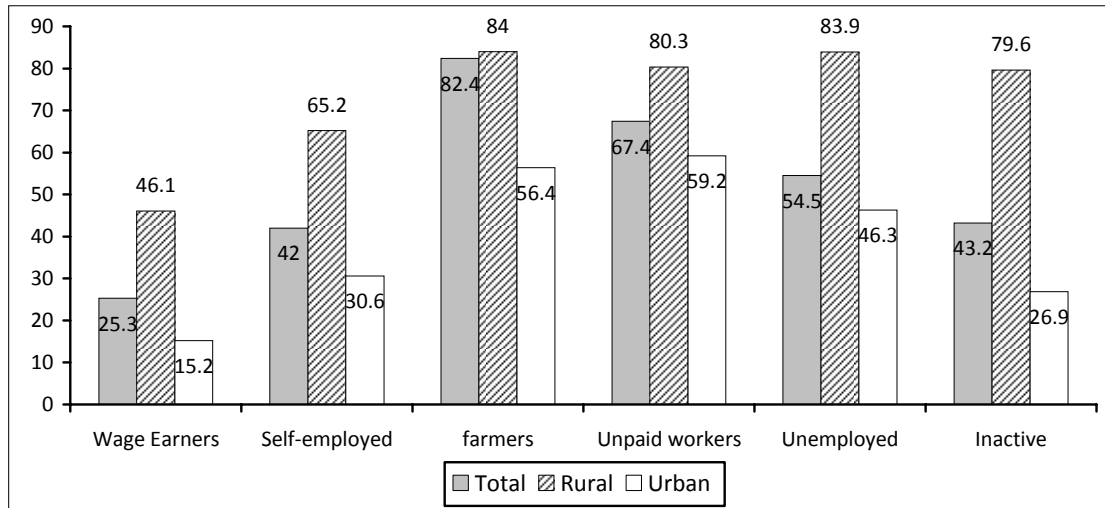
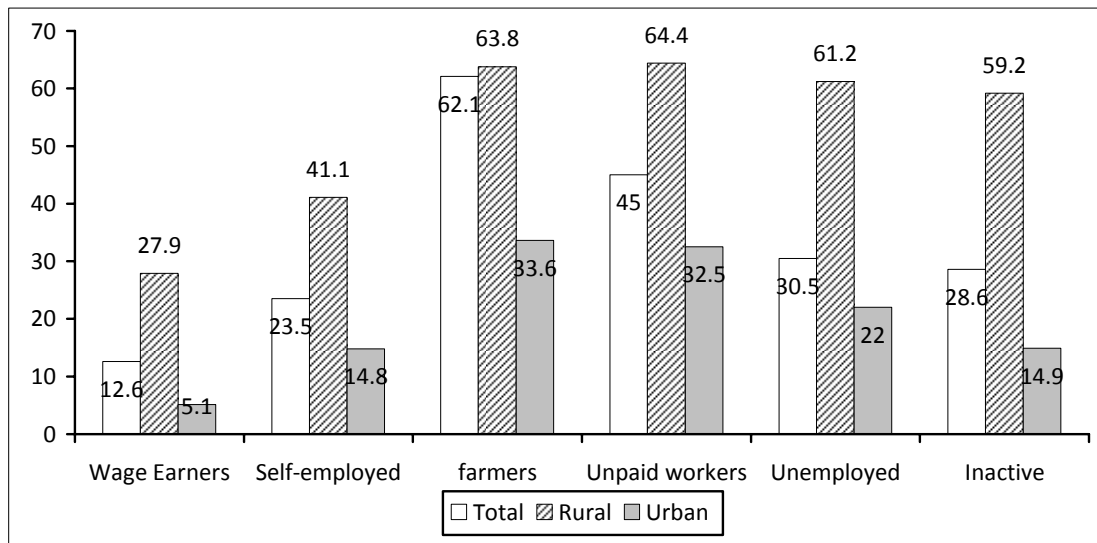


Figure 12.23 shows the levels of extreme poverty by employment status. High levels of extreme poverty of more than 60 percent were observed among unpaid workers, farmers and unemployed persons. Extreme poverty was also common among the inactive population in rural areas. In urban areas, over 30 percent of the farmers, unpaid workers and unemployed were extremely poor. Results reveal that wage employment as well as self employment provides some insurance from poverty especially in urban areas.

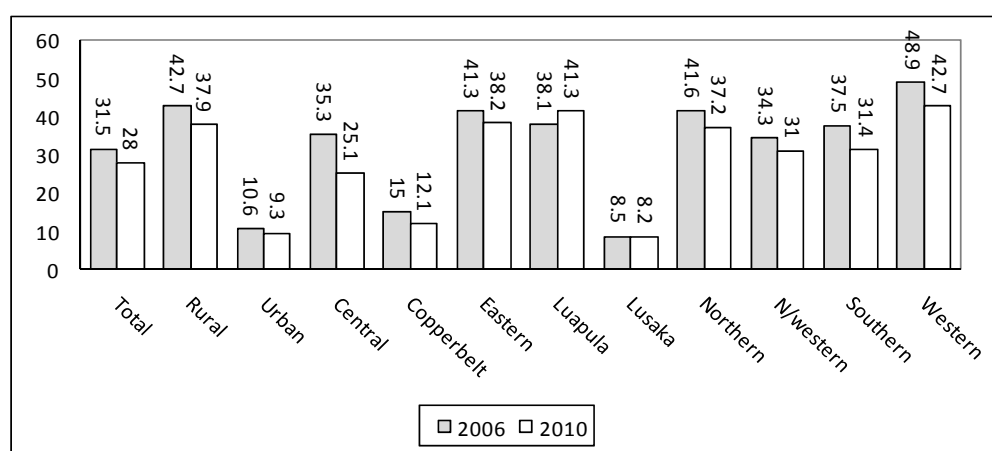
**Figure 12.23: Extreme poverty by Employment Status of head and residence, 2010**



### 12.13. The Poverty Gap Ratio

Another welfare indicator that has gained prominence in contemporary poverty analysis is the Poverty Depth 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 required resources if all the poor were to be brought just onto the poverty line. The wider the poverty gap the fatter the required poverty reduction resource envelope. Results from the 2006 and 2010 LCMS survey reveal that the poverty gap ratio has remained much wider in rural than in urban areas. Poverty has remained much deeper in Western, followed by Luapula, Eastern and Northern Provinces. Results clearly show that since 2006, the depth of poverty has progressively been reducing from 31.5 percent to 28.0 percent. The reduction in the poverty gap was more pronounced in rural than in urban areas of Zambia, from 42.7 to 37.9 percent and from 10.6 to 9.3 percent, respectively. Furthermore, with the exception of Luapula Province, all the remaining provinces registered some decline in the poverty gap ratio, especially Central, Western and Northern Provinces.

**Figure 12.24: Poverty Gap Ratio by Province and Residence, 2006 - 2010**



### 12.14. Contribution to Total Poverty

Figures 12.25 and 12.26 show the contribution of households to overall poverty by residence and province. Results reveal that the rural population contributed 84 percent towards overall headcount poverty while the urban population only contributed 16 percent. Disaggregating across the provinces shows that 18 percent of the total poor in the country were from Eastern province followed by Northern Province, at 16 percent and Southern province, at 15 percent. Central, Luapula and Western provinces were also associated with higher contribution to total poverty of about 10 to 11 percent. The contribution to overall poverty for the remaining provinces was less than 10 percent. Notably, despite having a huge population share, Lusaka province had recorded the lowest contribution of 5 percent, just as much as the contribution for North-western, which stood at 6 percent.

Figure 12.25: Residential Contribution to poverty, Rural-urban, 2010

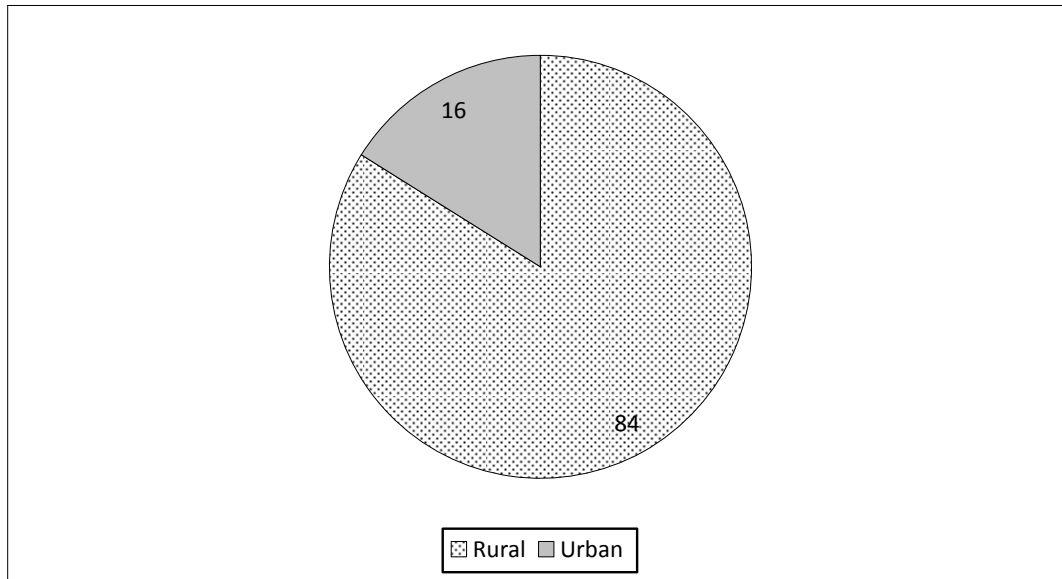
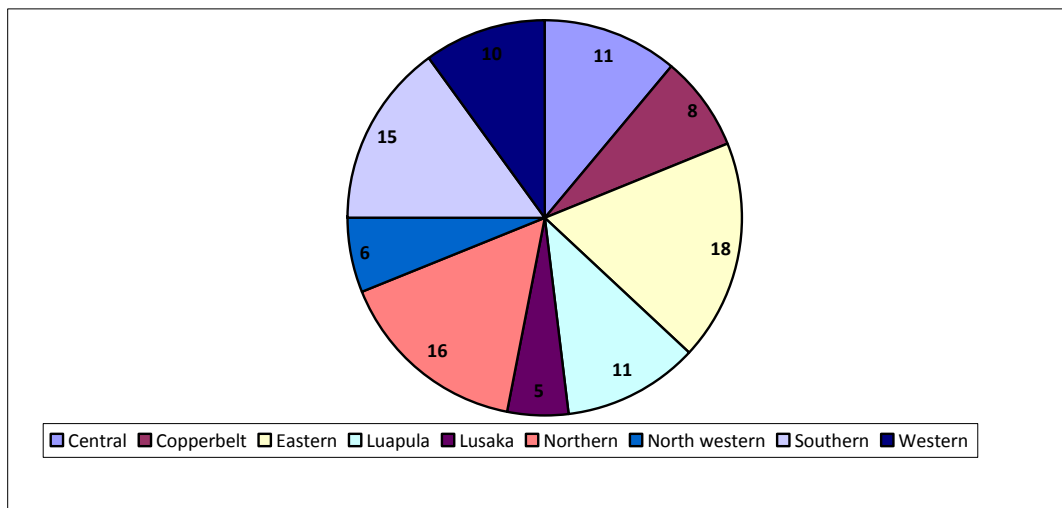


Figure 12.26: Provincial Contribution to poverty, by provinces, 2010



## 12.15. Changes in Income Inequality

### 12.15.1. The Gini Coefficient as a measure of Inequality

Zambia has one of the highest inequality index in the Sub-Saharan Africa. This is partly due to the huge gap that exists between the rural and urban areas of the country. Much of the gainful economic activities in the country are mainly concentrated along the line of rail specifically in the highly urbanised Copperbelt and Lusaka regions. The rest of the country is fairly underdeveloped and its labour is mainly dependent on subsistence agriculture. Therefore, the high inequality index of over 50 percent, as measured by the Gini coefficient, does not come as a surprise because the gap between the rich and poor has still remained quite wide. The main

problem that high income inequality has in the development agenda of poverty reduction is that it erodes away all the gains that are associated with income or economic growth. Therefore, in order for economic growth to be good to the poor, it should be accompanied by progressive redistribution of income in favour of the poor.

There are several measures of inequality that have been seen in action over the last 4 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 income differences that even pass the Pigou-Dalton condition. The Pigou-Dalton transfer condition requires that the Gini reduces 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 used 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):

$$G = \left( \frac{1}{2} \frac{1}{n^2 \mu} \sum_{i=1}^n \sum_{j=1}^n |y_i - y_j| \right)$$

Where:

G= the Gini coefficient

n= the number of persons in a distribution

$\mu$ = average adult equivalent expenditure

$|y_i - y_j|$  = Absolute difference in adult equivalent expenditure

Using the above formula, the Gini coefficients have been computed at regional as well as at residence levels.

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.

#### 12.15.2. Inequality Results based on Per Capita expenditure Gini Coefficient

Table 12.5 and figure 12.20 show trends in the level of inequality as measured using the Gini coefficient. This report opted to use per capita household expenditure as opposed to per adult equivalent expenditure. Overall, the level of inequality is still

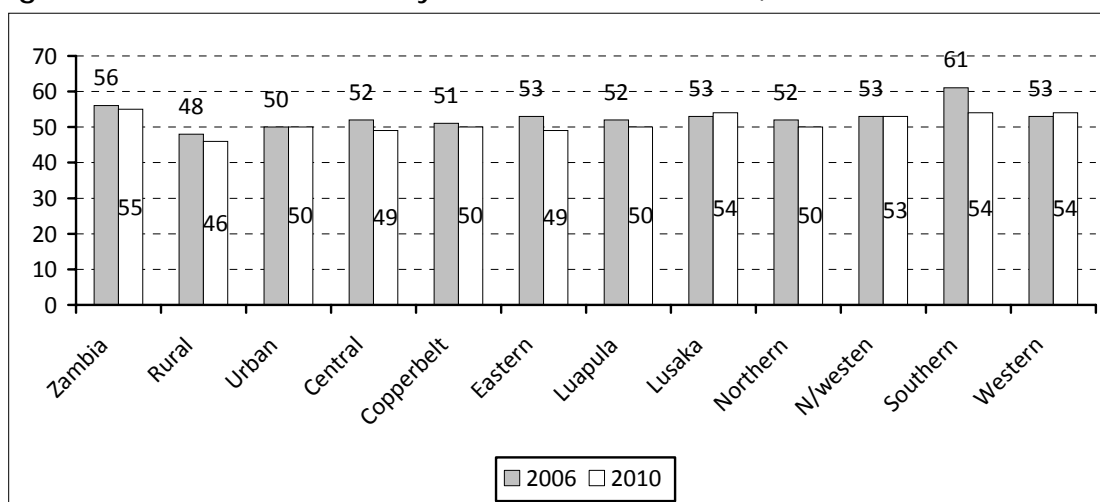
very high in Zambia. Between 2006 and 2010, the Gini coefficient was over 50 percent, an indication that incomes in Zambia have continued to be unevenly distributed among the population. For instance, the 2010 results further show that income inequalities were more pronounced in urban areas, at 50 percent, than in rural areas, at 46 percent.

At national level, income inequality slightly reduced from 56 percent in 2006 to 55 percent in 2010. Where as inequality reduced in rural areas from 48 to 46 percent, it instead remained at the 2006 level of 50 percent in urban areas. Lusaka and western provinces recorded marginal increase in inequality whereas north western maintained the 2006 level. The remaining provinces recorded some decline in inequality during the period 2006 and 2010.

**Table 12.5: Gini Inequality by Rural/urban and Province, 2010**

	2006	2010
All Zambia	0.56	0.55
Residence		
Rural	0.48	0.46
urban	0.50	0.50
Province		
Central	0.52	0.49
Copperbelt	0.51	0.50
Eastern	0.53	0.49
Luapula	0.52	0.50
Lusaka	0.53	0.54
Northern	0.52	0.50
Northwestern	0.53	0.53
Southern	0.61	0.54
Western	0.53	0.54

**Figure 12.20: Gini Coefficients by residence and Province, 2006 - 2010**



## 12.16. Conclusion

In conclusion, the current poverty analysis clearly indicates that poverty levels in Zambia are still very high despite recording some decline between 2006 and 2010. It is clear from these findings that poverty has continued to be more of a rural than urban phenomenon. This is more of the case in the predominantly rural provinces such as Luapula, Western, Eastern and Northern provinces. 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 counterpart. Levels of poverty are more likely to be higher among households that are headed by elderly persons. Education and wage employment reduces the risk of becoming poor. Furthermore, the poverty gap ratio in rural areas, especially in remote provinces has continued to be wide despite recording some reduction overtime. The level of income inequality is very high especially in urban areas. Finally, these results indicate that the country requires more effort towards poverty reduction especially in the rural parts of the remote provinces.

# SELF ASSESSED POVERTY AND COPING STRATEGIES

## 13.1 Introduction

Poverty is generally measured based on either money metric measures using data income or household expenditure, or measured based on ownership of assets both productive and household. However, these measurements do not reflect the different dimensions and characteristics of poverty according to peoples' perceptions. The LCMS (VI) collected information 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 how they cope in times of economic hardships. The coping strategies employed by households will help to paint a picture of the vulnerability to poverty, in so much as households employ damaging coping strategies.

This section discusses 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

0 reports the self-assessed poverty status, disaggregated by sex of head, residence, stratum and province. 0 indicates that whilst the majority of Zambians regarded themselves as either *Very Poor* (38%) or *Moderately Poor* (47%) these numbers are in decline since 2006, and in fact the proportion of Zambians that consider themselves as *Non-Poor* has increased from 10% in 2006 to 15% in 2010.

This picture is continued when disaggregated by sex of household head. The proportion of male headed households' who consider themselves as *Non-Poor* has increased from 11% in 2006 to 16% in 2010 whilst the proportion for female headed households has increased from 6% in 2006 to 11% in 2010. For both male and female headed households the proportion of households' who consider themselves as *Very Poor* has fallen by 2 percentage points for male and 3 percentages points for female headed households.

Whilst both rural and urban households have seen improvements in levels of self-assessed poverty, the improvement appears to be more dramatic for urban



households. The proportion of urban households considering themselves as *Non-Poor* has increased, by 8 percentage points since 2006, to 25% in 2010. In rural households this increase was by only 3 percentage points, to 9% in 2010.

Analysis by strata indicates that the Medium Cost Urban stratum showed the largest improvement in self-assessed poverty, with the numbers of Medium Cost households considering themselves as *Non-Poor* increasing by 16 percentage points to 36%. The Large Scale Rural households reported the greatest proportion of households considering themselves as *Non-Poor* at 50% in 2010. However, this stratum also reported the largest increase in households reporting themselves as *Very Poor* by 10 percentage points to 13% in 2010.

**Table 13.1: Percentage distribution of households by self-assessed poverty, residence, sex of head, stratum and province, 2010 and 2006**

2010		Not Poor	Moderately Poor	Very Poor	Missing	Total	Total Number of Households ('000s)
Sex of Household Head	Male Head	15.8	48.8	35.2	0.2	100	1,901
	Female Head	11.2	40.9	47.5	0.3	100	582
	Missing	12.9	42.0	45.1	0.0	100	8
Actual Poverty Status	Very Poor	7.3	40.2	52.3	0.2	100	905
	Moderately Poor	8.4	46.7	44.7	0.2	100	452
	Not Poor	23.1	52.5	24.3	0.2	100	1,114
Rural/Urban	Rural	9.2	44.3	46.4	0.2	100	1,600
	Urban	24.6	51.8	23.4	0.2	100	891
Stratum	Small Scale	8.8	44.1	47.0	0.2	100	1,426
	Medium Scale	14.9	52.3	32.9	0.0	100	41
	Large Scale	49.9	37.1	13.0	0.0	100	1
	Non Agric	12.0	43.9	44.0	0.1	100	133
	Low Cost	19.4	53.2	27.2	0.2	100	659
	Medium Cost	36.3	50.4	13.0	0.3	100	149
Province	High Cost	44.4	43.3	12.3	0.1	100	83
	Central	12.6	50.3	37.0	0.1	100	250
	Copperbelt	22.8	50.7	26.3	0.1	100	369
	Eastern	9.2	36.9	53.8	0.2	100	342
	Luapula	6.9	51.1	41.9	0.1	100	191
	Lusaka	25.2	51.4	23.1	0.4	100	366
	Northern	14.0	54.5	31.5	0.1	100	318
	North Western	18.3	46.7	34.7	0.3	100	138
	Southern	9.8	42.6	47.4	0.2	100	311
	Western	6.7	36.4	56.6	0.3	100	205
All Zambia	Zambia	14.7	47.0	38.2	0.2	100	2,491

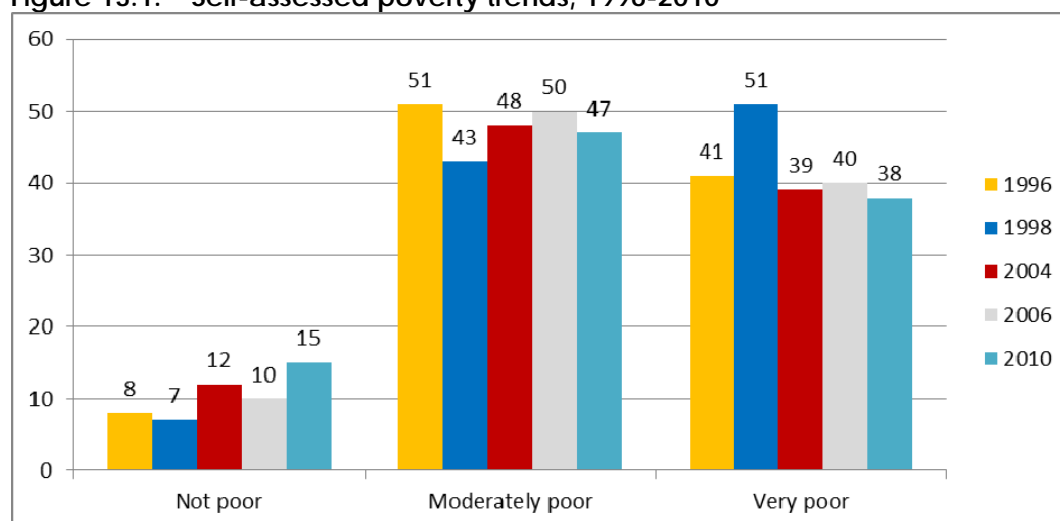
2006		Not Poor	Moderately Poor	Very Poor	Total	Total Number of Households ('000s)
Sex of Household Head	Male Head	11	51	37	100	1,758
	Female Head	6	42	51	100	525
Rural/Urban	Rural	6	46	47	100	1,484
	Urban	17	58	26	100	800
Stratum	Small Scale Farmer	6	47	48	100	1,351
	Medium Scale Farmer	14	57	29	100	36
	Large Scale Farmer	45	52	3	100	1
	Non-Agricultural Households	10	39	51	100	96
	Low Cost Areas	13	58	29	100	649
	Medium Cost Areas	20	63	17	100	86
Province	High Cost Areas	41	49	11	100	65
	Central	9	53	38	100	226
	Copperbelt	16	53	31	100	338
	Eastern	7	45	48	100	320
	Luapula	6	56	38	100	178
	Lusaka	17	56	27	100	333
	Northern	8	55	37	100	296
	North Western	9	55	36	100	131
	Southern	8	42	51	100	284
	Western	3	37	61	100	176
All Zambia	Zambia	10	50	40	100	2,283

Provincial analysis indicates that Western province has the greatest proportion of households who consider themselves *Very Poor* at 57% in 2010, though this is a slight decline of 4 percentage points since 2006. The majority of households in Eastern province also considered themselves to be *Very Poor*, at 54% in 2010, an increase from 48% in 2006. Lusaka and Copperbelt have the greatest proportion of households who consider themselves *Non-Poor* at 25% and 23% respectively in 2010. Both provinces have seen an increase in self-reported *Non-Poor* status since 2006. North-Western province has seen the greatest increase in the proportion of households that consider themselves *Non-Poor* up from 9% in 2006 to 18% in 2010.

### 13.3. Self-assessed Poverty: Trends Analysis

0 reports the trends in self-assessed poverty levels since 1996. Over this period there has been a decrease in the proportion of Zambian households reporting themselves as being in poverty and a corresponding increase in the proportion of Zambians reporting themselves as *Non-Poor*. The proportion of Zambians considering themselves *Non-Poor* increased from 8% in 1996 to 15% in 2010. The proportion of households considering themselves *Very Poor* decreased from 41% in 1996 to 38% in 2010. The proportion of households that considered themselves *Moderately Poor* also decreased, from 51% in 1996 to 47% in 2010.

**Figure 13.1: Self-assessed poverty trends, 1996-2010**



### 13.4. Reasons for Household Poverty

In order to put into context the level of self-assessed poverty, the LCMS (VI) enquired about the perceived reasons for poverty of those households who considered themselves as either *Moderately Poor* or *Very Poor*.

0 reports that at the national level the most common reason given for a self-assessed poverty status was that the household *“cannot afford agricultural inputs”* with 21% of households reporting this as a reason for poverty in 2010., remaining at the same level as in 2006. This is potentially a reflection of the fact that the majority of Zambian households are rural, and thus draw livelihoods from agricultural activities.

At the national level this was followed by *"salary/wage too low"* and *"lack of employment opportunities"* which was reported by 11% and 9% of households in self-assessed poverty respectively.

In rural areas, *"cannot afford agricultural inputs"* again was the most reported reason for self-assessed poverty status, with 28% of households reporting. Other agricultural related reasons were also amongst the most common, such as *"lack of agricultural inputs due to other reasons"* (7%), *"low agricultural production"* (5%) and *"agricultural inputs not available for purchase"* (5%). This reflects the perceived importance of the agricultural sector in lifting rural households out of poverty.

*"Salary/wage too low"* and *"lack of employment opportunities"* were also seen as important reasons for self-assessed poverty, with 5% of rural households reporting both of these reasons.

In urban areas *"wage/salary too low"* and *"lack of employment opportunities"* were the most commonly reported reasons for self-assessed poverty at 25% and 18% respectively, reflecting the differing economic profiles of urban households as compared to rural households. Also important as reasons for self-assessed poverty in urban households were *"hard economic times"* and *"prices of commodities too high"* reported by 7% and 6% of households respectively. Broadly speaking, the reasons given by male and female households for self-assessed poverty levels were similar. The main exception to this rule was the *"death of breadwinner"* with 9% of female headed households reporting this as a reason for poverty, compared to only 1% of male headed households. This illustrates the vulnerability to poverty due to the death of the breadwinner, particularly in households that do not have an adult male.

**Table 13.2: Percentage distribution of self-assessed poor households by main reason of poverty, residence and sex of head, 2010 and 2006**

2010	Residence and Sex of Head				
Reason for poverty	Rural	Urban	Male	Female	All Zambia
Cannot afford agricultural imports	28.4	5.2	20.8	22.1	21.1
Salary/wage too low	4.7	25.2	12.3	7.6	11.1
Lack of employment opportunities	4.9	17.8	9.7	6.8	9.0
Lack of capital to start own business or to expand	5.6	13.8	7.8	9.4	8.2
Lack of capital to start/expand agricultural output	7.3	3.0	6.2	5.0	5.9
Lack of agricultural inputs due to other reasons	6.6	0.9	4.8	4.8	4.8
Lack of cattle/oxen	6.5	0.4	4.5	4.5	4.6
Hard economic times	2.8	6.6	4.0	3.7	4.0
Low agricultural production	5.3	0.7	4.0	3.5	3.9
Lack of adequate land	3.5	3.0	3.4	3.2	3.4
Agricultural inputs not available	4.6	0.5	3.6	2.4	3.3
Prices of commodities too high	1.9	5.7	3.0	3.5	3.1
Death of breadwinner	2.4	2.8	0.5	8.7	2.5
Lack of credit for agricultural production	2.5	0.7	2.1	1.5	2.0
Business not doing well	0.6	4.4	1.8	1.8	1.8
Lack of credit facilities to start business or to expand	1.0	2.5	1.4	1.6	1.5
Low prices for agricultural produce	1.9	0.4	1.5	1.3	1.5
Lack of capital to diversify into cash crops	1.7	0.6	1.4	1.3	1.4
Lack of market/buyers for agricultural produce	1.5	0.2	1.1	1.1	1.1
Floods	1.3	0.4	1.0	1.2	1.0
Death of cattle due to disease	0.7	0.0	0.5	0.5	0.5
Pension payment too low	0.1	0.8	0.4	0.2	0.3
Too much competition	0.1	0.8	0.3	0.2	0.3
Drought	0.4	0.1	0.3	0.3	0.3

2010	Residence and Sex of Head				
Reason for poverty	Rural	Urban	Male	Female	All Zambia
Due to disability	0.3	0.1	0.3	0.2	0.3
Retrenchment/Redundancy	0.1	0.5	0.2	0.2	0.2
Debts	0.0	0.3	0.1	0.2	0.1
Other reasons	3.0	2.6	2.8	3.1	2.9
None given	0.2	0.3	0.2	0.1	0.2
Total	100	100	100	100	100

2006	Rural	Urban	Male	Female	All Zambia
Cannot afford Agricultural Inputs	28	5	21	19	21
salary/wages too low	4	25	12	7	11
Lack of employment opportunities	4	16	8	6	8
Lack of capital to start own business or to expand	5	12	7	8	7
Lack of Cattle and Oxen	8	0	5	7	6
Lack of agricultural inputs due to other reasons	6	2	5	3	5
Lack of capital to start/expand agriculture output	6	3	5	5	5
Hard economic times/economic decline	3	8	5	3	5
Death of Breadwinner	5	4	1	15	5
Agricultural inputs not Available for purchase	5	1	4	3	4
Low agricultural production	5	1	4	4	4
Inadequate land	3	5	4	4	4
Prices of commodities too high	2	5	3	3	3
Low prices for agricultural produce	3	0	2	1	2
Lack of credit facilities to start agricultural	2	1	2	1	2
Business not doing well	1	4	2	2	2
Drought	2	0	1	1	1
Floods	2	0	1	1	1
Lack of market for agricultural produce	2	0	2	1	1
Death of Cattle due to diseases	1	0	1	0	1
Lack of capital to diversify	1	1	1	1	1
Lack of credit facilities to start or expand business	1	2	1	1	1
Too much competition	0	1	1	0	1
Due to Disability	1	0	1	1	1
Pension payment too low	0	1	1	0	0
Retrenchment/redundancy	0	1	0	0	0
Other	0	0	0	0	0
Total	100	100	100	100	100

### 13.5. Reasons for Household Poverty: Trends Analysis

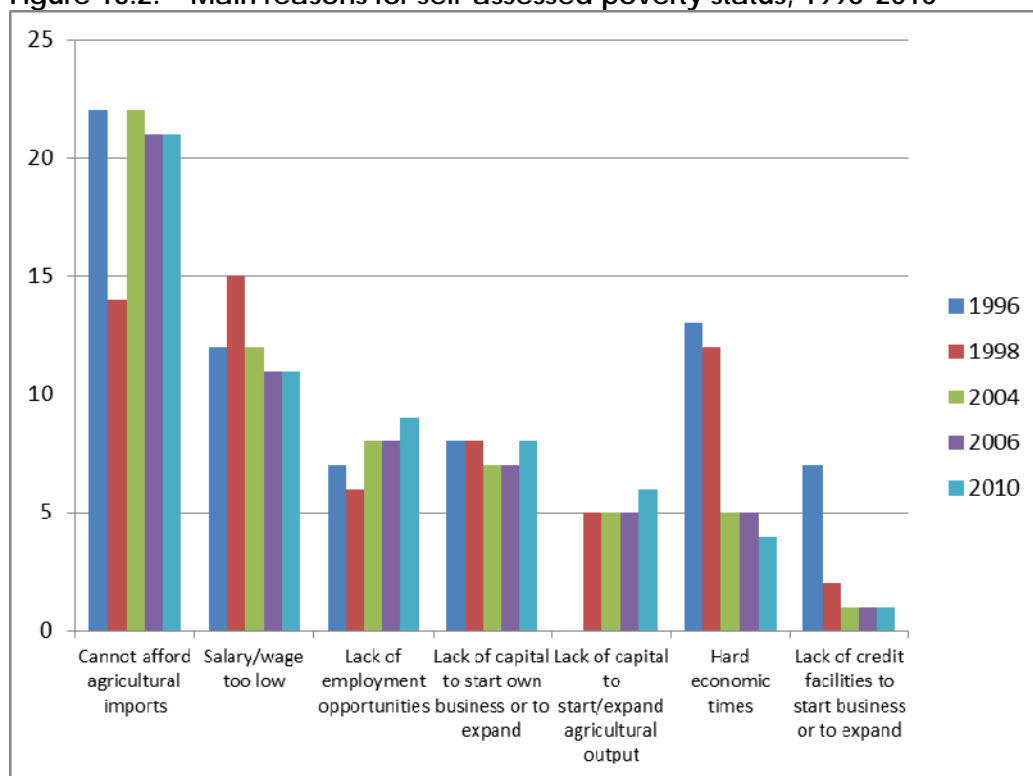
0 and 0 illustrate the trends in the reasons given by households as the main reason for their self-assessed poverty status. What is striking is that the reason *"cannot afford agricultural inputs"* as consistently been the most reported reason for self-assessed poverty, although there was a very slight decline from 22% in 1996 to 21% in 2010.

**Table 13.3: Trend in percentage distribution of self-assessed poor households by main reason of poverty, 1996 - 2010**

Percentage Distribution of Self-Assessed Poor Households by Main Reason of Poverty, Trends					
Reason for poverty	Survey Year				
	1996	1998	2004	2006	2010
Cannot afford agricultural imports	22	14	22	21	21.1
Salary/wage too low	12	15	12	11	11.1
Lack of employment opportunities	7	6	8	8	9.0
Lack of capital to start own business or to expand	8	8	7	7	8.2
Lack of capital to start/expand agricultural output	-	5	5	5	5.9
Lack of agricultural inputs due to other reasons	-	3	3	5	4.8
Lack of cattle/oxen	-	6	6	6	4.6
Hard economic times	13	12	5	5	4.0
Low agricultural production	-	4	3	4	3.9
Lack of adequate land	-	1	3	4	3.4
Agricultural inputs not available	2	3	3	4	3.3
Prices of commodities too high	6	3	3	3	3.1
Death of breadwinner	-	-	4	5	2.5
Lack of credit for agricultural production	-	7	1	2	2.0
Business not doing well	3	3	2	2	1.8
Lack of credit facilities to start business or to expand	7	2	1	1	1.5
Low prices for agricultural produce	1	0	1	2	1.5
Lack of capital to diversify into cash crops	-	-	1	1	1.4
Lack of market/buyers for agricultural produce	-	1	1	1	1.1
Floods	-	-	1	1	1.0
Death of cattle due to disease	5	1	1	1	0.5
Pension payment too low	4	-	1	1	0.3
Too much competition	-	-	0	0	0.3
Drought	1	1	0	0	0.3
Due to disability	-	0	1	1	0.3
Retrenchment/Redundancy	-	-	0	1	0.2
Debts	-	-	-	0	0.1
Other reasons	8	6	0	2	2.9
None given	-	-	-	-	0.2
Total	100	100	100	100	100

In addition another major perceived factor in self-assessed poverty was *"salary/wage too low"* also reported a slight decline from 12% in 1996 to 11% in 2010. However, there were also some major reasons that have increased in importance over the reported period. These include *"lack of employment opportunities"*, which increased from 7% in 1996 to 9% in 2010 and *"lack of capital to start/expand agricultural output"* which increased from 5% in 1998 to 6% in 2010.

**Figure 13.2: Main reasons for self-assessed poverty status, 1996-2010**



However, the importance of “*hard economic times*” has seen a dramatic decrease as a reason for self-assessed importance with only 4% of the self-assessed poor households reporting it as the main reason for their poverty status in 2010, compared to 13% in 1996. “*Lack of credit facilities to start/expand business*” also saw a dramatic decrease in importance as a poverty predictor, with only 1% of households reporting it as the main reason for poverty in 2010, compared to 7% of households in 1996.

### 13.6. Household Welfare Comparisons

During LCMS (VI) households were asked to make an assessment of their current welfare compared with that of the previous year. Households were requested to indicate whether their household was *better off*, *the same* or *worse off* as compared to the previous year.

Overall the majority of Zambian households felt in 2010 that their welfare status had remained the same since the previous year, with 60% of households nationally reporting no change in welfare. Encouragingly, 23% of Zambian households reported that they were better off than last year, whilst 16% of households felt that they were worse off as compared to the previous year.

**Table 13.4: Percentage distribution of households by perceived change in welfare, residence, sex of head, stratum and province**

2010		Better Off	The Same	Worse Off	Not Applicable	Missing	Total	Total Number of Households ('000s)
Sex of Household Head	Male Head	24.2	59.9	14.9	0.6	0.4	100	1,901
	Female Head	17.8	60.3	21.0	0.4	0.5	100	582
	Missing	27.3	62.2	10.1	0.4	0.0	100	8
Rural/Urban	Rural	22.0	62.0	15.4	0.3	0.4	100	1,600
	Urban	24.0	56.3	18.0	1.1	0.6	100	891
Stratum	Small Scale	21.8	62.3	15.3	0.2	0.4	100	1,426
	Medium Scale	34.4	54.4	10.2	0.7	0.2	100	41
	Large Scale	36.0	42.3	14.7	5.5	1.5	100	1
	Non Agric	20.4	61.1	18.1	0.3	0.1	100	133
	Low Cost	22.4	56.8	19.9	0.5	0.5	100	659
	Medium Cost	27.1	56.5	13.5	2.0	0.9	100	149
	High Cost	31.7	52.6	11.0	4.4	0.3	100	83
Province	Central	27.4	56.1	15.3	1.1	0.2	100	250
	Copperbelt	19.9	58.6	20.2	0.7	0.6	100	369
	Eastern	27.5	56.1	15.7	0.1	0.6	100	342
	Luapula	16.2	69.4	13.6	0.3	0.5	100	191
	Lusaka	25.0	57.7	15.5	1.2	0.5	100	366
	Northern	27.4	60.9	11.5	0.2	0.1	100	318
	North Western	19.9	67.3	11.6	0.6	0.6	100	138
	Southern	22.6	55.6	21.2	0.4	0.3	100	311
	Western	11.2	69.3	18.6	0.3	0.6	100	205
All Zambia	Zambia	22.7	60.0	16.3	0.6	0.4	100	2,491

Analysis by sex of household head shows that the same proportion of male and female headed households reported that they felt their level of welfare had not changed since the previous year. However, a greater proportion of male headed households felt that their welfare had improved at 24%, compared to just 18% for female headed households. In addition a greater proportion of female headed households felt that their level of welfare had gotten worse at 21% compared to just 15% for male headed households.

The comparison across rural and urban households is a little more mixed. Although the majority of both urban and rural households felt that their level of welfare had remained the same, a slightly smaller proportion of rural households felt that their level of welfare had increased compared to urban households, with the proportions at 22% and 24% respectively. On the other hand a greater proportion of urban households felt that their level of welfare was worse as compared to the previous households, with 18% of urban households in this position as compared to just 15% of rural households.

At the level of the strata, Large Scale and Medium Scale agricultural households report the greatest proportions of households who feel that their level of welfare has increased since the previous year at 36% and 34% respectively. Conversely Non-agricultural rural households, small scale agricultural households and low cost urban households reported the lowest rate of improved welfare at 20%, 22% and 22% respectively.

In terms of households reporting decreases in welfare low cost urban households and non-agricultural rural households reported the biggest proportions of households who perceived their level of welfare falling at 20% and 18% respectively.

At the provincial level Central, Eastern and Northern provinces all reported the largest proportion of households with increasing levels of self-reported welfare, at 27% in each of the three provinces. Western province reported the lowest proportion of households with increasing levels of welfare at only 11%. In terms of decreasing levels of welfare, Southern, Copperbelt and Western Provinces reported the biggest proportion of households with decreasing levels of welfare at 21%, 20% and 19% respectively.

### **13.7. Average Number of Meals in a Day**

Nationally the proportion of Zambian households eating more than three meals a day has remained the same at 2% of the population. However, the proportion of households eating 3 meals per day has increased from 42% in 2006 to 47% in 2010. In addition the proportion of households reporting eating only 1 meal per day has fallen from 5% in 2006 to 4% in 2010.

It would suggest that on average male headed households are eating more meals per day than female headed households. Only 44% of female headed households are eating 3 meals per day compared to 49% of male headed households. However, the rate of increase in proportions was higher for female headed households where the proportion of female headed households eating 3 meals a day increased by 7 percentage points since 2006, compared to 6 percentage points for male headed households.

A much greater proportion of urban households are eating 3 meals per day as compared to rural households, with the proportions at 61% and 40% respectively. Both urban and rural households have seen an increase in the proportion of households eating three meals a day, increases of 2 percentage points and 7 percentage points respectively. However, there are slightly less rural households eating only 1 meal a day as compared to urban households with the proportions at 3% and 5% respectively.

At the level of the stratum high cost and medium cost households appear to eat on average the most number of meals in a day with 76% and 72% of households respectively eating 3 meals per day. This is in contrast to small scale and non-agricultural rural households, of which only 39% and 47% respectively eat 3 meals per day on average.



**Table 13.5: Average number of meals per day by sex of head, residence, stratum and province, 2010 and 2006**

2010	Number of meals in a day							Total number of Households ('000s)
		One	Two	Three	More than three	Missing data	Total	
Sex of Household Head	Male	3.7	45.1	48.5	2.5	0.1	100	1,901
	Female	5.4	48.9	43.7	1.9	0.1	100	583
Actual Poverty Status	Very Poor	5.7	61.9	31.6	0.8	0.0	100	905
	Moderately Poor	3.8	52.5	42.8	0.9	0.0	100	452
	Non-poor	3.0	30.8	61.8	4.4	0.0	100	1,114
Rural/Urban	Rural	3.4	55.3	40.0	1.1	0.1	100	1,600
	Urban	5.4	29.3	60.5	4.7	0.1	100	891
Stratum	Small Scale	3.3	56.9	38.7	1.0	0.1	100	1,426
	Medium Scale	0.6	34.1	63.7	1.2	0.4	100	41
	Large Scale	6.4	14.3	64.2	12.8	2.2	100	1
	Non Agric	5.8	45.3	47.0	1.8	0.1	100	133
	Low Cost	6.6	34.4	56.0	2.9	0.2	100	659
	Medium Cost	1.5	14.9	72.1	11.6	0.0	100	149
	High Cost	2.4	15.3	75.7	6.5	0.0	100	83
Province	Central	3.8	42.6	52.1	1.4	0.1	100	250
	Copperbelt	7.7	40.9	47.5	3.7	0.1	100	369
	Eastern	3.9	49.1	46.7	0.3	0.0	100	342
	Luapula	2.8	71.1	22.9	3.1	0.1	100	191
	Lusaka	5.1	26.8	62.6	5.3	0.1	100	366
	Northern	2.4	62.1	34.0	1.5	0.1	100	318
	North Western	5.2	57.9	35.0	1.7	0.3	100	138
	Southern	1.0	26.9	69.7	2.4	0.1	100	311
	Western	5.0	61.5	32.8	0.8	0.0	100	205
All Zambia	All Zambia	4.1	46.0	47.3	2.4	0.1	100	2,491

	2006	One	Two	Three	More than three		Total	Number of Households ('000s)
Sex of Household Head	Male Head	5	50	43	2		100	1,758
	Female Head	7	51	37	2		100	525
Rural/Urban	Rural	5	61	33	1		100	1,484
	Urban	5	32	59	4		100	800
Stratum	Small Scale Farmer	5	63	32	1		100	1,351
	Medium Scale Farmer	2	45	52	2		100	36
	Large Scale Farmer	1	39	40	20		100	1
	Non-Agricultural Households	10	47	41	2		100	96
	Low Cost Areas	6	35	56	3		100	649
	Medium Cost Areas	2	20	70	8		100	86
	High Cost Areas	2	16	73	10		100	65
Province	Central	4	55	40	1		100	226
	Copperbelt	7	41	48	4		100	338
	Eastern	5	55	40	1		100	320
	Luapula	4	81	14	1		100	178
	Lusaka	4	28	64	4		100	333
	Northern	5	67	26	2		100	296
	North Western	6	63	29	1		100	131
	Southern	3	33	63	2		100	284
	Western	13	61	25	1		100	176
All Zambia	Zambia	5	51	42	2		100	2,283

Provincially households in Southern and Lusaka provinces enjoyed the greatest frequency of meals, with 70% and 63% of households in each province respectively eating 3 meals per day. In Lusaka province had the greatest proportion of households eating more than three meals per day at 5% of households.

Conversely Luapula, Western and Northern provinces had the smallest proportion of households that reported consumption of an average of at 3 meals per day, with rates of 23%, 33% and 24% respectively. However, in each province the proportion eating at 3 meals per day on average had increased since 2006. In Luapula the proportion increased by 9 percentage points, whilst in Western and Northern the proportion increased by 8 percentage points.

### 13.8. Household Coping Strategies

Analysis of the various coping strategies employed by households in the face of adverse events can tell a particularly interesting story of the vulnerability of those households to poverty. This is particularly important for potentially damaging coping strategies that may be employed such as the distress sale of a productive asset.

A trend analysis is not conducted on household coping strategies, as the way in which data has been collected, and indeed the questions asked, on the household coping strategies has changed over the course of the various LCMS surveys. Thus comparison between the results of the 2010 survey and previous years would be difficult.

In the 2010 survey households were asked if they had suffered any incidents, which we will now describe as 'shocks' in the previous 12 months, which could be negative or positive, with the results reported in 0. Some 60% of households had experienced a shock, and this rose to 71% of those who considered themselves to be *Very Poor*, compared with 42% of those who were *Non-Poor*. The experience of shocks did not change very much over the strata or between urban and rural household; only households living in high cost areas were less likely to suffer a shock.

**Table 13.6: Percentage of households who experienced an incident in the previous 12 months, by level of perceived poverty and stratum, 2010**

		No	Yes	Total
Household level of perceived poverty	Not poor	58.9	41.1	100.0
	Moderately poor	41.8	58.2	100.0
	Very poor	29.0	71.0	100.0
Rural/Urban	Rural	37.7	62.3	100.0
	Urban	42.7	57.3	100.0
Stratum	Small Scale	37.5	62.5	100.0
	Medium Scale	34.8	65.2	100.0
	Large Scale	38.0	62.0	100.0
	Non Agric	40.5	59.5	100.0
	Low Cost	39.1	60.9	100.0
	Medium Cost	47.5	52.5	100.0
	High Cost	63.2	36.8	100.0
All Zambia	All Zambia	39.5	60.5	100.0

Of those households who had suffered a shock, the following incidents set out in 0 were experienced. The major causes of incident did not vary dramatically between urban and rural. It should be noted that households could report more than one incident.

The most common shock experienced by households was a *lack/decrease of money*, with almost a quarter of Zambians experiencing such a shock in 2010. Interestingly, *change in food prices* was reported as a shock by 27% of urban households, but only 15% of rural households, likely a consequence of their varying positions as net producers or net consumers of food. Despite this only 18% of urban households reported *lack of food*, compared to 23% of rural households. This result is likely a reflection of the higher per capita incomes enjoyed by urban households. Also of some concern for rural households was that 7% reported a *change in agricultural input prices* as an adverse shock.

Other significant adverse shocks to the household included *illness* reported by 13% of households, *floods* reported by 8% of households and *death of other household member* reported by 5% of Zambian households.

**Table 13.7: Percentage of households that faced a specific incident during the past 12 months, type of incident, by urban and rural, 2010**

Incident	Rural	Urban	All Zambia
Lack of money	24.7	24.0	24.5
Lack of food	23.1	18.1	21.3
Change in food prices	15.4	27.1	19.6
Illness	14.0	12.1	13.3
Flood	9.2	5.7	7.9
Change in agric input prices	6.8	1.9	5.1
Death of other household member	5.1	4.8	5.0
Mutual differences/divorce	4.8	5.2	4.9
Drought	6.7	0.9	4.6
Livestock disease	6.2	0.3	4.1
Collapse of business	2.4	6.8	3.9
Family conflicts	3.7	4.1	3.8
Change in sale prices of agric products	4.9	1.5	3.7
Crop disease/pest	4.8	0.9	3.4
Job loss/no salary	0.8	5.0	2.3
Damage to crop while storage	2.4	0.5	1.7
Rise of profit from business	1.1	2.7	1.7
Death of bread earner	1.8	1.5	1.7
Person joined household	1.4	2.0	1.6
Victim of crime/business scam/cheating	0.7	2.1	1.2
Serious injury/accident	1.1	1.1	1.1
Destruction of housing	1.4	0.5	1.1
Evicted from house	0.6	2.0	1.1
Storm	1.3	0.4	1.0
Better Pay/Work	0.3	1.7	0.8
Change in money received from family/friends	0.7	0.7	0.7
Inability to pay back loan	0.2	0.5	0.3
Law suit/imprisonment	0.2	0.3	0.2
Communal/political crisis/conflict	0.2	0.3	0.2

### 13.9. Impact of shocks on the households

Households were asked to report on the impact of the incident and whether it was positive or negative. Overall, 85% of incidents were reported to be negative.

To facilitate analysis and to allow for comparison, **Error! Reference source not found.** below presents a severity score. A score was assigned to each of the degrees of severity: 0 for no impact, 1 for low impact, 2 for medium impact and 3 for high impact. "Don't know" answers were disregarded for the severity score calculation. The severity score thus represents the average severity of a shock.

Of the negative incidents the impact was judged to be the most serious was where a death had occurred, especially that of the breadwinner. Loss of the home, loss of job, imprisonment and flooding were all other major impact shocks.

**Table 13.8: Percentage of households by severity of impact of shock by shock type, 2010**

Type of shock	Don't know	No impact	Low impact	Medium impact	High impact	Total	Severity score
Death of bread earner	1.5	0.1	1.2	9.8	87.4	100.0	2.87
Destruction of housing	0.6	0.2	2.0	11.5	85.8	100.0	2.84
Law suit/imprisonment	2.5	0.0	1.5	21.3	74.7	100.0	2.75
Evicted from house	6.1	0.2	1.3	25.9	66.4	100.0	2.69
Death of other household member	2.0	2.3	5.6	16.1	73.9	100.0	2.65
Job loss/no salary	2.8	0.3	5.9	22.1	68.9	100.0	2.64
Flood	1.7	1.9	3.3	25.4	67.7	100.0	2.62
Lack of food	2.7	0.6	5.7	27.6	63.5	100.0	2.58
Lack of money	2.6	0.3	5.1	30.6	61.4	100.0	2.57
Livestock disease	2.4	0.1	8.8	25.9	62.9	100.0	2.55
Inability to pay back loan	0.3	3.7	7.7	18.7	69.6	100.0	2.55
Collapse of business	2.0	0.7	4.6	35.4	57.3	100.0	2.52
Drought	2.0	1.7	5.1	34.0	57.2	100.0	2.50
Change in agric input prices	2.4	0.9	7.0	33.6	56.1	100.0	2.48
Change in food prices	1.4	1.2	5.2	37.9	54.4	100.0	2.47
Serious injury/accident	5.4	0.6	12.1	24.1	57.8	100.0	2.47
Victim of crime/business scam/cheating	1.3	2.3	10.7	25.7	60.0	100.0	2.45
Crop disease/pest	2.7	1.4	8.4	35.6	51.9	100.0	2.42
Change in sale prices of agric products	2.9	1.1	7.4	39.7	49.0	100.0	2.41
Change in money received from family/friends	0.5	1.4	6.0	43.3	48.8	100.0	2.40
Illness	4.0	1.5	10.5	34.8	49.2	100.0	2.37
Mutual differences/divorce	5.9	2.1	15.9	29.6	46.5	100.0	2.28
Storm	1.7	2.2	16.6	36.1	43.4	100.0	2.23
Family conflicts	5.1	2.7	17.1	36.2	38.9	100.0	2.17
Rise of profit from business	8.5	6.1	18.7	26.7	40.0	100.0	2.10
Damage to crop while storage	0.5	1.9	21.0	44.6	32.0	100.0	2.07
Person joined household	11.6	6.3	10.8	43.7	27.6	100.0	2.05
Communal/political crisis/conflict	0.0	22.8	12.6	10.8	53.8	100.0	1.96
Better Pay/Work	7.8	23.9	4.8	17.7	45.8	100.0	1.93

The way in which households coped with these shocks was collected in the survey and households were asked to list up to three coping strategies. The following table simplifies the 37 strategy choices into 10 broader categories and reports the percentage of households that used a certain coping strategy, either as first, second or third strategy, given that households could use more than one coping strategy. Around half of all households did nothing to cope with the shock experience; when action was taken the most popular strategies were making food economies (reducing number of meals, substituting meals, buying cheaper food, collecting food from the wild etc.) followed by undertaking casual (piece) work.

This could be seen as encouraging as fewer households were forced to undertake particularly damage coping strategies such as selling assets or paying out of savings.

**Table 13.9: Percentage of households facing negative incidents using coping strategies by type, 2010**

	Rural	Urban	Male Head	Female Head	All Zambia
Households ('000s)	1,600	891	1,901	584	2,491
Households that had to cope with hardships ('000s)	902	451	1,013	338	1,353
Did nothing	55.1	40.4	51.0	47.7	50.2
Food economies	46.9	42.5	43.6	50.7	45.5
Piece work	33.0	21.3	29.2	28.6	29.1
Relatives & friends	19.7	22.3	20.1	22.2	20.6
Borrowed	15.6	26.4	19.4	18.8	19.2
Took refuge with others	20.4	11.8	16.7	19.9	17.5
Sold assets	18.9	14.8	18.4	14.8	17.5
Worked more	16.7	12.9	14.8	17.5	15.4
Savings	9.5	9.6	9.7	9.1	9.5
Other	24.9	27.8	25.5	26.8	25.9

## HOUSING CHARACTERISTICS, HOUSEHOLD AMENITIES AND ACCESS TO FACILITIES

### 14.1. Introduction

Poverty among many households in Zambia can also be measured by the housing standards and the extent to which the population has access to safe water sources, good sanitation and other social economic infrastructure. Provision of clean and safe water supply is a high priority for Government because of the link that exists between inadequate supply of safe water and incidence of water borne diseases.

The 2010 LCMS collected data on housing and household characteristics pertaining to types of dwelling, building materials used for roofing, walls and floors (not reported on), tenancy of housing units, main source of water supply for households, sanitation, energy for cooking and lighting and households' access to facilities.

Facilities for which information was collected included the food market, post office, bank and health facilities. For each of these facilities, various aspects 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 on housing characteristics presents results on type of dwelling used by households and the materials used in the construction of the dwellings. In this chapter, conventional housing included detached house, flat/apartment and semi-detached house.

#### 14.2.1. Type of Dwelling

Table 14.1 presents information on type of dwellings households occupied by rural and urban areas, stratum and province. The most common type of housing occupied by households remains 'traditional hut', occupied by 38 percent of the households, down from 46 percent in 2006. This decline was chiefly accounted for by the rise in 'detached houses' to 25 percent (21 percent in 2006) and 'improve traditional huts' to 23 percent (20 percent in 2006).

Those living in some type of traditional hut – whether improved or not - declined from 67 percent to 61 percent of all households from 2006 to 2010. This compares to 37 percent of households that occupied one of the following: detached house, flat/apartment/multi-unit or semi-detached house; this is a rise of 5 percent from 32 percent in 2006. In rural areas, there was a fall in the proportion of households occupying a 'traditional hut' that was not improved. The number of rural households living in 'improved traditional houses' and 'detached houses' increased to 28 percent and 14 percent, respectively.

The shift away from traditional housing (improved or not) was driven by housing changes in the rural areas of the country. In rural areas the percentage of households living in a traditional house fell from 90 to 84 percent. In contrast the proportion living in traditional housing in urban areas remaining stable at around 20 percent.

By stratum, the 'small scale' and 'medium scale' farming households and the 'non agricultural' rural households showed the greatest fall in the proportions of households living in non-improved 'traditional hut'. For these strata there has been an equivalent rise in the occupancy of 'improved huts' and 'detached houses'.

In all provinces, but Lusaka and Copperbelt, traditional housing (improved or not) is the most common type of dwelling. This is unchanged from 2006. Only in Luapula province did the proportion of households living in traditional housing rise since 2006, conversely Northern and North Western provinces experienced the greatest fall in the proportion of households living in 'traditional huts', and for those households many more are now living in 'improved traditional huts'.

**Table 14.1: Percentage Distribution of Households by Type of Dwelling by Rural/Urban, Stratum and Provinces, 2010 and 2006**

2010		Type of Dwelling									Total number of households ('000s)
		Traditional Hut	Improved Traditional House	Detached House	Flat/ Apartment / Multi-Unit	Semi-detached House	Servant Quarters	Other	Missing data	Total	
Rural/Urban	Rural	56.2	27.8	13.9	0.9	0.5	0.2	0.4	0.1	100	1,600
	Urban	5.9	13.8	45.7	18.8	10.7	2.9	2.2	0.1	100	891
Stratum	Small Scale	58.1	28.0	12.7	0.3	0.3	0.1	0.4	0.1	100	1,426
	Medium Scale	40.9	32.9	24.5	0.3	0.9	0.0	0.3	0.2	100	41
	Large Scale	17.3	18.9	59.8	0.0	4.0	0.0	0.0	0.0	100	1
	Non Agric	41.4	23.9	23.0	7.5	2.1	0.8	1.0	0.3	100	133
	Low Cost	7.3	16.8	42.2	20.3	10.3	2.2	0.8	0.1	100	659
	Medium Cost	1.7	2.8	56.5	16.2	15.7	1.6	5.4	0.2	100	149
	High Cost	2.2	9.5	53.5	11.5	4.6	10.7	7.6	0.4	100	83
Province	Central	45.1	21.7	25.1	3.9	2.5	0.4	1.1	0.2	100	250
	Copperbelt	12.2	19.0	50.0	3.0	10.6	4.0	1.0	0.1	100	369
	Eastern	66.2	12.7	18.6	0.7	0.2	0.4	0.9	0.3	100	342
	Luapula	24.0	67.0	7.7	0.3	0.8	0.1	0.1	0.0	100	191
	Lusaka	5.5	8.9	35.9	36.1	9.4	1.7	2.4	0.1	100	366
	Northern	49.9	33.7	12.6	2.1	1.2	0.2	0.2	0.0	100	318
	North Western	45.4	34.4	16.0	1.6	1.3	0.9	0.3	0.1	100	138
	Southern	40.7	17.0	30.7	4.7	3.8	1.0	1.9	0.1	100	311
	Western	74.9	15.4	6.7	1.2	1.1	0.1	0.5	0.0	100	205
All Zambia	All Zambia	38.2	22.8	25.2	7.3	4.1	1.1	1.1	0.1	100	2,491

2006	Type of Dwelling									
		Traditional Hut	Improved Traditional House	Detached House	Flat/ Apartment	Semi-detached House	Servant Quarters	Other	Total	Total number of households ('000s)
Rural/Urban	Rural	66.3	23.9	8.1	0.9	0.4	0.1	0.4	100	1,484
	Urban	8.5	13.9	44.9	16.9	12.3	2.7	0.8	100	800
Stratum	Small Scale	67.3	23.9	7.4	0.6	0.4	0.0	0.4	100	1,351
	Medium scale	53.4	26.9	17.4	1.1	0.7	0.2	0.5	100	36
	Large Scale	13.2	36.9	45.6	0.0	4.3	0.0	0.0	100	1
	Non-Agric	57.1	21.5	13.9	5.1	0.7	0.9	0.9	100	96
	Low Cost	10.0	16.3	42.1	16.2	13.2	1.6	0.7	100	649
	Medium Cost	3.3	7.2	63.0	14.4	9.7	1.8	0.7	100	86
	High Cost	1.1	1.5	48.5	26.2	7.8	13.7	1.2	100	65
Province	Central	56.3	21.3	16.3	1.7	3.3	0.4	0.7	100	226
	Copperbelt	13.7	22.8	43.0	4.8	11.4	3.3	1.0	100	338
	Eastern	70.6	11.5	15.3	0.8	1.0	0.2	0.6	100	320
	Luapula	20.8	71.7	6.9	0.3	0.1	0.2	0.1	100	178
	Lusaka	7.2	5.6	39.1	33.2	12.9	1.9	0.2	100	333
	Northern	70.3	18.2	9.8	0.6	0.6	0.2	0.3	100	296
	North Western	70.4	21.3	6.9	0.1	0.8	0.2	0.3	100	131
	Southern	50.2	21.6	20.3	3.8	3.0	0.7	0.5	100	284
	Western	84.8	8.1	4.6	1.2	0.3	0.1	0.8	100	176
Zambia	Zambia	46.2	20.4	20.9	6.5	4.6	1.0	0.5	100	2,283

### 14.2.2. Tenancy Status of Dwelling

Table 14.2 provides data on tenancy, that is, whether the dwelling is owner occupied, rented or provided free to the occupiers. Information on tenancy was collected, by asking the household head, the basis on which the household occupied the dwelling they lived in. The 2010 LCMS revealed that at national level, the majority of households (72 percent) lived in their own dwelling, 20 percent rented<sup>1</sup> and 8 percent occupied free housing.

Table 14.2 and Figure 14.1 show that in 2010 home ownership was higher in rural areas with 88 percent of the households compared to urban areas where 43 percent of households owned the houses they occupied. The high home ownership rates in rural areas is mainly as a result of most people in rural areas occupying traditional dwelling – this is replicated in the disaggregation of data by stratum where all rural strata show large proportions of owner-occupied dwellings.

The proportion of households renting in urban areas has risen from 46 in 2006 to 49 percent in 2010. Lusaka and Copperbelt remain the provinces with the least owner-occupied housing and the greatest proportion of rented accommodation. Owner-occupied housing in Lusaka remains at considerably lower levels than for all other provinces at 35 percent in 2010.

Rural non agricultural households have the highest incidence of occupying ‘free’ housing at 27 percent; followed by urban ‘medium’ and ‘high cost’ Where some employees are occupying housing provided by employers. By province Central, Lusaka and Southern provinces show the highest proportions of ‘free’ housing, unchanged from the 2006 findings.

**Table 14.2: Percentage Distribution of Households by Tenancy Status by Rural/Urban, Stratum and Province, 2010 and 2006**

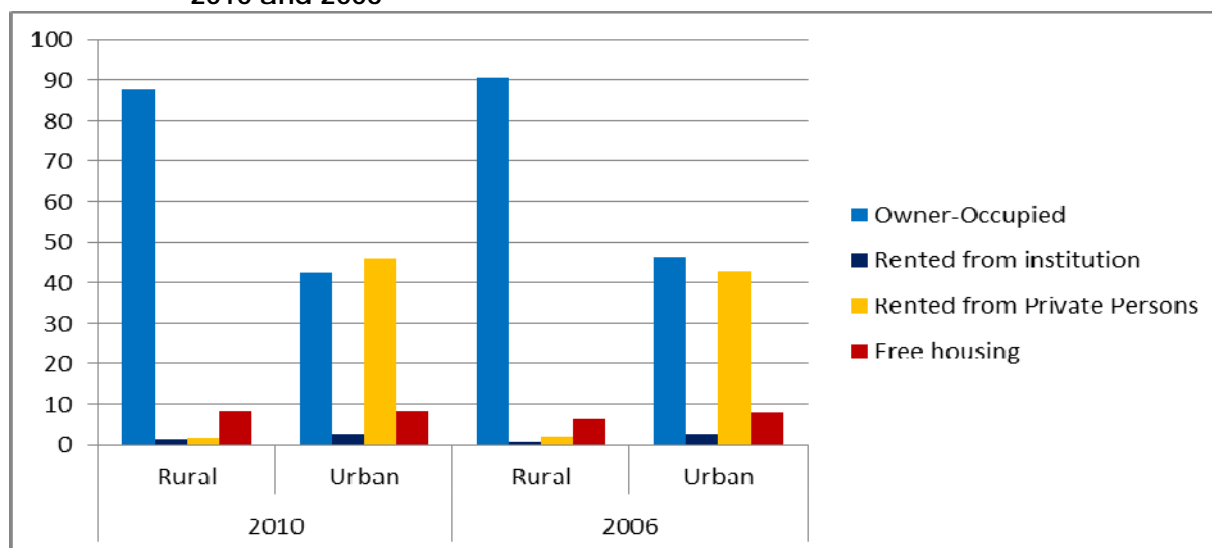
2010		Basis of Occupation							Total number of households ('000s)
		Owner-Occupied	Rented from institution	Rented from Private Persons	Free housing	Others	Missing data	Total	
Rural/Urban	Rural	87.9	1.4	1.9	8.5	0.2	0.1	100	1,600
	Urban	42.5	2.7	46.2	8.3	0.2	0.1	100	891
Stratum	Small Scale	90.6	1.3	1.1	6.8	0.2	0.1	100	1,426
	Medium Scale	90.6	2.3	0.6	6.3	0.2	0.1	100	41
	Large Scale	85.7	1.8	0.4	12.1	0.0	0.0	100	1
	Non Agric	57.9	3.2	11.2	27.2	0.2	0.3	100	133
	Low Cost	43.8	1.9	47.8	6.2	0.1	0.1	100	659
	Medium Cost	40.9	4.5	42.4	11.7	0.4	0.1	100	149
	High Cost	34.3	5.8	40.0	19.2	0.7	0.1	100	83
Province	Central	73.8	1.5	11.8	12.5	0.2	0.2	100	250
	Copperbelt	56.1	1.7	33.7	8.3	0.3	0.0	100	369
	Eastern	89.4	0.6	4.1	5.9	0.0	0.0	100	342
	Luapula	85.3	1.7	5.5	7.4	0.0	0.0	100	191
	Lusaka	34.5	2.3	51.8	11.0	0.2	0.2	100	366
	Northern	86.8	1.6	6.7	4.8	0.1	0.0	100	318
	North Western	85.3	1.4	8.1	5.0	0.1	0.2	100	138
	Southern	71.3	4.7	11.5	11.7	0.7	0.1	100	311
	Western	89.0	0.8	2.7	7.2	0.3	0.1	100	205
All Zambia	All Zambia	71.7	1.9	17.7	8.4	0.2	0.1	100	2,491

<sup>1</sup> Here, rented includes housing ‘rented from institution’ and ‘rented from private person’. The majority of rented households are rented from private persons. Rental institutions include: local government, central government, private company and parastatal.



2006		Basis of Dwelling						Total number of households ('000s)
		Owner occupied	Rented from institution	Rented from private persons	Free housing	Other	Total	
Rural/Urban	Rural	90.9	0.7	2.0	6.4	0.0	100	1,484
	Urban	46.4	2.8	42.9	8.0	0.1	100	800
Stratum	Small Scale	92.6	0.6	1.3	5.4	0.0	100	1,351
	Medium scale	94.0	0.3	0.7	5.1	0.0	100	36
	Large Scale	96.9	0.0	0.0	3.1	0.0	100	1
	Non-Agric	65.3	1.5	11.5	21.7	0.0	100	96
	Low Cost	47.5	2.3	42.9	7.2	0.1	100	649
	Medium Cost	47.2	1.4	43.6	7.9	0.0	100	86
	High Cost	34.7	8.8	42.0	14.3	0.1	100	65
Province	Central	81.8	0.7	9.3	8.1	0.0	100	226
	Copperbelt	60.6	2.8	30.2	6.3	0.1	100	338
	Eastern	90.2	0.7	3.6	5.5	0.0	100	320
	Luapula	88.0	0.9	6.4	4.5	0.0	100	178
	Lusaka	38.5	1.6	48.0	11.9	0.0	100	333
	Northern	89.2	1.4	5.7	3.6	0.0	100	296
	Northwestern	87.8	0.6	6.0	5.7	0.0	100	131
	Southern	76.1	2.5	12.0	9.5	0.0	100	284
	Western	91.7	0.2	3.3	4.8	0.0	100	176
All Zambia	All Zambia	75.4	1.5	16.2	7.0	0.0	100	2,283

**Figure 14.1: Percentage Distribution of Households by Tenancy Status by Rural/ Urban, 2010 and 2006**



### 14.3. Household Amenities

This section discusses findings on various households' access to various amenities including sources of water supply, lighting and cooking energy. The section also looks at the type of toilet facilities, and the garbage disposal methods used by the households.

#### 14.3.1. Main Water Source

Among the different water sources, protected wells, boreholes, and taps are regarded as safe sources of water supply; whereas, unprotected wells, rivers and lakes/ streams are considered unsafe sources of water supply.

There has been a rise in the proportion of households with access to safe water. As table 14.3 and Figure 14.2 show the national proportion of households with access to safe water was 62 percent. Rural households have gained greater access to safe water sources in the period between the surveys: 49 percent of rural households now have access to safe water compared to 41 percent in 2006.

Most of the increase in the use of safe water sources was as a result of better access to 'protected wells' and 'boreholes', rather than to 'taps'. Rural households increased their access to safe water, and this was mainly achieved by 'boreholes'; but for urban households the increase in access was due to more 'protected wells', accompanied by a decline in access to 'public taps'.

Urban households' use of safe water has declined from 86.6 percent in 2006 to 83.6 percent in 2010. Lusaka - one of the most urbanised provinces - remains the province with the greatest proportion of households with access to safe water at 89 percent; however Lusaka was the only province where access reduced over the time period. This contrasts with Eastern and Luapula provinces where access rose by more than 10 percentage points. Despite this sharp rise in Luapula residents' access to safe water, overall access in the province remains very low at 28 percent. Northern province now has the lowest levels of access to safe water sources, at 27 percent of households.

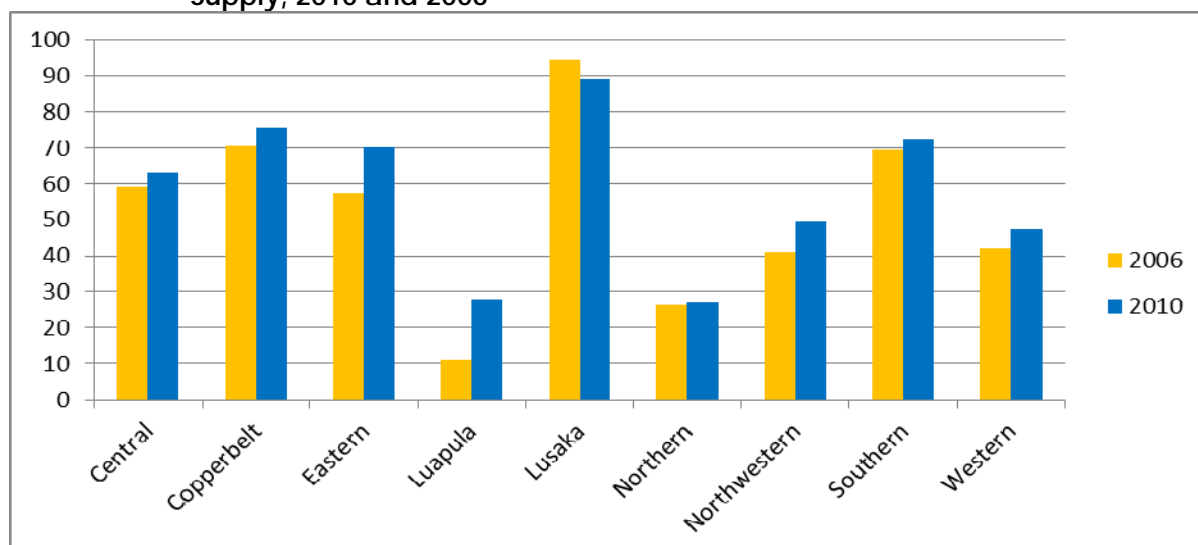
Access to safe sources of water is lower than average for households classified as poor, with 48 percent for the extremely poor and 55 percent for the moderately poor, as compared to 75 percent for the non-poor.

**Table 14.3: Percentage Distribution of Households by Main Water Source by Rural/Urban, Stratum, Province and Poverty Status, 2010 and 2006**

2010	Main water source																		
				Safe water sources						Directly from river/lake/ stream/ dam	Unprotected well	Unprotected Spring	Protected spring	Rain water	Water Kiosk	Others	Missing data	Total	Total Number of Households (000s)
		Total safe		Protected well	Borehole	Public Tap	Own Tap	Other Tap											
Rural/Urban	Rural	49.2		10.8	31.9	4.0	1.8	0.7		21.1	26.3	2.4	0.1	0.5	0.1	0.1	0.1	100	1,600
	Urban	83.6		8.2	3.6	22.6	39.7	9.5		1.2	8.3	0.3	0.2	0.2	5.1	1.0	0.1	100	891
Stratum	Small Scale	47.7		10.9	32.1	3.0	1.2	0.5		21.8	27.1	2.5	0.1	0.5	0.1	0.1	0.1	100	1,426
	Medium Scale	48.4		11.7	32.0	2.2	2.3	0.2		19.9	29.2	1.3	0.4	0.8	0.0	0.1	0.0	100	41
	Large Scale	74.2		21.0	36.0	2.0	11.3	3.9		9.8	13.9	0.0	3.9	0.0	2.1	0.0	0.0	100	1
	Non Agric	66.6		9.6	30.4	15.8	7.8	3.0		13.9	16.8	2.0	0.2	0.1	0.1	0.1	0.3	100	133
	Low Cost	79.8		10.1	4.3	27.9	27.8	9.7		1.1	10.3	0.4	0.2	0.2	6.9	1.0	0.1	100	659
	Medium Cost	94.8		3.3	1.5	8.3	70.2	11.5		1.2	2.6	0.1	0.0	0.1	0.1	1.1	0.0	100	149
	High Cost	94.4		1.1	2.1	6.6	79.4	5.2		1.6	2.3	0.2	0.1	0.2	0.2	0.8	0.1	100	83
Province	Central	63.0		22.8	22.9	7.6	8.9	0.8		13.0	20.7	0.6	0.4	0.2	1.3	0.6	0.2	100	250
	Copperbelt	75.7		14.8	3.4	8.9	41.2	7.4		3.6	13.8	0.3	0.3	0.3	4.4	1.6	0.2	100	369
	Eastern	70.2		11.1	50.7	3.6	3.4	1.4		11.5	15.8	0.3	0.1	0.4	1.5	0.1	0.1	100	342
	Luapula	28.0		6.9	17.9	1.2	1.3	0.7		25.6	40.4	5.5	0.0	0.3	0.0	0.1	0.0	100	191
	Lusaka	89.2		2.6	8.9	37.8	32.2	7.7		1.4	3.8	0.3	0.1	0.3	4.2	0.5	0.1	100	366
	Northern	26.9		8.5	8.4	3.5	4.0	2.5		38.3	30.3	4.0	0.2	0.1	0.1	0.1	0.0	100	318
	North Western	49.3		14.3	25.9	1.8	5.8	1.5		20.2	24.9	3.3	0.2	0.0	1.9	0.0	0.1	100	138
	Southern	72.5		4.3	38.2	11.5	14.4	4.1		12.7	9.8	2.5	0.1	1.0	1.2	0.0	0.2	100	311
	Western	47.4		6.8	25.1	5.8	4.6	5.1		10.0	41.3	0.6	0.1	0.3	0.3	0.0	0.1	100	205
Poverty Status	Extremely Poor	48.1		10.8	30.5	4.6	0.8	1.4		19.7	28.1	2.5	0.1	0.5	0.9	0.1	0.0	100	905
	Moderately Poor	54.7		11.6	24.5	11.1	4.5	3.0		17.6	22.8	2.1	0.1	0.2	2.1	0.3	0.2	100	452
	Non Poor	75.0		8.5	13.7	15.3	31.3	6.2		8.0	12.1	0.9	0.2	0.3	2.6	0.7	0.1	100	1,134
All Zambia	All Zambia	61.6		9.9	21.8	10.7	15.3	3.9		14.0	19.8	1.7	0.1	0.4	1.9	0.4	0.1	100	2,491

2006		Main water Source																	
		Total safe		Safe water sources						Directly from the river	Pumped (pipd) from the river	Unprotected well	Bought from water vendor	Other	Total	Total Number of Households (000s)			
Rural/Urban	Rural	40.6		9.3	27.3	2.4	1.2	0.4		25.1	1.5	32.2	0.2	0.3	100	1,484			
	Urban	86.6		4.1	4.9	28.3	39.2	10.1		2	0.8	10.2	0.1	0.3	100	800			
Stratum	Small Scale	39.4		9.2	27.3	1.7	0.9	0.3		25.8	1.6	32.8	0.1	0.3	100	1,351			
	Medium scale	51.9		11.5	36.9	1.3	1.8	0.4		16.9	1.3	29.5	0.1	0.3	100	36			
	Large Scale	52.1		21.7	14.8	4.7	10.9	0		19.3	5.5	23	0	0	100	1			
	Non-Agric	55.1		10.4	24.5	12	5.5	2.7		17.9	0.6	24.3	1.9	0.3	100	96			
	Low Cost	84.6		5	5.1	33.9	30.1	10.5		2.4	0.7	12	0.1	0.3	100	649			
	Medium Cost	93.2		0.5	3.5	7.1	74.1	8		0.3	2.2	4.1	0.1	0	100	86			
	High Cost	97.2		0.4	4.4	4.7	78.6	9.1		1	0.5	1.1	0	0.2	100	65			
Province	Central	59.2		10.9	29.6	8	9.4	1.3		13.1	0.9	26.8	0	0	100	226			
	Copperbelt	70.5		8.2	3.5	9.9	44.1	4.8		5.7	1	21.7	0.1	0.9	100	338			
	Eastern	57.5		8.4	43.1	2.5	2.8	0.7		15.7	1.5	25.3	0	0	100	320			
	Luapula	11.1		2.5	6.7	0.9	0.6	0.4		36.6	2.2	48.9	0.1	1	100	178			
	Lusaka	94.4		3.8	9.8	41	27.8	12		0.6	0.2	4.8	0	0	100	333			
	Northern	26.4		6.4	8.7	6.3	3.7	1.3		42.6	1.6	29.4	0	0	100	296			
	Northwestern	40.9		16.4	12.4	8.2	3	0.9		20.7	3.3	34.9	0.1	0.2	100	131			
	Southern	69.7		7.2	35.4	9.4	12.9	4.8		15.2	1.4	12.4	1.3	0	100	284			
	Western	42.0		7.9	23.2	4.3	3.1	3.5		14.9	0.3	42	0	0.7	100	176			
All Zambia	All Zambia	56.6		7.5	19.5	11.4	14.4	3.8		17	1.3	24.5	0.2	0.3	100	2,283			

**Figure 14.2: Percentage Distribution of Households by Province with Access to Safe Water Supply, 2010 and 2006**



### 14.3.2. Sources of Drinking Water

Sources of *drinking* water can also be defined as safe or unsafe, following the same definition as for safe and unsafe sources of *general* water supply in section 14.3.1 above. However, WHO and UNICEF monitor the status of drinking water for international comparison purposes; and categorize drinking water into improved or unimproved sources rather than safe or unsafe.<sup>2</sup> It is important to note that the WHO/UNICEF definition applies only to drinking water sources, not general water sources. It is therefore only applied here and not in section 14.3.1 above.

Table 14.4 compares the two definitions of safe and improved. This comparison shows that all safe categories are also covered under the international definition; however, there are more categories considered improved under the international definition. The actual difference in results between 'safe' and 'improved' is very minor.

**Table 14.4: Comparison of definitions for safe and improved drinking water sources**

Safe	Improved
<ul style="list-style-type: none"> <li>Protected wells</li> <li>Boreholes</li> <li>Taps</li> </ul>	<ul style="list-style-type: none"> <li>Protected well</li> <li>Borehole</li> <li>Piped water (i.e. private taps)</li> <li>Public tap</li> <li>Protected spring</li> <li>Rainwater</li> </ul>

The WHO/UNICEF classification of 'improved' water sources is used for the first time in the LCMS 2010: to enable the results to be compared with previous surveys, and for national planning purposes, this section will present results for both the old definition of 'safe' sources of drinking water as well as 'improved' drinking water sources. The results from the two definitions do not vary widely; averaging less than two percentage points. Furthermore, due to fewer answer choices being included in the 2006 LCMS, the estimates for safe and improved are identical for 2006.

<sup>2</sup> <http://www.wssinfo.org/definitions-methods/watsan-categories/>, used to monitor the MDGs on use of improved water sources. The difference in "safe" as used by the LCMS and "improved" is very minor.

Table 14.5 shows that at the national level 62 percent of households have access to safe drinking water and, similarly, 63 percent have access to improved drinking water. There has been an increase in rural households' access to safe drinking water, which now stands at 50 percent of households. For urban households access remains higher than the national average at 84 percent.

There has been a rise in the use of all types of safe drinking water sources in rural households with the largest change being a rise in the use of 'boreholes'. For urban households the rise in 'protected wells' as main source of drinking water was offset by declines in the use of 'boreholes' and 'public taps'.

By stratum the 'small scale' and 'large scale' farmers; 'rural non agricultural' and 'medium cost' households improved their access to safe water vis-à-vis levels seen in 2006. Decline in safe water use for 'medium scale' farmers were mostly due to reduction in use of 'boreholes'; for 'low cost' and 'high cost' households. Reductions in use of 'taps' were the main driver.

Lusaka remains the province with the greatest proportion of households with access to safe water although this has fallen to 89 percent from 95 in 2006. The only other province to see a decline in access to safe drinking water was Northern, both experienced reductions in use of 'boreholes' and 'taps'. This is not a good sign for the Northern Province which was struggling with low levels of access to safe water in 2006 and now has the lowest levels of access to safe drinking water in the country at 27 percent. Access in Eastern, Luapula and North Western provinces rose by more than 10 percentage points. As a proportion of households, Luapula's access to safe drinking water has doubled but still remains very low at 30 percent.

Access to safe sources of drinking is lower than average for households classified as poor, with 49 percent for the extremely poor and 56 percent for the moderately poor, as compared to 76 percent for the non-poor.

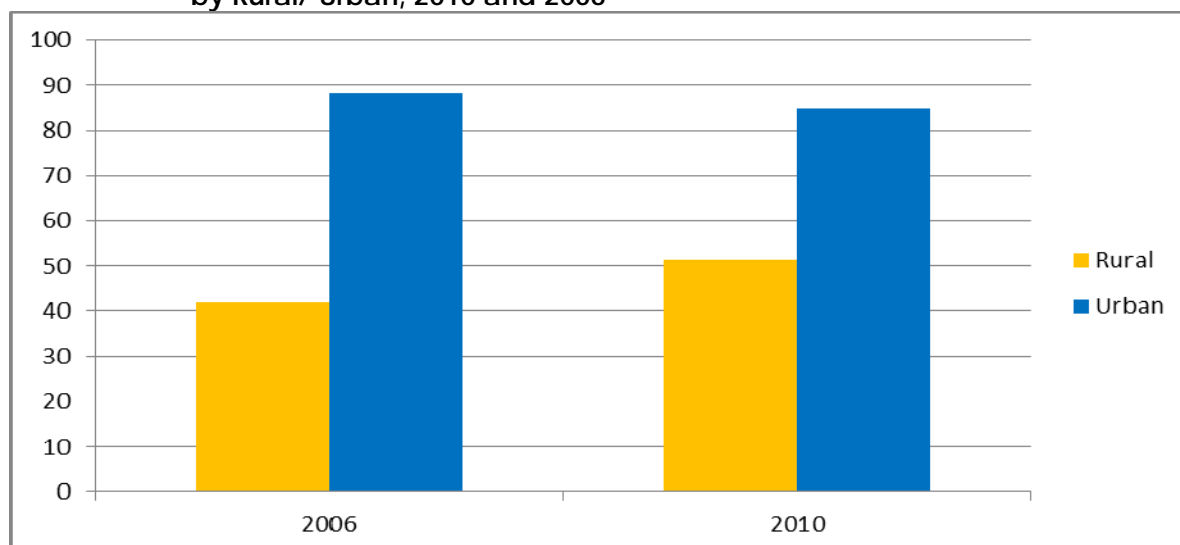
**Table 14.5: Percentage Distribution of Households by Main Source of Drinking Water by Rural/Urban, Stratum and Province, 2010 and 2006**

2010		Main source of drinking water																			
		Improved/ Safe																			
		Total improv ed	Total safe		Bore-hole	Protected well	Public Tap	Own Tap	Other Tap	Protected spring	Rain water	Unprotected well	Directly from river/lake/ stream/ dam	Unprot ected spring	Water Kiosk	Bottled water		Other	Missing data	Total	Total Number of Households (000s)
Rural/Urban	Rural	51.4	50.3		32.6	11.0	4.1	1.8	0.8	0.4	0.7	26.0	19.8	2.5	0.1	0.0		0.1	0.2	100	1,600
	Urban	84.7	84.4		4.1	7.5	23.2	39.7	9.9	0.2	0.1	6.3	1.0	0.3	6.5	0.2		0.9	0.2	100	891
Stratum	Small Scale	49.6	48.6		32.7	11.0	3.1	1.2	0.6	0.3	0.7	27.0	20.5	2.6	0.1	0.0		0.1	0.2	100	1,426
	Medium Scale	50.5	49.4		32.7	11.9	2.0	2.4	0.4	0.4	0.7	28.8	19.0	1.1	0.0	0.0		0.1	0.5	100	41
	Large Scale	80.5	80.5		44.8	17.7	2.0	12.1	3.9	0.0	0.0	7.6	11.9	0.0	0.0	0.0		0.0	0.0	100	1
	Non Agric	70.5	68.4		31.4	10.2	15.9	7.8	3.1	1.7	0.4	15.0	12.1	2.0	0.2	0.0		0.1	0.3	100	133
	Low Cost	80.9	80.5		4.5	9.5	28.7	27.9	9.9	0.3	0.1	8.0	1.1	0.3	8.7	0.1		0.9	0.2	100	659
	Medium Cost	96.0	96.0		2.8	2.0	8.4	70.5	12.3	0.0	0.0	1.9	0.5	0.0	0.2	0.1		1.0	0.1	100	149
	High Cost	94.2	93.9		2.9	0.9	6.6	77.9	5.6	0.1	0.2	0.8	1.1	0.3	1.3	0.9		1.3	0.2	100	83
Province	Central	65.0	64.3		23.6	22.6	8.3	8.8	1.0	0.4	0.3	19.2	12.3	0.4	2.3	0.2		0.3	0.3	100	250
	Copperbelt	75.8	75.3		4.7	14.0	8.5	40.8	7.3	0.4	0.1	13.4	3.5	0.2	4.8	0.2		1.7	0.2	100	369
	Eastern	72.4	72.0		52.0	11.3	3.6	3.6	1.5	0.0	0.4	14.2	11.1	0.3	1.5	0.0		0.1	0.2	100	342
	Luapula	30.7	29.7		18.9	7.5	1.1	1.4	0.8	0.0	1.0	38.7	24.3	6.0	0.0	0.0		0.0	0.3	100	191
	Lusaka	89.1	88.9		8.7	2.3	37.8	32.3	7.8	0.0	0.2	3.3	1.5	0.2	4.9	0.0		0.5	0.3	100	366
	Northern	28.5	26.7		8.0	7.8	4.4	4.0	2.5	1.4	0.4	29.0	38.2	3.6	0.4	0.1		0.0	0.0	100	318
	North Western	52.7	51.4		25.8	14.1	2.9	6.1	2.5	0.6	0.7	23.7	14.1	4.0	5.5	0.0		0.0	0.1	100	138
	Southern	75.0	73.8		39.2	4.0	11.8	14.5	4.3	0.1	1.1	9.0	11.6	2.7	1.3	0.0		0.1	0.3	100	311
	Western	49.2	48.9		25.4	7.7	6.0	4.6	5.2	0.1	0.2	42.3	7.2	1.1	0.3	0.0		0.0	0.0	100	205
Poverty Satus	Extremely Poor	50.0	49.2		31.3	10.8	4.8	0.9	1.4	0.2	0.6	27.5	18.5	2.5	1.1	0.0		0.0	0.3	100	905
	Moderately Poor	56.4	55.7		25.0	11.8	11.4	4.5	3.0	0.2	0.5	22.6	16.1	2.2	2.5	0.0		0.2	0.1	100	452
	Non Poor	76.5	75.7		14.2	8.1	15.7	31.2	6.5	0.5	0.3	10.7	7.5	0.8	3.4	0.1		0.7	0.2	100	1,134
All Zambia	All Zambia	63.1	62.3		22.4	9.7	10.9	15.3	4.0	0.3	0.5	18.9	13.1	1.7	2.4	0.1		0.4	0.2	100	2,491

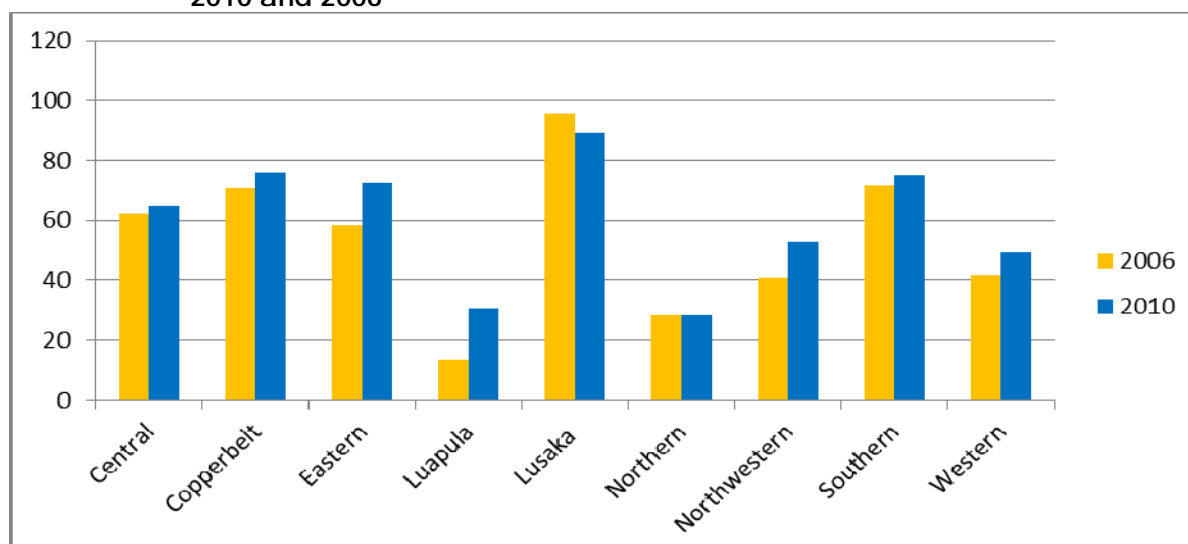
2006	Main source of drinking water																	
		Improved/ Safe (identical for 2006)																
		Total improve d	Tota l Safe 3		Bor ehol e	Protected well	Public tap	Own tap	Other tap		Unprotected well	Directly from the river	Pumped (pipel) from the river	Bought from water vendor	Bottled water	Othe r	Tota l	Total Number of Households (000s)
Rural/Urban	Rural	41.9	41.9		28.4	9.3	2.6	1.2	0.4		32.5	23.6	1.4	0.2	0	0.3	100	1,484
	Urban	88.2	88.2		5.5	3.8	29.1	39.3	10.5		9	1.6	0.6	0.2	0.2	0.3	100	800
Stratum	Small Scale	40.6	40.6		28.2	9.2	2	0.9	0.3		33.2	24.4	1.5	0.1	0.1	0.3	100	1,351
	Medium scale	53.4	53.4		37.4	12.6	1.3	1.8	0.3		28.6	16.5	1	0.1	0	0.3	100	36
	Large Scale	59.9	59.9		31.9	16.2	0	11.8	0		23.1	16.9	0	0	0	0	100	1
	Non-Agric	57.1	57.1		27	10.2	11.6	5.6	2.7		24.5	15.5	0.8	1.9	0	0.3	100	96
	Low Cost	86.3	86.3		6	4.6	34.7	30.2	10.8		10.7	1.9	0.5	0.2	0.1	0.4	100	649
	Medium Cost	94.6	94.6		3.1	0.4	7.3	74.5	9.3		3	0.9	1.3	0	0	0	100	86
	High Cost	97.1	97.1		4.5	0.3	4.8	78.3	9.2		1	0.3	0.4	0	1.1	0	100	65
Province	Central	62.0	62.0		30.7	11	8.9	9.6	1.8		25.3	11.8	0.8	0	0	0	100	226
	Copperbelt	71.1	71.1		3.7	8.1	10.1	44.3	4.9		21.5	5.6	0.6	0.2	0	0.9	100	338
	Eastern	58.6	58.6		43.8	8.3	2.9	2.9	0.7		25.6	14.4	1.3	0	0	0	100	320
	Luapula	13.6	13.6		7.7	3.6	1.2	0.6	0.5		49	33.7	2.6	0	0	1.1	100	178
	Lusaka	95.4	95.4		11.7	2.8	41.2	27.6	12.1		3.1	0.6	0.3	0.2	0.4	0	100	333
	Northern	28.3	28.3		9.7	6.5	6.7	3.8	1.6		28.9	41.6	1.1	0	0.1	0	100	296
	Northwestern	40.8	40.8		12.1	15.1	9.6	3	1		36	19.5	3.2	0.1	0.4	0.2	100	131
	Southern	71.7	71.7		37.3	7.6	9.2	12.9	4.7		12	13.6	1.5	1.3	0	0	100	284
	Western	41.6	41.6		23.1	7.5	4.6	3	3.4		44.6	12.9	0.3	0	0.2	0.4	100	176
All Zambia	All Zambia	58.0	58.0		20.4	7.4	11.8	14.5	3.9		24.3	15.9	1.1	0.2	0.1	0.3	100	2,283

<sup>3</sup> Due to answer choices 'protected spring' and 'rainwater' not being included in the 2006 LCMS questionnaire, the estimates for safe and improved are identical for 2006.

**Figure 14.3: Percentage Distribution of Households Accessing Improved Drinking Water, by Rural/ Urban, 2010 and 2006**



**Figure 14.4: Percentage of Households Accessing Improved Drinking Water, by Province, 2010 and 2006**



### 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 and figure 14.5 show the proportion of households by residence who treated or boiled their drinking water. Results indicate that treatment of water was not widespread in Zambia and has not changed much since 2006. In 2010, 35 percent of households treated there boiling water compared to 32 percent in 2006.

The proportion of rural households treating their water rose to 25 percent. However urban households remain much more likely to boil or treat water, with 53 percent doing so.



Treatment of drinking water varies by stratum, large scale farmers and those living in medium or high cost urban housing areas are much more likely to treat their water. But households living in the low and medium housing areas, and 'medium scale farmers' are now less likely to treat their water than was the case in 2006.

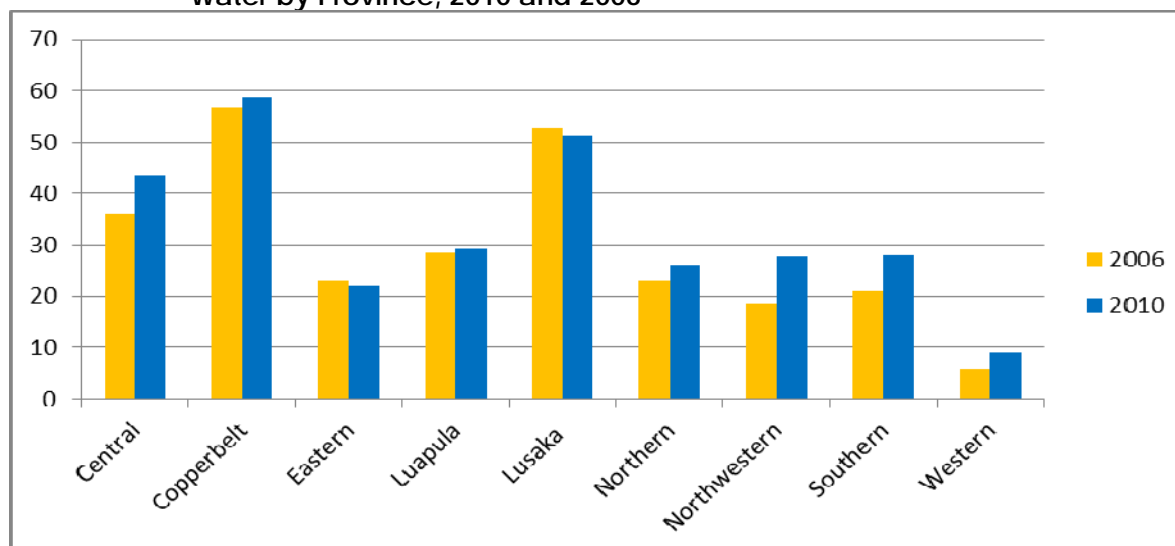
At provincial level Central, Northwestern and Southern province show increases in the proportions of households treating their drinking water. Copperbelt and Lusaka remain the two provinces with the greatest proportion of treatment, whilst Western remains the lowest.

**Table 14.6: Proportion of Households that Treated/Boiled Drinking Water by Rural/Urban, Stratum and Province, 2010, 2006**

2010		Treated / Boiled Drinking Water				Total Number of Households ('000s)
		Yes	No	Missing Data	Total	
Rural/Urban	Rural	25.0	74.5	0.6	100	1,600
	Urban	53.1	46.2	0.7	100	891
Stratum	Small Scale	24.0	75.4	0.6	100	1,426
	Medium Scale	24.1	75.3	0.5	100	41
	Large Scale	44.0	54.1	1.9	100	1
	Non Agric	35.5	63.9	0.6	100	133
	Low Cost	49.5	50.0	0.5	100	659
	Medium Cost	60.6	38.7	0.7	100	149
	High Cost	68.2	29.9	1.9	100	83
Province	Central	43.6	56.1	0.3	100	250
	Copperbelt	58.8	40.5	0.7	100	369
	Eastern	22.2	76.9	0.8	100	342
	Luapula	29.3	70.3	0.3	100	191
	Lusaka	51.2	48.2	0.6	100	366
	Northern	26.2	73.5	0.2	100	318
	North Western	27.7	71.5	0.8	100	138
	Southern	28.0	71.1	0.9	100	311
	Western	8.9	90.5	0.6	100	205
All Zambia	All Zambia	35.0	64.4	0.6	100	2,491

2006		Treatment of Drinking Water			Total Number of Households ('000s)
		Yes	No	Total	
Rural/Urban	Rural	20.5	79.5	100	1,484
	Urban	53.9	46.1	100	800
Stratum	Small Scale	19.7	80.3	100	1,351
	Medium scale	31.8	68.2	100	36
	Large Scale	36.2	63.8	100	1
	Non-Agric	28.2	71.8	100	96
	Low Cost	50.8	49.2	100	649
	Medium Cost	65.6	34.4	100	86
	High Cost	68.0	32.0	100	65
Province	Central	36.0	64.0	100	226
	Copperbelt	56.6	43.4	100	338
	Eastern	23.0	77.0	100	320
	Luapula	28.5	71.5	100	178
	Lusaka	52.7	47.3	100	333
	Northern	23.0	77.0	100	296
	Northwestern	18.6	81.4	100	131
	Southern	20.9	79.1	100	284
	Western	5.7	94.3	100	176
Zambia	Zambia	32.2	67.8	100	2,283

**Figure 14.5: Percentage Distribution of Households that Treated / Boiled their Drinking Water by Province, 2010 and 2006**



#### 14.3.4. Connection to Electricity

The 2010 LCMS asked the question: “Is your house connected to electricity?” This is a new introduction to the LCMS series and so there is no previous response data to compare with. Table 14.7 and figures 14.6 and 14.7 below outline the situation in 2010.

Almost 22 percent of Zambian households are connected to electricity. There is a clear rural/urban divide with more than half of urban households being connected but connectivity drops to around 5 percent in rural areas.

Electricity connection varies by stratum. By rural stratum this ranges from 3 percent of ‘small scale’ to almost one third of ‘large scale’ agricultural households being connected. For the urban strata connectivity ranges from 43 percent of ‘low cost’ to 83 percent of ‘high cost’ households.

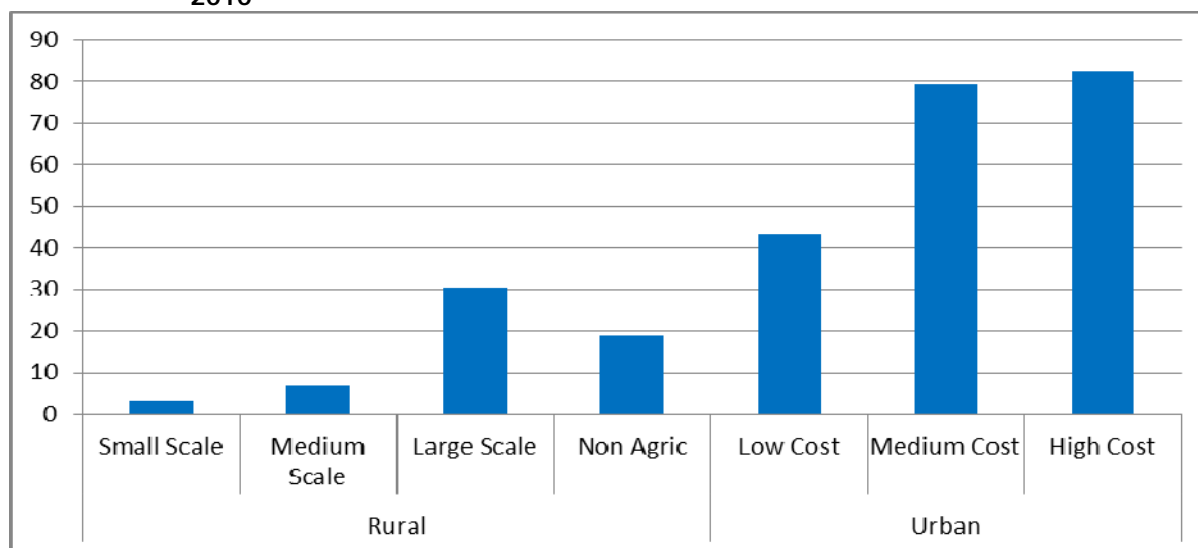
By province the greatest proportion of households with an electricity connection are in Lusaka (61 percent) followed by Copperbelt (45 percent). Western, Luapula and Eastern have the lowest rates of connectivity, ranging between 4 and 5 percent.

It is important to keep these variations of electricity connection in mind when reading the following two sections on main source of lighting and cooking energy.

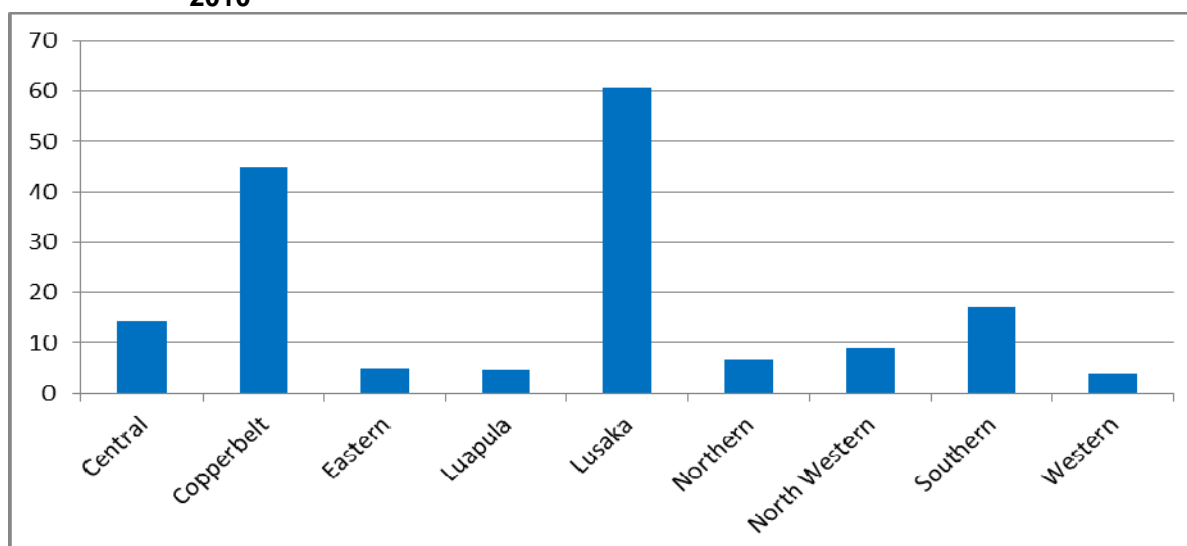
**Table 14.7: Percentage Distribution of Households by Electricity Connection by Rural/Urban, Stratum and Province, 2010**

2010		House Connected to Electricity				Total Number of Households ('000s)
		Yes	No	Missing Data	Total	
Rural/Urban	Rural	4.5	94.2	1.3	100	1,600
	Urban	53.0	45.6	1.4	100	891
Stratum	Small Scale	3.1	95.6	1.3	100	1,426
	Medium Scale	6.8	92.3	0.9	100	41
	Large Scale	30.3	67.3	2.4	100	1
	Non Agric	18.8	79.9	1.3	100	133
	Low Cost	43.3	55.6	1.1	100	659
	Medium Cost	79.2	19.0	1.8	100	149
	High Cost	82.6	14.4	3.0	100	83
Province	Central	14.3	85.0	0.7	100	250
	Copperbelt	44.8	53.6	1.6	100	369
	Eastern	5.0	92.5	2.5	100	342
	Luapula	4.6	94.0	1.4	100	191
	Lusaka	60.7	37.8	1.5	100	366
	Northern	6.7	93.0	0.3	100	318
	North Western	8.9	89.6	1.5	100	138
	Southern	17.1	82.5	0.4	100	311
	Western	4.0	93.9	2.1	100	205
Zambia	Zambia	21.9	76.8	1.3	100	2,491

**Figure 14.6: Percentage Distribution of Households Connected to Electricity by Stratum, 2010**



**Figure 14.7: Percentage Distribution of Households Connected to Electricity by Province, 2010**



#### 14.3.5. Sources of Lighting Energy

Data relating to the main type of energy used for lighting by households was collected in the 2010 LCMS. Results are shown in table 14.8 and figure 14.8. The results indicate that whilst kerosene/paraffin remains the main source of lighting energy for the majority of Zambians its prevalence is reducing; from 41 percent of all households in 2006 to 27 percent in 2010. In fact the use of this type of lighting energy has reduced across all strata and provinces. In general, the use of candles and torches for lighting has grown to offset this (and electricity and solar panels to a lesser extent). Diesel and open fires have reduced usage over the past four years.

In rural areas, kerosene/paraffin was the most commonly used source of lighting with 37 percent of households using it as their main source of lighting (down from 56 percent in 2006). Candles were the second most common source at 22 percent (14 percent in 2006). In urban areas electricity was the most commonly used source of lighting energy, rising to 53 percent of households from 49 percent in 2006. Use of candles has remained relatively stable at 34 percent while use of kerosene/paraffin has fallen to 9 percent.

'Medium scale' and 'large scale' farming stratum have reduced their use of diesel as a commonly used lighting source – instead torches, solar panels, electricity and candles have been increasingly used as a lighting source.

Luapula continues to be the province with the greatest proportion of households using kerosene/paraffin as their main lighting source at 69 percent. This has reduced from 79 percent in 2006. As expected from the capital city, Lusaka has the greatest proportion of households using electricity as the main lighting energy at 60 percent, rising from 51 percent in 2006.

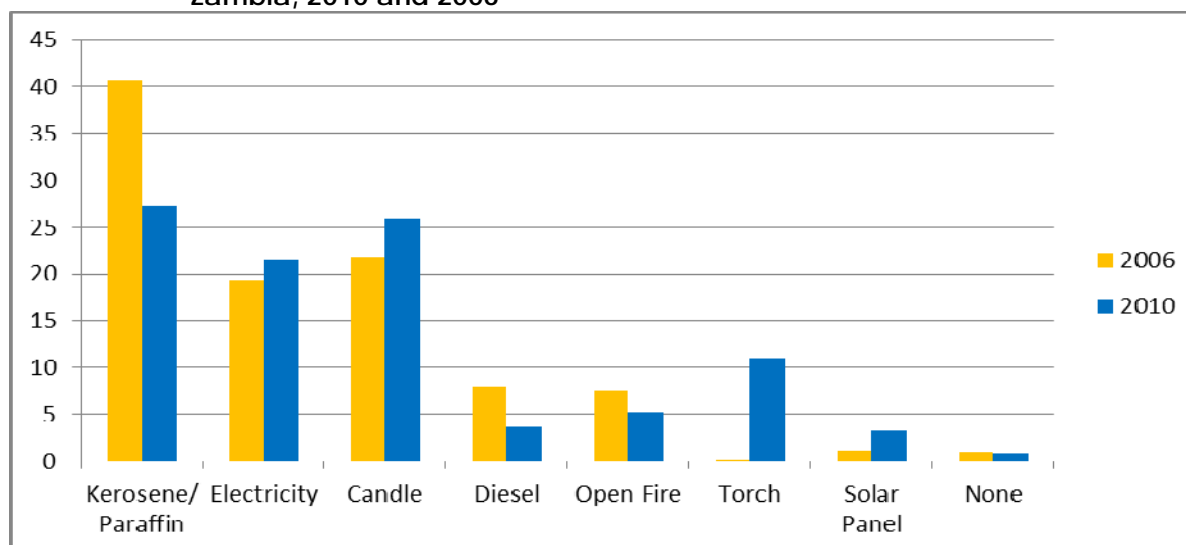
Sources of lighting differ by poverty status. Among non-poor households, 44 percent use electricity, but this is only the case for 6 percent and 1 percent of moderately poor and extremely poor households, respectively.

**Table 14.8: Percentage Distribution of Households by Main Type of Lighting Energy by Rural/Urban, Stratum, Poverty Status and Province, 2010 and 2006**

2010		Type of Lighting Energy											
		Kerosene/ Paraffin	Electricity	Candle	Diesel	Open Fire	Torch	Solar Panel	Other	None	Missing Data	Total	Total Number of Households ('000s)
Rural/Urban	Rural	37.1	4.3	21.5	5.3	8.0	16.3	4.5	1.8	1.1	0.1	100	1,600
	Urban	9.4	52.7	34.2	0.3	0.2	1.5	1.0	0.3	0.2	0.1	100	891
Stratum	Small Scale	38.8	2.8	20.3	5.5	8.2	17.1	4.5	1.8	1.1	0.0	100	1,426
	Medium Scale	35.9	4.5	22.4	5.2	3.5	14.0	11.1	2.3	1.2	0.0	100	41
	Large Scale	6.5	32.8	12.3	2.0	3.8	12.0	24.8	3.6	2.2	0.0	100	1
	Non Agric	20.3	19.7	34.1	4.2	6.2	8.5	3.0	2.3	1.5	0.3	100	133
	Low Cost	11.5	42.9	41.3	0.5	0.3	1.8	1.0	0.4	0.2	0.1	100	659
	Medium Cost	3.4	79.1	15.3	0.1	0.0	0.6	1.3	0.0	0.0	0.1	100	149
	High Cost	3.6	83.4	11.6	0.0	0.0	0.3	0.5	0.1	0.5	0.1	100	83
Province	Central	31.4	14.8	38.1	5.9	0.9	6.3	2.1	0.3	0.1	0.1	100	250
	Copperbelt	15.1	44.0	32.6	4.0	0.3	2.1	1.0	0.4	0.3	0.1	100	369
	Eastern	37.7	4.3	17.3	1.1	5.0	26.3	4.7	2.8	0.9	0.0	100	342
	Luapula	68.5	5.1	6.6	0.1	6.0	11.0	1.6	1.0	0.0	0.2	100	191
	Lusaka	5.1	60.4	30.6	0.7	0.4	1.3	1.1	0.1	0.2	0.2	100	366
	Northern	45.8	5.9	10.1	3.2	7.4	17.7	4.7	4.4	0.8	0.0	100	318
	North Western	9.0	9.2	34.6	9.2	9.6	22.0	3.4	1.3	1.6	0.1	100	138
	Southern	21.1	16.7	35.2	8.3	3.1	8.6	4.8	0.6	1.6	0.0	100	311
	Western	20.2	4.7	28.9	2.0	23.9	10.2	7.2	0.3	2.7	0.0	100	205
Poverty status	Extremely Poor	41.8	1.0	22.1	5.2	9.8	14.8	2.2	1.8	1.4	0.0	100	905
	Moderately Poor	31.7	5.7	33.3	4.3	4.8	14.9	3.1	1.5	0.5	0.1	100	452
	Non Poor	13.8	44.4	26.3	1.9	1.6	6.4	4.2	0.8	0.4	0.1	100	1,134
All Zambia	All Zambia	27.2	21.6	26.0	3.6	5.2	11.0	3.3	1.3	0.8	0.1	100	2,491

2006		Type of Lighting Energy										
		Kerosene/ Paraffin	Electricity	Candle	Diesel	Open Fire	Torch	Solar Panel	Other	None	Total	Total Number of Households (‘000s)
Rural/Urban	Rural	55.6	3.2	14.2	11.7	11.3	0.2	1.5	0.9	1.3	100	1,484
	Urban	13.2	49.2	36	0.9	0.4	0	0.2	0.1	0	100	800
Stratum	Small Scale	56.9	2.5	13.4	11.8	11.5	0.2	1.4	0.9	1.3	100	1,351
	Medium Scale	52.6	4.5	14.9	15.5	4.7	0.1	5.6	0.7	1.3	100	36
	Large Scale	34.1	12.9	31.2	21.8	0	0	0	0	0	100	1
	Non Agric	37.9	12.7	25.2	8.7	11.6	0	0.9	1.3	1.7	100	96
	Low Cost	15.3	41.3	41.4	1	0.5	0	0.2	0.1	0	100	649
	Medium Cost	5.1	77	17.3	0.4	0	0	0.1	0.1	0	100	86
	High Cost	2.7	90.5	5.9	0.2	0.2	0	0.2	0.2	0	100	65
Province	Central	51.4	11.9	18.2	11.1	4.6	0	1.4	1	0.4	100	226
	Copperbelt	23.7	43.9	26.6	4.4	0.7	0	0.3	0.4	0.1	100	338
	Eastern	59.5	4.7	14.1	9.5	8.6	0.1	2.1	0.7	0.7	100	320
	Luapula	79.5	4.6	6	1.1	7.6	0.3	0.3	0.4	0.3	100	178
	Lusaka	5.4	51.6	41.6	0.8	0.1	0	0.4	0	0	100	333
	Northern	67.9	6.5	8	6.9	7.7	0.1	1.3	1.3	0.4	100	296
	North Western	38.3	4.9	23.9	17.3	13.4	0.4	0.5	0.8	0.6	100	131
	Southern	27.5	13.5	27.8	19.2	7.8	0.2	2.1	0.4	1.6	100	284
	Western	30.5	3.5	22.3	4.6	30.9	0.6	0.8	1.5	5.2	100	176
All Zambia	All Zambia	40.8	19.3	21.8	7.9	7.5	0.2	1.1	0.6	0.9	100	2,283

**Figure 14.8: Percentage Distribution of Households by Main Type of Lighting Energy in Zambia, 2010 and 2006**



#### 14.3.6. Sources of Cooking Energy

This section provides results pertaining to households' main type of cooking energy. The percentage distribution of households is shown in table 14.9 and figures 14.9 and 14.10. At national level, the majority of households, 54 percent, use firewood as the main source of cooking energy. The majority of this firewood is collected rather than purchased. Charcoal is the second most common source, at 29 percent, again the majority, is purchased rather than collected. Electricity is used by 17 percent of households. There is a distinct rural/urban split. In rural areas most households, 81 percent used firewood for cooking, followed by charcoal with 16 percent; and electricity is used by only 3 percent. In contrast, urban households use charcoal for cooking (51 percent); followed by electricity (43 percent) while only a small proportion use firewood (6 percent). Although not substantial changes, there has been a reduction in the use of firewood in rural households since 2006.

Use of firewood as the main source of cooking energy varies by stratum from around 85 percent in 'small scale' and 'medium scale' farmer households to around 2 percent of 'medium cost' and 'high cost' urban households. The greatest reductions in the use of firewood for cooking are among the 'large scale' farmers and 'non-agricultural' rural households. Both increasingly make more use of electricity, with charcoal also rising in 'non agricultural' households.

It is clear from figure 14.10 that Lusaka and the Copperbelt use different sources of cooking energy from the rest of the provinces. A third of the households in Copperbelt and half in Lusaka use electricity as the main source of energy for cooking compared to an average for Zambia of 17 percent. Also, their use of firewood is much less widespread than average. Conversely, Eastern and Western provinces have the largest proportion of firewood use with low levels of charcoal and electricity use.

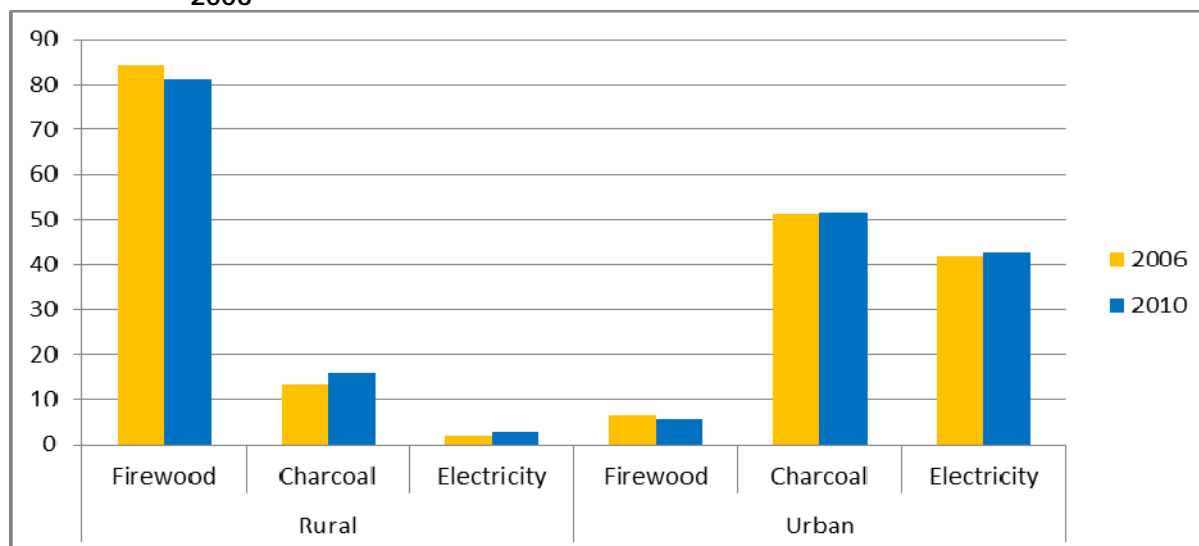
Among households categorized as moderately poor and extremely poor, 64 and 81 percent use collected firewood as main source of cooking energy, respectively. In contrast, among non-poor households, 36 percent use electricity, 35 percent use purchased charcoal and 25 percent use collected firewood.

Table 14.9: Percentage Distribution of Households by Main Type of Cooking Energy by Rural/Urban, Stratum, Poverty Status and Province, 2010 and 2006

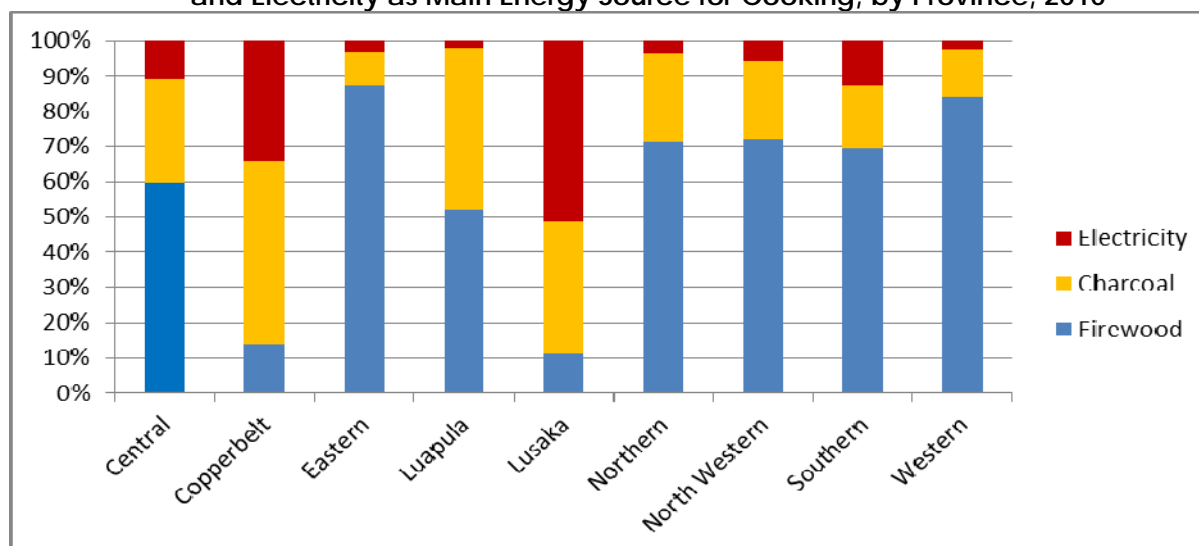
2010		Type of energy for cooking								
		Collected Firewood	Purchased Firewood	Charcoal Own Produced	Charcoal Purchased	Electricity	Other	Missing Data	Total	Total Number of Households ('000s)
Rural/Urban	Rural	79.3	2.0	4.6	11.3	2.6	0.1	0.1	100	1,600
	Urban	3.9	1.8	2.1	49.3	42.5	0.3	0.1	100	891
Stratum	Small Scale	81.9	2.1	4.7	9.6	1.5	0.1	0.0	100	1,426
	Medium Scale	85.1	1.3	2.4	7.5	3.5	0.3	0.0	100	41
	Large Scale	44.5	3.3	5.2	18.3	24.4	4.3	0.0	100	1
	Non Agric	50.1	2.1	3.9	30.1	13.3	0.3	0.3	100	133
	Low Cost	4.8	2.1	2.7	57.5	32.6	0.3	0.1	100	659
	Medium Cost	1.0	0.8	0.6	30.1	66.8	0.5	0.2	100	149
	High Cost	1.7	1.2	0.3	18.9	77.7	0.2	0.1	100	83
Province	Central	57.1	2.4	1.4	27.9	11.0	0.1	0.1	100	250
	Copperbelt	12.2	1.5	4.9	46.8	34.1	0.5	0.1	100	369
	Eastern	84.2	3.2	1.3	7.9	3.3	0.0	0.0	100	342
	Luapula	48.9	3.2	21.6	24.3	1.9	0.0	0.2	100	191
	Lusaka	10.0	1.2	1.3	35.9	51.1	0.3	0.3	100	366
	Northern	70.3	1.0	3.4	21.4	3.8	0.0	0.1	100	318
	North Western	70.6	1.3	2.1	20.3	5.7	0.1	0.1	100	138
	Southern	67.4	1.9	0.8	17.0	12.7	0.2	0.0	100	311
	Western	81.5	2.4	2.3	11.4	2.3	0.1	0.0	100	205
Poverty status	Extremely Poor	81.4	1.6	4.6	12.1	0.2	0.1	0.0	100	905
	Moderately Poor	63.8	3.1	4.9	25.5	2.4	0.2	0.1	100	452
	Non Poor	24.6	1.7	2.6	34.8	35.9	0.3	0.1	100	1,134
All Zambia	All Zambia	52.4	1.9	3.7	24.9	16.8	0.2	0.1	100	2,491

2006		Type of energy for cooking								
		Collected Firewood	Purchased Firewood	Charcoal Own Produced	Charcoal Purchased	Electricity	Other	Total	Total Number of Households ('000s)	
Rural/Urban	Rural	82.5	1.7	4.5	9	2	0.3	100	1,484	
	Urban	5.4	1	2.1	49	41.8	0.6	100	800	
Stratum	Small Scale	84	1.5	4.6	8	1.5	0.3	100	1,351	
	Medium Scale	86.6	2	1.3	6.6	3.4	0	100	36	
	Large Scale	59.3	0	6.5	19	12.9	2.3	100	1	
	Non Agric	58.9	3.3	4.7	23.7	9.1	0.2	100	96	
	Low Cost	6.2	1.2	2.4	56.2	33.3	0.6	100	649	
	Medium Cost	2.8	0.5	0.5	24.2	71	1.1	100	86	
	High Cost	1	0.3	0.4	9.7	88.1	0.6	100	65	
Province	Central	67.8	1.1	2.2	19.1	9.5	0.3	100	226	
	Copperbelt	15.9	0.7	5.4	39.7	37.5	0.8	100	338	
	Eastern	84.1	2.4	2.1	8.1	3	0.1	100	320	
	Luapula	45.7	1.3	19.9	30.1	2.6	0.3	100	178	
	Lusaka	10.5	0.4	0.3	42.4	46	0.5	100	333	
	Northern	75.4	0.7	3.9	16.2	3.4	0.3	100	296	
	North Western	76.1	1.5	1.4	18.2	2.4	0.4	100	131	
	Southern	69.7	2.9	1	15.1	11	0.3	100	284	
	Western	87.3	2.6	0.5	6.9	2.2	0.4	100	176	
All Zambia	All Zambia	55.5	1.5	3.7	23	15.9	0.3	100	2,283	

**Figure 14.9: Percentage Distribution of Households by Province using Firewood, Charcoal and Electricity as Main Energy Source for Cooking, by Rural/Urban, 2010 and 2006**



**Figure 14.10: Percentage Distribution of Households by Province using Firewood, Charcoal and Electricity as Main Energy Source for Cooking, by Province, 2010**



### 14.3.7. Toilet Facilities

The LCMS 2010 collected data on households' main toilet facility. Possible answers included different types of flush toilets, pit latrines with slab, pit latrines without slab, aqua privy and no toilet.

WHO and UNICEF monitor the status of sanitation facilities for international comparisons; this disaggregates facilities into improved or unimproved facilities. In addition to the international definition of 'improved' sanitation, there is also a national definition of 'adequate' sanitation facilities. The two definitions are compared in table 14.10 below. Despite minor differences between the two definitions, the classification of the answer choices given in the LCMS 2010 questionnaire yields identical results, irrespective of which definition is applied.

The following answer choices of the LCMS 2010 fall under both the definition of 'improved' as well as of 'adequate' facilities: own flush toilet (whether inside or outside the house), pit



latrines with slabs (whether own, communal or neighbours) and aqua privy (aka a septic tank).<sup>4</sup>

For 2006 data, the definition of improved/adequate cannot be applied since no data was collected on whether pit latrines had a slab or not – as a result, the improved/adequate definition is presented only for 2010.

**Table 14.10: Comparison of definitions for adequate and improved sanitary facilities**

Adequate (national)	Improved (international)
<ul style="list-style-type: none"> <li>• Pour-flush latrines</li> <li>• Pit latrines with sanitation platforms or other concrete platforms</li> <li>• Traditional pit latrines with a smooth floor surface</li> <li>• Ventilated Improved Pit latrines</li> <li>• Septic tank latrines (i.e. aqua privy)</li> <li>• EcoSan latrines</li> </ul>	<ul style="list-style-type: none"> <li>• Flush/pour flush to pit latrine</li> <li>• Flush toilet</li> <li>• Piped sewer system</li> <li>• Pit latrine with slab</li> <li>• Ventilated improved pit latrine</li> <li>• Septic tank (i.e. aqua privy)</li> <li>• Composting toilet</li> </ul>

Table 14.11 shows results pertaining to toilet facilities available to households as asked in the questionnaire. Results show that 73 percent of all households used pit latrines; of this the majority were pit latrines without a slab. 13 percent have their own flush toilet whilst 12 percent have no toilet facilities at all.

Results using the definition of improved/adequate show that one third of Zambian households have use of improved/adequate sanitation facilities. This is greater in urban areas where two thirds of households have access to improved/adequate facilities compared to 14 percent of rural households. Figure 14.12 shows the disaggregation of this by province where Lusaka and Copperbelt have the highest proportion of improved/adequate facilities whilst Western and Eastern have the lowest.

Use of flush toilets is largely an urban phenomenon with 34 percent of urban households using flush toilets (inside or outside house) compared to only 1 percent of rural households. Whilst the majority of both rural and urban households use pit latrines, the proportion of those without slabs is greater in rural areas.

It is interesting to note that whilst the majority of household using 'pit latrines without slabs' have sole use of the facility, for those using facilities 'with a slab' these are just as likely to be a shared facility with neighbours.

Figure 14.11 shows results by province and it is clear that Eastern, Southern and Western have a much larger proportion of households without toilet facilities than other provinces. Disaggregating by stratum; just less than 20 percent of the small and medium scale farming households fall into this category and just over ten percent of large scale and non-agricultural rural households.

Among non-poor households, 56 percent have improved/adequate sanitary facilities, but this is only true for 18 percent of moderately poor and 10 percent of extremely poor households. 20 percent of extremely poor households have no toilet at all.

<sup>4</sup> <http://www.wssinfo.org/definitions-methods/watsan-categories/>, used to monitor the MDGs on use of improved sanitation facilities.

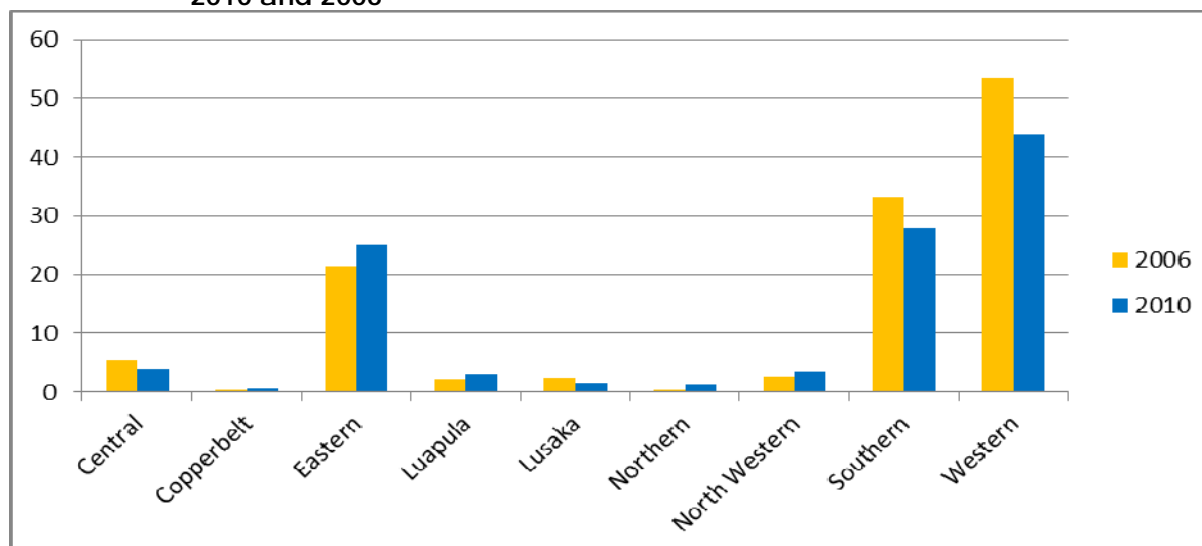
**Table 14.11: Percentage Distribution of Households by Main Type of Toilet Facility, Rural/Urban, Stratum, Province and Poverty Status, 2010 and 2006**

2010		Main type of toilet																
			Improved/adequate sanitation facilities															
		Total improved/ adequate	Own flush toilet inside househol d	Own flush toilet outside househol d	Own pit latrine with slab	Commun al pit latrine with slab	Neighbou r's pit latrine with slab	Aqua privy	Own pit latrine without slab	Commun al pit latrine without slab	Neighbou r's pit latrine without slab	Other	None	Missing data	Total	Total Number of Households (‘000s)		
Rural/Urban	Rural	14.1	0.8	0.6	6.6	1.0	5.0	0.1	55.7	1.1	8.4	2.3	18.3	0.3	100	1,600		
	Urban	66.0	22.2	11.8	12.4	7.7	11.8	0.1	24.0	3.0	5.5	0.7	0.5	0.2	100	891		
Stratum	Small Scale	12.3	0.5	0.4	6.1	0.7	4.5	0.1	56.9	0.9	8.4	2.3	19.0	0.3	100	1,426		
	Medium Scale	23.7	1.8	0.7	11.3	0.6	9.3	0.0	50.4	0.2	5.2	2.0	18.2	0.2	100	41		
	Large Scale	66.2	23.9	0.4	22.3	3.4	16.2	0.0	23.1	0.0	0.0	0.0	10.6	0.0	100	1		
	Non Agric	29.7	3.7	2.8	9.7	4.6	8.8	0.1	44.6	3.7	9.3	1.5	10.9	0.3	100	133		
	Low Cost	58.1	12.0	8.2	14.7	9.5	13.6	0.1	30.1	3.8	6.8	0.3	0.6	0.2	100	659		
	Medium Cost	87.5	44.5	26.4	6.3	3.8	6.4	0.1	7.7	0.4	1.5	2.6	0.1	0.2	100	149		
	High Cost	89.9	62.9	14.0	5.5	0.6	6.9	0.0	5.3	1.8	1.9	0.6	0.0	0.3	100	83		
Province	Central	32.5	5.2	4.3	12.8	3.2	6.8	0.2	54.6	0.7	5.5	2.5	4.0	0.2	100	250		
	Copperbelt	57.4	24.7	15.4	8.7	1.8	6.8	0.0	35.9	0.6	4.7	0.4	0.8	0.2	100	369		
	Eastern	12.4	1.6	0.6	4.9	0.6	4.7	0.0	41.8	1.2	13.5	5.6	25.1	0.4	100	342		
	Luapula	13.7	0.9	0.6	6.8	0.8	4.6	0.0	71.9	1.3	9.4	0.5	2.9	0.4	100	191		
	Lusaka	69.7	18.9	5.4	14.2	15.3	15.9	0.0	17.2	6.1	3.9	1.3	1.5	0.2	100	366		
	Northern	13.8	2.5	1.0	6.6	1.0	2.7	0.0	77.3	1.0	6.3	0.1	1.4	0.3	100	318		
	North Western	17.8	2.3	0.9	6.4	1.3	6.9	0.0	61.3	1.6	14.3	1.0	3.4	0.5	100	138		
	Southern	35.9	4.8	5.9	11.7	1.8	11.4	0.3	27.3	0.5	6.4	1.7	28.0	0.2	100	311		
	Western	7.4	2.3	0.8	1.5	0.2	2.5	0.1	37.5	2.4	7.0	1.5	43.9	0.2	100	205		
Poverty Status	Extremely Poor	10.4	0.2	0.5	4.6	0.7	4.4	0.0	56.6	1.6	9.7	2.3	19.1	0.3	100	905		
	Moderately Poor	18.3	0.8	1.6	7.4	1.9	6.6	0.0	53.4	1.7	9.0	1.8	15.5	0.2	100	452		
	Non Poor	56.0	18.1	9.1	12.4	6.2	10.1	0.1	31.0	2.0	4.9	1.2	4.8	0.2	100	1,134		
All Zambia	All Zambia	32.7	8.5	4.6	8.7	3.4	7.4	0.1	44.3	1.8	7.4	1.7	11.9	0.3	100	2,491		

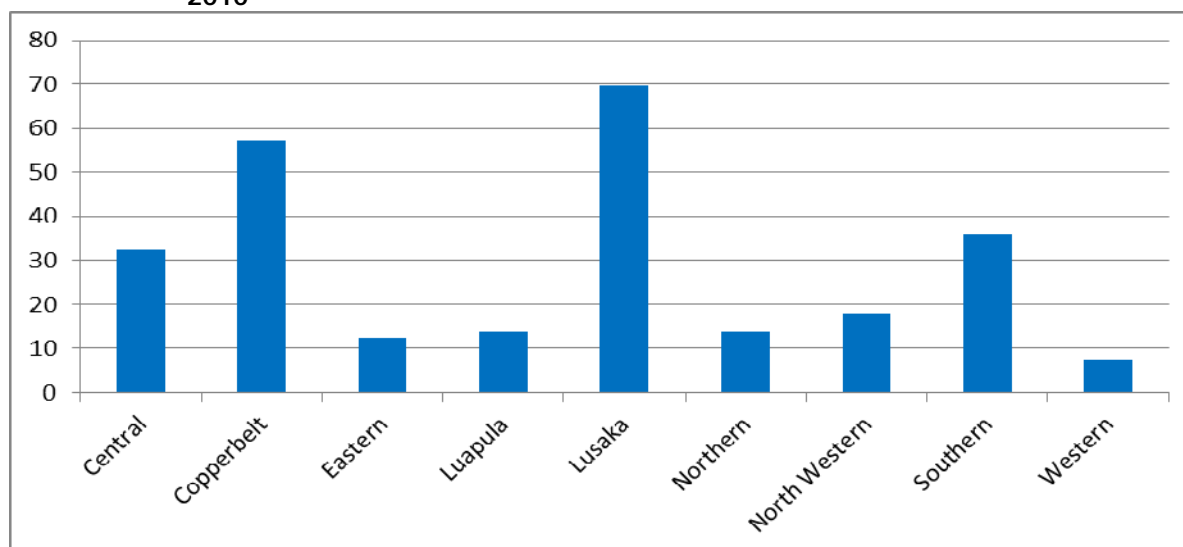
2006 <sup>5</sup>		Main type of toilet facility										
			Own Flush Inside House	Own Flush Outside House	Communal/ Shared Flush Toilet	Own Pit Latrine	Communal Pit Latrine	Neighbours Pit Latrine	Aqua privy	Other	None	Total Number of Households ('000s)
Rural/Urban	Rural		1.3	0.4	0.4	67.4	4.0	5.4	0.1	2.1	18.8	1,484
	Urban		23.4	13.3	1.9	43.2	13.4	3.2	0.5	0.1	1.0	800
Stratum	Small Scale		1.1	0.4	0.4	67.7	3.7	5.2	0.1	2.1	19.3	1,351
	Medium Scale		1.8	0.4	0.5	77.2	2.3	1.4	0.2	1.5	14.7	36
	Large Scale		18.8	0.0	0.0	72.6	0.0	0.0	0.0	0.0	8.6	1
	Non Agric		2.9	1.3	1.5	59.1	9.5	9.2	0.1	2.9	13.5	96
	Low Cost		13.6	13.7	1.9	49.2	16.0	3.8	0.5	0.1	1.1	649
	Medium Cost		62.3	9.5	2.3	20.4	2.6	1.5	0.3	0.1	1.1	86
	High Cost		63.8	14.1	1.7	16.9	2.8	0.3	0.0	0.0	0.1	65
Province	Central		6.7	4.4	0.8	73.5	4.3	3.0	0.0	1.7	5.4	226
	Copperbelt		28.4	19.4	1.3	44.3	3.5	1.6	0.0	0.9	0.4	338
	Eastern		1.5	0.5	0.3	61.5	5.7	6.7	0.0	2.3	21.5	320
	Luapula		2.5	0.7	0.8	80.8	1.6	10.2	0.0	1.3	2.2	178
	Lusaka		16.3	6.0	1.7	43.9	24.6	3.7	1.0	0.3	2.3	333
	Northern		2.8	1.1	0.2	87.0	2.2	5.3	0.4	0.5	0.5	296
	North Western		2.9	0.6	0.7	83.1	3.4	6.2	0.2	0.4	2.5	131
	Southern		5.8	3.0	1.7	40.9	7.5	5.5	0.1	2.2	33.2	284
	Western		1.3	0.7	0.5	34.1	4.9	1.0	0.0	4.0	53.4	176
Zambia	All Zambia		9.0	4.9	1.0	59.0	7.3	4.6	0.2	1.4	12.6	2,283

<sup>5</sup> For 2006 data, the definition of improved/adequate cannot be applied since no information was collected on whether pit latrines had a slab or not.

**Figure 14.11: Percentage Distribution of Households with No Toilet Facilities in Zambia, 2010 and 2006**



**Figure 14.12: Percentage Distribution of Households with Improved Sanitation by Province, 2010**



#### 14.3.8. Sewage Facilities

In the 2010 LCMS a new question was asked to households who have an 'own flush toilet' facility (see section 14.3.7 above). These respondents were asked "If flush/ pour flush: where is the sewerage piped into?" It is important to note that in Zambia only 13 percent of households have a flushing toilet. As a result the sample size is too small to produce a representative table for all strata and provinces. Table 14.12 below and figure 14.13 below outline the situation in 2010. As this was a new introduction in 2010 there is no previous response data to compare with.

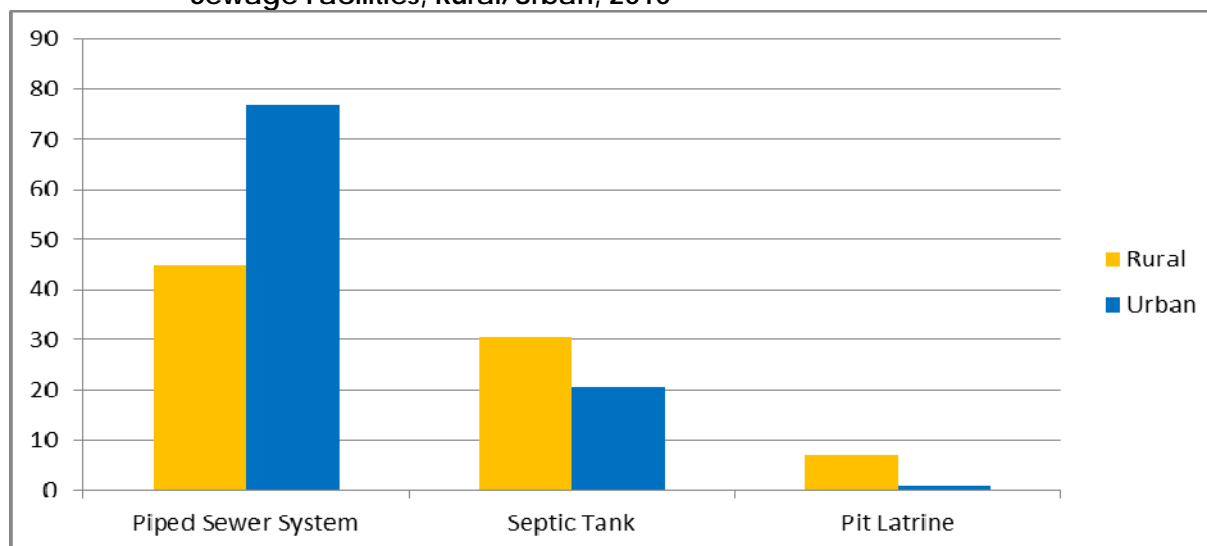
In 2010, 75 percent of Zambian households with flushing toilets were connected to a piped sewerage system. 21 percent disposed of their sewage in a septic tank, and one percent in a pit latrine. These proportions are replicated for urban households – a function of the fact that a greater proportion of urban households have flushing toilets (see section 14.3.7 above). Piped sewer systems account for the greatest type of sewage disposal for

rural households but at a lower rate; 45 percent. Septic tanks and pit latrines account for greater proportions in rural areas at 30 and 7 percent, respectively.

**Table 14.12: Percentage Distribution of Households with Flushing Toilets by Type of Sewage Facilities, Rural/Urban, 2010**

		Sewage Disposal							Total
		44.8	30.4	7.2	1.8	0.0	15.8	100	23
		76.9	20.5	0.8	0.0	0.7	1.2	100	303
		74.6	21.2	1.2	0.1	0.6	2.3	100	325

**Figure 14.13: Percentage Distribution of Households with Flushing Toilets by Type of Sewage Facilities, Rural/Urban, 2010**



#### 14.3.9. Garbage Disposal

Results pertaining to the household's main method of garbage disposal are presented in table 14.13 and figure 14.14. The most common method used for disposing garbage was using a pit with 57 percent of all households using this method. 35 percent use dumping, 6 percent have their refuse collected, and 2 percent burn their garbage. There has not been much change in these patterns since 2006. However, there has been a reduction in refuse collection in urban areas between 2006 and 2010. There is a more marked reduction in medium and high cost urban areas, from 29 percent to 20 percent for medium cost and 40 percent to 29 percent of high cost areas relying on collection. By province the largest drop was in the Copperbelt, from 19 percent to 11 percent of households relying on refuse collection, but Northern, North western and Southern all saw smaller drops from around 4 percent to around 1 to 2 percent of household. Disaggregating by rural/urban it is clear that refuse collection is an urban phenomenon with 15 percent of urban household using this as their method of garbage disposal compared to less than one percent of rural households.

In urban areas higher cost housing was more likely to have a refuse collection. Dumping was less prevalent among medium and large scale farming and non-agricultural households, than was the case in 2006, and was replaced by the use of pits as a disposal method.

Disaggregating by province it is clear that refuse collection is largely a Lusaka based urban phenomenon. 23 percent of households in Lusaka use this method and 11 percent

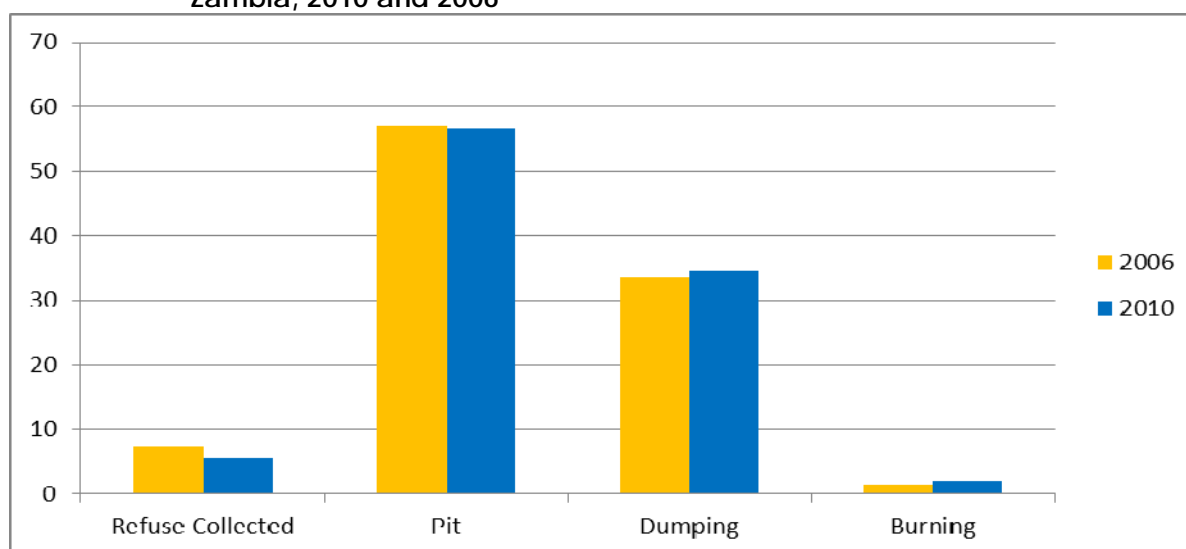
of Copperbelt households, whilst all other provinces this accounts for less than one percent of households disposal methods.

**Table 14.13: Percentage Distribution of Households by Main Type of Garbage Disposal, Rural/Urban, Stratum and Province, 2010, 2006**

2010		Type of Garbage Disposal							Total Number of Households ('000s)
		Refuse Collected	Pit	Dumping	Burning	Other	Missing Data	Total	
Rural/Urban	Rural	0.6	55.0	41.2	1.7	0.5	1.1	100	1,600
	Urban	14.6	59.4	22.3	2.7	0.1	0.9	100	891
Stratum	Small Scale	0.5	54.0	42.2	1.7	0.5	1.1	100	1,426
	Medium Scale	0.6	63.4	32.6	1.3	0.2	1.9	100	41
	Large Scale	2.3	87.7	5.8	4.2	0.0	0.0	100	1
	Non Agric	0.8	62.4	34.3	1.6	0.4	0.5	100	133
	Low Cost	11.6	57.4	26.5	3.4	0.1	1.1	100	659
	Medium Cost	19.9	66.0	12.6	0.7	0.5	0.4	100	149
	High Cost	28.6	63.0	7.1	0.5	0.1	0.8	100	83
Province	Central	0.7	72.1	26.1	0.6	0.3	0.2	100	250
	Copperbelt	11.0	62.4	24.0	1.7	0.1	0.8	100	369
	Eastern	0.7	40.4	55.0	1.2	0.4	2.3	100	342
	Luapula	0.2	68.4	29.5	0.6	0.3	0.9	100	191
	Lusaka	22.6	45.8	25.5	4.4	0.2	1.4	100	366
	Northern	1.4	72.5	23.5	1.1	0.6	0.9	100	318
	North Western	0.5	65.7	31.5	1.0	0.7	0.7	100	138
	Southern	1.7	55.6	39.1	2.6	0.5	0.5	100	311
	Western	0.3	32.4	61.9	4.3	0.4	0.6	100	205
Zambia	Zambia	5.6	56.5	34.5	2.0	0.4	1.0	100	2,491

2006		Type of Garbage Disposal						
		Refuse Collection	Pit	Dumping	Burning	Other	Total	Total Number of Households ('000s)
Rural/Urban	Rural	1.9	55.3	40.5	1.8	0.6	100	1,484
	Urban	17.5	60.8	20.6	0.8	0.4	100	800
Stratum	Small Scale	2.0	54.8	40.9	1.7	0.6	100	1,351
	Medium Scale	1.3	61.0	35.8	1.5	0.3	100	36
	Large Scale	0.0	83.4	11.4	2.3	2.8	100	1
	Non Agric	1.0	59.3	37.4	1.9	0.3	100	96
	Low Cost	13.4	61.3	24.0	0.8	0.5	100	649
	Medium Cost	29.1	62.7	7.4	0.7	0.1	100	86
	High Cost	39.5	53.2	6.5	0.8	0.0	100	65
Province	Central	1.3	72.0	23.9	2.1	0.7	100	226
	Copperbelt	18.7	63.5	17.2	0.6	0.1	100	338
	Eastern	0.6	45.1	52.6	1.0	0.6	100	320
	Luapula	2.4	76.3	20.7	0.5	0.1	100	178
	Lusaka	19.8	44.5	33.7	1.0	1.0	100	333
	Northern	3.6	75.3	19.9	1.1	0.1	100	296
	North Western	3.5	70.0	23.4	2.6	0.4	100	131
	Southern	4.1	46.6	46.4	2.5	0.4	100	284
	Western	1.0	29.7	65.9	2.4	1.0	100	176
Zambia	Zambia	7.3	57.2	33.6	1.4	0.5	100	2,283

**Figure 14.14: Percentage Distribution of Households by Main Type of Garbage Disposal in Zambia, 2010 and 2006**



#### 14.4. Access to Nearest Facilities

This section covers findings related to household access to various socio-economic facilities. The access is discussed in terms of usage and proximity of households to the *nearest* facilities.

##### 14.4.1. Use of Nearest Amenities

Table 14.14 and figure 14.15 give the proportion of households who knew 'where the nearest facility is located'. Those households who knew where the nearest facility is were then asked if they use the facility. This is presented in table 14.15.

In Zambia most households, 87 percent, know where the nearest food market is and of these households 91 percent of them use this nearest facility. The location of the nearest hammer mill is known by 87 percent of households and of these 86 percent use it. The nearest health facilities are also widely known (94 percent) and used by those who know of them (96 percent).

Knowledge of the nearest school at all levels other than 'Upper Basic' is low. Of those who do know where the nearest school is, use is less than 50 percent of households in all by upper basic schooling. The reader should note however that households would need to have a child of the relevant age to use the facility. In interpreting these numbers it is also important to note that different types of basic schools may be substitutes for each other in the lower grades – as a result it is unlikely that a given locality will have all three types of basic schools.

Households located in urban areas have an overall higher knowledge of the nearest facilities, excluding hammermills, which more rural households know of.

Knowledge and use of the nearest internet cafes is very low. Only 15 percent of Zambian households know of the nearest internet cafe and of these 29 percent use them. However, among urban households, knowledge of the nearest internet café is at 32 percent as compared to 5 percent in rural areas. The location of the nearest bank is also known to just over half of all households (75 percent of urban, 42 percent of rural households). 65 percent of non-poor households know of the nearest bank, as compared

to 47 percent of moderately poor households and 43 percent of extremely poor households. Of those non-poor households that know of the nearest bank, 52 percent use it, but this is only true for 21 percent of moderately poor and 15 percent of extremely poor households. The location of the nearest public telephone is known to under a third of households.

Compared to 2006, knowledge of the nearest facility has decreased slightly for most facilities, such as food markets (89 to 87 percent), post offices (64 to 57 percent), input markets (50 to 48 percent), health facilities (95 to 94 percent) police stations (74 to 72 percent), public transport (82 to 79 percent) and public phones (40 to 28 percent).

**Table 14.14: Percentage of Households Knowing Where the Nearest Facility is, by Rural/Urban and Poverty Status, 2010 and 2006**

2010	Knowledge of Nearest Location						Total number of households ('000s)
	Rural/Urban		Poverty Status				
	Rural	Urban	Extremely poor	Moderately Poor	Non Poor	All Zambia	
Food Market	79.8	99.2	79.8	85.0	93.0	86.7	2,491
Post Office / Postal Agency	48.8	72.0	49.4	53.2	64.7	57.0	2,491
Community School	35.3	50.7	37.2	39.7	44.1	40.8	2,491
Lower Basic School (1 - 4)	22.4	37.8	21.2	25.9	34.1	27.9	2,491
Middle Basic School (1 - 7)	47.2	54.7	47.7	48.1	52.3	49.9	2,491
Upper Basic School (1 - 9)	83.0	84.1	83.0	83.9	83.5	83.4	2,491
High School	44.1	74.0	43.6	50.2	65.6	54.8	2,491
Secondary School	42.3	56.3	43.3	46.4	50.8	47.3	2,491
Health Facility	92.5	96.6	92.3	94.4	95.2	94.0	2,491
Hammer Mill	94.2	74.1	93.5	92.8	79.5	87.0	2,491
Input Market	45.9	50.7	43.9	50.8	49.2	47.6	2,491
Police Station/ Post	60.1	93.1	61.0	68.3	82.1	71.9	2,491
Bank	41.9	75.3	42.6	47.3	65.3	53.8	2,491
Public Transport	70.4	95.4	70.5	77.4	87.2	79.3	2,491
Public Phone	11.6	56.8	14.0	20.8	41.6	27.8	2,491
Internet Cafe	4.9	31.9	5.4	7.0	24.9	14.6	2,491

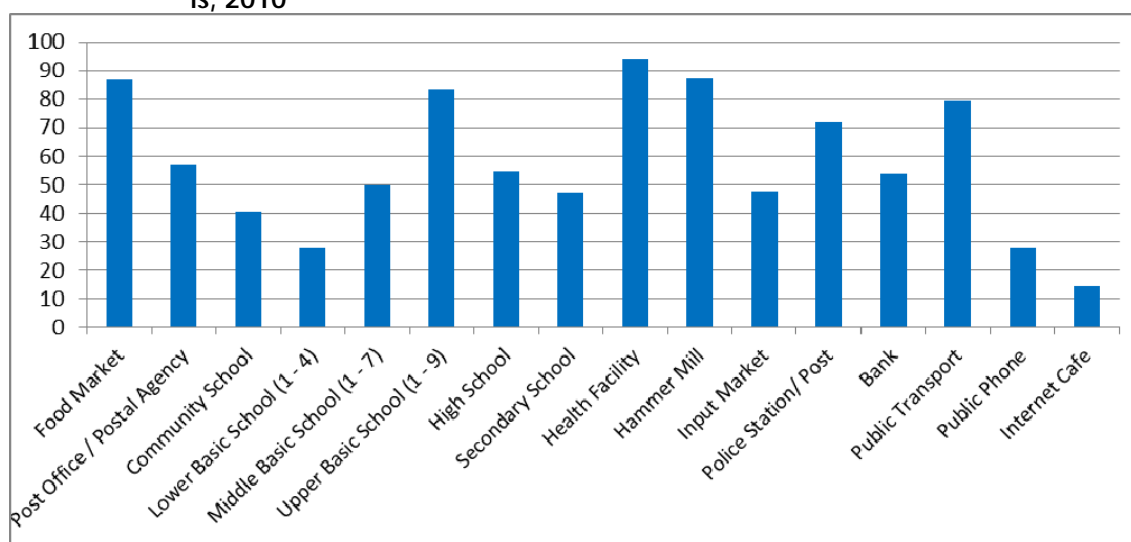
2006	Knowledge of Nearest Location				
	Rural/Urban				
	Rural	Urban		All Zambia	Total number of households ('000s)
Food markets	83.2	98.5		88.6	2,283
Post office/post agency	59.5	72.3		64.0	2,283
Community school	35.2	54.2		41.8	2,283
Lower basic 1 to 4	16.8	33.1		22.5	2,283
Middle basic 1 to 7	59.0	53.4		57.1	2,283
Upper basic	81.9	85.3		83.1	2,283
High school	42.7	61.2		49.1	2,283
Secondary school	54.9	70.8		60.5	2,283
Health facility	94.4	96.2		95.0	2,283
Hammer mill	94.1	73.0		86.7	2,283
Input market	52.5	45.9		50.2	2,283
Police station/post	65.8	90.4		74.4	2,283
Bank	48.7	64.9		54.4	2,283
Public transport	75.2	94.3		81.8	2,283
Public phone	23.4	70.8		39.9	2,283
Internet cafe	3.4	33.1		13.8	2,283



**Table 14.15: Percentage of Households that use the Nearest facility, of those who know where it is, by Rural/Urban and Poverty Status, 2010**

2010	Use of nearest facility for those who know of it							Total number of households that know of this facility ('000s)
	Rural/Urban		Poverty Status				All Zambia	
	Rural	Urban	Extremely poor	Moderately Poor	Non Poor			
Food Market	86.8	97.3	85.8	91.5	94.6		91.1	2,158
Post Office / Postal Agency	34.6	49.1	30.2	34.7	50.0		41.2	1,419
Community School	35.5	24.6	38.3	34.1	24.3		30.7	1,016
Lower Basic School (1 - 4)	56.7	36.9	59.5	53.9	38.8		47.1	694
Middle Basic School (1 - 7)	55.8	39.7	59.7	53.7	40.5		49.5	1,239
Upper Basic School (1 - 9)	61.6	49.1	65.2	61.2	49.1		57.1	2,074
High School	20.4	30.5	19.9	25.5	28.1		25.3	1,363
Secondary School	19.8	28.9	20.1	22.7	26.4		23.7	1,175
Health Facility	97.3	94.9	96.9	98.0	95.5		96.5	2,338
Hammer Mill	96.2	64.1	95.6	93.1	74.7		86.4	2,164
Input Market	66.2	34.8	60.4	61.0	47.0		54.2	1,183
Police Station/ Post	57.5	71.4	58.2	59.8	68.7		63.9	1,789
Bank	23.2	49.2	14.7	21.4	51.7		36.2	1,338
Public Transport	91.6	95.6	89.9	94.2	95.2		93.3	1,973
Public Phone	27.3	45.8	28.6	40.4	44.3		40.9	691
Internet Cafe	15.7	32.6	5.4	11.9	35.0		29.0	363

**Figure 14.15: Percentage Distribution of Households who know where the nearest facility is, 2010**



#### 14.4.2. Proximity to Nearest Facilities

This section examines the distance of the *nearest* facilities from households. Due to the way in which the questionnaire is written it is only those respondents who know the location of the facility that go on to answer the question regarding the distance. Therefore, the results exclude a large number of respondents who don't know the location of their nearest facility.

In 2010 the majority of urban households state that almost all facilities are within one kilometre. That is all facilities but post office, secondary school, input market and bank for which for the majority of urban households are within five kilometres. Table 14.16 gives the results for the distance to the nearest facilities. The 2010 results show a new disaggregation in the distance parameter of 'less than one kilometre'. Figures 14.17 and 14.18 show the 0 to 5 km proportions for comparability with the 2006 results.

Wide disparities persist in the distance to facilities depending on if a household is in a rural or urban area. For example:

- Whilst 85 percent of urban households live within one kilometre of a food market only one quarter of rural households do.
- Less than a third of rural households live within one kilometre of a health facility compared to three quarters of urban households.
- Nearly 60 percent of urban households live within one kilometre of an internet cafe compared to only 3 percent of rural households.

However, for accessing basic schools, a hammer mill facility and public transport the disparity is less, but still large.

Figure 14.16 shows the urban rural disparities in access to facilities, with only access to schools, access to food markets, hammermills and public transport approaching the levels of urban access.

Figure 14.17 shows that over 70 percent of households in Zambia are within five kilometres of selected key socio-economic facilities. These include a food market, health facility, a hammer mill, public transport, public telephone and also an internet cafe<sup>6</sup>. For all these facilities there has been a rise in the proportion of households located within five kilometres since 2006.

Figure 14.18 shows that the majority of households are within five kilometres of a community school, and all types of basic schools. This falls to less than 60 percent for high schools and secondary schools.

Almost all urban households are within five kilometres a basic school, and around 90 percent are within five kilometres of a high school or secondary school. This reduces substantially for rural households. Around 80 percent of rural households are within five kilometres of a basic school, and less than one quarter are within five kilometres of a high school or secondary school.

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<sup>6</sup> Whilst an internet cafe is not an essential facility as such, it is relevant for the Fifth National Development Plan where goals relate to connection to ICT services.

Figure 14.16: Percentage Distribution of Households within 1km of Nearest Facilities, Rural/Urban, 2010

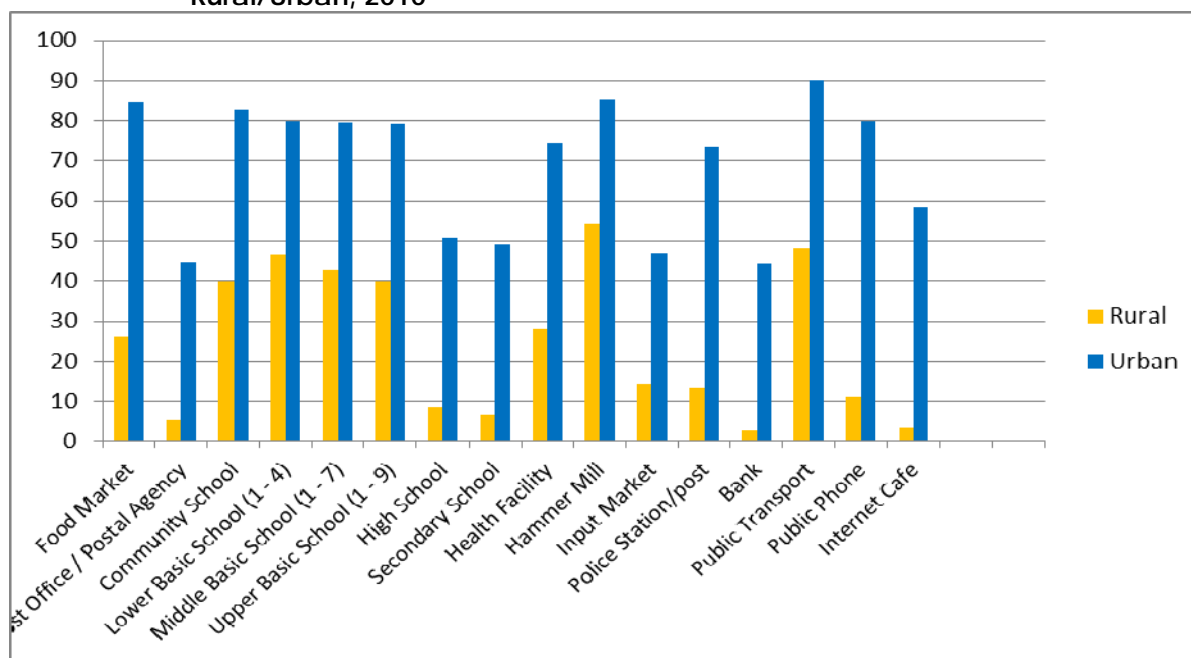


Figure 14.17: Percentage Distribution of Households within 5 Km of Selected Nearest Key Facilities (of households that know location), 2010 and 2006

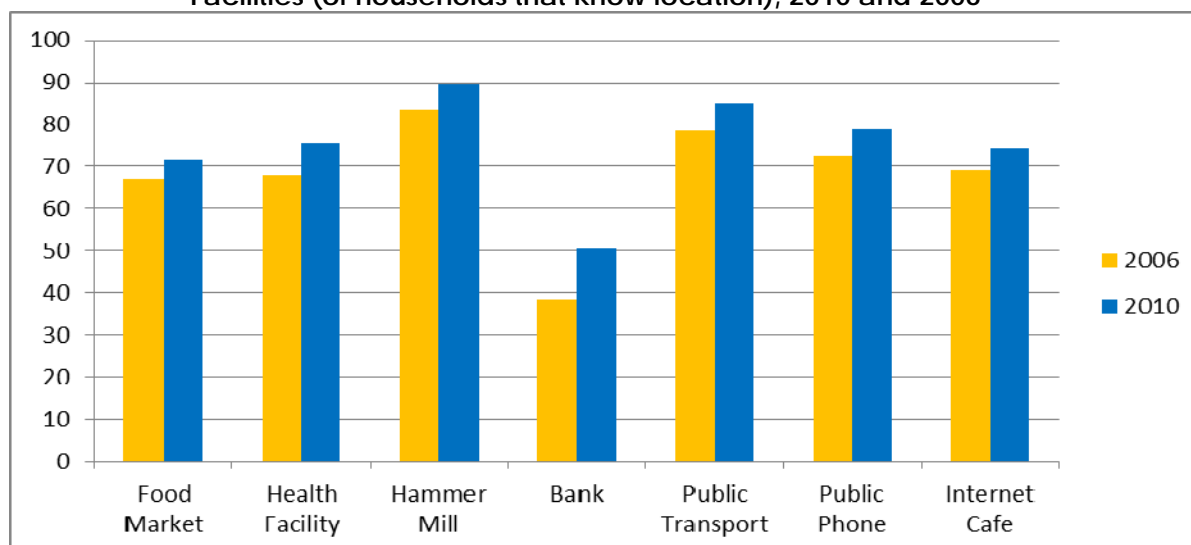
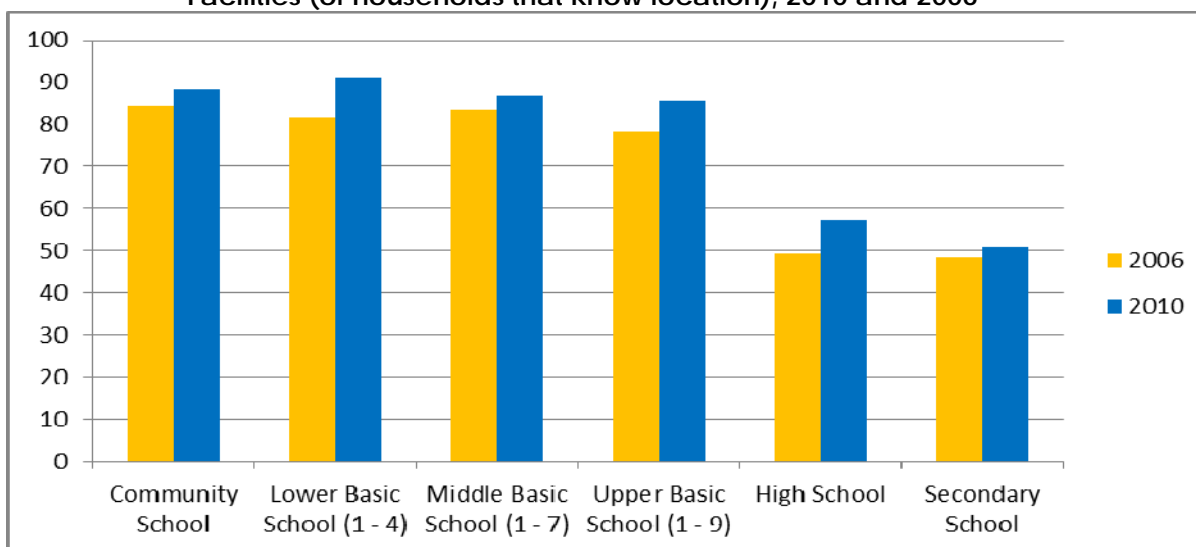


Figure 14.18: Percentage Distribution of Households within 5 Km of Nearest School Facilities (of households that know location), 2010 and 2006



**Table 14.16: Percentage Distribution of Households by Proximity to Facilities, 2010 and 2006**

2010	Residence	Less than 1km	2-5 Km	6-15 Km	16+ Km	Total	Total number of households that know location ('000s)
<b>Food Market</b>	<b>Zambia</b>	50.2	21.6	14.0	14.2	100	2,158
	Rural	26.1	26.9	23.1	23.9	100	1,276
	Urban	84.7	14.0	0.9	0.4	100	883
<b>Post Office / Postal Agency</b>	<b>Zambia</b>	23.1	26.5	17.5	32.9	100	1,419
	Rural	5.5	14.5	21.6	58.3	100	779
	Urban	44.7	41.1	12.5	1.8	100	640
<b>Community School</b>	<b>Zambia</b>	58.7	29.5	9.7	2.0	100	1,016
	Rural	39.9	40.2	16.6	3.2	100	565
	Urban	82.5	16.0	1.0	0.4	100	451
<b>Lower Basic School (1 - 4)</b>	<b>Zambia</b>	62.8	28.3	6.9	2.0	100	694
	Rural	46.5	37.4	12.9	3.2	100	358
	Urban	79.9	18.8	0.5	0.8	100	336
<b>Middle Basic School (1 - 7)</b>	<b>Zambia</b>	57.0	30.0	10.8	2.2	100	1,239
	Rural	42.7	36.9	17.3	3.1	100	753
	Urban	79.6	19.1	0.7	0.7	100	486
<b>Upper Basic School (1 - 9)</b>	<b>Zambia</b>	53.8	32.0	11.2	3.0	100	2,074
	Rural	39.8	38.6	17.1	4.5	100	1,326
	Urban	78.9	20.2	0.6	0.3	100	748
<b>High School</b>	<b>Zambia</b>	29.1	28.2	15.8	26.8	100	1,363
	Rural	8.3	16.4	24.3	51.0	100	705
	Urban	50.7	40.5	7.1	1.8	100	658
<b>Secondary School</b>	<b>Zambia</b>	24.8	26.0	19.3	29.9	100	1,175
	Rural	6.5	15.7	27.4	50.4	100	675
	Urban	49.0	39.6	8.7	2.7	100	499
<b>Health Facility</b>	<b>Zambia</b>	44.9	30.5	18.2	6.5	100	2,338
	Rural	27.9	34.7	27.9	9.5	100	1,479
	Urban	74.3	23.1	1.3	1.3	100	859
<b>Hammer Mill</b>	<b>Zambia</b>	63.8	25.7	8.4	2.2	100	2,164
	Rural	54.4	30.9	11.7	3.0	100	1,505
	Urban	85.4	13.7	0.6	0.3	100	659
<b>Input Market</b>	<b>Zambia</b>	27.2	23.2	20.2	29.3	100	1,183
	Rural	14.5	16.3	21.4	47.8	100	732
	Urban	46.8	33.7	18.5	1.0	100	451
<b>Police Station/post</b>	<b>Zambia</b>	41.5	21.0	14.2	23.3	100	1,789
	Rural	13.3	18.7	24.7	43.3	100	961
	Urban	73.3	23.6	2.4	0.7	100	828
<b>Bank</b>	<b>Zambia</b>	23.8	26.8	12.3	37.0	100	1,338
	Rural	2.8	10.6	14.6	72.0	100	669
	Urban	44.4	42.6	10.1	2.9	100	669
<b>Public Transport</b>	<b>Zambia</b>	66.2	18.8	8.6	6.4	100	1,973
	Rural	48.1	26.2	14.6	11.0	100	1,125
	Urban	90.1	8.9	0.6	0.3	100	848
<b>Public Phone</b>	<b>Zambia</b>	62.1	16.7	6.5	14.8	100	691
	Rural	11.0	16.3	19.4	53.3	100	186
	Urban	80.0	16.8	1.9	1.3	100	506
<b>Internet Cafe</b>	<b>Zambia</b>	47.0	27.4	10.2	15.5	100	363
	Rural	3.3	11.5	19.8	65.5	100	79
	Urban	58.2	31.5	7.7	2.6	100	284

2006	Residence	0-5 Km	6-15 Km	16+ Km	Total	Total Number of Households that know location ('000s)
Food markets	Zambia	67.2	15.4	17.4	100	2,024
	Rural	48.7	24.8	26.5	100	1,237
	Urban	96.3	0.6	3.1	100	787
Post office/post agency	Zambia	44.7	19.1	36.2	100	1,463
	Rural	20.3	24.9	54.8	100	884
	Urban	81.9	10.3	7.8	100	579
Community school	Zambia	84.2	9.1	6.7	100	954
	Rural	76.5	15.2	8.4	100	519
	Urban	93.5	1.9	4.7	100	435
Lower basic 1 to 4	Zambia	81.7	8.8	9.5	100	513
	Rural	71.5	16.2	12.3	100	250
	Urban	91.4	1.8	6.8	100	263
Middle basic 1 to 7	Zambia	83.5	11.4	5.1	100	1,301
	Rural	79.6	15.4	5.0	100	877
	Urban	91.4	3.3	5.3	100	424
Upper basic	Zambia	78.2	14.2	7.6	100	1,898
	Rural	69.5	21.3	9.2	100	1,215
	Urban	93.7	1.7	4.6	100	682
High school	Zambia	49.4	14.0	36.6	100	1,122
	Rural	21.4	19.4	59.2	100	631
	Urban	85.3	7.0	7.6	100	491
Secondary school	Zambia	48.6	18.0	33.4	100	1,383
	Rural	22.8	26.1	51.1	100	815
	Urban	85.8	6.4	7.8	100	567
Health facility	Zambia	68.1	20.9	11.0	100	2,171
	Rural	54.7	30.9	14.4	100	1,403
	Urban	92.6	2.6	4.8	100	768
Hammer mill	Zambia	83.5	10.8	5.7	100	1,982
	Rural	77.8	15.2	7.0	100	1,398
	Urban	97.0	0.4	2.6	100	585
Input market	Zambia	47.0	18.6	34.4	100	1,149
	Rural	30.4	22.1	47.6	100	779
	Urban	82.0	11.3	6.7	100	370
Police station/post	Zambia	55.8	17.0	27.2	100	1,701
	Rural	27.2	28.6	44.2	100	978
	Urban	94.5	1.3	4.1	100	723
Bank	Zambia	38.6	16.3	45.1	100	1,244
	Rural	13.2	16.6	70.2	100	724
	Urban	74.0	15.9	10.1	100	520
Public transport	Zambia	78.6	12.4	9.0	100	1,870
	Rural	65.8	20.5	13.7	100	1,117
	Urban	97.6	0.3	2.1	100	753
Public phone	Zambia	72.5	9.4	18.2	100	914
	Rural	33.0	23.5	43.6	100	347
	Urban	96.7	0.7	2.6	100	567
Internet cafe	Zambia	69.2	12.5	18.3	100	316
	Rural	16.5	13.5	70.0	100	51
	Urban	79.4	12.3	8.3	100	265

# CHILD HEALTH

### 15.1. Introduction

This chapter presents an analysis on the nutrition and health status of children under the age of five in Zambia. The nutrition and health status of a child can be a direct indicator of the well-being 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. There are two reasons that are given to support this importance:

- There is likely to be significant economy wide benefits from improved nutrition and health status. In particular, there is likely to be important benefits in terms of improved mental and physical productivity, and in reduced health care requirements, and
- Societies in general have a particular aversion to malnutrition and to its correlate, hunger.

Against this background it is important to note that description and analysis of the levels and determinants of malnutrition, and in particular child malnutrition not only provides information on the overall welfare of the economy, but furthermore can assist in advocacy, policy-making, planning, targeting and growth-monitoring activities by various stakeholders interested in the welfare of children in Zambia.

Under this section, the 2010 LCMS questionnaire collected information on:

- Child Feeding Practices: Breast feeding and feeding on solids
- Immunization: BCG, DPT, Polio and Measles
- Anthropometric Data: Child's age, Height and Weight

The anthropometry information was collected for all children aged 0-59 months (i.e. under 5 years) that were in the survey households whether they were children of the head of household or not.

The child health data in this 2010 LCMS round is missing in a greater proportion of cases than is ideal.<sup>1</sup> This shortfall has been taken into account in the following analysis and the results and conclusions presented are deliberately conservative to minimise the risk of misleading the reader.

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<sup>1</sup> Cases with missing information in this section (weighted): Table 15.1: 2.6%; Table 15.2: 8.0%; Table 15.3: 9.1%; Tables 15.4 and 15.5: 5.7%; Tables 15.6 and 15.7: 12.8% of cases missing anthropometric measures, plus an additional 20.2% of cases missing because z-score outliers.

## 15.2 Child feeding practices

The pattern of infant feeding has important influences 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 and supplements

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. It is also an integral part of the reproductive process with important implications for the health of mothers. WHO and UNICEF recommend that exclusive breastfeeding for 6 months is the optimal way of feeding infants. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.

Table 15.1 shows the proportion of children less than five years of age who were being breastfed at the time of the survey, by sex and age group. The table shows that more than 95 percent of children are breastfed directly after birth. Breastfeeding rates remain high up to a child age of approximately 12 months, then gradually decline until children have reached the age of 27 months. Only a small percentage of children are breastfed after the age of 27 months.

Breastfeeding rates after birth are equal in rural and urban areas. However, after the age of 12 months, breastfeeding rates decline significantly faster in urban than in rural areas. For children aged 13-15 months, there is already a notable difference between rural and urban rates, and this discrepancy increases as children grow older. It is only at the age of 25-27 months that urban and rural rates align. The earlier decline in urban breastfeeding rates can also be seen in figure 15.1.

Breastfeeding rates have increased in comparison to 2006, especially for the youngest age groups. Breastfeeding for 0-3 month olds has increased from 87 to 96 percent in urban areas and from 93 to 96 percent in rural areas. Likewise, for 4-6 month olds, breastfeeding rates increased from 85 to 94 percent in urban areas and from 93 to 96 percent in rural areas.



**Table 15.1** Proportion of children (under five-years) who were currently being breastfed, by sex of child, age group and rural/urban for 2010 and 2006

2010		Breastfeeding			Total number of children under five years ('000s)
		All Children	Rural	Urban	
Sex	Male	39.1	40.3	36.5	848
	Female	42.2	44.2	37.4	870
Age in months	0-3	95.7	95.6	95.8	145
	4-6	95.5	95.9	94.1	114
	7-9	95.8	96.2	94.7	107
	10-12	92.0	92.8	90.3	124
	13-15	86.1	89.3	78.5	100
	16-18	65.4	69.2	56.5	99
	19-21	41.9	47.9	28.0	66
	22-24	20.4	24.4	10.2	124
	25-27	10.0	10.1	9.9	87
	28-30	4.5	4.7	3.9	87
	31-33	3.5	4.0	2.0	69
	34-36	4.7	5.1	3.8	145
	37 and above	2.2	2.5	1.7	452
All Zambia	All Zambia	40.7	42.3	37.0	1,719

2006		Breastfeeding			Total number of children under five years ('000s)
		All Children	Rural	Urban	
Sex	Male	38.8	40.6	34.9	739
	Female	39.5	41.2	34.1	776
Age in months	0-3	91	93	87	131
	4-6	91	93	85	94
	7-9	92	94	89	76
	10-12	90	90	87	94
	13-15	79	83	67	83
	16-18	68	74	50	85
	19-21	49	57	28	77
	22-24	21	23	15	109
	25-27	12	13	8	80
	28-30	9	11	7	63
	31-33	3	3	3	65
	34-36	5	5	5	114
	37 and above	3	3	3	445
All Zambia	All Zambia	39.2	41	34.5	1,515

**Figure 15.1** Proportion of Children Currently being Breastfed by Age Group and Urban/Rural Areas, Zambia, 2010

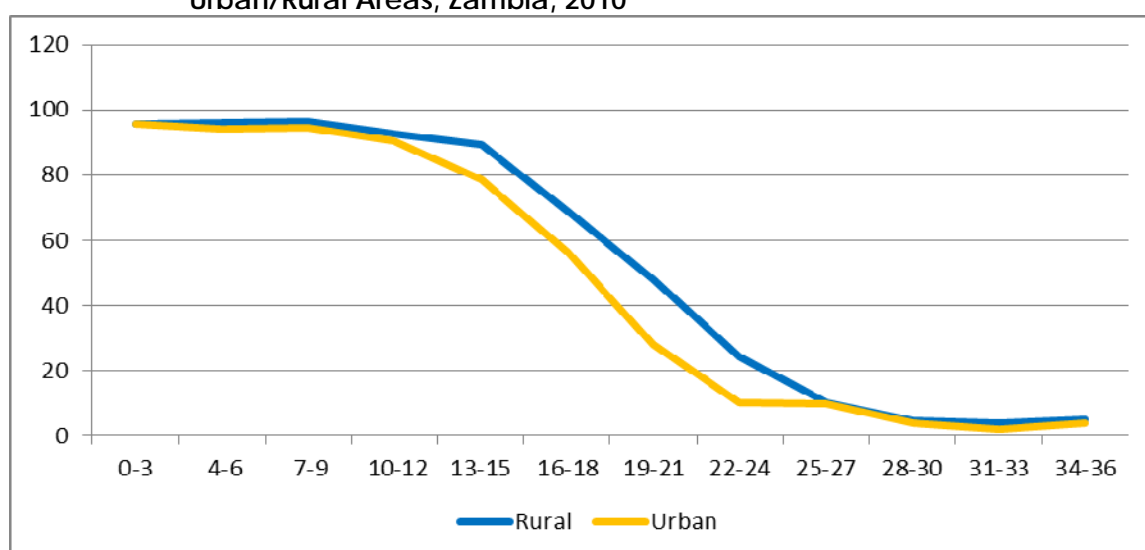


Table 15.2 shows the distribution of children aged 0 to 6 months by breastfeeding status and age group, residence and province. For children being breastfed, this table details whether they are exclusively breastfed, or receive water in addition to breastmilk, or any supplements.

Supplements in this table are defined as at least one of the following:

- Any milk other than breast milk (e.g. S26, lactogen, promil or baby formula, fresh milk, soya milk, goat milk, etc.)
- Other fluids
- Solids (e.g. custard, cerelac or other cereal, vitaso, porridge, nshima, etc.)

The table shows that 67 percent of children aged 0-3 months are being breastfed exclusively, with another 20 percent of that age group receiving supplements. Above the age of 3 months this relationship is inverted, with only 20 percent of children aged 4-6 being exclusively breastfed. For this older age group, supplements play an increasingly important role, with 67 percent receiving supplements.

Plain water as a supplement to breast milk plays only a minor role, in both age groups.

Supplement feeding patterns vary only to a minor degree across provinces. Eastern province displays the highest proportion of children aged 0-6 months receiving supplements, with 47 percent, whereas this is 28 percent in Western province.

**Table 15.2 Percentage Distribution of children (0-6 months), by breastfeeding status, sex of child, age group, rural/urban, poverty status and province for 2010 and 2006**

2010		Breastfeeding status				Total	Total number of children aged 0-6 months ('000s)
		Not breastfeeding	Exclusively breastfeeding	Breastfeeding with plain water only	Breastfeeding with supplements		
Rural/Urban	Rural	4.5	46.0	9.2	40.4	100	180
	Urban	5.1	48.7	6.7	39.5	100	67
Province	Central	2.7	51.3	2.3	43.7	100	21
	Copperbelt	7.0	40.7	7.9	44.4	100	30
	Eastern	1.0	43.3	8.4	47.3	100	47
	Luapula	11.8	37.4	8.1	42.7	100	24
	Lusaka	2.5	57.1	7.5	33.0	100	27
	Northern	4.3	36.5	14.9	44.3	100	34
	North Western	10.1	48.1	4.8	37.0	100	16
	Southern	3.7	60.1	6.5	29.7	100	32
	Western	3.8	52.3	16.0	27.9	100	14
Sex	Male	5.9	48.1	7.9	38.1	100	120
	Female	3.5	45.4	9.1	42.0	100	126
Age in months	0-3	4.5	67.1	8.9	19.5	100	138
	4-6	4.8	20.6	8.1	66.5	100	108
Poverty status	Extremely Poor	4.9	48.8	10.0	36.3	100	105
	Moderately Poor	5.4	41.4	8.1	45.1	100	50
	Non Poor	4.0	47.3	7.0	41.7	100	92
All Zambia	All Zambia	4.6	46.7	8.5	40.1	100	246

2006		Breastfeeding status				Total	Total number of children aged 0-6 months ('000s)
		Not breastfeeding	Exclusively breastfeeding	Breastfeeding with plain water only	Breastfeeding with supplements		
Rural/Urban	Rural	4	37	10	48	100	67
	Urban	8	37	7	47	100	29
Province	Central	0	42	14	43	100	12
	Copperbelt	7	33	7	53	100	12
	Eastern	5	29	10	56	100	16
	Luapula	4	43	9	44	100	11
	Lusaka	8	43	6	44	100	9
	Northern	4	29	16	50	100	13
	North-Western	9	27	9	54	100	6
	Southern	4	56	3	37	100	10
	Western	11	33	11	46	100	7
All Zambia	All Zambia	6	37	9	48	100	96

### 15.2.2. Frequency of feeding on solids

The survey assessed the frequency of consumption of solid foods by children aged below five years of age. Solid foods can be nshima, rice, potatoes, porridge, cerelac, other cereals, vitaso, custard, etc. Table 15.3 shows that half of the children in this age group received solid foods three times a day.

The distribution of this indicator varies, as one would expect, by age. For children under the age of three months, 67 percent have not yet started on solids. As children grow older, their diet is diversified to include solids in addition to breast milk; hence, those in the 4 – 9 age group still received relatively few solids. As children reach the age of 13 months, half of them receive solids three times a day, with another 25 percent receiving solids twice a day. For older children aged 37 months and above, 58 percent receive solids three times a day, 22 percent receive solids only twice a day and 14 percent receive solids four times a day.

At provincial level Lusaka recorded the highest proportion of children that were fed solids at least three times in a day followed by Central province, with 80 and 74 percent respectively. Among the provinces with low proportions of children under five being fed at least three times a day are Luapula (45 percent), Northern province (53 percent) and North Western (57 percent).

**Table 15.3 Percentage Distribution of how many times children (0-59 months) are given solid foods, by sex of child, age group, rural/urban and province for 2010 and 2006**

2010		Number of times given solid foods							Total	Total number of children under five years ('000s)
		Once	Twice	Three times	Four times	Five times	More than five times	Not yet started on solids		
Rural/Urban	Rural	3.9	27.2	52.9	7.5	1.9	0.9	5.7	100	1,135
	Urban	3.2	16.8	44.7	22.8	5.9	2.5	4.0	100	469
Province	Central	5.4	17.3	59.2	10.1	3.8	0.8	3.5	100	166
	Copperbelt	4.0	21.4	47.6	16.8	3.3	1.6	5.2	100	205
	Eastern	2.4	18.9	60.3	6.9	2.4	0.4	8.7	100	274
	Luapula	3.8	46.3	37.8	4.4	1.0	1.8	5.0	100	153
	Lusaka	1.9	14.6	42.5	27.6	6.6	3.7	2.9	100	172
	Northern	5.1	36.7	44.6	6.8	1.3	0.2	5.3	100	231
	North Western	2.7	32.2	48.4	6.2	1.9	0.4	8.1	100	90
	Southern	3.2	12.3	57.7	16.5	4.9	1.9	3.6	100	205
	Western	5.0	26.3	48.8	11.6	2.3	2.9	3.2	100	108
Sex	Male	3.7	22.8	51.4	12.3	3.2	1.6	5.0	100	794
	Female	3.7	25.6	49.6	11.6	3.0	1.2	5.3	100	810
Age in months	0-3	8.3	11.8	11.6	1.3	0.3	0.1	66.6	100	91
	4-6	20.1	33.7	24.6	3.9	0.5	0.8	16.3	100	92
	7-9	5.1	38.2	41.1	10.4	2.3	0.9	1.9	100	102
	10-12	6.2	32.0	46.3	10.8	2.2	0.7	1.8	100	117
	13-15	4.1	24.7	51.8	14.5	2.4	1.3	1.3	100	96
	16-18	2.4	23.5	55.2	13.1	3.5	2.2	0.0	100	96
	19-21	3.8	19.9	55.0	11.5	6.5	3.2	0.0	100	65
	22-24	2.0	23.5	55.1	11.3	4.5	2.8	0.8	100	120
	25-27	0.5	17.8	59.5	15.2	4.5	2.3	0.1	100	85
	28-30	0.1	21.6	60.1	14.2	3.3	0.7	0.0	100	86
	31-33	1.9	20.3	57.1	16.0	2.7	2.0	0.0	100	68
	34-36	1.3	25.0	53.9	13.7	4.5	1.4	0.2	100	143
	37 and above	1.3	22.4	58.3	13.7	3.1	1.2	0.1	100	443
	All Zambia	3.7	24.2	50.5	12.0	3.1	1.4	5.2	100	1,604

2006		Number of times given solid foods							Total	Total number of children under five years ('000s)
		Once	Twice	Three times	Four times	Five times	More than five times	Not yet started on solids		
Rural/Urban	Rural	3	28	51	9	2	1	7	100	1,060
	Urban	4	17	42	22	5	3	7	100	414
Province	Central	2	22	54	12	2	1	7	100	143
	Copperbelt	4	22	42	20	4	4	5	100	167
	Eastern	4	20	61	7	2	1	6	100	225
	Luapula	3	46	35	8	1	0	8	100	150
	Lusaka	4	12	42	26	6	2	8	100	173
	Northern	3	41	41	7	1	0	6	100	205
	North Western	5	34	49	5	1	0	6	100	93
	Southern	1	11	57	16	5	1	9	100	197
	Western	4	19	50	15	2	2	8	100	120
Age in months	3-4	15	20	21	3	2	0	38	100	65
	5-6	12	38	33	6	1	2	8	100	59
	7-9	5	30	47	12	4	2	1	100	74
	10+	2	25	53	15	3	2	0	100	1,189
All Zambia	All Zambia	3	25	48	13	3	1	7	100	1,474

### 15.3. Immunization

The induction of an immune response through vaccination is a widely accepted public health strategy for the prevention of vaccine-preventable infectious diseases. To be considered fully vaccinated a child should have received one dose of BCG, three doses of DPT, three doses of polio and one dose of measles vaccine. The WHO recommends that a child should complete the schedule of vaccinations before the age of 12 months.

The tables below present immunization status for children aged 12-23 months. Ideally, the information on doses received was recorded from the child's clinic card, but where this was not available the information was collected by asking the respondent. Source of information is also presented in the tables below.

Tables 15.4 and 15.5 both report on child immunization, the former refers to initiated immunizations, i.e. at least one dose, and the latter refers to completed immunizations, i.e. the appropriate amount of doses for the respective immunization.

Table 15.4 shows that across Zambia, most children aged 12-23 had received at least one dose of each of the four vaccinations against BCG (92 percent), DPT (93 percent), polio (95 percent) and measles (81 percent). Rates are slightly higher in urban than in rural areas, except for the case of DPT vaccinations. The provinces with the highest proportions of children who had initiated all vaccinations were Western and Central with above 80 percent. In Southern province, however, only 68 percent of children had initiated all four immunizations.

**Table 15.4 Percentage Distribution of children (12-23 months) who initiated various vaccinations (at least one dose), by Rural/Urban, age group and province for 2010**

2010		Source of information		Initiated immunization					Total number of children aged 12-23 months ('000s)
		Clinic card	Respondent	BCG	DPT	POLIO	MEASLES	ALL	
Rural/Urban	Rural	76.6	23.4	90.7	93.1	94.9	80.6	75.6	251
	Urban	77.7	22.3	94.0	92.6	95.8	82.2	78.7	102
Age in months	12-15	78.0	22.0	90.1	90.8	94.2	75.8	71.0	147
	16-18	79.4	20.6	92.5	94.4	95.5	85.2	80.1	94
	19-21	75.1	24.9	93.5	95.0	96.5	87.4	82.0	64
	22-23	71.5	28.5	92.4	94.2	95.5	80.7	78.8	47
Province	Central	73.5	26.5	95.6	93.7	96.2	85.1	83.6	41
	Copperbelt	82.1	17.9	90.3	93.0	95.1	82.7	78.2	44
	Eastern	80.1	19.9	93.9	95.2	94.8	81.2	79.4	62
	Luapula	67.3	32.7	87.6	93.6	96.1	79.3	73.7	35
	Lusaka	74.7	25.3	94.8	91.3	95.4	78.3	72.9	38
	Northern	75.1	24.9	92.3	91.7	96.2	82.5	75.1	46
	North West	68.2	31.8	90.6	92.1	92.3	79.0	76.3	19
	Southern	82.4	17.6	84.5	92.1	93.2	76.5	67.9	43
	Western	83.9	16.1	95.1	92.1	96.0	85.2	81.5	24
	All Zambia	77.0	23.0	91.7	93.0	95.1	81.1	76.5	353

Table 15.5 presents information on the proportion of children aged 12-23 that completed the immunization process for the four diseases. Where the immunization only requires one dose the proportion does not differ from the table above; however, in the cases of polio and DPT, there are some significant differences.

In the case of DPT 93 percent of children had initiated the immunization process by receiving at least one dose of the vaccination. However, only 70 percent completed the entire cycle, leaving some 23 percent of this age group not fully immunized although they started the process. The same is true for polio. Here 95 percent had started the process by receiving at least the first dose, however, only 77 percent completed the cycle and can thus be regarded as fully immunized.

As a result the LCMS survey indicates that the proportion of Zambian children aged 12-23 months that have fully completed the immunization for all four vaccinations is only 55 percent.

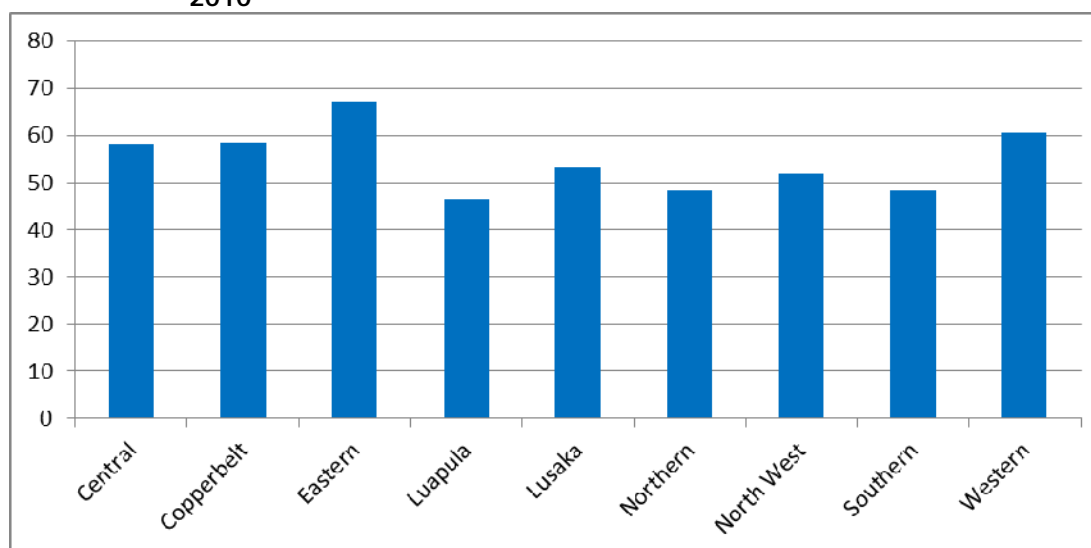
Full immunization for all four types was achieved for more than 60 percent of children in this age group in Eastern and Western provinces. This is countered by low rates below 50 percent found in Luapula, Northern and Southern provinces. Figure 15.2 presents full immunization rates across provinces. Urban immunization rates are higher than those in rural areas.

Immunization rates are also presented by poverty status. Immunization is lowest for the extremely poor for all types of diseases. Full immunization for all four types was achieved for 62 percent of children living in households categorized as non-poor and 61 percent of children from poor households; however, only 48 percent of children from extremely poor households are fully immunized against all four types.

**Table 15.5 Percentage Distribution of children (12-23 months) who completed various vaccinations (1 measles, 1 BCG, 3 polio, 3 DPT), by Rural/Urban, age group, poverty status and province for 2010**

2010		Source of information		Completed immunization					Total number of children aged 12-23 months ('000s)
		Clinic card	Respondent	BCG	DPT	POLIO	MEASLES	ALL	
Rural/Urban	Rural	76.6	23.4	90.7	68.4	75.8	80.6	54.1	251
	Urban	77.7	22.3	94.0	74.5	81.0	82.2	58.6	102
Age in months	12-15	78.0	22.0	90.1	67.0	73.3	75.8	49.2	147
	16-18	79.4	20.6	92.5	74.5	81.4	85.2	62.7	94
	19-21	75.1	24.9	93.5	73.0	79.6	87.4	60.1	64
	22-23	71.5	28.5	92.4	67.4	78.4	80.7	53.8	47
Province	Central	73.5	26.5	95.6	70.4	76.6	85.1	58.1	41
	Copperbelt	82.1	17.9	90.3	75.2	82.0	82.7	58.3	44
	Eastern	80.1	19.9	93.9	80.5	83.0	81.2	67.0	62
	Luapula	67.3	32.7	87.6	63.9	69.3	79.3	46.6	35
	Lusaka	74.7	25.3	94.8	70.9	77.0	78.3	53.2	38
	Northern	75.1	24.9	92.3	60.6	73.1	82.5	48.4	46
	North West	68.2	31.8	90.6	67.8	76.0	79.0	52.0	19
	Southern	82.4	17.6	84.5	65.4	73.6	76.5	48.2	43
	Western	83.9	16.1	95.1	70.7	82.7	85.2	60.6	24
Poverty Status	Extremely Poor	74.8	25.2	89.2	64.1	72.8	78	48	159
	Moderately Poor	79.9	20.1	92.4	73.8	79.5	82.6	60.7	65
	Non Poor	78	22	94.3	75.7	81.7	84.1	61.8	129
All Zambia	All Zambia	77.0	23.0	91.7	70.1	77.3	81.1	55.4	353

**Figure 15.2 Children aged 12-23 months who were fully vaccinated by province for 2010**



#### 15.4. Child nutritional status

The assessment of the nutritional status of children in the LCMS 2010 included anthropometric measurements for children under the age of five. These measurements allow for measurement and evaluation of the overall nutritional and health status of young children. The evaluation also allows for identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development and death. The factors that influence nutritional status of children are many. Among them are poverty status of mothers, poor diet and poor environmental conditions of households. These can impair growth in children and result in reduced weight or height.

The three standard indices of physical growth that describe the Nutritional status of children are defined as follows:

- Height-for-Age (Chronic malnutrition) - Stunting
- Weight-for-Height (Current malnutrition) - Wasting
- Weight-for-Age (Chronic and current malnutrition) – Underweight

Stunting (Height-for-age) is a condition reflecting the cumulative effect of chronic malnutrition.

Wasting (weight-for-height) is failure to gain weight in relation to height. It is a short-term effect and reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease.

Underweight (Weight-for-age) is low weight in relation to age. It is a composite index for weight-for-height and height-for-age and thus does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). A child can be underweight for his /her age because he/she is stunted, wasted, or because he/she is wasted and stunted. Weight for age is a good overall indicator of a population's nutritional health.

The indicators were generated using the WHO "igrowup" software package. As recommended by the World Health Organisation (WHO), the nutritional status of children in the sample is compared with an international reference population defined by the U.S. National Centre for Health Statistics (NCHS) and accepted by the U.S Centre for Disease Control (CDC). The three nutritional status indicators reported below apply where a child is two standard deviation units (z-scores) below the reference population mean.

Figure 15.3 shows prevalence ranges currently used by WHO to interpret levels of stunting, underweight, and wasting.

**Figure 15.3 Classification for assessing severity of malnutrition**

Indicator	Severity of malnutrition by prevalence ranges (%)			
	Low	Medium	High	Very high
Stunting	<20	20-29	30-39	>=40
Underweight	<10	10-19	20-29	>=30
Wasting	< 5	5-9	10-14	>=15

Table 15.7 presents prevalence rates of stunting, underweight and wasting for children aged 3-59 months. Stunting is very high at 47 percent. Underweight is medium at 13 percent. Wasting is also medium at 6 percent. The rates for stunting, underweight and wasting are roughly in line with the ones reported in the DHS report on Zambia from 2007.<sup>2</sup> The results indicate that children residing in urban areas have better nutritional status compared to rural children. The table also shows that malnutrition levels decrease with mother's level of education.

Stunting rates are particularly high in the Northern (53 percent), Eastern (52 percent) and Copperbelt (51 percent) provinces. Low stunting rates can be found in Southern and Lusaka provinces (both 40 percent). Underweight is highest in Luapula (18 percent) and Northern province (16 percent) and lowest in Lusaka (8 percent). Wasting is high in the Central province (11 percent) and low on the Copperbelt (2 percent) and Eastern province (3 percent).

All three indices are higher for children living in households classified as poor. The incidence of stunting is 40 percent for children from non-poor households, but 47 in poor households and 52 in extremely poor households. The incidence of underweight also increases with poverty status, with 11 percent among non-poor children, 12 percent among poor children and 16 percent among extremely poor children. The

<sup>2</sup> Prevalence rates reported in the DHS 2007 are: stunting 45.4%, underweight 14.6%, wasting 5.2%.



same pattern can be observed for wasting, where percentages for children from extremely poor households are highest.

Compared to 2006, stunting and underweight has decreased significantly in Zambia. Stunting has decreased from 54 to 47 percent, and underweight is down from 20 percent to 13 percent. Wasting has remained unchanged at the national level. The provinces most affected by stunting have remained the same since 2006, Northern and Eastern. The same is true for underweight, with Luapula being top of the list in both years. Wasting, which is a more short-term indicator compared to the other two, displays a similar, yet slightly different regional pattern. North-Western province was most affected in 2006, and retains high rates in 2010; Central province is most affected in 2010, but was only slightly above average in 2006.

**Table 15.6 Incidence of stunting, underweight and wasting of children aged 3-59 months, by residence, province, poverty status and mother's level of education for 2010 and 2006**

2010		Incidence of physical development indices			Total number of children aged 3-59 months ('000s)
		Stunting	Underweight	Wasting	
Rural/Urban	Rural	48.3	14.2	6.4	809
	Urban	42.3	10.8	4.9	300
Province	Central	41.3	12.6	10.6	135
	Copperbelt	51.0	14.9	2.2	119
	Eastern	51.7	12.3	2.6	191
	Luapula	49.2	18.0	5.8	123
	Lusaka	39.9	7.9	6.9	104
	Northern	52.5	15.9	7.6	158
	North West	47.1	13.2	8.8	46
	Southern	39.5	13.0	6.2	161
	Western	45.0	9.4	5.9	72
Mother's education	No education	49.8	14.0	6.1	118
	Not completed primary	52.2	14.9	5.5	354
	Completed primary (grade 7)	44.8	12.9	6.6	467
	Completed secondary (grade 12)	40.3	10.2	4.3	57
	Higher	28.1	5.0	4.1	39
Poverty status	Extremely Poor	51.9	15.7	6.6	493
	Moderately Poor	47.3	12.1	5.7	215
	Non Poor	39.9	11	5.4	401
All Zambia	All Zambia	46.7	13.3	6.0	1,109

2006		Incidence of physical development indices			Total number of children aged 3-59 months ('000s)
		Stunting	Underweight	Wasting	
Rural/Urban	Rural	56.6	21.4	6.2	860
	Urban	47.8	15.1	5.2	319
Province	Central	56.3	16.6	6.4	119
	Copperbelt	53.2	15.2	5.4	134
	Eastern	64.1	18.4	3.5	180
	Luapula	56.1	29.1	6.6	127
	Lusaka	47.6	17.9	4.8	127
	Northern	64.5	23.1	5.3	163
	North Western	49.1	23.1	13.2	79
	Southern	46.2	17.9	6.8	158
	Western	39.6	17	4.5	91
All Zambia	All Zambia	54.2	19.7	5.9	1,180

**Figure 15.4 Proportion of stunting by province for 2010**

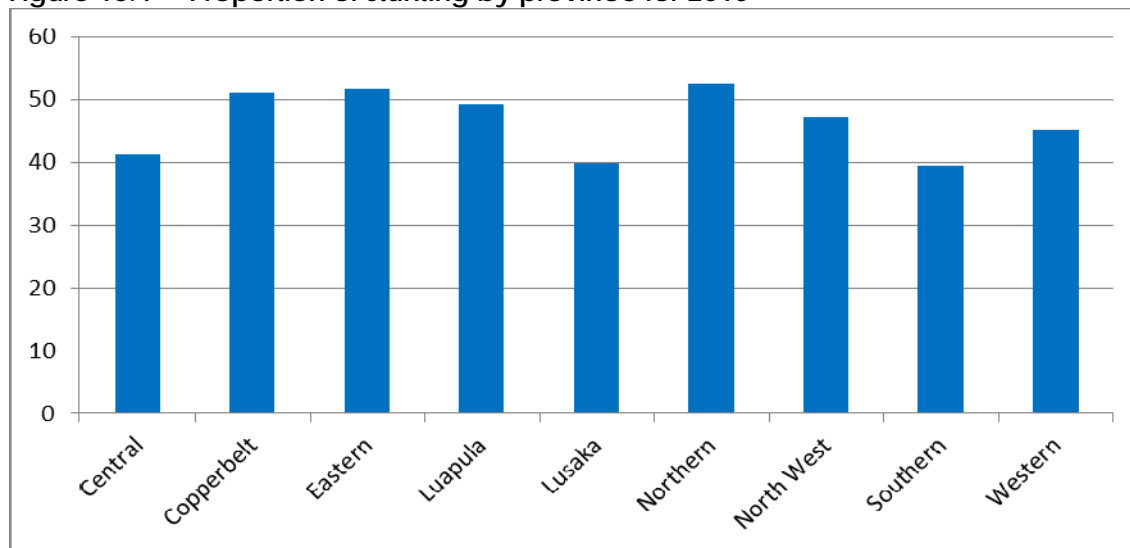


Table 15.8 shows the incidence of stunting, underweight and wasting by age, sex and household size. The table indicates that stunting and underweight occurs at all ages except at the infant age group where lower prevalences were observed. Underweight is observed more frequently in the age group above 22 months.

Male children are more likely to be stunted with 50 percent as compared to 44 percent. They are also more likely to be underweight than female children with 15 percent as compared to 12 percent. Wasting occurs equally among boys (6.1 percent) and girls (5.9 percent).

Wasting is also spread out evenly over the different age groups. This is a major change compared to the 2006 LCMS. In 2006, wasting increased drastically with age, up to an age of 19 months and then remained constant for older age groups.

**Table 15.7** Proportion of children aged 3-59 months classified as stunted, underweight and wasted, by age, sex of child and household size for 2010 and 2006

2010		Incidence of physical development indices			Total number of children aged 3-59 months ('000s)
		Stunting	Underweight	Wasting	
Rural/Urban	Rural	48.3	14.2	6.4	809
	Urban	42.3	10.8	4.9	300
Age in months	3-6	26.1	6.3	7.1	81
	7-9	32.2	8.3	5.1	67
	10-12	43.2	11.4	6.3	82
	13-15	49.0	11.9	5.8	67
	16-18	50.1	10.9	5.3	66
	19-21	53.9	11.5	6.3	49
	22-24	47.8	14.3	7.9	83
	25-27	51.6	14.6	3.9	64
	28-30	54.7	14.8	4.2	63
	31-33	48.6	15.8	5.9	49
	34-36	49.5	12.8	7.4	103
	37 and above	49.4	16.5	5.9	336
Sex of child	Male	49.7	14.7	6.1	544
	Female	43.8	12.0	5.9	565
Household size	1-2	41.1	8.8	6.3	3
	3-4	46.4	14.7	6.6	243
	5-6	47.5	12.5	5.6	375
	7-9	47.7	13.3	5.0	360
	10+	42.3	13.0	8.7	128
All Zambia	All Zambia	46.7	13.3	6.0	1,109

2006		Incidence of physical development indices			Total number of children ('000s)
		Stunting	Underweight	Wasting	
Rural/Urban	Rural	56.6	6.2	21.4	860
	Urban	47.8	5.2	15.1	319
Age in months	3-6	36	7.3	3.8	99
	7-12	49.6	4.5	13.7	62
	13-18	52.5	7.9	14.8	40
	19-24	60.9	6.6	23.7	275
	25-36	54.3	5.6	22.2	261
	37-59	56.1	5.1	19.7	269
Sex	Male	57.4	6.6	21.7	579
	Female	51.1	5.3	17.8	600
All Zambia	All Zambia	54.2	5.9	19.7	1,180

## CHAPTER 16

# COMMUNITY DEVELOPMENT

### 16.1. Introduction

This chapter analyses data collected by the 2010 LCMS addressing community needs and the impact of measures undertaken to promote social and economic facilities in the community. The survey collected data on the following:

- The type of social and economic facilities that households would like to see provided or improved in the community
- The projects or changes that have occurred in the community in the last 12 months prior to the survey being undertaken
- The extent to which projects have improved the way households live

### 16.2. Social and economic projects desired by households

In 2006 and 2010, households were asked to state four social/economic facilities which they would like to see provided in their communities, facilities which can be broadly classified into 14 categories. Table 16.1 shows the percentage of households choosing facilities from each category (project type) for both years, taking into account all choices specified.<sup>1</sup>

**Table 16.1 Percentage of households choosing facilities to be provided by project type and rural/urban, 2010 and 2006**

Type of project, to be provided 2010	Rural/Urban		All Zambia
	Rural	Urban	
Health	47.0	27.1	39.9
Food and other consumer goods	42.0	34.4	39.3
Water supply	41.8	24.0	35.4
Education	34.1	24.5	30.7
Agricultural	33.5	7.3	24.1
Roads	22.6	24.3	23.2
Employment	5.2	18.9	10.1
Police/security	9.2	8.3	8.9
Sanitation	4.2	17.3	8.9
Hammer mills	12.4	2.3	8.8
Credit	6.6	8.5	7.3
Housing	3.6	6.5	4.6
Transport	4.3	2.5	3.6
Not stated	2.7	9.8	5.3
Number of households (000s)	1,600	891	2,491

<sup>1</sup> Even though the respondent could list up to four choices, some households will have listed less than four or in some cases none. The category 'not stated' refers to such instances where no facility from the manual was specified across all four choices.

Type of project, to be provided 2006	Rural/Urban		All Zambia
	Rural	Urban	
Food and other consumer goods	48.7	46.0	47.8
Health	49.7	33.1	44.3
Water supply	49.1	31.6	43.4
Education	33.3	27.9	31.5
Agricultural	39.3	9.1	29.4
Roads	18.0	16.9	17.6
Employment	7.9	33.2	16.2
Hammer mills	18.1	4.5	13.7
Police/security	13.9	12.5	13.5
Credit	9.9	12.5	10.8
Sanitation	4.8	16.0	8.5
Transport	8.3	4.3	7.0
Housing	2.6	8.3	4.5
Number of households (000s)	1,484	799	2,283

In 2010, 40 percent of households overall stated that they would like health facilities provided in their community; this was the most stated facility in rural areas, but not in urban areas where the most wanted facility was food and other consumer goods.

The proportion of households wanting water supply, education, agricultural and hammer mill facilities in 2010 was notably higher in rural than urban areas, while the proportion of households wanting employment and sanitation facilities was higher in urban than rural areas; this was also the case in 2006, although there was a large drop over time in the proportion of urban households stating that they wanted employment (33 percent in 2006 compared to 19 percent in 2010).

Although health facilities, food and consumer goods and water supply were the top three most desired projects for both years, the proportions of households stating these facilities dropped over time; the overall proportion of households in Zambia stating that they would like food and other consumer goods fell from 48 percent in 2006 to 39 percent in 2010. The proportion stating that they would like water supply fell from 43 percent in 2006 to 35 percent in 2010, with the rural and urban proportions falling by similar levels.

The proportion of urban households stating that they would like roads to be provided increased from 17 percent in 2006 to 24 percent in 2010.

Households were also asked to specify facilities that they would like to see *improved* in their communities; the results are shown in table 16.2.

**Table 16.2 Percentage of households choosing facilities to be improved by project type and rural/urban, 2010 and 2006**

Type of project, to be improved 2010	Rural/Urban		All Zambia
	Rural	Urban	
Roads	48.2	52.3	49.7
Health	30.6	26.5	29.1
Education	36.6	15.6	29.1
Food and other consumer goods	16.2	20.2	17.6
Water supply	17.0	17.9	17.3
Sanitation	4.3	19.1	9.6
Agricultural	13.2	2.6	9.4
Police/Security	3.7	11.2	6.4
Transport	7.3	3.6	6.0
Housing	4.7	5.7	5.1
Hammer mills	6.9	1.5	4.9
Employment	2.7	8.9	4.9
Credit	1.7	1.2	1.5
Not stated	12.4	11.5	12.1
Number of households (000s)	1,600	891	2,491

Type of project, to be improved 2006	Residence		All Zambia
	Rural	Urban	
Roads	56.5	64.0	59.1
Education	52.1	22.0	41.7
Health	38.6	34.4	37.1
Water supply	24.7	33.1	27.6
Agricultural	29.9	5.7	21.6
Food and other consumer goods	15.7	25.2	18.9
Sanitation	5.4	24.7	12.0
Police/Security	5.6	15.2	8.9
Transport	10.0	4.9	8.3
Housing	5.8	12.9	8.2
Hammer mills	9.9	1.9	7.1
Employment	3.9	12.7	6.9
Credit	3.4	3.3	3.4
Number of households (000s)	1,484	799	2,283

Although the order of projects was similar in both 2006 and 2010, all percentages either dropped or remained at a similar level over time.

In 2010, around 50 percent of households overall indicated that they would like to see roads improved in their communities; this proportion dropped from 59 percent in 2006, although it was still the top project to be improved in 2006. It was also the most stated project in both rural and urban areas in both years.

29 percent of households in 2010 indicated that they would like health and education facilities to be improved in their communities; in rural areas, 37 percent stated education facilities and 31 percent stated health facilities, whilst in urban areas the proportion of households stating health facilities was substantially higher than the proportion stating education facilities, 27 percent and 16 percent respectively. There was a similar trend in 2006, with the proportion of rural households stating that they would like education to be improved notably higher than the proportion stating that they would like health facilities to be improved.

In 2010, the proportion of households indicating that they would like to see sanitation, police/security and employment improved was much higher in urban areas, whilst the proportion of households indicating that they would like

to see agriculture and hammer mill facilities improved was notably higher in rural areas. This was also the case in 2006.

### 16.3. Projects or changes that have taken place in the community

Both the 2010 and 2006 LCMS considered a period of 12 months prior to the survey when asking whether projects or changes had taken place in the community; table 16.2 shows the percentage of households stating each project for 2010 and 2006.

**Table 16.3 Percentage of households indicating that projects/changes had taken place in the community by rural/urban, 2010 and 2006**

Project/change which has taken place 2010	Rural/Urban		All Zambia
	Rural	Urban	
Provision of mobile phone network	35.9	42.6	38.2
Radio reception provided	29.8	33.0	31.0
Television reception provided	22.1	33.0	26.0
Radio reception improved	22.1	30.0	24.9
Provision of hammer mills	22.8	19.3	21.5
Transport services provided or improved	14.4	30.8	20.3
Television reception improved	14.2	28.1	19.1
Extension of existing school	21.2	11.5	17.7
Police services available or improved	9.1	28.3	16.0
Rehabilitation of existing school	16.4	13.2	15.3
Buyers of agricultural produce available or improved	18.3	7.7	14.5
Agricultural inputs provided on a subsidized basis	18.7	6.2	14.3
Building of new school	12.7	11.3	12.2
Rehabilitation of existing gravel road	11.7	11.0	11.4
Veterinary services now provided or improved	12.2	4.8	9.6
Agricultural extension service available or improved	12.6	4.0	9.5
Rehabilitation of existing health facility	8.5	10.1	9.1
Building of new health facility	9.3	7.8	8.8
Sinking of borehole	11.1	4.4	8.7
Agricultural inputs now more readily available	8.8	7.3	8.3
Extension of existing health facility	6.4	9.9	7.6
Water supply rehabilitated or improved	3.0	14.9	7.3
Building of shopping mall or shopping centre	2.7	9.5	5.1
Agricultural inputs provided on credit	5.7	3.3	4.9
Piping of water	1.0	11.5	4.8
Digging of well	5.4	3.5	4.7
Sanitation provided or improved	2.7	6.1	3.9
Rehabilitation or resurfacing of existing tarred road	3.3	5.0	3.9
Building of new gravel road	3.7	3.4	3.6
Credit facility now provided	2.4	5.2	3.4
Other construction development	0.8	4.8	2.2
Building of new tarred road	1.6	2.2	1.8
More employment opportunities available	1.3	2.5	1.7
Extension of existing tarred road	1.7	1.7	1.7
Number of households (000s)	1,600	891	2,491

Project/change which has taken place 2006	Rural/Urban		All Zambia
	Rural	Urban	
Provision of mobile phone network	37	71	49
Radio reception provided	44	56	48
Radio reception improved	31	30	38
Television reception provided	27	57	37
Television reception improved	18	51	30
Transport services provided or improved	21	42	28
Rehabilitation of existing school	30	19	26
Provision of hammer mills	25	20	23
Police services available or improved	13	37	21
Grading of gravel road	18	14	17
Rehabilitation of existing health facility	16	17	16
Buyers of agricultural produce available or improved	18	8	15
Building of new school	14	12	13
Agricultural inputs now more readily available	14	10	13
Sinking of borehole	13	6	11
Agricultural extension service available or improved	12	7	10
Building of new health facility	8	10	9
Water supply rehabilitated or improved	4	18	9
Veterinary services now provided or improved	10	6	9
Agricultural inputs provided on credit	10	5	8
Piping of water	2	14	6
Sanitation provided or improved	5	8	6
Building of new road (tarred or gravel)	3	5	4
Tarring of road	3	7	4
Digging of well	5	3	4
Credit facility improved	4	5	4
More employment opportunities available	1	3	2
Number of households (000s)	1,477	794	2,271

In both years 2010 and 2006, projects/changes related to communications were among the most likely to have taken place in the community. The highest proportion of households in both years stated the provision of a mobile phone network; in 2006, the proportion of urban households stating this project/change was notably higher than the proportion of rural households whereas in 2010, the difference had diminished somewhat and the overall proportion of households stating that this project/change had taken place dropped over time, from 49 percent in 2006 to 38 percent in 2010. This was also generally the case for television reception provision and improvement, and radio reception provision.

Transport services ranked 6<sup>th</sup> in both years, with the overall proportion of households stating this project dropping from 28 percent in 2006 to 20 percent in 2010; the proportion of urban households stating this type of project was roughly double that of rural households in both years.

Police services ranked 9<sup>th</sup> in both years, dropping only 5 percentage points over time (21 percent in 2006 compared to 16 percent in 2010). In both years, the proportion of urban households stating this project was roughly three times larger than the rural proportion.

The overall proportion of households affirming that the rehabilitation of existing schools had taken place in their community fell from 26 percent in 2006 to 15 percent of households in 2010; in 2006, the rural proportion was 30 percent compared to the urban proportion of 19 percent while in 2010 the difference between rural and urban proportions is much smaller, 16 and 13 percent respectively.



#### 16.4. Extent to which projects/changes have improved the way households live

The answers given by households in 2010 and 2006 were scored to enable projects to be ranked according to the extent that the projects had improved the way households live. Answers were scored as follows: extremely 4, moderately 3, little 2, no effect 1.<sup>2</sup>

**Table 16.4 Percentage of households indicating the extent to which projects/changes that have taken place in their communities have improved their way of life, 2010 and 2006**

Project/change 2010	Extent (percent)				Total	Number of households (000s) <sup>3</sup>	Score
	Extremely	Moderately	Little	No effect			
Provision of mobile phone network	48.6	32.3	15.7	3.4	100	943	326
Radio reception improved	40.1	44.0	12.8	3.1	100	613	321
Extension of existing health facility	41.1	42.0	13.2	3.7	100	188	321
Transport services provided or improved	39.5	39.7	19.1	1.7	100	500	317
Provision of hammer mills	39.7	39.1	19.3	1.9	100	528	317
Building of new school	44.2	35.4	12.7	7.6	100	297	316
Television reception improved	41.5	37.0	16.0	5.5	100	473	314
Radio reception provided	37.0	43.1	16.7	3.2	100	756	314
Extension of existing school	36.5	42.6	14.5	6.5	100	435	309
Extension of existing tarred road	37.1	42.6	11.2	9.1	100	42	308
Rehabilitation of existing health facility	31.9	48.2	15.3	4.7	100	223	307
Building of shopping mall or shopping centre	31.3	47.7	17.1	3.8	100	126	307
Rehabilitation or resurfacing of existing tarred road	38.7	38.7	12.3	10.3	100	95	306
Water supply rehabilitated or improved	36.0	36.7	24.0	3.3	100	178	305
Building of new tarred road	38.3	35.6	18.6	7.5	100	45	305
Television reception provided	36.4	38.9	17.4	7.3	100	639	304
Rehabilitation of existing school	31.4	44.4	17.7	6.5	100	377	301
Building of new health facility	37.1	35.0	19.2	8.7	100	205	301
Sinking of borehole	33.8	37.1	21.9	7.3	100	212	297
Piping of water	34.9	34.1	23.3	7.7	100	117	296
Buyers of agricultural produce available or improved	28.0	43.4	22.2	6.3	100	358	293
Police services available or improved	26.5	39.8	27.8	5.9	100	391	287
Agricultural inputs now more readily available	27.5	38.6	26.5	7.4	100	203	286
Building of new gravel road	20.1	49.0	26.6	4.4	100	88	285
Rehabilitation of existing gravel road	23.2	43.2	25.5	8.1	100	281	282
More employment opportunities available	26.8	31.0	36.3	6.0	100	43	279
Other construction development	24.1	44.5	17.2	14.2	100	54	279
Veterinary services now provided or improved	23.6	40.2	26.0	10.2	100	236	277
Agricultural extension service available or improved	18.6	43.5	32.3	5.7	100	234	275
Digging of well	22.0	41.3	26.1	10.6	100	116	275
Credit facility now provided	23.5	37.0	26.5	13.0	100	83	271
Agricultural inputs provided on credit	22.1	36.3	29.4	12.3	100	118	268
Agricultural inputs provided on a subsidized basis	21.8	36.5	26.0	15.7	100	349	264
Sanitation provided or improved	17.2	38.0	36.6	8.2	100	96	264

<sup>2</sup> Score = (4 x Extremely%) + (3 x Moderately%) + (2 x Little%) + (1 x NoEffect%); The maximum score would be 400 if 100 percent of households stated that the project had extremely improved their lives, whilst the minimum score would be 100 if 100 percent of households stated that the project had no effect on their lives.

<sup>3</sup> The number of households refers to those who answered 'yes' to whether the project/change had taken place in the community but excludes those who didn't answer 'extremely/moderately/little/no effect' when asked about the project's impact.

Type of project 2006	Extent (percent)				Total	Number of households (000s)	Score
	Extremely	Moderately	Little	No effect			
Radio reception improved	47	37	14	2	100	865	329
Television reception improved	50	32	15	3	100	672	329
Transport services provided or improved	46	37	16	1	100	647	328
Provision of mobile phone network	51	29	15	5	100	1,117	326
Provision of hammer mills	42	39	18	1	100	524	322
Radio reception provided	44	38	15	2	100	1,089	322
Tarring of road	45	31	22	2	100	94	319
Piping of water	41	38	19	2	100	136	318
Water supply rehabilitated or improved	40	39	20	1	100	196	318
Building of new road (tarred or gravel)	41	36	21	2	100	89	316
Television reception provided	44	33	16	6	100	848	313
Building of new health facility	40	35	21	5	100	202	312
Rehabilitation of existing health facility	33	45	20	2	100	371	309
Building of new school	38	37	20	5	100	302	308
Sanitation provided or improved	33	42	23	1	100	131	305
Sinking of borehole	39	34	20	6	100	249	304
Grading of gravel road	28	43	27	3	100	381	298
Police services available or improved	27	44	27	3	100	480	297
Veterinary services now provided or improved	30	40	27	3	100	201	297
Digging of well	31	40	23	6	100	102	296
More employment opportunities available	32	36	28	4	100	47	296
Agricultural inputs now more readily available	27	44	25	4	100	288	294
Rehabilitation of existing school	25	49	21	4	100	589	293
Buyers of agricultural produce available or improved	26	43	28	3	100	336	292
Credit facility improved	23	49	23	6	100	89	291
Agricultural extension service available or improved	23	47	27	3	100	218	290
Agricultural inputs provided on credit	22	40	29	8	100	187	274

As in the previous section, the provision of a mobile phone network was a prominent feature of the 2010 data; table 16.3 shows that this project had most impact on households' way of life and that its 'importance' (as indicated by the score) did not change over time. The next most important projects to households in 2010 were; improved radio reception, extension of existing health facility, transport services provided/improved, provision of hammer mills and the building of a new school.

Where comparisons between 2006 and 2010 were possible there were more cases of importance scores falling over time than rising, and the largest fall in importance was for provision/improvement of sanitation; in 2006, 33 percent of households which responded indicated that this project had greatly improved their lives, 42 percent stated 'moderately' and 23 percent stated 'little'; this is in contrast to 2010 when 17 percent said 'extremely', 38 percent said 'moderately' and 37 percent said 'little'.

Other projects with large falls in importance scores over time were 'piping of water' and 'provision/improvements in veterinary services.

The only projects for which importance scores increased notably over time were 'building of new school' and 'rehabilitation of existing school.'

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# ANNEX 1

Table 1: Food Basket for a Family of Six, 2004 - 2010

FOOD BASKETS FOR A FAMILY OF SIX (Values in Zambian Kwacha)							
Consumption Items	QTY	Unit Price 2004	Cost 2004	Unit Price 2006	Cost 2006	Unit Price 2009	Cost 2009
Cooking oil Local 2.5Lt	1	19,628	19,628	17,653	17,653	28,698	28,698
Dried beans 1kg	2	4,760	9,520	6,041	12,082	8,746	17,492
Dried bream 1 Kg	1	21,856	21,856	22,317	22,317	30,522	30,522
Dried Kapenta 1 Kg	2	30,062	60,124	30,336	60,672	49,225	98,450
Fresh milk 500 ml	4	2,005	8,020	2,186	8,744	3,298	13,192
Onion 1kg	4	3,040	12,160	3,864	15,456	4,765	19,060
Shelled groundnut 1kg	3	5,425	16,275	5,743	17,229	7,705	23,115
Table salt 1kg	1	1,880	1,880	2,424	2,424	4,516	4,516
Tomatoes 1kg	4	1,846	7,384	2,253	9,012	3,073	12,292
White Roller 25Kg	3.6	25,220	90,792	26,288	94,637	47,736	171,849.6
Vegetables 1 Kg	7.5	1,437	10,777	2,070	15,525	2,185	16,388
Total Cost			258,416		275,751		435,574
POVERTY LINES IN ADULT EQUIVALENT (AE) TERMS AE scale=4.52							
Poverty Line			57172		61007		96366

Source: NFNC and PIC 1990 Report

## ANNEX 2

### A Poverty Appendix

**Table A1: Variables used in the 2006 and 2010 Hedonic Regression model with description**

Variable Name	Variable Description	Variable Name	Variable Description
Lnrent	Log of Rent	Othtap	Other tap
Hhsize	Household Size	Lightke	Kerosene for lighting
<b>Dummy Variables</b>			
Tradhut	Traditional House dummy	lightcan	Candle for lighting
Impttrad	Improved Traditional House	lightoth	Other lighting
Flat	Flat	Ftoiletout	Flush toilet (Outside the house)
Servagt	Servants quarter	Toiletcom	Communal Toilet
Othhse	Other housing	Ownpit	Own pit latrine
Asbestos	Asbestos	Ownpit_ws	Own pitlatrine with slab
Iron	Iron	Compit_ws	Communal pitlatrine with slab
Grass	Grass	Ownpit_wos	Own pitlatrine without slab
Othroof	Other roof	Compit_wos	Communal pitlatrine without slab
Panbrick	Panbrick	Othtoi	Other toilet
Mudbrick	Mud brick	Location	Rural/urban residence
Burnbrick	Burnt brick	Central	Central
Poledaga	Pole and Dagga	Copperbelt	Copperbelt
Confloor	Concrete Floor	Eastern	Eastern
mudfloor	Mud floor	Luapula	Luapula
tilefloor	Tiled Floor	Northern	Northern
Othfloor	Other Floor	Nwestern	North Western
rivawata	River water	Southern	Southern
protwata	Protected well	Western	Western
Borehole	Borehole		
Pubtap	Public tap		

**Table A2: 2006 Hedonic Housing Rent Regression Results**

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	35	3797.9143	108.51184	229.11	<.0001
Error	3872	1833.8321	0.47361		
Corrected Total	3907	5631.7464			

	Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
	Intercept	12.79723	0.04405	39978	84410	<.0001
*	location	-0.42927	0.04499	43.11956	91.04	<.0001
*	central	-0.4967	0.05405	39.99542	84.45	<.0001
*	copperbelt	-0.54221	0.03603	107.25952	226.47	<.0001
*	eastern	-0.4461	0.06814	20.29818	42.86	<.0001
*	Luapula	-0.62148	0.08038	28.31384	59.78	<.0001
*	northern	-0.45293	0.05926	27.66714	58.42	<.0001
*	nwestern	0.15406	0.08664	1.49739	3.16	0.0755
*	southern	-0.65822	0.04309	110.51388	233.34	<.0001
*	western	-0.30826	0.09794	4.69224	9.91	0.0017
	hhsz	0.03417	0.0051	21.28856	44.95	<.0001
	tradhut	-0.19234	0.08246	2.57689	5.44	0.0197
	imptrad	-0.14993	0.04613	5.00236	10.56	0.0012
	servaqt	-0.09578	0.06083	1.17428	2.48	0.1154
	iron	-0.05062	0.02593	1.80475	3.81	0.051
	grass	-0.28043	0.07705	6.27405	13.25	0.0003
	panbrick	0.08726	0.04379	1.88074	3.97	0.0464
	mudbrick	-0.28665	0.04579	18.55893	39.19	<.0001
	poledaga	0.17452	0.08493	1.99989	4.22	0.04
	confloor	-0.09783	0.02788	5.8329	12.32	0.0005
	mudfloor	-0.29972	0.04933	17.48433	36.92	<.0001
	tilefloor	0.85935	0.06566	81.1217	171.28	<.0001
	othfloor	0.5727	0.22762	2.99806	6.33	0.0119
	rivawata	-0.30979	0.04828	19.50052	41.17	<.0001
	protwata	-0.401	0.06652	17.21279	36.34	<.0001
	borehole	-0.19551	0.05864	5.26449	11.12	0.0009
	pubtap	-0.45066	0.03772	67.61412	142.76	<.0001
	othtap	-0.19971	0.04269	10.36674	21.89	<.0001
	lightke	-0.61976	0.04644	84.35638	178.11	<.0001
	lightcan	-0.69982	0.02921	271.80483	573.9	<.0001
	lightoth	-0.99171	0.27899	5.98434	12.64	0.0004
	ftoiletout	-0.67147	0.04259	117.70496	248.53	<.0001
	toiletcom	-0.70885	0.07416	43.2693	91.36	<.0001
	ownpit	-0.75541	0.04371	141.42556	298.61	<.0001
	compit	-0.79706	0.04916	124.49428	262.86	<.0001
	othtoi	-0.69549	0.10388	21.22748	44.82	<.0001

**Table A3: 2010 Hedonic Housing Rent Regression Results**

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	41	4831.2237	117.83473	308.59	<.0001
Error	4856	1854.2722	0.38185		
Corrected Total	4897	6685.4959			
Root MSE	0.61794	R-Square	0.7226		
Dependent Mean	11.87073	Adj R-Sq	0.7203		
Coeff Var	5.20559				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	13.72669	0.05198	264.07	<.0001
hhsz	1	0.04401	0.00409	10.75	<.0001
tradhut	1	-0.18057	0.05627	-3.21	0.0013
imptrad	1	-0.13085	0.03299	-3.97	<.0001
flat	1	-0.09067	0.02505	-3.62	0.0003
servwin	1	0.08581	0.04271	2.01	0.0446
othhse	1	-0.44194	0.08392	-5.27	<.0001
asbestos	1	-0.09161	0.04052	-2.26	0.0238
iron	1	-0.13349	0.04144	-3.22	0.0013
grass	1	-0.49983	0.06912	-7.23	<.0001
othroof	1	-0.21562	0.08163	-2.64	0.0083
mudbrick	1	-0.25817	0.03623	-7.13	<.0001
burnbrick	1	0.0582	0.03506	1.66	0.097
poledaga	1	-0.14563	0.06323	-2.3	0.0213
confloor	1	-0.07397	0.02068	-3.58	0.0004
mudfloor	1	-0.31822	0.03969	-8.02	<.0001
othfloor	1	0.27319	0.09488	2.88	0.004
rivawata	1	-0.34446	0.03955	-8.71	<.0001
protwata	1	-0.22363	0.04075	-5.49	<.0001
borehole	1	-0.24128	0.04892	-4.93	<.0001
pubtap	1	-0.28743	0.02917	-9.85	<.0001
othtap	1	-0.25457	0.03255	-7.82	<.0001
lightke	1	-0.64539	0.04068	-15.86	<.0001
lightcan	1	-0.70505	0.02341	-30.11	<.0001
lightoth	1	-0.64371	0.06599	-9.75	<.0001
ftoiletout	1	-0.70208	0.03566	-19.69	<.0001
ownpit_ws	1	-0.77416	0.03769	-20.54	<.0001
compit_ws	1	-0.95687	0.03481	-27.48	<.0001
ownpit_wos	1	-0.99086	0.03793	-26.12	<.0001
compit_wos	1	-1.12858	0.04414	-25.57	<.0001
othtoi	1	-0.63277	0.08013	-7.9	<.0001
gabpit	1	-0.21791	0.0288	-7.57	<.0001
gabdump	1	-0.18222	0.03094	-5.89	<.0001
location	1	-0.30439	0.03553	-8.57	<.0001
central	1	-0.57387	0.04129	-13.9	<.0001
copperbelt	1	-0.46079	0.02962	-15.56	<.0001
eastern	1	-0.6656	0.05943	-11.2	<.0001
Luapula	1	-0.58515	0.06388	-9.16	<.0001
northern	1	-0.7897	0.05026	-15.71	<.0001
nwestern	1	0.04815	0.06199	0.78	0.4373
southern	1	-0.45907	0.03532	-13	<.0001
western	1	-0.45238	0.07709	-5.87	<.0001



**Table A4: Percentage Change in Poverty Between 2006 and 2010**

Location	2006	2010	Percentage change
	Incidence of poverty	Incidence of poverty	
Zambia	62.8	60.5	- 2.3
Rural/Urban			
Rural	80.3	77.9	- 2.4
Urban	29.7	27.5	- 2.2
Province			
Central	70.7	60.9	- 9.8
Copperbelt	37.3	34.3	- 3
Eastern	78.5	77.9	- 0.6
Luapula	73.9	80.5	6.6
Lusaka	24.7	24.4	-0.3
Northern	78.5	75	-3.5
North Western	70.7	67	-3.7
Southern	73.0	67.9	-5.1
Western	83.3	80.4	-2.9

**TableA5: Incidence of Poverty by Stratum, 2010**

	Poverty Status				All Persons
	Total Poor	Extremely Poor	Moderately Poor	Not Poor	
		%	%	%	
Zambia	60.5	42.3	18.2	39.5	13 013 152
Small Scale	79.9	59.7	20.2	20.1	7 686 565
Medium Scale	70	48.2	21.8	30	302 285
Large Scale	25.1	15.9	9.2	74.9	10 342
Non Agric	53.5	34.9	18.6	46.5	513 109
Low Cost	34.5	16.7	17.8	65.4	3 334 914
Medium Cost	8.5	3.1	5.4	91.5	765 003
High Cost	4.9	1.7	3.2	95.1	400 934

**TableA6: Incidence of Poverty in Stratum, 2006**

	Poverty Status				All Persons
	Total Poor	Extremely Poor	Moderately Poor	Not Poor	
		%	%	%	
Zambia	62.8	42.7	20.1	37.2	11 639 968
Small Scale	81.5	59.7	21.8	18.6	6 970 793
Medium Scale	69.8	44.9	24.9	30.2	263 952
Large Scale	33.2	14.6	18.6	66.7	8 889
Non Agric	68.2	46.9	21.3	31.8	350 380
Low Cost	34.7	15.4	19.3	65.3	3 224 566
Medium Cost	13.8	5.8	8	86.3	483 292
High Cost	5.1	1.3	3.8	95	338 096

**Table A7: Incidence, Intensity and severity of poverty by rural, Urban and Province 2010**

Residence and Province	Po	Contribution to Incidence of Poverty	P1	Contribution to intensity of Poverty	P2	Contribution to severity of Poverty	Income Gap ratio (P <sub>1</sub> /P <sub>0</sub> )
All Zambia	0.605	100	0.280	100	0.160	100	0.463
Rural	0.779	84	0.379	89	0.222	91	0.487
Urban	0.275	16	0.093	11	0.043	9	0.337
Central	0.609	11	0.251	10	0.133	9	0.413
Copperbelt	0.343	8	0.121	6	0.058	5	0.354
Eastern	0.779	18	0.382	19	0.221	19	0.490
Luapula	0.805	11	0.413	12	0.243	12	0.513
Lusaka	0.244	5	0.082	4	0.039	3	0.335
Northern	0.750	16	0.372	17	0.219	17	0.496
Northwestern	0.670	6	0.310	6	0.178	6	0.462
Southern	0.679	15	0.314	14	0.178	14	0.463
Western	0.804	10	0.427	12	0.268	13	0.531

**Table A8: Incidence, Intensity and severity of poverty by rural, Urban and Province 2006**

Residence and Province	Po	Contribution to Incidence of Poverty	P1	Contribution to intensity of Poverty	P2	Contribution to severity of Poverty	Income Gap ratio (P <sub>1</sub> /P <sub>0</sub> )
Zambia	0.628	100	0.315	100	0.194	100	0.503
Rural	0.803	83	0.427	88	0.270	91	0.532
Urban	0.297	17	0.106	12	0.052	9	0.356
Central	0.707	12	0.353	12	0.209	11	0.499
Copperbelt	0.373	9	0.150	7	0.081	6	0.401
Eastern	0.785	17	0.413	18	0.257	18	0.526
Luapula	0.739	9	0.381	10	0.233	10	0.516
Lusaka	0.247	5	0.085	4	0.039	3	0.342
Northern	0.785	16	0.416	17	0.262	17	0.530
Northwestern	0.708	7	0.343	7	0.208	6	0.484
Southern	0.731	14	0.375	15	0.235	15	0.513
Western	0.833	10	0.489	12	0.336	13	0.587

**Table A9: Confidence Interval for the 2010 Poverty Variable Based on the Taylors Series of Linearisation**

	Poverty	Poverty Estimate	Linearized Standard error	Lower 95% confidence limit	Upper 95% confidence limit	Coefficient of Variation
<b>All Zambia</b>						
	Non Poor	39.593	0.995	37.640	41.545	2.513
	Poor	60.508	0.995	58.455	62.360	1.647
<b>Region</b>						
Rural	Non Poor	22.119	0.847	20.456	23.782	3.831
	Poor	77.881	0.847	76.218	79.544	1.088
Urban	Non Poor	72.517	1.557	69.462	75.573	2.147
	Poor	27.483	1.557	24.427	30.538	5.665
<b>Stratum</b>						
Small Scale	Non Poor	20.101	0.788	18.555	21.647	3.920
	Poor	79.899	0.788	78.353	81.446	0.986
Medium Scale	Non Poor	30.077	2.525	25.122	35.031	8.395
	Poor	69.924	2.525	64.969	74.878	3.611
Large Scale	Non Poor	74.797	8.133	58.837	90.756	10.873
	Poor	25.204	8.133	9.244	41.163	32.269
Non Agric	Non Poor	46.477	3.641	39.332	53.622	7.834
	Poor	53.523	3.641	46.378	60.668	6.802
Low Cost	Non Poor	65.422	1.873	61.746	69.098	2.863
	Poor	34.578	1.873	30.902	38.255	5.417
Medium cost	Non Poor	91.490	1.596	88.358	94.621	1.744
	Poor	8.510	1.596	5.379	11.642	18.750
High cost	Non Poor	95.135	0.861	93.445	96.826	0.906
	Poor	4.865	0.861	3.175	6.556	17.707
<b>Province</b>						
Central	Non Poor	39.143	2.507	34.223	44.063	6.405
	Poor	60.857	2.507	55.937	65.777	4.120
Copperbelt	Non Poor	65.749	2.621	60.607	70.892	3.986
	Poor	34.251	2.621	29.108	39.393	7.651
Eastern	Non Poor	22.058	1.973	18.185	25.930	8.946
	Poor	77.942	1.973	74.070	81.815	2.532
Luapula	Non Poor	19.565	2.046	15.550	23.580	10.458
	Poor	80.435	2.046	76.420	84.450	2.544
Lusaka	Non Poor	75.621	2.391	70.929	80.313	3.162
	Poor	24.379	2.391	19.687	29.071	9.808
Nothern	Non Poor	25.017	2.194	20.712	29.323	8.770
	Poor	74.983	2.194	70.677	79.289	2.926
NorthWestern	Non Poor	33.049	3.501	26.179	39.920	10.593
	Poor	66.951	3.501	60.080	73.821	5.229
Southern	Non Poor	32.117	2.471	27.268	36.967	7.695
	Poor	67.883	2.471	63.033	72.732	3.641
Western	Non Poor	19.670	2.392	14.976	24.364	12.162
	Poor	80.330	2.392	75.636	85.024	2.978

**Table A10: Confidence Interval for the 2006 Poverty Variable Based On the Taylors Series of Linearisation**

	Poverty	Poverty Estimate	Linearized Standard error	Lower 95% confidence limit	Upper 95% confidence limit	Coefficient of Variation
<b>All Zambia</b>						
	Non Poor	37.29	0.97	35.39	39.18	2.59
	Poor	62.80	0.97	60.82	64.61	1.54
<b>region</b>						
Rural	Non Poor	19.65	0.89	17.91	21.40	4.53
	Poor	80.35	0.89	78.60	82.09	1.11
Urban	Non Poor	70.28	1.61	67.12	73.45	2.29
	Poor	29.72	1.61	26.55	32.88	5.42
<b>Stratum</b>						
Small Scale	Non Poor	18.57	0.89	16.81	20.32	4.82
	Poor	81.43	0.89	79.68	83.19	1.10
Medium Scale	Non Poor	30.28	2.95	24.49	36.07	9.74
	Poor	69.72	2.95	63.93	75.51	4.23
Large Scale	Non Poor	66.70	11.52	44.10	89.30	17.27
	Poor	33.30	11.52	10.70	55.90	34.59
Non Agric	Non Poor	31.81	3.31	25.31	38.31	10.42
	Poor	68.19	3.31	61.69	74.69	4.86
Low Cost	Non Poor	65.28	1.84	61.68	68.89	2.81
	Poor	34.72	1.84	31.11	38.32	5.29
Medium cost	Non Poor	86.24	2.72	80.91	91.57	3.15
	Poor	13.76	2.72	8.43	19.09	19.75
High cost	Non Poor	94.93	1.36	92.25	97.60	1.44
	Poor	5.07	1.36	2.40	7.75	26.87
<b>Province</b>						
Central	Non Poor	29.27	3.00	23.39	35.15	10.24
	Poor	70.73	3.00	64.85	76.61	4.24
Copperbelt	Non Poor	62.70	2.67	57.47	67.93	4.25
	Poor	37.30	2.67	32.07	42.53	7.15
Eastern	Non Poor	21.56	2.15	17.35	25.78	9.96
	Poor	78.44	2.15	74.22	82.65	2.74
Luapula	Non Poor	26.11	3.28	19.68	32.54	12.55
	Poor	73.89	3.28	67.46	80.32	4.43
Lusaka	Non Poor	75.33	2.38	70.65	80.00	3.16
	Poor	24.67	2.38	20.00	29.35	9.66
Nothern	Non Poor	21.54	2.10	17.42	25.65	9.74
	Poor	78.46	2.10	74.35	82.58	2.67
NorthWestern	Non Poor	29.34	2.83	23.78	34.90	9.65
	Poor	70.66	2.83	65.10	76.22	4.01
Southern	Non Poor	27.01	2.14	22.80	31.21	7.93
	Poor	72.99	2.14	68.79	77.20	2.94
Western	Non Poor	16.77	2.07	12.71	20.82	12.33
	Poor	83.23	2.07	79.18	87.29	2.48

## ANNEX 3

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### LIST OF PERSONNEL WHO TOOK PART IN THE SURVEY

The following persons took part in the Living Conditions Monitoring Survey VI (LCMS V) 2010:

#### EDITORS

- |    |                       |  |
|----|-----------------------|--|
| 1. | Mr John Kalumbi       | Acting Director - Census and Statistics      |
| 2. | Mr. Modesto F C Banda | Deputy Director - Agriculture Statistics     |
| 3. | Mr. William C Mayaka  | Deputy Director - Social Statistics          |
| 4. | Mr. Peter M Mukuka    | Deputy Director - Information Technology     |
| 5. | Mr. Goodson Sinyenga  | Acting Deputy Director - Economic Statistics |

#### CORE SURVEY STAFF

- |     |                       |   |
|-----|-----------------------|---|
| 1.  | Mr John Kalumbi       | Acting Director - Census and Statistics         |
| 2.  | Mr. Modesto F C Banda | Deputy Director - Agriculture Statistics        |
| 3.  | Mr. William C Mayaka  | Deputy Director - Social Statistics             |
| 4.  | Mr. Peter M Mukuka    | Deputy Director - Economic Statistics           |
| 5.  | Mr. Goodson Sinyenga  | Acting Deputy Director - Information Technology |
| 6.  | Kambaila G. Munkoni   | Head - Living Conditions Monitoring Survey      |
| 7.  | Frank Kakungu         | Information Technology Manager                  |
| 8.  | Shebo Nalishebo       | Head – National Accounts                        |
| 8.  | Lubinda Mukata        | Nutritionist (LCMB)                             |
| 9.  | Siyoto Owen           | Statistician (LCMB)                             |
| 10. | Anthony Silungwe      | Statistician (NA)                               |
| 11. | Morgan Siachuka       | Intern Statistician (LCMB)                      |
| 12. | Allan Banda           | Intern Statistician (LCMB)                      |

### PAGE LAYOUT AND REPORT FORMATTING

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