ZAMBIA

2010 CENSUS OF POPULATION AND HOUSING

LUAPULA PROVINCE ANALYTICAL REPORT

Published by

Central Statistical Office
Nationalist Road
P.O. Box 31908
Lusaka

www.zamstats.gov.zm
email: info@zamstats.gov.zm

March, 2014

Table of Content

Page | Table of Content

Page | List of Figures

2010 Census of Population and Housing - Luapula Province Analytical Report

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Foreword

The 2010 Census of Population and Housing was conducted between 16th October and 15th November 2010. Complete enumeration in all parts of the country was achieved by 30th November 2010. The 2010 Census of Population and Housing marked the fifth national population census that Zambia has successfully conducted since independence in 1964. Previous censuses were conducted in 1969, 1980, 1990 and 2000.

This report presents analytical results of the population in Luapula Province based on data from the 2010 Population and Housing Census. The report presents detailed analysis of issues of Population Size, Growth and Distribution; Education and Economic characteristics, Disability and Coverage and Content errors.

I would like to thank all our cooperating partners that supported the 2010 Census of Population and Housing. Special gratitude goes to the United Nations Population Fund (UNFPA), the United Kingdom AID (UKAID-formerly DFID), the United States Agency for International Development (USAID) and the African Development Bank (AfDB) for their material, financial and technical support to the Government of the Republic of Zambia (GRZ) and the Central Statistical Office (CSO) during this mammoth national exercise.

I also extend my sincere gratitude to the people of Luapula Province and all the residents of Luapula Province for the support and cooperation during the census. I hope the information contained in this report will be effectively used by all to plan and deliver development to the people of Luapula Province.

Alexander B. Chikwanda, MP
Minister of Finance
March, 2014

Acknowledgements

The 2010 Census of Population and Housing was successfully conducted between 16th October and 15th November 2010. However, field enumeration was only concluded in all parts of the country on 30th November 2010. Scanning of the 2010 Census questionnaires started in April 2011 and was successfully concluded in August 2011. Data verification and development of edit and imputation specifications and programmes started in May and was completed in November 2011.

I would like to commend and thank the Government of the Republic of Zambia (GRZ) for its commitment to take stock of its population including special groups by conducting the 2010 Census of Population and Housing. I would like to pay gratitude to the Treasury headed by the then Secretary to the Treasury Mr. Likolo Ndalamei and the current Secretary to the Treasury Mr. Fredson K. Yamba for their personal commitment to the 2010 Census. The continued support from the Government is a great indicator of the importance attached to information for planning and monitoring the development agenda set forth.

I would also like to pay sincere gratitude to UNFPA, UKAID, USAID and AfDB for the financial, material and technical support so far rendered to the 2010 Census.

I take special mention of the National Census Committee chaired by the then Secretary to the Cabinet, Dr. Joshua L. Kanganja, assisted by Mr. C. Evans Chibiliti, the then Deputy Secretary to the Cabinet (Finance and Economic Development). I also acknowledge the immense contribution of the National Census Steering Committee, the Provincial Census Committees and the District Census Committees in supporting the day-to-day monitoring and supervision of the entire census operation at the national, provincial and districts levels, respectively.

I extend sincere appreciation and gratitude to the various administrative and technical committees that spearheaded the preparation and execution of the 2010 Census of Population and Housing at different levels. These include the Cartographic Technical Committee chaired by the Surveyor General Mr Danny Mubanga, Planning and Methodology Committee Chaired by Dr. Namuunda Mutombo (UNZA), Census Publicity Committee chaired by Mr. Gilbert Maimbo (former Director – ZANIS), the Logistics and Security Committee chaired by Mr. Daniel Bowasi (former Director Human Resource and Administration Ministry of Finance and National Planning) and the Data Processing Committee chaired by the late Dr. Jacob Mulenga from Centralized Computer Services Department (CCSD) of Ministry of Finance and National Planning.

I would further like to thank the 2010 Census Secretariat, in particular the former Deputy Director in charge of Social Statistics, Mr. William C. Mayaka, Mr. Iven Sikanyiti (Current Deputy Director in charge of Social Statistics), the former Census Manager, Mr. Richard Banda and the Current Census Manager, Ms. Nchimunya Nkombo, Mr. Palver Sikanyiti (Deputy Census Manager), Mr. Modesto Banda (Former Deputy Director - Agriculture and Environment Statistics), Mr. Peter Mukuka (Former Deputy Director - Information, Research and Dissemination), Mr. Goodson Sinyenga (Deputy Director - Economic Statistics) and other members of the Secretariat for their dedication and hard work during the most challenging and difficult stages of the Census. Special recognition goes to the census analysis team for the tireless work of putting this report together.

I would like to extend and recognize the contribution of the data processing staff for the hard work and commitment during the data capture and processing of the 3.2 million census questionnaires. Special mention should be made of the IT Manager, Mr. Frank Kakungu and his Assistant Ms. Catherine Mwape, Mr. Chanda Lubemba, Senior Systems Analyst (Examinations Council of Zambia), Ms. Barbra Muyabi, Mr. Michelo Munzele and Mr. Sipho Inambao for effectively and efficiently coordinating the entire data processing exercise.

I also thank the mapping and cartographic teams for their work during the preparatory phase. I extend gratitude to the Regional Statisticians for effectively supporting the 2010 Census exercise from preparation, enumeration and post enumeration phases. I also make mention of the Provincial Census Officers, all the Master Trainers and Assistant Master Trainers for effectively coordinating the census in the various provinces and districts of assignment. I thank all the Supervisors and Enumerators for the job well done and for enduring the challenges of census data collection. Special gratitude go to staff of the Central Statistical Office and other institutions who all in one way or the other contributed to the successful conduct of the 2010 Census.

Finally but not the least, I would like to extend my sincere gratitude to the technical staff from the US Bureau of the Census, for their dedication and commitment during the development of edit and imputation specifications and programmes, data verification and editing, tabulation of the 2010 Census data and demographic data analysis. The skills transfer and capacity building that was done during this process will continue to serve CSO for many years to come.

I also thank the two census advisors Dr. Jeremiah Banda from AfDB and Dr. Griffith Feeney from DFID for their technical support to the census.

I hope all stakeholders and data users will make effective use of this Analytical Report.

John Kalumbi
Director - **Census and Statistics**

March, 2014

Chapter 1:
Provincial Profile; Luapula Province

Luapula province, Zambia

Chienge

Nchelenge

Kawambwa

Mwense

Mansa

Samfya

Milenge

Legend

District boundaries
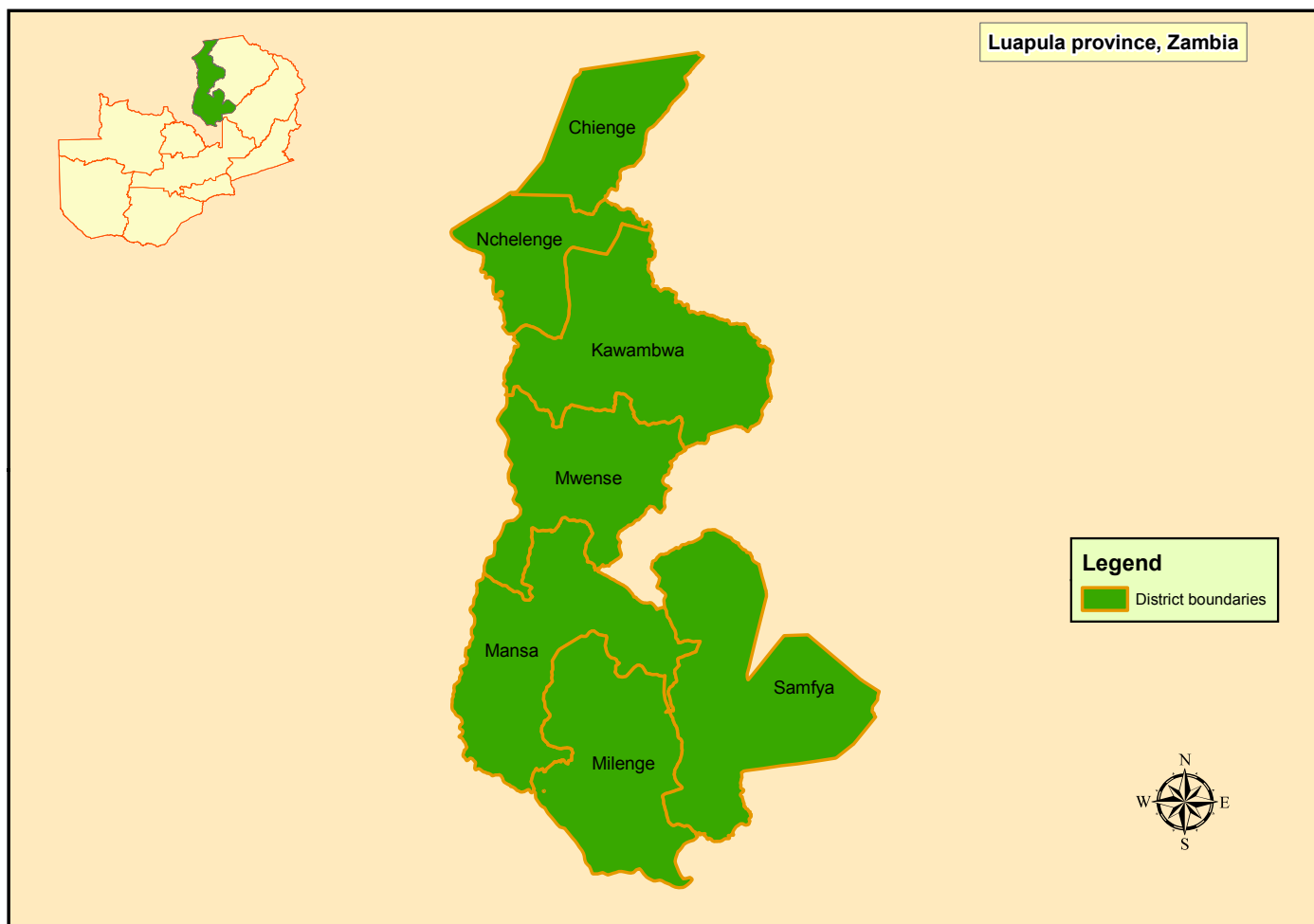
Chapter 1
Profile: Luapula Province

1.0 Introduction
Luapula Province covers a surface area of 50,567 square kilometres and had a population of 991,927 people at the time of the 2010 Census. About 40 percent of the land is covered by water.

1.1 Administration
The province is administratively divided into seven (7) districts, namely: Chienge, Kawambwa, Mansa, Milenge, Mwense, Nchelenge and Samfya. At the time of the 2010 Census, Luapula Province had 14 constituencies and 128 wards. The provincial administration offices are situated in Mansa District.

1.2 Natural Resources
The province is endowed with a lot of natural resources and has approximately 60 percent of Zambia's water resources. It has one main river, Luapula, and two big lakes namely Mweru and Bangweuru. It has 8 waterfalls namely Lumangwe, Ntumbacushi, Kabwelume, Chilongo, Finkula, Kundabwika, Mumbuluma and Mubotuta falls.

The sandy beaches of Lakes Mweru and Bangweulu are a tourist attraction. The province has wildlife and birds.

1.3 Languages
English is the official language of communication and instruction in Zambia. The main local language of communication in the province is Bemba.

1.4 Religion
Zambia was declared a Christian nation in the 1996 constitution while upholding the right of every person to enjoy that person's freedom of conscience or religion.

1.5 Health
Health plays a critical role in the development of the country and no meaningful development can be attained without a sound health policy. Since 1991 the health sector has been making strides to improve the health delivery system in the country. Some of these efforts include a move from a strongly centralised health system in which the central structures provided support and national guidance to the peripheral structures to a more decentralized system.

In 2010, the health system in the province had 142 health facilities. The health system consists of 1 General Hospital, 5 District Hospitals, 1 Urban Health Centre, 125 Rural Health Centres and 10 Health Posts.

Table 1.1: Health Facilities by District and Ownership, Luapula Province 2010

Type of Facility	Total	District						
		Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
Level 3 Hospital	0	0	0	0	0	0	0	0
Level 2 Hospital	1	0	0	1	0	0	0	0
Level 1 Hospital	5	0	2	0	0	0	1	2
Urban Health Centres (UHCs)	1	0	0	1	0	0	0	0
Rural Health Centres (RHCs)	125	8	22	26	6	23	10	30
Health Posts (HPs)	10	1	2	1	2	2	1	1
Total	142	9	26	29	8	25	12	33
Ownership								
AMission health facilities	7	0	1	0	1	2	1	2
Private health facilities	3	0	2	0	0	1	0	0
Total	142	9	26	29	8	25	12	33

Source: Ministry of Health, 2010

1.6 Economy
Fish and crop farming were the main economic activities in Luapula Province. About 60 percent of the people in the province are directly or indirectly involved in the fishing industry. While cassava is the main food crop grown, the province also has maize, groundnuts and sweet potatoes cultivated.

Notable industries in the province include Kawambwa Tea, Mansa Batteries and Mununshi Banana Scheme.

The province has a lot of potential for tourism development and mining.

1.7 Education
Education is a powerful tool for economic development of an individual and nation. The Revised Sixth National Development Plan (R-SNDP) identifies education, training, science and technology as prime movers of Zambia's development.

The province has recorded improvements in the education sector contributing to high enrolment levels of both girls and boys at primary, basic and high school levels (Ministry of Finance and National Planning, Annual Economic Report, 2010).

The government has put in place some measures to improve the quality of education offered. One of these is the continuous teacher recruitment programme introduced by the government which resulted in additional teachers being recruited in 2010 leading to an improvement in the Pupil-Teacher Ratios at all levels of basic education in the province (Ministry of Education, Educational Statistical Bulletin, 2008-2010). The province had 5300 teachers and 679 schools in 2010. Among these, 20 were grant aided while 18 were privately owned.

1.8 Gender Issues
Gender issues are concerned with promoting equality between the sexes and improvement in the status of both women and men in society. It is well understood that social and economic

development can only be attained when there is equal participation of both men and women in the development process.

Zambia's vision on gender as stated in the "Vision 2030" is to achieve gender equity and equality in the social-economic development process by 2030. In this regard, the government has put in place a Gender policy which ensures the advancement of gender mainstreaming policies and legislation.

1.9 Poverty

Majority of people in Luapula Province live in poverty. Results from the 2006 and 2010 Living Condition Monitoring Surveys

(LCMS) show that poverty levels have increased between 2006 and 2010. The percentage of the overall poor population increased from 73.9 in 2006 to 80.4 percent in 2010. The percentage of the extremely poor increased from 53.6 in 2006 to 64.9 percent in 2010.

Poverty in Luapula Province has continued to be more of a rural than urban phenomenon. In 2010, the extreme poverty in rural areas was estimated at 68.5 percent compared to urban levels at 35.7 percent.

Table 1.2: Overall and Extreme Poverty by Rural/Urban, Luapula Province 2006 and 2010				
Rural/Urban	**2006**		**2010**	
	Overall Percent	**Extreme Percent**	**Overall Percent**	**Extreme Percent**
Total	**73.9**	**53.6**	**80.5**	**64.9**
Rural	78.1	58.4	82.9	68.5
Urban	44.1	19.1	61.0	35.7
Source: CSO: Living Conditions Monitoring Statistics, 2006 and 2010				

1.10 Census of Population and Housing Undertaking

The 2010 Census is the fifth National Census of Population and Housing conducted in Zambia since independence in 1964. The country has so far conducted censuses in 1969, 1980, 1990 and 2000.

The 2010 Census of Population and Housing was carried out from 16th October to 15th November, 2010. Field staff included school leavers who worked as Enumerators and Census supervisors who were mostly teachers and Civil Servants from various government departments and ministries worked as Master Trainers, Assistant Master Trainers and Provincial Census Officers.

1.10.1 The Main Objectives of the Census of Population and Housing

The main objectives of the 2010 Census of Population and Housing included:

- *To provide accurate and reliable information on the size, composition and distribution of the population of Zambia at the time of the census;*

- *To provide information on the demographic and socio-economic characteristics of the population of Zambia at the lowest administrative level – the Constituency and Ward;*

- *To provide indicators for measuring progress towards national and international development goals in a timely and user friendly manner;*

- *To provide information on the number and characteristics of households engaged in agriculture and other economic activities;*
- *To provide an accurate sampling frame and sample weights for future inter-censual household and population based surveys;*
-
- *To provide information identifying the number of eligible voters for the 2011 General Elections.*

- *To provide a census that meets national and international standards and allows for comparability with other censuses;*

- *To provide information on the housing characteristics of the population etc.*

1.10.2 Methodologies Applied in the 2010 Census of Population and Housing

Prior to the 2010 Census undertaking, a comprehensive mapping exercise was conducted. The mapping strategy for 2010 census was Geographical Information System (GIS) driven and involved the use of the Global Positioning System (GPS) and Satellite imagery. The GPS was used to map rural areas while the urban areas were mapped using high resolution satellite imagery.

The 2010 Census used a single questionnaire to capture individual, household and housing characteristics from the population, whereas the 2000 Census used two different questionnaires, Form A (Household and Housing Characteristics) and Form B (Individual Characteristics) to collect information from the population.

During data capturing, the 2010 Census used Optical Mark Reading (OMR) and Intelligent Character Recognition (ICR) technology, whereas the 2000 Census used the OMR technology only.

The 2010 Census included the following questions which were not in the 2000 census:

- *Deaths of Household Members during the 12 months period prior to the census enumeration, as well as cause of death for all reported deaths.*
- *Maternal deaths to women aged 12-49 years during the reference period (12 months prior to the Census).*

- *Albinism.*

- *Orphanhood and Fosterhood*

The 2010 Census used school leavers that had completed their Secondary School Education within 2-5 years prior to the Census as Enumerators while the 2000 Census used Grade Eleven School Pupils.

1.10.3 Presentation of Results

The analysis in this report is based on the geography that existed at the time of the census in 2010.

CHAPTER 2
POPULATION SIZE, GROWTH AND DISTRIBUTION

2.0 Summary

Luapula Province's population in 2010 was 991,927. This was an increase from 775,353 in 2000.

The population grew at an average annual rate of 2.5 percent during the 2000-2010 inter-censal period. This average annual rate was lower than 3.2 percent recorded in the 1990-2000 inter-censal period.

In 2010, 80.4 percent of the population was residing in rural areas while 19.6 percent was residing in urban areas.

Mansa District had the largest population at 228,392 while Milenge District had the smallest population at 43,337.

The province had a population density of 19.6 persons per square kilometre. The most densely populated district was Nchelenge with 37.4 persons per square kilometre while Milenge was the most sparsely populated with 6.9 persons per square kilometre.

Chapter 2
Population Size, Growth and Distribution

2.1 Introduction
This chapter presents an analysis of the population size, growth, distribution and composition of the 2010 Census for Luapula Province. Trends in the population size, growth and distribution are also presented using data from previous censuses.

2.2 Concepts and definitions
Concepts and definitions used in this chapter are as follows:

De Facto Population
This refers to household members and visitors who spent the census night at a household. This, however, excludes:

a) *Foreign diplomatic personnel accredited to Zambia*
b) *Zambian nationals accredited to foreign embassies and their family members who live with them abroad, and*
c) *Zambian migrant workers and students in foreign countries who were not in the country at the time of the census.*

De jure Population
This refers to usual household members present and usual household members temporarily absent at the time of the census. In a de jure Census, institutional populations in places such as hospitals or health centres, prisons and academic institutions like universities, colleges and boarding schools are counted as members of their usual household. Figure 2.1 presents a diagram of the de facto and de jure populations.

De Jure and De Facto Populations
The de jure count is considered the true or resident population of a country. It is used for the age-sex distribution and is also used as a denominator in the calculation of vital indicators for sectors such as education e.g. deriving Gross and Net enrolment rates.

However, this de jure population count is not used in the analysis of data on various social, economic and health characteristics as some variables would be missing for individuals who were absent from the household at the time of the census.

Figure 2.1: Diagrammatic presentation of the de facto and the de jure populations
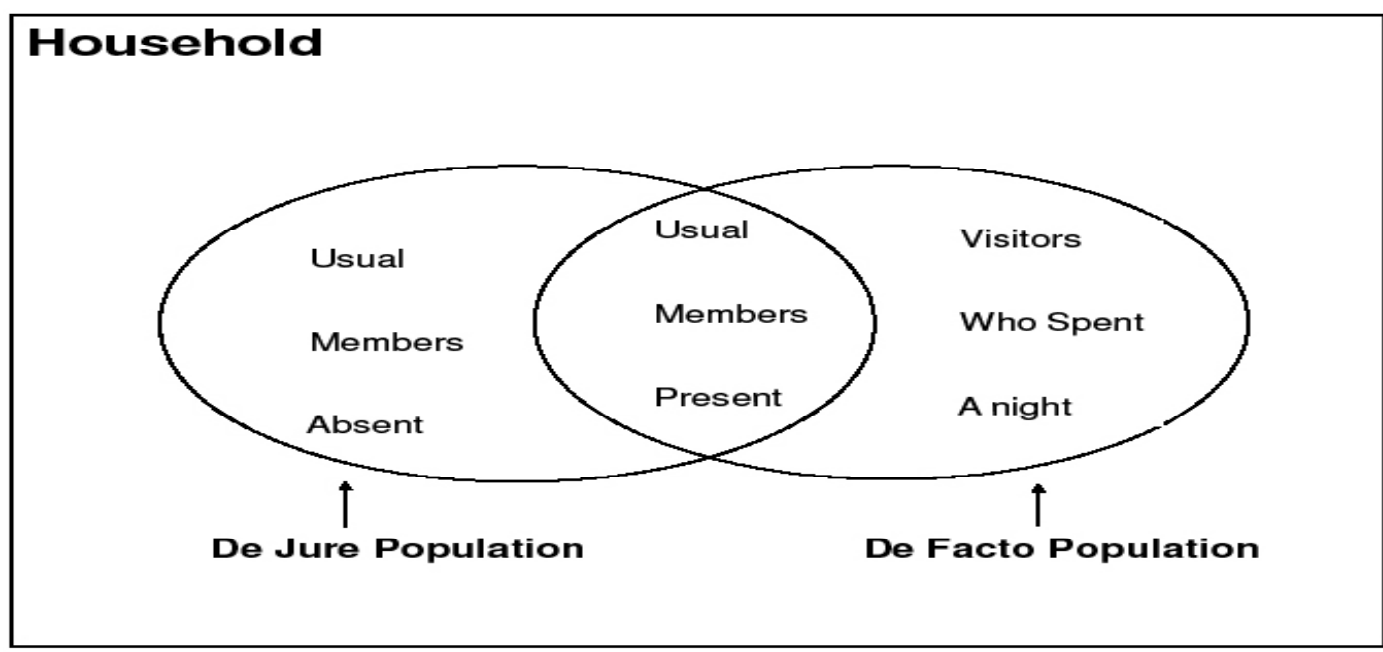
Population Growth Rate
This refers to the change in the size of the population as a proportion of the total population of an area. Estimated on a yearly basis, it gives the average annual growth rate for each year in the inter-censal period.

2.3 Population Size

This is the absolute number of people that was enumerated at the time of the census. Table 2.1 shows the population size for Luapula Province by rural/urban from 1990 to 2010. The population in Luapula Province increased from 564,493 in 1990 to 775,353 in 2000 and to 991,927 in 2010. This represented a percentage change of 37.4 in the 1990-2000 inter-censal period. This declined to 27.9 percent in the 2000-2010 inter-censal period.

Table 2.1: Population Size by Rural/Urban, Luapula Province 1990-2010

Rural/Urban	1990-2000			2000-2010		
	1990 Population	2000 Population	Percent change	2000 Population	2010 Population	Percent Change
Total	564,493	775,353	37.4	775,353	991,927	27.9
Rural	478,958	674,187	40.8	674,187	797,407	18.3
Urban	85,535	101,166	18.3	101,166	194,520	92.3

Sources: 1990, 2000 and 2010 Censuses of Population and housing.

The population in rural areas increased from 674,187 in 2000 to 797,407 in 2010 while the urban population increased from 101,166 in 2000 to 194,520 in 2010. This represents an increase of 18.3 percent in rural and 92.3 percent in urban areas.

Table 2.2 shows the percent distribution of the population by sex and rural/urban for Luapula Province in 2010. Of the total population in 2010, there were 488,589 males and 503,338 females. Males constituted 49.3 percent and females constituted 50.7 percent of the total population.

Table 2.2: Total Population (De Jure) and Percent Distribution by Sex and Rural/Urban, Luapula Province 2010

Rural/Urban	Both Sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	991,927	100	488,589	49.3	503,338	50.7
Rural	797,407	100	393,615	49.4	403,792	50.6
Urban	194,520	100	94,974	48.8	99,546	51.2

Sources: 2010 Census of Population and Housing.

Table 2.3 shows the distribution of the population by sex, rural/urban and district for Luapula Province. Mansa District had the largest population at 228,392 while Milenge District had the smallest population at 43,337.

Table 2.3: Total Population (De jure) by Sex, Rural/Urban and District, Luapula Province 2010

District	Both Sexes			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	991,927	488,589	503,338	797,407	393,615	403,792	194,520	94,974	99,546
Chienge	114,225	56,542	57,683	110,602	54,782	55,820	3,623	1,760	1,863
Kawambwa	134,414	66,091	68,323	102,727	50,682	52,045	31,687	15,409	16,278
Mansa	228,392	112,336	116,056	150,239	74,188	76,051	78,153	38,148	40,005
Milenge	43,337	21,338	21,999	40,218	19,742	20,476	3,119	1,596	1,523
Mwense	119,841	58,744	61,097	98,704	48,552	50,152	21,137	10,192	10,945
Nchelenge	152,807	76,124	76,683	115,913	58,060	57,853	36,894	18,064	18,830
Samfya	198,911	97,414	101,497	179,w004	87,609	91,395	19907	9,805	10,102

Source: 2010 Census of Population and Housing

The most urbanised district was Mansa District with an urban population of 78,153 while Milenge District had the smallest urban population at 3,119.

Table 2.4 shows population distribution by district and sex. In 2000 and 2010, Mansa District had the largest population at 180,943 and 228,392, respectively. Milenge District had the smallest population in both 2000 (27,596) and 2010 (43,337).

Table 2.4: Population (De Jure) by Sex and District, Luapula Province 2000 and 2010

District	2000			2010		
	Total	Male	Female	Total	Male	Female
Total	775,353	387,825	387,528	991,927	488,589	503,338
Chienge	83,824	41,845	83,824	114,225	56,542	57,683
Kawambwa	102,503	51,795	102,503	134,414	66,091	68,323
Mansa	180,943	90,732	180,943	228,392	112,336	116,056
Milenge	27,596	13,729	27,596	43,337	21,338	21,999
Mwense	105,759	53,280	105,759	119,841	58,744	61,097
Nchelenge	111,119	54,776	111,119	152,807	76,124	76,683
Samfya	163,609	81,371	163,609	198,911	97,414	101,497

Source: 2000 and 2010 Censuses of Population and Housing

2.4 Population Growth

The population of Luapula Province has continued to grow over the past three decades. Figure 2.2 shows the average annual population growth rate for Luapula Province between 1980 and 2010. The population grew at an average rate of 2.5 percent per annum during the 2000-2010 inter-censal period. This was a decline from the annual rate of population growth of 3.2 percent per annum recorded in 1990-2000 inter-censal period.

The urban population grew at a rate of 6.8 percent per annum between 2000 and 2010. This was an increase of 5.1 percentage points from 1.7 percent recorded between 1990 and 2000. The rural population grew at a rate of 1.7 percent per annum during the 2000-2010 inter-censal period. This was a decline from a rate of 3.5 percent during the 1990-2000 inter-censal period.

Figure 2.2: Annual Rate of Population Growth by Rural/Urban, Luapula Province 1980-1990, 1990-2000, 2000-2010
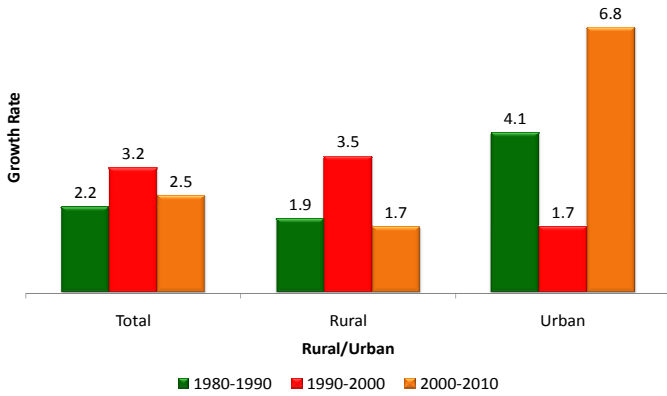
Source: 1980, 1990, 2000 and 2010 Censuses of Population and Housing

Table 2.5 shows the average annual rate of population growth for Luapula Province by rural/urban and district.

Milenge District had the fastest growing population with an average annual population growth rate of 4.2 percent in the 2000-2010 inter-censal period while Mwense District had the slowest annual population growth at 1.3 percent.

Table 2.5: Population Size and Annual Average Population Growth Rate by Rural/Urban and District, Luapula Province 2000-2010

Rural/Urban and District	Population Size 2000	Population Size 2010	Annual Growth Rate (2000-2010)
Total	775,353	991,927	2.5
Rural	674,187	797,407	1.7
Urban	101,166	194,520	6.8
Chienge	83,824	114,225	3.1
Kawambwa	102,503	134,414	2.7
Mansa	179,749	228,392	2.4
Milenge	28,790	43,337	4.2
Mwense	105,759	119,841	1.3
Nchelenge	111,119	152,807	3.2
Samfya	163,609	198,911	2.0

Source: 2000 and 2010 Censuses of population and Housing

2.5 Population Distribution

The population of Luapula Province has remained largely rural. Figure 2.3 shows the percent distribution of the population by rural/urban in 1990, 2000 and 2010.

Between 1990 and 2000, the rural population of Luapula Province increased from 84.8 to 87.0 percent and reduced to 80.4 percent in 2010. The urban population increased from 13.0 percent in 2000 to 19.6 percent in 2010.

Table 2.6 shows the percentage distribution of the population by rural/urban and district from 2000-2010. Between 2000 and 2010, the contribution of Nchelenge, Milenge, Chienge and Kawambwa Districts to the provincial population increased by 1.1, 0.8, 0.7 and 0.4 percentage points, respectively.

Figure 2.3 Percentage Distribution of Population by Rural/Urban, Luapula Province 1990-2010

Source: 1990, 2000 and 2010 Censuses of Population and Housing

Table 2.6: Population Distribution (De jure) by Rural/Urban and District, Luapula Province 2000 and 2010
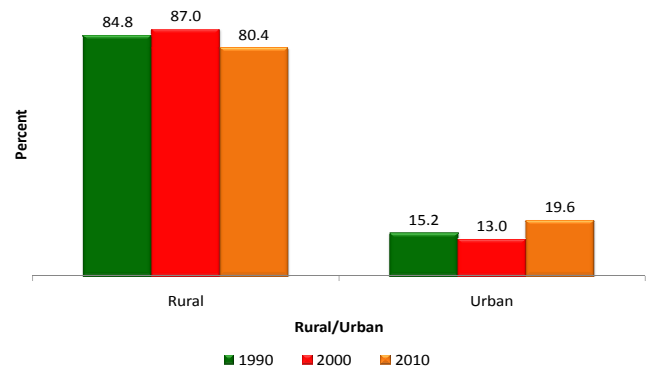
| District and Rural/Urban | 2000 | | 2010 | | Percent Change |
	Population	Percent	Population	Percent	2000-2010
Total	775,353	100.0	991,927	100.0	N/A
Rural	674,187	87.0	797,407	80.4	-6.6
Urban	101,166	13.0	194,520	19.6	6.6
District					
Chienge	83,824	10.8	114,225	11.5	0.7
Kawambwa	102,503	13.2	134,414	13.6	0.4
Mansa	180,943	23.3	228,392	23.0	-0.3
Milenge	27,596	3.6	43,337	4.4	0.8
Mwense	105,759	13.6	119,841	12.1	-1.5
Nchelenge	111,119	14.3	152,807	15.4	1.1
Samfya	163,609	21.1	198,911	20.1	-1.0

Source: 2000 and 2010 Censuses of Population and Housing

Figure 2.4 shows the percent distribution of the population by district. Mansa District had the largest proportion of the population at 23.0 percent while Milenge had the least at 4.4 percent.

Figure 2.4: Percentage Population Distribution by District, Luapula Province, 2010
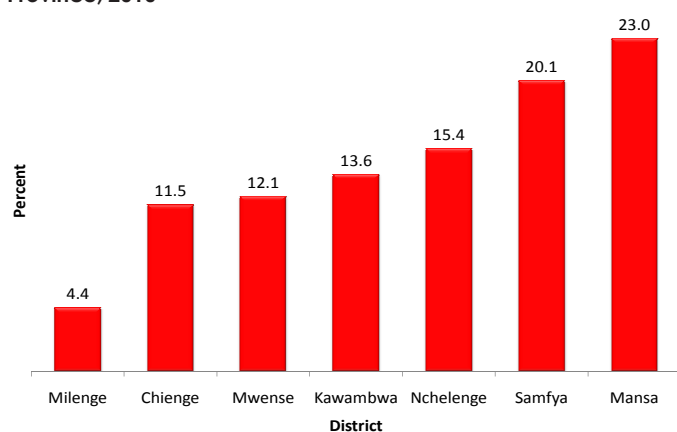
Source: 2010 Census of Population and Housing

2.6 Population Density

Population density is defined as the total number of persons per square kilometre. Table 2.7 shows the area and population density of Luapula Province by district in 2000 and 2010. Luapula Province has a total surface area of 50,566 square kilometres. The province is sparsely populated with a population density of 19.6 persons per square kilometre representing an increase of 4.3 persons per square kilometre from 2000.

In 2010, Nchelenge District had the highest population density of 37.4 persons per square kilometre. It was followed by Chienge with a density of 28.8 persons per square kilometre. The least densely populated district was Milenge with 6.9 persons per square kilometre.

District	Area (Sq.Km)	Population Density (Population per Sq. Km)	
		2000	2010
Total	50,566	15.3	19.6
Chienge	3,965	21.1	28.8
Kawambwa	9,303	11	14.4
Mansa	9,900	18.3	23.1
Milenge	6,261	4.4	6.9
Mwense	6,718	15.7	17.8
Nchelenge	4,090	27.2	37.4
Samfya	10,329	15.8	19.3

Table 2.7: Area and Population Density (De jure) by District, Luapula Province 2000 and 2010

Source: 2000 and 2010 Censuses of Population and Housing

CHAPTER 3
POPULATION COMPOSITION AND
DEMOGRAPHIC CHARACTERISTICS

3.0 Summary

In 2010, Luapula Province had a young population with 47.9 percent of persons aged below 15 years.

The median age was 15.9 years. The median age was higher in urban areas at 17.2 years compared to 15.2 years in rural areas.

The Overall Dependency Ratio was recorded at 102.2 persons per 100 persons aged between 15 and 64 years. Child and Aged dependency ratios were 96.8 and 5.4, respectively.

The overall sex ratio was 97.1 males per 100 females, while the sex ratio at birth was 102.8 males per 100 females.

Chapter 3
Population Composition And Demographic Characteristics

3.1 Population Composition

Information on the age and sex structure is essential in the analysis of demographic processes such as fertility, mortality and migration. The analysis in this chapter focuses on the age and sex composition of the population.

3.2 Age And Sex Composition

The 2010 Census collected information on sex and age in completed years at the time of enumeration. Figure 3.1 presents the percent age distribution by sex for the province in 2010. The distribution shows higher percentages of population in the younger ages. The percentage decreases with increase in age.

Figure 3.1: Percent Age Distribution by Sex, Luapula Province 2010
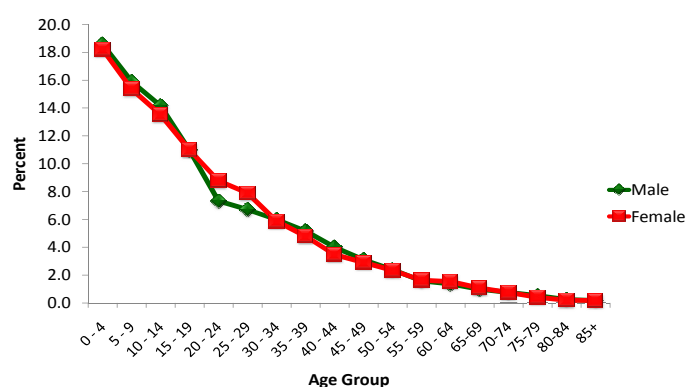
Source: 2010 Census of Population and Housing

A comparison between the sexes shows minimal differences in the percent age distribution with an exception of the population aged 20-29 years which had fewer males than females.

Figure 3.2 presents the percent age distribution by rural/urban. A comparison of the percent age distribution shows a higher percent of the population aged 0-9 years and 15-34 years in rural areas.

Figure 3.2: Percent Age Distribution by Rural/Urban, Luapula Province 2010
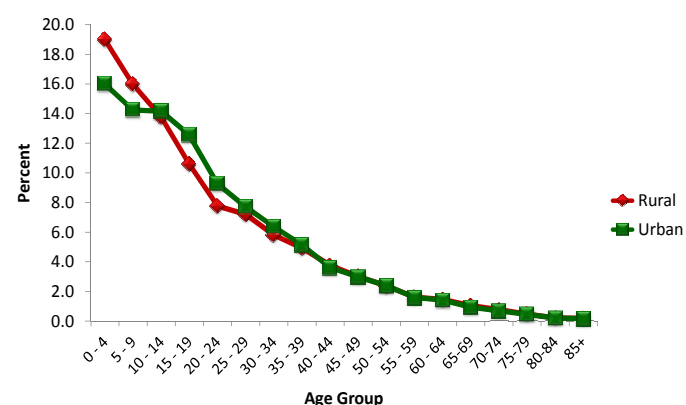
Source: 2010 Census of Population and Housing

Figure 3.2.1: Population Age and Sex Structure, Luapula Province 2010
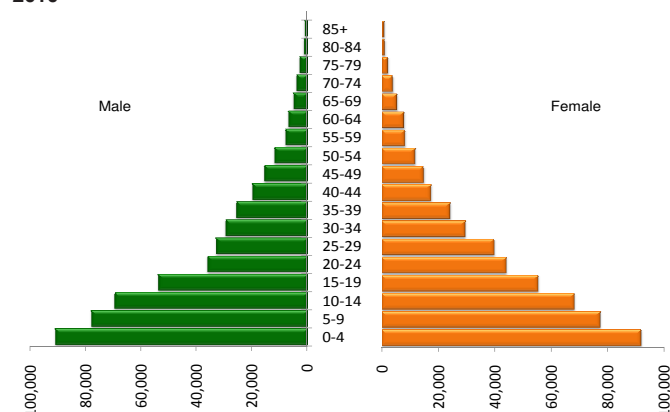
Source: 2010 Census of Population and Housing

For the purpose of policy interventions, proportions of some selected age groups have been presented. Selected age groups include adolescents aged 10-19 years; young people aged 10-24 years; children aged below 15 years; children aged below 18 years; persons in middle and later adolescence stages aged 15-19 years; youths aged 15-24 years; persons in the reproductive age group aged 15-49 years; youths aged 15-35 years; persons aged 15-64 years and the elderly aged 60 years and older and 65 years and older.

Figure 3.3 shows the population proportions by selected age groups. The population aged below 18 years had the highest percent at 54.5. The elderly population aged 65 years and older had the lowest percent at 2.7. The population aged 15-24 and 15-35 had proportions of 19.0 and 33.7 percent, respectively.

Figure 3.3: Population Proportions by Selected Age Groups, Luapula Province 2010
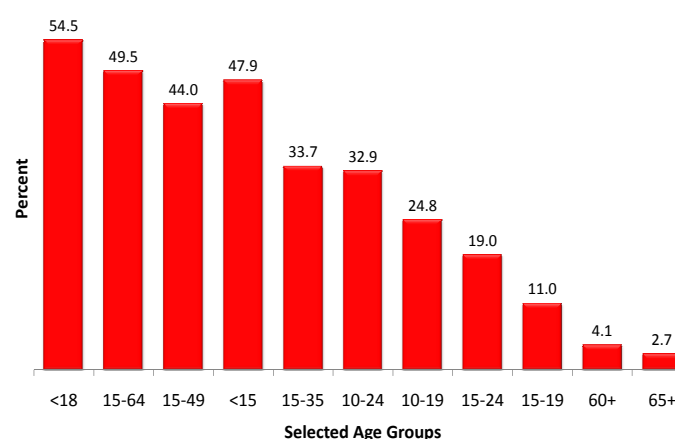
Source: 2010 Census of Population and Housing

Figure 3.4 shows the percent distribution of children aged below 15 years and the elderly (65 years and older) by district. Milenge District had the highest percent of children below 15 years at 51.3 percent while Mansa District had the lowest at 47.0 percent.

Figure 3.4: Percentage Distribution of Population Aged below 15 years and the Population 65 Years and Older by District, Luapula Province 2010
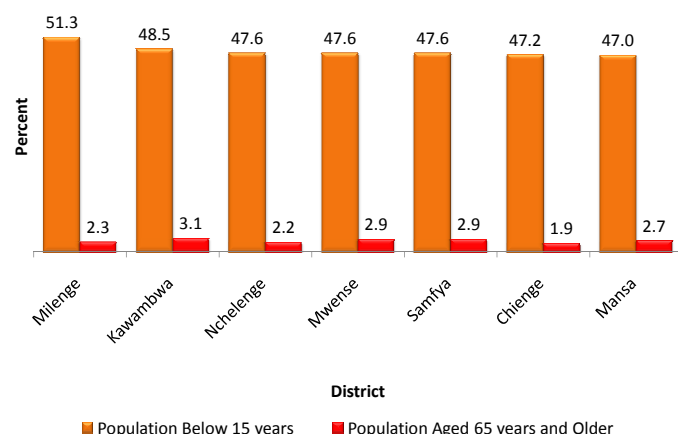
Source: 2010 Census of Population and Housing

3.3 Median Age

Median age is the age that divides the population into two numerically equal groups i.e. half the population are younger than that age while half are older. A median age that is lower than 20 years shows a young population; that between 20 and 30 years indicates an intermediate population that is either becoming younger or ageing; while a population with a median age above 30 years is an old population.

Figure 3.5 shows the median age for the province and rural/urban in 2010. The median age was 15.9 years in 2010. The median age was higher in urban areas at 17.2 years compared to rural areas at 15.5 years.

Figure 3.5: Median Age by Rural/Urban, Luapula Province 2010
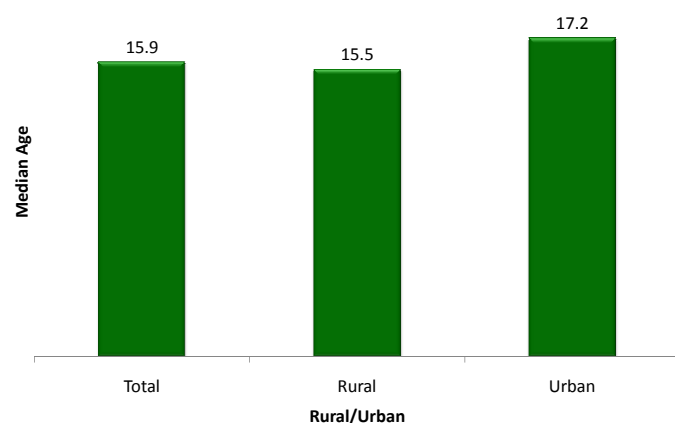
Source: 2010 Census of Population and Housing

Figure 3.6 shows the median age by sex and rural/urban. Generally, the median age for females was higher than those of males. Overall, the median age was 15.5 and 16.2 years for males and females, respectively.

Figure 3.6: Median Age by Sex and Rural/Urban, Luapula Province 2010
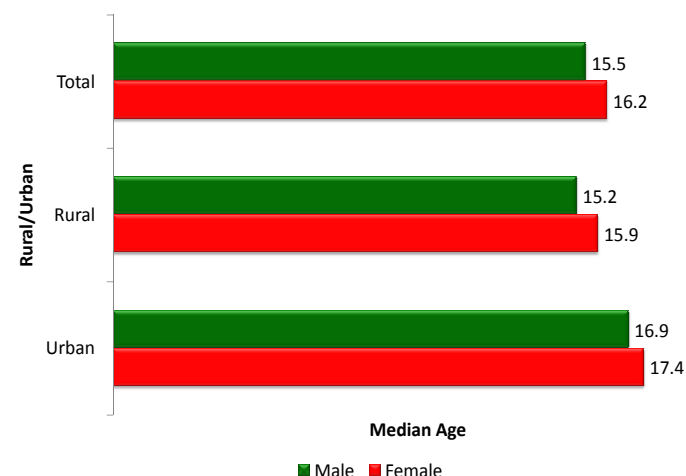
Source: 2010 Census of Population and Housing

Figure 3.7 shows the median age by district. The median age ranges from 14.5 years in Milenge District to 16.3 years in Chienge District.

Figure 3.7: Median Age by District, Luapula Province 2010
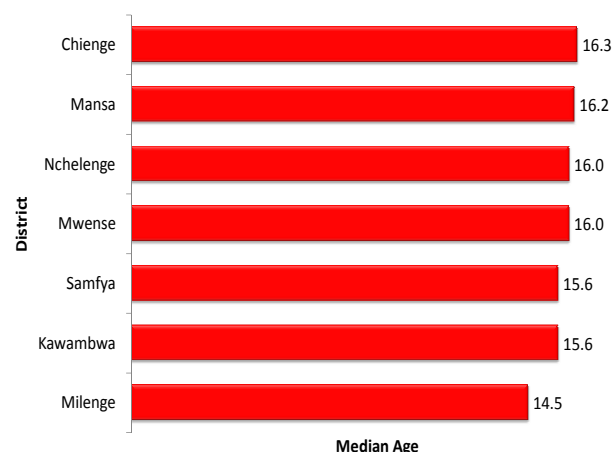
Source: 2010 Census of Population and Housing

3.4 Age Dependency Ratios

Age Dependency Ratio is the ratio of population aged 0-14 years and persons aged 65 years and older, per 100 persons in the working age group of 15-64 years old. It shows the burden of dependency on the productive population.

The following age dependency ratios have been calculated in this section:

a) *Child Dependency Ratio: The number of children aged below 15 years per 100 persons aged between 15 and 64 years*

b) *Aged Dependency Ratio: The number of persons aged 65 years and older per 100 persons aged between 15 and 64 years*

c) *Overall Dependency Ratio: The number of children below 15 years and elderly persons aged 65 and older years per 100 persons aged between 15 and 64 years.*

Table 3.1 shows Age Dependency Ratio in 1990, 2000 and 2010. In 2010, the Overall Dependency Ratio was 102.2 per 100 persons aged 15-64 years. The Child and Aged Dependency Ratios were 96.8 and 5.4 persons, respectively.

Table 3.1: Age Dependency Ratio, Luapula Province 1990, 2000 and 2010

Age Dependency Ratios	1990	2000	2010
Overall Dependency Ratio	93.5	101.2	102.2
Child Dependency Ratio	87.9	95.5	96.8
Aged Dependency Ratio	5.6	5.7	5.4

Source: 2010 Census of Population and Housing

Table 3.2 shows the Overall, Child and Aged Dependency Ratios by district. Milenge District had the highest Overall Dependency Ratio (115.3 persons) while Chienge District had the lowest (96.5 persons) per 100 persons aged 15-64 years.

Table 3.2: Overall, Child and Aged Dependency Ratios by District, Luapula Province 2010

District	Age Dependency Ratios		
	Overall	Child	Aged
Chienge	96.5	92.7	3.8
Kawambwa	106.8	100.3	6.5
Mansa	98.6	93.4	5.3
Milenge	115.3	110.4	4.9
Mwense	102.0	96.1	5.9
Nchelenge	99.0	94.7	4.3
Samfya	102.0	96.1	5.9

Source: 2010 Census of Population and Housing

3.5 Sex Composition

This section analyses the composition of males and females in the population using sex ratio. Sex ratio is the number of males per 100 females. This type of sex ratio is also called the masculinity ratio. A value above 100 indicates excess of males over females.

3.5.1 Sex Ratio and Percent Deficit of Males

Another indicator analysed is sex ratio at birth, which is the ratio of males per 100 females at birth. The percent deficit of males has been used to show the percent at which males are fewer than females. It is the difference between the male and female population divided by the total population, expressed as a percentage. A negative value shows a deficit of males while a positive value shows an excess of males.

Table 3.3 shows sex ratio and percent deficit of males by rural/urban and district. Luapula Province had fewer males per 100 females, with a sex ratio of 97.1. This indicates a deficit of males of 1.5 percent of the total population. In all the districts, there was a deficit of males.

Nchelenge District had the highest sex ratio at 99.3 males per 100 females with a 0.4 percent deficit of males. Samfya District had the lowest sex ratio at 96.0 males per 100 females, translating into a 2.1 percent deficit of males.

Table 3.3: Sex Ratio and Percent Deficit of Males by Rural/Urban and District, Luapula Province, 2010

Region/ District	Sex Ratio	Percent Male Deficit
Luapula Province	**97.1**	**-1.5**
Rural	97.5	-1.3
Urban	95.4	-2.4
District		
Chienge	98.0	-1.0
Kawambwa	96.7	-1.7
Mansa	96.8	-1.6
Milenge	97.0	-1.5
Mwense	96.1	-2.0
Nchelenge	99.3	-0.4
Samfya	96.0	-2.1

Source: 2010 Census of Population and Housing

3.5.2 Sex Ratio at Birth

The births in the last twelve (12) months were used as a proxy for the calculation of the Sex Ratio at birth. Figure 3.8 shows the Sex Ratios at birth by rural/urban and district. The Sex Ratio at birth in Luapula Province was 102.8 males per 100 females. In rural and urban areas, the Sex Ratio at birth was 102.6 and 104.0 males per 100 females, respectively.

At district level, Mwense and Nchelenge had the highest Sex Ratio at birth of 106.3 males per 100 females each, while Mansa had the lowest at 98.8 males per 100 females.

Figure 3.8: Sex Ratio at Birth by Rural/Urban and District, Luapula Province 2010
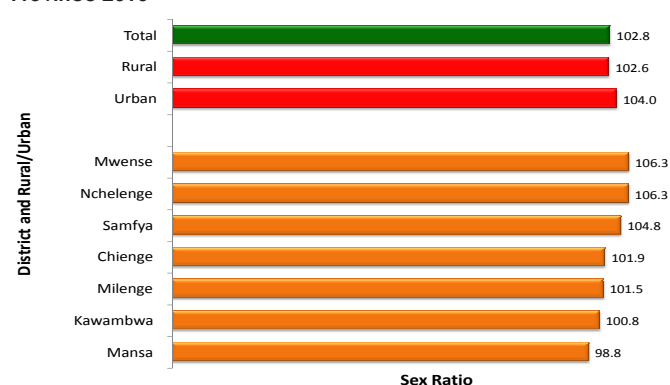
Source: 2010 Census of Population and Housing

CHAPTER 4
SOCIAL CHARACTERISTICS

4.0 Summary

In 2010, Luapula Province recorded 479,611 persons aged 15 years and older. Of these, 57.6 percent were married. Rural areas had a higher percentage of the population aged 15 years and older that were married (59.6 percent) compared to urban areas (49.7 percent).

For the population aged 15 years and older, the median age at first marriage was 20.3 years. The median age at first marriage was lower in rural areas at 20.2 years compared to urban areas at 20.7 years. Males had a higher median age at first marriage than females at 23.3 years and 18.5 years, respectively.

In 2010, Luapula Province had 194,962 households. Rural areas had more households at 157,432 compared to 37,530 in urban areas. The average household size was 5.1 persons. Male headed households had a larger average household size of 5.4 persons than female headed households with 4.0 persons.

The Protestants and Catholics represented 69.1 percent and 27.0 percent of the population, respectively. Muslims and other religious affiliation made up 1.1 percent of the population.

Persons aged below 18 years without birth certificates were reported at 87.9 percent of the total population below 18 years. Of the population aged 16 years and older, 86.5 percent had Green National Registration Cards.

Of the population aged 18 years and older, 65.4 percent were registered voters at the time of the census.

Chapter 4
Social Characteristics

4.1 Marital Status

Marital status is the categorization of the population in relation to whether an individual has never been married; is married, cohabiting, separated, divorced or widowed. Marital status was analysed for the population aged 15 years and older. In 2010, the population aged 15 years and older in Luapula Province was 479,611. Of these 225,539 were males and 254,072 were females.

Figure 4.1 shows the percentage distribution of the population of Luapula Province by marital status. The figure shows that 57.6 percent of the population aged 15 years and older was married and 29.1 percent was never married. The widowed and divorced made up 5.5 percent and 3.2 percent, respectively.

Figure 4.1: Percentage Distribution of Population Aged 15 Years and Older by Marital Status, Luapula Province 2010
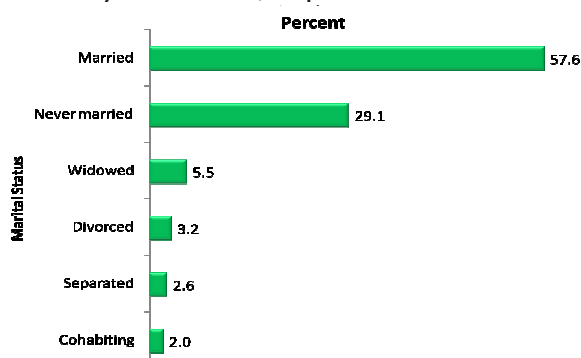
Source: 2010 Census of Population and Housing

Figure 4.2 shows the percent distribution of the population aged 15 years and older by marital status and rural/urban. The percent of the married aged 15 years and older was higher in rural areas at 59.6 percent compared with urban areas at 49.7 percent. Urban areas had a higher percent that had never married at 36.6 percent compared to rural areas at 27.1 percent.

Figure 4.2: Percentage Distribution of the Population 15 Years and Older by Marital Status and Rural/Urban, Luapula Province 2010
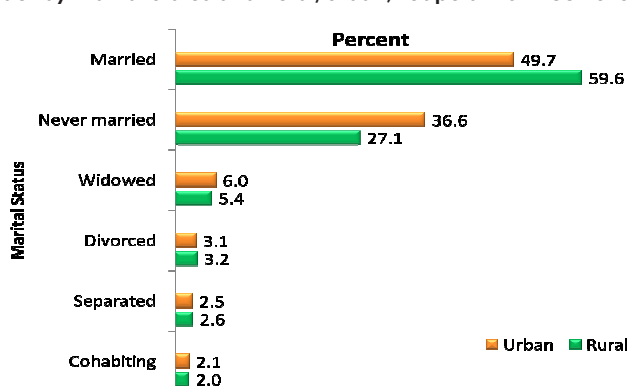
Source: 2010 Census of Population and Housing

Figure 4.3 shows the percent distribution of the population 15 years and older by marital status and sex. There were more males who had never been married at 36.4 percent compared with their female counterparts at 22.6 percent. More females were widowed (9.2 percent) compared with males at 1.3 percent.

Figure 4.3: Percentage Distribution of the Population 15 Years and Older by Marital Status and Sex, Luapula Province 2010
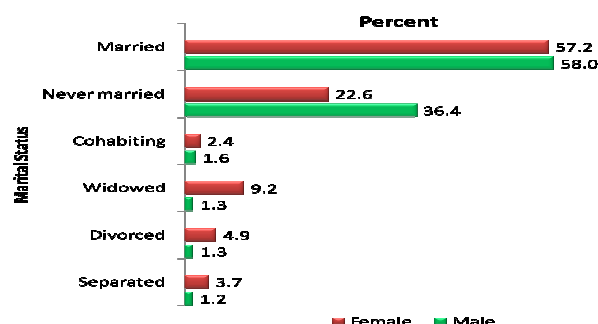
Source: 2010 Census of Population and Housing

4.2 Median Age At First Marriage

Median age at first marriage divides the married population into two parts, showing that 50 percent married before the median age and 50 percent married after reaching the median age.

Figure 4.4 shows the median age at first marriage by rural/urban, sex and district. The median age at first marriage for Luapula Province was 20.3 years for the population aged 15 years and older. The median age at first marriage was 20.2 years in rural areas and 20.7 years in urban. The median age for males was 23.3 years while that of females was 18.5 years.

At district level, Kawambwa had the highest median age at first marriage at 20.6 years while Milenge had the lowest at 20.0 years.

Figure 4.4: Median Age at First Marriage by Sex, District and Rural/Urban, Luapula Province 2010
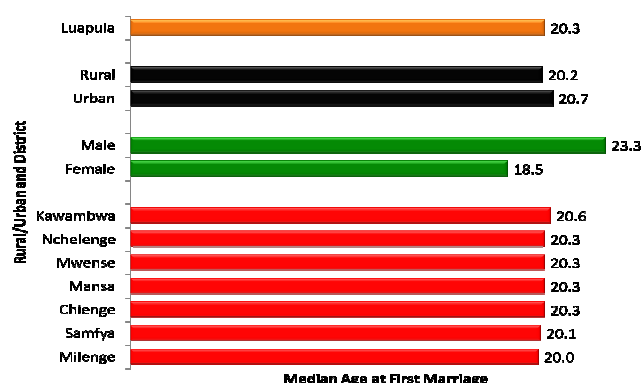
Source: 2010 Census of Population and Housing

4.3 Household Composition

Household composition is the description of the household according to some aspects of its members such as age, sex, relationship to head and size. It is determined by the people living together and their relationships to one another.

A *Household* refers to a group of people who normally live and eat together. These may or may not be related by blood, marriage or adoption, but make common provision for food or other essentials for living and they have only one person whom they all regard as head of household. A household can also have one member.

A **Household head** is a person all members of the household regard as the head. He or she makes day to day decisions governing the running of the household. In cases of one member households, the member is taken as the household head.

A **Usual household member** is a person who has been living in the household for at least 6 (six) months or has joined the household and intends to live with the household for six months or longer.

4.3.1 Household and Household Headship

In 2010, there were 194,962 household heads in Luapula Province. There were more households in rural than urban areas at 157,432 and 37,530 respectively. Household heads made up 19.7 percent of the population of Luapula Province. Figure 4.5 shows the distribution of household heads by age. The age group 30-34 years had the highest percentage of household heads at 15.4 percent. Households headed by persons aged below 20 years made up a total of 0.7 percent.

Figure 4.5: Percentage Distribution of Household Heads by Age Group, Luapula Province 2010
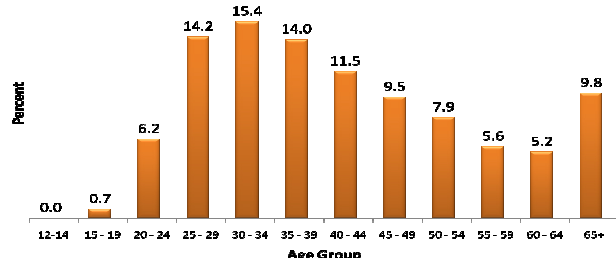
Source: 2010 Census of Population and Housing

Figure 4.6 shows the percentage distribution of household heads by sex and rural/urban. In Luapula Province, there were more male headed households at 77.9 percent compared to 22.1 percent for females. There were more male headed households in both rural and urban areas.

Figure 4.6: Percentage Distribution of Household Heads by Rural/Urban and Sex, Luapula Province 2010
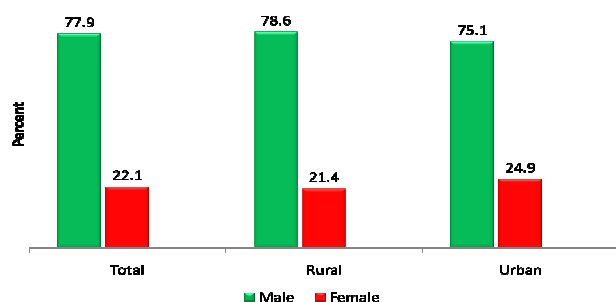
Source: 2010 Census of Population and Housing

4.3.2 Household Size

Figure 4.7 shows the average household size by rural/urban and district. The average household size in Luapula Province in 2010 was 5.1 persons. Urban areas had a higher average household size of 5.2 persons compared with 5.1 persons in the rural areas. The highest average household size was recorded in Milenge District at 5.7 persons and the lowest was in Chiengi District at 4.7 persons.

Figure 4.7: Average Household Size by District and Rural/Urban, Luapula Province 2010
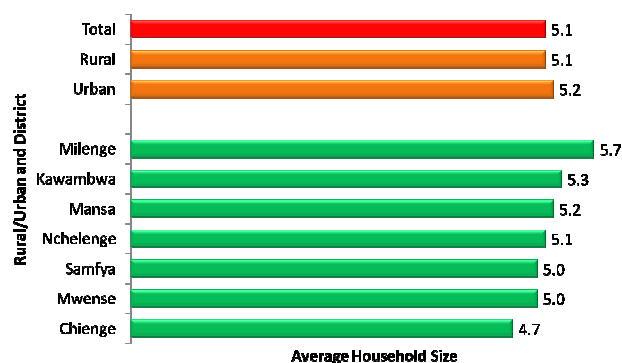
Source: 2010 Census of Population and Housing

Figure 4.8 shows the average household size by sex of household head, district and rural/urban. Male headed households had a higher average household size of 5.4 persons than female headed households with 4.0 persons.

Figure 4.8: Average Household Size by Sex of the Household Head, Rural/Urban and District, Luapula Province 2010
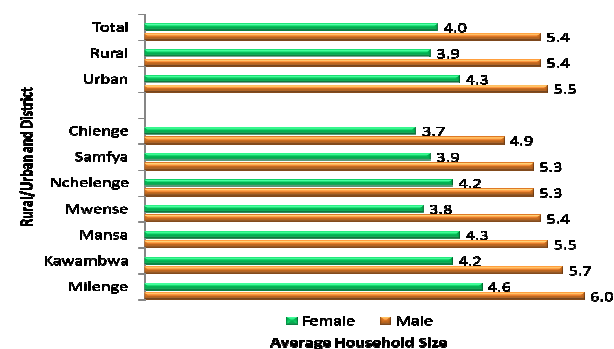
Source: 2010 Census of Population and Housing

4.3.3 Relationship to the Head

Figure 4.9 shows percentage distribution of population by relationship to the household head. In 2010, 64.2 percent of the population in households were biological children to the household heads. Spouses constituted 17.9 percent while 7.2 percent were grand children to the household head.

Figure 4.9: Percentage Distribution of the Population by Relationship to Household Head, Luapula Province 2010
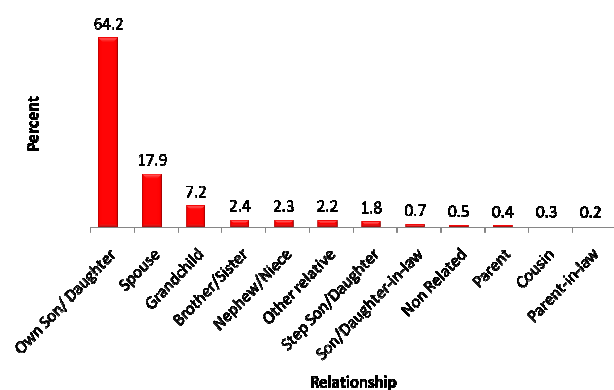
Source: 2010 Census of Population and Housing

4.4 Religion

Figure 4.10 shows the percentage distribution of the population by religious affiliation. In 2010, 69.1 percent of the total population in Luapula Province was Protestant while 27.0 percent were Catholic.

Figure 4.10: Percentage Distribution of Population by Religious Affiliation, Luapula Province 2010
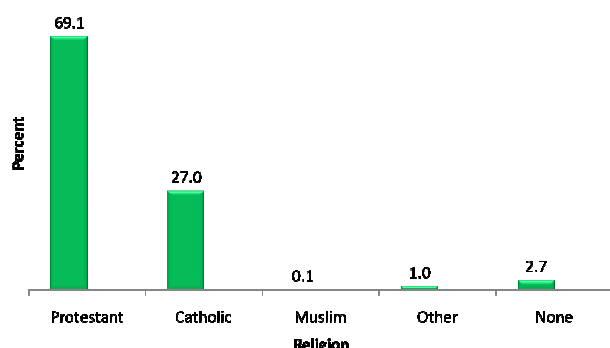
Source: 2010 Census of Population and Housing

4.5 Birth Certificate

Figure 4.11 shows the percentage distribution of the population aged below 18 years with and without birth certificates and those who did not know whether they had birth certificates. In 2010, 87.9 percent of those aged below 18 years did not have birth certificates. The proportion of those without birth certificates was higher in rural at 90.6 percent compared to urban areas at 75.9 percent. The proportion of those with birth certificates was higher in urban areas (17.3 percent) than rural areas (5.4 percent).

Figure 4.11: Percentage of Persons Aged Below 18 Years With and Without Birth Certificates by Rural/Urban, Luapula Province 2010
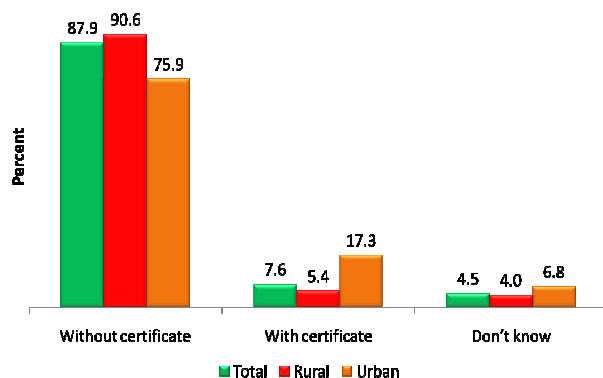
Source: 2010 Census of Population and Housing

Figure 4.12 shows the distribution of persons aged below 18 years without birth certificates by district. Chienge District had the highest proportion of persons without birth certificates at 92.1 percent, while Mansa District had the lowest at 81.0 percent.

Figure 4.12: Percentage Distribution of Population Aged Below 18 Years Without Birth Certificates by District, Luapula Province 2010
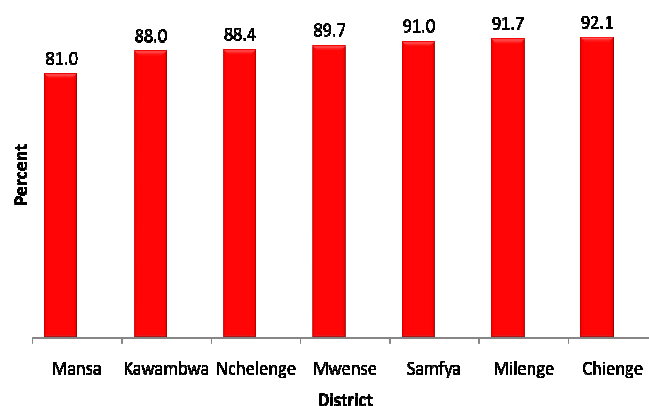
Source: 2010 Census of Population and Housing

4.6 Holders of Green National Registration Cards

In Zambia, the age at which one is required to obtain a Green National Registration Card (NRC) is 16 years. Figure 4.13 shows the percent distribution of the population aged 16 years and older with green National Registration Cards by sex, district and rural/urban. In 2010, 456,630 citizens in Luapula Province were aged 16 years and older. Of these, 86.5 percent had NRCs.

Figure 4.13: Percentage Distribution of Population (16 Years and Older) with Green National Registration Cards by Sex, District and Rural/Urban, Luapula Province 2010
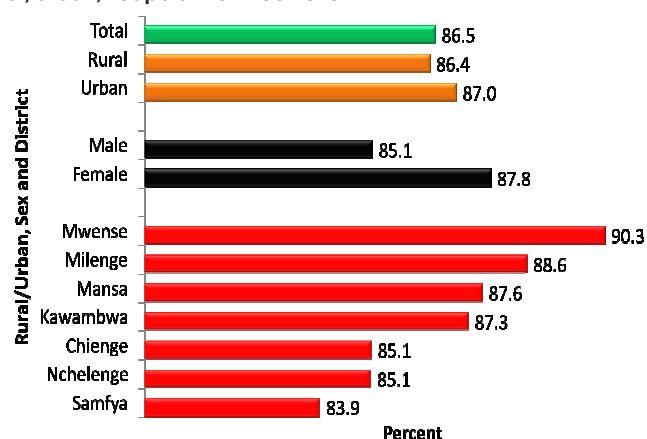
Source: 2010 Census of Population and Housing

Urban areas had a higher percentage of persons with Green National Registration Cards at 87.0 percent compared with rural areas at 86.4 percent. The district with the highest percentage of persons with green NRCs was Mwense at 90.3 percent while Samfya had the lowest at 83.9 percent.

4.7 The Voting Population

The 2010 Census collected information on the number of registered voters at the time of the Census. This included people who were registered during the previous registration exercise as well as those registered during the 2010 registration exercise.

In Luapula Province, there were a total of 417,745 eligible voters (18 years and older) of which 273,141(65.4 percent) were registered voters. Table 4.1 shows the percentage distribution of eligible and registered voters (18 years and older) by rural/urban and sex. In rural and urban areas, 79.8 and 20.2 percent were registered voters, respectively. Males made up 47.6 percent while females made up 52.4 percent of registered voters.

Table 4.1: Percentage Distribution of Eligible and Registered Voters (18 Years and Older) by Rural/Urban and Sex, Luapula Province 2010

Rural/Urban and Sex	Eligible Voters(18 Years and Older)	Registered voter
Total	417,745	273,141
Rural	79.5	79.8
Urban	20.5	20.2
Sex		
Male	46.7	47.6
Female	53.3	52.4
Source: 2010 Census of Population and Housing		

Figure 4.14 shows the percentage of registered voters among eligible voters by district. The percentage of registered voters was highest in Kawambwa District at 75.2 percent and the lowest was in Chienge District at 53.1 percent.

Figure 4.14: Percentage of Registered Voters Among Eligible Voters by District, Luapula Province 2010
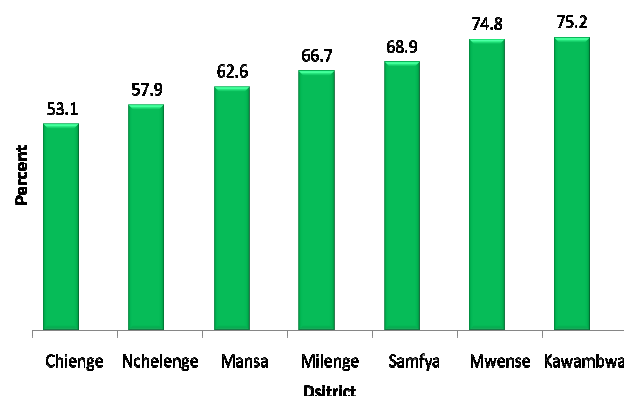
Source: 2010 Census of Population and Housing

CHAPTER 5
EDUCATION CHARACTERISTICS

5.0 Summary

The literacy rate at provincial level was 62.6 percent. Literacy rates for rural and urban areas were 59.2 and 76.1 percent, respectively. Males had a higher literacy rate (66.9 percent) than females (58.5 percent).

Of the population aged 5 years and older, 31.1 percent were currently attending school. The provincial net primary and secondary school attendance rates were 64.0 percent and 35.9 percent, respectively.

The net primary school attendance rate was 61.5 percent in rural areas and 74.4 percent in urban areas. The net secondary school attendance rate was 30.7 percent in rural areas and 54.6 percent in urban areas.

The Gender Parity Index was 0.89, indicating that there were gender inequalities in school attendance for males and females. The rural and urban areas, school attendance Gender Parity Index was 0.88 and 0.94, respectively.

Of the population aged 25 years and older that ever attended school, 63.4 percent had completed primary school, 29.1 percent had completed secondary school and 7.0 percent had completed tertiary education.

In rural areas, the completion rate was 69.6 percent, 25.4 percent and 4.4 percent for primary, secondary and tertiary education, respectively. In urban areas, the highest completion rate was for primary at 42.1 percent followed by secondary at 41.9 percent and tertiary education at 15.6 percent.

Sex differentials shows that a high percentage of females (73.3 percent) have completed primary education compared to 54.3 percent for males. At secondary and tertiary levels, males had higher completion rates of 36.1 percent and 9.3 percent, respectively. Females had completion rates of 21.6 percent for secondary and 4.4 percent for tertiary.

Chapter 5
Education Characteristics

5.1: Introduction
Education is a basic human right and is of central importance to the economic and social development of a nation. There are various benefits of education such as promoting economic growth, national productivity, innovations and social cohesion.

The current Education Policy supports free primary education for all. This is in line with the second Millennium Development Goal which is to 'achieve universal primary education, that is to ensure by 2015 children everywhere, boys and girls alike, will be able to complete a full course of primary schooling' (UN, 2000).

The population censuses in general provide a good basis for monitoring the participation of the population in an education system. The 2010 Census captured the education characteristics of the population such as literacy, school attendance, educational attainment, professional or vocational education attainment and fields of study.

5.2: Concepts And Definations
The following have been used in this chapter:

School Attendance
This is defined as attendance at any accredited educational institution or programme, public or private, for organized learning at any level of education.

Gross School Attendance Rate
Gross school attendance rate is defined as the ratio of the population aged five years and older attending a specified education level to the applicable official school-age population. In some instances where there is extensive under-age and over-age enrolment, the ratio can be over 100 percent. This indicator is mainly used to measure the absorption capacity of an education system at any designated level.

Net School Attendance Rate
The net school attendance rate measures the percentage of the school-age population that is attending a designated level of education. This indicator is much more refined than the gross attendance rates and is widely used in education planning. The gross and net attendance rates are used to determine the extent of under and over age school attendance in an education system.

Educational Attainment
This is the highest level of formal education that an individual has completed regardless of duration in school. It is the highest grade completed within the most advanced level attended in the educational system of the country where the education was received.

Literacy
Literacy refers to the ability to read and write in any language. Members of the population who are able to read and write are literate, while those who cannot read and write in any language are considered illiterate.

Gender Parity Index
The Gender Parity Index (GPI) is the number of female students enrolled in primary, secondary and tertiary education to the number of male students in each level. A GPI of less than 1 indicates that there are fewer females than males in the formal education system to the appropriate school-age population. A gender parity index of more than 1 means that there are more females than males attending school. A score of 1 reflects equal enrolment rates for males and females.

5.3. Literacy
Figure 5.1 shows literacy rates of person aged 5 years and older by sex and rural/urban in 2000 and 2010. At provincial level, the percentage of persons aged 5 years and older that were literate in 2010 was 62.6 percent. This was an increase of 14.2 percentage points from 48.4 percent in 2000. The literacy rate for males was higher (66.9 percent) than that of females (58.5 percent). The literacy in rural and urban areas increased for both males and females between 2000 and 2010.

Figure 5.1: Literacy Rates of Population Aged 5 years and Older by Sex and Rural/Urban, Luapula Province 2000 and 2010
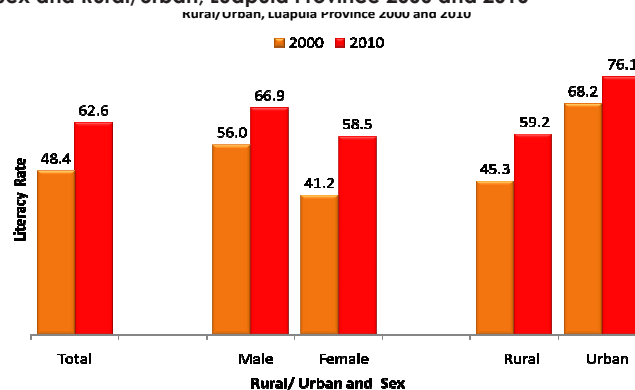
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.2 shows literacy rates for the population aged 5 years and older by district. The districts with the highest literacy rates in 2010 were Kawambwa and Mansa with 68.9 percent and 68.6 percent, respectively. Chienge district had the lowest literacy rate at 51.6 percent.

Figure 5.2: Literacy Rate for Persons Aged 5 years and Older by District, Luapula Province 2010
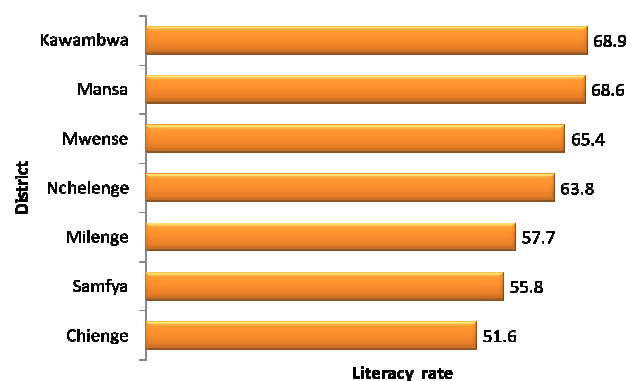
Source: 2010 Census of Population and Housing

5.3.1: Literacy Rates for the Youth Population (15 –24 years)

Youth literacy is one of the indicators used to assess the achievement of the universal primary education. Figure 5.3 shows the literacy rate for the population aged 15 to 24 years by sex and rural/urban. At provincial level, youth literacy was 83.8 percent in 2010. This was an increase from 62.3 percent in 2000. Between 2000 and 2010, male and female literacy rates increased by 18.0 percentage points for males and 24.4 percentage points for females. The literacy rates for both rural and urban areas increased between 2000 and 2010.

Figure 5.3: Literacy Rate for the Youth Population (15 to 24 years) by Sex and Rural/Urban, Luapula Province 2000 and 2010
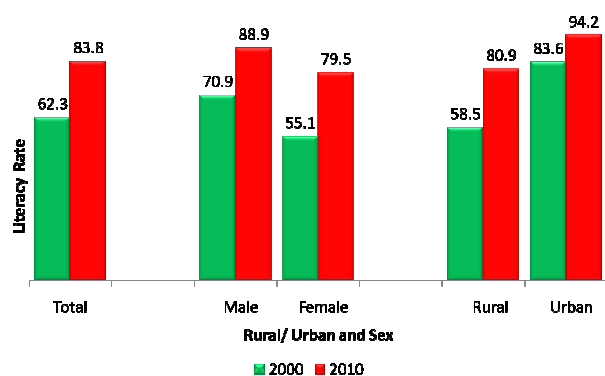
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.4 shows the literacy rate for the population aged 15 to 24 years by district. Kawambwa District had the highest youth literacy rate (90.7 percent) while Chienge District had the lowest (70.6 percent).

Figure 5.4: Literacy Rate for the Youth Population (15 to 24 years) by District, Luapula Province 2010
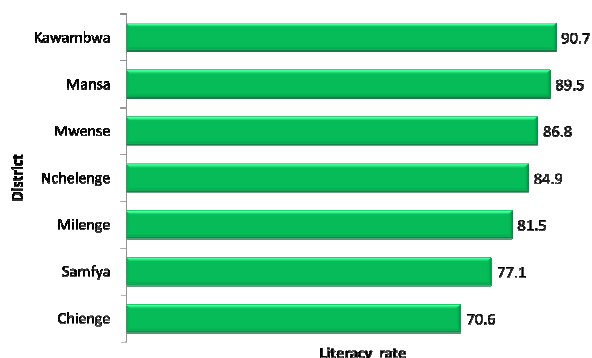
Source: 2010 Census of Population and Housing

5.3.2: Literacy Rates for Adult Population (15 Years and Older)

Figure 5.5 shows the adult literacy rate for the population aged 15 years and older by sex and rural/urban. The adult literacy rate at provincial level increased from 61.5 percent in 2000 to 77.9 percent in 2010. For both males and females, the adult literacy rate improved between 2000 and 2010.

Figure 5.5: Literacy Rate for the Adult Population (15 Years and Older) by Sex and Rural/Urban, Luapula Province 2000 and 2010
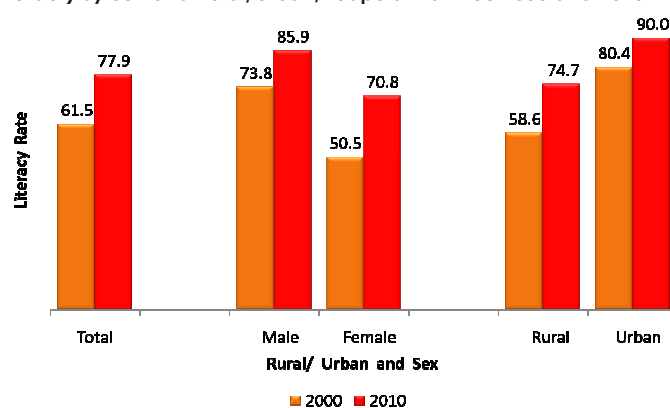
Source: 2000 and 2010 Censuses of Population and Housing

In 2010, the adult literacy rate for urban areas was higher (90.0 percent) than that of rural areas (74.7 percent). The percentage point increase in the adult literacy rate between 2000 and 2010 was higher in rural (16.1) than urban areas (9.6).

Figure 5.6 shows the literacy rate for the adult population (15 years and older) by district. Kawambwa district had the highest adult literacy rate at 86.1 percent. It was followed by Mansa District at 84.2 percent. Chienge District had the lowest adult literacy rate at 64.1 percent.

Figure 5.6: Literacy Rate for the Adult Population (15 Years and Older) by District, Luapula Province 2010
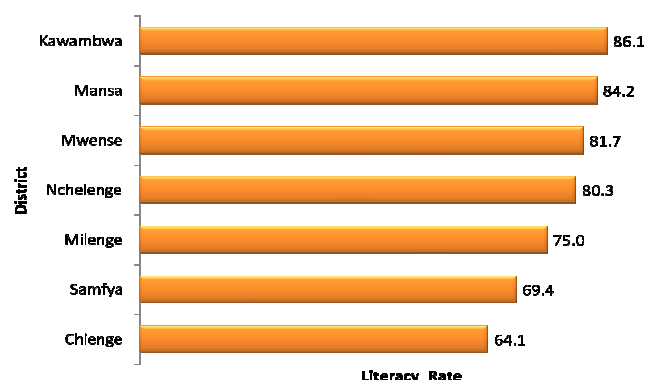
Source: 2010 Census of Population and Housing

5.4: School Attendance

The official primary school entry age in Zambia is seven years. Grades 1 to 7 correspond to pupils aged 7 to 13 years while 8 to 9 correspond to pupils aged 14 to 15 years. Grades 10 to 12 correspond to pupils aged 16 to 18 years. The population above 18 years is expected to be in higher institutions of learning.

Figure 5.7 shows the percent of the population aged 5 years and older that were currently attending school by sex and rural/urban. At provincial level, 31.1 percent of the population was currently attending school in 2010. This was an increase from 23.1 percent in 2000.

Figure 5.7: Percentage of Population (5 years and older) Currently Attending School by Sex and Rural/Urban, Luapula Province 2000 and 2010


Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.9: Percentage Distribution of the Population (5 years and older) Currently Attending School by Age Group and Rural/Urban, Luapula Province 2010
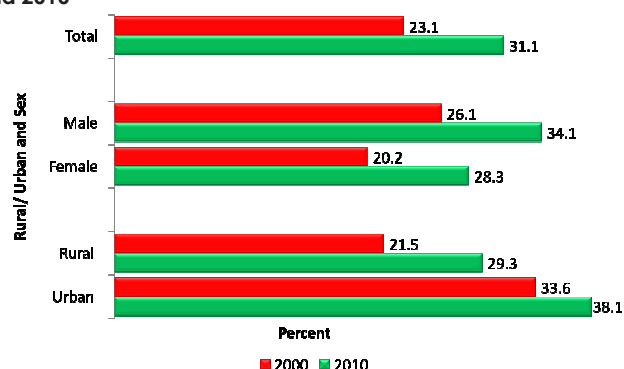
Source: 2010 Census of Population and Housing

In rural and urban areas, the percentage of the population (5 years and older) that were currently attending school in 2010 was 29.3 percent and 38.1 percent, respectively. This shows an increase of 7.8 percentage points for rural areas and 4.5 percentage points in urban areas. The percentage of males currently attending school increased from 26.1 percent in 2000 to 34.1 percent in 2010 while that of females increased from 20.2 percent in 2000 to 28.3 percent in 2010.

Figure 5.8 shows the percentage of the population (5 years and older) currently attending school by 5 year age groups. The figure shows that for all the age groups, there was an increase in the proportion of the population that was currently attending school. The age group 10-14 had the highest proportion currently attending school at 77.9 percent in 2010. This shows an increase of 11.5 percentage points from 66.4 percent in 2000. The current school attendance rate for the age group 15-19 years increased from 39.6 percent in 2000 to 62.5 percent in 2010.

Figure 5.8: Percentage of the Population Currently Attending School by 5 Year Age Groups, Luapula Province 2000 and 2010
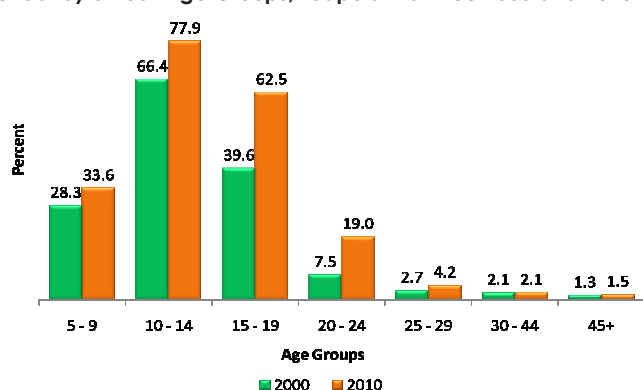
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.9 shows the percent distribution of the population (5 years and older) currently attending school by age group and rural/urban. Across all age groups, the population currently attending school was higher in urban than in rural areas. The age group 10-14 had the highest proportion of the population currently attending school in both rural and urban areas at 75.4 percent and 87.8 percent, respectively.
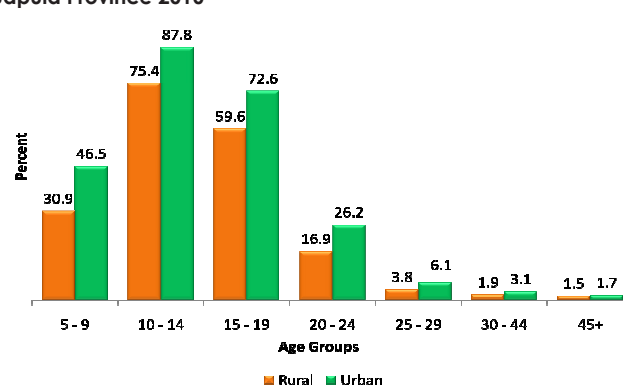
Figure 5.10 shows the percent distribution of the population currently attending school by sex and age group. There were more females currently attending school in the age group (5 – 9 years) than males. The age group 10-14 had the highest percentage of the population currently attending school for both males and females at 78.3 percent and 77.4 percent, respectively.

Figure 5.10: Percentage Distribution of the Population (5 years and older) Currently Attending School by Sex and Age Group, Luapula Province 2010
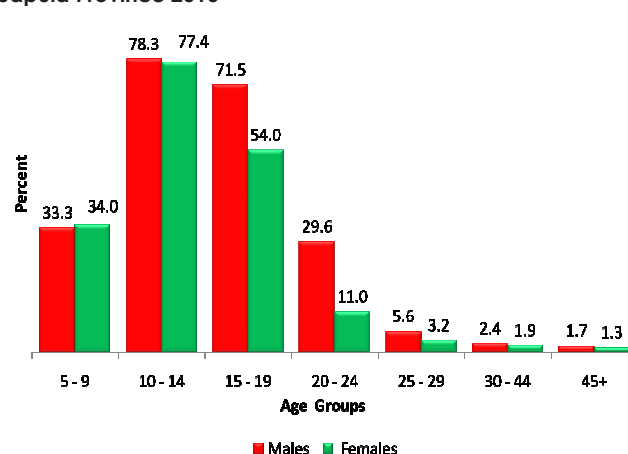
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.11 shows the percent of the population (5 years and older) that was currently attending school by district. Kawambwa District had the highest proportion of the population that was currently attending school at 34.2 percent while Chienge District had the lowest at 25.3 percent.

Figure 5.11: Percentage Distribution of Population (5 years and older) Currently Attending School by District, Luapula Province 2010
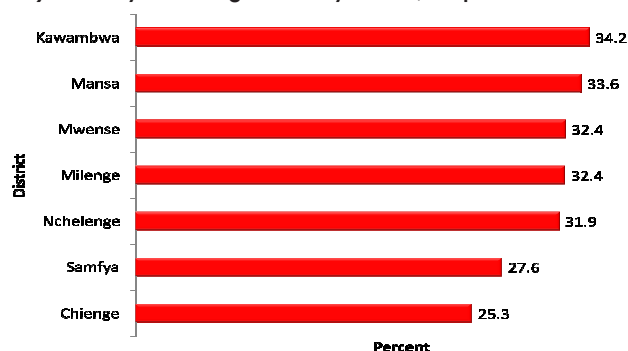
Source: 2010 Census of Population and Housing

5.4.1 Primary School Attendance Rate

Figure 5.12 shows the percentage of the population aged 7 to 13 years that was currently attending primary school by sex and rural/urban. Primary school attendance rate increased from 49.4 percent in 2000 to 65.7 percent in 2010. In 2010, 62.7 percent of the population aged 7-13 years was currently attending primary school in rural areas, compared to 78.5 percent in urban areas.

Figure 5.12: Percentage of the Population Aged 7 to 13 Years Currently Attending Primary School by Sex and Rural/Urban, Luapula Province 2000 and 2010
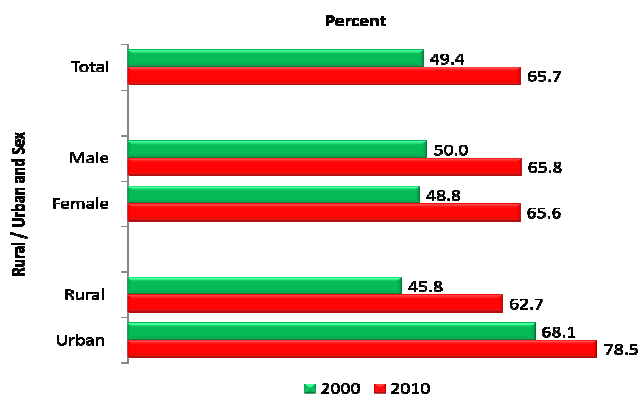
Source: 2000 and 2010 Censuses of Population and Housing

The primary school attendance rate for males increased from 50.0 percent in 2000 to 65.8 percent in 2010 while that of females increased from 48.8 percent in 2000 to 65.6 percent in 2010.

Current primary school attendance rate by district is shown in Figure 5.13. Kawambwa District had the highest proportion of the population currently attending primary school (71.3 percent) while Chienge District had the lowest (57.3 percent).

Figure 5.13: Percentage of the Population (7 to 13 years) Currently Attending Primary School by District, Luapula Province 2010

Source: 2010 Census of Population and Housing

5.4.2 Gross Primary School Attendance Rate

Figure 5.14 shows the gross primary school attendance rate by sex and rural/urban. The gross primary school attendance rate for Luapula Province increased from 73.8 percent in 2000 to 88.6 percent in 2010. In 2010, the gross primary attendance rate was higher in urban areas (97.9 percent) than in rural areas (86.5 percent). Males recorded a higher gross primary school attendance rate at 89.8 percent compared to females at 87.3 percent.

Figure 5.14: Gross Primary School Attendance Rate by Sex and Rural/Urban, Luapula Province, 2000 and 2010
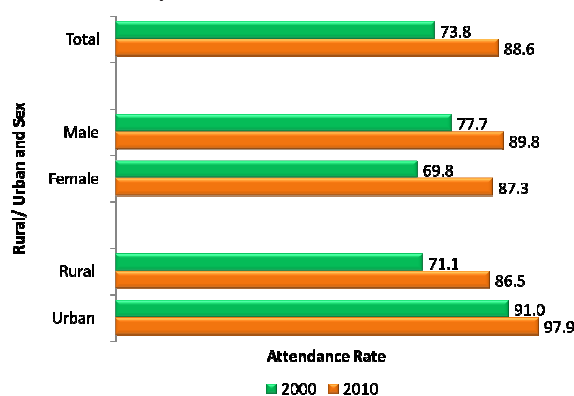
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.15 shows the gross primary school attendance rate by district. Nchelenge District had the highest gross primary school attendance rate at 95.4 percent while Samfya District had the lowest at 78.2 percent.

Figure 5.15: Gross Primary School Attendance Rate by District, Luapula Province 2010
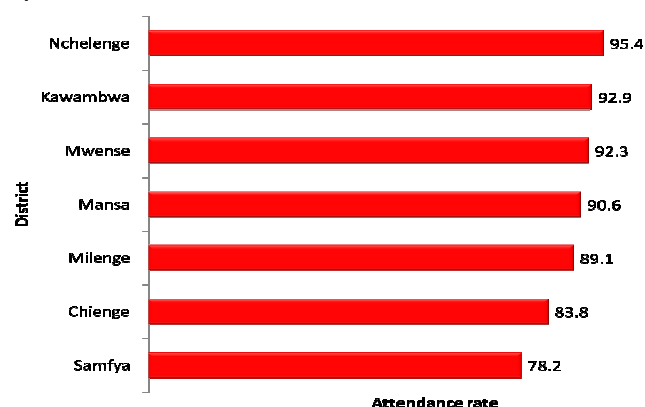
Source: 2010 Census of Population and Housing

5.4.3 Net Primary School Attendance Rate

The net primary school attendance rate shows the percentage of the primary school age population (7 to 13 years) currently attending primary grades (Grades 1 to 7). Figure 5.16 shows the net primary school attendance rate by sex and rural/urban. The net primary school attendance rate for Luapula Province increased from 54.4 percent in 2000 to 64.0 percent in 2010. The increase in the net primary school attendance rate means that the percentage of eligible primary school age children not in school declined from 45.6 percent in 2000 to 36.0 percent in 2010.

In rural areas, the net primary school attendance rate increased from 51.5 percent in 2000 to 61.5 percent in 2010 while that of urban areas increased from 72.9 percent to 74.4 percent during the same period. Between 2000 and 2010, the net primary school attendance rate for males increased from 55.1 percent to 64.0 percent and from 53.6 percent to 63.9 percent for females.

Figure 5.16: Net Primary School Attendance Rate by Sex and Rural/Urban, Luapula Province 2000 and 2010
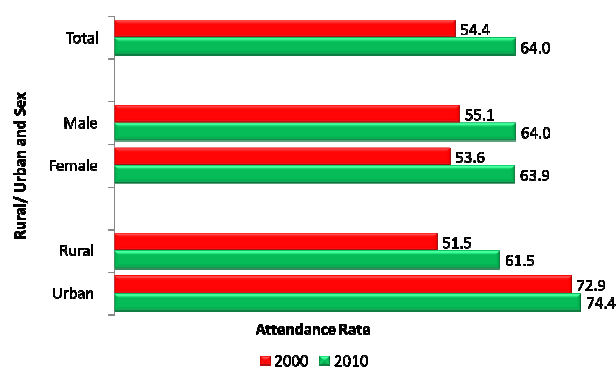
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.17 shows the net primary school attendance rate by district. Kawambwa District had the highest net primary school attendance rate at 69.1 percent while Chienge District had the lowest at 56.7 percent.

Figure 5.17: Net Primary School Attendance Rate by District, Luapula Province 2010
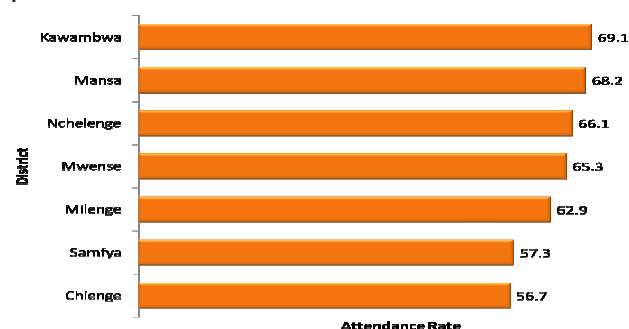
Source: 2010 Census of Population and Housing

5.4.4 Gross Secondary School Attendance Rate

In Zambia, the official secondary school age ranges from 14-18 years. Figure 5.18 shows gross secondary school attendance rate by sex and rural/urban. The overall gross secondary school attendance rate for the population aged 14-18 years increased from 30.9 percent in 2000 to 57.8 percent in 2010. In rural areas, the gross secondary school attendance rate increased from 25.6 percent in 2000 to 50.0 percent in 2010 while in urban areas it increased from 61.3 percent in 2000 to 85.9 percent. The gross secondary school attendance rate for males increased from 37.7 percent in 2000 to 67.7 percent in 2010 while that of females increased from 24.6 percent to 48.2 percent during the same period.

Figure 5.18: Gross Secondary Attendance Rate by Sex and Rural/Urban, Luapula Province 2000 and 2010
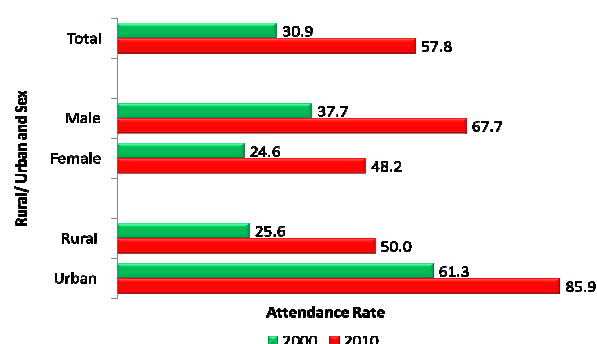
Source: 2000 and 2010 Censuses of Population and Housing

Figure 5.19 shows the gross secondary school attendance rate by district. Milenge District had the highest gross secondary school attendance rate at 68.7 percent while Chienge District had the lowest at 39.8 percent.

Figure 5.19: Gross Secondary School Attendance Rate by District, Luapula Province 2010
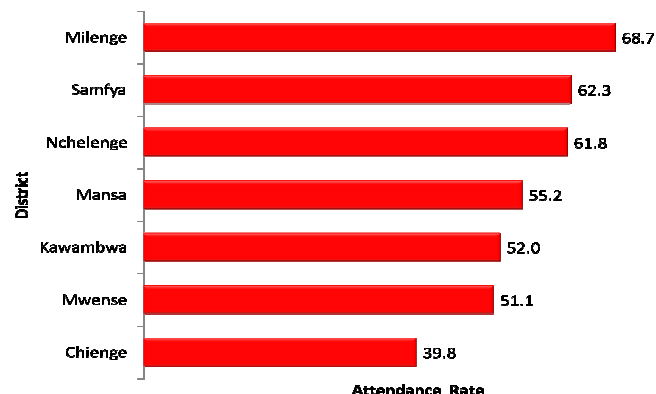
Source: 2010 Census of Population and Housing

5.4.5 Net Secondary School Attendance Rate

The net secondary school attendance rate shows the percentage of the secondary school age population (14-18 years) currently attending secondary school grades 8 to 12. Figure 5.20 shows the net secondary school attendance rate by sex and rural/urban. The net secondary school attendance rate increased from 21.8 percent in 2000 to 35.9 percent in 2010. In 2000, the net secondary school attendance rate for rural areas was 17.9 percent while that of urban areas was 44.1 percent. The net secondary school attendance rate in 2010 increased to 30.7 percent and 54.6 percent in rural and urban areas, respectively. More children in urban areas were attending secondary school than their rural counterparts.

Figure 5.20: Net Secondary School Attendance Rate by Sex and Rural/Urban, Luapula Province 2000 and 2010
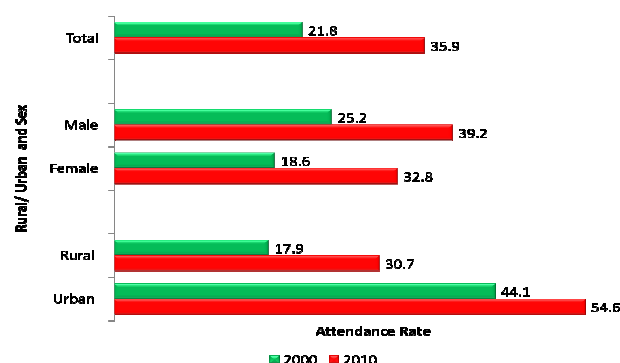
Source: 2000 and 2010 Censuses of Population and Housing

In both 2000 and 2010, the net secondary school attendance rate for males was higher than that of females. The net secondary school attendance rate for males increased from 25.2 percent in 2000 to 39.2 percent in 2010 while that of females increased from 18.6 percent in 2000 to 32.8 percent in the same period.

Figure 5.21 shows the net secondary school attendance rate by district. In 2010, Mansa District recorded the highest net secondary school attendance rate at 45.4 percent while Chienge District had the lowest at 23.0 percent.

Figure 5.21: Net Secondary School Attendance Rate by District, Luapula Province 2010
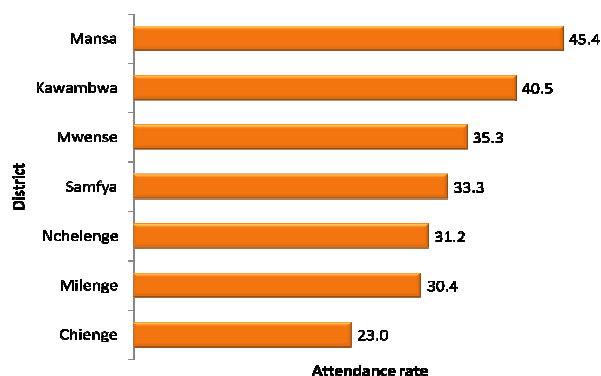
Source: 2010 Census of Population and Housing

5.5 Gender Parity Index

Gender parity index shows the disparities in access to education between males and females. The index helps in addressing unequal access to education among females. Figure 5.22 shows gender parity index by district and rural/urban. Overall, the gender parity index for those currently attending school was 0.89, implying that there were fewer females than males who were currently attending school.

Figure 5.22: Gender Parity Index by District and Rural/Urban, Luapula Province 2010
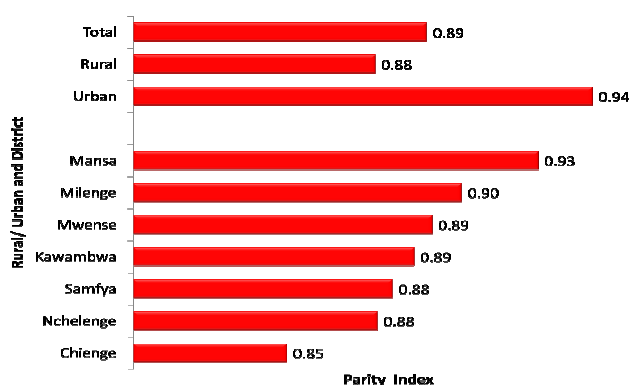
Source: 2010 Census of Population and Housing

The GPI for rural areas was 0.88 while that of urban areas was 0.94. Mansa District had the highest GPI of 0.93 while Chienge District had the lowest at 0.85.

Figure 5.23 shows the gender parity index for the population currently attending primary school by district and rural/urban. The Gender Parity Index for those currently attending primary school was 0.96. The GPI for rural areas was 0.95 while that of urban areas was 1.02. Milenge District had the highest GPI of 0.98 while Chienge District had the lowest at 0.93.

Figure 5.23: Gender Parity Index for Population Currently Attending Primary School by Rural/Urban and District, Luapula Province 2010
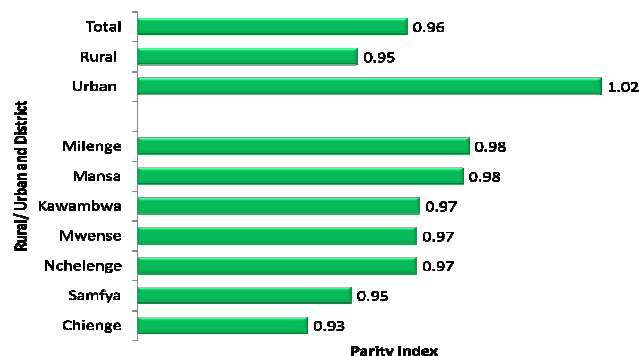
Source: 2010 Census of Population and Housing

Figure 5.24 shows the Gender Parity Index for the population currently attending secondary school by district and rural/urban. The GPI for those currently attending secondary school was 0.74. In rural areas, the GPI was 0.69 while that of urban areas was 0.85. Mansa District had the highest GPI of 0.83 while Chienge District had the lowest at 0.59.

Figure 5.24: Gender Parity Index for the Population Currently Attending Secondary School by Rural/Urban and District, Luapula Province 2010
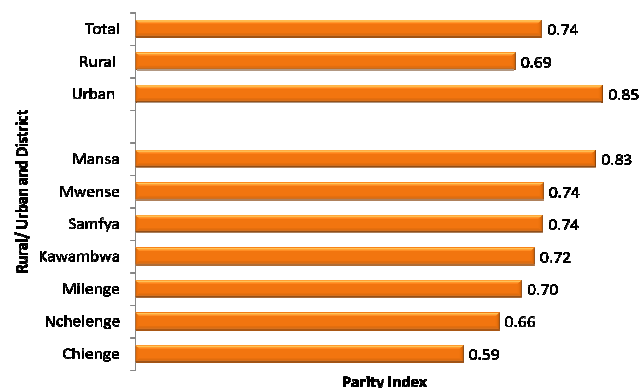
Source: 2010 Census of Population and Housing

5.6 Highest Education Level Completed

Educational attainment is the highest level of education completed in the country where the education was received (United Nations, 1998). The United Nations recommends that educational attainment be included among the basic areas of census inquiry and that data on the subject be collected for all persons 5 years of age and older.

Indicators on highest education qualification level completed and highest professional/vocational qualification in this analysis uses the population aged 25 years and older. Note that the population under 25 years of age may still be attending school and that the measures for these persons would tend to understate their eventual educational attainment to some degree (Siegel and Swanson, 2004).

Figure 5.25 shows the percentage distribution of the population (25 years and older) that ever attended school by highest education level completed and rural/urban. In 2010, 63.4 percent had completed primary level, 29.1 percent had completed secondary and 7.0 percent had completed tertiary.

Figure 5.25: Percentage Distribution of Population (25 Years and Older) that Ever Attended School by Highest Education Level Completed and Rural/Urban, Luapula Province 2010
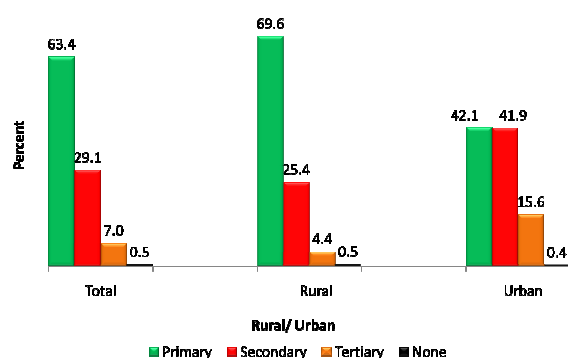
Source: 2010 Census of Population and Housing

In rural areas, 69.6 percent of the population (25 years and older) that ever attended school reported having completed primary education as the highest level while 42.1 percent in urban areas had completed the same level of education. The percentage of the population that had completed tertiary education was higher in urban areas (15.6 percent) than rural areas (4.4 percent).

Figure 5.26 shows the percent distribution of the population (25 years and older) that ever attended school by highest education level completed and sex. There were more females than males who had primary education as the highest level completed at 73.3 percent and 54.3 percent, respectively. The percentage of males who had secondary and tertiary as their highest level of education completed was higher than that of females.

Figure 5.26: Percentage Distribution of Population (25 Years and Older) that Ever Attended School by Highest Education Level Completed and Sex, Luapula Province 2010
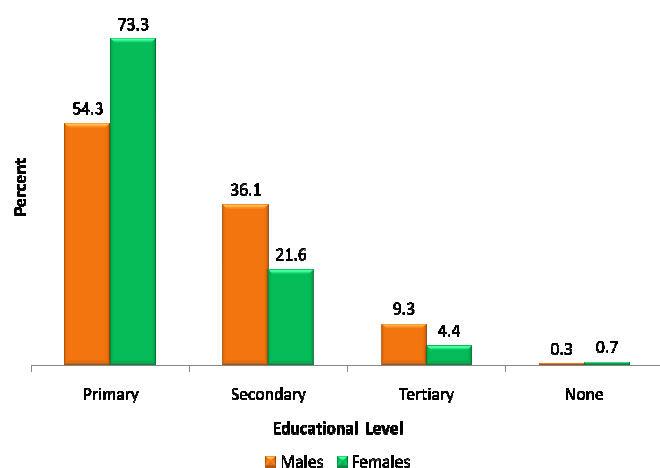
Source: 2010 Census of Population and Housing

Figure 5.27 shows the percentage distribution of the population (25 years and older) that ever attended school by highest education level completed and district. Mansa District had the highest percentage of the population with tertiary as their highest level of education completed at 11.5 percent while Chienge District had the lowest at 3.0 percent.

Figure 5.27: Percentage Distribution of Population (25 Years and Older) that Ever Attended School by Highest Education Level Completed and District, Luapula Province 2010
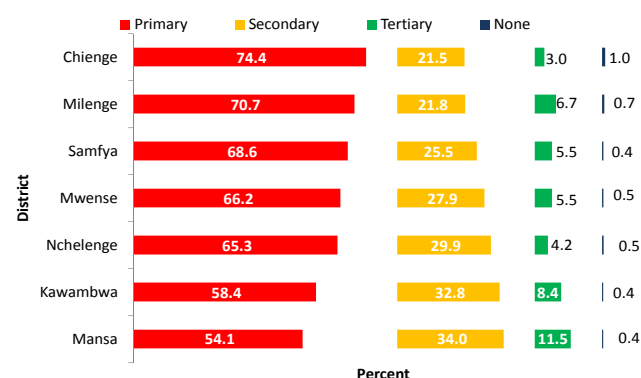
Source: 2010 Census of Population and Housing

5.7 Highest Professional/Vocational Qualification Completed

Figure 5.28 shows the percentage distribution of the population (25 years and older) by highest professional/vocational qualification completed. Certificate holders constituted 3.8 percent followed by diploma holders at 1.3 percent. Less than one percent (0.0) of the people had doctorate degrees (PhD).

Figure 5.28: Percentage Distribution of Population (25 Years and Older) by Highest Professional/Vocational Qualification Completed, Luapula Province 2010
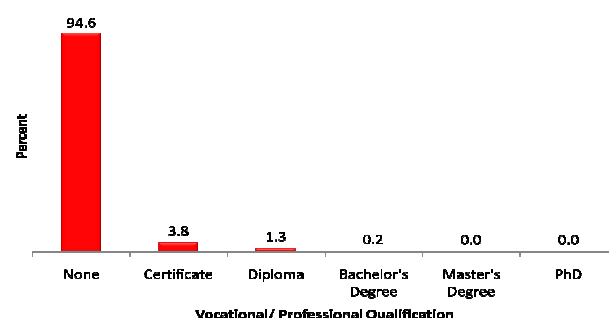
Source: 2010 Census of Population and Housing

Figure 5.29 shows the percent distribution of population (25 years and older) by highest professional/vocational qualification completed and sex. In all professional and vocational qualification categories, males had higher percentages compared to females. The highest percentage difference was recorded in the Certificate category where males accounted for 5.4 percent compared to 2.4 percent for females.

Figure 5.29: Percentage Distribution of Population (25 Years and Older) by Highest Professional/Vocational Qualification Completed and Sex, Luapula Province 2010
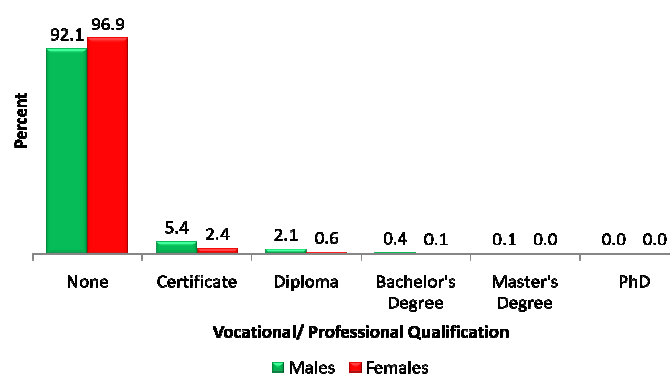
Source: 2010 Census of Population and Housing

5.8 Field of Study

Table 5.1 shows the percent distribution of the population (25 years and older) by field of study and sex. Teacher training was the field of study reported by 2.2 percent of the total population (25 years and older) that had ever attended school. Other notable fields of study included nursing and agriculture at 0.3 percent each.

Table 5.1: Percentage Distribution of the Population (25 Years and Older) by Field of Study and Sex, Luapula Province 2010				
Field of Study	Number	Percent of Population	Percent	
			Males	Females
Natural science (e.g. biological science programme chemistry programme geological programme etc).	96	0.0	82.3	17.7
Civil engineering	110	0.0	95.5	4.5
Electrical and electronics engineering	315	0.1	95.2	4.8
Mechanical engineering	515	0.2	96.3	3.7
Chemical engineering	28	0.0	96.4	3.6
Mining engineering	169	0.1	99.4	0.6
Industrial engineering	72	0.0	62.5	37.5
Metallurgical engineering	17	0.0	100.0	0.0
Architectural and town planning engineering	97	0.0	68.0	32.0
Other engineering	118	0.0	98.3	1.7
Medicine and surgery	137	0.0	92.0	8.0
Pharmacy	142	0.0	72.5	27.5
Dentistry	54	0.0	81.5	18.5
Nursing	1,055	0.3	53.6	46.4
Medical technology	90	0.0	86.7	13.3
X-Ray technology	19	0.0	89.5	10.5
Veterinary	33	0.0	93.9	6.1
Statistics	13	0.0	84.6	15.4
Mathematics	60	0.0	80.0	20.0
Computer science/Economics	230	0.1	57.4	42.6
Accountancy	623	0.2	88.1	11.9
Teacher training	6,857	2.2	61.8	38.2
Law and jurisprudence (includes magistrates and judges)	248	0.1	87.1	12.9
Journalism	51	0.0	68.6	31.4
Fine arts	47	0.0	74.5	25.5
Physical education	54	0.0	68.5	31.5
Library science	22	0.0	45.5	54.5
Social welfare	215	0.1	57.7	42.3
Criminology	123	0.0	87.0	13.0
Business administration and related programmes	407	0.1	72.5	27.5
Secretarial training	342	0.1	14.3	85.7
shorthand typing	96	0.0	32.3	67.7
Clerical Typing	111	0.0	60.4	39.6
Operating of office machines	29	0.0	75.9	24.1
Service trade (e.g. cooking tourist trade etc.)	121	0.0	51.2	48.8
Radio and television broadcasting	11	0.0	100.0	0.0
Fire protection and fire fighting	30	0.0	80.0	20.0
Agriculture forestry and fishery	777	0.3	85.7	14.3
Food and drinks processing trades programmes	62	0.0	46.8	53.2
Wood working	468	0.2	96.2	3.8
Textile trades	225	0.1	29.3	70.7
Leather trades	16	0.0	68.8	31.3
Other programmes	2,710	0.9	81.1	18.9
None	288,418	94.4	46.2	53.8
Source: 2010 Census of Population and Housing				

CHAPTER 6
ECONOMIC CHARACTERISTICS

6.0 Summary

The population aged 12 years and older was 549,692 in 2010. Out of these, 79.3 percent were in rural areas while 20.7 percent were in urban areas. Males comprised 47.4 percent of total population aged 12 years and older while females comprised 52.6 percent.

Of the population aged 12 years and older, 322,203 were in the labour force, out of which 82.5 percent were in rural areas and 17.5 percent were in urban areas.

The unemployment rate was 7.7 percent of the total labour force. Urban unemployment rate was 12.8 percent while rural unemployment was at 6.6 percent. The unemployment rate among the male population was 8.2 percent compared to 7.1 percent among the female population.

The youth unemployment rate was 9.3 percent, of which urban youth unemployment rate was higher (17.0 percent) than the rural youth unemployment rate (7.6 percent). The unemployment rate for male youths was higher (10.1 percent) than that of female youths (8.4 percent).

Of the employed population, the highest proportion was self employed (48.8 percent) and the lowest were employers (0.5 percent)

CHAPTER 6
ECONOMIC CHARACTERISTICS

6.1 Introduction

Individuals engage in economic activities in order to attain and sustain a certain acceptable level of consumption of goods and services. Engagement in these activities not only ensures a person's livelihood but also equips an individual with the 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 the levels of economic activities because fluctuations in labour force participation rates, employment levels and economic dependency levels have an impact on poverty.

6.2 Concepts and Definitions

Concepts and definitions used in this chapter are as follows:

Labour Force Participation Rate: This is ratio of the economically active population to the working age population expressed as a percent.

Unemployment Rate: This is the proportion of the labour force who have no jobs, are available for work and are seeking work in a given reference period in the total labour force expressed as a percent.

Youth Unemployment Rate: This was defined as a proportion of the labour force aged 15-35 years who had no jobs, were available for work and were seeking work in a given reference period in the total youthful labour force expressed as a percent.

In the 2000 and 2010 population Censuses, data pertaining to economic characteristics of the population 12 years and older were collected and analyzed. The main topics covered are:

i)   Labour force participation
ii)   Economic dependency
iii)   Employment and unemployment
iv)   Employment status
v)   Occupation
vi)   Industry

6.3 Working Age Population

The working-age population was defined as all persons 12 years and older. This is the population from which measurement of the economic characteristics of the population is based.

Figure 6.1 shows the various components of the population 12 years and older. It shows the composition of the economically active and economically inactive population, including their sub components.

Figure 6.1: Organogram for the structure of Population Aged 12 Years and Older
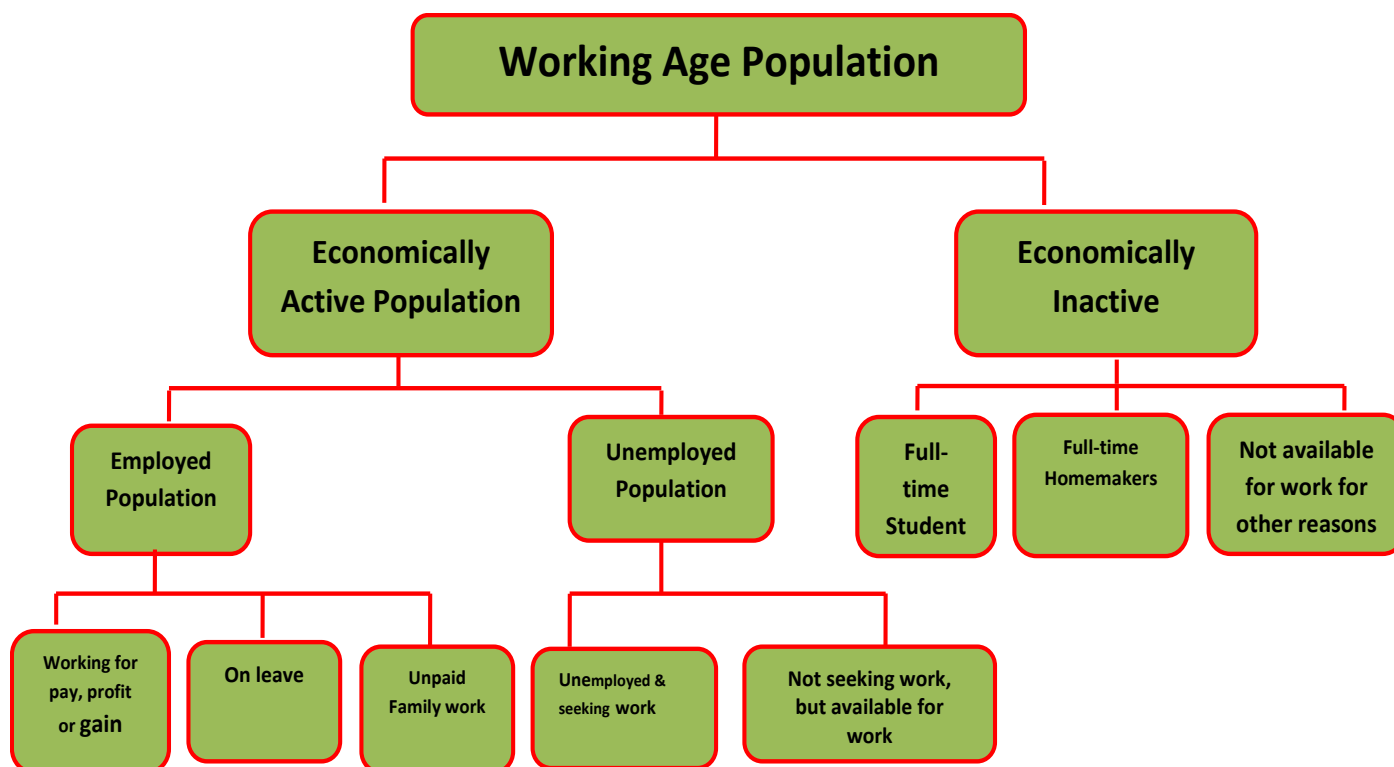
The question asked in the 2010 Census to determine the economic activity status was 'What did **(NAME)** do in the last 7 days and last 12 months?' The reference period for the response categories was the last 7 days (current activity status) and last 12 months (usual activity status).

6.3.1 Percentage Change in the Population 12 Years and Older between 2000 and 2010, Luapula Province

In 2010, the population aged 12 years and older represented 58.6 percent of the total population of Luapula Province while in 2000, it represented 56.0 percent. The population 12 years and older increased from 434,409 in 2000 to 549,692 in 2010, representing a 26.5 percent increase.

Figure 6.2 shows the percentage change in the population 12 years and older by rural/urban and sex. During 1990-2000 and 2000-2010 intercensal periods, the working age population in urban areas increased from 33.6 percent to 62.4 percent while in rural areas, it decreased from 31.3 to 19.7 percent.

Figure 6.2: Percentage Change in Population Aged 12 Years and Older (Working Age Population) by Rural/Urban and Sex, Luapula Province 1990-2000 and 2000-2010
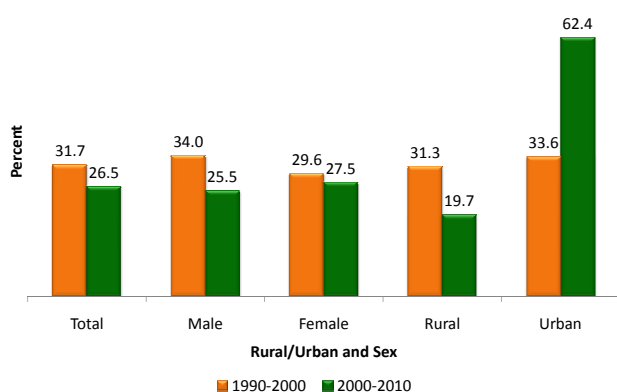
Source: 1990, 2000 and 2010 Censuses of Population and Housing

Figure 6.3 shows the average annual growth rate of the labour force by district between 2000 and 2010 in Luapula Province. The average annual growth rate of the labour force was 1.9 percent. This growth was lower than the national average annual growth rate of the labour force which was recorded at 3.0 percent.

Figure 6.3: Average Annual Growth Rate of the Labour force by District, Luapula Province 2000-2010
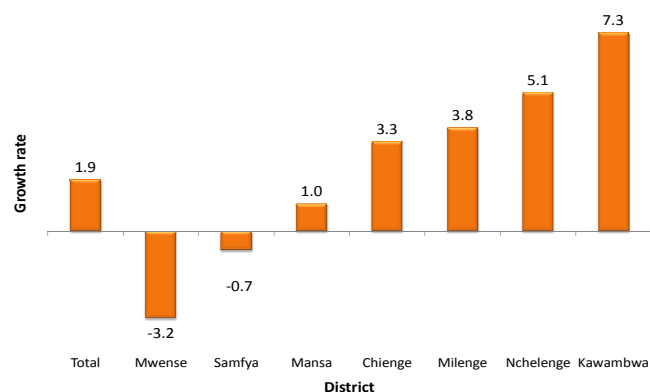
Source: 2000 and 2010 Censuses of Population and Housing

Kawambwa District recorded the highest average annual growth rate of the Labour Force at 7.3 percent while Mwense District recorded a negative average growth rate of -3.2 percent per annum.

6.4 Economic Activity Status

The population 12 years and older is subdivided into two broad economic activity status categories, namely economically active and economically inactive. The economic activity status thus refers to whether a person aged 12 years and older is in the labour force or outside the labour force.

6.4.1 Economically Active

The economically active population (labour force) comprises persons who during the 7-days prior to the census night were either employed (i.e. employers, employees and unpaid family workers) or unemployed (i.e. without work but actively looking for work and those willing to work).

The analysis for the economic activity status is based on the current (in the 7 days prior to the census night) economic activity of the population. In 2010, 322,203 persons were in the labour force in Luapula Province. Of these, 172,759 were male and 149,444 were female.

6.4.2 Economically Inactive

The economically inactive population comprises people who, during the reference period, were outside the labour force. These included fulltime students, fulltime homemakers (i.e. fulltime housewives) and those not available for work for other reasons such as, not able to work due to sickness, old age, beggars among others.

Figure 6.4 shows the percent share of the population 12 years and older by economic activity status. Of the population 12 years and older, 58.6 percent were economically active while 41.4 percent were economically inactive.

Figure 6.4: Percentage of Population (12 Years And Older) by Economic Activity Status, Luapula Province 2010
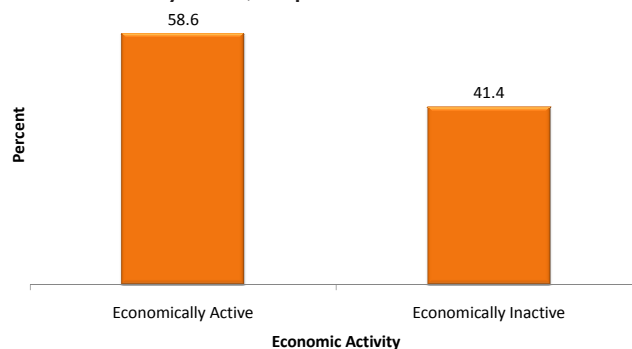
Source: 2010 Census of Population and Housing

6.5 Labour Force Participation Rate

The labour force participation rate shows how much of the population is economically active. Figure 6.5 shows the participation rate for the population 12 years and older by sex and rural/urban. In 2010, the labour force participation rate was 58.6 percent in Luapula Province. The participation rate in the male population was 66.2 percent compared to 51.7 percent in the female population.

The labour force participation rate was higher in rural areas (61.0 percent) compared to urban areas (49.6 percent). The results also show that the labour force participation rate for males was higher than that of females in both rural and urban areas.
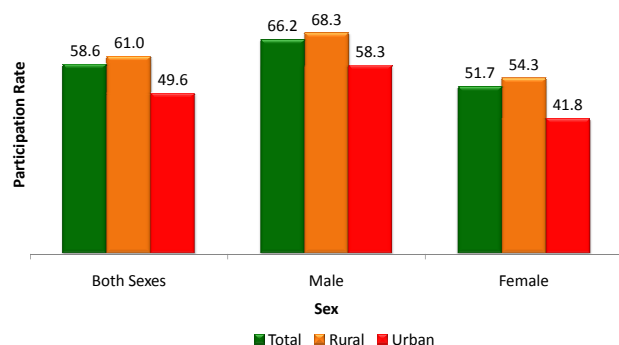
Source: 2010 Census of Population and Housing

Figure 6.6 shows the labour force participation rate for the population 12 years and older by age group and sex. Labour force participation rate among males was higher than that of females except for the age group 15-19 years.

Figure 6.6: Labour Force Participation Rate for the Population (12 Years and Older) by Age Group and Sex, Luapula Province 2010
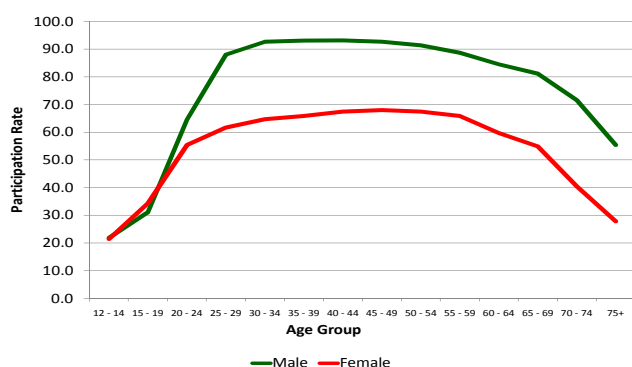
Source: 2010 Census of Population and Housing

Figure 6.7 shows the labour force participation rate for the population aged 12 years and older by sex and rural/urban. The labour force participation rate was 61.6 and 58.6 percent in 2000 and 2010, respectively.

The labour force participation rate for males decreased from 70.0 percent in 2000 to 66.2 percent in 2010, representing a 3.8 percentage point decrease. For the females, the labour force participation rate decreased by 2.2 percentage points from 53.9 percent in 2000 to 51.7 percent in 2010.

Figure 6.7: Labour Force Participation Rate for Population (12 Years and Older) by Sex and Rural/Urban, Luapula 2000-2010
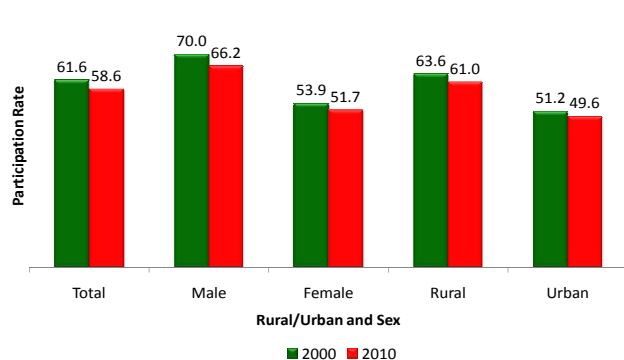
Sources: 2000 and 2010 Censuses of Population and Housing

In both 2000 and 2010, the labour force participation rate was higher in rural than in urban areas. In 2010, the labour force participation rate was 61.0 percent in rural compared to 49.6 percent in urban areas.

Figure 6.8 shows labour force participation rate for population 12 years and older by age group and sex in 2000 and 2010. Between 2000 and 2010, the labour force participation rate reduced in the younger ages for both males and females.

Figure 6.8: Labour Force Participation Rate for Population (12 Years and Older) by Age Group and Sex, Luapula Province, 2000 and 2010
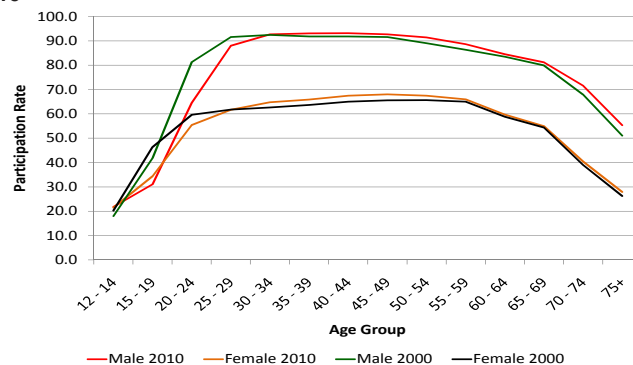
Sources: 2000 and 2010 Censuses of Population and Housing

Figure 6.9 shows the labour force participation rate for the population 12 years and older by district. Kawambwa District had the highest labour force participation rate at 73.4 percent while Mwense District had the lowest at 46.5 percent.

Figure 6.9: Labour Force Participation Rate for the Population 12 Years and Older by District, Luapula Province 2010
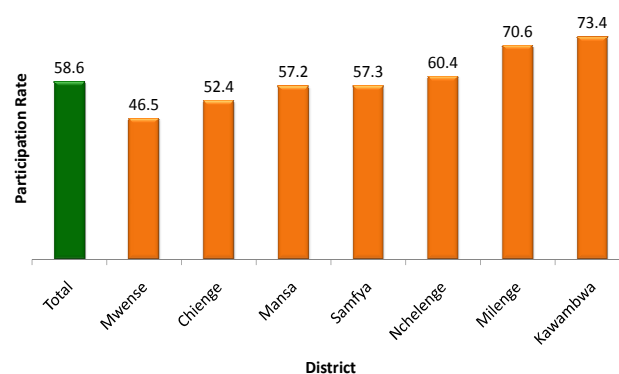
Source: 2010 Census of Population and Housing

6.6 Employed Population

Employment in Zambia is measured as a percent of the labour force. In the 2010 Census, the labour force made up persons who reported to be working or on leave during the reference period (seven days prior to the census night). Of the 322,203 persons in the labour force, 297,494 persons were employed, representing 92.3 percent of the labour force. Of the employed population, 53.6 percent were male while 46.4 percent were female

Figure 6.10 shows the percentage distribution of the employed population by sex and rural/urban. The results show that there were more employed persons in rural areas (83.5 percent) than in urban areas (16.5 percent).

Figure 6.10: Percentage of Employed Population (12 Years and Older) by Sex and Rural/Urban, Luapula Province 2010
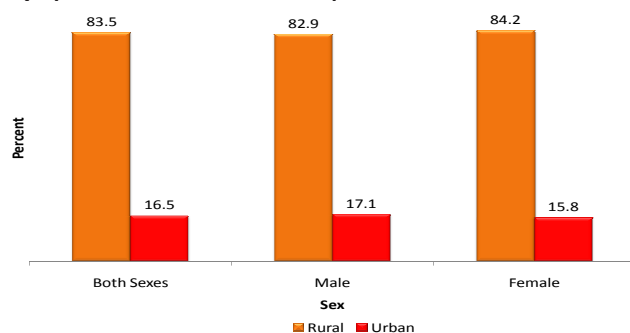
Source: 2010 Census of Population and Housing

6.7 Unemployment

The unemployed population consists of all persons 12 years and older who were actively seeking work or were available for work during the seven days prior to the census night. Unemployment is a state of total lack of work for those persons within the employable age available for work but without work, looking for work but did not do anything i.e. zero hours of work in the 7 days prior to the census night.

Figure 6.11 shows the unemployment rate for the population 12 years and older by district. Of the 322,203 persons in the labour force, 24,709 (7.7 percent) were unemployed. Kawambwa District had the highest unemployment rate at 11.8 percent while Milenge District had the lowest at 1.4 percent.

Figure 6.11: Unemployment Rate for the Population 12 Years and Older by District, Luapula Province 2010
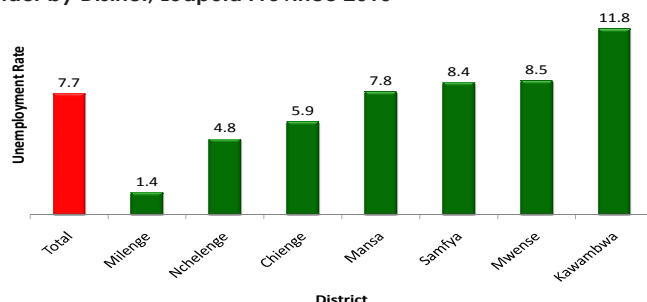
Source: 2010 Census of Population and Housing

Figure 6.12 shows the unemployment rate for the population (12 years and older) by age group. Unemployment rate was highest in the age group 12-14 years at 14.2 percent followed by the age group 15-19 years at 13.7 percent. The lowest unemployment rate was 4.1 percent in the age group 55-59 years.

Figure 6.12: Unemployment Rate of the Population (12 Years and Older) by Age Group, Luapula Province 2010
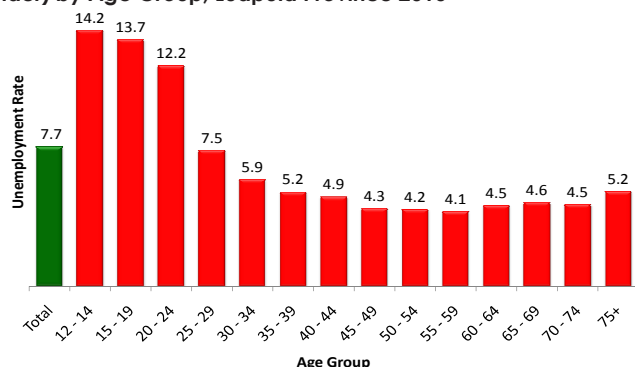
Source: 2010 Census of Population and Housing

Figure 6.13 shows the unemployment rate for the population 12 years and older by sex and rural/urban. Overall, the unemployment rate was 8.2 percent for males and 7.1 percent for females. Unemployment was higher in urban areas than in rural areas. In rural areas, males recorded a higher unemployment rate (7.0 percent) than females (6.0 percent). Similarly, in urban areas, males recorded a higher unemployment rate (13.3 percent) than females (12.1 percent).

Figure 6.13: Unemployment Rate for the Population 12 Years and Older by Sex and Rural/Urban, Luapula Province 2010
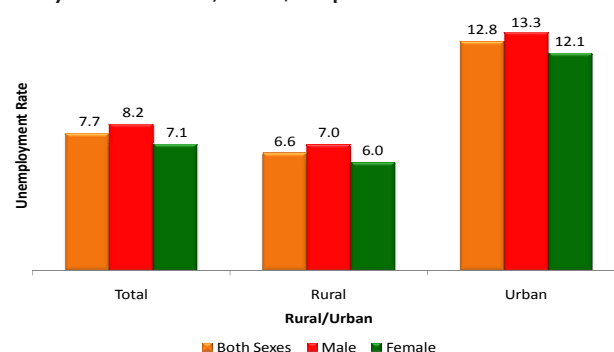
Source: 2010 Census of Population and Housing

6.7.1 Youth Unemployment

The national youth policy defines a youth as any person aged 15-35 years. In this chapter, this age group has been used to analyse youth unemployment. The youth population in the labour force was 178,938 representing 55.5 percent of the total labour force. Of these, 51.3 percent were male while 48.7 percent were female. Rural areas constituted 82.1 percent of youth population in the labour force while urban areas constituted 17.9 percent.

The youth unemployment rate by age group is shown in figure 6.14. Out of the 178,938 youths in the labour force, 9.3 percent were unemployed. The highest youth unemployment rate was in the age group 15-19 years at 13.7 percent while the lowest was in the age group 30-35 years at 5.8 percent.

Figure 6.14: Youth Unemployment Rate by Age Group, Luapula Province 2010
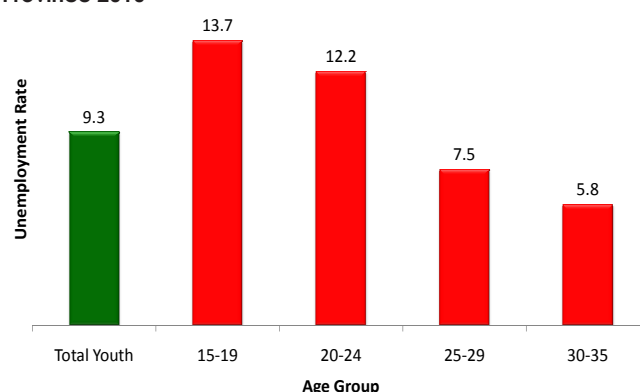
Source: 2010 Census of Population and Housing

Figure 6.15 shows the youth unemployment rate by age group and sex. Overall, the unemployment rate for male youths was higher than that of females in all age groups. The total youth unemployment rate among males was 10.1 percent and 8.4 percent among females. The age group with the highest disparity between males and females was 20-24 years with 14.4 percent for males and 10.3 percent for females.

Figure 6.15: Youth Unemployment Rate by Age Group and Sex, Luapula Province 2010
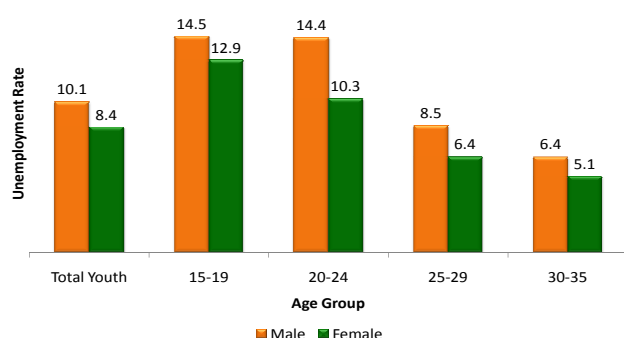
Source: 2010 Census of Population and Housing

Figure 6.16 shows the youth unemployment rate by rural/urban and district. The unemployment rate was higher in urban areas (17.0 percent) than in rural areas (7.6 percent). Kawambwa District had the highest youth unemployment rate of 13.2 percent while Milenge District had the lowest at of 1.7 percent.

Figure 6.16: Youth Unemployment Rate by Rural/Urban and District, Luapula Province 2010
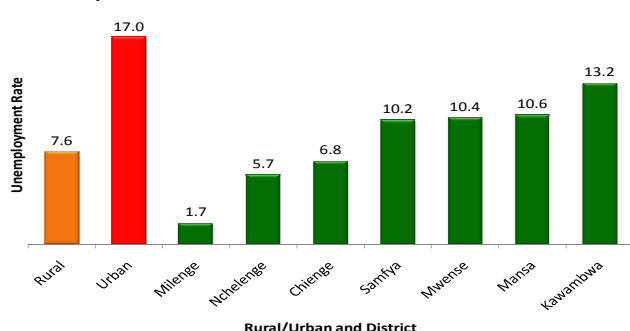
Source: 2010 Census of Population and Housing

6.8 Economically Inactive Population

The economically inactive population refers to persons who reported to be either full-time homemakers (i.e full-time housewives), full-time students or not available for work for other reasons (e.g. beggars, too sick to work and so on).

Figure 6.17 shows the percentage distribution of the economically inactive population by reason of inactivity. For both sexes, the majority of the economically inactive were full time students. However, only 40.7 percent of the females were full time students compared to 73.4 percent of the males. Among females, full time home maker/housewife constituted 39.0 percent of the economically inactive population.

Figure 6.17: Percentage Distribution of the Economically Inactive
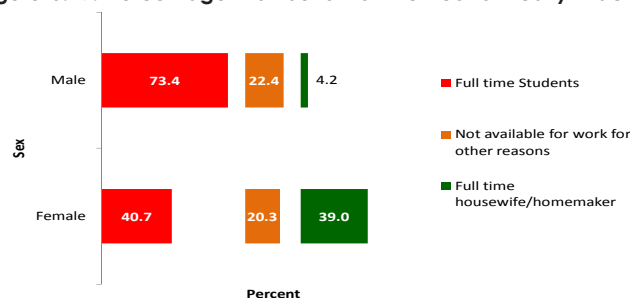
Source: 2010 Census of Population and Housing

6.9 Economic Dependency Ratio

Economic dependency measures the extent to which the economically inactive population is dependent on the economically active population. It is the ratio of the economically inactive persons to a 100 economically active persons.

Figure 6.18 shows the economic dependency ratio by sex and rural/urban. The economic dependency ratio increased from 62 in 2000 to 71 in 2010. This means that the number of the inactive people that depended on the economically active people increased by nine (9). Overall, the economic dependency ratio increased between 2000 and 2010.

Figure 6.18: Economic Dependency Ratio by Sex and Rural/Urban, Luapula Province 2010
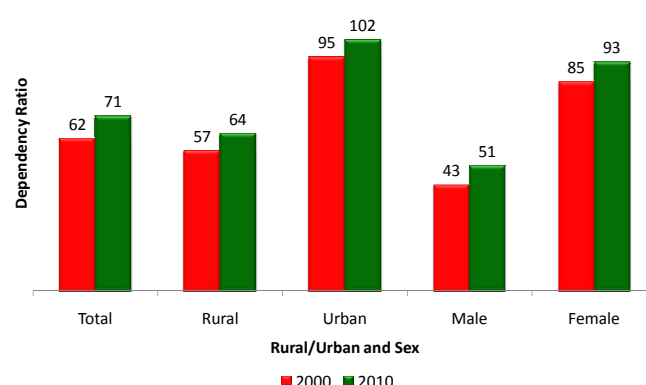
Source: 2010 Census of Population and Housing

6.10 Employment Status, Occupation and Industrial Classification

The employment status, occupational and industrial structure of the province's workforce reflects the level of its economic development and the efficiency with which it uses and allocates its resources. The analysis that follows is based on the usually working population, (i.e. those that were working in the 12 months prior to the census night) as this reflects the characteristics of the population for a longer period.

6.10.1 Employment Status

Employment status refers to whether a person is an employer, employee, self-employed or an unpaid family worker. An employer is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires one or more employees. An employee is a person who works for a public or private employer and receives remuneration in wages, salaries, commissions, tips, piece rates, or pay in kind. A self-employed worker is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires no employees. An unpaid family worker is a person who works without pay in an economic enterprise operated by a related family member of the same household (including peasant farmers).

Figure 6.19 shows the percentage distribution of usually working population 12 years and older by employment status. The results show that the majority of the usually working population was self-employed at 48.8 percent, followed by unpaid family workers at 42.8 percent. The lowest proportion was for employers at 0.5 percent.

Figure 6.19: Percentage Distribution of Usually Working Population (12 Years and Older) by Employment Status, Luapula Province 2010

Source: 2010 Census of Population and Housing

The distribution of the usually working population by employment status and sex is shown in Figure 6.20. The figure shows that 56.4 percent of the females were unpaid family workers followed by self employed at 39.2 percent. For males 57.7 percent were self employed followed by unpaid family workers at 30.0 percent.

Figure 6.20: Percentage Distribution of Usually Working Population (12 Years and Older) by Employment Status and Sex, Luapula Province 2010
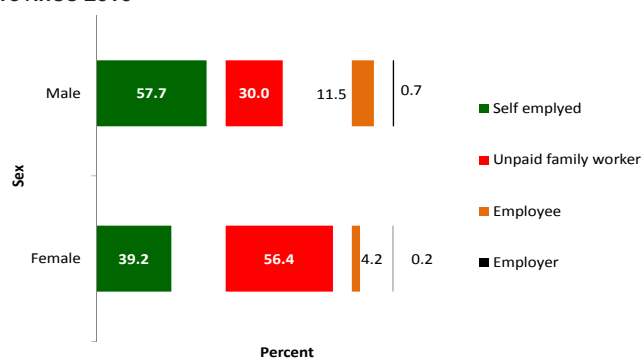
Source: 2010 Census of Population and Housing

6.10.2 Working Population by Occupation

Occupation is defined as the actual work or task that a person does in his/her main job at his/her place of work whether in paid employment, unpaid family work or self-employment.

Figure 6.21 shows the percentage distribution of the usually working population (12 years and older) by occupation. The main occupation among the usually working population was the skilled agricultural, forestry and fishing at 68.3 percent, followed by the elementary occupations at 12.0 percent. Managers accounted for 0.2 percent of the total working age population.

Figure 6.21: Percentage Distribution of Usually Working Population (12 Years and Older) by Occupation, Luapula Province 2010
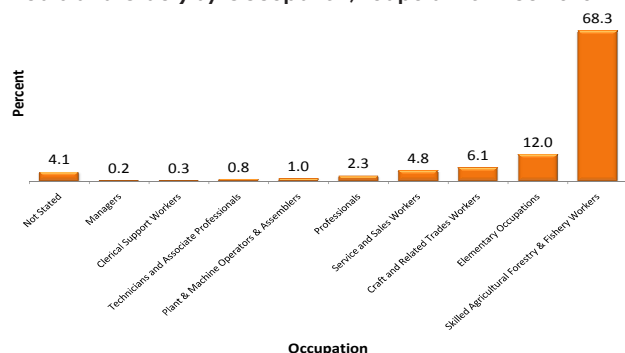
Source: 2010 Census of Population and Housing

Figure 6.22 shows the percentage distribution of the usually working population (12 years and older) by occupation and sex. The largest percent share of the working population for both males and females was skilled agriculture, forestry and fishing at 70.8 and 65.6 percent, respectively.

Figure 6.22: Percentage Distribution of Usually Working Population (12 Years and Older) by Occupation and Sex, Luapula Province 2010
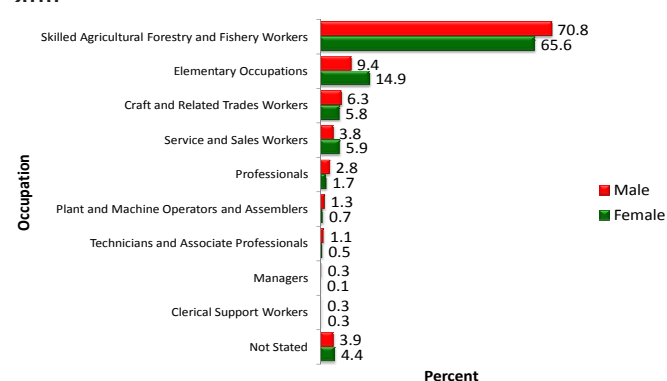
Source: 2010 Census of Population and Housing

Figures 6.23 and 6.24 show the percentage distribution of the usually working population (12 years and older) by occupation for rural and urban areas, respectively. The largest percent share of the usually working population in rural areas was in the skilled agriculture, forestry and fishing occupation (73.4 percent), followed by elementary occupations (12.3 percent).

Figure 6.23: Percentage Distribution of Usually Working Population (12 Years and Older) by Occupation, Rural Luapula Province 2010
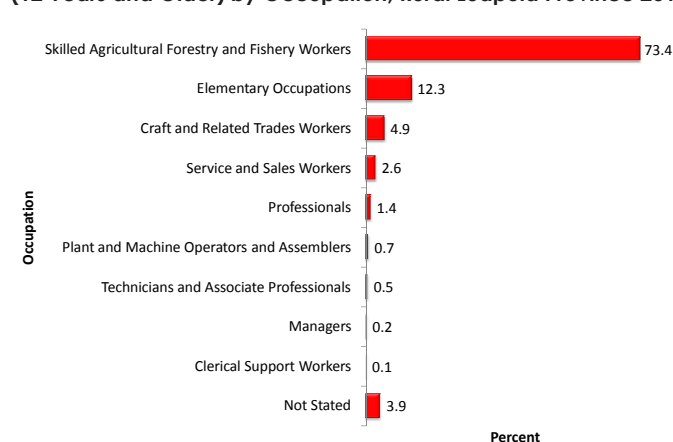
Source: 2010 Census of Population and Housing

In urban areas, the largest percent share of the usually working population was skilled agriculture forestry and fishery workers (42.6 percent), followed by the services and sales occupation (15.8 percent). The lowest percentage in urban areas was for managers at 0.5 percent.

Figure 6.24: Percentage Distribution of Usually Working Population (12 Years and Older) by Occupation, Urban Luapula Province 2010
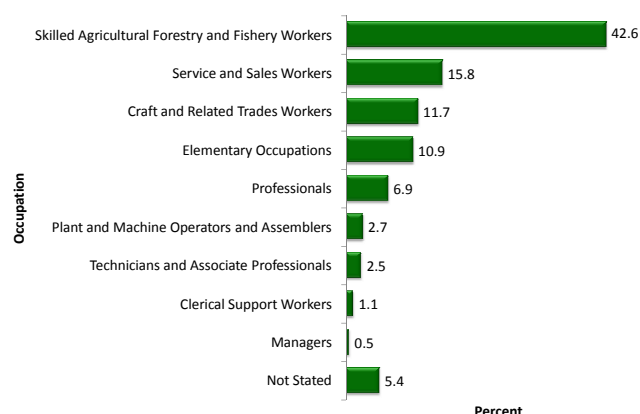
Source: 2010 Census of Population and Housing

6.10.3 Working Population by Industry

Industry is defined as the type of activity carried out by an enterprise where a person works. Industry categorisation used the International Standard Industrial Classification of All Economic Activity Revision IV (ISIC Rev. 4).

The percentage distribution of the usually working population by industry is shown in Figure 6.25. The agriculture industry accounted for 78.9 percent of the usually working population. Other industries with a fair share of the usually working population were wholesale and retail trade and Community, social and personal services with 7.1 and 4.3 percent, respectively.

Figure 6.25: Percentage Distribution of Usually Working Population (12 Years and Older) by Industry, Luapula Province 2010
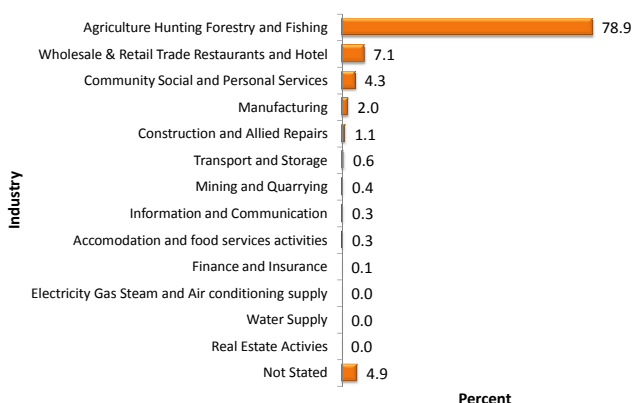
Source: 2010 Census of Population and Housing

Figures 6.26 and 6.27 show the percentage distribution of the usually working population (12 years and older) by industry in rural and urban areas, respectively. The agriculture industry accounted for 84.8 percent of the usually working population in rural areas. Wholesale and retail trade; Community social and personal services; manufacturing; and Construction collectively accounted for 9.9 percent.

Figure 6.26: Percentage Distribution of Usually Working Population (12 Years and Older) by Industry, Rural Luapula Province, 2010
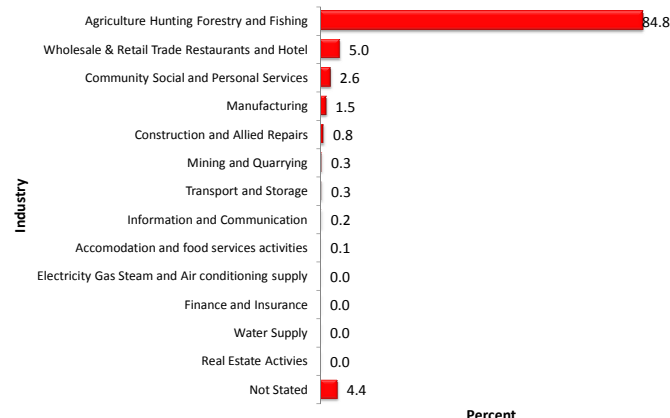
Source: 2010 Census of Population and Housing

In urban areas, Agriculture, hunting, forestry and fishing accounted for 49.5 percent of the usually working population followed by wholesale and retail trade at 17.2 percent, Community Social and Personal Services (12.9 percent); manufacturing (4.6 percent) and Construction and Allied Repairs (2.9 percent).

Figure 6.27: Percentage Distribution of Usually Working Population (12 Years and Older) by Industry, Urban Luapula 2010
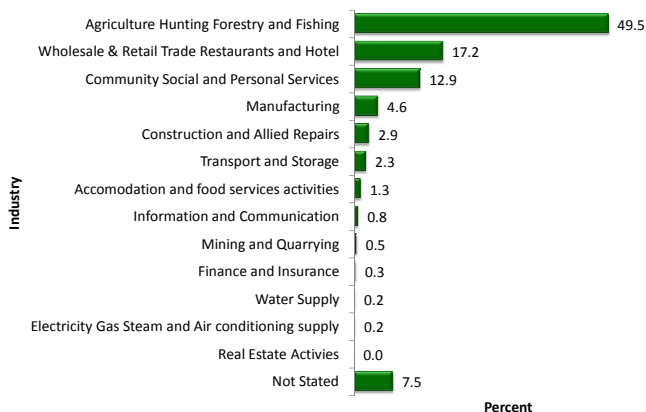
Source: 2010 Census of Population and Housing

CHAPTER 7:
FERTILITY CHARACTERISTICS

7.0 Summary

The Total Fertility Rate (TFR) for Luapula Province was 7.3. The TFR in rural areas was 7.3 and 6.0 in urban areas. Milenge District recorded the highest TFR at 8.3 while Nchelenge and Mansa districts had the lowest at 6.9 each.

The Mean Age at Child Bearing (MACB) for the year 2010 was 29.6 years.

The Crude Birth Rate (CBR) in 2010 was 39 live births per 1000 mid-year population. Rural areas had a higher CBR of 42 compared to urban areas at 30 live births per 1000 population.

The Child Woman Ratio (CWR) for Luapula Province in 2010 was 835 children (0-4 years) per 1000 women. The CWR for rural areas was 876 compared with 678 in urban areas.

The General Fertility Rate (GFR) was 172. Rural areas had a GFR of 186 and urban areas had 121.

The Completed Family Size (CFS) was 6.4 children, 6.5 and 6.3 for rural and urban areas respectively.

The Gross Reproduction Rate (GRR) in 2010 was 2.7. The GRR for rural and urban areas were 2.9 and 2.0, respectively.

The Net Reproduction Rate (NRR) in 2010 was 1.8. The NRR for rural and urban areas were 2.0 and 1.5, respectively.

Chapter 7
Fertility Characteristics

7.1 Introduction

Fertility remains one of the most important aspects of census undertaking. The census provides a unique opportunity to collect reliable data on migration and fertility, which is very hard to do in a survey. It provides information to help understand and appreciate past, current and future trends of the population size, composition and growth. Fertility data leads planners, government, non-governmental organizations, among others, to evidence based socio-economic planning, monitoring and evaluation for various current and future aspects of population development. There were two fertility questions on the 2010 Census of Population and Housing. One asked all females 12 years and older if they ever had a live birth broken down by whether these children were still living or not. The second question asked females, 12 to 49 years old if they had any live births in the 12 months preceding the Census, also broken down by whether these children were still alive or not.

7.2 Concepts and Definitions

The following concepts have been used in the analysis of fertility in this chapter.

Age Specific Fertility Rate (ASFR): Is the annual number of births to women in a particular age group per 1000 women in that age group.

Child Woman Ratio (CWR): The ratio of all children aged 0-4 years to women aged 15-49 years in the population.

Completed Family Size (Mean Parity): Is the number of children ever born to women who have completed their reproduction i.e. those aged 50 and older.

Crude Birth Rate (CBR): Is the annual number of live births per thousand population present at mid-year.

Fertility: Refers to the occurrence of live births among women in a population.

General Fertility Rate (GFR): The number of live births occurring in a year per thousand women of childbearing age.

Gross Reproduction Rate (GRR): Refers to the average number of female births that a woman would give birth to by the time she reached the end of her reproduction if she experienced age specific fertility rates prevailing in that year.

Mean Age at Child Bearing (MACB): Is the mean age of mothers at the birth of their children if women were subject throughout their lives to the age-specific fertility rates observed in a given year. It is computed as the sum of age-specific fertility rates weighted by the midpoint of each group.

Mean Parity: Refers to the Completed Family Size (CFS).

Net Reproduction Rate (NRR): refers to the average number of female births born to women aged 15-49 years, that would survive to the end of their reproductive period after experiencing the prevailing fertility and mortality levels.

Total Fertility Rate (TFR): Is the average number of live births a woman would have by age 50 if she were subject, throughout her life, to the age specific fertility rates observed in a given year. The calculation assumes there is no mortality and is expressed as number of children per woman.

7.3 Data Availability and Limitations

Fertility measurement in most developing countries, Zambia inclusive, is still a significant challenge. This is so because direct methods of measuring fertility, such as the vital registration system, are still underdeveloped. As a result, the 2010 Census applied indirect estimation methods to measure fertility. The 2010 Census followed international standards in asking questions on children ever born and births occurring in the 12 months prior to Census Night. The question on 'children ever born' provides a total record of women's child bearing experience from the beginning of their reproductive period to the current age (Manual X 1983 pp 31). The average number of children ever born, obtained by dividing the number of reported children by the number of women is a measure of the fertility experience of a cohort of women (Ibid 1983 pp33). The question on Children Ever Born (CEB) provides estimates for lifetime fertility and completed mean parity or family size.

Data from the question on 'births occurring 12 months prior to the census' was used to estimate Age Specific Fertility Rates (ASFRs), Total Fertility Rates (TFR), Gross Reproduction Rates (GRRs) and Net Reproduction Rates (NRRs) for national, provincial and district levels.

Omission of children by women responding to the census question on children ever born and births in the last twelve months may introduce errors in the estimation of fertility, especially those that died or are living elsewhere. In view of this weakness, the 2010 Census broke down this question to include other questions such as 'how many children are living with you?', 'how many are living elsewhere?' and 'how many are dead?' This form of investigation has the advantage of providing more accurate data for making appropriate estimates (Ibid 1983 pp27).

7.4 Evaluation and Justification for Adjustments

The 2010 Census data on fertility was evaluated for completeness of reporting of children ever born and births in the last 12 months using the Coale-Demeny and Brass Empirical formula technique. Using data for CEB, the Brass empirical formula yielded this result: (P2)(P4/P3)4 = (1.342) (3.859/2.623)4 = 7.897. Observed average parity for women 45-49 years for the 2010 Census was 6.018. Comparing the Brass empirical formula result with observed parity for women 45-49 years, it is clear that there was under reporting of children. This therefore called for the adjustment of reported fertility in order to come up with adjusted Age Specific Fertility Rates (ASFRs) and Total Fertility Rates (TFRs).

The 2010 Census therefore applied the P/F Ratio Technique, which uses children ever born data to adjust fertility data for underreporting in number of births that occurred in the last 12 months prior to the census (Arriaga et al 2005). The P/F Ratio Technique is based on cumulating fertility (represented by letter 'F') up to ages 20, 25, …50 (49) which are later adjusted and compared with CEB, represented by letter 'P'. The general assumption of this technique is that the number of children ever born is more accurately reported than births in the last year. In the same way, the P/F Ratio Technique also assumes that the completeness of data is the same for all age groups of women; that the reporting of the average number of children ever born per woman is complete at least up to ages 30 or 35 years; that there is no age misreporting of women of childbearing age; and that the pattern and level of fertility have not changed in the 10-15 years prior to the census (Coale and Trussel, 1974).

7.5 Fertility Indicators

7.5.1 Adjusted Age Specific Fertility Rates

Figure 7.1 shows the Adjusted Age Specific Fertility Rate for Luapula Province. The age group with the highest ASFR in 2010 was 25-29 years. This was followed by the age group 20-24 years. (See details in appendix Table E1).

Figure 7.1: Adjusted Age Specific Fertility Rate, by Age Group, Luapula Province 2010
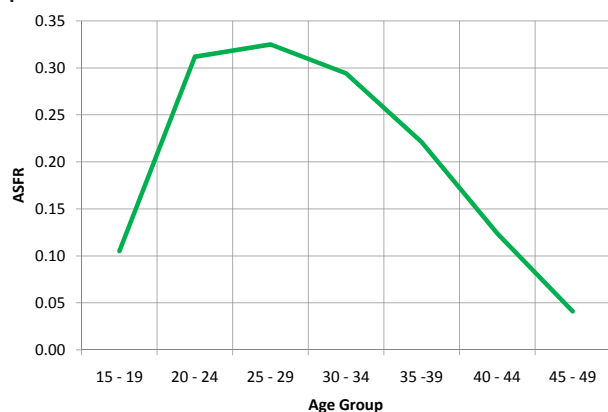
Source: 2010 Census of Population and Housing

Figure 7.2 shows the Adjusted Age Specific Fertility Rate by rural/urban. Results show that child bearing starts early in rural areas compared to urban areas. The peak for child bearing in both rural and urban areas was in the 25-29 age group.

Figure 7.2: Adjusted Age Specific Fertility Rate by Age Group and Rural/Urban, Luapula Province 2010
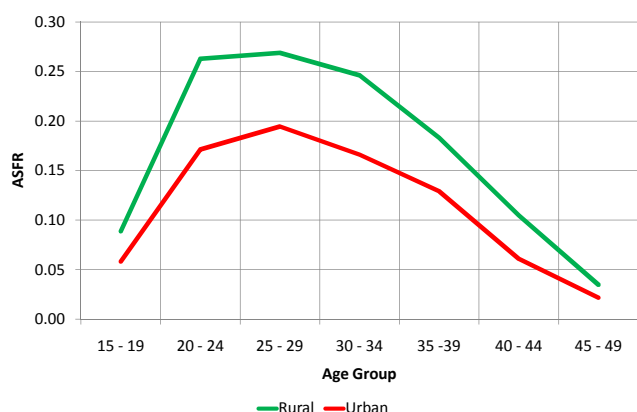
Source: 2010 Census of Population and Housing

Figure 7.3 shows adjusted Age Specific Fertility Rate for Luapula Province in 2000 and 2010. Results show that the peak of child bearing in both 2000 and 2010 was in the age group 25-29 years.

Figure 7.3 Adjusted Age Specific Fertility Rates by Age Group, Luapula Province, 2000 - 2010
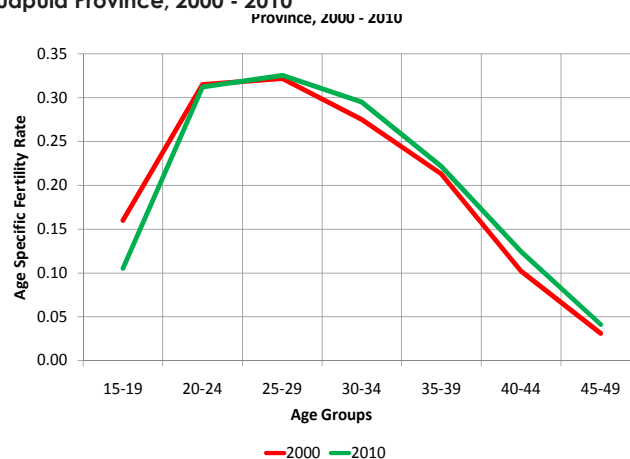
Source: 2000 and 2010 Censuses of Population and Housing

7.5.2 Total Fertility Rate (TFR)

Figure 7.4 shows trends in Total Fertility Rate (TFR) in Luapula Province from 1990 to 2010. The results show that, between 1990 and 2000, the TFR declined from 7.2 to 7.1 and increased to 7.3 in 2010.

Figure 7.4 Total Fertility Rate, Luapula Province, 1990, 2000 and 2010
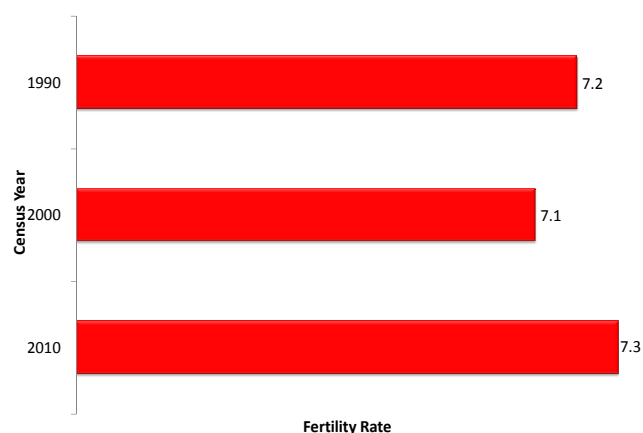
Source: 1990, 2000 and 2010 Censuses of Population and Housing

7.5.2.1 Total Fertility Rate by Rural/Urban

Figure 7.5 shows the trends in Total Fertility Rate by rural/urban from 1990 to 2010. There were some variations in TFR at rural/urban level. Results show that, the TFR for rural areas in Luapula Province remained the same between 1990 and 2010 at 7.3. Further, the TFR in urban areas declined from 6.9 in 1990 to 5.9 in 2000 then increased to 6.0 in 2010.

Figure 7.5: Total Fertility Rate by Rural/Urban, Luapula Province, 1990, 2000 and 2010
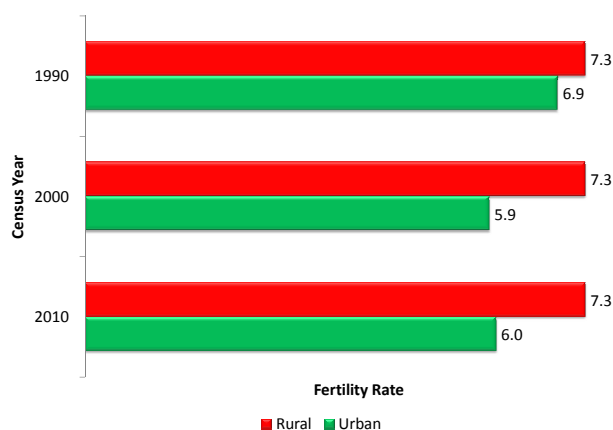
Source: 1990, 2000 and 2010 Censuses of Population and Housing

7.5.2.2 Total Fertility Rate by District

Figure 7.6 shows total fertility rate by district. In 2010, Mansa and Nchelenge districts had the lowest TFR at 6.9 each while Milenge District had the highest at 8.3. All districts recorded a TFR equal to or above the provincial estimate apart from Mansa and Nchelenge which recorded a TFR of 6.9 each.

Figure 7.6 Total Fertility Rate by District, Luapula Province 2010
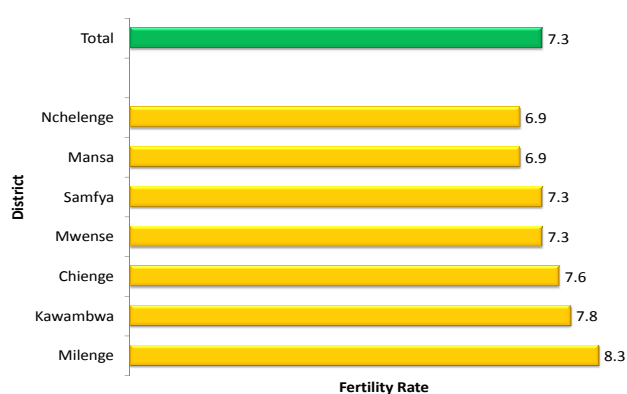
Source: 2010 Census of Population and Housing

7.5.3 Mean Age at Child Bearing (MACB)

Figure 7.7 shows the Mean Age at Child Bearing (MACB) by rural/urban. In 2010, the MACB for Luapula Province was 29.6 years. There was minimal difference in the MACB between rural (29.6) and urban areas (29.5).

Figure 7.7 Mean Age at Child Bearing by Rural/Urban, Luapula Province 2010
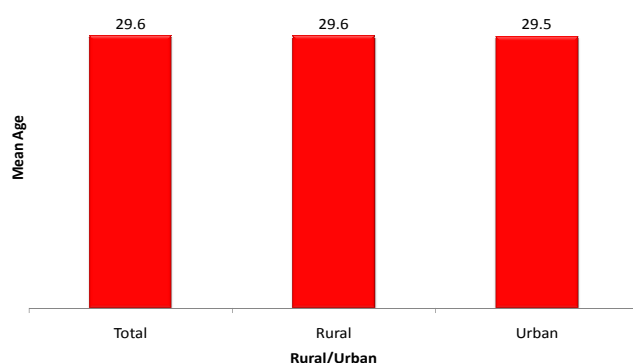
Source: 2010 Census of Population and Housing

7.5.4 Gross Reproduction Rate (GRR)

Figures 7.8 show the Gross Reproduction Rate by rural/urban in 1990, 2000 and 2010. The GRR declined from 3.5 in 1990 to 2.7 in 2010. The GRR was higher in rural areas than urban areas for the three census years. In 2010, the GRR in rural areas was 2.9 compared to 2.0 for the urban areas.

Figure 7.8 Trends in Gross Reproduction Rates by Rural/Urban Luapula Province,1990, 2000 and 2010
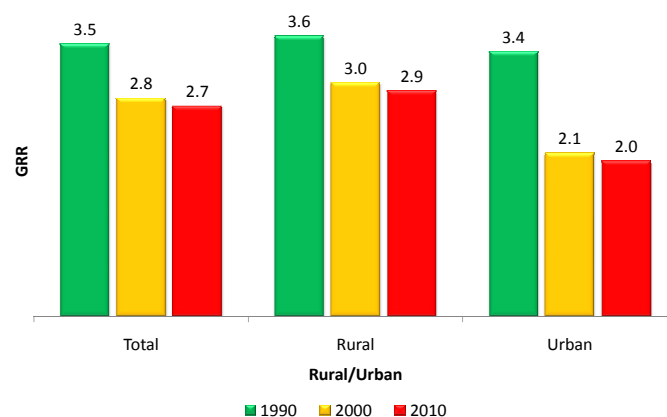
Source: 1990, 2000 and 2010 Censuses of Population and Housing

7.5.5 Net Reproduction Rate (NRR)

Figure 7.9 shows the Net Reproduction Rate by rural/urban in 1990, 2000 and 2010. The NRR declined from 2.1 in 1990 to 1.8 in 2000 and remained at 1.8 in 2010. The NRR was higher in rural areas than urban areas for the three census years. In 2010, the NRR for rural areas was 2.0 compared to 1.5 for urban areas.

Figure 7.9 Trends in Net Reproduction Rate by Rural/Urban, Luapula Province, 1990, 2000 and 2010
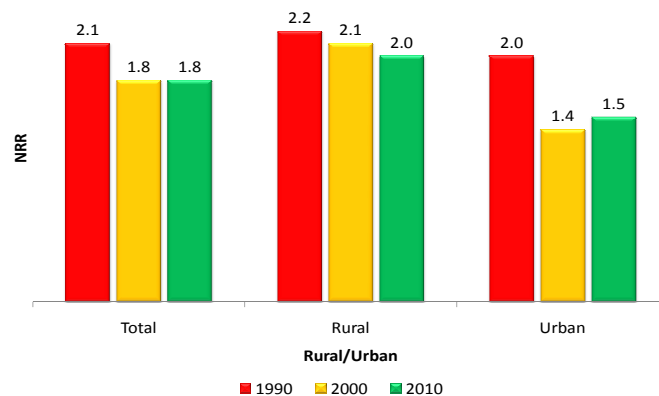
Source: 1990, 2000 and 2010 Censuses of Population and Housing

7.5.6 Other Fertility Indicators

Several other indices of fertility can also be measured from data on births and the population (Arriaga et al., 2005). These include the Crude Birth Rate (CBR), Child-Woman Ratio (CWR), Completed Family Size (CFS) and General Fertility Rate (GFR). Table 7.1 shows a summary of fertility indicators by rural/urban and district. In 2010, the CBR was at 39 per 1000 mid-year population, while the CWR was at 835 per 1000 women. Other indicators such as the GFR and CFS were at 172 and 6.4, respectively.

Table 7.1 Fertility Indicators By Rural/Urban and District, Luapula Province 2010							
District and Rural/Urban	Total Fertility Rate (TFR)	Completed Family Size (CFS)	Crude Birth Rate (CBR)	Child Woman Ratio(CWR)	General Fertility Rate(GFR)	Gross Reproduction Rate (GRR)	Net Reproduction Rate (NRR)
Total	**7.3**	**6.4**	**39**	**835**	**172**	**2.7**	**1.8**
Rural	6.0	6.5	42	876	186	2.9	2.0
Urban	7.3	6.3	30	678	121	2.0	1.5
District							
Chienge	7.6	6.6	47	863	202	3.2	2.1
Kawambwa	7.8	6.3	38	840	170	2.8	1.9
Mansa	6.9	6.9	37	804	162	2.6	1.8
Milenge	8.3	7.2	45	958	210	3.4	2.6
Mwense	7.3	6.3	37	797	160	2.5	2.0
Nchelenge	6.9	6.2	40	821	176	2.7	1.6
Samfya	7.3	6.2	38	857	166	2.6	1.8
Source: 2010 Census of Population and Housing							

7.6 Fertility Differentials and Selected Background Characteristics of Women Aged 15-49 years

This section presents results on the fertility levels by various background characteristics of women. These characteristics include religious affiliation, education level, economic characteristics and marital status.

7.6.1 Total Fertility Rate by District and Religious Affiliation of Women Aged 15–49 Years

Table 7.2 shows fertility levels by religious affiliation of women. Muslim women recorded the highest Total Fertility Rate at 9.1 followed by Protestant women at 7.3. The lowest Total Fertility Rate (6.6) was for women whose religious affiliation was other.

Table 7.2: Total Fertility Rate By Religious Affiliation of Women Aged 15-49 Years and District, Luapula Province 2010							
Districts	All Women	Religious Affiliation of Women (15-49 years)					
		Catholics	Protestants	Muslims	Hindus	Other	None
Total	**7.3**	**7.2**	**7.3**	**9.1**	**-**	**6.6**	**7.2**
Chienge	7.6	6.9	7.7	5.6	-	6.8	7.5
Kawambwa	7.8	7.9	7.8	-	-	8.1	10.7
Mansa	6.9	6.8	6.9	15.5	-	6	5.7
Milenge	8.3	8.3	8.4	-	-	13.8	0.7
Mwense	7.3	7.1	7.4	1.7	-	7.2	6.5
Nchelenge	6.9	6.9	6.9	9.4	-	7.6	6.2
Samfya	7.3	7.2	7.5	3.3	-	5.5	5.2
Source: 2010 Census of Population and Housing							

7.6.2 Total Fertility Rate by Education Attainment of Women 15–49 years

Table 7.3 shows the total fertility rate of women by education attainment and district. The Total Fertility Rate was higher among women with primary education (8.2), followed by women with no education (7.1). Women with tertiary education had the lowest total fertility rate at 3.5.

Table 7.3: Total Fertility Rate by Education Attainment of Women Aged 15-49 Years and District, Luapula Province 2010					
District	All Women	Education Level Attained			
		No-Education	Primary	Secondary	Tertiary
Total	**7.3**	**7.1**	**8.2**	**5.8**	**3.5**
Chienge	7.6	7.0	8.3	6.1	2.1
Kawambwa	7.8	8.4	8.6	6.7	5.3
Mansa	6.9	7.3	8.1	5.3	3.0
Milenge	8.3	8.5	8.7	6.8	3.9
Mwense	7.3	6.9	8.2	5.7	3.2
Nchelenge	6.9	6.6	7.6	5.6	2.7
Samfya	7.3	7.0	8.3	5.6	4.1
Source: 2010 Census of Population and Housing					

Figure 7.10 shows trends in TFR by women's education attainment for 2000 and 2010. In 2000, women with tertiary and primary education had the highest TFR at 7.7 each while women with secondary education had the lowest TFR at 6.6. In 2010, the highest total fertility rate was among women with Primary Education at 8.2 and the lowest was among women with tertiary education at 3.5.

7.6.3 Total Fertility Rate by Employment Status of Women

Figure 7.11 shows the total fertility rate by employment status of women aged 15-49 years and district. The total fertility rate was higher among the unemployed women (7.6) compared to that of the employed women (6.8). The figure also shows that the unemployed and employed women aged 15-49 years in Milenge District had the highest TFR at 9.5 and 7.7 respectively. Mansa District had the lowest TFR for both the unemployed and employed women aged 15-49 years at 6.6 and 6.3 respectively.

Figure 7.10: Total Fertility Rate by Education Attainment of Women 15-49 Years, Luapula Province 2000-2010
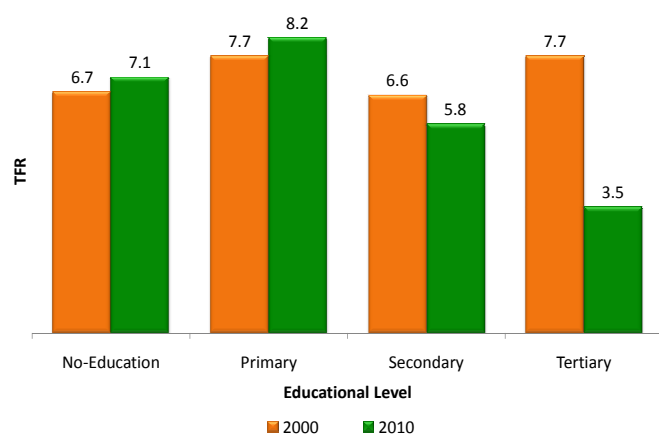
Source: 2000 and 2010 Censuses of Population and Housing

Figure 7.11: Total Fertility Rate by Employment Status of Women 15-49 Years and District, Luapula Province 2010
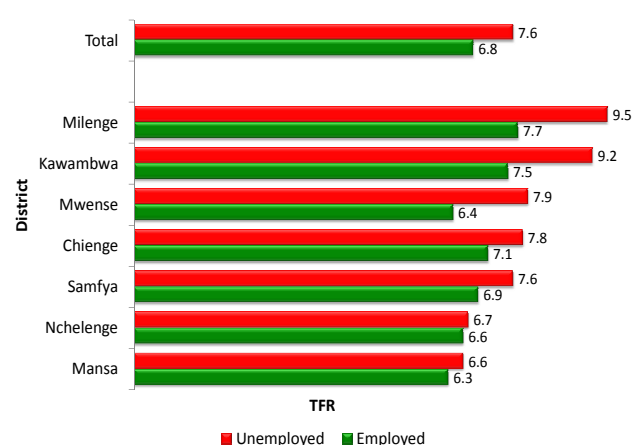
Source: 2010 Census of Population and Housing

CHAPTER 8
CHILDHOOD MORTALITY CHARACTERISTICS

8.0 Summary

The infant mortality rate (IMR) declined from 166.0 deaths per 1000 live births in 1990 to 138.0 deaths per 1,000 live births in 2000 and declined further to 99.6 deaths per 1000 live births in 2010.

The Child Mortality Rate (CMR) declined from 137.0 deaths per 1000 live births in 1990 to 110.0 deaths per 1000 live birth in 2000 and declined further to 99.6 deaths per 1000 live births in 2010.

The under-5 mortality rate (U5MR) declined from 280.0 deaths per 1000 live births in 1990 to 233.0 deaths per 1000 live births in 2000 and declined further to 199.1 deaths per 1000 live births in 2010.

8.1 Introduction

Child mortality is a key indicator not only of child health and nutrition but also of the implementation of child survival interventions and, more broadly, of social and economic development (UNICEF, 2011). Reducing the current levels of child mortality is one of eight millennium development goals (MDG4). Though it is a global goal, it is also a national goal set in Zambia's national health strategic plans over time. In the past decade, the government through the Ministry of Health (MOH) has scaled up child health interventions such as the child health week programme aimed at expanding access to immunization and other child health interventions like vitamin A supplementation to the hard to reach children in communities. Among the majors causes of child mortality are infectious diseases like pneumonia, diarrhoea, malaria and measles. These diseases are common and affect most children in some provinces of Zambia. HIV/AIDS and its related complications, coupled with high levels of malnutrition also contribute to the high disease burden among children under the age of five years.

8.2 Concepts and Definitions

The following concepts and definitions have been used in this analysis:

Mortality: Refers to the occurrence of deaths in a population.

Age Specific Death Rates (ASDR): Refer to mortality rates from deaths occurring to a specified population age group or sex per 1,000 population in that age group or sex during a given time period.

Infant Mortality Rate (IMR): Is usually denoted by the life table notation (1q0) and refers to the number of infant (children below the age of one) deaths per 1,000 live births occurring during a specified reference period, in this case taken to be one year prior to the census.

Child Mortality Rate (CMR): Usually denoted by the life table notation (4q1) refers to the number of child (children aged between exact age one and four) deaths per 1,000 live births occurring during a specified reference period, in this case taken to be one year prior to the census.

Under-five Mortality Rate (UMR): Usually denoted by the life table notation (5q0) refers to the number of deaths among children aged below the age of five per 1,000 live births occurring during a specified reference period, in this case taken to be one year prior to the census. UMR therefore, constitutes both the infant and child mortality.

8.3 Collection of Childhood Mortality data in the 2010 Census

Information collected in population and housing censuses on the total number of children ever born and children surviving are used in the estimation of childhood mortality (UN, 1983). Two questions are usually included in a census on children ever born (CEB) and births in the last 12 months prior to the census. This information is also used in the estimation of fertility.

All women aged 12 years and older in all households were asked whether they had a live birth, including children who died after birth. Follow up questions were asked to find out how many of the children born alive were living in the household by sex, how many were living elsewhere by sex and how many were dead by sex. This information was also collected from all women aged 12-49 years for the 12 months period prior to the census.

8.4 Childhood Mortality data Evaluation and Estimation Procedure

It is well known that the proportions of children ever born who have died are indicators of child mortality and can yeild robust estimates of childhood mortality (UN, 1983). However, it is equally well known that data on children ever born sometimes suffers from under reporting of dead children, especially those that die early in infancy. Infants that die within 24 hours after birth are sometimes classified not as deaths but as "stillbirths" (Shryock, 1980).

8.4.1 Crude Death Rate

Child mortality data collected using the question on household deaths in the last twelve months was evaluated using demographic methods. Crude mortality rates were computed using observed unadjusted data. Evaluation was made of the observed crude measures. The observed crude death rate for the population aged 0-4 years is shown in Figures 8.1 and 8.2 and Table 8.1.

The observed CDR presented in Figure 8.1 shows that childhood mortality was higher among infants at 107.0 deaths per 1000 population aged less than one year. The observed CDR declined with increasing age of the child, reaching the level of 10.9 deaths per 1000 population at age four.

Figure 8.1: Observed Crude Death Rate per 1000 Population Aged 0-4 Years by Single Age, Luapula Province 2010
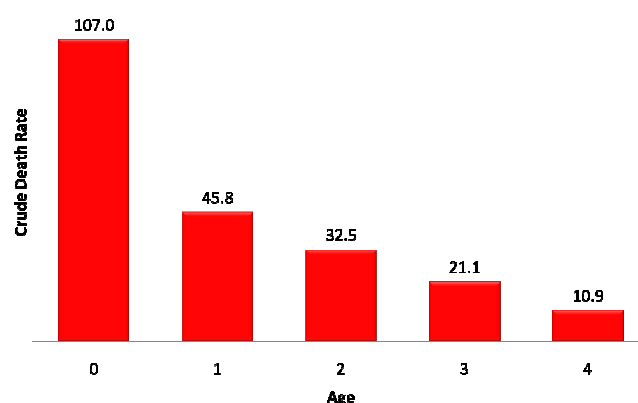
Source: 2010 Census of Population and Housing

Figure 8.2 shows observed crude death rate by rural/urban. The observed crude death rate was higher in rural areas, 44.0 deaths per 1000 population aged 0-4 years compared to 38.5 deaths per 1000 population in urban areas.

Figure 8.2: Observed Crude Death Rate per 1000 Population Aged 0-4 Years by Rural/Urban, Luapula Province 2010
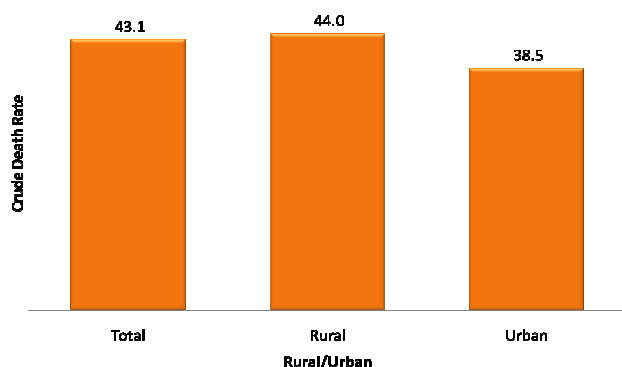
Source: 2010 Census of Population and Housing

Table 8.1 shows crude death rate by rural/urban, sex and single age for the population aged 0-4 years. The analysis of the crude death rate presented in Table 8.1 provide proxy indications of the expected levels of infant, child and under five mortality rates. Results show that Luapula Province had an infant mortality rate of 107, a child mortality rate of 110 and an under five mortality rate of 217.

Similarly, the information in the table approximates the infant mortality rate for rural areas at 108 and 100 for urban areas, a child mortality rate of 112 for rural areas and 96 for urban areas and an under five mortality rate of 196 for urban and 220 for rural. These proxy estimates of child mortality based on the observed crude death rates would be plausible for Luapula Province at the time of the 2010 Census.

Table 8.1: Observed Crude Death Rates (CDR) by Sex and Single Age for Population Aged 0-4 Years, Rural/Urban, Luapula Province 2010

Age	Total			Rural			Urban		
	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
0	0.107	0.118	0.096	0.108	0.121	0.096	0.100	0.102	0.098
1	0.046	0.049	0.042	0.046	0.050	0.042	0.044	0.046	0.041
2	0.032	0.036	0.029	0.033	0.037	0.030	0.028	0.031	0.025
3	0.021	0.024	0.019	0.022	0.025	0.020	0.015	0.019	0.012
4	0.011	0.010	0.011	0.011	0.011	0.012	0.009	0.010	0.009

Source: 2010 Census of Population and Housing

Direct estimation procedures were used to generate childhood mortality indicators. These indicators were extracted from the empirical life tables generated using information on household deaths in the period 12 months prior to the census. The US Census Bureau spreadsheet LTPOPDTH was used to generate the life tables.

8.5 Infant Mortality Rate

Table 8.2 shows infant mortality rate (IMR) by sex and rural/urban for Luapula Province for the period 12 months prior to the census. In 2010, the IMR was 99.6 deaths per 1000 live births. In rural areas, the IMR was 100.7 deaths per 1000 live births and 93.8 deaths per 1000 live births in urban areas. Estimated IMR was higher for male children than female children in both rural and urban areas.

Table 8.2: Infant Mortality Rate (IMR) by Sex and Rural/Urban, Luapula Province 2010

Rural/Urban	Both Sexes	Males	Females
Total	99.6	109.1	90.0
Rural	100.7	111.6	89.6
Urban	93.8	95.6	92.0

Source: 2010 Census of Population and Housing

The infant mortality rate presented in Figure 8.3 show declining trends since 1990. The IMR declined from 166.0 deaths per 1,000 live births in 1990 to 99.6 deaths per 1,000 live births in 2010. The decline in IMR occurred in both rural and urban areas since 1990.

Figure 8.3: Infant Mortality Rate (IMR) by Rural/Urban, Luapula Province 1990, 2000 and 2010
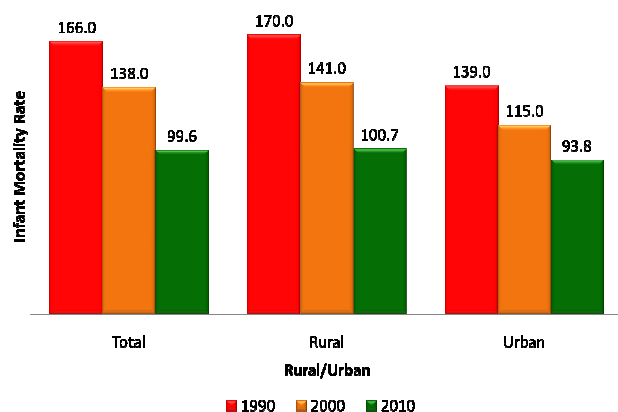
Source: 1990, 2000 and 2010 Censuses of Population and Housing

Infant Mortality Rate (IMR) by district is presented in Figure 8.4. In 2010, Nchelenge District had the highest infant mortality rate at 129.6 infant deaths per 1,000 live births and was the only district with an infant mortality rate above the province's average of 99.6 infant deaths per 1,000 live births. Milenge District had the lowest infant mortality rate at 55.6 infant deaths per 1,000 live births.

Figure 8.4: Infant Mortality Rate (IMR) by District, Luapula Province 2010
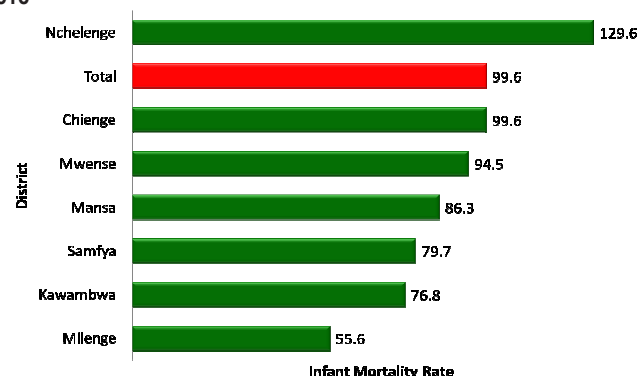
Source: 2010 Census of Population and Housing

Figure 8.5 shows infant mortality rate by district in 2000 and 2010. Between 2000 and 2010, the infant mortality rate declined in all the districts. The highest decline in IMR occurred in Milenge District from 135.0 deaths per 1,000 live births in 2000 to 55.6 deaths per 1,000 live births in 2010.

Figure 8.5: Infant Mortality Rate (IMR) By District, Luapula Province 2000 and 2010
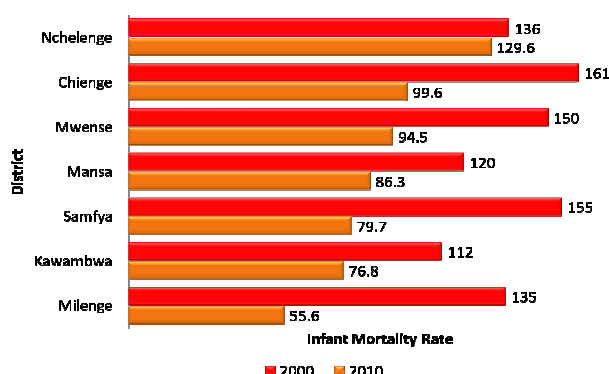
Source: 2000 and 2010 Censuses of Population and Housing

8.6 Child Mortality Rate

Table 8.3 shows the Child Mortality Rate (CMR) by sex and rural/ urban in 2010. The CMR for Luapula Province was 99.6 deaths per 1,000 live births. In rural areas, the CMR was 101.8 deaths per 1,000 live births and 88.4 deaths per 1000 live births in urban areas. The CMR was higher for male than female children in both rural and urban areas.

Table 8.3: Child Mortality Rate by Sex and Rural/Urban, Luapula Province 2010

Rural/Urban	Both Sexes	Males	Females
Luapula Province	**99.6**	**107.2**	**91.9**
Rural	101.8	109.3	94.3
Urban	88.4	96.6	80.2

Source: 2010 Census of Population and Housing

Figure 8.6 shows Child Mortality Rate (CMR) by rural/urban in 1990, 2000 and 2010. The figure suggests improvements in child survival in Luapula Province as depicted by the declining child mortality rate during the three inter-censal periods. Child mortality rate declined in rural areas from 140.0 deaths per 1,000 live births in 1990 to 101.8 deaths per 1,000 live births in 2010. Similarly, child mortality rate declined in urban areas from 111.0 deaths per 1,000 live births in 1990 to 88.4 deaths per 1,000 live births in 2010.

Figure 8.6: Child Mortality Rate (CMR) by Rural/Urban, Luapula Province 1990, 2000 and 2010
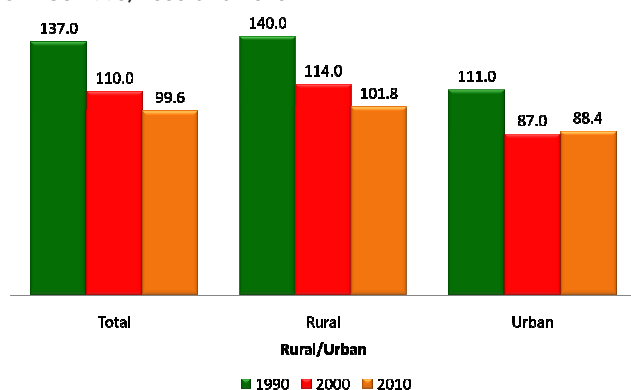
Source: 1990, 2000 and 2010 Censuses of Population and Housing

The Child Mortality Rate (CMR) by district is presented in Figure 8.7. In 2010, the child mortality rate for Nchelenge District was above the province's average of 99.6 deaths per 1000 live births. Nchelenge District had the highest child mortality rate at 132.1 deaths per 1000 live births while Milenge District had the lowest child mortality rate at 60.3 deaths per 1000 live births.

Figure 8.7: Child Mortality Rate (CMR) by District, Luapula Province 2010
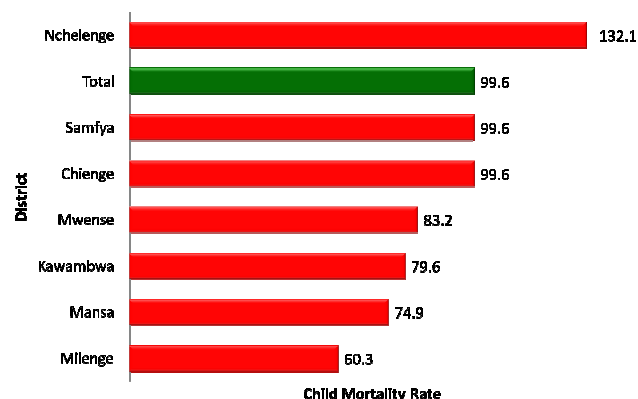
Source: 2010 Census of Population and Housing

Figure 8.8 shows child mortality rate by district in 2000 and 2010. Between 2000 and 2010, child mortality rate declined in all districts except Nchelenge District, which had an increase. Milenge District had the highest decline in child mortality rate during the inter-censal period from 108.0 deaths per 1,000 live births in 2000 to 60.3 deaths per 1,000 live births in 2010. Kawambwa District had the lowest decline from 84.0 deaths in 2000 to 79.6 deaths per 1,000 live births in 2010.

Figure 8.8: Child Mortality Rate (CMR) By District, Luapula Province 2000 and 2010
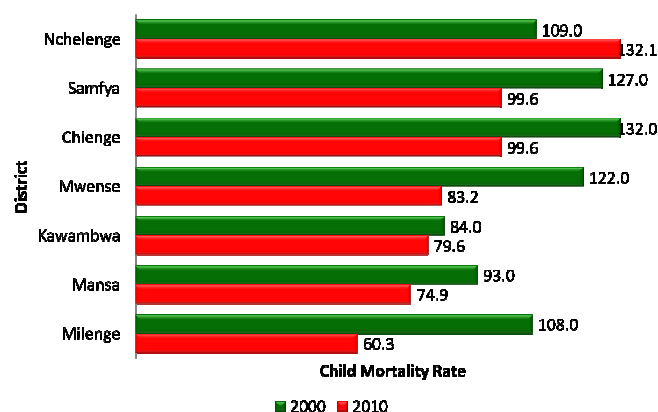
Source: 2000 and 2010 Censuses of Population and Housing

8.7 Under-Five Mortality Rate (U5MR)

Table 8.4 shows Under-Five Mortality Rate (U5MR) by sex and rural/urban. The U5MR for Luapula Province was 199.1 deaths per 1,000 live births. The U5MR in rural areas was 202.5 deaths per 1,000 live births and 182.2 deaths per 1,000 live births in urban areas.

As observed in infant and child mortality, under-five mortality rate was higher for male than female children in both rural and urban areas.

Table 8.4: Under-Five Mortality Rate (U5MR) by Sex and Rural/Urban, Luapula Province 2010

Rural/Urban	Both Sexes	Males	Females
Total	199.1	216.2	181.9
Rural	202.5	221.0	183.9
Urban	182.2	192.2	172.2
Source: 2010 Census of Population and Housing			

Figure 8.9 shows Under-five Mortality Rate by rural/urban in 1990, 2000 and 2010. The figure shows that the under-five mortality rate declined from 280.0 deaths per 1,000 live births in 1990 to 233.0 deaths per 1,000 live births in 2000. In 2010, the under-five mortality rate further declined to 199.1 deaths per 1,000 live births.

Under-five Mortality rate declined in both rural and urban areas between 1990 and 2010. In rural areas, Under-five Mortality Rate declined from 286.0 deaths per 1,000 live births in 1990 to 202.5 deaths per 1,000 live births in 2010. The decline in urban areas was from 234.0 deaths per 1000 live births in 1990 to 182.2 deaths per 1,000 live births in 2010.

Figure 8.9: Levels in Under five Mortality Rate (U5MRs) by Rural/Urban, Luapula Province 1990, 2000 and 2010
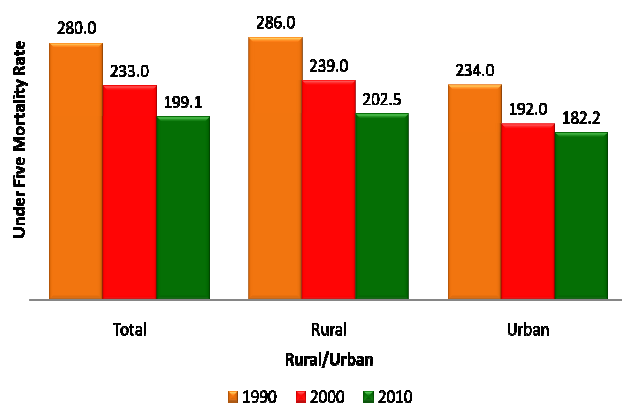
Source: 1990, 2000 and 2010 Censuses of Population and Housing
Note: *1990 and 2000 figures were revised using QFIVE*

Figure 8.10 shows Under five Mortality Rate by district. Nchelenge District was the only district with an Under five Mortality Rate above the provincial average of 199.1 deaths per 1,000 live births. Under five Mortality Rate was lowest in Milenge District at 115.9 deaths per 1,000 live births and highest in Nchelenge District at 261.7 deaths per 1,000 live births.

Figure 8.10: Under Five Mortality Rate (U5MR) by District, Luapula Province 2010
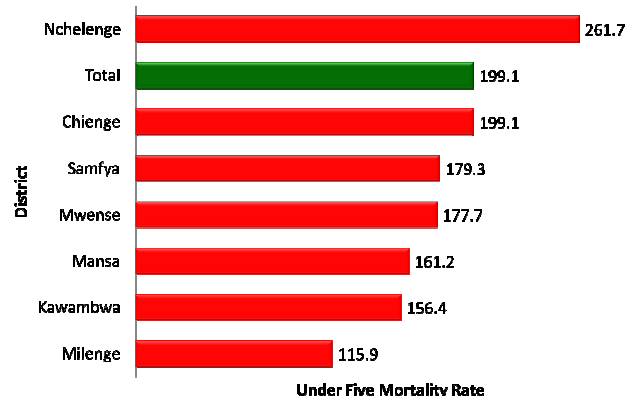
Source: 2010 Census of Population and Housing

Figure 8.11 shows under five mortality rate by district in 2000 and 2010. Milenge District had the highest decline in Under five Mortality Rate from 228.0 deaths per 1,000 live births in 2000 to 115.9 deaths per 1,000 live births in 2010.

Figure 8.11: Under Five Mortality Rate (U5MR) by District, Luapula Province 2000 and 2010
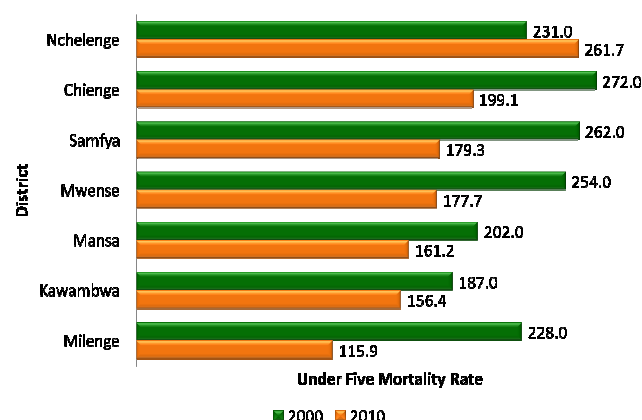
Source: 2000 and 2010 Censuses of Population and Housing

CHAPTER 9
GENERAL AND MATERNAL MORTALITY CHARACTERISTICS

9.0 Summary

The Crude Death Rate (CDR) in 2010 for Luapula Province was 17.3 deaths per 1,000 population; 19.0 deaths per 1,000 population for males and 15.6 deaths per 1,000 population for females. Rural areas had a higher CDR at 17.4 deaths compared to 16.6 deaths per 1,000 population for urban areas.

The age groups with the highest percentage of reported adult deaths were the age groups 25-29 years for females and 30-34 years for males. For ages below 30 years, the percentages of the reported adult deaths were higher among females than males.

The life expectancy at birth was 45.0 years, 45.3 years in rural areas and 44.1 years in urban areas. Females had a higher life expectancy at birth of 47.4 years compared to 42.7 years for males.

The most common cause of death was sickness/disease accounting for 75.5 percent of all reported causes.

9.1 Introduction

Mortality data are useful in assessing the performance of national health programmes, including interventions aimed at disease control and prevention. Mortality statistics provide a foundation on which health policy is formulated.

Mortality measure, though a challenge in the absence of complete vital registration is still critical to national planning. Census and surveys still form a major source of mortality information for Zambia. However, the costs and periodicity of census and surveys affect timeliness and accuracy.

A national population census provides a unique opportunity to collect mortality data for district and sub-district level estimates. This is the core advantage of collecting mortality data in a census over other sources. The district level estimates of mortality form critical input into population projections and components of district planning.

9.2 Concepts and definitions

The following concepts and definitions have been used in analyzing General Mortality in this chapter;

Death (Mortality): The complete disappearance of any signs of life at any time after a live birth has occurred.

Crude Death Rate (CDR): The ratio of the number of deaths occurring in a year to the mid-year population expressed per 1,000 population.

Age Specific Death Rates (ASDR): Mortality rates from deaths occurring to a specified population age group or sex per 1,000 population in that age group or sex during a given time period

Life Expectancy at Birth (e0): Average number of years expected to be lived by a birth cohort, based on prevailing age specific mortality rates

9.3 Collection of Mortality Data in the 2010 Census

Information on children ever born, children surviving, children dead and direct questions on deaths in the 12 months prior to the census were asked to all households in the census. All households in the census were asked whether there was any member who had died since October 2009, the sex of the deceased, age and the cause of death.

9.4 General Mortality

9.4.1 Crude Death Rate (CDR)

Crude Death Rate (CDR) gives a general indication of the levels of mortality in a population. Crude death rate is calculated for 12 month periods such as calendar years or fiscal years so as to eliminate the effect of seasonal or monthly variations on the comparability of the rates (Shryock et al., 1980).

Figure 9.1 shows the observed crude death rate (CDR) for Luapula Province by sex and rural/urban. The Crude Death Rate was 17.3 deaths per 1,000 population; 19.0 deaths per 1,000 males and 15.6 deaths per 1,000 females. Overall, males had higher mortality than females in both rural and urban areas. The CDR was higher in rural areas, 17.4 deaths per 1,000 population than 16.6 deaths per 1,000 population in rural areas.

Figure 9.1: Observed Crude Death Rate (CDR) per 1,000 Population by Sex and Rural/Urban, Luapula Province 2010
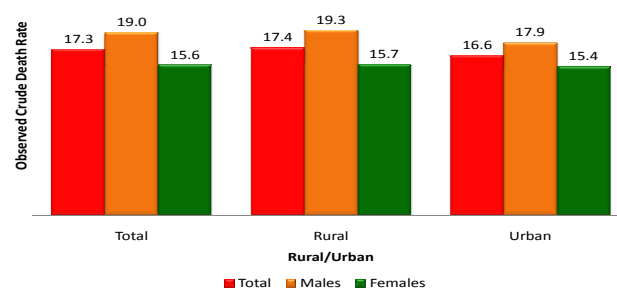
Source: 2010 Census of Population and Housing

Figure 9.2 shows Crude Death Rate by district. The figure shows that Chienge and Nchelenge Districts had Crude Death Rates above the provincial average of 17.3 deaths per 1,000 population.

Figure 9.2: Crude Death Rate (CDR) by District, Luapula Province 2010
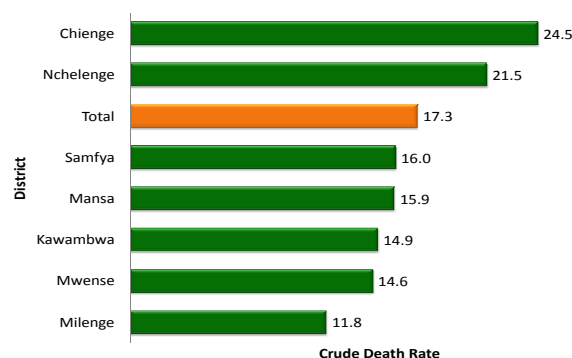
Source: 2010 Census of Population and Housing

The highest Crude Death Rate was in Chienge District at 24.5 deaths per 1,000 population and the lowest was in Milenge District at 11.8 deaths per 1000 population.

Table 9.1: Observed Crude Death Rate by Sex and District, Luapula Province 2010

District	Male	Female
Chienge	26.4	22.7
Kawambwa	15.8	14.0
Mansa	17.8	14.1
Milenge	13.7	10.0
Mwense	15.5	13.7
Nchelenge	23.1	19.8
Samfya	18.5	13.6
Source: 2010 Census of Population and Housing		

9.4.2 Age-Sex Specific Death Rate

Age and sex form two important demographic variables in the analysis and understanding of mortality levels and patterns. Certain diseases or mortality risks tend to be age or sex selective. Age-sex specific death rates refer to mortality rate from deaths occurring to a specified population age group or sex per 1,000 population in that age group or sex during a given time period.

Figure 9.3 shows the observed Age-Sex Specific Death Rates for Luapula Province in 2010. The figure shows a u-shaped characteristic with high mortality at the very young and oldest ages. The high death rate in the age groups less than 1 year and 1-4 years explains the high child mortality in Luapula Province. Further, the figure shows increasing mortality in both males and females after age 15 years, levelling off in the mid-thirties for both males and females.

Figure 9.3: Observed Age-Sex Specific Death Rate by Age Group and Sex, Luapula Province 2010
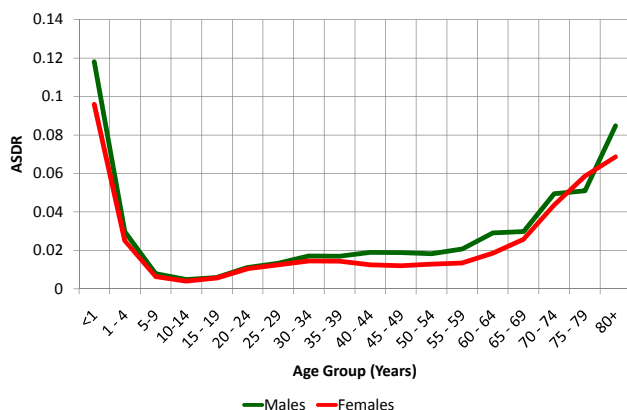
Source: 2010 Census of Population and Housing

Luapula Province follows the typical u-shaped age specific death rates pattern, starting off high in early childhood, declining to the lowest at the age group 10-14 years and increasing with age. There is a "bump" set off by rising mortality after age 15. The figure also shows higher mortality among males than females, especially in early childhood and after age 30.

Figures 9.4 and 9.5 show Age-Sex Specific Death Rate for rural and urban areas, respectively. In both cases, the mortality pattern is characterized by high mortality in young ages that decline with increasing age until the age of 15 years. After age 15, mortality steadily increases before levelling off in the thirties for females and in the late forties for males and then it increases with age.

Generally, in both rural and urban areas, mortality was higher among males than females, especially over the age of 30 years.

Figure 9.4: Observed Age-Sex Specific Death Rate by Age Group and Sex, Luapula Province Rural 2010
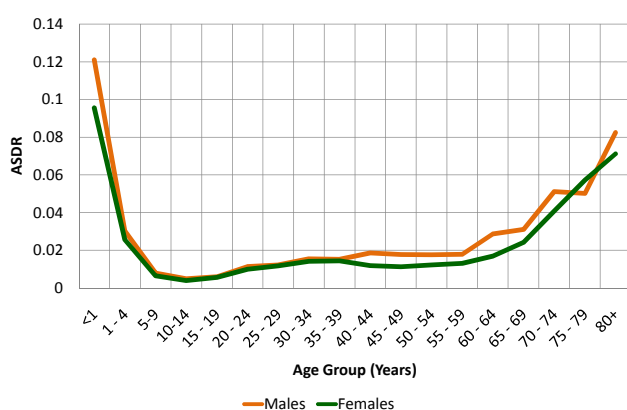
Source: 2010 Census of Population and Housing

Figure 9.5: Observed Age-Sex Specific Death Rate by Age Group and Sex, Luapula Province Urban, 2010
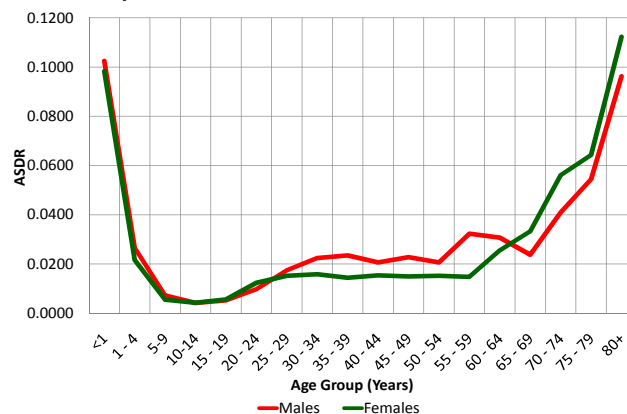
Source: 2010 Census of Population and Housing

Figure 9.6 shows Observed Age-Specific Death Rate by rural/urban for Luapula Province. The figure shows that above the age of 20 years, mortality is higher in urban than in rural areas.

Figure 9.6: Observed Age Specific Death Rate by Age Group and Rural/Urban, Luapula Province 2010
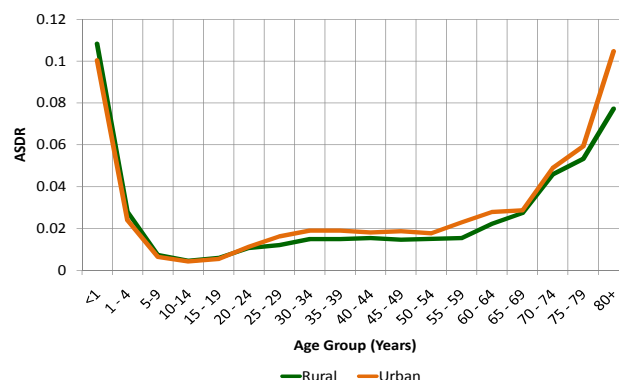
Source: 2010 Census of Population and Housing

In all societies, mortality levels are influenced more by the age structure. However, some causes of death tend to be sex selective. Therefore, mortality tends to vary by age and sex.

Figure 9.7 shows the percentage of reported adult deaths by age group and sex for Luapula Province. The age groups with the highest percentage of reported adult deaths were the age groups 25-29 years for females and 30-34 years for males. The percentage of reported adult deaths was higher for females than males in the age groups 15-34, while the percentage of reported adult deaths were higher for males than females among those aged 35 years and older.

Figure 9.7: Percentage Reported Adult Deaths by Age Group and Sex, Luapula Province, 2010
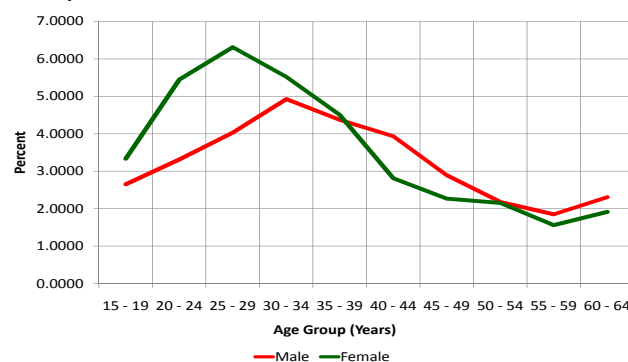
Source: 2010 Census of Population and Housing

9.5 Life Expectancy

Life expectancy refers to the average numbers of years expected to be lived from a particular age of reference e.g. from age 0 (life expectancy at birth), age 5, age 15, age 45 or age 65. It is computed using prevailing age specific mortality rates and implied life table probabilities. Hence, Life expectancy is a useful summary measure because it takes into account the mortality situation at each age yet expresses the result in a single figure (US Census Bureau, 1994).

The most commonly used measure of life expectancy is the life expectancy at birth (e0), which refers to the average number of years expected to be lived by a birth cohort, based on prevailing age specific mortality rates.

Unadjusted household deaths data were used to generate abridged life tables for Luapula Province by sex and rural/urban. The 2000 life expectancy estimates were indirectly estimated based on the North Model, while the 2010 estimates are based on empirical data on household deaths collected during the 2010 Census. The US Bureau spreadsheet LTPOPDTH was used to generate life tables from which the estimates of life expectancy at birth had been extracted. Table 9.2 shows life expectancy at birth by sex and rural/urban for Luapula Province in 2010.

Table 9.2: Life Expectancy at Birth by Sex and Rural/Urban, Luapula Province 2010			
Luapula Province Rural/Urban	Both Sexes	Males	Females
Total	45.0	42.7	47.4
Rural	45.3	44.2	49.0
Urban	44.1	43.5	47.4
Source: 2010 Census of Population and Housing			

In 2010, the life expectancy at birth was 45.0 years. The life expectancy at birth for rural areas was higher (45.3) than in urban areas (44.1). A possible explanation lies in the high adult mortality in urban areas than in rural areas as explained earlier with the Age-Sex Specific Death Rate. In both rural and urban areas, females had higher life expectancy at birth than males.

Figure 9.8 shows life expectancy at birth by sex and rural/urban in 1990, 2000 and 2010. Life expectancy at birth increased from 39.0 years in 1990 to 45.0 years in 2010. In rural areas, life expectancy at birth increased from 38.4 years to 45.3 years between 1990 and 2010 while in urban areas it increased from 43.2 years in 1990 to 44.1 years in 2010.

Figure 9.8: Life Expectancy at Birth by Sex and Rural/Urban, Luapula Province 1990, 2000 and 2010

Source: 1990, 2000 and 2010 Censuses of Population and Housing

For males, life expectancy at birth increased from 38.1 years to 42.7 years in 1990 and 2010, respectively. The life expectancy at birth for females increased from 40.0 years in 1990 to 47.4 years in 2010.

For each district, life expectancy at birth was generated from abridged life tables based on reported household deaths 12 months prior to the census. Figure 9.9 shows life expectancy at birth by district. In 2010, Nchelenge District had life expectancy at birth below the province average of 45.0 years. Milenge District had the highest life expectancy at birth of 54.1 years while Nchelenge District had the lowest life expectancy at birth of 41.2 years.

Figure 9.9: Life Expectancy at Birth by District, Luapula Province 2010
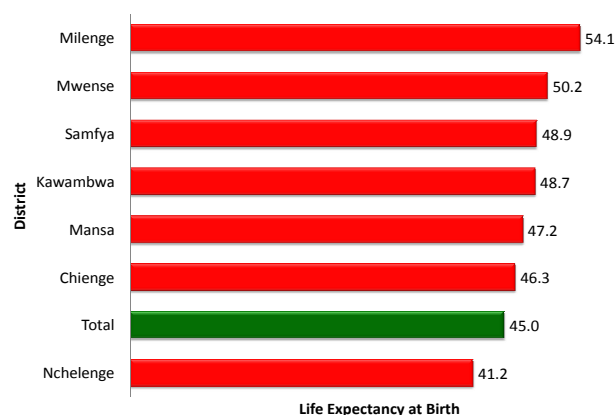
Source: 2010 Census of Population and Housing

Figure 9.10 shows life expectancy at birth by district for 2000 and 2010. Caution should also be taken in comparing the estimates for 2000 and 2010 as they are based on different methodologies. The 2000 estimates were based on indirect estimation based on the North Model Life Table, while the 2010 estimates are based on empirical data on household deaths collected during the 2010 Census. Some districts had an increase while others had a decline in life expectancy at birth between 2000 and 2010.

Figure 9.10: Life Expectancy at Birth by District, Luapula Province 2000 and 2010
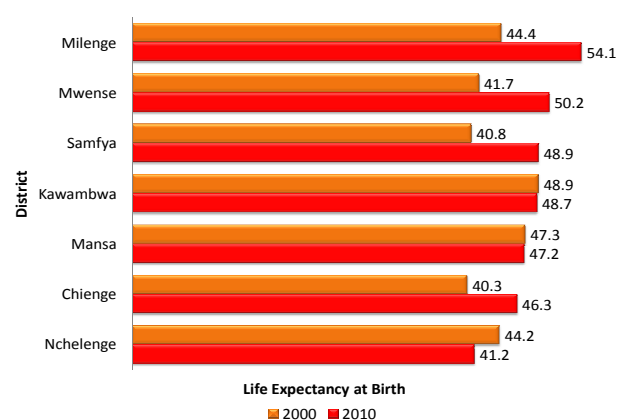
Sources: 2000 and 2010 Censuses of Population and Housing

Figure 9.11 shows life table function nqx (probability of dying between exact n and n+x). This is presented by age and sex due to the variability of mortality by age and sex.

Figure 9.11: Life Table Probability of Dying (nqx) by Age and Sex, Luapula Province 2010
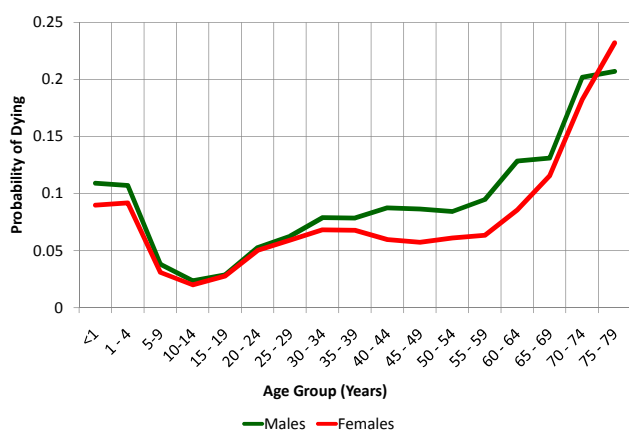
Source: 2010 Census of Population and Housing

The probability of dying is higher for males than females almost in all ages except at age groups 15 to 19 and 20 to 24 years. At age 10, there is an improved survival prospect for both sexes. As mortality increases beyond age 25, the gap in the probability of dying between males and females increases and is even wider between the ages of 35 and 65. This contributes to the lower life expectancy among males than females.

9.6 Cause of Death

Information on the cause of death is important in focusing interventions to prevent and reduce mortality. For all deaths reported during the 2010 Census, cause of death information was collected. However, the broad categories were pre-specified due to limited space on the questionnaire.

Figure 9.12 shows the percentage of reported cause of death for deceased household members as reported by households. The major cause of mortality was illness/disease accounting for 75.5 percent of all reported household deaths. Accidents were cited as a cause of death in 3.2 percent of deaths reported, while other causes were cited in 10.1 percent of reported deaths. Spousal violence, suicide and injury accounted for less than one percent each.

Figure 9.12: Percentage Reported Cause of Death for Deceased Household Members that Died 12 months Prior to the Census, Luapula Province 2010
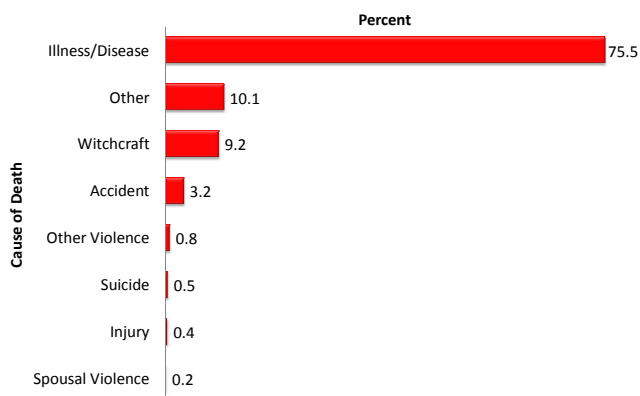
Source: 2010 Census of Population and Housing

Some causes of death are selective due to selective nature of exposure to risk. Hence it is important to look at cause of death by sex so as to assess any variation in cause of death by sex. Figure 9.13 presents information on cause of death by sex of deceased persons.

Illness/disease was the major cause of mortality among males and females in Luapula Province. The percentage for females was higher (78.2 percent) than that for males (73.2 percent). However, the percentages of male deaths attributed to witchcraft, accident, violence, suicide and other causes were higher than those of females.

Figure 9.13: Percentage Reported Cause of Death for Deceased Household Members that Died 12 Months Prior to the Census by Sex of Deceased, Luapula Province 2010
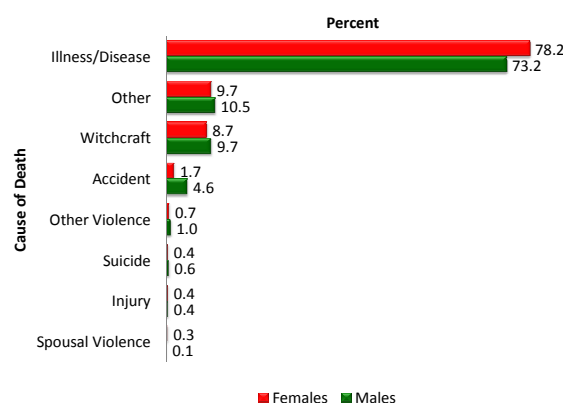
Source: 2010 Census of Population and Housing

Figure 9.14 shows the percentage of reported adult deaths due to illness/disease by age and sex of the deceased person. The percentage of reported female deaths due to illness/disease was higher than that of males for the age groups 15-39 years, while the percentage of males dying from sickness/disease was higher than females for ages over 40 years.

Figure 9.14: Percentage Reported Adult Deaths Due to Sickness/Disease by Age and Sex of Deceased Person, Luapula Province 2010
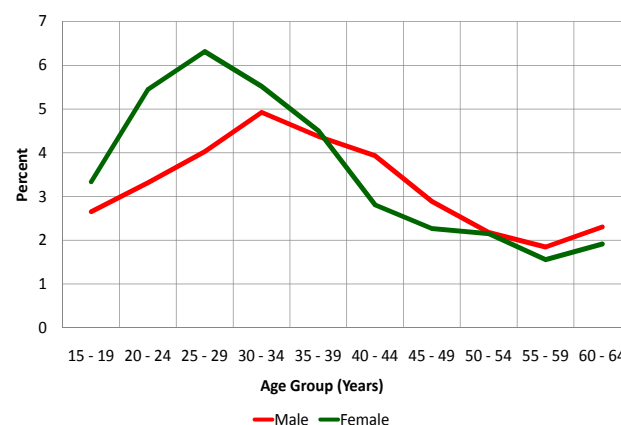
Source: 2010 Census of Population and Housing

CHAPTER 10
LANGUAGE AND ETHNICITY

10.0 Summary

Bemba was the widely used language of communication, spoken by 71.3 percent of the population in Luapula Province.

Bemba was spoken by a higher proportion of the population in six districts of Luapula Province, namely; Chienge (78.8 percent), Kawambwa (88.3 percent), Mansa (60.5 percent), Mwense (90.4 percent), Nchelenge (97.6 percent) and Samfya (41.7 percent). Ushi was the widely used language of communication in Milenge District at 55.1 percent.

Over the past three censuses, languages from the Bemba group had remained the most widely used from 98.9 percent in 1990 to 99.5 percent in 2010.

Bemba was the largest ethnic group with 44.1 percent of the population in Luapula Province.

Chapter 10
Language and Ethnicity

10.1 Introduction

The Zambian society is endowed with many languages; there are officially 73 ethnic groups, from which, seven language clusters have been identified. There are seven languages or language clusters that are used in Zambia besides English for official purposes such as broadcasting (both on radio and television), literacy campaigns and the official dissemination of information. These are (in alphabetical order), Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga.

This chapter presents data on widely used language of communication and ethnicity. Widely used language of communication looks at the language use. Therefore the number of language users does not necessarily reflect the number of people that belong to an ethnic grouping.

The data is presented by broad language/ethnic groups and single language/ethnic groups. Broad language/ethnic groups are formed using different criteria:

* *By combining most spoken languages in a geographical location such as North-Western language groups.*

* *By combining languages which are mutually intelligible. For example, Mambwe, Lungu, Namwanga, Wina and Tambo form one language group called the Mambwe language group because they are mutually intelligible languages.*

* *By combining languages which are trans–tribe such as Nyanja.*

To collect ethnicity data, Zambians were asked to indicate their ethnic group. Zambians of different origin and Non-Zambians were asked to indicate a major racial group they belonged to (such as African, Asian, European or American).

It is important to note that during data collection, children under the age of three years whose speech was still developing and persons with speech impairment did not report any language of communication. Therefore, the total population reported to have been speaking a predominant language is less than the defacto population. On the other hand, the analysis on ethnicity included all persons in the defacto population.

10.2 Concepts and Definitions
Ethnicity
This is the tribal group that one identifies himself/herself with. Ethnic group is a self-perceived conception of social group membership.

Widely Used Language of Communication
This is the language which is mostly spoken by an individual during their day to day communication, at work, with neighbours or in market places. This is simply the language currently spoken or most often spoken by the individual in his/her present home.

10.3 Widely Used Language of Communication
Table 10.1 shows the widely spoken languages of communication by rural/urban. In 2010, Bemba was the widely spoken language of communication in Luapula Province at 71.3 percent. It was widely spoken in both rural areas (67.5 percent) and urban areas (86.5 percent) of the population.

Table 10.1: Percentage Distribution of the Population by Widely Spoken Language of Communication and Rural/Urban, Luapula Province 2010			
Widely Spoken Language of Communication	Total	Rural	Urban
Bemba	71.3	67.5	86.5
Lunda Luapula	1.2	1.0	2.1
Lala	0.1	0.1	0.1
Bisa	0.1	0.1	0.1
Ushi	11.8	13.3	5.8
Chishinga	1.5	1.5	1.6
Ngumbo	5.1	6.4	0.2
Kabende	4.5	5.3	1.3
Tabwa	0.1	0.1	0.0
Shila	0.2	0.2	0.0
Unga	1.3	1.6	0.0
Bwile	2.2	2.7	0.4
Tonga	0.1	0.0	0.1
Nyanja	0.1	0.0	0.6
English	0.1	0.0	0.5
Other Language	0.2	0.1	0.6
Total Percent	**100**	**100**	**100**
Total Population	**827,639**	**664,179**	**163,460**
Source: 2010 Census of Population and Housing			
Note: Languages that had less than 0.1 percent of the total population in the province were lumped in the "Other Languages" category. "Not applicable", "Not stated" and "Major Racial Group" categories were excluded			

10.3.1 Language Groups

Seven language groups had been identified according to the criteria described in the introduction (10.1). These are (in alphabetical order) Barotse, Bemba, Mambwe, North Western, Nyanja, Tonga and Tumbuka. Table 10.2 shows the percentage distribution of the population by major language groups and rural/urban. Languages in the Bemba group were spoken by 99.5 percent of the population. In rural areas, the languages were spoken by 99.8 percent of the population and 98.3 percent in urban areas.

Table 10.2: Percentage Distribution of the Population by Major Language Group and Rural/Urban, Luapula Province 2010

Language Group	Total	Rural	Urban
Bemba	99.5	99.8	98.3
Tonga	0.1	0.0	0.2
North Western	0.0	0.0	0.1
Barotse	0.0	0.0	0.1
Mambwe	0.0	0.0	0.1
Nyanja	0.2	0.0	0.7
Tumbuka	0.0	0.0	0.1
English	0.1	0.0	0.5
Other	0.0	0.0	0.0
Total Percent	**100.0**	**100.0**	**100.0**
Total Population	**827,639**	**664,179**	**163,460**

Source: 2010 Census of Population and Housing

10.3.2 Widely Used Language of Communication by Sex

Table 10.3 shows the percentage distribution of the widely used language of communication by sex and rural/urban. The table shows that Bemba was the widely used language of communication for both males and females at 71.4 and 71.1 percent, respectively. A similar pattern was observed in both rural and urban areas where most males and females reported Bemba as their widely used language of communication.

Table 10.3: Percentage Distribution of Widely Used Language of Communication by Sex and Rural/Urban, Luapula Province 2010

Widely Spoken Language of Communication	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bemba	71.3	71.4	71.1	67.5	67.8	67.3	86.5	86.3	86.6
Lunda (Luapula)	1.2	1.3	1.2	1.0	1.1	1.0	2.1	2.1	2.1
Lala	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Bisa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ushi	11.8	11.7	11.8	13.3	13.2	13.3	5.8	5.9	5.8
Chishinga	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.7	1.6
Ngumbo	5.1	5.1	5.2	6.4	6.3	6.4	0.2	0.2	0.2
Kabende	4.5	4.4	4.6	5.3	5.2	5.4	1.3	1.3	1.3
Tabwa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Shila	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.0
Unga	1.3	1.2	1.3	1.6	1.5	1.6	0.0	0.0	0.0
Bwile	2.2	2.2	2.2	2.7	2.7	2.6	0.4	0.4	0.4
Tonga	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Nyanja	0.1	0.2	0.1	0.0	0.0	0.0	0.6	0.6	0.5
English	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0.5	0.4
Other Languages	0.2	0.2	0.2	0.1	0.2	0.1	0.6	0.6	0.6
Total Percent	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total Population	**827,639**	**399,860**	**427,779**	**664,179**	**321,518**	**342,661**	**63,460**	**78,342**	**85,118**

Source: 2010 Census of Population and Housing

10.3.3 Widely Used Language of Communication by District

Table 10.4 shows the percentage distribution of the widely used languages of communication by district. Bemba was widely spoken by a higher proportion of the population in six districts of Luapula Province, namely Chienge (78.8 percent), Kawambwa (88.3 percent), Mansa (60.5 percent), Mwense (90.4 percent) , Nchelenge (97.6 percent) and Samfya (41.7 percent). In Milenge District, Ushi was the widely spoken language at 55.1 percent.

Table 10.4: Percentage Distribution of the Widely Used Languages of Communication by District, Luapula Province 2010								
Widely Used Language of Communication	Total	District						
		Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
Bemba	71.3	78.8	88.3	60.5	41.1	90.4	97.6	41.7
Lunda Luapula	1.2	0.0	2.9	0.1	0.1	5.1	1.2	0.1
Lala	0.1	0.0	0.0	0.0	0.9	0.0	0.0	0.1
Bisa	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.5
Ushi	11.8	0.1	0.1	37.7	55.1	1.4	0.1	3.2
Chishinga	1.5	0.0	8.2	0.1	0.1	2.7	0.1	0.0
Ngumbo	5.1	0.0	0.0	0.1	0.1	0.0	0.0	25.6
Kabende	4.5	0.0	0.0	0.0	1.9	0.0	0.0	22.1
Tabwa	0.1	0.7	0.0	0.0	0.1	0.0	0.0	0.0
Shila	0.2	0.9	0.0	0.0	0.0	0.0	0.6	0.0
Unga	1.3	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Bwile	2.2	19.2	0.0	0.0	0.0	0.0	0.0	0.0
Tonga	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.0
Nyanja	0.1	0.0	0.1	0.4	0.0	0.1	0.1	0.0
English	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Other Language	0.2	0.1	0.2	0.5	0.1	0.2	0.2	0.1
Total Percent	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Population	827,639	94,497	113,971	187,970	35,830	102,401	127,884	165,086

Source: 2010 Census of Population and Housing

10.3.4 Major Language Groups

Table 10.5 shows the percentage distribution of the population by major language groups in 1990, 2000 and 2010. The proportion of the population speaking languages in the Bemba language group increased from 98.9 percent in 1990 to 99.5 percent in 2010.

Table 10.5: Percentage Distribution of Major Language Groups, Luapula Province 1990, 2000 and 2010			
Language Group	Percentage of Total Population		
	1990	2000	2010
Bemba	98.9	95.2	99.5
Tonga	0.1	0.1	0.1
North Western	0.1	0	0.0
Barotse	0.1	0	0.0
Mambwe	0.2	0.1	0.0
Nyanja	0.3	0.2	0.2
Tumbuka	0.1	0	0.0
English	0.1	0.1	0.1
Others	0.1	4.3	0.0
Total Percent	100	100	100.0
Total Population	504,271	674,049	827,639

Source: 1990, 2000 and 2010 Censuses of Population and Housing

10.4 Ethnicity

This section shows ethnic groups that had a population of at least 0.1 percent of the total population in Luapula Province as captured in the 2010 Census. The rest of the ethnic groups are lumped under the "other" category.

10.4.1. Ethnicity by Rural/Urban

Table 10.6 shows the percent distribution of the population by ethnic group and rural/urban. The Bemba ethnic group had the largest percentage of the provincial population at 44.1 percent followed by the Ushi ethnic group at 17.1 percent. In rural and urban areas, Bemba had the largest ethnic group at 42.0 and 53.0 percent, respectively.

Table 10.6: Percentage Distribution of the Population by Ethnicity and Rural/Urban, Luapula Province 2010

Ethnicity	Total	Rural	Urban
Bemba	44.1	42.0	53.0
Lunda Luapula	7.0	6.1	10.6
Lala	0.3	0.2	0.8
Bisa	0.5	0.4	0.9
Ushi	17.1	17.4	15.8
Chishinga	6.0	6.3	5.0
Ngumbo	6.9	8.2	1.6
Lamba	0.1	0.1	0.3
Kabende	4.5	5.0	2.4
Tabwa	1.1	1.2	0.6
Shila	2.1	2.4	0.5
Unga	2.3	2.8	0.2
Bwile	5.5	6.4	1.7
Tonga	0.3	0.1	0.7
Lenje	0.1	0.0	0.2
Lunda N/Western	0.1	0.1	0.3
Kaonde	0.1	0.1	0.3
Lozi	0.2	0.1	0.6
Chewa	0.1	0.1	0.4
Nsenga	0.1	0.1	0.4
Ngoni	0.2	0.1	0.6
Nyanja	0.1	0.0	0.2
Tumbuka	0.2	0.1	0.5
Lungu	0.1	0.1	0.2
Mambwe	0.3	0.1	0.7
Namwanga	0.2	0.1	0.8
English	0.0	0.0	0.0
Ethnicity Not Stated	0.2	0.2	0.3
Major racial groups	0.1	0.1	0.1
Other Ethnic Groups	0.3	0.2	0.7
Total Percent	**100.0**	**100.0**	**100.0**
Total Population	**938,391**	**756,351**	**182,040**

Source: 2010 Census of Population and Housing

10.4.2. Ethnicity by Rural/Urban and Sex

Ethnicity was analysed by sex and rural/urban as shown in Table 10.7. The Bemba ethnic group had the largest proportion of the population for both males and females at 44.1 percent each. The table shows that there were no major differences by sex in the proportion of the population for all ethnic groups in both rural and urban areas.

Table 10.7: Percentage Distribution of the Population by Ethnicity, Sex and Rural/Urban, Luapula Province 2010

Ethnicity	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bemba	44.1	44.1	44.1	42.0	42.1	41.8	53.0	52.6	53.3
Lunda Luapula	7.0	7.0	7.0	6.1	6.2	6.1	10.6	10.6	10.5
Lala	0.3	0.3	0.3	0.2	0.2	0.2	0.8	0.8	0.7
Bisa	0.5	0.5	0.5	0.4	0.4	0.3	0.9	0.9	1.0
Ushi	17.1	17.0	17.1	17.4	17.3	17.5	15.8	15.8	15.8
Chishinga	6.0	6.0	6.0	6.3	6.3	6.2	5.0	5.0	4.9
Ngumbo	6.9	6.9	7.0	8.2	8.1	8.3	1.6	1.6	1.6
Lamba	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3
Kabende	4.5	4.4	4.6	5.0	4.9	5.1	2.4	2.5	2.4
Tabwa	1.1	1.1	1.1	1.2	1.2	1.2	0.6	0.6	0.6
Shila	2.1	2.1	2.0	2.4	2.5	2.4	0.5	0.5	0.4
Unga	2.3	2.2	2.4	2.8	2.7	3.0	0.2	0.2	0.2
Bwile	5.5	5.5	5.5	6.4	6.4	6.4	1.7	1.6	1.7
Tonga	0.3	0.3	0.3	0.1	0.2	0.1	0.7	0.8	0.7
Lenje	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Lunda N/Western	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.3	0.3
Kaonde	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3
Lozi	0.2	0.2	0.2	0.1	0.1	0.1	0.6	0.6	0.5
Chewa	0.1	0.1	0.1	0.1	0.1	0.0	0.4	0.4	0.4
Nsenga	0.1	0.1	0.1	0.1	0.1	0.0	0.4	0.4	0.4
Ngoni	0.2	0.2	0.2	0.1	0.1	0.1	0.6	0.7	0.5
Nyanja	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Tumbuka	0.2	0.2	0.2	0.1	0.1	0.1	0.5	0.5	0.5
Lungu	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Mambwe	0.3	0.3	0.2	0.1	0.1	0.1	0.7	0.8	0.7
Namwanga	0.2	0.2	0.2	0.1	0.1	0.1	0.8	0.8	0.7
English	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ethnicity Not Stated	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2
Major racial groups	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Ethnic Groups	0.3	0.3	0.3	0.2	0.2	0.2	0.7	0.7	0.7
Total Percent	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total Population	**938,391**	**455,046**	**483,345**	**756,351**	**367,462**	**388,889**	**182,040**	**87,584**	**94,456**

Source: 2010 Census of Population and Housing

CHAPTER 11
DISABILITY

11.0 Summary

The proportion of the population with disability in Luapula Province was 2.8 percent. The proportion in rural areas was higher than urban areas at 3.0 percent and 2.2 percent, respectively. Milenge District had the highest proportion of the population with disability at 3.2 percent while Mwense District had the lowest at 2.5 percent.

The median age for the population with disability was 37.3 years. Physical disability was the most common type of disability at 31.8 percent. The major cause of disability was disease at 36.8 percent.

The literacy rate for the population with disability in Luapula Province was 59.1 percent. Kawambwa District had the highest proportion of the population with disabilities who were literate at 65.0 percent. Samfya District had the highest proportion of the population with disabilities who could not read and write.

The proportion of the population with disability that had never attended school was higher (33.4 percent) than that of the population without disability. The highest level of education attained by the majority of the population with disabilities for both males and females was primary education.

Of the population of the disabled, 94.0 percent were employed. Of these, 71.9 percent were self employed and 20.1 percent were unpaid family workers.

Agricultural related occupations made up 91.0 percent of the employed disabled population.

Chapter 11
Disability

11.1 Introduction

Disability is an experience with different parts and aspects. The concept of disability has been evolving. There has been a shift in the perception of disability from an individual and medical condition to a social perspective. The International Classification of Functioning, Disability and Health (ICF) classify disability in three areas that are inter-related:

- *Impairments: problems in body function or changes in body structure such as blindness;*

- *Activity limitations: difficulties in doing certain activities such as walking or eating;*

- *Participation limitations: societal restrictions with regards, involvement in any area of life such as being discriminated against in employment or transportation.*

Disability refers to problems faced in any or all three areas of functioning (WHO, 2011).

Zambia has been collecting data on the prevalence of disability through censuses and surveys. This information was collected in all of its five censuses (1969, 1980, 1990, 2000 and 2010). The set of impairments on which data is collected through censuses in Zambia has been increasing, from four to twelve disability categories between 1969 and 2010, as shown in the Table 11.1.

Table 11.1: Disability Categories used in Censuses, Zambia 1969-2010

1969	1980	1990	2000	2010
1. Blind	1. Blind	1. Blind	1. Blind	1. Blind
2. Deaf and/or mute	2. Deaf and/or mute	2. Deaf-Dumb	2. Partially sighted	2. Partially sighted
3. Loss of limb	3. Crippled, or loss of limb	3. Crippled	3. Deaf/Dumb	3. Deaf and Dumb
4. Sick	4. Mentally Retarded	4. Mentally Retarded	4. Hard of Hearing	4. Deaf
	5. Sick	5. Multiple Disabilities	5. Mentally ill	5. Hard of Hearing
	6. Combination of two or more categories		6. Ex- Mental	6. Dumb
			7. Mentally Retarded	7. Mentally ill
			8. Physically Handicapped	8. Intellectual
				9. Speech impairment
				10. Physically disabled
				11. Mentally Retarded
				12. Other

Sources: 1969, 1980, 1990, 2000 and 2010 Censuses of Population and Housing

The widening of responses on impairments overtime was meant to capture more people living with disabilities and hence improve the measurement of disability. However, this has made comparability between censuses difficult as some categories have not only changed but also increased.

11.2 Concepts and Definitions

Disability, in the 2010 Census, was defined as a limitation in the kind or amount of activities that an individual can do because of the on-going difficulties due to a long term physical condition, mental condition or health problem. Short term disabilities due to temporary conditions such as broken legs and illness were excluded.

The following concepts and definitions have been used to analyse data on disability.

11.2.1 Type of Disability

Blind: Complete loss of sight in both eyes.

Partially Sighted: Loss of one eye or poor sight but does not mean complete blindness.

Deaf and Dumb: Complete loss of sense of hearing and speech. The lack or loss of the ability to hear and speak.

Deaf: Complete loss of sense of hearing. The lack or loss of the ability to hear.

Hard of Hearing: Partial loss of sense of hearing but not complete loss of sense of hearing e.g. the person who uses hearing aids.

Dumb: Complete lack of ability to speak.

Mental Illness: A condition of mental illness with a substantial, adverse and long-term effect on one's ability to carry out normal day-to-day activities.

Intellectual: Intellectual disability is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18.

Speech Impairment: This is a condition of people who fail to produce meaningful sound words.

Physically Disabled: Any person with a physical abnormality relating to the loss of bodily limbs or any deformity in the bodily stature, e.g., the epileptics and leper.

Mentally Retarded: Any individual that is either very slow to learn or has deficiency of mental intellect (slow in grasping things, difficulties in remembering things, very slow at responding).

Other: Any other disability not mentioned above.

11.3 Causes of Disability

The following responses to causes of disability were used in the questionnaire.

- *Congenital/Prenatal - these are disabilities which one is born with.*
- *Disease/Illness e.g. polio, leprosy, cataract.*
- *Injury/Accidents e.g. road accidents, injuries from accidental falls, fire etc.*
- *Spousal Violence – e.g. husband/wife battering.*
- *Other Violence– e.g. violence perpetrated by any other person such as boyfriend or girlfriend.*
- *Unknown –where the respondent did not know the cause of the disability.*
- *Other, e.g., unsuccessful medical operation, wrongful application of traditional and conventional medicine.*

11.4 Limitations of Disability Data

The method used in the collection of disability data determines the comprehensiveness and quality of the data. Countries using censuses to capture disability data report low disability prevalence rates than those using surveys. This is so because a census is a huge data collection undertaking covering entire populations after long intervals and, as such, can only include few questions on disability. Specialised surveys can provide extensive information about disability because not only do they provide information on problems in body function and structure but also cover information on origins and impact of the impairments on functioning, service accessibility and unmet needs of the disabled (Altman BM and Barnartt SN, 2006).

The 2010 census did not include detailed questions on disability to be able to bring out the variations in the intensity of the disabilities. In addition, this data did not include the population living with disabilities in institutions.

11.5 General Characteristics

This section discusses the distribution and age structure of the population with disabilities. Types and causes of disability are also discussed in this section.

11.5.1 Distribution of the Disabled and Non–Disabled Population

Figure 11.1 shows the percentage distribution of the population by disability status. The percentage of the population living with disabilities was 2.8 percent, of which 2.7 percent had one disability while 0.1 percent had more than one disability.

Figure 11.1: Percentage Distribution of the Population by Disabled and Non-Disabled, Luapula Province 2010
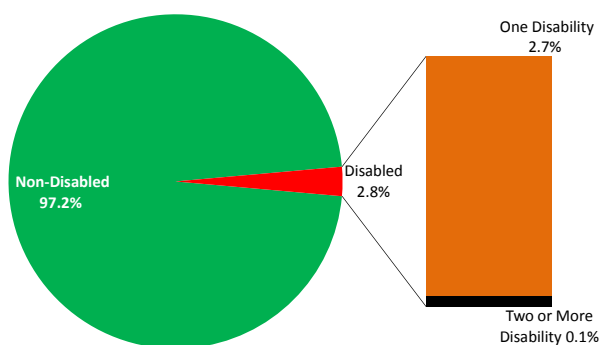
Source: 2010 Census of Population and Housing

11.5.2   Distribution of the Disabled

Figure 11.2 shows the percentage distribution of persons with disabilities by rural/urban and district. The percentage of the population living with disabilities was 2.8 percent. Rural areas had more persons living with disabilities than urban areas at 3.0 and 2.2 percent, respectively.

Figure 11.2: Percentage Distribution of the Population with Disability by Rural/Urban and District, Luapula Province 2010
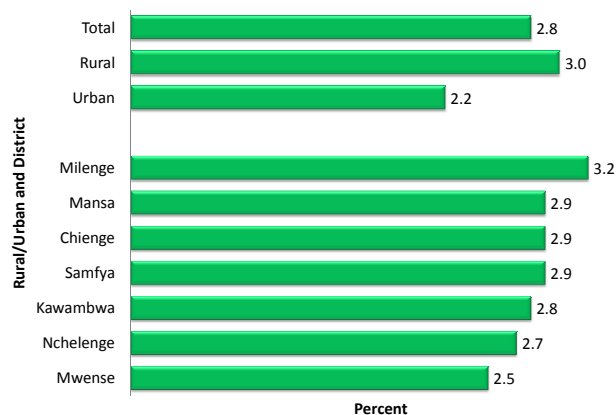
Source: 2010 Census of Population and Housing

Milenge District had the highest percentage (3.2 percent) of persons with disabilities while Mwense District had the lowest (2.5 percent)

11.5.3 Disability by Sex

Figure 11.3 shows the percentage distribution of persons living with disabilities by sex and district. In Luapula Province there were more males than females who were living with disabilities. Milenge District had the highest percentage of persons who were disabled at 3.2 percent for both males and females. Mwense District had the lowest percentage of persons living with disabilities at 2.6 percent and 2.4 percent for males and females, respectively.

Figure 11.3: Percentage Distribution of the Population with Disability by Sex and District, Luapula Province 2010
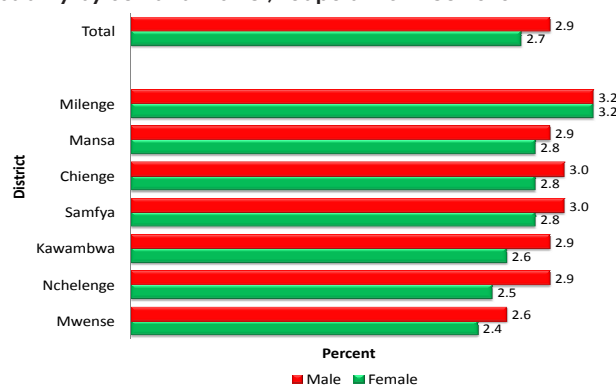
Source: 2010 Census of Population and Housing

11.5.4 Disability by Age

Figure 11.4 shows the percentage distribution of the population with disability by age. The figure shows that disability increases with age. The highest percentage in the age group 90-94 years at 28.3 percent. The age group with the lowest percentage was 0-4 years at 0.7 percent.

Figure 11.4: Percentage Distribution of Persons with Disability by Age, Luapula Province 2010
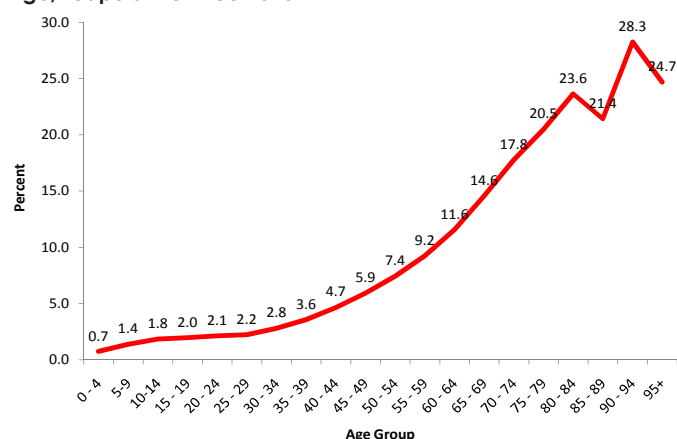
Source: 2010 Census of Population and Housing

Figure 11.5 shows the median age for the disabled and non-disabled population in Luapula Province. The median age for the population with disability was 37.3 years. Non-disabled population had a median age of 15.5 years.

Figure 11.5: Median Age of the Disabled and Non-Disabled Population by Sex, Luapula Province 2010
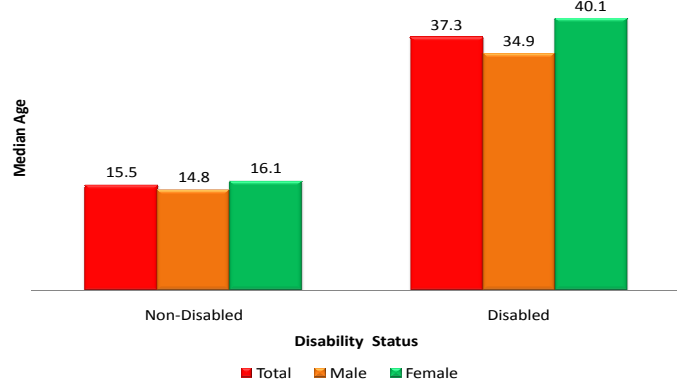
Source: 2010 Census of Population and Housing

11.5.5 Disability by Household Headship
Figure 11.6 shows the percentage of the population with disabilities who were heading households by sex and rural/urban. In Luapula Province, there were more male (5.0 percent) than female (2.8 percent) household heads living with disabilities. The proportion of male household heads with disabilities was also higher than that of females in both rural and urban areas.

Figure 11.6: Percentage Distribution of Household Heads with Disabilities by Sex and Rural/Urban, Luapula Province 2010
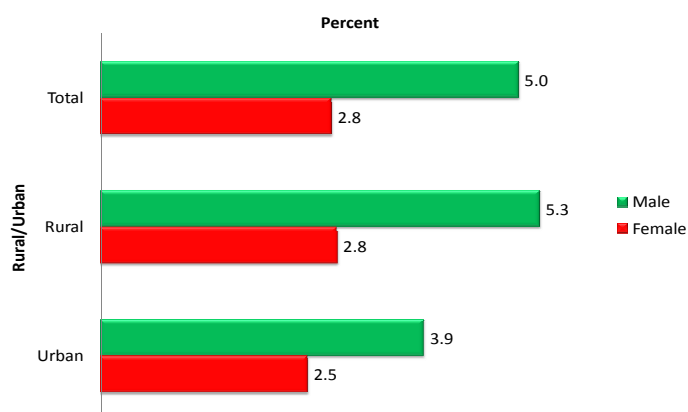
Source: 2010 Census of Population and Housing

Figure 11.7 shows the percentage distribution of household heads with disabilities. Mansa and Kawambwa Districts had the highest proportion of household heads living with disabilities at 5.7 percent each while Mwense District had the least proportion at 5.3 percent.

Figure 11.7: Percentage Distribution of Household Heads with Disabilities by District, Luapula Province 2010
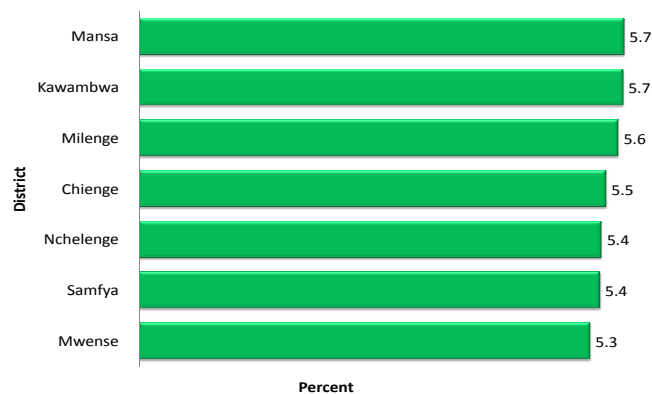
Source: 2010 Census of Population and Housing

11.5.6 Type of Disability
Figure 11.8 shows the percentage distribution of persons with disabilities by type of disability. Physical disability was the most prevalent type of disability (31.8 percent) followed by partially sighted (28.0 percent). The least common type of disability was intellectual at less than a percentage point (0.8 percent).

Figure 11.8: Percentage Distribution of Persons with Disabilities by Type of Disability, Luapula Province 2010
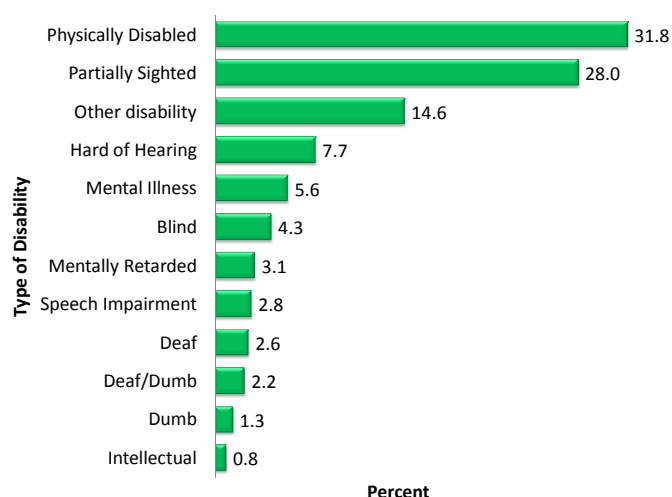
Source: 2010 Census of Population and Housing

11.5.7 Cause of Disability
This section discusses the most common causes of disability. However, the data did not allow for exploring the association between causes and specific types of disability. The various causes of disability were categorized as congenital, disease, injury, spousal violence, other and unknown. Respondents were asked to state if they had more than one cause of disability.

Figure 11.9 shows the percentage distribution of cause of disability. The figure shows that 36.8 percent of the persons with disabilities reported disease as the cause of disability. This was followed by congenital with 11.9 percent. The least common cause of disability was spousal violence with 0.8 percent.

Figure 11.9: Percentage Distribution of Persons with Disabilities by Cause of Disability, Luapula Province 2010
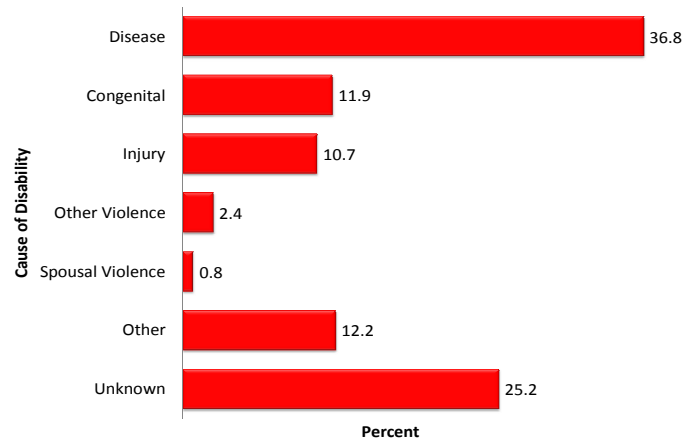
Source: 2010 Census of Population and Housing

11.6 Characteristics of the Population with Disability

This section presents the characteristics of the population with disability using education, economic activity and marital status indicators.

11.6.1 Literacy Levels among the Disabled and Non-Disabled

Figure 11.10 shows the percentage distribution of literate population aged 5 years and older by disability status and rural/urban. Literacy among persons with disability was 59.1 percent compared to 62.5 percent for persons without disability. The literacy levels for the persons with disability were higher in urban areas at 69.7 percent compared to 57.0 percent in rural areas.

Figure 11.10: Percentage Distribution of Literate Population (5 Years and Older) by Disability Status and Rural/Urban, Luapula Province, 2010
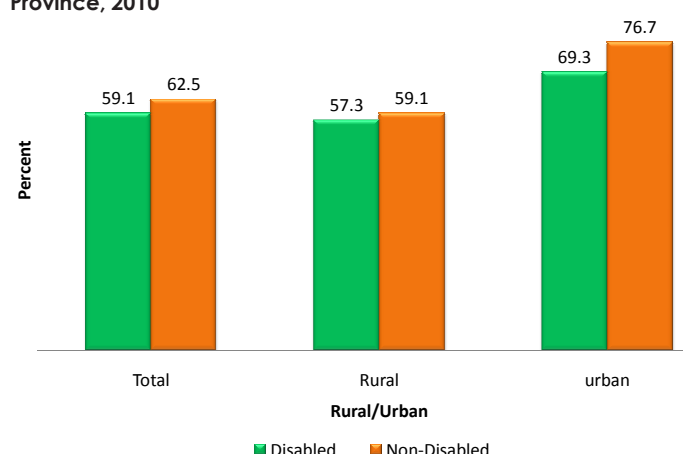
Source: 2010 Census of Population and Housing

Figure 11.11 shows the percentage distribution of literate population with disability aged 5 years and older by district. Kawambwa District had the highest proportion of the literate population with disability at 65.0 percent. Samfya District had the least proportion at 51.4 percent.

Figure 11.11: Percentage Distribution of Literate Population with Disability Aged 5 Years and Older by District, Luapula Province, 2010
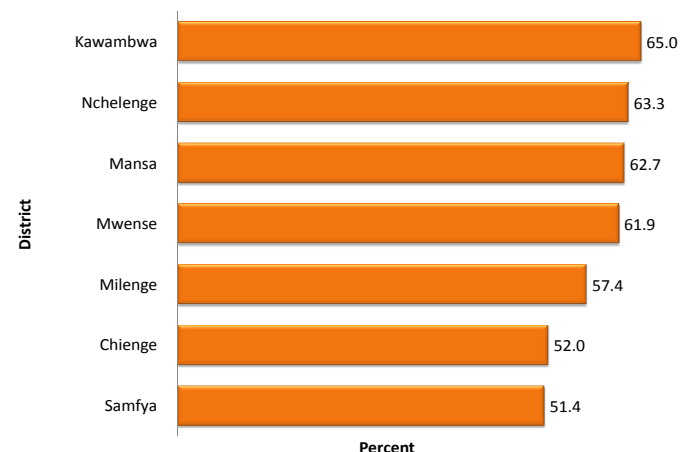
Source: 2010 Census of Population and Housing

11.6.2 School Attendance

The percentage distribution of the population aged 5 years and older by disability status, school attendance and rural/urban is shown in Figure 11.12.

The figure shows that there was a higher percentage of persons without disability who were currently attending school at 31.0 percent compared to 13.8 percent for persons with disability. For those who had never attended school, the percentage of the disabled was higher than that of the non-disabled, 33.3 and 24.4 percent, respectively.

In rural areas, the proportion of persons with disabilities who were currently attending school was 13.6 percent and the non-disabled was 29.4 percent while in urban areas, the disabled currently attending school was 14.8 percent and the non disabled was 37.7 percent.

Figure 11.12: Percentage Distribution of Disabled and Non-Disabled Populations (5 years and Older) by School Attendance and Rural/Urban, Luapula Province 2010
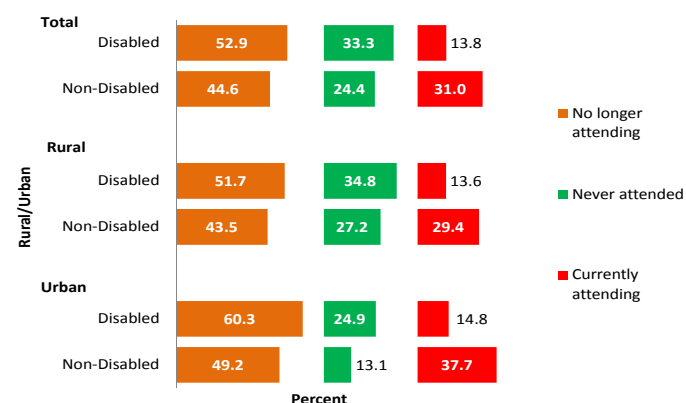
Source: 2010 Census of Population and Housing

11.6.3 Education Level among the Disabled

Figure 11.13 shows the percentage distribution of persons with disability, 25 years and older, by highest level of education completed and sex. In Luapula Province, 73.5 percent of the population with disabilities had attained primary education and 6.5 percent had attained tertiary education. A higher percentage of Males had completed tertiary education at 9.1 percent compared to 3.4 percent for females.

Figure 11.13: Percentage Distribution of Persons with Disability Aged 25 Years and Older by Highest Level of Education Completed and Sex, Luapula Province 2010

Source: 2010 Census of Population and Housing

11.7 Economic Activity

Persons living with disabilities are disadvantaged with regards to engagement in economic activities. Literature suggests that, in developed as well as developing countries, persons living with disabilities face much lower employment rates and higher unemployment rates than persons without disabilities (WHO, 2011).

Figure 11.14 shows the percentage distribution of employed persons aged 12 years and older by disability status and rural/urban. The figure shows that 94.0 percent of persons with disabilities were employed compared to 92.3 percent of persons without disabilities. The percentage of the disabled who were employed was higher than the corresponding percentage for the non disabled in both rural and urban areas.

Figure 11.14: Percentage Distribution of Employed Population (12 Years and Older) by Disability Status and Rural/Urban, Luapula Province 2010
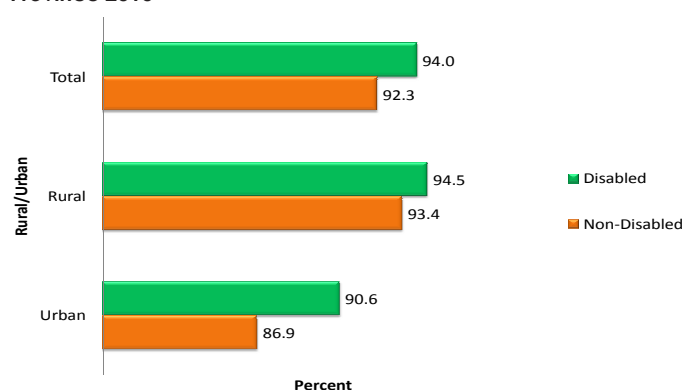
Source: 2010 Census of Population and Housing

11.7.1 Employment Status

Figure 11.15 shows employment status of persons with disability by rural/urban. Self-employed was the most common employment status at 71.9 percent while employer was the least with 0.7 percent. There were more persons with disabilities working on a family business, without pay or profit, in rural areas (21.0 percent) than urban areas (13.2 percent). The figure also shows that the proportion of persons with disabilities who were employees was higher in urban areas than in rural areas, 21.1 and 5.3 percent, respectively.

Figure 11.15: Percentage Distribution of Persons with disability Aged, 12 Years and Older by Employment Status and Rural/Urban, Luapula Province 2010
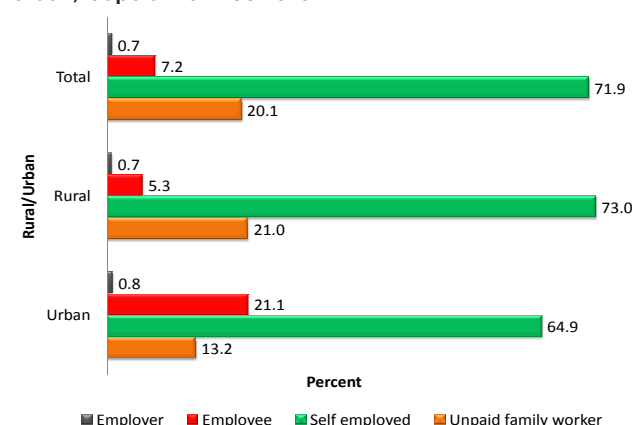
Source: 2010 Census of Population and Housing

11.7.2 Employment Status of Disabled Household Heads

Figure 11.16 shows the percentage distribution of household heads with disabilities (12 years and older) by employment status. In 2010, the largest proportion of household heads with disabilities was self employed at 72.0 percent while the least was that of employers at 0.7 percent.

Figure 11.16: Percentage Distribution of Household Heads with Disabilities Aged 12 Years and Older by Employment Status and District, Luapula Province 2010
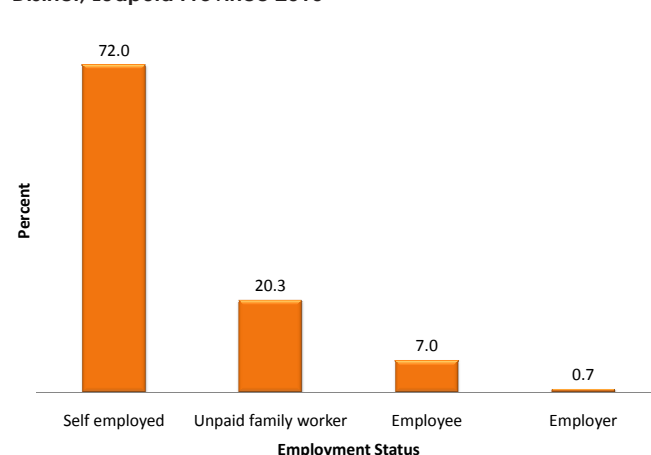
Source: 2010 Census of Population and Housing

11.7.3 Occupation Status

Occupation is described as the kind of work a person performs in his/her job or business. Figure 11.17 shows percentage distribution of occupation by disability status. Among persons with disabilities, agricultural occupations were the most common while service occupations were the least common at 91.0 and 0.8 percent, respectively. Persons without disabilities made up 87.6 and 1.3 percent, persons in agriculture and service occupations, respectively.

Figure 11.17: Percentage Distribution of Occupation by Disability Status, Luapula Province 2010
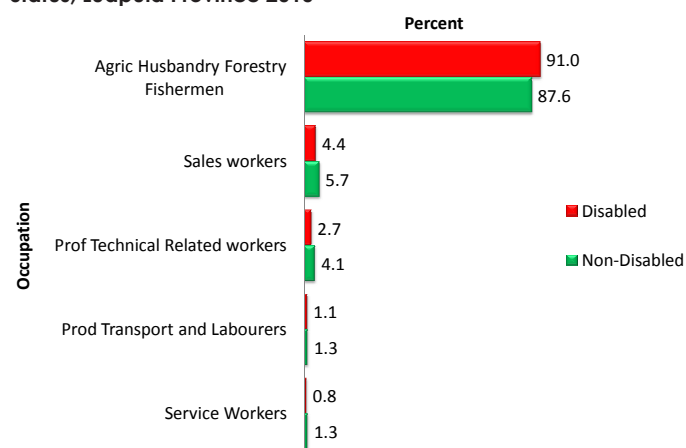
Percent

Source: 2010 Census of Population and Housing

11.8 Marital Status of the Disabled by Sex

Figure 11.18 shows percentage distribution of marital status of the disabled (15 years and older) by sex. There were more males than females living with disabilities who were married at 61.0 percent and 41.6 percent, respectively. Persons living with disabilities who were never married made up 26.5 percent and 13.5 percent of the male and female populations, respectively. The proportion of widowed females with disabilities was higher than that of males at 28.6 percent and 4.8 percent, respectively.

Figure 11.18: Percentage Distribution of Marital Status of the Disabled, 15 years and Older, by Sex, Luapula Province 2010

Percent
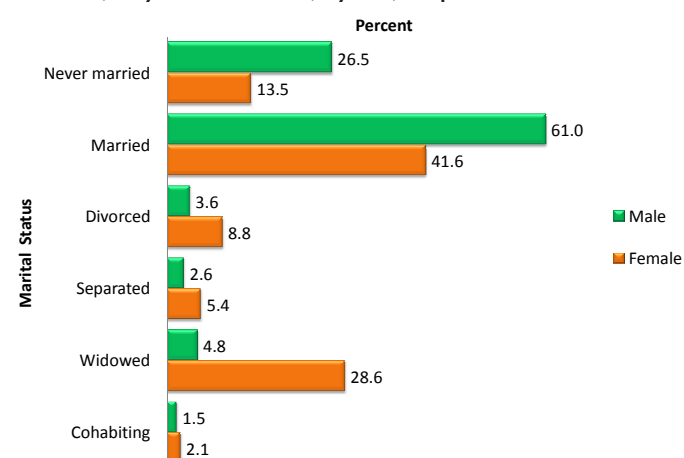
Source: 2010 Census of Population and Housing

CHAPTER 12
EVALUATION OF COVERAGE
AND CONTENT ERRORS

12.0 Summary

In 2010, the pattern of age composition, child woman ratio and dependency ratio in Luapula Province was in line with the observed fertility and mortality declines.

The Myers Index reduced from 8.2 in 2000 to 7.6 in 2010.

The most preferred digits for age data reporting were 0, 8 and 5.

The age-sex accuracy index for Luapula Province reduced from 38.4 in 2000 to 32.1 in 2010.

Chapter 12
Evaluation of Coverage and Content Errors

12.1 Introduction

Data evaluation is the assessment of the quality of the data. It provides reliable standards for adjusting data if needed. The adjustment is done based on responses to the questions which were asked during the census on:

- *Sex*
- *Age (in completed years)*
- *Rural/Urban status of household*
- *Number of children still living, and*
- *Number of children dead*

12.2 Concepts and Definitions

The following concepts and definitions have been used in this chapter.

The Age-Sex Accuracy Index: Mean difference in sex ratios plus the mean deviations of male and female age ratios multiplied by three gives an indication of the quality of age data.

Age Ratio: The ratio of the population in a given age group to one-third of the sum of the populations in the age group itself, the preceding and the following age groups, times 100 (Shryock et al, 1976).

Census Night: The night prior to the actual census count. In Zambia a rolling (varying) census night is used because enumeration is usually done over a period of about two-three weeks.

Census of Population: Total process of collecting, compiling, evaluating, analysing and publishing or otherwise dissemination of demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of a country, (UN, 2008).

Child-Woman Ratio: Number of children aged 0-4 years in a population to every 1,000 women aged 15-49 years in the same population.

Cohort Survival Ratio: The survival ratio of the population in a given age group to the next age.

Content Error: Error made in the recorded information in the census questionnaire either because the respondent provided incorrect information or the interviewer recorded incorrect information

Coverage Error: Under or over-enumeration in a population census due to either omission or duplication of an individual, household, or housing unit.

Data Smoothing: This is the use of an approximating function to capture important patterns in the data and removing the noise or outliers. For example, smoothing is done to help reduce the

negative consequences of digit preference.

Dependency Ratio: Ratio of children aged 0-14 and persons aged 65 years and older, per 100 persons in the age-group 15-64 years old.

Digit Preference: Reporting of age by respondents often ending in certain preferred digits such as zero or five. This results in heaping of population in ages ending with certain digits.

Population Pyramid: A graphical illustration that shows the distribution of various age groups in a population

Sex Ratio: Number of males per 100 females in a population (Masculinity ratio).

Overall Survival Ratio: The ratio of the population of age, say, 10 years and older that will survive to 15 years and older.

12.3 Type of Population used in Evaluating the Coverage and Content Errors

In the analysis of the coverage and content errors, the de facto population was used.

12.4 Methods of Evaluation

There are numerous checks and controls directed at minimising errors in the census, during enumeration. Despite instituting data control measures, some errors can occur in the census data. For instance, some people may be omitted, others may be enumerated more than once, or some characteristics of an individual such as age, sex, fertility and economic activity may be incorrectly reported or recorded. In general, two approaches are used to evaluate the quality of data: direct and indirect methods.

The direct method involves the carrying out of the Post Enumeration Survey (PES). In a PES, a sample of households is revisited after the census and data are again collected but on a smaller scale (both in terms of scope and questionnaire content). These are later compared with the data collected during the actual census. The matching process of the two sets of data can then be used to evaluate the quality of the census data.

Indirect methods usually employ the comparison of data using both internal and external consistency checks. Internal consistency checks compare relationships of data within the same census data, for example, using the Myers index to check for accuracy of age reporting. External consistency checks compare census data with data generated from other sources. For instance, one can compare data on education obtained during a census with administrative data collected by the Ministry of Education.

12.5 Coverage Error

This type of error occurs when there is omission or duplication of individuals, households, or housing units resulting in under or over enumeration. Some factors which contribute to coverage

errors are lack of accessibility or cooperation with respondents, difficulties in communication and lack of proper boundary descriptions on maps. Coverage errors can be measured by examining certain statistics such as growth rate, age composition, child woman ratio and dependency ratio.

12.6 Age Composition
Examining age composition over time can help assess the coverage error in census data. The percentage for each group should not vary much from one census to another except where there had been major changes to the population. Fertility and

mortality effects would normally result into marginal changes to the percentage of the broad age groups.

Table 12.1 shows population composition of Luapula Province by broad age groups for 1990, 2000 and 2010. The percentage of children aged 0-14 years increased to 47.5 percent in 2000 from 45.4 percent in 1990. It later increased to 48.9 percent in 2010. The percentage of both the adults and the old in the age groups 15-64 years and 65 years and older, respectively, had been declining since 1990. Generally, the population distribution by broad age groups shows consistency of coverage in all the three censuses.

Table 12.1: Population Distribution by Broad Age Groups, Luapula Province 1990, 2000 and 2010						
Age Group	Population					
	1990	Percent	2000	Percent	2010	Percent
0-4	86,257	16.4	139,364	19.1	178,815	19.1
5-9	79,734	15.2	113,744	15.6	149,455	15.9
10-14	72,558	13.8	93,357	12.8	130,510	13.9
0-14	238,549*	45.4	346,465*	47.5	458,780*	48.9
15-64	271,402	51.7	362,789	49.7	454,082	48.4
65+	15,210	2.9	20,574	2.8	25,529	2.7
Total	525,161	100	729,828	100	938,391	100

Sources: 1990, 2000 and 2010 Censuses of Population and Housing
Note: Not included in total.

12.7 Child-Woman Ratio
Figure 12.1 shows the child woman ratio for census years 1990, 2000 and 2010. The child-woman ratio increased from 368 in 1990 to 817 children aged 0-4 years per 1000 women age 15-49 years in 2000. In 2010, it further increased to 835 children aged 0-4 years per 1000 women age 15-49 years. The change in child-woman ratio was in line with the change in the percentage of the population in the age group 0-4 years.

Figure 12.1 Child Woman Ratio, Luapula Province 1990, 2000 and 2010
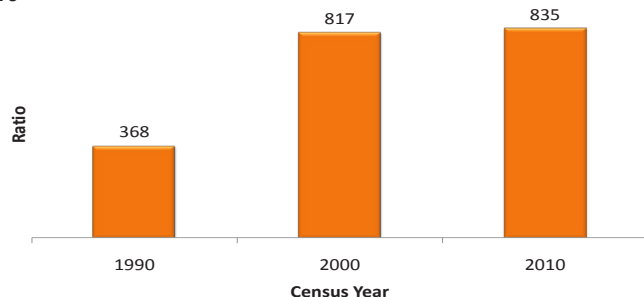
Note: Child-Woman Ratio is the number of children aged 0-4 years in a population to every 1000 women aged 15-49 years
Sources: 1990, 2000 and 2010 Censuses of Population and Housing

12.8 Dependency Ratios
The consistency in the coverage for the three censuses can be further explored through dependency ratios. Figure 12.2 shows dependency ratios for census years 1990, 2000 and 2010.

Figure 12.2: Dependency Ratios, Luapula Province 1990, 2000 and 2010
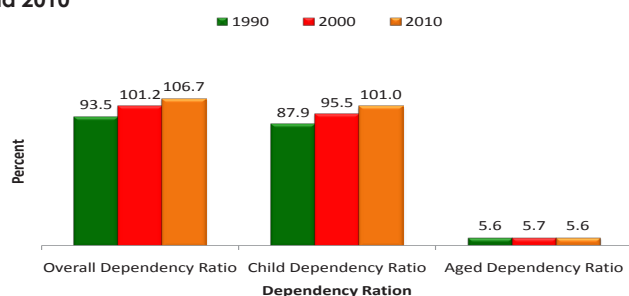
Note: Overall Dependency Ratio - Number of children aged 0-14 and the elderly aged 65 years and older, per 100 persons in the age-group 15-64 years
Sources: 1990, 2000 and 2010 Censuses of Population and Housing

The overall dependency ratio for the population of Luapula Province for 1990, 2000 and 2010 were 93.5, 101.2 and 106.7 persons, respectively. This means that, in 2010, for every 100 persons in the age group 15-64 years, there were 106.7 dependants in the age groups 0-14 years and 65 years and older. Child dependency ratio increased from 87.9 persons in 1990 to 101.0 persons in 2010. Age dependency ratio increased slightly from 5.6 persons to 5.7 persons between 1990 and 2000 and it later reduced to 5.6 persons in 2010.

12.9 Content Error
Content errors refer to instances where characteristics such as age, sex, marital status, economic activity, etc. of a person enumerated in a census or survey are incorrectly reported or tabulated. Content errors are caused by either a respondent giving a wrong response or by an enumerator recording an incorrect response. For instance, a question about age in a census can be solicited by asking either "date of birth" or "completed number of years". These two questions may yield different ages. During the 2010 Census, age was recorded in completed years. Some content errors can be estimated by the use of the Myers' Index, Sex Ratios, Age Ratios, and Survival Ratios.

12.9.1 Digit Preference
Digit preference is mostly pronounced among population subgroups having a low educational status. The causes and patterns of digit preference vary from one culture to another. Age misreporting, net under enumeration and non-reporting or misclassifications of age contribute to heaping (Shryock, et.al. 1976).

In this analysis, the Myers' Index was used to investigate age heaping. Figure 12.3 shows the Myers' Index by rural/urban for 2000 and 2010. The maximum value of Myers' Index is 90 and the minimum value is 0. A high Myers' Index implies poor age reporting whereas a low Myers' Index indicates good age reporting.

Figure 12.3: Myers' Index by Rural/Urban, Luapula Province 2000 and 2010
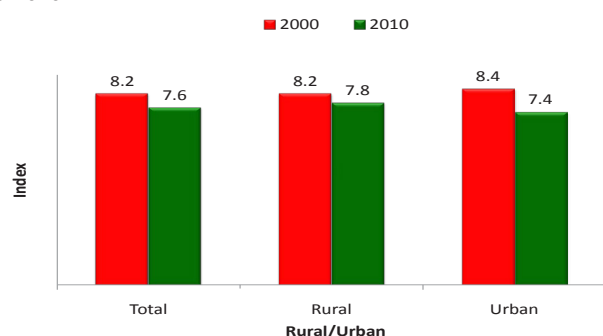
Note: A high Myers' Index implies poor age reporting whereas a low Myers' Index indicates good age reporting. The maximum value of Myers' Index is 90 while the minimum value is 0

Sources: 2000 and 2010 Censuses of Population and Housing

The Myers' index for Luapula Province reduced from 8.2 in 2000 to 7.6 in 2010. The index also reduced in both rural and urban areas. In rural areas, the Myer's index reduced from 8.2 in 2000 to 7.8 in 2010. In urban areas, it reduced from 8.4 to 7.4 between 2000 and 2010. The results for Myers' index shows that the quality of age data reporting improved in 2010 compared to 2000.

Digit preference can also be explored by looking at age heaping. Table 12.2 shows the most preferred digits by sex and rural/urban for 2000 and 2010. The most preferred digits are presented in decreasing order of preference. In 2000 and 2010, the most preferred digits by both sexes were 0, 8 and 5.

Table 12.2: Most Preferred Digits by Sex and Rural/Urban, Luapula Province 2000 and 2010

Rural/Urban	Most Preferred Digits and Census Year		
	Sex	2000	2010
Total	Both Sexes	0, 8, 5	0, 8, 5
	Male	0, 8, 5, 2	0, 5, 8
	Female	0, 8	0, 8, 5
Rural	Both Sexes	0, 8, 5	0, 8, 5
	Male	0, 8, 5, 2	0, 5, 8
	Female	0, 8	0, 8, 5
Urban	Both Sexes	0, 8, 5, 2	0, 8, 5
	Male	0, 8, 5	0, 8, 5, 2
	Female	0, 8, 5, 2	0, 8, 5
Sources: 2000 and 2010 Censuses of Population and Housing			

Errors in age data reporting are also presented in Figures 12.4 and 12.5. The figures show population distribution in single years for 2000 and 2010. The peaks on the curves indicate the most preferred ages in reporting while the troughs indicate the under reported ages.

Figure 12.4: Population Distribution in Single Years, Luapula Province 2000
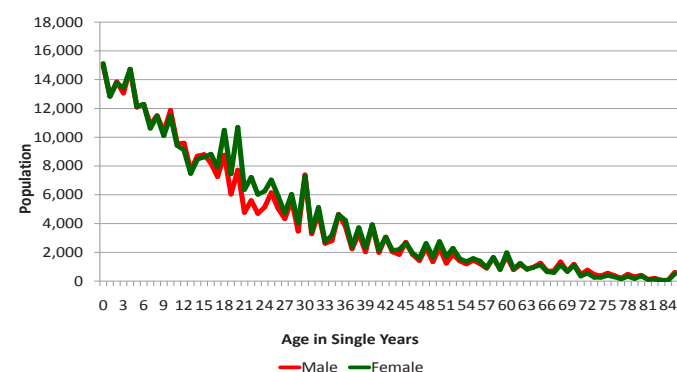
Source: 2000 Census of Population and Housing

Figure 12.5: Population Distribution in Single Years, Luapula Province 2010
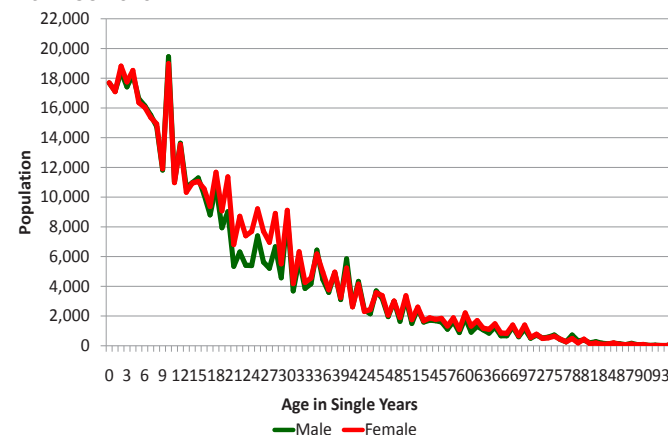
Source: 2010 Census of Population and Housing

A comparison of Figures 12.4 and 12.5 shows that the peaks and troughs were more pronounced for ages reported below 55 years in both censuses. The differences in the peaks and troughs for ages reported after 55 years were not that pronounced. This may suggest that both males and females tend to misreport their ages before age 55.

When single year age data is grouped into five year age groups, irregularities in age data arising from age misreporting tend to disappear. Figure 12.6 and 12.7 show population distribution in 5 year age groups for 2000 and 2010. The figures show smoothened curves after the single age data was grouped for both censuses.

Figure 12.6: Population Distribution by 5 Year Age Group, Luapula Province 2000
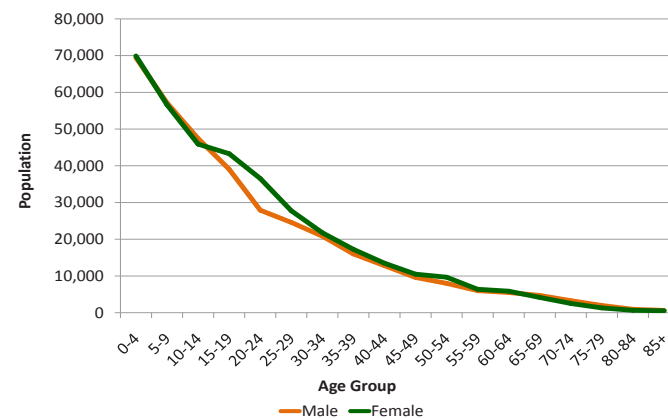
Source: 2000 Census of Population and Housing

Figure 12.7: Population Distribution by 5 Year Age Group, Luapula Province 2010
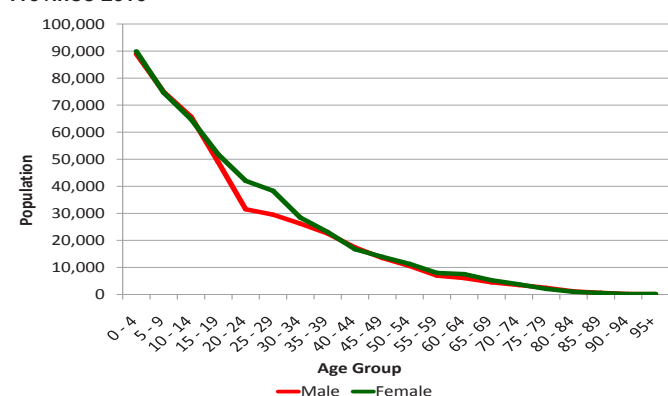
Source: 2010 Census of Population and Housing

12.9.2 Sex Ratios

The presence of omission errors, age misreporting and out migration may be detected by looking at the pattern of sex ratios. A sex ratio of more than 100 shows an excess of males over females while a sex ratio of less than 100 shows an excess of females over males. A sex ratio of 100 indicates an equal number of males and females. In the absence of big fluctuations in births, deaths and migration, the sex ratios are expected to be high at infant ages. After early childhood, the ratios are expected to decline continuously to reach very low levels at the highest ages when female mortality is much lower than the male mortality. Figure 12.8 shows the sex ratio by rural/urban for 1990, 2000 and 2010.

Sex ratio for Luapula Province increased from 92.9 in 1990 to 94.9 males per 100 females in 2000. In 2010, it reduced to 94.1 males per 100 females. The sex ratio in both rural and urban areas followed a similar pattern. Overall, the sex ratio was below 100, implying that there were more females than males in the province.

Figure 12.9 shows the sex ratio by five year age groups for 1990, 2000 and 2010. An analysis of age-specific sex ratios for 1990 shows more females than males in the age group 0-44 years. An analysis for 2000 shows more females than males in the age groups 0-4 and 15-64 years. In 2010, more females than males were observed in age groups 0-4, 15-39, and 45-74 years.

Figure 12.8: Sex Ratios by Rural/Urban, Luapula Province 1990, 2000 and 2010

Sources: 1990, 2000 and 2010 Censuses of Population and Housing

Figure 12.9: Sex Ratio by 5 Year Age Group, Luapula Province 1990, 2000 and 2010
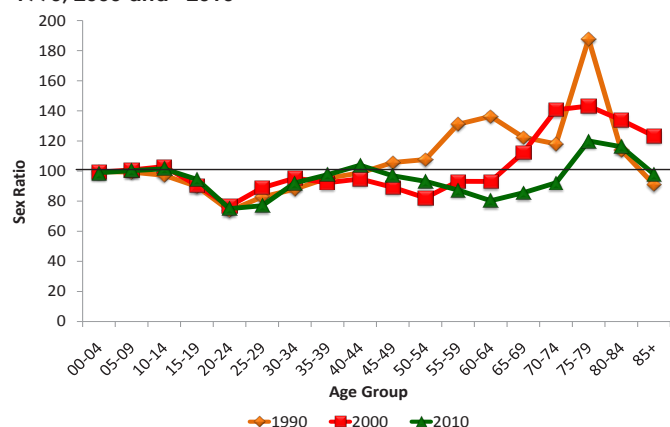
Sources: 1990, 2000 and 2010 Censuses of Population and Housing

Table 12.3: Sex Ratio by Age and Rural/Urban, Luapula Province 1990, 2000 and 2010

Age Group	1990			2000			2010		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
00-04	99.7	99.5	99.7	99.3	98.9	102.3	98.9	99.0	98.5
05-09	99.3	99.6	99.3	100.7	101.2	99.3	100.3	101.2	96.5
10-14	97.2	102.7	97.2	103.0	104.7	96.7	101.5	102.7	96.6
15-19	89.8	88.2	89.8	90.5	89.9	91.8	94.5	94.5	94.3
20-24	73.7	75.3	73.7	76.7	76.1	78.1	75.0	72.9	82.9
25-29	82.8	82.5	82.8	88.9	87.9	92.2	77.0	77.4	75.2
30-34	88.0	92.9	88.0	95.3	95.8	95.4	92.1	92.3	91.4
35-39	95.3	81.6	95.4	92.3	92.5	94.5	97.6	96.8	100.8
40-44	98.8	71.6	98.8	94.8	96.1	89.9	103.9	103.0	107.9
45-49	105.7	80.8	105.7	89.2	90.1	101.1	96.9	98.3	91.2
50-54	107.7	82.9	107.7	82.2	81.6	89.6	93.2	95.6	83.8
55-59	131.1	108.9	131.0	93.2	93.2	99.6	87.4	87.8	85.5
60-64	136.4	106.3	136.2	93.1	94.1	91.8	80.3	80.1	80.9
65-69	122.4	119.2	122.2	112.3	114.1	109.2	85.6	84.1	93.1
70-74	118.1	126.8	118.4	140.7	131.8	125.6	92.2	93.2	87.8
75-79	187.8	195.4	125.2	143.2	158.2	112.5	120.0	126.2	97.0
80-84	114.0	118.8	80.8	133.9	141.4	122.2	116.2	118.2	107.7
85+	91.1	97.1	65.2	123.3	132.9	73.7	98.0	106.5	67.5

Sources: 1990, 2000 and 2010 Censuses of Population and Housing

12.9.3 Age Ratios

The quality of age data can also be evaluated by examining age ratios. When there are no major changes in fertility, mortality or migration, the age ratios do not deviate much from 100, hence, any substantial deviation is explained in terms of age misreporting. Calculations and comparison of age ratios have been done and the results disaggregated by sex are given in Figure 12.10.

The irregular patterns of the age ratios show that data could be affected by errors from age misreporting, digit preference, omission, migration or fluctuations in births and deaths.

Figure 12.10: Age Ratio by Sex, Luapula Province 2010
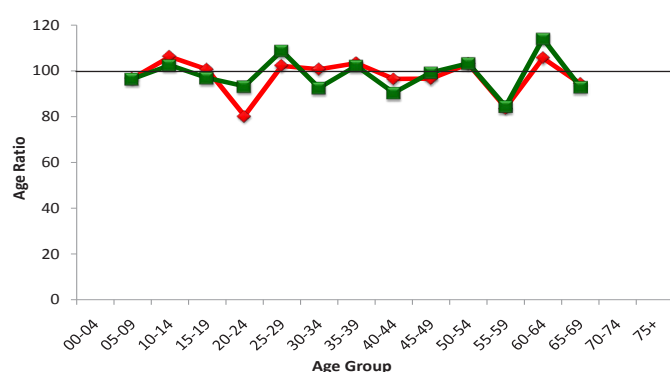
Source: 2010 Census of Population and Housing

The Age-Sex Accuracy Index describes the quality of age data. The United Nations defines age data as "accurate, inaccurate and highly inaccurate" if the Age-Sex Accuracy Index lies below 20, between 20-40, and above 40, respectively. Figure 12.11 shows the Age Sex Accuracy Index for 1990, 2000 and 2010.

Figure 12.11: Age-Sex Accuracy Index, Luapula Province 1990, 2000 and 2010
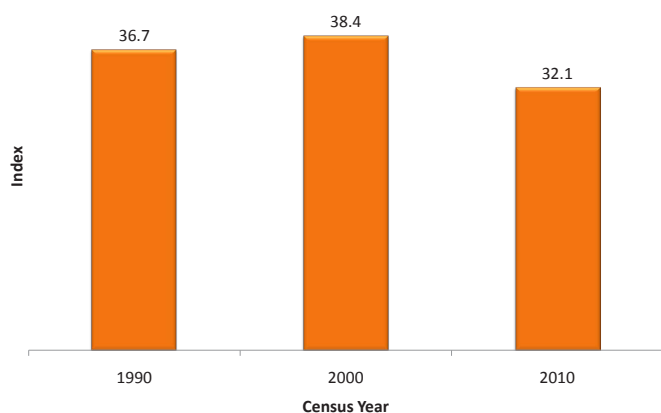
Source: 1990, 2000 and 2010 Census of Population and Housing

The Age Sex Accuracy Index for Luapula Province increased from 36.7 in 1990 to 38.4 in 2000. In 2010, the Age-Sex Accuracy index reduced to 32.1. This was an improvement in the quality of data on age reporting. However, using the UN interpretation of the age accuracy index, despite the improvement in the 2010 census data on age reporting, it would still be defined as "inaccurate".

12.9.4 Survival Ratios

Survival ratio is the probability that individuals of the same birth cohort or group of cohorts will still be living 10 years later. Survival ratios have been used to evaluate the quality of age and sex data from two censuses. This assumes that the population is closed to migration and influence of abnormal mortality due to wars, disasters and diseases over a 10 year period. Figure 12.12 shows the cohort survival ratio by age and sex between 2000 and 2010.

Figure 12.12: Cohort Survival Ratio by Age and Sex, Luapula Province 2000-2010
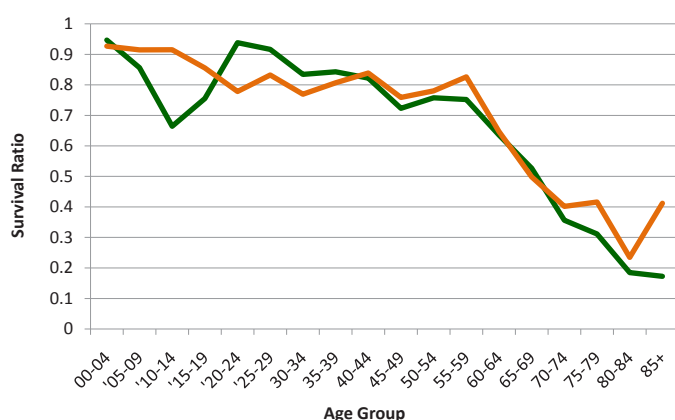
Sources: 2000 and 2010 Censuses of Population and Housing

The figure shows fluctuations in the cohort survival ratios rather than the expected systematic continuous decline with the increase in age. These distortions in data could either be due to age misreporting, under enumeration or over enumeration at some age groups.

Female ratios are generally expected to be higher than the male ratios because females normally have lower mortality compared to males. However, the figure shows higher survival ratios for males than females in the age groups 0-4, 20-39 and 65-69 years.

Figure 12.13 shows the overall survival ratios by age and sex between 2000 and 2010. The overall survival ratio shows a continued decline with increase in age. Females had higher survival ratios across all age groups except for the age groups 25+, 30+ and 35+ were males had higher survival ratios.

Figure 12.13: Overall Survival Ratio by Age and Sex, Luapula Province 2000-2010
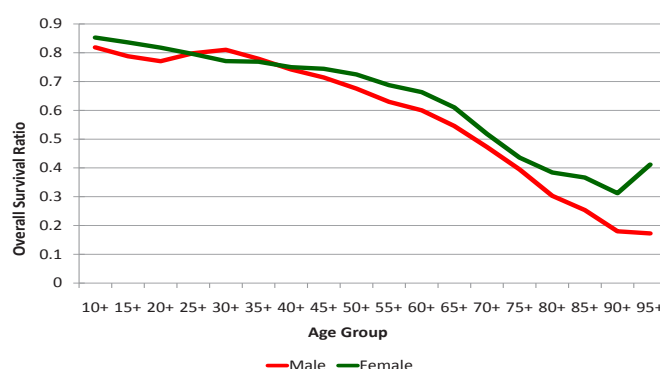
Sources: 2000 and 2010 Censuses of Population and Housing

12.9.5 Population Pyramids

Irregularities in the reported age data was analysed using population pyramids. Inaccuracies in census age data are easily spotted when data is distributed in single year than in five year age groups. The population pyramids for the 2010 Census data given in figure 12.14, 12.15 and 12.16, show age misreporting with preference for ages ending with 0 and 5. Figure 12.14 shows the population distribution by single age for 2010.

Figure 12.14: Population Distribution in Single Years, Luapula Province 2010
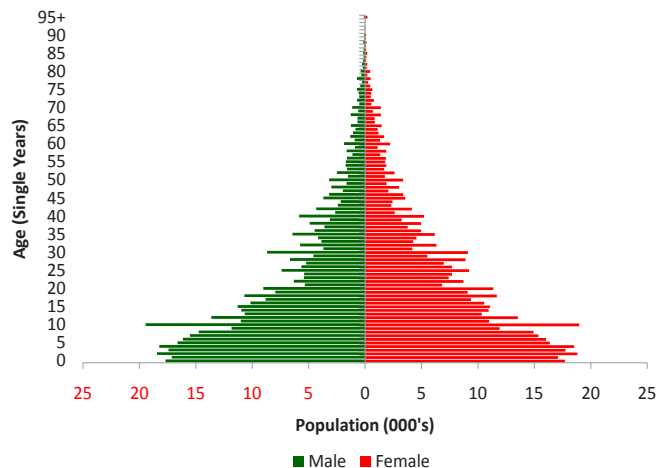
Source: 2010 Census of Population and Housing

Figures 12.15 and 12.16 show the population distribution by age for rural and urban areas, respectively in 2010.

Figure 12.15: Population Distribution in Single Years, Luapula Province Rural 2010
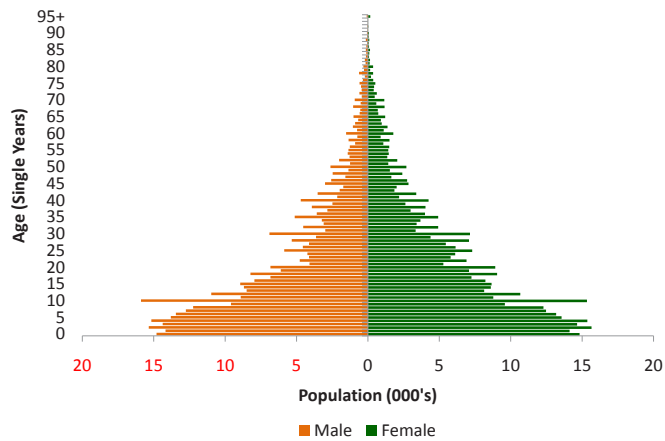
Source: 2010 Census of Population and Housing

Figure 12.16: Population Distribution in Single Years, Luapula Province Urban 2010
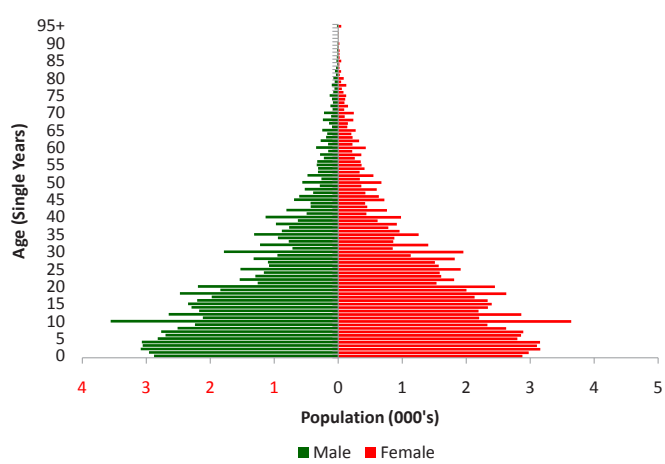
Source: 2010 Census of Population and Housing

Figures 12.17 and 12.18 show the reported and smoothed population by age for males and females, respectively in 2010.

Smoothing the age data using selected techniques for light smoothing of the population, show that the irregularities in the structure were not severe to consider smoothing.

Figure 12.17: Reported and Smoothed Population for Males by Age and Smoothing Technique, Luapula Province 2010
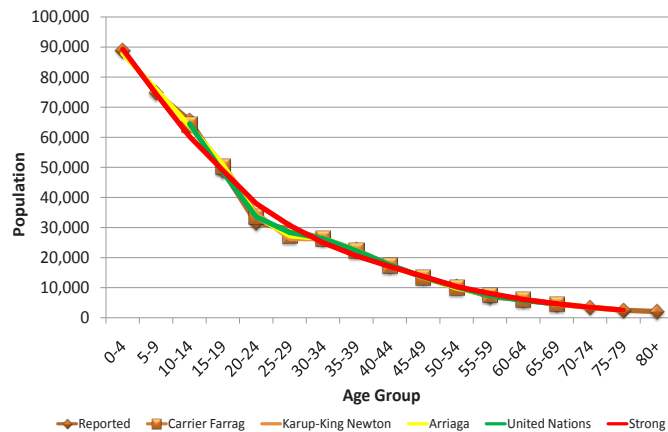
Source: 2010 Census of Population and Housing

Figure 12.18: Reported and Smoothed Population for Females by Age and Smoothing Technique, Luapula Province 2010
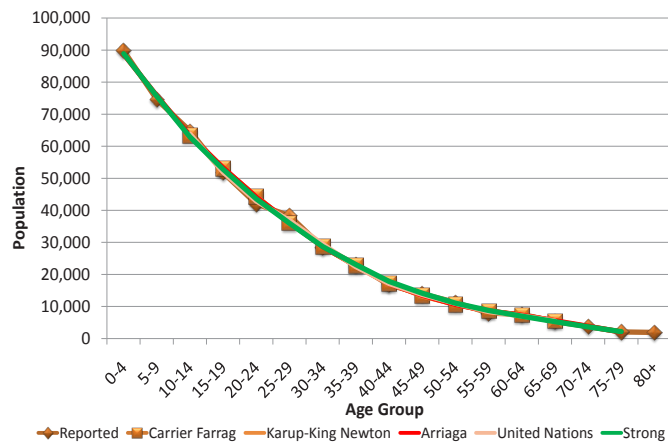
Source: 2010 Census of Population and Housing

Given that the irregularities were not severe, the age sex data used for analysis in the 2010 Census was not smoothened.

ANNEX TABLES AND REFERENCES

A1: Percent Distribution of the Population (De jure) by Age Group, Sex and Rural/Urban, Luapula Province 2010

Age Group	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0 - 4	18.4	18.6	18.2	19.0	19.1	18.8	16.0	16.3	15.7
5 - 9	15.6	15.9	15.4	16.0	16.3	15.7	14.3	14.4	14.2
10 - 14	13.8	14.2	13.5	13.8	14.1	13.4	14.2	14.3	14.1
15 - 19	11.0	11.0	11.0	10.6	10.6	10.6	12.6	12.6	12.5
20 - 24	8.1	7.3	8.8	7.8	6.9	8.6	9.3	8.9	9.6
25 - 29	7.3	6.7	7.9	7.2	6.6	7.8	7.7	7.0	8.4
30 - 34	5.9	6.0	5.9	5.8	5.9	5.8	6.4	6.4	6.3
35 - 39	5.0	5.2	4.8	4.9	5.1	4.8	5.2	5.5	4.9
40 - 44	3.7	4.0	3.5	3.8	4.0	3.5	3.6	4.0	3.3
45 - 49	3.0	3.1	2.9	3.0	3.1	2.9	3.0	3.0	3.0
50 - 54	2.4	2.4	2.3	2.4	2.4	2.3	2.4	2.3	2.5
55 - 59	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
60 - 64	1.5	1.4	1.5	1.5	1.4	1.6	1.4	1.4	1.5
65 - 69	1.0	1.0	1.1	1.1	1.0	1.1	1.0	0.9	1.0
70 - 74	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
75 - 79	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5
80 - 84	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
85+	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Population	991,927	488,589	503,338	797,407	393,615	403,792	194,520	94,974	99,546

Source: 2010 Census of Population and Housing

A2: Percent Age Distribution of the Population by Selected Age Groups and Rural/Urban, Luapula Province 2010

Age Group	2010 Census		
	Total	Rural	Urban
10-19 (Adolescents ,WHO)	24.8	24.4	26.7
10-24 (Young People, UN)	32.9	32.1	36.0
<15 (Children)	47.9	48.7	44.4
<18 (Children)	54.5	55.2	51.9
15-19 (Middle and later Adolescence)	11.0	10.6	12.6
15-24 (Youths, UN)	19.0	18.4	21.8
15-49 (Reproductive Age Group)	44.0	43.1	47.7
15-35 (Youths, Zambia)	33.7	32.8	37.4
15-64 (Labour force Age group)	49.5	48.6	53.1
60+ (Elderly)	4.1	4.2	3.9
65+ (Elderly)	2.7	2.7	2.5
Total Population	991,927	797,407	194,520

Source: 2010 Census of Population and Housing

Annex B: Social Characteristics

B1: Percent Distribution of Household Heads by Age Group and Sex, Luapula Province 2010

Age group of Household Head	Total Number of Household heads	Number of Male Headed Households	Percent of Male headed Households	Number of Female Headed Households	Percent of Female Headed Households
Total	194,962	151,913	100	43,049	100
12-14	87	45	*	42	0.1
15 - 19	1,444	898	0.6	546	1.3
20 - 24	12,093	9,853	6.5	2,240	5.2
25 - 29	27,602	23,406	15.4	4,196	9.7
30 - 34	29,997	25,519	16.8	4,478	10.4
35 - 39	27,329	22,917	15.1	4,412	10.2
40 - 44	22,392	18,182	12	4,210	9.8
45 - 49	18,518	14,343	9.4	4,175	9.7
50 - 54	15,407	11,112	7.3	4,295	10
55 - 59	10,859	7,334	4.8	3,525	8.2
60 - 64	10,216	6,280	4.1	3,936	9.1
65+	19,018	12,024	7.9	6,994	16.2

Source: 2010 Census of Population and Housing.

B 2: Relationship to Household Head by Rural/Urban, Luapula Province 2010

Relationship to head	Total	Percent	Rural	Percent	Urban	Percent
Total Population	991,927	100	797,407	100	194,520	100
Head	194,962	19.7	157,432	19.7	37,530	19.3
Spouse	142,475	14.4	117,189	14.7	25,286	13
Own Son/ Daughter	511,418	51.6	418,214	52.4	93,204	47.9
Step Son/Daughter	14,283	1.4	12,006	1.5	2,277	1.2
Parent	3,027	0.3	2,209	0.3	818	0.4
Brother/Sister	18,952	1.9	12,460	1.6	6,492	3.3
Nephew/Niece	17,993	1.8	11,133	1.4	6,860	3.5
Son/Daughter-in-law	5,915	0.6	4,701	0.6	1,214	0.6
Grandchild	57,423	5.8	43,867	5.5	13,556	7
Parent-in-law	1,433	0.1	1,118	0.1	315	0.2
Cousin	2,679	0.3	1,644	0.2	1,035	0.5
Other relative	17,694	1.8	12,880	1.6	4,814	2.5
Not Related	3,673	0.4	2,554	0.3	1,119	0.6

Source: 2010 Census of Population and Housing

Annex C: Education

C1: Population 5 Years and Older by Age (Single and 5 Year Groups), Sex and Literacy Status, and Rural/Urban, Luapula Province 2010

Age (Single and 5 Year Groups)	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Total	62.6	46.3	58.5	59.2	43.1	54.6	76.1	61.1	74.0
5	2.8	1.4	2.9	2.2	1.1	2.2	5.9	3.0	6.0
6	4.3	2.3	4.1	3.5	1.9	3.3	8.3	4.3	8.2
7	8.7	4.7	8.4	7.1	3.9	6.8	15.6	8.5	15.3
8	16.0	8.6	16.0	13.6	7.3	13.6	27.2	15.4	27.3
9	29.6	17.1	29.8	25.5	14.5	25.7	46.5	29.7	47.0
5 - 9	11.2	5.9	11.2	9.4	5.0	9.4	19.6	10.6	19.7
10	42.9	27.5	43.0	38.4	24.2	38.2	62.2	44.6	62.8
11	61.4	44.6	60.8	56.9	40.4	55.9	79.8	65.8	80.2
12	71.9	56.2	71.8	68.4	52.4	68.0	85.7	74.2	86.2
13	79.9	66.9	79.7	76.7	62.8	76.5	91.9	85.1	91.7
14	84.6	73.5	83.9	81.9	69.7	80.9	94.5	89.5	94.9
10 - 14	65.0	48.4	64.8	61.1	44.5	60.6	80.8	67.4	81.2
15	86.0	75.9	85.1	83.6	72.5	82.3	94.9	90.3	94.9
16	88.1	78.8	86.1	86.1	75.7	83.7	95.5	91.3	94.5
17	87.8	78.3	84.9	85.7	75.2	82.3	94.9	90.0	93.9
18	86.7	76.5	83.0	84.2	72.8	79.8	95.2	90.7	93.8
19	85.2	74.1	80.5	82.4	70.0	76.8	95.0	90.2	93.7
15 - 19	86.8	76.7	84.0	84.4	73.3	81.1	95.1	90.5	94.2
20 - 24	79.8	65.0	74.0	76.1	59.9	69.6	92.9	85.9	90.3
25 - 29	75.4	59.6	69.2	71.5	55.3	64.4	90.3	80.7	87.4
30 - 34	77.4	64.2	70.6	73.8	60.1	66.0	91.0	83.3	88.1
35 - 39	77.4	65.0	70.0	74.3	61.3	66.1	89.8	82.1	85.7
40 - 44	77.5	65.9	69.2	74.6	62.5	65.4	90.1	83.2	86.2
45 - 49	77.9	65.7	70.3	75.1	62.6	66.5	89.7	81.4	85.7
50 - 54	76.1	63.6	66.2	73.6	61.2	62.5	86.2	75.5	80.6
55 - 59	74.0	60.8	63.0	71.3	58.0	59.6	84.8	74.1	76.8
60 - 64	65.6	51.9	51.5	63.0	49.4	48.3	77.2	64.2	65.8
65 +	57.0	47.2	36.5	54.8	45.5	33.6	67.3	55.9	49.4

Source: 2010 Census of Population and Housing

C2: Population 5 Years and Older by Age, Sex, and School Attendance and Rural/Urban, Luapula Province 2010

Age (Single and 5 Year Groups)	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Total	31.1	34.1	28.3	29.3	32.4	26.5	38.1	40.9	35.4
5	7.6	7.4	7.8	6.2	5.9	6.5	14.3	14.7	13.9
6	15.5	14.9	16.1	13.6	13.2	13.9	24.8	23.3	26.2
7	36.3	36.0	36.6	33.1	33.0	33.2	50.7	50.1	51.2
8	52.8	52.5	53.2	49.4	49.2	49.5	69.4	68.4	70.5
9	67.0	67.1	66.8	63.5	63.7	63.2	81.6	81.6	81.6
5 - 9	33.6	33.3	34.0	30.9	30.6	31.1	46.5	45.8	47.2
10	72.0	71.8	72.2	69.2	69.2	69.3	83.9	83.5	84.3
11	78.2	78.3	78.0	75.7	75.9	75.4	88.5	88.5	88.5
12	80.7	80.8	80.5	78.6	79.0	78.2	88.9	88.6	89.1
13	81.8	82.9	80.7	79.7	80.9	78.5	89.8	90.5	89.1
14	80.7	82.3	79.0	78.1	80.0	76.2	90.1	90.9	89.4
10 - 14	77.9	78.3	77.4	75.4	76.0	74.8	87.8	87.9	87.7
15	76.5	79.4	73.5	73.8	77.3	70.2	86.3	87.3	85.3
16	72.8	77.9	68.0	70.2	75.3	65.2	82.2	87.1	77.6
17	64.4	73.2	56.1	61.2	70.8	52.2	75.5	81.7	69.7
18	53.4	66.5	41.4	50.0	63.8	37.4	64.9	75.5	55.0
19	41.4	56.7	28.0	38.4	54.2	24.9	51.6	65.0	39.2
15 - 19	62.5	71.5	54.0	59.6	69.1	50.6	72.6	79.8	65.9
20 - 24	19.0	29.6	11.0	16.9	27.2	9.4	26.2	37.5	16.8
25 - 29	4.2	5.6	3.2	3.8	5.1	2.7	6.1	7.5	5.1
30 - 34	2.4	2.7	2.2	2.2	2.6	1.8	3.5	3.4	3.5
35 - 39	1.9	2.1	1.8	1.8	1.9	1.6	2.7	2.7	2.7
40 - 44	1.9	2.4	1.5	1.7	2.1	1.4	2.8	3.4	2.2
45 - 49	1.6	1.7	1.5	1.5	1.6	1.4	2.1	2.2	2.0
50 - 54	1.5	1.7	1.3	1.5	1.7	1.3	1.5	1.7	1.3
55 - 59	1.3	1.6	1.0	1.3	1.5	1.0	1.3	1.7	1.0
60 - 64	1.4	1.8	1.0	1.3	1.8	1.0	1.4	1.7	1.2
65 +	1.6	1.8	1.4	1.6	1.9	1.3	1.6	1.5	1.7

Source: 2010 Census of Population and Housing

Annex D: Economic Characteristics

D1: The Usually Working Population (12 years and Older) By District, Luapula Province 2010

	Percent	Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
Total	100.0	33,691	53,632	71,347	16,060	30,799	59,682	61,110
Rural	100.0	32,661	42,936	52,675	15,188	26,425	45,514	56,553
Urban	100.0	1,030	10,696	18,672	872	4,374	14,168	4,557
Male	100.0	19,403	26,206	36,278	7,344	17,908	30,429	31,283
Female	100.0	14,288	27,426	35,069	8,716	12,891	29,253	29,827
The Usually Working Population (12 years and Older) By Employment Status								
Employer	0.5	250	160	331	28	170	264	341
Employee	8.0	2,934	3,317	9,666	561	2,043	3,613	3,891
Self employed	48.8	21,499	19,066	36,367	5,813	12,410	29,622	34,401
Unpaid family worker	42.8	9,008	31,089	24,983	9,658	16,176	26,183	22,477
The Usually Working Population (12 years and Older) By Occupation								
Managers	0.24	71	132	199	6	89	62	213
Professionals	2.30	372	1,154	2,630	247	925	895	1,270
Technicians and Associate Professionals	0.83	292	420	843	55	447	230	413
Clerical Support Workers	0.27	36	121	522	16	43	84	75
Service and Sales Workers	4.81	1,011	2,419	6,291	160	771	3,056	1,998
Skilled Agricultural Forestry and Fishery Workers	68.29	27,621	36,117	31,237	14451	19,972	46,137	47,299
Craft and Related Trades Workers	6.07	1,867	1,472	5,060	234	1,146	5,699	4,331
Plant and Machine Operators and Assemblers	1.02	229	506	1,272	111	144	347	734
Elementary Occupations	12.04	1,325	9,461	20,419	334	4,342	1,238	2,170
Not Stated	4.13	867	1,830	2,874	446	2,920	1,934	2,607
The Usually Working Population (12 years and Older) By Industry								
Agriculture Hunting Forestry and Fishing	78.9	28,821	44,028	49,800	14,632	23,739	46,804	49,649
Mining and Quarrying	0.4	33	45	694	6	88	105	173
Manufacturing	2.0	477	1,216	2,096	147	502	741	1,389
Electricity Gas Steam & Air conditioning supply	0.0	6	17	71	-	38	6	10
Water Supply	0.0	2	14	52	6	7	29	7
Construction and Allied Repairs	1.1	307	523	1,253	58	305	480	753
Wholesale & Retail Trade Restaurants and Hotel	7.1	2,249	2,367	6,260	146	1,213	7,630	3,212
Transport and Storage	0.6	78	204	1,208	65	60	195	231
Accommodation and food services activities	0.3	41	157	532	5	18	75	102
Information and Communication	0.3	42	295	233	39	262	67	105
Finance and Insurance	0.1	5	20	142	4	4	8	27
Real Estate Activities	0.0	-	1	3	-	-	-	1
Community Social and Personal Services	4.3	672	2,504	5,239	362	1,325	1,340	2,518
Not stated	4.9	958	2,241	3,764	590	3,238	2,202	2,933

Source: 2010 Census of Population and Housing

Annex E: Fertility Levels, Patterns and Trends

E1: Adjusted ASFRs and TFRs by District, Luapula Province 2010

Age Group	Total	Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
15-19	0.1302	0.1315	0.0964	0.1053	0.1195	0.0865	0.1130	0.1004
20-24	0.3313	0.3417	0.3066	0.2968	0.4036	0.2879	0.3265	0.3002
25-29	0.3328	0.3686	0.3359	0.3014	0.3769	0.3213	0.3231	0.3100
30-34	0.2963	0.3362	0.3061	0.2689	0.3474	0.2904	0.2828	0.2935
35-39	0.2194	0.2488	0.2190	0.2142	0.2914	0.2071	0.2186	0.2126
40-44	0.1165	0.1478	0.1246	0.1110	0.1669	0.1136	0.1188	0.1265
45-49	0.0335	0.0580	0.0473	0.0278	0.0565	0.0409	0.0396	0.0409
TFR	**7.3**	**7.6**	**7.8**	**6.9**	**8.3**	**7.3**	**6.9**	**7.3**

Source: 2010 Census of Population and Housing

E2: Observed and Adjusted ASFR, TFR and Mean Age at Childbearing (MACB), Luapula Province 1990 – 2010

Age Group	1990*		2000*		2010	
	Observed ASFR	Adjusted ASFR	Observed ASFR	Adjusted ASFR	Observed ASFR	Adjusted ASFR
15-19	0.0879	0.0940	0.0928	0.1407	0.0822	0.1302
20-24	0.2501	0.2674	0.2118	0.2768	0.2439	0.3313
25-29	0.2746	0.2936	0.2116	0.2692	0.2542	0.3328
30-34	0.2543	0.2719	0.1846	0.2317	0.2304	0.2963
35-39	0.2112	0.2258	0.0420	0.1748	0.1730	0.2194
40-44	0.1203	0.1286	0.0710	0.0833	0.0970	0.1165
45-49	0.0549	0.0587	0.0290	0.0301	0.0322	0.0335
Obs. TFR	6.3		4.7		5.6	
Adj. TFR		6.7		6.0		7.3
MACB					33.0	

Source: 1990, 2000 and 2010 Censuses of Population and Housing

E3: Adjusted Total Fertility Rate by Province and Rural/Urban, Luapula Province 1990 – 2010

Census Year	Total			Districts						
	Total	Rural	Urban	Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
1990	7.2	7.3	6.9	-	-	-	-	-	-	-
2000	7.1	7.3	5.9	6.7	7.3	6.8	7.8	7.6	6.9	7.1
2010	7.3	7.3	6.0	7.6	7.8	6.9	8.3	7.3	6.9	7.3

Source: 1990, 2000 and 2010 Censuses of Population and Housing

E4: GRR and NRR by Rural/Urban, Luapula Province 1990 - 2010

Age Group	Total			Rural			Urban		
	ASFR(f)	Survival Ratios	ASFR at Current Mortality Rates	ASFR(f)	Survival Ratios	ASFR at Current Mortality Rates	ASFR(f)	Survival Ratios	ASFR at Current Mortality Rates
15 - 19	0.0411	3.8259	0.2007	0.0444	3.8140	0.1674	0.0293	3.8827	0.1216
20 - 24	0.1218	3.6425	0.5677	0.1315	3.6389	0.4844	0.0841	3.6681	0.3395
25 - 29	0.1249	3.4304	0.5529	0.1324	3.4382	0.4706	0.0944	3.4119	0.3661
30 - 34	0.1110	3.1994	0.4626	0.1185	3.2122	0.4010	0.0805	3.1613	0.2957
35 - 39	0.0845	2.9820	0.3188	0.0897	2.9941	0.2851	0.0615	2.9462	0.2101
40 - 44	0.0491	2.8015	0.1650	0.0528	2.8202	0.1569	0.0317	2.7359	0.0995
45 - 49	0.0157	2.6404	0.0509	0.0168	2.6669	0.0466	0.0108	2.5438	0.0308
GRR 2010	2.7			2.9			2.0		
GRR 2000	2.8			3.0			2.1		
GRR 1990	3.5			2.9			3.4		
NRR 2010			1.8			2.0			1.5
NRR 2000			1.8			2.1			1.4
NRR 1990			2.1			2.2			2.0

Source: 1990, 2000 and 2010 Censuses of Population and Housing

Annex F: Mortality

F1: Proportion Distribution of Reported Deaths by Age Group, District and Rural/Urban, Luapula Province 2010

Age Group	Total	Rural	Urban	Chienge	Kawambwa	Mansa	Milenge	Mwense	Nchelenge	Samfya
0 - 4	0.475	0.496	0.385	0.590	0.411	0.392	0.431	0.471	0.522	0.471
5-9	0.066	0.068	0.055	0.062	0.069	0.058	0.070	0.063	0.068	0.074
10-14	0.036	0.036	0.036	0.032	0.046	0.031	0.047	0.031	0.035	0.039
15 - 19	0.036	0.035	0.040	0.030	0.038	0.037	0.031	0.030	0.032	0.046
20 - 24	0.049	0.046	0.061	0.038	0.053	0.058	0.039	0.046	0.050	0.048
25 - 29	0.054	0.049	0.074	0.045	0.057	0.069	0.056	0.053	0.048	0.048
30 - 34	0.053	0.049	0.071	0.045	0.052	0.070	0.047	0.055	0.049	0.046
35 - 39	0.044	0.041	0.057	0.029	0.047	0.056	0.047	0.037	0.042	0.047
40 - 44	0.033	0.032	0.038	0.022	0.044	0.037	0.037	0.035	0.032	0.034
45 - 49	0.026	0.024	0.032	0.021	0.036	0.030	0.023	0.027	0.025	0.021
50 - 54	0.021	0.020	0.025	0.019	0.026	0.023	0.023	0.025	0.019	0.016
55 - 59	0.015	0.014	0.022	0.011	0.017	0.024	0.023	0.014	0.014	0.010
60 - 64	0.019	0.019	0.023	0.015	0.019	0.023	0.029	0.023	0.017	0.019
65 - 69	0.017	0.017	0.017	0.015	0.019	0.019	0.014	0.020	0.013	0.016
70 - 74	0.021	0.021	0.021	0.010	0.030	0.024	0.039	0.021	0.014	0.025
75+	0.035	0.034	0.042	0.017	0.036	0.050	0.043	0.049	0.021	0.041

Source: 2010 Census of Population and Housing

Annex H: Disability

H1: Disabled Population by Sex, Rural/Urban and District, Luapula Province 2010

Sex and District	Disabled Population			Percent Disabled		
	Total	Rural	Urban	Total	Rural	Urban
Total	**26,326**	**22,377**	**3949**	**2.8**	**3.0**	**2.2**
Male	13,306	11,364	1942	2.9	3.1	2.2
Female	13,020	11,013	2007	2.7	2.8	2.1
District						
Chienge	3,135	3,023	112	2.9	2.9	3.2
Kawambwa	3,554	2,765	789	2.8	2.8	2.6
Mansa	6,043	4,452	1591	2.9	3.2	2.2
Milenge	1,308	1,236	72	3.2	3.2	2.4
Mwense	2,899	2,413	486	2.5	2.5	2.3
Nchelenge	3,928	3,415	513	2.7	3.1	1.5
Samfya	5,459	5,073	386	2.9	3.0	2.1

Source: 2010 Census of Population and Housing

H2: Disabled Population by Age and Sex, Luapula Province 2010

Age	Disabled Population			Percent Disabled		
	Total	Male	Female	Total	Male	Female
Total	26,326	13,306	13,020	2.8	2.9	2.7
0 - 4	1,328	788	540	0.7	0.9	0.6
5-9	2,043	1,193	850	1.4	1.6	1.1
10-14	2,403	1,338	1,065	1.8	2.0	1.6
15 - 19	1,971	1,133	838	2.0	2.3	1.6
20 - 24	1,560	736	824	2.1	2.3	2.0
25 - 29	1,512	732	780	2.2	2.5	2.0
30 - 34	1,525	747	778	2.8	2.9	2.7
35 - 39	1,625	820	805	3.6	3.6	3.5
40 - 44	1,588	807	781	4.7	4.6	4.7
45 - 49	1,625	758	867	5.9	5.6	6.2
50 - 54	1,622	736	886	7.4	7.0	7.8
55 - 59	1,376	635	741	9.2	9.1	9.3
60 - 64	1,575	638	937	11.6	10.5	12.4
65 - 69	1,424	631	793	14.6	14.0	15.1
70 - 74	1,290	601	689	17.8	17.3	18.2
75 - 79	930	515	415	20.5	20.8	20.1
80 - 84	512	266	246	23.6	22.9	24.6
85 - 89	247	150	97	21.4	24.5	18.0
90 - 94	91	55	36	28.3	32.7	23.4
95+	79	27	52	24.7	25.0	24.5

Source: 2010 Census of Population and Housing

Annex I: Evaluation of Coverage and Content Errors

I1: Population by Age Group, Sex, Age Ratio and Sex Ratio, Luapula Province 1990

Age Group	Population		Age Ratio		Deviation from 100		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	6,317	6,337	-	-	-	-	99.7	-
5-9	6,070	6,112	98.4	97.5	-1.6	-2.5	99.3	-0.4
10-14	6,025	6,196	104.7	101.9	4.7	1.9	97.2	-2.1
15-19	5,435	6,054	115.5	112.2	15.5	12.2	89.8	-7.5
20-24	3,385	4,593	83.2	98.6	-16.8	-1.4	73.7	-16.1
25-29	2,699	3,258	94.1	89.7	-5.9	-10.3	82.8	9.1
30-34	2,351	2,672	106.1	105.3	6.1	5.3	88.0	5.1
35-39	1,731	1,816	90.1	86.9	-9.9	-13.1	95.3	7.3
40-44	1,491	1,509	102.2	102.7	2.2	2.7	98.8	3.5
45-49	1,188	1,124	97.1	93.8	-2.9	-6.2	105.7	6.9
50-54	956	888	98.8	104.8	-1.2	4.8	107.7	2.0
55-59	747	570	100.1	89.0	0.1	-11.0	131.1	23.4
60-64	536	393	102.3	96.3	2.3	-3.7	136.4	5.3
65-69	301	246	80.2	85.6	-19.8	-14.4	122.4	-14.0
70-74	215	182	-	-	0.0	0.0	118.1	-4.2
75+	223	240					92.9	
Total	39,670	42,190	-	-				
Mean	-	-	-	-	6.9	6.9	-	7.6

Source: 1990 Census of Population and Housing

Age-Sex Accuracy Index = 3 times mean difference in sex ratio plus mean
deviations of males and females age ratios.
3 x 7.6 + 6.9 + 6.9
= 36.7

I2: Population by Age Group, Sex, Age Ratio and Sex Ratio, Luapula Province 2000

Age Group	Population		Age Ratio		Deviation from 100		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	69,524	70,035	-	-	-	-	99.3	-
5-9	57,004	56,599	97.6	97.6	-2.4	-2.4	100.7	1.4
10-14	47,264	45,896	98.2	91.8	-1.8	-8.2	103.0	2.3
15-19	39,280	43,401	104.1	105.0	4.1	5.0	90.5	-12.5
20-24	28,233	36,798	88.0	103.1	-12.0	3.1	76.7	-13.8
25-29	24,883	28,003	102.6	96.5	2.6	-3.5	88.9	12.1
30-34	20,258	21,250	100.2	94.7	0.2	-5.3	95.3	6.5
35-39	15,564	16,863	93.8	96.6	-6.2	-3.4	92.3	-3.0
40-44	12,943	13,656	103.3	99.3	3.3	0.7	94.8	2.5
45-49	9,488	10,641	90.3	90.7	-9.7	-9.3	89.2	-5.6
50-54	8,067	9,817	104.2	115.0	4.2	15.0	82.2	-7.0
55-59	5,992	6,430	88.4	81.8	-11.6	-18.2	93.2	11.0
60-64	5,492	5,898	102.8	111.2	2.8	11.2	93.1	-0.1
65-69	4,696	4,182	103.7	99.1	3.6	-0.9	112.3	19.2
70-74	3,573	2,540	-	-	0.0	0.0	140.7	28.4
75+	3,486	2,549					136.8	
Total	355,747	374,558	-	-				
Mean	-	-	-	-	5.2	6.8	-	8.1

Source: 2000 Census of Population and Housing

Age-Sex Accuracy Index = 3 times mean difference in sex ratio plus mean
deviations of males and females age ratios.
3 x 8.1 + 5.2 + 6.8
= 38.4

I3: Population by Age Group, Sex, Age Ratio and Sex Ratio, Luapula Province 2010								
Age Group	Population		Age ratio		Deviation from 100		Sex ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	88,914	89,901					98.9	
5-9	74,858	74,597	96.8	96.5	-3.2	-3.5	100.3	1.4
10-14	65,735	64,755	106.2	102.5	6.2	2.5	101.5	1.1
15-19	48,909	51,760	100.6	96.9	0.6	-3.1	94.5	-7.0
20-24	31,505	42,004	80.4	93.3	-19.6	-6.7	75.0	-19.5
25-29	29,488	38,315	102.2	108.8	2.2	8.8	77.0	2.0
30-34	26,184	28,441	100.7	92.6	0.7	-7.4	92.1	15.1
35-39	22,531	23,095	103.4	102.2	3.4	2.2	97.6	5.5
40-44	17,384	16,735	96.5	90.4	-3.5	-9.6	103.9	6.3
45-49	13,487	13,916	96.6	99.3	-3.4	-0.7	96.9	-7.0
50-54	10,527	11,293	103.0	103.3	3.0	3.3	93.2	-3.7
55-59	6,953	7,958	83.9	84.5	-16.1	-15.5	87.4	-5.8
60-64	6,054	7,543	105.6	114.1	5.6	14.1	80.3	-7.1
65-69	4,508	5,265	94.5	93.0	-5.5	-7.0	85.6	5.4
70-74	3,483	3,778	-	-	0.0	0.0	92.2	6.6
75+	4,526	3,969	-	-	-	-	114.0	-
Total	455,046	483,345	-	-				
Mean	-	-	-	-	5.6	6.5	-	6.7

Source: 2010 Census of Population and Housing

Age-Sex Accuracy Index   = 3 times mean difference in sex ratio plus mean deviations of males and females age ratios.
3 x 6.7 + 5.6 + 6.5
= 32.1

Life Tables

Table 1: Abridged Life Table for Both Sexes, Luapula Province 2010

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.1071	0.3	0.0996	100,000	9,959	93,029	0.8418	4,496,304	45.0
1	4	0.0273	0.4	0.0996	90,041	8,964	327,894	0.9332	4,403,275	48.9
5	5	0.0071	0.5	0.0345	81,077	2,796	392,802	0.9769	4,075,381	50.3
10	5	0.0044	0.5	0.0218	78,281	1,705	383,730	0.9725	3,682,579	47.0
15	5	0.0058	0.5	0.0282	76,575	2,157	373,169	0.9511	3,298,849	43.1
20	5	0.0107	0.5	0.0513	74,418	3,814	354,925	0.9403	2,925,680	39.3
25	5	0.0128	0.5	0.0607	70,604	4,287	333,726	0.9279	2,570,755	36.4
30	5	0.0157	0.5	0.0734	66,317	4,870	309,669	0.9268	2,237,028	33.7
35	5	0.0157	0.5	0.0732	61,447	4,497	286,996	0.9262	1,927,359	31.4
40	5	0.0158	0.5	0.0739	56,949	4,207	265,815	0.9279	1,640,363	28.8
45	5	0.0154	0.5	0.0718	52,742	3,789	246,659	0.9277	1,374,548	26.1
50	5	0.0155	0.5	0.0724	48,953	3,544	228,815	0.9224	1,127,888	23.0
55	5	0.0168	0.5	0.0782	45,408	3,553	211,055	0.8977	899,074	19.8
60	5	0.0232	0.5	0.1052	41,856	4,403	189,464	0.8791	688,019	16.4
65	5	0.0276	0.5	0.1229	37,453	4,601	166,556	0.8158	498,555	13.3
70	5	0.0464	0.5	0.1920	32,851	6,306	135,877	0.7845	331,999	10.1
75	5	0.0545	0.5	0.2187	26,545	5,806	106,597	0.4565	196,122	7.4
80	+	0.0823	0.5	1.0000	20,739	20,739	89,525		89,525	4.3

Source: 2010 Census of Population and Housing

Table 2: Abridged Life Table for Males, Luapula Province 2010

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.1181	0.3	0.1091	100,000	10,905	92,366	0.8287	4,265,838	42.7
1	4	0.0297	0.4	0.1072	89,095	9,548	322,007	0.9271	4,173,472	46.8
5	5	0.0079	0.5	0.0379	79,547	3,017	384,156	0.9750	3,851,465	48.4
10	5	0.0048	0.5	0.0235	76,529	1,801	374,545	0.9718	3,467,309	45.3
15	5	0.0059	0.5	0.0287	74,729	2,143	363,999	0.9498	3,092,764	41.4
20	5	0.0110	0.5	0.0526	72,585	3,819	345,742	0.9383	2,728,765	37.6
25	5	0.0133	0.5	0.0627	68,766	4,313	324,425	0.9228	2,383,023	34.7
30	5	0.0170	0.5	0.0789	64,454	5,088	299,373	0.9214	2,058,598	31.9
35	5	0.0169	0.5	0.0786	59,366	4,664	275,839	0.9135	1,759,225	29.6
40	5	0.0190	0.5	0.0874	54,701	4,783	251,982	0.9134	1,483,386	27.1
45	5	0.0188	0.5	0.0865	49,918	4,318	230,161	0.9155	1,231,404	24.7
50	5	0.0182	0.5	0.0843	45,600	3,843	210,709	0.9064	1,001,243	22.0
55	5	0.0207	0.5	0.0947	41,757	3,955	190,988	0.8752	790,535	18.9
60	5	0.0291	0.5	0.1285	37,802	4,859	167,144	0.8692	599,547	15.9
65	5	0.0297	0.5	0.1311	32,943	4,318	145,281	0.8060	432,403	13.1
70	5	0.0494	0.5	0.2020	28,624	5,783	117,100	0.7935	287,122	10.0
75	5	0.0509	0.5	0.2072	22,842	4,732	92,914	0.4535	170,023	7.4
80	+	0.0848	0.5	1.0000	18,110	18,110	77,109		77,109	4.3

Source: 2010 Census of Population and Housing

Table 3: Abridged Life Table for Females, Luapula Province 2010

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.0960	0.3	0.0899	100,000	8,995	93,704	0.8552	4,736,083	47.4
1	4	0.0251	0.4	0.0919	91,005	8,366	333,903	0.9393	4,642,380	51.0
5	5	0.0064	0.5	0.0310	82,639	2,563	401,662	0.9789	4,308,477	52.1
10	5	0.0041	0.5	0.0200	80,076	1,602	393,170	0.9731	3,906,814	48.8
15	5	0.0057	0.5	0.0277	78,474	2,173	382,590	0.9521	3,513,644	44.8
20	5	0.0105	0.5	0.0502	76,301	3,833	364,255	0.9418	3,131,055	41.0
25	5	0.0125	0.5	0.0592	72,468	4,289	343,040	0.9327	2,766,800	38.2
30	5	0.0146	0.5	0.0683	68,179	4,657	319,938	0.9321	2,423,760	35.5
35	5	0.0145	0.5	0.0679	63,522	4,313	298,203	0.9395	2,103,822	33.1
40	5	0.0126	0.5	0.0597	59,209	3,532	280,152	0.9425	1,805,619	30.5
45	5	0.0121	0.5	0.0573	55,677	3,188	264,041	0.9393	1,525,468	27.4
50	5	0.0129	0.5	0.0611	52,489	3,206	248,018	0.9369	1,261,427	24.0
55	5	0.0134	0.5	0.0634	49,283	3,124	232,356	0.9167	1,013,408	20.6
60	5	0.0186	0.5	0.0856	46,159	3,953	213,004	0.8876	781,052	16.9
65	5	0.0258	0.5	0.1157	42,205	4,883	189,052	0.8250	568,048	13.5
70	5	0.0437	0.5	0.1825	37,322	6,811	155,959	0.7737	378,997	10.2
75	5	0.0587	0.5	0.2322	30,511	7,085	120,673	0.4590	223,038	7.3
80	+	0.0687	0.5	1.0000	23,426	23,426	102,365		102,365	4.4

Source: 2010 Census of Population and Housing

2010 Census of Population and Housing - Luapula Province Analytical Report

Table 4: Abridged Life Table Luapula Province Rural - Both Sexes, 2010									
Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.1083	0.3	0.1007	100,000	10,068	92,952	0.8394	4,525,345	45.3
1	4	0.0280	0.4	0.1018	89,932	9,157	326,761	0.9317	4,432,393	49.3
5	5	0.0073	0.5	0.0353	80,775	2,851	391,045	0.9765	4,105,632	50.8
10	5	0.0045	0.5	0.0221	77,924	1,721	381,873	0.9720	3,714,587	47.7
15	5	0.0059	0.5	0.0287	76,202	2,185	371,181	0.9516	3,332,715	43.7
20	5	0.0106	0.5	0.0507	74,018	3,751	353,210	0.9438	2,961,534	40.0
25	5	0.0120	0.5	0.0569	70,267	3,997	333,347	0.9316	2,608,323	37.1
30	5	0.0149	0.5	0.0697	66,270	4,619	310,562	0.9303	2,274,977	34.3
35	5	0.0149	0.5	0.0697	61,651	4,295	288,925	0.9284	1,964,414	31.9
40	5	0.0153	0.5	0.0718	57,356	4,117	268,253	0.9312	1,675,489	29.2
45	5	0.0146	0.5	0.0684	53,239	3,641	249,808	0.9301	1,407,236	26.4
50	5	0.0150	0.5	0.0701	49,597	3,477	232,339	0.9283	1,157,429	23.3
55	5	0.0154	0.5	0.0719	46,120	3,318	215,670	0.9023	925,089	20.1
60	5	0.0222	0.5	0.1008	42,802	4,315	194,592	0.8804	709,419	16.6
65	5	0.0274	0.5	0.1220	38,487	4,694	171,311	0.8176	514,827	13.4
70	5	0.0459	0.5	0.1900	33,793	6,422	140,065	0.7880	343,516	10.2
75	5	0.0533	0.5	0.2150	27,371	5,885	110,371	0.4575	203,451	7.4
80	+	0.0772	0.5	1.0000	21,486	21,486	93,080		93,080	4.3
Source: 2010 Census of Population and Housing										

Table 5: Abridged Life Table Luapula Province Urban - Both Sexes, 2010									
Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.1004	0.3	0.0938	100,000	9,379	93,435	0.8541	4,405,595	44.1
1	4	0.0240	0.4	0.0884	90,621	8,012	333,640	0.9404	4,312,161	47.6
5	5	0.0063	0.5	0.0308	82,609	2,542	401,606	0.9784	3,978,520	48.2
10	5	0.0042	0.5	0.0206	80,067	1,645	392,931	0.9742	3,576,914	44.7
15	5	0.0054	0.5	0.0264	78,422	2,073	382,779	0.9495	3,183,983	40.6
20	5	0.0112	0.5	0.0533	76,349	4,067	363,440	0.9270	2,801,204	36.7
25	5	0.0161	0.5	0.0753	72,281	5,441	336,921	0.9140	2,437,763	33.7
30	5	0.0190	0.5	0.0873	66,840	5,838	307,930	0.9129	2,100,842	31.4
35	5	0.0189	0.5	0.0871	61,002	5,314	281,097	0.9160	1,792,913	29.4
40	5	0.0181	0.5	0.0836	55,688	4,656	257,488	0.9141	1,511,816	27.1
45	5	0.0187	0.5	0.0862	51,032	4,398	235,370	0.9177	1,254,328	24.6
50	5	0.0177	0.5	0.0818	46,634	3,815	216,006	0.8987	1,018,957	21.8
55	5	0.0229	0.5	0.1037	42,820	4,439	194,121	0.8785	802,951	18.8
60	5	0.0279	0.5	0.1238	38,380	4,750	170,527	0.8734	608,830	15.9
65	5	0.0287	0.5	0.1270	33,630	4,270	148,937	0.8077	438,303	13.0
70	5	0.0490	0.5	0.2006	29,360	5,891	120,295	0.7698	289,365	9.9
75	5	0.0594	0.5	0.2343	23,470	5,498	92,608	0.4523	169,070	7.2
80	+	0.1048	0.5	1.0000	17,972	17,972	76,462		76,462	4.3
Source: 2010 Census of Population and Housing										

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2010 CENSUS OF POPULATION AND HOUSING QUESTIONNAIRE

REPUBLIC OF ZAMBIA

CENTRAL STATISTICAL OFFICE

2010 CENSUS OF POPULATION AND HOUSING

IDENTIFICATION

Province

District

Constituency

Ward

Region — Rural 1 / Urban 2

CSA No.

SEA No.

Census Building No. (CBN)

Housing Unit No. (HUN)

Household No. (HHN)

Village/Locality Name

Residential Address

Chief's Area

INTERVIEW STATUS

Completed (occupied)
Non-contact (occupied)
Not interviewed (vacant)
Non residential
Refused
Other

MARK HERE IF MORE THAN ONE QUESTIONNAIRE

Questionnaire [ ] of [ ]

SECTION P - QUESTIONS ON POPULATION FOR ALL MEMBERS OF THE HOUSEHOLD

P1 NAMES of usual residents and visitors

P2 Membership status? — Usual member Present / Usual member Absent / Visitor

P3 What is (NAME'S) relationship to the head of household? — Head of Household / Spouse / Own Son/Daughter / Step Son/Daughter / Parent / Brother/Sister / Nephew/Niece / Grandchild / Son/Daughter-in-Law / Parent-in-Law / Cousin / Other Relative / Unrelated

P4 Is (NAME) male or female? — Male / Female

P5 How old was (NAME) at his/her last birthday? If less than 1 year enter "00" — In Years

P6 PLACE OF BIRTH Where was (NAME) born? Write District/Country name then code

P7 Was this part of the district rural or urban at the time of birth? — Rural / Urban / Outside Zambia

P8 Is (NAME) Zambian? If Zambian, code here then skip to P11

P9 If non-Zambian, code here then write name of country

P10 What is the main purpose of your stay in Zambia? — Employment / Family formation/reunification / Education/training / Settlement / Refugee/Asylum / Investor / Tourist / Other

P11 What is (NAME'S) religion? — Catholic / Protestant / Muslim / Hindu / Buddist / Bahai faith / Other / None

ENUMERATOR Name _____ Date _____

SUPERVISOR Name _____ Date _____

99080946 (82)

M 6193

99080946 (82)

M 6193
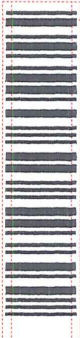
HOUSEHOLD SUMMARY COUNT

Usual members present		Usual members absent	
Male		Male	
Female		Female	
Total		Total	

Visitors	
Male	
Female	
Total	

INSTITUTIONAL

Type of Collective Quarters

Hotel/Motel/Lodge [1]
Hostel/Guest House/Inn [2]
Hospital [3]
Learning Institution [4]
Prison [5]
Police Cell [6]
Refugee Camp [7]
Other (specify below) [8]

Summary Count

Male	
Female	
Total	

FOR ALL MEMBERS PRESENT

P12 What is (NAME's) ethnicity? — *Write and record code for ethnicity*

P13 What is (NAME'S) predominant language of communication? — *Write name of predominant language then code*

P14 Where was (NAME) residing in October 2009? — *Record code for district or code for foreign country*

P15 How long has (NAME) been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? — YEARS / MONTHS — Same as Head of Household

P16 Is (NAME) disabled in any way? — Yes [1] / No [2] Go to P19

P17 What is (NAME'S) disability? — *Mark all those that apply* — Blind [1], Partially sighted [2], Deaf and Dumb [3], Deaf [4], Hard of hearing [5], Dumb [6], Mental illness [7], Intellectual [8], Speech impairment [9], Physically disabled [10], Mentally retarded [11], Other [12]

P18 What is the cause of (NAME'S) disability? — *Mark all those that apply* — Congenital/pre-natal [1], Disease/Illness [2], Injury/Accident [3], Spousal violence [4], Other violence [5], Unknown [6], Other [7]

P19 Is (NAME) an albino? — Yes [1] / No [2]

ONLY FOR PERSONS LESS THAN 18 YEARS OLD

P20 Is (NAME'S) biological mother alive? — Yes [1] / No [2] Go to P22 / Don't know [8]

P21 Does (NAME'S) biological mother live in this household? — Yes [1] / No [2]

P22 Is (NAME'S) biological father alive? — Yes [1] / No [2] Go to P24 / Don't know [8]

P23 Does (NAME'S) biological father live in this household? — Yes [1] / No [2]

P24 Does (NAME) have a birth certificate? — Yes seen [1], Yes not seen [2], No [3], Don't know [8]

ONLY FOR PERSONS AGED 5 YEARS AND OLDER

P25 Can (NAME) read and write in any language? — Yes [1] / No [2]

P26 Has (NAME) ever attended school? — Yes [1] / No [2] Go to P29

P27 Is (NAME) currently attending school? — Yes [1] / No [2]

P28 What highest level of education has (NAME) completed? — *Enter code from manual*

Person Number: [1] [2] [3] [4] [5] [6] [7] [8]

ONLY FOR PERSONS AGED 5 YEARS AND OLDER

P29 What is the highest professional or vocational qualification (NAME) has completed?

- None [1]
- Certificate [2]
- Diploma [3]
- Bachelors Degree [4]
- Masters Degree [5]
- PHD [6]

P30 What is the field of study for the highest professional or vocational qualification completed?

Write field of study and enter code.

ONLY FOR PERSONS AGED 12 YEARS OR OLDER

P31 What did (NAME) do in the last 7 days?

- Worked - Paid non seasonal [1]
- Worked - Unpaid non seasonal [2]
- Worked - Paid seasonal [3]
- Worked - Unpaid seasonal [4]
- On leave [5]
- Unpaid work on household holding or business [6]
- Unemployed and seeking work [7]
- Not seeking work but available for work [8]
- Full time Housewife/homemaker [9]
- Full time student [10]
- Not available for work for other reasons [11]

P32 What did (NAME) do in the last 12 months?

- Worked - Paid non seasonal [1]
- Worked - Unpaid non seasonal [2]
- Worked - Paid seasonal [3]
- Worked - Unpaid seasonal [4]
- On leave [5]
- Unpaid work on household holding or business [6]
- Unemployed and seeking work [7]
- Not seeking work but available for work [8]
- Full time Housewife/homemaker [9]
- Full time student [10]
- Not available for work for other reasons [11]
→ Go to P36

P33 What was (NAME'S) employment status in the last 12 months?

- An employer [1]
- An employee [2]
- Self employed [3]
- An unpaid family worker [4]

P34 What kind of work did (NAME) do in his/her main job or business during the last 12 months?

Write main occupation and enter code.

ONLY FOR PERSONS AGED 12 YEARS AND OLDER

P35 What kind of business/service was mainly carried out by (NAME'S) employer/establishment/business in the last 12 months?

Write name of industry and enter code.

P36 What is (NAME'S) marital status?

- Never married [1] → Go to P38
- Married [2]
- Divorced [3]
- Separated [4]
- Widowed [5]
- Cohabiting [6]

P37 How old was (NAME) when he/she first got married or started cohabiting?

Age at first marriage

FEMALES 12 YEARS AND OLDER

P38 Have you ever had a live birth (including babies who died after birth)?

- Yes [1]
- No [2] → Go to P46

Of the children born to you alive how many are....?

P39 Living with you now? (Male / Female)

P40 Living elsewhere? (Male / Female)

P41 Dead? (Male / Female)

FEMALES 12 - 49 YEARS OLD

P42 Did you have any live births in the last 12 months?

- Yes [1]
- No [2] → Go to P46

Of the children born to you alive in the last 12 months how many are....

P43 Living with you now? (Male / Female)

P44 Living elsewhere? (Male / Female)

P45 Dead? (Male / Female)

PERSONS 16 YEARS+

P46 Do you have a Zambian registered Green National Registration card?

- Yes [1]
- No [2]

P47 Are you a registered voter?

- Yes [1]
- No [2]

Person Number [1] [2] [3] [4] [5] [6] [7] [8]

ENUMERATOR: GO TO THE NEXT PAGE TO CONTINUE WITH THE LIST OF THE HOUSEHOLD'S MEMBERS. IF THE PERSON IS THE LAST MEMBER OF THE HOUSEHOLD, PROCEED TO SECTION D

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SECTION A – AGRICULTURE

A1 Has your household engaged directly in any of the following agricultural activities, that is: crop growing, livestock and poultry raising, fish farming and game ranching since 1st October 2009?
Yes [1]
No [2] → M1

A2 On your holding, which of the following crops did you grow since 1st October 2009?

	Yes	No
Maize	[1]	[2]
Sorghum	[1]	[2]
Millet	[1]	[2]
Rice	[1]	[2]
Cassava	[1]	[2]
Sweet potatoes	[1]	[2]
Irish potatoes	[1]	[2]
Groundnuts	[1]	[2]
Mixed beans	[1]	[2]
Cow peas	[1]	[2]
Wheat	[1]	[2]
Cotton	[1]	[2]
Burley tobacco	[1]	[2]
Virginia tobacco	[1]	[2]
Sunflower	[1]	[2]
Soya beans	[1]	[2]
Paprika	[1]	[2]
Sugar cane	[1]	[2]
Cashew Nuts	[1]	[2]
Vegetables	[1]	[2]
Orchard	[1]	[2]
Coffee	[1]	[2]
Velvet beans	[1]	[2]
Bambara nuts	[1]	[2]
Pineapple	[1]	[2]
Other crop	[1]	[2]

A3 On your holding, which of the following livestock/poultry have you raised since 1st October 2009?

	Yes	No
Cattle	[1]	[2]
Goats	[1]	[2]
Pigs	[1]	[2]
Sheep	[1]	[2]
Donkeys	[1]	[2]
Chickens	[1]	[2]
Other Poultry	[1]	[2]
Other Livestock	[1]	[2]

A4 Has your agriculture holding included fish farming since 1st October 2009?
Yes [1]
No [2]

A5 Has your agriculture holding included game ranching since 1st October 2009?
Yes [1]
No [2]

SECTION M: GENERAL AND MATERNAL DEATHS

Please record information on the deaths that occurred in the household during the last 12 months.
Do not forget the children.

M1 Is there any member of the household who died since October 2009?
Yes [1] No [2] → End

Death Number	M2 What was the sex of the deceased?		M3 What was the age of the deceased? Age in completed years. (Record 00 if less than 1 year)	M4 What was the cause of death?									M5 Did the death occur while pregnant?		M6 Did the death occur during childbirth?		M7 Did the death occur during the 6 weeks period following the end of pregnancy, irrespective of the way the pregnancy ended?	
	Male	Female		Accident Injury [1]	Suicide [2]	Spousal Violence [3]	Other Violence [4]	Sickness/Disease [5]	[6]	Witchcraft [7]	Other [8]		Yes	No	Yes	No	Yes	No
[1]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]
[2]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]
[3]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]
[4]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]
[5]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]
[6]	Male [1]	Female [2]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		Yes [1] → End	No [2]	Yes [1] → End	No [2]	Yes [1] → End	No [2]

If death of Woman aged 12-49

SECTION H – HOUSING CHARACTERISTICS

H1 Type of housing unit
- Traditional [1]
- Improved traditional [2]
- Mixed [3]
- Conventional flat [4]
- Conventional house [5]
- Mobile [6]
- Part of commercial building [7]
- Improvised/Makeshift [8]
- Collective/Institutional quarters [9]
- Unintended [10]
- Other [96]

H2 What is the main type of material used for the roof?
- Concrete [1]
- Thatch/Palm Leaf [2]
- Rustic Mat [3]
- Palm/Bamboo [4]
- Wood Planks [5]
- Cardboard [6]
- Metal/Iron Sheets [7]
- Wood [8]
- Asbestos [9]
- Ceramic Tiles/Harvey Tiles [10]
- Cement [11]
- Roofing Shingles [12]
- Mud Tiles [13]
- Other [96]

H3 What are the walls of this housing unit mainly made of?
- Burnt bricks [1]
- Mud bricks [2]
- Compressed mud [3]
- Compressed cement bricks [4]
- Concrete blocks/slab [5]
- Cement blocks [6]
- Stone [7]
- Iron sheets [8]
- Asbestos/hardboard/wood [9]
- Pole and dagga/mud [10]
- Grass [11]
- Other [96]

H4 What is the floor of this housing unit mainly made of?
- Concrete [1]
- Cement [2]
- Brick [3]
- Tiles [4]
- Mud [5]
- Wood (not wooden tiles) [6]
- Marble [7]
- Terrazzo [8]
- Other [9]

H5 Type of Occupancy?
- Single household [1]
- One household in several housing units [2]
- Shared [3]
- Vacant [4]
- Non-contact [5]
- Non-residential [6]

H6 (If shared) what is the number of households?

H7 What is the main source of water supply for...

	Household use	Drinking
Piped water inside the housing unit	[1]	[1]
Piped water outside housing unit within stand/plot	[2]	[2]
Communal tap	[3]	[3]
Protected well	[4]	[4]
Protected borehole	[5]	[5]
Unprotected well	[6]	[6]
Unprotected borehole	[7]	[7]
River/Dam/Stream	[8]	[8]
Rain Water Tank	[9]	[9]
Other tap	[10]	[10]
Water Kiosk	[11]	[11]
Water Vendor	[12]	[12]
Mineral/bottled water	[13]	[13]
Other	[96]	[96]

H8 How many living rooms and bedrooms does this housing unit have?
LIVING
BEDROOMS

H9 How many persons usually sleep in the housing unit(s)?

H10 Does this housing unit have a kitchen?
Yes [1]
No [2]

SECTION HH – HOUSEHOLD CHARACTERISTICS

HH1 What is the main source of energy used for...

	Light-ing	Cook-ing	Heat-ing
Electricity	[1]	[1]	[1]
Gas	[2]	[2]	[2]
Wood	[3]	[3]	[3]
Candle	[4]	[4]	[4]
Paraffin	[5]	[5]	[5]
Cowdung	[6]	[6]	[6]
Charcoal	[7]	[7]	[7]
Coal	[8]	[8]	[8]
Solar	[9]	[9]	[9]
Bio fuel	[10]	[10]	[10]
Diesel	[11]	[11]	[11]
None	[12]	[12]	[12]
Other	[96]	[96]	[96]

HH2 Does your household have?

	Yes	No
A Radio	[1]	[2]
A Television	[1]	[2]
Refrigerator/freezer	[1]	[2]
A Telephone	[1]	[2]
A Bicycle	[1]	[2]
A Motor vehicle	[1]	[2]
An Internet facility	[1]	[2]
A Computer/Laptop	[1]	[2]
A Motorcycle	[1]	[2]
A Plough	[1]	[2]
A Boat/Canoe	[1]	[2]
A Scotch Cart	[1]	[2]
A Donkey	[1]	[2]
A Mobile Phone	[1]	[2]
Oxen	[1]	[2]
A Wheelbarrow	[1]	[2]

HH3 How is the household refuse disposed?
- Regularly collected [1]
- Irregularly collected [2]
- Burnt [3]
- Roadside dumping [4]
- Other dumping [5]
- Burying/pit [6]
- Other [7]

HH4 What is the main type of toilet used by members of this household?
- Flush Private connected to water sewer system [1]
- Flush Private connected to stand alone soak away [2]
- Flush Communal [3]
- Pit Latrine [4]
- Ventilated Improved Pit Latrine (VIP) [5]
- Bucket [6]
- Other [7]
- No toilet facility [8] → HH7

HH5 Is this toilet inside or outside this housing unit?
Inside [1]
Outside [2]

HH6 Is this toilet exclusively used by members of this household?
Yes [1]
No [2]

HH7 Is this housing unit owned by any member of this household?
Yes [1]
No [2] → HH9

HH8 How was this housing unit acquired?
- Purchased [1]
- Mortgage [2]
- Freely [3]
- Inherited [4]
- Self built [5]
- Other [6] → A1

HH9 Is this housing unit provided free by the employer, friend or relative of any member of this household?
- Yes, Employer [1] → HH11
- Yes, By friend or relative [2] → A1
- No [3]

HH10 Is this housing unit rented from the employer of any member of this household?
Yes [1]
No [2] → HH12

HH11 Is this employer ...
- The Central Government? [1]
- The Local Government? [2]
- Parastatal? [3]
- A private Organisation? [4]
- An individual? [5]
All skip to A1

HH12 Is this housing unit rented from ...
- The Central Government? [1]
- The Local Government? [2]
- Parastatal? [3]
- A private Organisation? [4]
- An individual? [5] → HH7

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