2000 Census of Population and Housing

Copperbelt Province Analytical Report

Volume Two

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Preface

The 2000 Census of Population and Housing was undertaken from 16th October to 15th November 2000. This was the fourth census since Independence in 1964. The other three were carried out in 1969, 1980 and 1990. The 2000 Census operations were undertaken with the use of Grade 11 pupils as enumerators, Primary School Teachers as supervisors, Professionals from within Central Statistical Office and other government departments being as Trainers and Management Staff. Professionals and Technical Staff of the Central Statistical Office were assigned more technical and professional tasks.

This report presents detailed analysis of issues on evaluation of coverage and content errors; population, size, growth and composition; ethnicity and languages; economic and education characteristics; fertility; mortality and disability.

The success of the Census accrues to the dedicated support and involvement of a large number of institutions and individuals. My sincere thanks go to Co-operating partners namely the British Government, the Japanese Government, the United States Agency for International Development (USAID), United Nations Population Fund (UNFPA), the Norwegian Government, the Dutch Government, the Finnish Government, the Danish Government, the German Government, University of Michigan, the United Nations High Commission for Refugees (UNHCR) and the Canadian Government for providing financial, material and technical assistance which enabled the Central Statistical Office carry out the Census.

Finally, we would like to show gratitude to the people of Zambia for co-operating in providing the valuable information, to the enumerators, supervisors, master trainers, provincial census officers, district census officers and to all others who contributed to the collection, processing and compilation of this valuable information in one way or another.

Dr. Buleti G. Nsemukila
Director of Census and Statistics

September, 2004

Table of Contents

CHAPTER 4: LANGUAGE OF COMMUNICATION AND ETHNICITY

CHAPTER 5: EDUCATION CHARACTERISTICS

CHAPTER 6: ECONOMIC CHARACTERISTICS

CHAPTER 7: FERTILITY LEVELS, PATTERNS AND TRENDS

CHAPTER 8: CHILD MORTALITIY

CHAPTER 9: DISABILITY

List of Tables

CHAPTER 1: BACKGROUND

CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

CHAPTER 4: LANGUAGE AND ETHNICITY

CHAPTER 5: EDUCATION CHARACTERISTICS

CHAPTER 6: ECONOMIC CHARACTERISTICS

List of Figures

CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

CHAPTER 4: LANGUAGE ANMD ETHNICITY

CHAPTER 5: EDUCATION CHARACTERISTICS

CHAPTER 6: ECONOMIC CHARACTERISTICS

CHAPTER 7: FERTILITY

CHAPTER 8: MORTALITY

CHAPTER 9: DISABILITY

Abbreviations/Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ASFR	Age Specific Fertility Rate
CBR	Crude Birth Rate
CEB	Children Ever Born
CFS	Completed Family Size
CMR	Child Mortality Rate
CSO	Central Statistical Office
CWR	Child-Woman Ratio
EMIS	Education Management Information System
GDP	Gross Domestic Product
GFR	General Fertility Rate
GPI	Gender Parity Index
HIV	Human Immune Virus
ICF	International Classification of Functioning
IMR	Infant Mortality Rate
ISCED	International Standard Classification of Education
LCMS	living Conditions Monitoring Survey
NAC	National AIDS/STD/TB/ Council
NRR	Net Reproduction Rate
PAS	Population Analysis Spreadsheet
SAP	Structural Adjustment Programme
SADC	Southern African Development Community
TFR	Total Fertility Rate
UMR	Under-Five Mortality Rate
UN	United Nations
WHO	World Health Organisation
ZCS	Zambia Community School

Executive Summary

Copperbelt province's population recorded as at 16th October 2000 (Census Night), is 1,581,221, comprising 799,402, males and 781,819 females. The majority of the population, 78 percent or 1,231,128 lives in urban areas, while the rural areas have the remaining 22 percent or 350,093.

Of the total population, 44.1 percent are below the age of 15, resulting in a median age of 18 years. Hence Copperbelt Province has continued to have a young population with an in-built potential to grow for many years to come.

Copperbelt Province's population grew at an average annual growth rate of 3.9 percent between 1969-1980, 1.3 percent between 1980-1990, and finally 0.8 percent during the period, 1990-2000. Thus the province's population has continued to grow, though at a declining rate as of 2000.

The province's average population density stands at 50.5 persons per square kilometer, with the highest population density occurring in Kitwe and Ndola districts, with 484.1 and 339.8 persons per square kilometer for Kitwe and Ndola respectively.

Though Household-Headship is still dominated by males, the results from the census show that one in every six households or 17.1 percent is female headed. There is very little variation by rural or urban residence. Masaiti district has the highest percentage of female-headed households at 19.5 percent.

The census results estimates an Overall dependency ratio of 85.1, with a Child and Aged dependency ratio of 81.7 and 3.4 respectively.

A total of 1,439,298 persons reported their predominant language of communication in the 2000 census, with Bemba being the most spoken language, spoken by 73.6 percent of the population as their predominant language of communication, followed by Lamba spoken by 8.9 percent, , Kaonde by 1.3 percent and Nyanja by 1.1 percent of the population. English is spoken only by 2.5 percent of the population, as their predominant language of communication, despite it being the country's official language. Thirty three percent of the population reported belonging to the Bemba ethnic group, 9.9 percent belonging to the Lamba ethnic group, 5.1 to the Lala ethnic group, 4.7 to the Tumbuka and Kaonde ethnic groups, and 4.2 to the Nsenga language group.

Census results show that 70.5 percent of the provincial population is literate i.e. is able to read and write in any language, with 74 percent of males and 66.8 percent of females able to read and write in any language. Literacy rates have increased marginally from the 1990 rate of 69.9 percent. Fifty-three percent of the population in rural areas can read and write in any language compared to 75 percent of the population in urban areas. The proportion of youths who could read and write in any language declined from about 88.2 percent in 1990 to 84.6 percent by 2000. However adult literacy rate stagnated at the 1990 rate of 82 percent. The problem of adult illiteracy remained much more marked among females than males.

Teacher training, secretarial, accountancy, nursing, Business Administration, Mechanics and Electrical Engineering have remained among the most popular fields of study in Copperbelt Province.

The province's labour force population stands at 492,644. However, economic participation rates stand at 66 percent for males, and 36 percent for females. The labour force has increased by 20.4 percent between 1990 and 2000. About 77 percent of the labour force is in urban areas, while 23 percent is in rural areas. Close to half (49 percent) of the labour force is in the young age group of 12-29 years. Sixty-seven percent of province's workforce is comprised of unskilled labour.

The employed population increased by 7.8 percent between 1990 and 2000. The female employed population increased by 43.4 percent, while the male employed population declined by 4.5 percent.

The increase in the female employed population could have been due to both the increased female participation in informal sector activities, as well as due to the improved coverage of informal sector activities in the 2000 Census compared to the 1990 Census.

The number of the unemployed increased by 88.6 percent between 1990 and 2000. The size of the male unemployed population increased by 102.5 percent, while that of females increased by 68 percent.

There are more unemployed persons in the rural areas than in the urban areas for both males and females. In 2000, unemployment was a more serious problem among the young people aged 12-29 years than among the older population aged 30 years and over.

The transformation of the Copperbelt economy in the 1990's seems to have reduced employment opportunities in the formal sector, thereby forcing a large part of the labour force into the informal sector. This is evidenced by the decrease in the percentage of the Employed from 57.9 percent in 1990 to 44 percent in 2000, and the resultant increase in the percentage of the Self-Employed from 22.6 percent in 1990 to 36.5 percent in 2000.

There is a large concentration of workers (37.5 percent) in the Agricultural and related occupations.

Copperbelt province's fertility has continued to decline although at a slow pace. The drop in urban childbearing is the principle reason for the overall decline in fertility levels in the province. The Total Fertility Rate (TFR) for rural areas estimated at 6.1 is higher than the 5.0 estimated for urban areas. The province's TFR at 5.2 is relatively high.

Infant mortality rate has declined by about 14 percent in the period 1990-2000. However, the IMR is still high, with about one in every 11 infants dying before reaching their first birthday. Similarly, Childhood mortality rate between has also declined by 22 percent in the period 1990 and 2000, from 82 to 63 deaths per 1000 children. Under-five mortality has also recorded a decline of 5 percent in the period 1990 to 2000, with about one in 7 under-five children dying before their fifth birthday The decline in the IMR has led to a slight increase in the Life Expectancy at birth from 50 years in 1990 to 53 years in the year 2000.

Adult survivorship levels have significantly deteriorated between 1990-2000, resulting in an adult living 27 years less in 2000 compared to 1990. Males have higher chances of surviving than females.

The disabled population forms 2.3 percent of the total population of Copperbelt province. The proportion of the disabled is higher in rural than urban areas. Physical disability is the most common type of disability affecting about 39.1 percent of the disabled population, while ex-mental is the least common type of disability accounting for 3.3 percent of the disabled population. Disease is the most common cause of disability reported by about 38.9 percent of the disabled population. Prenatal causes were reported by 13.7 percent, injury by 17.2 percent, and other by 9.3 percent while 20.2 percent reported that they did not know the cause of their disability. Injury as a cause of disability is more commonly reported by males than females while disease is more common among females than males.

More than a quarter (29.3 percent) of the disabled have never been to school and another two fifths have completed primary education. Amongst all categories of disability, the largest proportions of the disabled are self-employed. The least proportion is among the employers. The most common occupation among the disabled is agriculture, which takes up about 51.1 percent.

Chapter 1

BACKGROUND

1.1 Geography

Copperbelt Province covers an area of 31,328 square kilometers, which is about 4.2 percent of the total area of Zambia. Administratively the province is divided into ten districts, namely: Chililabombwe, Chingola, Kalulushi, Kitwe, Luanshya, Lufwanyama, Masaiti, Mpongwe, Mufulira and Ndola. Ndola is the Provincial Headquarter of the province.

The province has a tropical climate with three distinct seasons, the cool and dry season, the hot and dry season and the hot and wet season. The province has reliable rainfall of about 1,400 millimeters per annum with moderate temperatures suitable for crops. Perennial streams and rivers exist in the province, providing excellent conditions for irrigation throughout the year. Average temperature range from 15°C in July to 37°C in October.

1.2 Population

Although Copperbelt has the second smallest land area, it has the highest concentration of people. Results from Table 1.1 shows that the population rose from 0.8 million in 1969, 1.3 million in 1980, 1.5 million in 1990 to 1.6 million in 2000 registering a 0.8 growth rate during the 1990 – 2000 inter-censal period. This growth rate is a decline from 3.9 percent during the 1969-1980 and 1.3 percent during the 1980-1990 intercensal periods. The provincial growth rate is now below that of the nation, which declined from 3.1 percent during the 1969-1980 intercensal period to 2.7 and 2.4 percent during the 1980-1990, and 1990-2000 intercensal periods, respectively.

Copperbelt Province's share of the population of the country has been declining. It accounted for 20 percent in 1969, 22 percent in 1980 and 19 percent in 1990 and now accounts for 16 percent of the whole population of the country. The density increased from 26.1 in 1969, 39.9 in 1980, and 46.6 in 1990 to 50.5 persons per square kilometre in 2000. This is higher than the population density for the whole country, which stands at 13.1 per square kilometers in 2000. Out of the 1,581,221 population of Copperbelt Province recorded in 2000, 51 percent were male and 49 percent were female.

According to the 2000 Census, Kitwe District has the largest number of people with a population size at 376,124, followed by Ndola District with a population size of 374,757, while Lufwanyama District has the least number of people at 63,185. Kitwe District has the highest population density of 484 persons per square kilometer (See Table 1.1 for details).

Table 1.1 Population Distribution by District, Area, Density, and Annual Growth Rate, 1969, 1980, 1990, and 2000

Province	Population				Area (Sq.Km)	Density				Percentage Distribution				Growth Rate (%)		
	1969	1980	1990	2000		1969	1980	1990	2000	1969	1980	1990	2000	1969-80	1980-90	1990-00
Chililabombwe	44,862	62,131	65,218	67,533	1,026	43.7	60.5	63.6	65.8	5.5	5	4.5	4.3	3	0.1	0.4
Chingola	103,292	145,993	168,999	172,026	1,678	61.6	87.1	100.7	102.6	12.7	11.7	11.6	10.9	3.2	1	0.2
Kalulushi	32,272	59,267	69,597	75,806	725	44.5	81.7	96	104.6	4	4.7	4.8	4.8	5.7	1.4	0.9
Kitwe	199,798	320,320	347,024	376,124	777	257.1	412.2	446.6	484.1	24.5	25.6	23.8	23.8	4.4	0.8	0.8
Luanshya	96,282	129,589	144,815	147,908	811	118.7	159.8	178.6	182.4	11.8	10.4	9.9	9.4	2.7	0.9	0.2
Lufwanyama	-	-	51,745	63,185	9849	-	-	-	77.9	-	-	-	4	-	-	2.0
Masaiti	-	-	84,831	95,581	5,383	-	-	-	9.7	-	-	-	6	-	-	1.2
Mpongwe	-	-	37,718	64,371	8,339	-	-	-	12	-	-	-	4.1	-	-	5.2
Mufulira	107,802	150,069	152,735	143,930	1,637	65.8	91.7	93.3	87.9	13.2	12	10.5	9.1	3.1	-0.2	-0.6
Ndola Rural	72,215	102,494	-	-	23,571	3.1	4.3	7.4	-	8.8	8.2	12	-	3.2	4.9	-
Ndola	159,786	281,315	334,777	374,757	1,103	144.9	255.1	303.5	339.8	19.6	22.5	23	23.7	5.3	1.7	1.1
Copperbelt Province	816,309	1,251,178	1,458,459	1,581,221	31,328	26.1	39.9	46.6	50.5	100	100	100	100	3.9	1.3	0.8
Zambia	4,056,995	5,661,801	7,759,117	9,885,591	752,612	5.4	7.5	10.3	13.1	100	100	100	100	3.1	2.7	2.5

Sources: CSO, 1969, 1980, 1990 and 2000 Censuses of Population and Housing
"-" Denotes Not Applicable

1.3 Economy

The Copperbelt is one of the most developed provinces in the country due to its rich mineral deposits. The province hosts the copper mines that have for many years been the mainstay of the country's economy and have provided over 80 per cent of the foreign earnings. The mines have been the major employers of the Zambian population. Apart from copper, the province is also endowed with other non-ferrous metals such as cobalt, silver, gold, precious and non-precious stones.

Copperbelt enjoys a fair share of industries in the manufacturing sector. However, the sector, which was prosperous in the 90s, is in a crisis with a number of firms closing down particularly in Ndola, and Luanshya. Table 1.2 shows the contribution to GDP by the Mining Sector.

Table 1.2 Mining Contributions to GDP (1994 constant prices-K'billion)

Mining	1994	1995	1996	1997	1998	1999	2000
Metal Mining	3690	256.3	224	269.8	208.5	155.7	147.6
Other Mining & Quarry	4.6	4.6	3.8	4.7	4.6	4.5	4.4
Total	373.6	260.9	226.8	274.5	213.1	160.2	152
Percent GDP	16.7	12.4	11.9	11.8	9	6.6	6.1
Percent Change		-265	2.5	2.4	-24.1	-24.8	-5.1

***Source**: Economic Report 1997 and 2000, Ministry of Finance and Economic Development*

1.4 Agriculture

The province has now gone into accelerated agricultural production following the drive to diversify its economy to reduce dependency on copper mining. However, the province has not fully exploited its agriculture potential. Out of the 3,132,829 hectares, 1,577,000 hectares is arable land. Of this arable land, only 307,000 hectares is under cultivation. Crop farming is the primary agricultural activity. Major crops grown include; maize, tobacco, coffee, cotton, and sunflower sugar cane, oil seeds, cashew nuts paprika, ginger, fruits and vegetables. The province though not a traditional livestock area has a number of poultry, beefs, dairy and small ruminants rearing farmers. However, the province is still not self sufficient in livestock and cattle dairy products and depends on other provinces to meet the demand. Fish farming is also practiced in the province. It boasts of 1062 fishponds and 259 fish farmers, (Poverty Reduction Strategy Paper 2002 – 2004).

Copperbelt Province is one of the major suppliers of hardwood and softwood. It has well established forestry related activities such as saw milling, paper, pulp and furniture industries. Saw milling is the most developed industry. Furthermore, the province is rich with mellifencous trees that provide raw materials for bee's food. This means there is potential for bee keeping as an economic venture. However, the province has in the past ten years experienced depletion of forests due to unstable exploitation such as charcoal burning and inappropriate agricultural farming practices. This has led to soil erosion, loss of bio-diversity, dwindling ability to recharge both surface and ground water and general environmental degradation, (Poverty Reduction Strategy Paper 2002 – 2004).

1.5 Education

The province currently has 252 basic schools, 40 secondary schools (MOE, 2003), three teacher's training colleges, four schools for continuing education and over 200 community schools. Other institutions of learning are: Copperbelt University, five TEVETA run institutions, NIEC Business School of Management, National Correspondence and National Vocation Centre. There are also 84 private schools, and 93 pre-schools and several colleges spread across the province.

1.6 Health

The province has a number of hospitals and health centers run by Government, Mission or Mines. There are also mini-hospitals and surgeries, which are privately owned. The province has a Tropical Disease Research Centre (TDRC), which apart from research, provides curative services, and Zambia Flying Doctor Service (ZFDS) which operates, mainly, in the remotest parts of the country. Generally the province has experienced upward trend in the provision of health services by private institutions and private practitioners. However the government still remains the major service provider. Table 1.3 provides more information on the distribution of health facilities in Copperbelt Province.

Table 1.3 Number of Health Facilities by District and Province, Copperbelt Province, 2004

District	Government	Mission	Private	Total	Beds	Cots
Chililabombwe	4	-	7	11	183	40
Chingola	10	-	5	15	522	144
Kalulushi	8	-	4	12	176	49
Kitwe	17	-	20	37	1,294	104
Luanshya	7	-	16	23	421	336
Lufwanyama	11	2	-	13	114	8
Masaiti	16	2	-	18	152	0
Mpongwe	9	2	1	12	254	18
Mufulira	13	-	11	24	400	112
Ndola	21	-	19	40	1,046	370
Total	116	6	83	205	4,562	1,181

Source: Ministry of Health, 2004

1.7 HIV/AIDS

HIV/AIDS is affecting the province. According to the 2001/2 Zambia Demographic and Health Survey (ZDHS) about 19.9 percent of the adult population (ages 15-49) is HIV positive, that is one in every five adults. This is higher than the national prevalence which stands at 15 .3 percent. Refer to Table 1.4 for details

Table 1.4: HIV Prevalence Among Men and Women Aged 15-49 Years by Province

Province	Men Percent Positive	Women Percent Positive	Total	
			Percent Positive	Number Tested
Central	13.4	16.8	15.3	306
Copperbelt	17.3	22.1	19.9	775
Eastern	11.0	16.1	13.7	471
Luapula	8.6	13.3	11.2	299
Lusaka	18.7	25.0	22.0	559

Northern	6.2	10.0	8.3	517
North-Western	9.5	8.8	9.2	166
Southern	14.6	20.2	17.6	408
Western	8.3	16.9	13.1	306
Zambia	12.9	17.8	15.6	3,807

Source: CSO, CboH and ORC Macro: 2001/2002 ZDHS, February 2003, Page 236

Chapter 2

EVALUATION OF COVERAGE AND CONTENT ERRORS

2.1 Introduction

Data evaluation is the assessment of the quality of data. In evaluating the data, sometimes it is adjusted in order to ensure that it is of acceptable standard. The adjustment is done on the basis of the responses to the following questions that were asked during the Census:

- Sex of members of household;
- Age (in completed years) of members of household;
- Residential status of household;
- Children still living (with household or elsewhere), and
- Children dead.

2.2 Concepts and Definitions

Listed below are the definitions of the major concepts used in this chapter.

- **Census of Population:** Complete enumeration of persons during a specified period in a demarcated geographical area.

- **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.

- **Content Error:** Mistake made in the recorded information in the census questionnaire either by the respondent or by the interviewer.

- **Coverage Error:** Under or over-enumeration in a population census due to either omission or duplication.

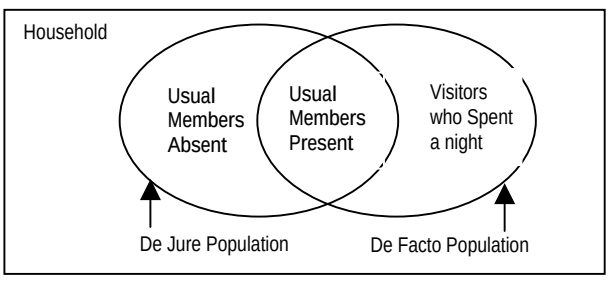
- De facto Population: **This refers to the usual household members present and visitors who spent the census night at any given household. This however excludes:**

    (a) Foreign diplomatic personnel accredited to Zambia; and

    (b) Zambian nationals accredited to foreign embassies and their family members who live with them abroad and, 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. These include institutional populations in places such as hospitals/health centers, prisons and academic institutions (universities, colleges, boarding schools, etc).**

Thus, the de facto and the de jure population can be diagrammatically represented as follows:



- **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. This results in heaping of population in ages ending with certain digits.

- **Evaluation of Census Data:** Measurement of the quality of Census data.

- **Sex-ratio:** Number of males per 100 females in a population.

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

In the analysis of the coverage and content errors, the de facto population has been used. De facto population allows for detailed analysis of individuals because these were present at the time of the count.

2.4 Methods of Evaluation

During enumeration, checks and controls are instituted to minimise errors in the census. Despite instituting data control measures, there are usually several errors in the census data. For instance, some people may be completely omitted, others may be enumerated more than once, or some characteristics of an individual such as age, sex, fertility and economic activity of the canvassed individual may be incorrectly reported or tabulated. In general, two approaches are used to evaluate the quality of data, direct and indirect methods.

The direct method basically involves the carrying out of what is referred to as a 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 and later compared with those 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. With regard to the 2000 Census of Population and Housing, the PES was carried out between February and March 2001. PES information is, however, only available for use at National Level, and therefore, will not be used to evaluate data quality at the Provincial Level.

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, whereas 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 maintained by the Ministry of Education.

2.4.1 Coverage Error

This type of error is made when omission or duplication resulting in under- or over-enumeration occurs. Some factors which contribute to this include errors arising from; inaccessibility, poor co-operation with respondents, difficulties in communication, and lack of proper boundary descriptions. Coverage errors are usually highlighted by examining certain statistics such as growth rate, age composition, child-woman ratio and dependency ratio.

2.4.1.1 Age Composition

Table 2.1 and Figure 2.1 show the age composition of the population of Copperbelt Province for 1980,1990 and 2000 Censuses.

Table 2.1: Population Distribution by Broad Age Groups, Copperbelt Province, 1980, 1990, and 2000

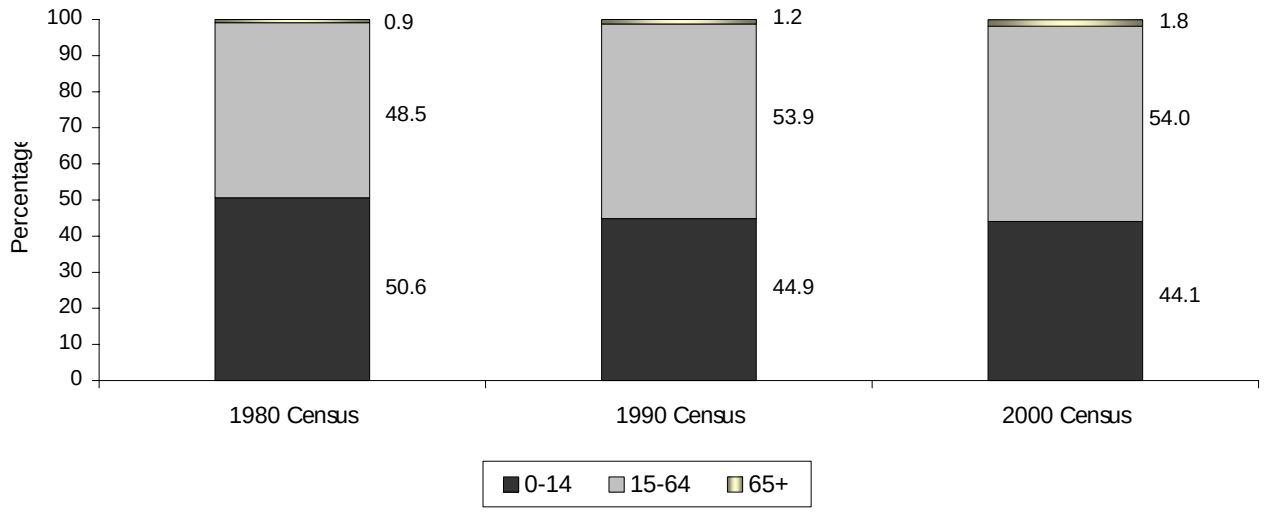
Age Group	Population					
	1980	Percent	1990	Percent	2000	Percent
0-14	633,419	50.6	641,157	44.9	674,047	44.1

15-64	606,550	48.5	769,184	53.9	825,089	54.0
65+	11,209	0.9	17,204	1.2	28,158	1.8
Total	1,251,178	100	1,427,545	100	1,527,294	100

Source: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

The proportion of children 0-14 years is less in 1990 than in 1980, which is in agreement with the observed decline in fertility in the province as well as the observed general increase in child mortality. Between 1990 and 2000, the proportion of children 0-14 years further decreased, but the change is not very significant. Generally, there is a shift in the population from age group 0-14 to older age groups. The population distribution shows that the quality of age data by broad age groups is acceptable.

Figure 2.1: Population Distribution by Broad Age Group, Copperbelt Province, 1980, 1990 and 2000

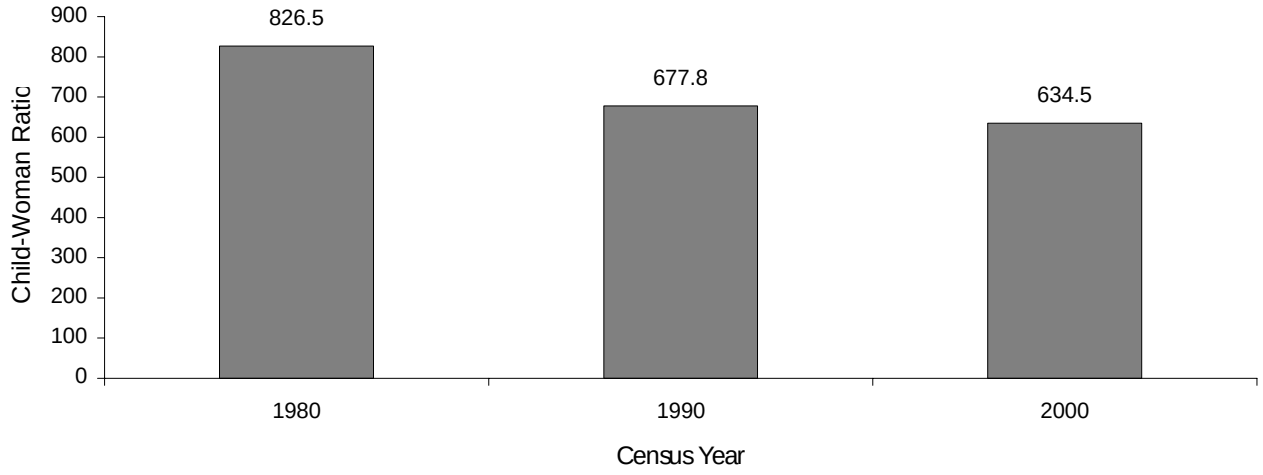


Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

2.4.1.2 Child-Woman Ratio

In 1980 the child-woman ratio was 826.5 per 1,000 women aged 15-49 years. It declined to 677.8 in 1990 and then declined further to 634.5 per 1,000 women aged 15-49 years in 2000. This is in line with the decline in the percentage of the population in the 0-14 year age group. The decline in the proportion of the population 0-14 years and the decline in child-woman ratio (see Figures 2.1 and 2.2) appear to have been caused by the increase in child mortality and a decline in fertility.

Figure 2.2: Child-Woman Ratio, Copperbelt Province, 1980, 1990, and 2000

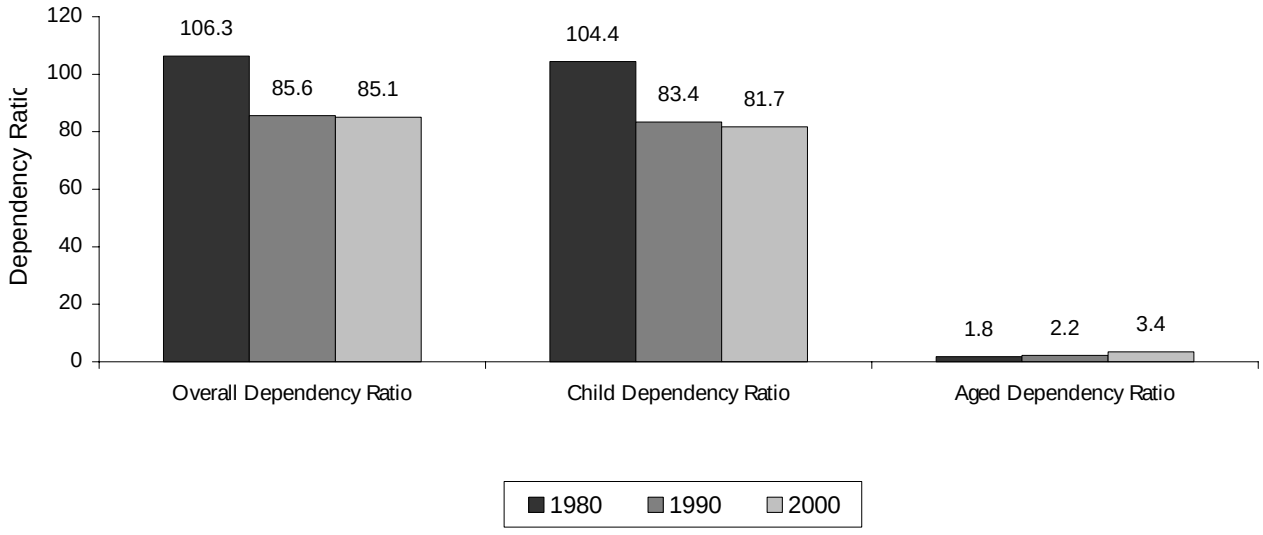


Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

2.4.1.3 Dependency-Ratio

The overall dependency-ratio for the population of Copperbelt Province for 1980, 1990 and 2000 Censuses was 106.3, 85.6 and 85.1 persons respectively per 100 persons in age group 15-64 years. This means that for every 100 persons in the age range 15-64 years, there were 85.1 persons in the age groups 0-14 and 65 years or over in 2000. The proportion of the population 65 years and older increased slightly from 0.9 percent in 1980 to 1.2 percent in 1990 and 1.8 in 2000. The age dependency-ratio for the population aged 65 years and over to that of 15-64 years (Old Age Dependency-ratio) was 1.8 for 1980, 2.2 in 1990 and 3.4 in 2000, while that of children declined from 104.4 in 1980 to 83.4 in 1990 and increased to 81.7. The decline in dependency-ratios could be attributed to an increase in the proportion of population aged 15-64 years (See Figure 2.3 for details).

Figure 2.3: Dependecy Ratio, Copperbelt Province, 1980, 1990, and 2000



Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

2.5 Content Error

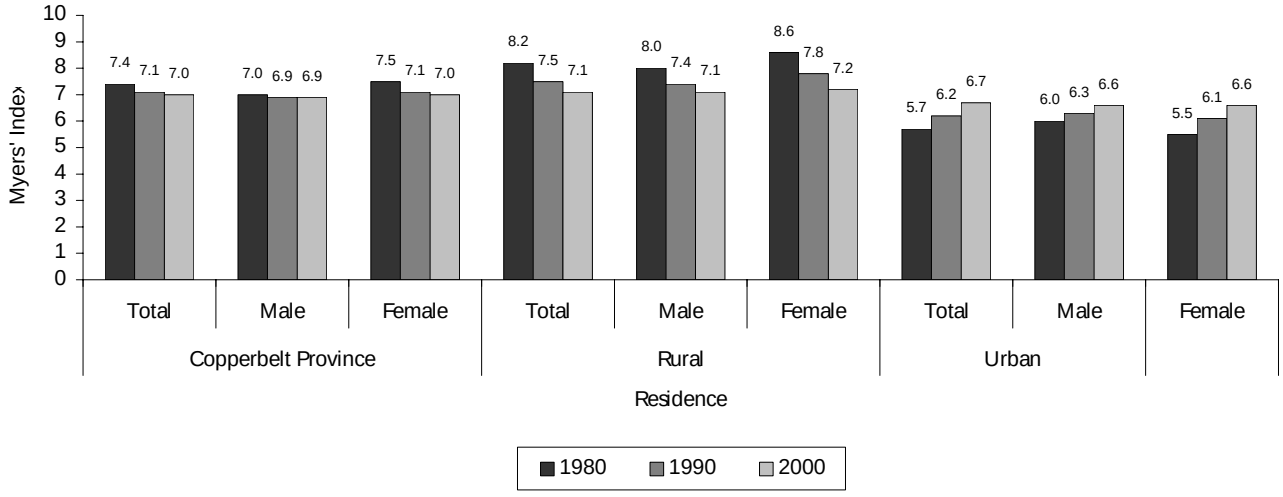
A content error usually refers to instances where characteristics such as age, sex, marital status, economic activity, etc. of a person enumerated in a census or survey are incorrectly reported or tabulated. Content errors are caused by either a respondent giving a wrong response or by the enumerator recording an incorrect response. For instance, a question about age in a census can be solicited by asking either the "date of birth" or "completed number of years". These two questions may yield different ages. During the 2000 Census, age was recorded in completed years. Some content errors are being estimated by the use of the Myers' Index, Sex-ratios, Age-ratios and Survival-ratios.

2.5.1 Digit Preference

Digit preference is the tendency of respondents to report ages ending with certain digits in preference to other digits. Digit preference is most 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 misclassification of age contribute to heaping (Shryock, et.al. 1976).

Investigation of age heaping in Copperbelt Province is done through the calculation of the Myers' Index. This index has been calculated for 1980,1990 and 2000 Censuses data using the United Nations Population Analysis Software (PAS) for single age data (SINGAGE) and is presented in Figure 2.4. 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. In Copperbelt Province, in all the three censuses, the index is on the lower side (less than 10), which implies that the age reporting is good.

Figure 2.4: Myers' Index by Residence and Sex, Copperbelt Province, 1980, 1990, and 2000



Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

Figure 2.4 and Table 2.2 show the results of digit preference in age data for Copperbelt Province using Myers' Index. Results from Figure 2.4 show that the index for females is higher than that of males in 1980, 1990, and 2000. Myers' Index for males declined from 7.0 in 1980 to 6.9 in 1990 and remained unchanged in 2000 while that of females declined from 7.5 in 1980 to 7.1 in 1990 and to 7.0 in 2000. With regard Myers' Index, Copperbelt Province shows a downward trend for the province as a whole and in rural areas except for urban areas. The downward trend in the Myers' Index shows an improvement in age data reporting in rural areas while the increase in the Myers' Index in urban areas indicates the deterioration of the quality of the age data. Generally, however, the Index shows that age reporting is better in urban areas due to the small Indices observed in urban areas and that age was more accurately reported for males than for females in 1980, 1990, and 2000. Overall, in all the three censuses, the index is less than 10 implying that age reporting has been good.

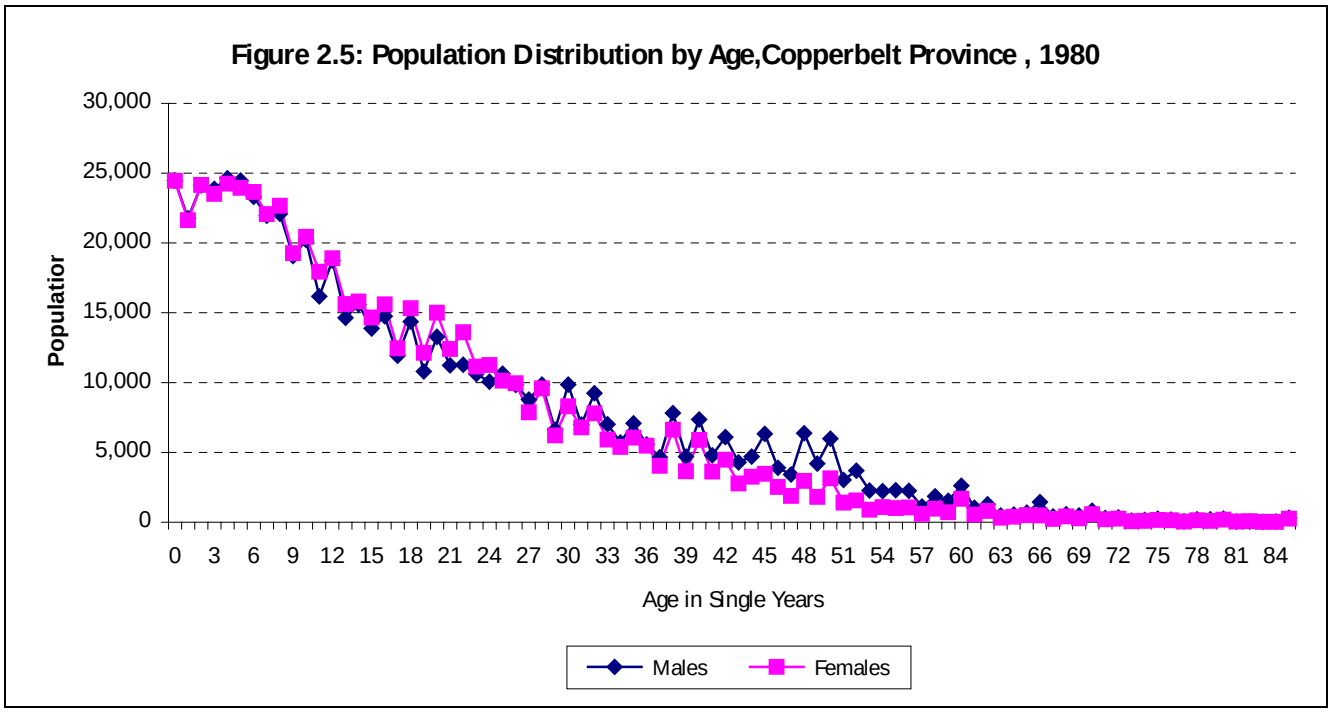
Table 2.2 and Figures 2.5 to 2.10 show that there was age heaping in Copperbelt Province. This is confirmed by the most preferred digits in decreasing order of preference for the three censuses. Preference for digits 0, 2, and 8 among males and females is observed in 1980, 1990, and 2000 Censuses. The digit 5 was also preferred among males in rural areas in 2000.

Table 2.2: Most Preferred Digits, Copperbelt Province, 1980, 1990, and 2000

Residence	Most Preferred Digits and Census Year			
	Sex	1980	1990	2000
Copperbelt Province	Both Sexes	0, 8, 2	0, 8, 2	0, 8
	Male	0, 8, 2	0, 8, 2	0, 8, 5
	Female	0, 8, 2	0, 8, 2	0, 8
Rural	Both Sexes	0, 8, 2	0, 8, 2	0, 8, 5
	Male	0, 8, 2	0, 8, 2	0, 8, 5
	Female	0, 8, 2	0, 8, 2	0, 8
Urban	Both Sexes	0, 8, 2	0, 8, 2	0, 8, 2
	Male	0, 8, 2	0, 8, 2	0, 8
	Female	0, 8, 2	0, 8, 2	0, 8, 2

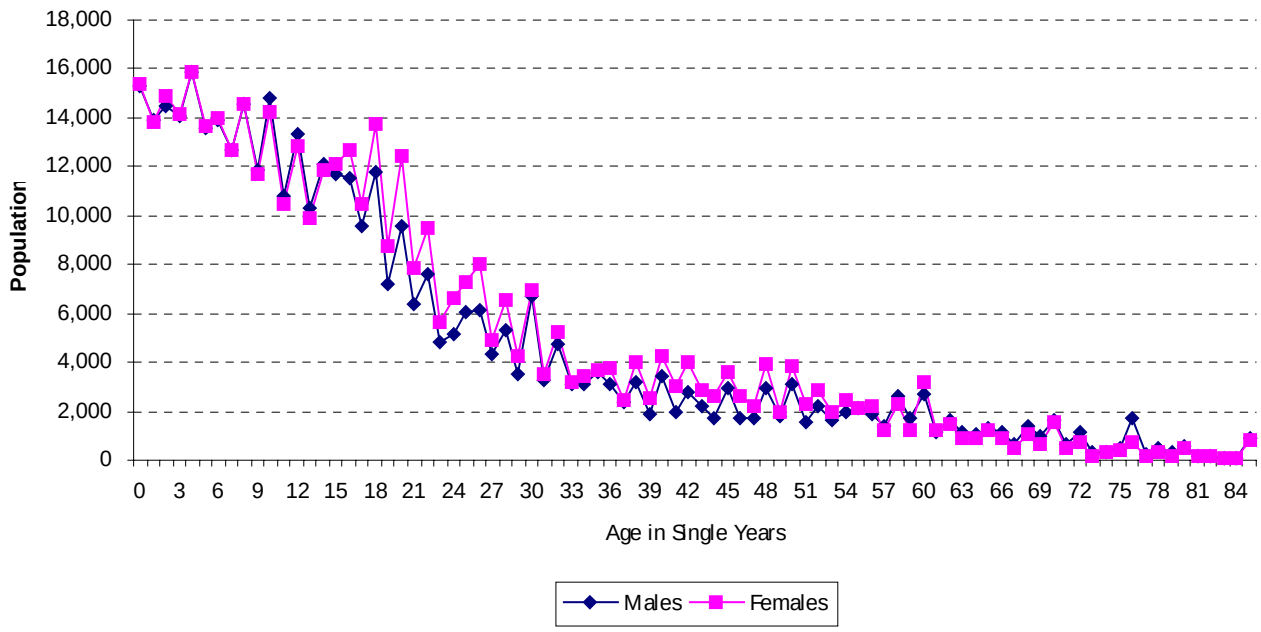
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Age misreporting errors are also presented in Figures 2.5 to 2.10. The peaks on the curves indicate the most preferred ages in reporting while the troughs indicate the under reported ages. A comparison of Figures 2.5, 2.6, and 2.7 shows that the peaks and troughs are higher for those reported below age 60 in all census years. There is no noticeable difference in the height of the peaks and troughs for ages reported after 60 in 1980, 1990, and 2000 Censuses.



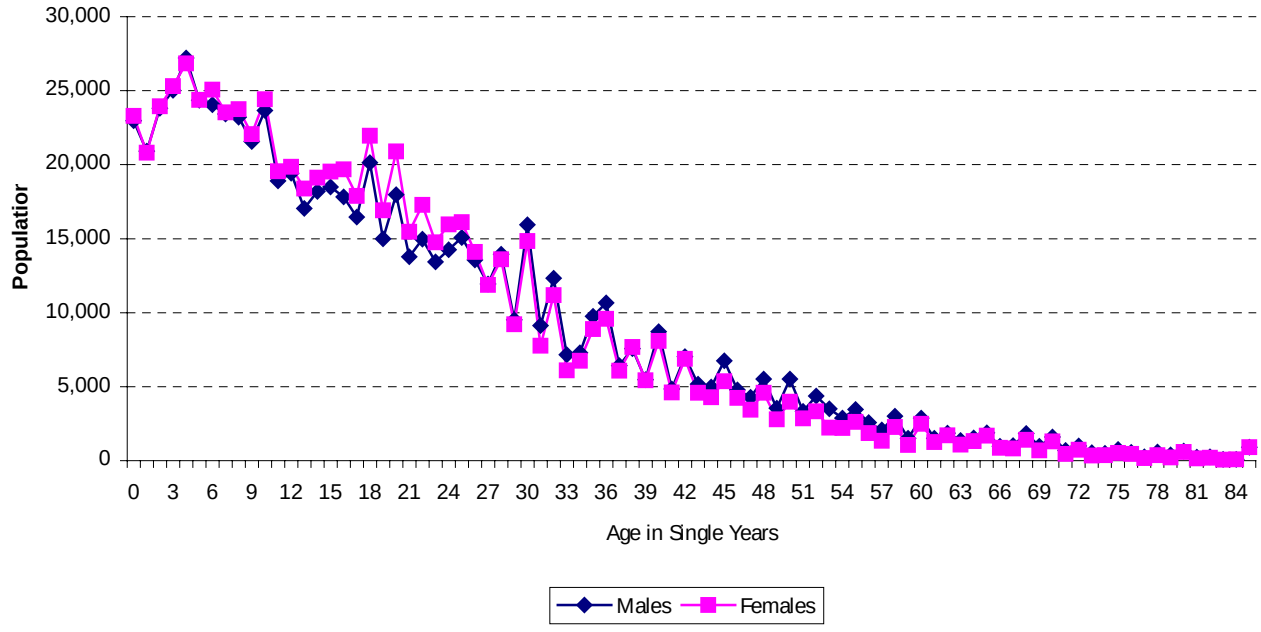
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Figure 2.6: Population Distribution by Single Years and Sex, Copperbelt Province, 1990



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

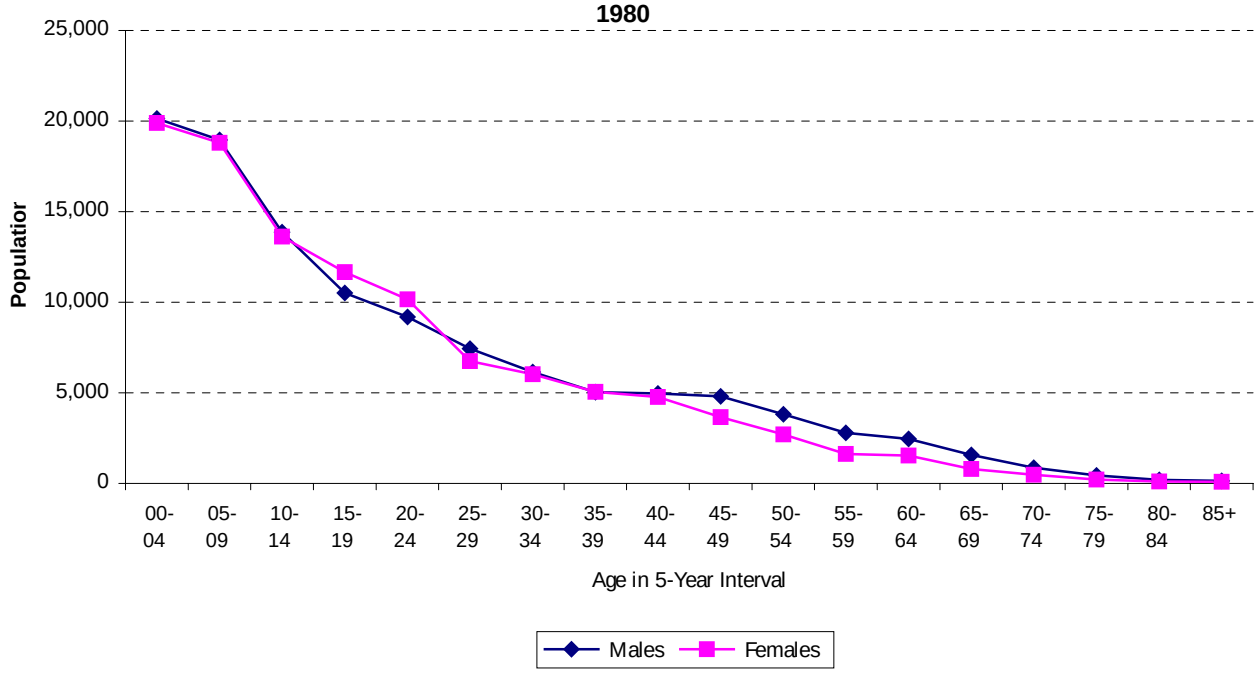
Figure 2.7: Population Distribution by Single Years and Sex Copperbelt Province , 2000



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

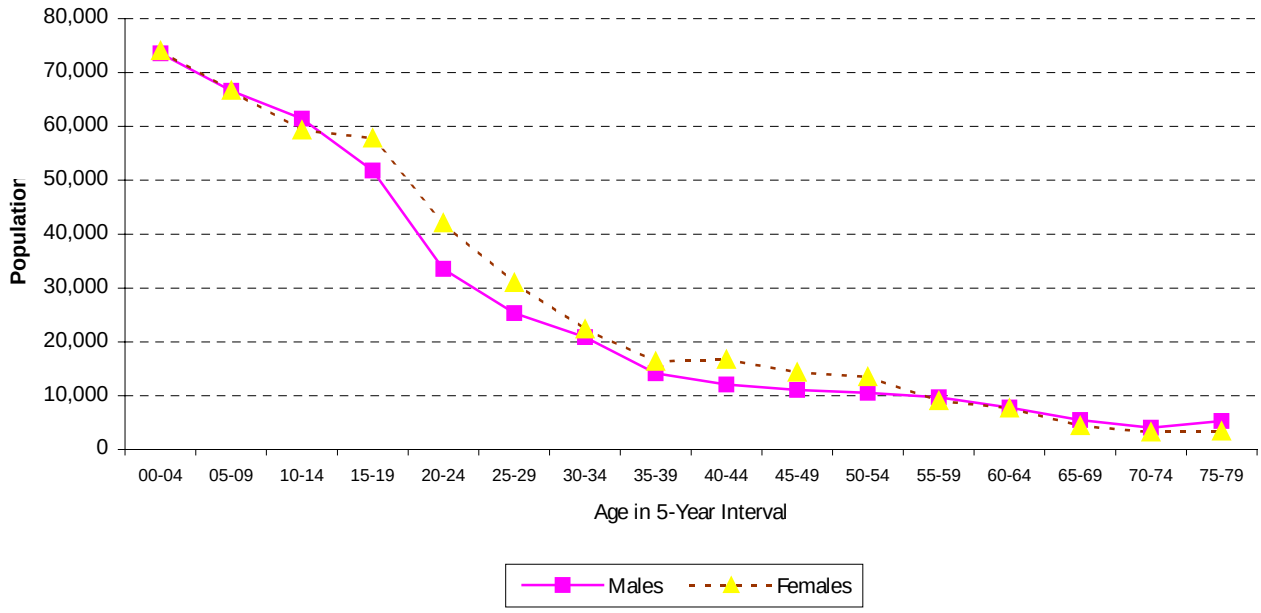
The smoothness of the curves in Figures 2.8, 2.9, and 2.10 shows that grouping of single-year age data into five-year age groups improves irregularities in age data arising from age misreporting (Compare Figures 2.5, 2.6 and 2.7 with Figures 2.8, 2.9 and 2.10).

Figure 2.8: Population Distribution by Five-Year Age Group and Sex, Copperbelt Province, 1980



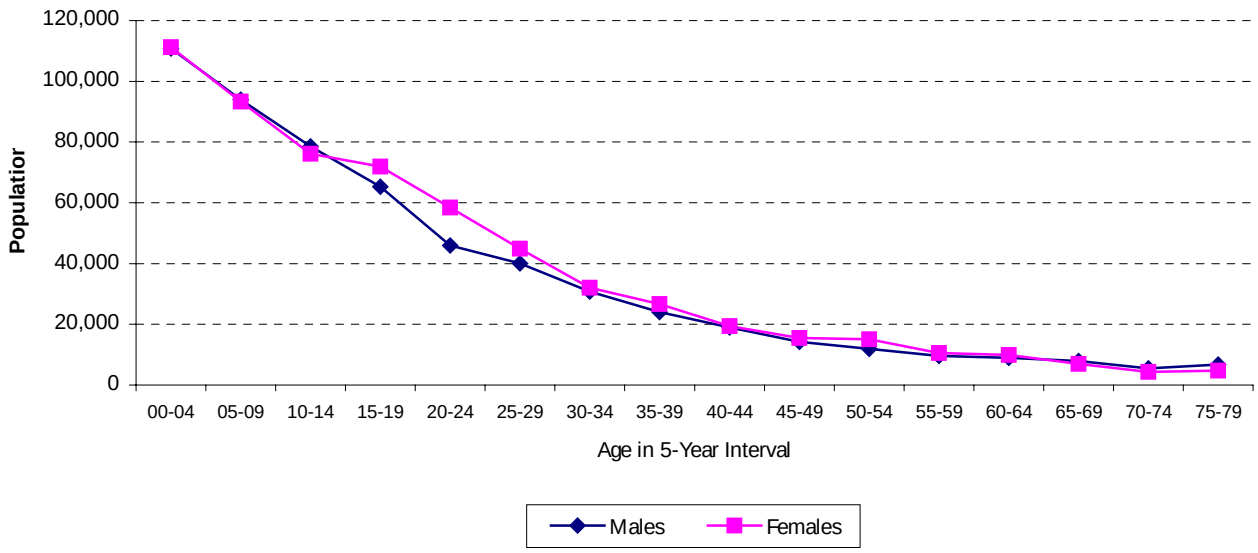
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Figure 2.9: Population Distribution by Five-Year Age Group and Sex, Copperbelt Province , 1990



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

Figure 2.10: Population Distribution by Five-Year Age Group and Sex, Copperbelt Province , 2000



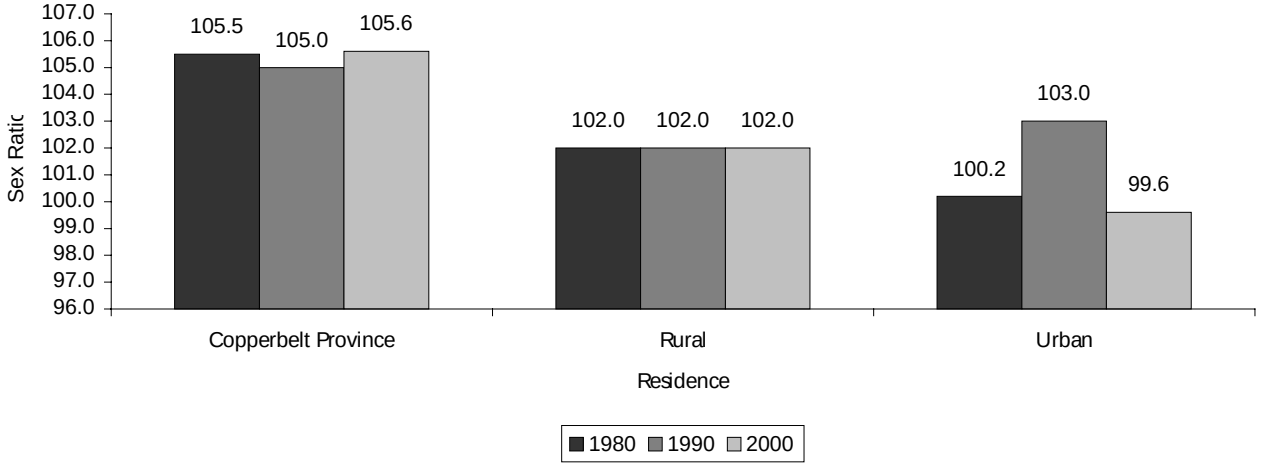
Source: CSO, 1990 and 2000 Censuses of Population and Housing

2.5.2 Sex-Ratio

A sex-ratio is the number of males per 100 females. A sex-ratio of more than 100 shows an excess of males, a sex-ratio of less than 100 shows that there are more females than males and a sex-ratio of 100 indicates an equal number of males and females. The presence of errors of omission, age misreporting and migration maybe detected by looking at the pattern of sex-ratios. In the absence of big fluctuations in births, deaths and migration, the sex-ratios are expected to be high at infant ages because the sex-ratio at birth is favourable to males. 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.

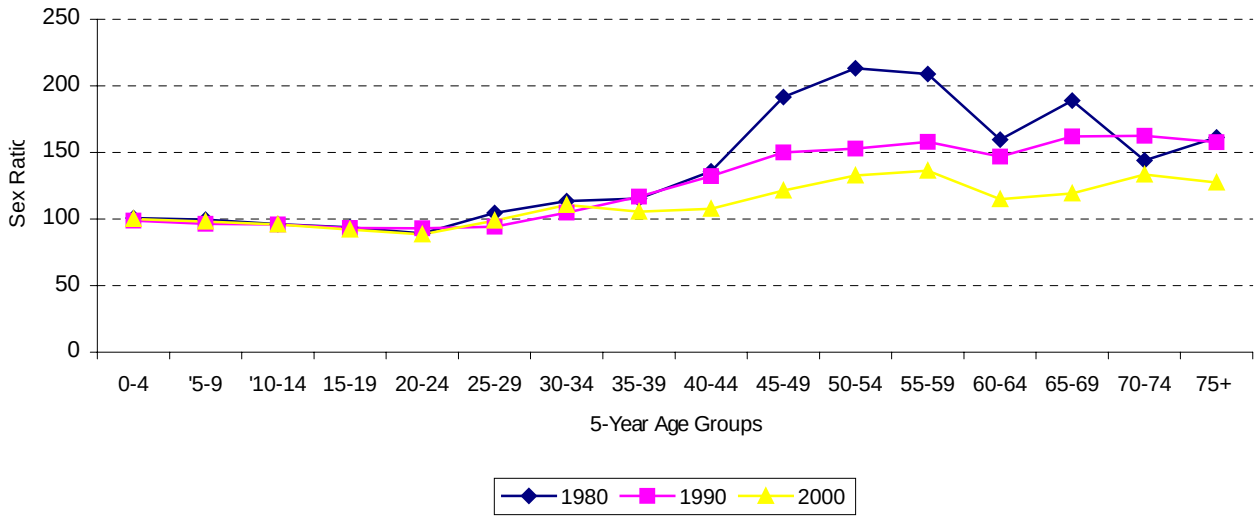
The sex-ratios for Copperbelt Province are given in Tables 2.3, 2.4, 2.5, and 2.6 and Figures 2.11 and 2.12. Sex-ratio for Copperbelt Province has almost remained stable (around 105). Copperbelt Province has not changed from being an area of excess males since 1980. However, the urban areas moved from being in excess of males (compare 103.0 in 1990 to 99.6 males per 100 females in 2000). Further observations show that the sex-ratio for urban areas first increased from 100.2 in 1980 to 103.0 in 1990 and declined to 99.6 in 2000. The pattern of sex-ratios cannot only be attributed to errors in the data. Sex-ratios are also influenced by sex selective migration.

Figure 2.11: Sex Ratios by Residence, Copperbelt Province, 1980, 1990, and 2000



Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

Figure 2.12: Population Distribution by Sex-Ratio, Copperbelt Province , 1980, 1990, and 2000



Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

An analysis of age-specific sex-ratios for 1980 reveals a deficit of males in age groups 5-24 years whereas that for 1990 and 2000 reveal a deficit of males in age groups 0-29 years. There are many possible factors responsible for this, including high male mortality. The tendency by men to over estimate their age could have shifted men into older ages while the tendency by women to under-state their age could have shifted them into lower ages, hence, causing errors in age and sex data.

The sex-ratios are higher than 100 for age groups 25-74 years in 1980 and age groups 30-74 years in 1990. The pattern of the 1980 Census sex-ratios is consistent with the 1990 pattern in that, above 29 years, sex-ratios are above 100. Tables 2.8 and 2.9 provide more detail. This means that the age groups above 20-24 for 1980 (Table 2.8) and above 25-29 for 1990 (Table 2.9) have more males than females. In-migration could have taken place especially among males above age 29, hence, having more males than females.

Table 2.3: Sex-Ratio by Residence, Copperbelt Province, 1980, 1990, and 2000

Age Group	1980			1990			2000		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
0-4	100.7	101.2	100.6	98.9	97.7	99.1	99.9	98.2	97.4
5-9	99.4	100.9	99.1	96.5	98.8	96.2	98.0	98.6	92.5
10-14	96.2	101.9	95.2	95.8	104.2	94.6	95.9	101.0	89.3
15-19	93.7	90.1	94.4	93.3	95.9	92.9	92.0	104.1	86.0
20-24	89.1	90.4	88.8	93.0	99.5	92.0	88.4	94.1	100.9
25-29	104.6	110.1	103.7	94.3	102.0	93.1	98.9	94.2	112.3
30-34	113.5	102.1	116.0	104.7	108.7	104.2	110.6	113.2	107.5
35-39	115.5	99.5	119.3	116.9	100.4	119.4	105.5	130.8	110.2
40-44	135.9	104.3	145.6	132.1	91.1	140.9	107.7	137.4	122.1
45-49	191.6	131.2	215.8	150.1	91.8	166.9	121.5	131.0	134.0
50-54	213.2	140.7	249.1	152.8	99.4	173.7	132.6	128.8	139.0
55-59	208.8	172.2	229.8	157.9	120.4	175.6	136.4	134.8	108.8
60-64	159.7	159.9	159.2	146.8	130.4	155.0	115.0	130.5	110.6
65-69	188.9	199.8	181.1	161.9	174.2	155.7	119.3	116.6	108.5
70-74	144.0	182.2	119.5	162.4	174.3	155.6	133.5	102.0	111.7
75+	143.6	187.1	119.0	157.7	206.2	137.5	127.3	104.3	101.0
Total	105.5	105.0	105.6	102.2	102.2	102.2	100.2	95.8	98.69

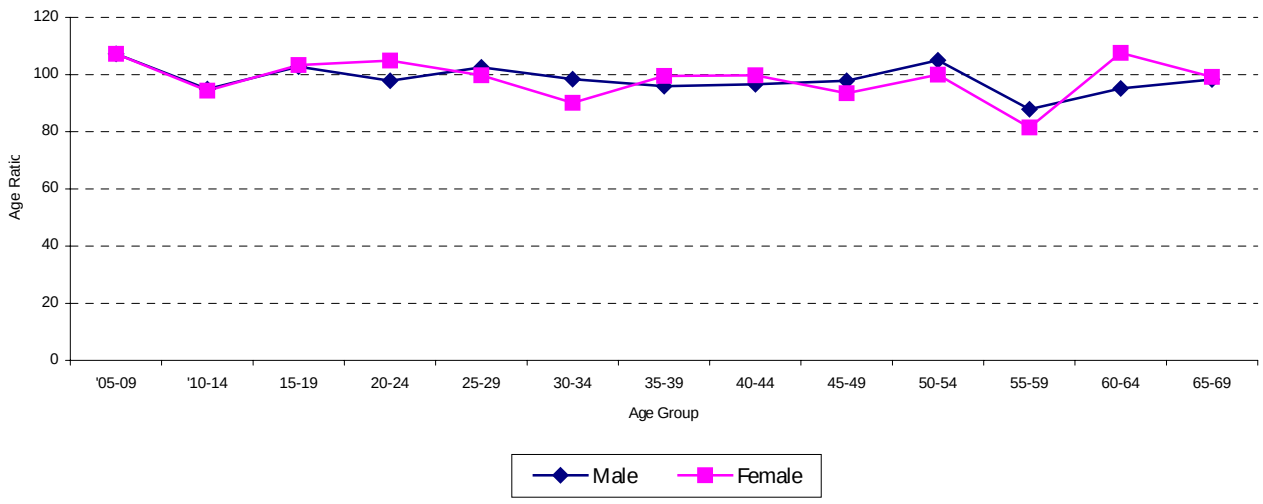
Source: CSO, 1980, 1990, and 2000 Censuses of Population and Housing

2.5.3 Age-Ratios

An age-ratio may be defined as 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). The quality of age data can also be evaluated by examining age-ratios. In normal circumstances, 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.

Information about age-ratios is presented in Table 2.4, 2.5, 2.6 and in Figure 2.13. Age groups with age-ratios less than 100 in 1980 for males are 10-19, 25-29, 35-39 and 55-69, while for females the age groups are 10-19, 25-39, 45-59 and 65-69. In 1990, age groups with ratios less than 100 are 20-29, 35-39, 45-49 and 55-69 for males. For females, the same pattern is reflected except for the age group 60-64 which shows an age-ratio of above 100 (See Figure 2.13 and Tables 2.4, 2.5, and 2.6).

Figure 2.13: Population Distribution by Age-Ratio and Sex Copperbelt Province , 2000



Source: CSO, 2000 Census of Population and Housing

The substantial deviations of the age-ratios are suggestive distortions arising from age misreporting. Results from Tables 2.4, 2.5 and 2.6 and Figure 2.13 suggest that reporting of age is less satisfactory for females than males. This is evidenced by having a higher average age-ratio deviation for females than males.

Table 2.4: Population by Five Year Age Group, Sex, Age-Ratio and the Age-Sex Accuracy Index, Copperbelt Province, 1980

Age Group	Population		Age-ratio		Deviation from 100		Sex-ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	118,881	118,015	-	-	-	-	100.7	
5-9	110,874	111,582	108.6	108.0	8.6	8.0	99.4	-1.4
10-14	85,346	88,697	96.7	97.6	-3.3	-2.4	96.2	-3.1
15-19	65,722	70,161	92.7	92.3	-7.3	-7.7	93.7	-2.5
20-24	56,482	63,408	101.3	111.3	1.3	11.3	89.1	-4.6
25-29	45,783	43,754	96.1	89.6	-3.9	-10.4	104.6	15.6
30-34	38,834	34,203	102.7	98.3	2.7	-1.7	113.5	8.9
35-39	29,855	25,859	90.4	95.3	-9.6	-4.7	115.5	1.9
40-44	27,240	20,041	100.7	104.1	0.7	4.1	135.9	20.5
45-49	24,222	12,639	109.0	89.9	9.0	-10.1	191.6	55.7
50-54	17,210	8,072	103.4	95.0	3.4	-5.0	213.2	21.6
55-59	9,072	4,346	78.4	73.7	-21.6	-26.3	208.8	-4.5
60-64	5,946	3,724	93.9	119.2	-6.1	19.2	159.7	-49.1
65-69	3,594	1,902	93.4	77.0	-6.6	-23.0	188.9	29.3
70-74	1,748	1,214	77.7	98.5	-22.3	-1.5	144.0	-44.9
75-79	907	562	-	-	-	-	161.4	-
80+	715	568	-	-	-	-	-	-
Total	642,431	608,747	-	-	106.4*	135.4*	105.5	263.6*

Mean	-	-	-	-	7.6	9.7	-	18.8

Source: CSO, 1980 Census of Population and Housing

Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = 3 times mean difference in sex-ratios plus mean deviations of male and female age-ratios.
= 3 x 18.8 + 7.6 + 9.7
= 51.3

The Age Accuracy Index reduced from 51.3 in 1980 to 32.1 in 1990 and rose to 32.7 in 2000. The United Nations define age data as "Accurate, Inaccurate and Highly Inaccurate" if the age accuracy index lies below 20, between 20-40 and 40 and above, respectively. In as far as the United Nations Age-Sex Accuracy Index is concerned, the 1980 age data were "Highly Inaccurate" whereas the 1990 and 2000 data were "inaccurate". However, the 1990 age data show some improvement over the 2000 age data (refer to Tables 2.4, 2.5, 2.6 and Figure 2.13 for details).

Table 2.5: Population by Five Year Age Group, Sex, Age-Ratio and the Age-Sex Accuracy Index, Copperbelt Province, 1990

Age Group	Population		Age-ratio		Deviation from 100		Sex-ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	109,710	110,893					98.93	
5-9	105,926	109,714	100.89	101.81	0.89	1.81	96.55	-2.39
10-14	100,278	104,634	100.87	99.98	0.87	-0.02	95.84	-0.71
15-19	92,896	99,603	107.71	109.28	7.71	9.28	93.27	-2.57
20-24	72,213	77,655	98.40	99.07	-1.60	-0.93	92.99	-0.27
25-29	53,878	57,162	90.73	93.63	-9.27	-6.37	94.25	1.26
30-34	46,559	44,453	103.75	101.19	3.75	1.19	104.74	10.48
35-39	35,873	30,696	92.74	90.58	-7.26	-9.42	116.87	12.13
40-44	30,804	23,324	103.08	100.08	3.08	0.08	132.07	15.21
45-49	23,896	15,915	96.42	89.40	-3.58	-10.60	150.14	18.07
50-54	18,760	12,281	104.06	103.99	4.06	3.99	152.76	2.62
55-59	12,162	7,704	91.09	87.10	-8.91	-12.90	157.86	5.10
60-64	7,942	5,410	93.42	101.18	-6.58	1.18	146.79	-11.06
65-69	4,840	2,990	87.68	81.71	-12.32	-18.29	161.88	15.09
70-74	3,098	1,908					162.37	0.50
75+	2,673	1,696						
Total	721,507	706,038			69.87	76.06		97.45
Mean					5.37	5.85		6.96

Source: CSO, 1990 Censuses of Population and Housing
Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = 3 times mean difference in sex-ratios plus mean deviations of male and female age-ratios.
= 3 x 6.96 + 5.37 + 5.85
= 32.1

Table 2.6: Population by Five Year Age Group, Sex, Age-Ratio and the Age-Sex Accuracy Index, Copperbelt Province, 2000

Age Group	Population		Age-ratio		Deviation from 10		Sex-ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	120,015	120,144					99.89	
5-9	116,393	118,754	107.21	107.26	7.21	7.26	98.01	-1.88
10-14	97,123	101,288	94.89	94.31	-5.11	-5.69	95.89	-2.12
15-19	88,320	96,045	102.76	103.35	2.76	3.35	91.96	-3.93
20-24	74,766	84,577	97.87	104.92	-2.13	4.92	88.40	-3.56
25-29	64,460	65,174	102.47	99.70	2.47	-0.30	98.90	10.50
30-34	51,048	46,168	98.37	90.14	-1.63	-9.86	110.57	11.67
35-39	39,323	37,262	95.94	99.52	-4.06	-0.48	105.53	-5.04
40-44	30,930	28,712	96.60	99.69	-3.40	-0.31	107.72	2.19
45-49	24,714	20,339	97.78	93.49	-2.22	-6.51	121.51	13.79
50-54	19,618	14,800	105.03	99.96	5.03	-0.04	132.55	11.04
55-59	12,644	9,272	87.86	81.44	-12.14	-18.56	136.37	3.81
60-64	9,165	7,971	95.11	107.51	-4.89	7.51	114.98	-21.39
65-69	6,629	5,557	98.28	99.13	-1.72	-0.87	119.29	4.31
70-74	4,325	3,240					133.49	14.20
75+	4,770	3,746					127.34	
Total	764,243	763,049			54.77	65.65	100.16	109.43

Mean					4.21	5.05		7.82

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

Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = (3 times mean difference in sex-ratios plus mean deviations of male and female age-ratios).
= 3 x 7.82 + 4.21 + 5.05
= 32.7

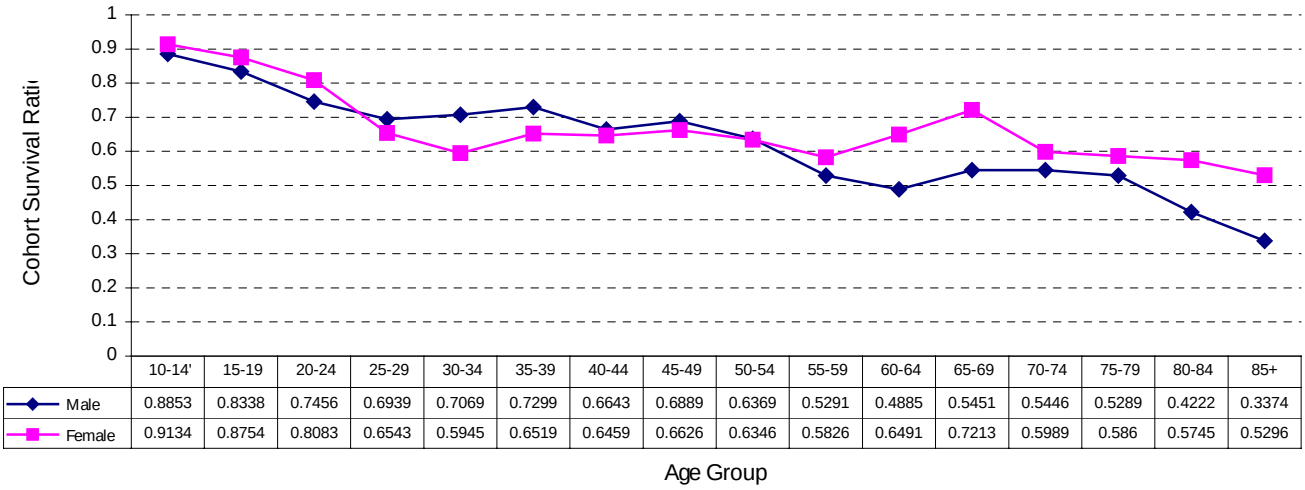
2.5.4 Survival-Ratios

Survival-ratios represent the probability that individuals of the same birth cohort or group of cohorts will still be alive 10 years later. Evaluation of the quality of age and sex data from two censuses using the survival-ratio method can be done only under certain assumptions; the population should be closed to migration, and the influence of abnormal mortality through wars, disasters, and diseases over a 10 year period should be absent.

Cohort survival-ratio refers to the survival-ratio of the population in a given age group to the next age whereas the overall survival-ratio refers to the ratio of the population aged say 10 years and above, who will survive to 15 years and above, and so on.

Cohort survival-ratios are expected to be highest at age group 10-14 where mortality is assumed to be lowest and then to decline continuously thereafter. Figure 2.14 shows fluctuations rather than the expected pattern. For example, the female cohort survival-ratio is lower at age group 55-59 than the preceding and the following age group, see Figure 2.13. Fluctuations in the cohort survival-ratios show that there was over-statement or under-statement of ages among males and females.

Figure 2.14: Cohort Survival Ratios by Sex, Copperbelt Province, 1990 and 2000



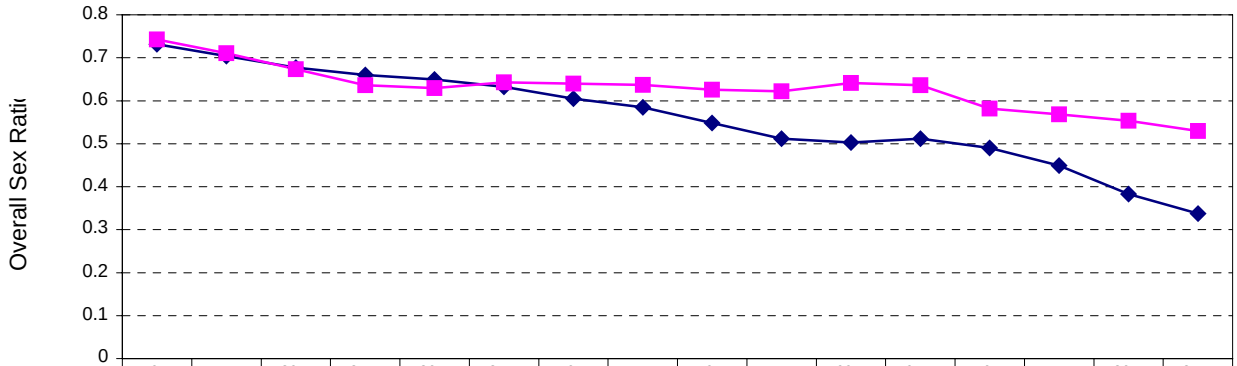
	10-14'	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Male	0.8853	0.8338	0.7456	0.6939	0.7069	0.7299	0.6643	0.6889	0.6369	0.5291	0.4885	0.5451	0.5446	0.5289	0.4222	0.3374
Female	0.9134	0.8754	0.8083	0.6543	0.5945	0.6519	0.6459	0.6626	0.6346	0.5826	0.6491	0.7213	0.5989	0.586	0.5745	0.5296

Age Group

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

In the absence of abnormal mortality and migration, the overall survival-ratios should decline continuously as we go up to the older ages. The female ratios should be higher than the male ratios because of lower mortality of females compared to that of males. The pattern of having higher ratios for females than males is not true at 20+ and 30+ (see Figure 2.15). This could be as a result of age misreporting by both males and females. However, the high levels of maternal mortality in the reproductive ages 15-49 years and the effect of the HIV/AIDS pandemic could also have played a major part.

Figure 2.15: Overall Survival Ratio by Sex, Copperbelt Province, 1990 and 2000



	10+	15+	20+	25+	30+	35+	40+	45+	50+	55+	60+	65+	70+	75+	80+	85+
Male	0.7316	0.704	0.6768	0.6598	0.6497	0.6325	0.6045	0.5845	0.5486	0.5116	0.5031	0.5119	0.4902	0.4495	0.3829	0.3374
Female	0.7424	0.7105	0.6733	0.6361	0.6297	0.6431	0.6397	0.637	0.626	0.6218	0.6413	0.6364	0.582	0.5681	0.5534	0.5296

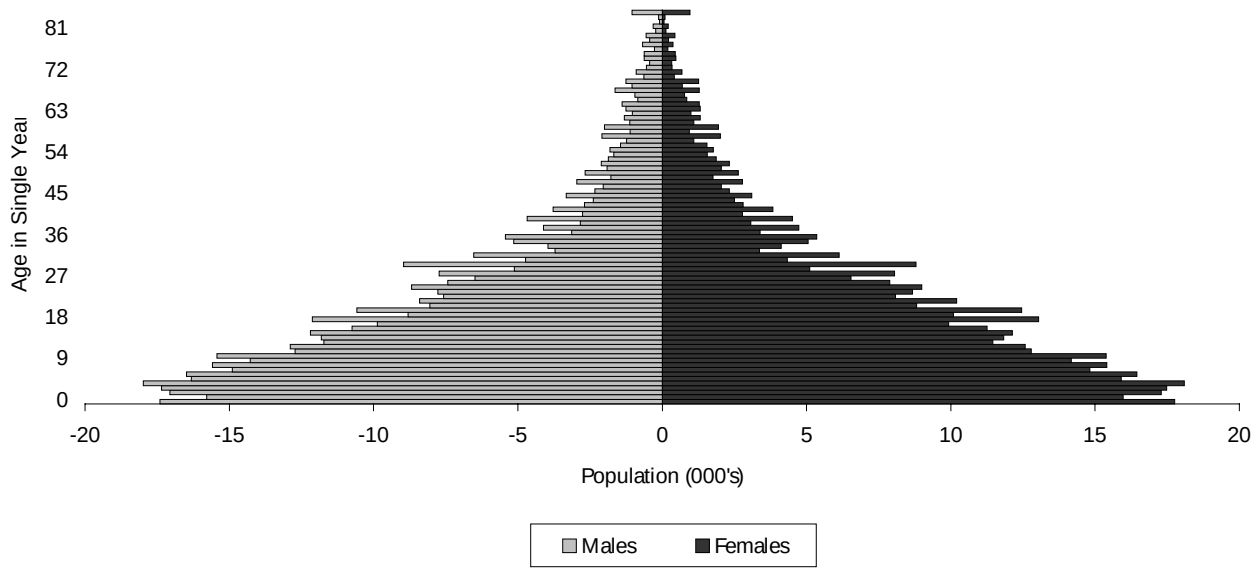
Age Group

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

2.5.5 Population Pyramids

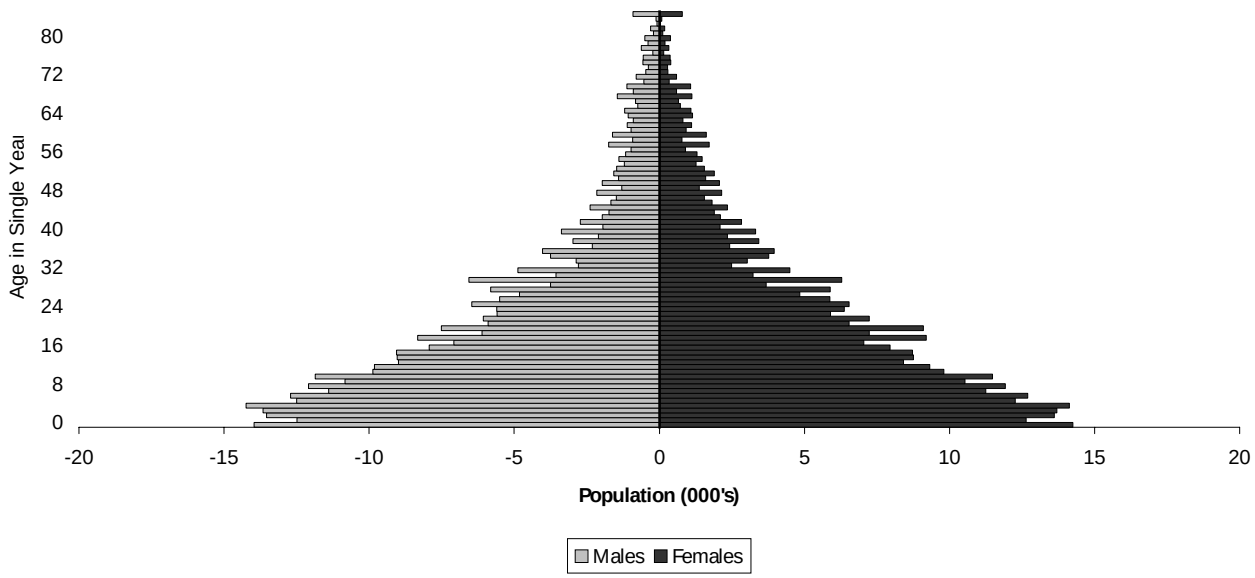
Another way of detecting irregularities in the reported age data of a survey or census is by looking at a Population Pyramid by single years of age. As already observed, when census age data are distributed in single years, one can easily spot out inaccuracies than when it is distributed in five-year age groups. If the data are found to have a lot of inaccuracies, it is better to smooth them. Looking at the population pyramids for the 2000 Census data from Figures 2.16 to 2.18, it can be seen that age misreporting was not severe to warrant the smoothing of data.

Figure 2.16: Graphical Population Distribution in Single Years by Sex, Copperbelt Province Total, 2000



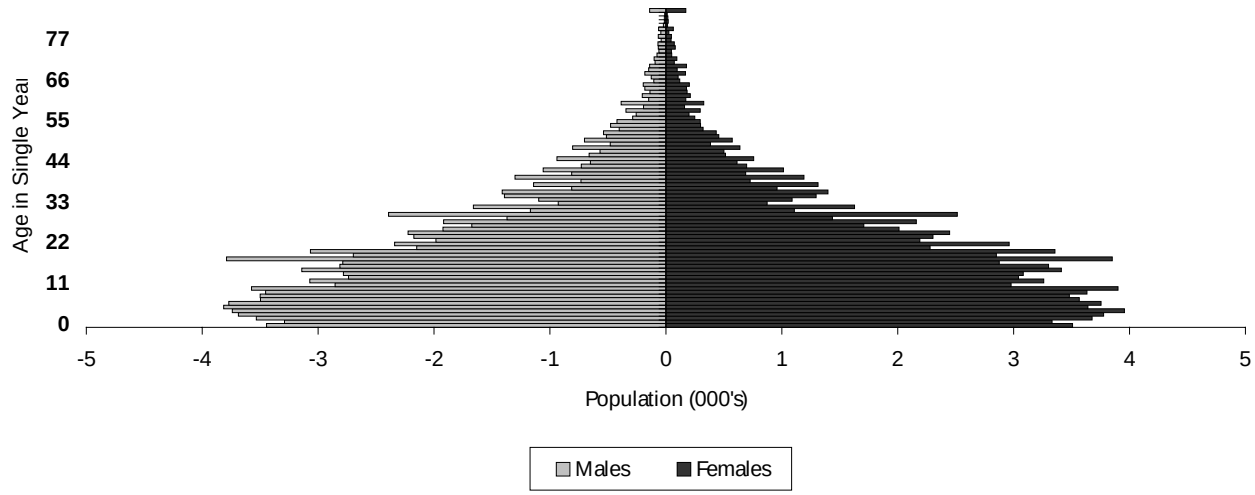
Source: CSO, 2000 Census of Population and Housing

Figure 2.17: Graphical Population Distribution by Single Years and Sex, Copperbelt Province Rural, 2000



Source: CSO, 2000 Census of Population and Housing

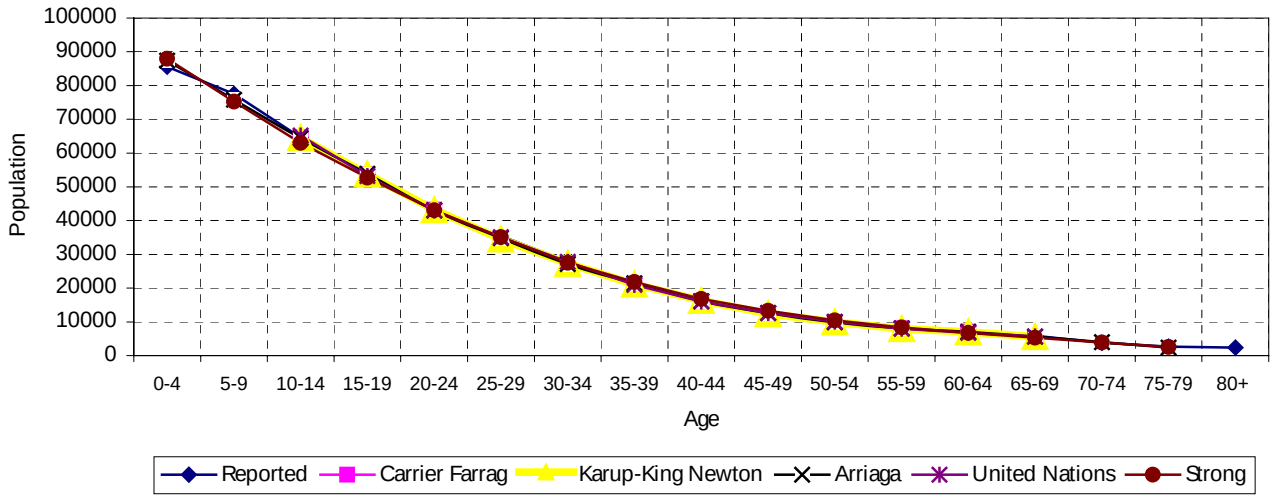
Figure 2.18: Graphical Population Distribution in Single Years by Sex, Copperbelt Province Urban, 2000



Source: CSO, 2000 Census of Population and Housing

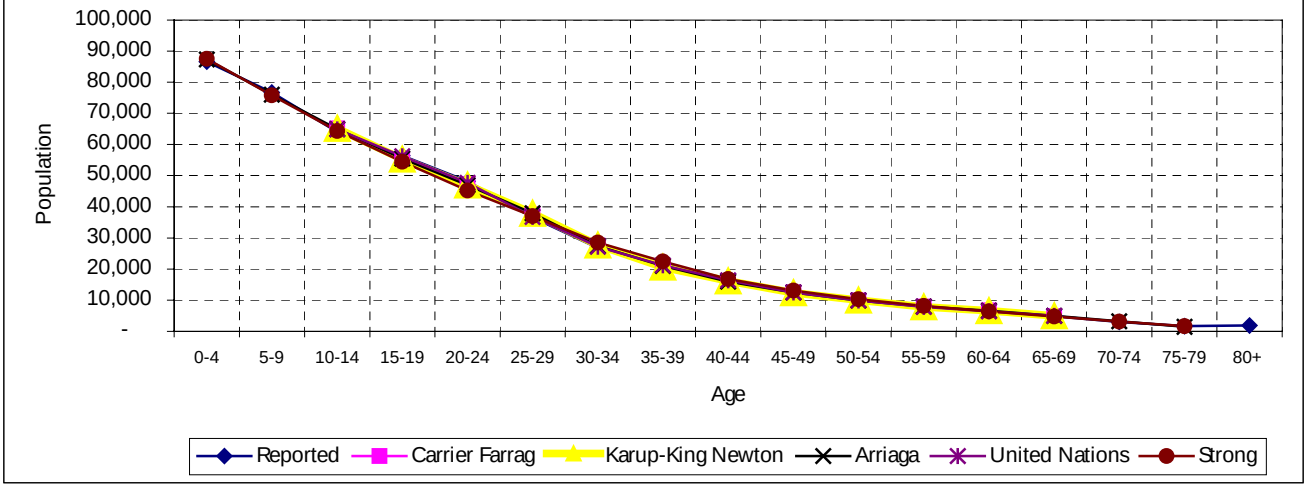
Smoothing the age data using selected techniques for light smoothing of the population (Edwardo E. Arriaga: November 1994, pages 11-42) shows that the irregularities in the structure are not severe, see Figures 2.19 and 2.20. The smoothing of data has been done using AGESMTH software program one of the Population Analysis Spreadsheet (PAS) programmes developed by the United Nations. Selected techniques for light smoothing of the population which have been used include Carrier Farrag, Karup-King Newton, Arriaga and United Nations. The strong smoothing technique has also been incorporated.

Figure 2.19: Reported and Smoothed Population by 5-Year Age Groups and Smoothing Technique, Copperbelt Province Males, 2000



Source: CSO, 2000 Censuses of Population and Housing

Figure 2.20: Reported and Smmothed Population by 5-Year Age Groups and Smoothing Technique, Copperbelt Province Females, 2000



Source: CSO, 2000 Censuses of Population and Housing

Given that the irregularities in the reported proportions are small, it is not recommended to smooth the 2000 Census of Population and Housing data because genuine irregularities in the reported pattern might be smoothed out.

2.6 Summary

Copperbelt Province has a young population. Of the total (de facto) population in 2000, 44.1 percent are below age 15 and 54.0 percent are aged 15-64. The overall dependency-ratio of the province declined from 106.3 in 1980 to 85.6 in 1990 and further declined to 85.1 dependants per 100 persons aged 15-64 in 2000. Copperbelt Province had more males than females in general and in rural areas in particular than in urban areas in 2000. The low age specific sex-ratio of 99.9 in 2000 for those aged 0-4 suggests that there was under-coverage of children. There was age heaping among males and females, with 0, 2, 5, and 8 being the most preferred digits. The 1990 age data were better than the 2000 age data in as far as the Age-Sex Accuracy Index is concerned which rose from 32.1in 1990 to 32.7 in 2000.

Chapter 3

POPULATION SIZE, GROWTH AND COMPOSITION

3. 1 Introduction

In Zambia, the first comprehensive Census of Population and Housing was undertaken in 1969 and was followed by another in 1980. Since then, censuses are conducted regularly every ten (10) years. The Census of Population in Zambia has included questions on births and deaths, taking into account the poor status of the vital registration system. The Census is designed to collect both de jure and de facto population count. By definition (*see below*) the de facto count is most useful in providing a separate record of a range of characteristics for all individuals enumerated. Characteristics here refer to social and economic aspects of a population such as education and economic activity. This therefore provides sound basis for carrying out detailed analysis of the characteristics of persons or groups of a population based on the de facto count.

In general, censuses of population are useful for social, economic, political planning of a country. For instance, population data analysed by age are essential in preparing current population estimates and projections of households, school enrollment, labour force and further projections of requirements for schools, teachers, health services, food and housing.

This chapter presents a trend analysis of the population size, population growth rates, population distribution and composition (i.e. demographic, social and economic) from the census results of 1980, 1990 and 2000. Analysis of population composition is based on the de facto as opposed to the de jure population of Zambia. As such, analysis is only possible by use of the former population count, which provides individual social and economic characteristics.

3.2 Concepts and Definitions

Concepts and definitions adopted during the census and used in this chapter and throughout the report are as follows:

De facto Population: ***This refers to the usual household members present and visitors who spent the census night at any given household. This however excludes:***

(c) Foreign diplomatic personnel accredited to Zambia; and

(d) Zambian nationals accredited to foreign embassies and their family members who live with them abroad and, 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. These include institutional populations in places such as hospitals/health centers, prisons and academic institutions (universities, colleges and boarding schools etc).

- **Population Growth Rate**

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 us the average annual growth rate for each year of the inter-censal period.

- **Population Composition**

This is defined as the distribution of certain traits, characteristics or attributes of the population and how these affect the overall demographic structure of the country. There are three main characteristics of population composition:

- Demographic characteristics such as age and sex,
- Social characteristics such as ethnicity and citizenship, and
- Economic characteristics such as economic activity.

- *Age*

The age of an individual in all censuses undertaken in Zambia is commonly defined in terms of the age of the person at his/her last birthday *before* the census date.

- *Household*

A group of persons who normally live and eat together. These people may or may not be biologically related to each other and make common provision for food and other essentials for living.

- **Head of Household**

This refers to a person who makes day-to-day decisions concerning the running of the household and is also regarded as such by all household members.

- **Population Density**

Density of population is defined as the number of people resident within a standard unit of area, in this case, measured per square kilometer (Pressant, 1985).

- **Age Dependency Ratio**

Age Dependency Ratio refers to the 'joint account of variations in the proportions of children, aged persons, and persons of "working age" (Shyrock et al., 1972:133). It therefore is the ratio of children aged 0-14 years and persons aged 65 years and older, per 100 persons in the working age group of 15-64 years old.

- **Citizenship**

Citizenship defined as 'the legal nationality of each person', is not necessarily linked to place of birth. Rather, citizenship is acquired through various means such as being born within state (or elsewhere with parents of the given nationality), through naturalization or marriage (Pressant,1985).

- **Age Dependency ratio**

Age Dependency ratio refers to the 'joint account of variations in the proportions of children, aged persons, and persons of "working age"' (Shyrock et al., 1972:133). It is therefore, the ratio of children aged 0-14 years and persons aged 65 years and older per 100 persons in the working age group of 15-64 years old.

3.3 Populations and Growth

The 2000 de jure population for Copperbelt Province is 1,581,221of, which 781,819 are females and 799,402 males, indicating for the first time in the province that males have out numbered females (see Table 3.1a).

Table 3.1a Population Size (De jure) and Percent Distribution by Sex and Residence, Copperbelt Province, 2000

Residence	Both Sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Zambia	9,885,591	100	4,946,298	50.0	4,939,293	50.0
Copperbelt- Total	1,581,221	100	799,402	50.6	781,819	49.4
Rural	350,093	100	179,616	51.3	170,477	48.7
Urban	1,231,128	100	619,786	50.3	611,342	49.7

Source: 2000 Census of Population and Housing

In demographic terms, this de jure figure is considered the *true or resident population* of a nation. However, this type of count of population does not allow collection of data on various characteristics (social, economic and political) of individuals.

As the definition above states, persons in institutions such as prisons and hospitals are counted as a group. The de jure population therefore becomes important as far as the age sex distribution is concerned. It is a useful denominator in the calculation of vital education indicators such as gross and net enrolment and intake rates.

The Copperbelt Province de facto count however, presented in Table 3.1b is 1,527,294 of which 49.9 percent are females. The de facto population allows for detailed analysis of individuals because these are present at the time of count (*see definition above*). It can be noted that the de jure population is always larger than the de facto population.

Table 3.1b Population Size (De facto) and Percent Distribution by Sex and Residence, Copperbelt Province, 2000

Residence	Both Sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Zambia	9,337,425	100	4,594,290	49.2	4,743,135	50.8
Copperbelt- Total	1,527,294	100	764,550	50.1	762,744	49.9
Rural	290,724	100	147,506	50.7	143,218	49.3
Urban	1,236,570	100	617,044	49.9	619,526	50.1

Source: 2000 Census of Population and Housing

The district population sizes for Copperbelt Province are displayed in Table 3.2. Among the districts Kitwe has the largest population of 376,124, closely followed by Ndola, (374,757). The smallest population is found in Lufwanyama (63,185), which is one of the three newly created districts with the others being Mpongwe and Masaiti. Amongst the districts, the most urbanised is Ndola, given that in comparison to others, it bears the highest number of urban population (374,757) in relation to the total provincial urban population of 1,231,128.

Table 3.2 Population Size (De jure) by Sex, Residence and District, Copperbelt Province, 2000

District	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Copperbelt-Total	1,581,221	799,402	781,819	350,093	179,616	170,477	1,231,128	619,786	611,342
Chililabombwe	67,533	34,391	33,142	13,029	6,653	6,376	54,504	27,738	26,766
Chingola	172,026	86,928	85,098	24,578	12,918	11,660	147,448	74,010	73,438
Kalulushi	75,806	38,786	37,020	23,036	12,011	11,025	52,770	26,775	25,995
Kitwe	376,124	189,650	186,474	12,390	6,301	6,089	363,734	183,349	180,385
Luanshya	147,908	74,963	72,945	32,329	16,658	15,671	115,579	58,305	57,274
Lufwanyama*	63,185	32,198	30,987	63,185	32,198	30,987	-	-	-
Masaiti*	95,581	48,892	46,689	95,581	48,892	46,689	-	-	-
Mpongwe*	64,371	32,846	31,525	64,371	32,846	31,525	-	-	-
Mufulira	143,930	72,526	71,404	21,594	11,139	10,455	122,336	61,387	60,949
Ndola	374,757	188,222	186,535	-	-	-	374,757	188,222	186,535

Source: 2000 Census of Population and Housing
Note: " * " denotes new districts which were formally part of Ndola Rural.

Table 3.3 presents the rate at which Copperbelt Province has grown in between censuses of 1969, 1980, 1990 and 2000. The population has almost doubled from about eight hundred thousand in 1980 to about 1.6 million in 2000. In spite of this doubling, the province has in general experienced a significant drop in the annual growth rates from 3.9 in 1969-1980 to 1.3 percent in 1980-1990 and to 0.8 percent between 1990 and 200. This shows that on average, the Copperbelt Province grew the most during the 1970s.

Table 3.3 Population Size and Annual Average Population Growth Rate by Residence and District, Copperbelt Province, 1969-2000

Residence/District	Population Size 1969-80	Annual Growth Rate	Population Size 1990	Annual Growth Rate 1980-90	Population Size 2000	Annual Growth Rate 1990-2000
ZAMBIA-Total	5,661,801	3.1	7,759,117	2.7	9,885,591	2.5
Copperbelt-Total	816,309	3.9	1,458,459	1.3	1,581,221	0.8
Rural	72,215	10.7	219,396	-0.7	350,093	4.8
Urban	744094	3	1,239,063	1.7	1,231,128	0.1
District						
Chililabombwe	44,862	3	65,218	0.1	67,533	0.4
Chingola	103,292	3.2	168,999	1	172,026	0.2

Kalulushi	32,272	5.7	69,597	1.4	75,806	0.9
Kitwe	199,798	4.4	347,024	0.8	376,124	0.8
Luanshya	96,282	2.7	144,815	0.9	147,908	0.2
Lufwanyama*	-	-	51,745	-	63,185	2.0
Masaiti*	-	-	84,831	-	95,581	1.2
Mpongwe*	-	-	38,718	-	64,371	5.1
Mufulira	107,802	3.1	152,735	-0.2	143,930	-0.6
Ndola (Rural)	72,215	3.2	-	-	-	-
Ndola	159,786	5.3	334,777	1.7	374,757	1.1

Source: 2000 Census of Population and Housing
Note: "* " New Districts, "-" Not applicable as they refer to non-existent districts.

It is noted that the annual population growth rate between 1990 and 2000 for the province is much lower than the national average of 2.5 percent, presenting a deviation of –1.7 percent. Except for the period 1969-1980, when the annual population growth rate was –0.7 percent for rural areas, rural areas have experienced higher rates of growth than urban areas. Between 1990 and 2000, urban population barely increased at 0.1percent compared to 4.8 percent in rural areas. Urban areas experienced the highest annual growth rate between 1969 and 1980. Historically, this coincides with the period of economic boom in the country, with the mining industry located in the Copperbelt Province attracting most Zambians from other parts of the country.

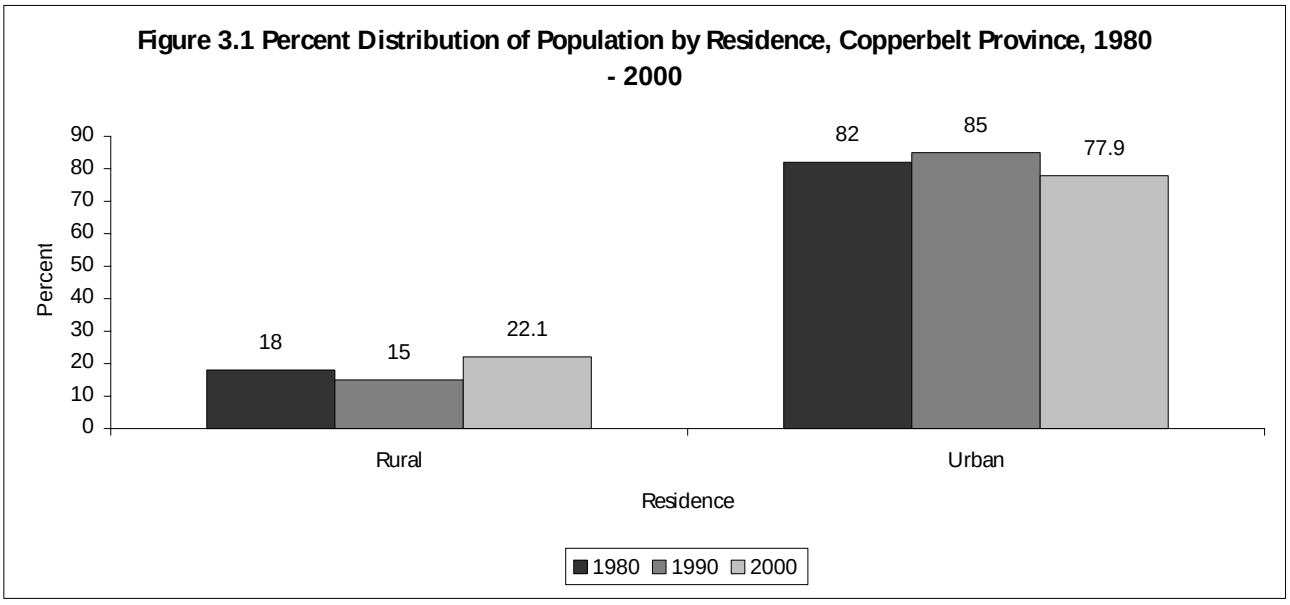
Generally, all districts but Lufwanyama and Mpongwe exhibit low growth rates of less or equal to one percent per year during the inter-censal period of 1990-2000. It is noted that districts with high growth rates during the said period are those designated as new districts following the apportionment of Ndola Rural. Thus, this indicates a mere carry over of the rural population, which had a high growth rate (4.1 percent) in the previous decade. Notably, Mufulira has experienced a reduction in its populace marked by an increasing negative growth rate of -0.2 and -0.6 percent, in 1980-1990 and 1990-2000, respectively.

3.4 Population Distribution

The spatial or geographical distribution of the population in Copperbelt Province is shown graphically in Figure 3.1, 3.2 and Table 3.4.

Figure 3.1 illustrates that in 1980 and 1990 Copperbelt Province had the majority of its population residing in urban areas. The proportion of urban population initially increased slightly from 82 percent in 1980 to 85 percent in 1990 and dropped significantly to 78 percent in 2000. This implies an abrupt urban-rural migration trend, which is apparent in other urbanized provinces of Zambia such as Lusaka. These provinces have over the years been characterised by economic decline, rendering them unattractive in economic terms. (Details on internal migration in Copperbelt Province are described in the 2000 Census Migration and Urbanisation Report).

Figure 3.1 Percent Distribution of Population by Residence, Copperbelt Province, 1980 - 2000



Source: 2000 Census of Population and Housing

Table 3.4 shows that in 2000, Kitwe and Ndola recorded having the largest share of the population in Copperbelt Province, with 24 percent each, with Chililabombwe, Mpongwe and Lufwanyama exhibiting the lowest population sizes.

Table 3.4: Population Distribution (De jure) by District, Copperbelt Province, 1980,1990 and 2000

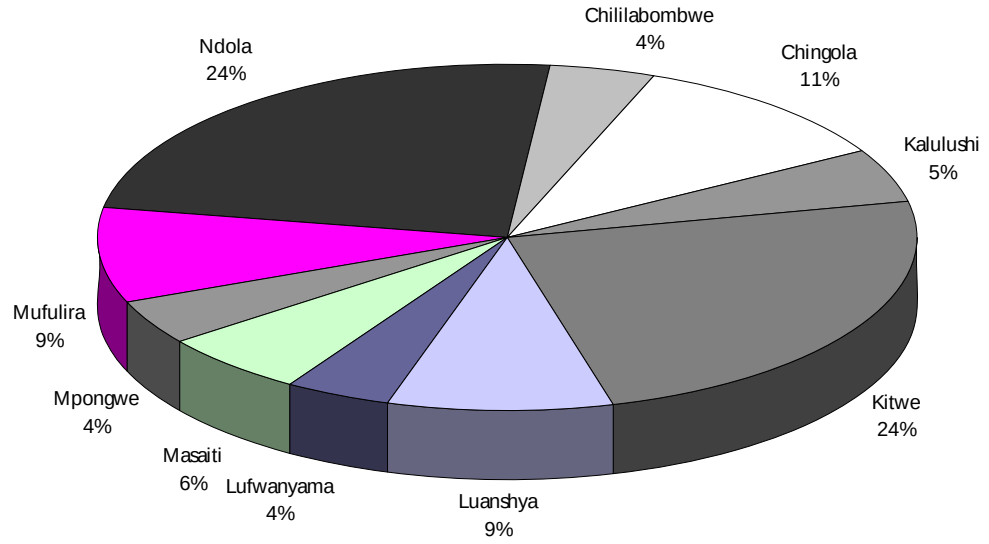
District	1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent
Total	1,251,178	100	1,458,459	100	1,581,221	100
Chililabombwe	62,131	4.5	65,218	4	67,533	4
Chingola	145,993	11.6	168,999	12	172,026	11
Kalulushi	59,267	4.8	69,597	5	75,806	5
Kitwe	320,320	23.8	347,024	24	376,124	24
Luanshya	129,589	9.9	144,815	10	147,908	9
Lufwanyama	-	-	51,745	4	63,185	4
District	-	-	84,831	6	95,581	6
Mpongwe	-	-	38,718	3	64,371	4
Mufulira	150,069	10.5	152,735	10	143,930	9
Ndola	281,315	23	334,777	23	374,757	24

Source: 1990 and 2000 Census of Population and Housing

3.4.1 Population Density

Table 3.5 shows the land area and population density for Copperbelt Province from 1969 to 2000. Generally, with a standard land area of 31,328 and an increasing population in the past decades, the provincial population density has also been increasing, from 26.1 in 1969 to 39.9 and 46.6 in 1980 and 1990, respectively. In 2000, 50.5 persons per square km were recorded. With the second smallest land area of 777 square km, Kitwe holds the highest population density of 484 persons per sq. km.

Figure 3.2: Population Distribution by District, Copperbelt Province, 2000



Source: 2000 Census of Population and Housing

Table 3.5: Area and (de jure) Population Density by District, Copperbelt Province, 1969-2000

District	Area (Sq Km)	Population Density/ Census Year (Population per sq. Km)			
		1969	1980	1990	2000
Zambia	752,612	5.4	7.5	10.3	13.1
Copperbelt Province	31,328	26.1	39.9	46.6	50.5
Chililabombwe	1,026	43.7	60.5	63.6	65.8
Chingola	1,678	61.6	87	100.7	102.5
Kalulushi	725	44.5	81.7	96	104.6
Kitwe	777	257.1	412.2	446.6	484.1
Luanshya	811	118.7	159.8	178.6	182.4
Lufwanyama	9,849	-	-	5.3	6.4
Masaiti	5,383	-	-	15.8	17.8
Mpongwe	8,339	-	-	4.6	7.7
Mufulira	1,637	65.8	91.7	93.3	87.9
Ndola	1,103	144.9	255.1	303.5	339.8

Source: 1969, 1980, 1990 and 2000 Censuses of Population and Housing

3.5 Population Composition

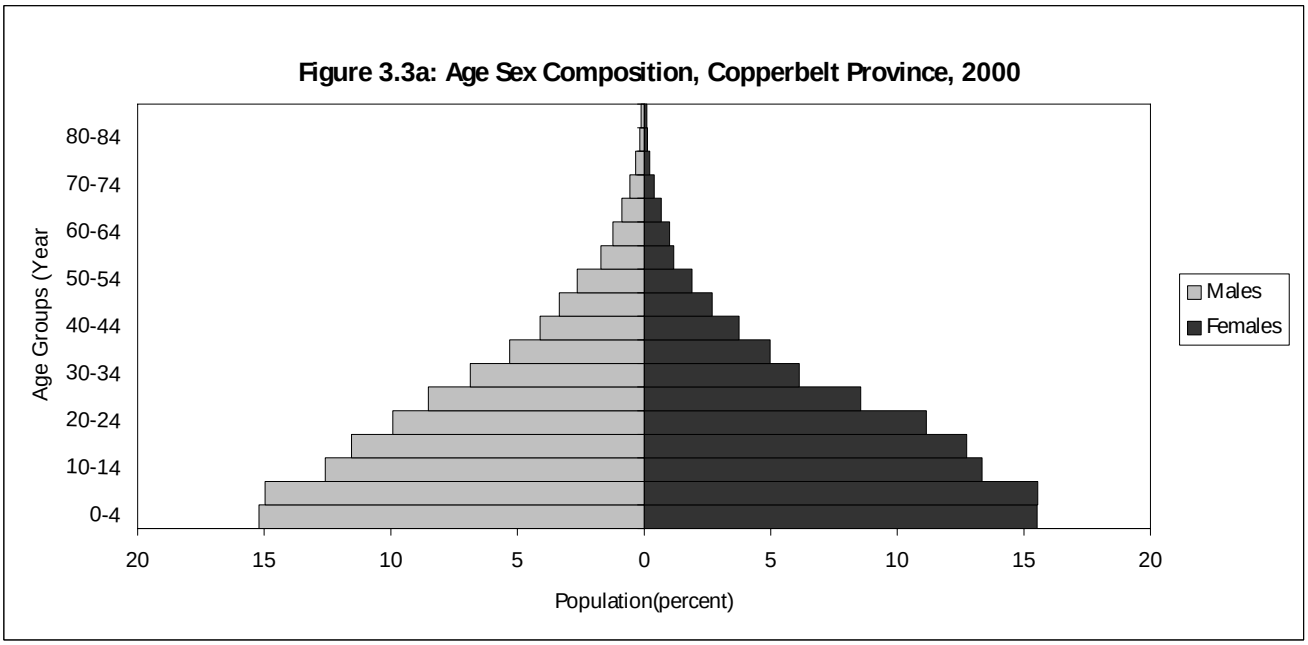
This section provides some information on the composition of Copperbelt Province population in terms of age, sex, age dependency, household headship, marital status, ethnicity, citizenship and economic characteristics.

3.5.1 Age and Sex Composition

The analysis of most population phenomena is difficult to understand without taking into consideration the age and sex structure of any given population. Generally, 'tabulations on age and sex are essential in the computation of basic measures related to the factors of population change and in the study of economic dependency. Those tabulations are indispensable for the identification and examination of various functional population groups, such as infants, children, youth, the elderly, women and women in child bearing ages, as well as for other demographic and actuarial analyses' (UN: 1995:1). Further, the age structure of a population is important given that social relationships within a community are considerably affected by the relative numbers at each age.

The age and sex structure of population in Copperbelt Province is illustrated in proportion by way of population pyramids for 1990 and 2000 in Figure 3.3a and 3.3b. Population pyramids are useful in describing the population by age and sex pictorially. Another important feature of population pyramids is their strength in illustrating whether a population is 'young' or 'old'. Similar to the national pattern, Copperbelt Province continues to exhibit a young population given that it bears a high proportion of persons below the age of 15 years. The broad base of the pyramids in both 1990 and 2000 is illustrative of this feature.

In comparative terms, the 2000 population pyramid (Figure 3.3a) has a smoothened appearance along the ages of 0-4 up to the mid 20s, which otherwise had a bump or near-funnel look in 1990 (Figure 3.3b). By comparison, this signifies population gaps or absences from about 10 years to early 20s (See Figure 3.4). These population gaps could very well be attributed to increased mortality, perhaps given the ravaging effects of HIV/AIDS pandemic coupled with odds of the declining economic situation in the country, particularly in the last decade. Supporting this likelihood of events also is the evidence that fertility has in the same period decreased (*see chapter on Fertility*).



Source: 2000 Census of Population and Housing

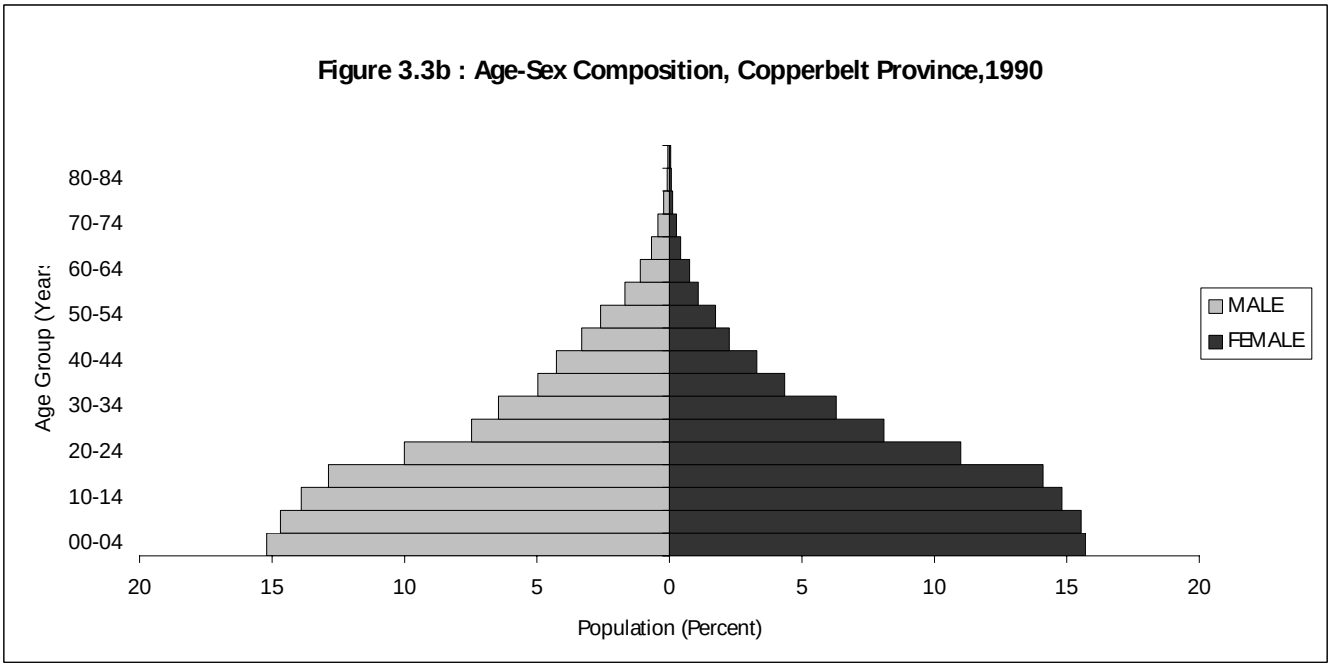
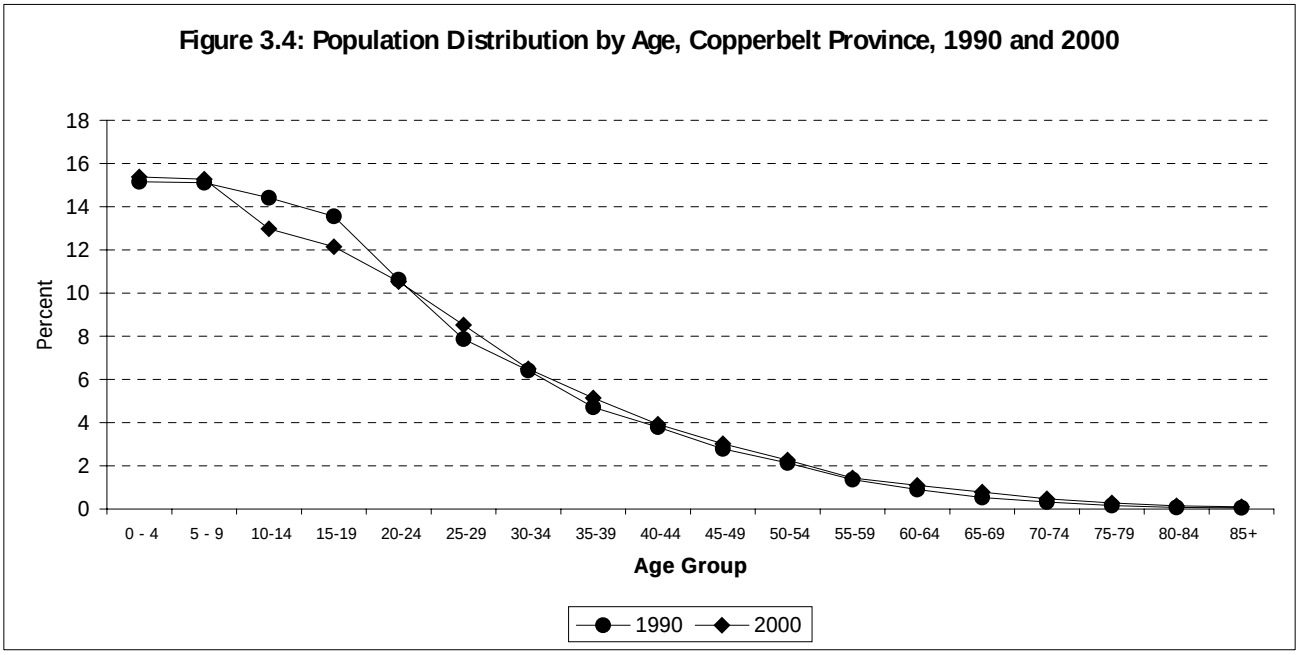


Table 3.6 presents the age-sex population distribution for Copperbelt Province, including the rural and urban areas. As of 2000, the age group 0-14 years constitutes 43.6 percent of the total population in the province, which is a percentage point decrease from 44.6 in 1990. Similarly, rural and urban populations mostly comprise the child population (0-14 years), 44.7 and 43.3 percent, respectively. The proportion for the rest of the population declines pointing towards a thin aged population (of about one and less percent) around the 60s and above. As was predictive in the past decades, this scenario still holds promise for future population growth given the potential that lies in the huge proportion of young persons expected to enter reproductive ages (15-49 years).

Table 3.6 Age-Sex Percent Distribution of Population (de jure) by Residence, Copperbelt Province, 2000

Age Group	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
0-4	15.37	15.21	15.53	17.28	16.79	17.79	14.90	14.81	14.98
5-9	15.27	14.98	15.56	15.15	14.84	15.48	15.29	15.01	15.58
10-14	12.97	12.60	13.36	12.28	12.19	12.38	13.14	12.70	13.59
15-19	12.14	11.55	12.74	10.65	10.22	11.10	12.50	11.88	13.13
20-24	10.52	9.92	11.14	9.32	8.75	9.92	10.82	10.21	11.44
25-29	8.53	8.51	8.55	7.93	8.34	7.50	8.68	8.56	8.81
30-34	6.49	6.86	6.13	5.96	6.35	5.54	6.63	6.98	6.27
35-39	5.14	5.30	4.97	4.65	4.77	4.54	5.26	5.44	5.08
40-44	3.93	4.11	3.75	3.53	3.57	3.49	4.03	4.24	3.81
45-49	3.02	3.34	2.69	2.93	2.97	2.90	3.04	3.44	2.64
50-54	2.27	2.63	1.89	2.66	2.61	2.72	2.17	2.64	1.70
55-59	1.44	1.70	1.17	2.13	2.21	2.04	1.27	1.57	0.96
60-64	1.10	1.22	0.98	1.95	2.07	1.83	0.89	1.00	0.78
65-69	0.78	0.88	0.68	1.53	1.78	1.28	0.60	0.66	0.53
70-74	0.48	0.56	0.40	0.96	1.18	0.74	0.36	0.41	0.32
75-79	0.28	0.33	0.22	0.55	0.75	0.35	0.21	0.23	0.18
80-84	0.15	0.17	0.14	0.30	0.38	0.22	0.12	0.11	0.12
85+	0.11	0.12	0.11	0.22	0.24	0.20	0.09	0.09	0.09
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total	1,581,221	799,402	781,819	312,200	160,359	151,839	1,269,025	639,041	629,983

Source: 2000 Census of Population and Housing



Source: 2000 Census of Population and Housing

3.5.2 Age Dependency Ratio

Table 3.7 reveals that in 2000, the overall dependency ratio for Copperbelt Province was 85 per 100 persons in the working age group (15-64 years). This is lower than the national, which is at 95.1. At provincial level, little variation has been noted between 1990 and 2000 in both overall and child dependency on those with economically productive capabilities.

It is also observed that unlike in 1990 persons in productive ages who reside in rural areas are now bearing a heavy burden of dependants compared to their urban counterparts, whose dependency between 1990 and 2000 has reduced particularly so for the child dependency. According to Table 3.7 for every 97 dependants per 100 persons in rural areas, there were 82 dependants for every 100 persons in urban areas

Table 3.7 further shows that between 1990 and 2000 census periods, both overall and child dependency ratios have increased for all districts. Of the new districts, Mpongwe exhibits the highest dependency ratios.

Table 3.7 Dependency Ratio by Residence and District, Copperbelt Province, 1990-2000

Residence	Ratios	1990	2000
Zambia	Overall Dependency Ratio	110.2	95.1
	Child Dependency Ratio	104.3	87.2
	Aged Dependency Ratio	5.9	5
Copperbelt	Overall Dependency Ratios	85.6	85.1
	Child Dependency Ratios	83.4	81.7
	Aged Dependency Ratios	2.2	3.4
Rural	Overall Dependency Ratios	84.5	97.2
	Child Dependency Ratios	79	90.2
	Aged Dependency Ratios	5.5	7.1
Urban	Overall Dependency Ratios	85.8	82.5
	Child Dependency Ratios	84.1	79.9
	Aged Dependency Ratios	1.7	2.6
District			
Chililabombwe	Overall Dependency Ratios	93.1	88.3
	Child Dependency Ratios	89.1	85.5
	Aged Dependency Ratios	4	2.8
Chingola	Overall Dependency Ratios	92.1	85.7
	Child Dependency Ratios	90.1	82.7
	Aged Dependency Ratios	2.1	3
Kalulushi	Overall Dependency Ratios	87.7	86.1
	Child Dependency Ratios	85.6	82.5
	Aged Dependency Ratios	2.1	3.6
Kitwe	Overall Dependency Ratios	83.8	80.3
	Child Dependency Ratios	82.3	77.9
	Aged Dependency Ratios	1.4	2.5
Luanshya	Overall Dependency Ratios	86	84.3
	Child Dependency Ratios	84.5	81.1
	Aged Dependency Ratios	2	3.2
Lufwanyama	Overall Dependency Ratios	-	99.7
	Child Dependency Ratios	-	0.6
	Aged Dependency Ratios	-	6.9
Masaiti	Overall Dependency Ratios	-	99.9
	Child Dependency Ratios	-	92.6
	Aged Dependency Ratios	-	7.3
Mpongwe	Overall Dependency Ratios	-	103.3
	Child Dependency Ratios	-	97.2
	Aged Dependency Ratios	-	6.1
Mufulira	Overall Dependency Ratios	88.9	83.9
	Child Dependency Ratios	86.9	83.7
	Aged Dependency Ratios	2	0.3
Ndola	Overall Dependency Ratios	81.3	80.4
	Child Dependency Ratios	79.6	77.5
	Aged Dependency Ratios	1.7	2.9

Source: 1990 and 2000 Censuses of Population and Housing

3.5.3 Household Headship

Household headship by various characteristics in Copperbelt Province is presented in Table 3.8. The table shows that one in every 6 households is female headed. This is lower than the national, which has one in every five households female headed. Given the dominance of the urban population, it is not surprising that there are thrice more heads of household in urban (217,667) than rural areas (71,980). Distinction of household heads by sex is important because it is often associated with aspects of household welfare. For instance, female-headed households are typically poorer than male-headed households (CSO, 1998 & 2003). Amongst the districts, Masaiti has the highest proportion of female household heads 19.5 percent) whilst Chililabombwe has the lowest (13.9 percent).

Table 3.8: Household Headship by Sex, Marital Status, Residence and District, Copperbelt Province, 2000

Residence/ Marital Status/District	Number of Household Heads	Total Percentage of Household Heads	Sex of Head (Percent)	
			Male	Female
Zambia	1,884,741	100	81.1	18.9
Residence				
Copperbelt Province	289,647	100	82.9	17.1
Rural	71,980	100	82.1	17.9
Urban	217,667	100	83.1	16.9
Marital Status				
Married	215,790	100	96.0	4.0
Separated	8,525	100	42.3	57.7
Divorced	14,177	100	34.4	65.6
Widowed	29,673	100	22.8	77.2
Never Married	20,724	100	83.5	16.5
Living together/Cohabiting	758	100	56.7	43.3
District				
Chililabombwe	11,997	100	86.1	13.9
Chingola	29,215	100	84	16
Kalulushi	13,549	100	84.8	15.2
Kitwe	65,409	100	84.1	15.9
Luanshya	27,239	100	81.7	18.3
Lufwanyama	12,932	100	82	18
Masaiti	19,792	100	80.5	19.5
Mpongwe	12,364	100	82.4	17.6
Mufulira	26,097	100	82.7	17.3
Ndola	71,053	100	81.8	18.2

Source: 2000 Census of Population and Housing

It is further shown from Table 3.8 that headship of household for a female is more likely to occur when they are separated (58 percent), divorced (66 percent) and widowed (77 percent). Among the married and never married, the (96 percent) majority of the heads are male.

3.5.4 Marital Status

Categorisation of marital status in the 2000 Census included married, separated, divorced, widowed, never married and co-habiting which was not available in the 1990 Census. Table 3.9 presents the percentage distribution of marital status of population above 12 years by age, sex, residence and district. The majority of males and females in the young age group 15-19 years have never been married. However, about one in six females (17 percent) compared to two percent of males are married.

It is a common practice for males to marry later than females with the latter presenting higher rates of those separated, divorced and widowed than their counterpart. Though not collected in 2000 census, the reported average age at marriage for Copperbelt Province in 1990 was 27 years for males and 22 (21.5) years for females (CSO, 1995). Table 3.9 also shows that the about one in two females in their early 20s are married compared to one in five males of the same age. Another common practice is that of males re-marrying more frequently than females, thus their low proportions in the separated, divorced and widowed categories.

Table 3.9 Percent Distribution of Population 12 years and above by Age, Sex and Marital Status, Copperbelt Province, 2000

Age Group	Married		Separated		Divorced		Widowed		Never Married		Cohabiting		Total Number of Cases	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
12-14	0.8	1.0	0.0	0.1	0.0	0.0	0.1	0.1	98.9	98.6	0.2	0.2	54,573	57,261
15 - 19	2.2	17.1	0.1	1.0	0.1	0.7	0.1	0.3	97.3	80.1	0.2	0.8	87,775	95,874
20 - 24	18.6	52.3	0.8	3.0	0.8	3.3	0.3	1.3	79.0	39.1	0.6	1.0	74,309	84,267
25 - 29	51.9	69.8	1.8	3.7	1.9	5.1	0.6	3.8	43.0	17.0	0.7	0.6	63,883	64,811
30 - 34	75.9	75.3	2.1	3.8	2.9	6.3	1.8	7.1	17.0	7.0	0.4	0.4	51,676	46,495
35 - 39	83.8	76.2	2.2	3.5	2.7	6.4	2.4	9.9	8.6	3.7	0.3	0.3	39,716	37,495
40 - 44	87.7	74.2	2.0	3.2	2.9	6.7	3.4	13.8	4.2	1.9	0.2	0.2	30,573	28,299
45 - 49	88.6	69.6	1.9	3.2	2.8	7.5	4.0	17.7	3.2	1.9	0.1	0.1	24,695	20,265
50 - 54	88.1	60.6	1.9	3.4	3.1	8.7	6.4	25.7	1.9	1.4	0.1	0.1	19,382	14,489
55+	79.4	40.0	2.4	2.9	4.8	7.9	14.2	47.5	2.1	1.7	0.1	0.1	37,134	29,189
Size	217,097	225,450	6,153	11,937	8,376	19,089	9,430	35,947	240,965	183,552	1,695	2,470	483,716	478,445

Source: 2000 Census of Population and Housing

3.5.5 Ethnicity and Citizenship

In the 2000 Census, ethnicity implied indigenous Zambian tribes while citizenship referred to the continent of origin for the entire population of Zambia. Information on racial characteristics is useful in the analysis of economic and social development in societies where the population is not homogenous. Planning of future development of resources is thus made possible through such analyses (UN: 95).

3.5.5.1 Ethnicity

As might be expected, Table 3.10 shows that the population in Copperbelt mostly constitutes persons of African origin, with 99.6 percent. The American, Asian, European and 'Other' ethnic groups make up the remaining 0.4 percent. This is similar to the national with 99.5 percent of the population being persons of African origin. This ethnic composition, dominated by Africans, is similar to that of 1990 Population census, with slight variations in proportions. In 1990, the proportion of Africans was 98.3 percent. Rural and urban comparison shows a higher presence of non-African ethnic groups in urban areas, where 'Other' ethnic groups are dominant (0.19 percent). Table 3.10 further shows that overall and in rural areas, there are more males than females of non-African origin.

Table 3.10 Ethnic Composition of the Population of Copperbelt Province, 2000 by Sex and Residence

Residence/Sex		Ethnic Group						
		African	American	Asian	European	Other	Percent Total	Total Population
Zambia	Male	4,572,026	691	6,272	3,462	11,839	0	4,594,290
	Female	4,722,128	507	5,576	2,720	12,204	0	4,743,135
	Both sexes	9,294,154	1,198	11,848	6,182	24,043	0	9,337,425
Percent of total population		**99.54**	**0.01**	**0.13**	**0.07**	**0.26**	**0**	**100**
Copperbelt	Male	761,007	162	1,120	758	1,503	0	764,550
	Female	759,586	130	962	583	1,483	0	762,744
	Both sexes	1,520,593	292	2,082	1,341	2,986	0	1,527,294
Percent of total population		**99.56**	**0.02**	**0.14**	**0.09**	**0.2**	**0**	**100**
Rural	Male	147,095	16	21	67	307	0	147,506
	Female	142,825	15	16	63	299	0	143,218
	Both sexes	289,920	31	37	130	606	0	290,724
Percent of total population		**99.72**	**0.01**	**0.01**	**0.04**	**0.21**	**0**	**100**
Urban	Male	613,912	146	1,099	691	1,196	0	617,044
	Female	616,761	115	946	520	1,184	0	619,526
	Both sexes	1,230,673	261	2,045	1,211	2,380	0	1,236,570
Percent of total population		**99.52**	**0.02**	**0.17**	**0.1**	**0.19**	**0**	**100**

Source: 2000 Census of Population and Housing

3.5.5.2 Citizenship

The 2000 Population census like past censuses, included questions on citizenship. In Zambia, data on citizenship is collected for purposes of classification of members of its population either as citizens or foreigners.

Table 3.11shows the citizenship status of the foreign population in Copperbelt Province. Overall, the number of foreign citizens in the province has more than trebled from 9,800 in 1990 to 31,982 in 2000. The majority of these hail from Central Africa (29 percent) and Congo DR (23 percent). The influx of foreigners from Central Africa and Congo DR could be mostly attributed to wars and refugees fleeing from civil strife in their countries.

Table 3.11 Foreign Population of Copperbelt Province by Citizenship, 1990 and 2000

Country/Region	Population 2000	Percent 2000	Percent 1990
Zimbabwe	1385	14.1	12.2
Malawi	1079	11.0	16.8
Botswana	23	0.2	0.1
Mozambique	47	0.5	0.7
Angola	194	2.0	1.3
Namibia	2	0.0	-
South Africa	488	5.0	-
Other Southern Africa	30	0.3	1
West Africa	385	3.9	2.3
Ghana	49	0.5	-
Mali	88	0.9	-
Nigeria	33	0.3	-
Senegal	119	1.2	-
Other Western Africa	96	1.0	-
Kenya	61	0.6	-
Tanzania	0		9.2
Uganda	46	0.5	-
Other Eastern Africa	393	4.0	1.2
Central Africa	2874	29.3	9.5
Cameroun	2	0.0	-
Congo	556	5.7	-
Congo DR (former Zaire)	2260	23.1	-
Other Central Africa	56	0.6	-
North Africa	69	0.7	0.7
Egypt	17	0.2	-
Other Northern Africa	52	0.5	-
Other African Countries	5	0.1	-
Europe	732	7.5	5.2
United Kingdom	345	3.5	-
France	10	0.1	-
Germany (East and West)	30	0.3	-
Other Europe	347	3.5	-
America	198	2.0	0.6
United States Of America	82	0.8	-
Canada	43	0.4	-
Other Americas	73	0.7	-
Asia & Oceania	1125	11.5	8.7
Australia	30	0.3	-
China	31	0.3	-
India	877	8.9	-
Japan	11	0.1	-
Other Asia & Oceania	176	1.8	-
Not Stated	664	6.8	30.5
Percent Total		100	100
Total Foreign Citizens	9,800		31,982
Percent Foreign Population	0.6		2.2

Source: 1990 and 2000 Censuses of Population and Housing
Note: Nationals less than five (5) wrere grouped under 'other' totals.

3.6 Economic Characteristics

Data on economic characteristics of the Copperbelt population was collected during the 2000 Census. Economic characteristics pertaining to labour force participation, employment and unemployment, employment status, occupation, industry and educational attainment are covered in detail in Chapter Six of this report. This section mainly provides a summary of economic characteristics (See Table 3.12).

Table 3.12 shows that of the total provincial population, 965,270 comprise those over 12 years, commonly referred to as the *working age population*. Majority of these are found in urban than rural areas (787,789 vs. 177,481) and are mostly females. Of the total working age population in the province, half (51 percent) are economically active or make up the labour-force. Despite dominance of females in the working age population, majority of these are considered economically inactive due to their classification as full-time homemakers.

Table 3.12 Summary of Economic Characteristics, Copperbelt Province, 2000

Characteristics	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Total Population (12 Yrs and Above)	965,270	485,449	479,821	177,481	90,731	86,750	787,789	394,718	393,071
Current Labour Force Size	492,644	322,274	170,370	113,546	67,948	45598	379,098	254,326	124,772
Current Participation Rate	51	66.4	35.1	64	74.9	52.6	48.1	64.4	31.7
Age Dependency Ratio	85.1	84.2	86.0	97.2	98.2	96.3	77.4	81.2	83.8
Economic Dependency Ratio	95.9	50.6	181.6	56.3	33.5	47.4	107.8	55.2	215.0

Source: 2000 Census of Population and Housing

Table 3.12 further shows that age dependency is higher for persons in rural than urban areas, while the opposite is true for economic dependency ratios. It is noted that females in the productive age groups especially those in urban areas tend to experience more stress from persons in non-productive age groups than the male counterparts. For instance, the economic dependency ratio for females in urban areas is over thrice (215) that of those in rural areas (47)

3.7 Summary

Copperbelt's de jure or simply 'true' or resident population recorded in the 2000 census is 1,581,221. However, the de facto population adopted for analytical purposes in this chapter and the rest of the report is 1,527,294 of which 49.9 percent are females. Over the decades, the population has continued to grow at a declining average annual population growth rate of 3.9 percent in 1969-1980 dropped to 1.3 percent in 1980-1990 and further declined to 0.8 percent during the last inter-censal period of 1990-2000. It is most apparent that the high urban population obtaining in the 70s and 80s has substantially dropped whilst the proportion of the rural population has increased from 15 percent in 1990 to 22 percent in 2000. This signifies major urban-rural migration resulting from major declines in economic activities, which have in the past heavily depended on the mining industry. This industry has in the recent past been marred with closures, loss of jobs and main livelihood.

Analysis of the age-sex distribution indicates that overtime Copperbelt Province has maintained a Young population. The proportion of those below the age of 15 years has decreased from 44.6 in 1990 to 43.6 percent in 2000. Population pyramids for 1990 and 2000 indicate a change in the age-sex structure, which could be attributed to increased mortality. This has been observed by huge population gaps for the young population between 10 years and early 20s (as of 2000).

Information on headship of households indicates that males predominantly remain heads of households, with only 17 percent of female heads in the province. In absolute terms, there are thrice more heads of household in urban (217,667) than rural areas (71,980).

Summary economic characteristics of the population show that the overall dependency ratio of 2000 Census was 85 per 100 persons in the economically active group (15-64 years, remained the same as that recoded in 1990. In addition, the chapter reveals that unlike urban counterparts, economically active persons in rural areas have a bigger challenge of providing for those who are economically inactive. Additionally, participation rates for males are higher than females. Notably, however, females present much higher economic dependency ratios than males.

Chapter 4

LANGUAGE OF COMMUNICATION AND ETHNICITY

4.1 INTRODUCTION

Zambia is a country endowed with many languages. A number of people in the country speak more than one language. Officially, there are 73 ethnic groups in Zambia with each of them speaking a dialect of the seven language cluster groups. Though language is not invariably synonymous with tribe, it is a fair assumption that the number of dialects of language clusters in the country is equal to the number of tribes.

ere 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. They represent language clusters around which exist several dialects. Although these languages are taught in schools in specific provinces, the official language of instruction in schools is English. The 2000 Census of Population and Housing collected information on the predominant language of communication in the cluster spoken by an individual as well as the second language. The former referred to the language a person uses most frequently in their day-to-day communication. The second language is the next most frequently used language of communication. The matter of second language shows the phenomenon of trans-tribe character of some languages in that other tribes speak them.

guages presented in this chapter are in five categories. The first set of languages are those most spoken in a given geographical location. Secondly, there are broad groups of languages that are mainly formed by combining languages that were mutually intelligible. For example Tonga, Ila, Lenje and Soli form one language group because they are not mutually unintelligible languages. Thirdly, there is a set of languages that are trans-tribe such as Bemba and Nyanja and have become increasing so. Fourthly, there are some languages that are slowly becoming extinct. Accordingly, when for example a person says they are Chishinga, Tabwa, they will say their mother tongue is Bemba. Fifthly, languages presented in the tables also deal with the category of gender. The chapter discusses the distribution of language in relation to the use by men and women. It has been necessary to make observations in this area to help in getting a clearer picture vis-à-vis language as for example in rural and urban areas.

hould be noted from the onset that children under the age of two years and persons with speech impairment did not report any language of communication. This directly implies that the population reported to speak a predominant language cluster hereafter referred to as language of communication is less than the total population of the country. The population speaking a second language of communication is therefore even smaller.

4.2 Predominant Language of Communication

.1 Provincial Distribution

Table 4.1 presents data on the 22 most spoken languages in the province. The majority of people (73.6 percent) on the Copperbelt speak Bemba as their first language of communication.

Table 4.1: Predominant Language of Communication by Residence, Copperbelt Province, 2000

Predominant Language of Communication	Total	Rural	Urban
Bemba	73.6	34.7	82.7
Lunda (Luapula)	0.2	0.2	0.2
Lala	0.8	1.9	0.6
Bisa	0.2	0.1	0.2
Ushi	0.4	0.6	0.3
Lamba	8.9	42.8	1
Lima	0.1	0.5	0
Tonga	1.1	1.9	1
Lenje	0.2	0.3	0.1
Luvale	0.7	1.7	0.4
Lunda (North-western)	0.9	2.1	0.6
Chokwe	0.5	1.9	0.2
Kaonde	1.3	3.2	0.9
Lozi	0.7	0.4	0.8
Chewa	0.4	0.2	0.4
Nsenga	0.6	0.4	0.6
Ngoni	0.3	0.2	0.4
Nyanja	1.1	0.7	1.2
Mambwe	0.3	0.2	0.3
Namwanga	0.5	0.4	0.6
Tumbuka	0.7	0.5	0.7
English	2.5	0.3	3
Other Language	4.0	4.8	3.8
Total Percent	100	100	100
Total Population	**1,439,298**	**270,376**	**1,168,922**

Source: 2000 Census of Population and Housing

The next most spoken languages on the Copperbelt in descending order were Lamba (8.9 percent), English (2.5 percent) and Kaonde with 1.3 percent of the people using it for the same purpose. The proportion of people using the first three languages has slightly increased to 85 percent of the population compared to 81.2 percent of the population speaking the same languages in 1990.

4.2.2 District Distribution

At district level, Bemba is spoken by a large proportion of the population in seven districts Chililabombwe (79.9), Chingola (79.2), Kalulushi (79.9), Kitwe (83.7), Luanshya (86.7), Mufulira (85.4) and Ndola (78.9) districts. It is important to note here that historically, the majority of the people that emigrated to the copperbelt to work in the mines were from the Luapula and Northern provinces of Zambia. Additionally, the indigenous languages in these provinces belong to the larger Bemba language group. Bemba is also the most predominant language of communication in those two provinces. In Lufwanyama, Masaiti and Mpongwe however, Lamba is the most spoken language with over half of the populations in each of those districts using it. It is interesting to observe that in Chililabombwe and Chingola, Kaonde and Lunda (North-Western) take third and fourth places respectively in predominance after Bemba and Lamba and Bemba and English, respectively. These towns are gateways to the Northwestern Province where the two languages (Kaonde and Lunda) are more predominantly spoken. This geographic factor could be the reason for the high prevalence of these two languages in the province. What is also interesting to note is that the majority of people who speak Ushi are in Mufulira, which is closer to Mansa district in Luapula Province where the Ushi people originate.

Despite being the nations official language a very small proportion of people (2.5 percent) on the Copperbelt speak English as a predominant language of communication.

Table 4.2: Predominant Language of Communication by District, Copperbelt Province, 2000

Predominant Language	Total	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Bemba	73.6	79.1	79.2	79.9	83.7	86.7	19.4	23.1	19.8	85.4	78.9
Lunda (Luapula)	0.2	0.2	0.2	0.2		0.1	0.1	0.1	0.2	0.2	0.2
Lala	0.8	0.3	0.3	0.4	0.4	0.8	0.3	4.5	1.2	0.2	1.1
Bisa	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
Ushi	0.4	0.5	0.1	0.2	0.2	0.3	0.3	0.6	0.2	0.9	0.5
Lamba	8.9	3.5	1.4	2.6	0.5	1.1	52.5	60.1	58.4	0.9	1.5
Lima	0.1	0	0	0	0	0	0.3	0	2.3	0	0
Tonga	1.1	0.6	0.6	0.9	0.9	0.6	1.3	1.4	4.9	0.8	1.4
Lenje	0.2	0	0.1	0.2	0.1	0.1	0.1	0.2	1	0.1	0.2
Luvale	0.7	1.4	1.4	1	0.4	0.4	1.8	0.8	0.6	0.7	0.3
Lunda (North-Western)	0.9	1	2	1.3	0.6	0.4	3.2	0.9	1	0.5	0.4
Chokwe	0.5	0.7	1.1	1.1	0.3	0.1	3.5	0.1	1.1	0.7	0.1
Kaonde	1.3	1.3	2.4	1.7	0.8	0.5	10.3	0.4	0.7	0.5	0.7
Lozi	0.7	0.6	0.6	0.7	0.7	0.5	0.4	0.3	0.5	0.7	0.9
Chewa	0.4	0.5	0.2	0.2	0.4	0.2	0.1	0.2	0.3	0.2	0.6
Nsenga	0.6	0.4	0.4	0.4	0.6	0.5	0.2	0.5	0.4	0.3	0.9
Ngoni	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.6
Nyanja	1.1	1	0.6	0.7	1.1	0.9	0.3	0.9	0.6	0.7	1.8
Mambwe	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.4
Namwanga	0.5	0.8	0.9	0.5	0.4	0.5	0.3	0.4	0.1	0.5	0.6
Tumbuka	0.7	0.9	0.8	0.7	0.8	0.5	0.3	0.4	0.2	0.5	0.9
English	2.5	2.2	2.5	2.6	3.2	1.6	0.1	0.2	0.2	1.9	3.7
Other Language	4	4.3	4.5	4.1	4.2	3.6	4.9	4.4	5.8	3.8	4.1
Total Percent	100	100	100	100	100	100	100	100	100	100	100
Total Population	1,439,298	62,843	155,490	66,874	342,445	136,549	55,483	84,389	54,793	129,890	350,542

rce: 2000 Census of Population and Housing

Predominant Language Groups

e majority of all languages spoken on the Copperbelt are in the Bemba language group. Both rural and urban areas reflect this pattern. The next most widely spoken languages are in the North-western Language group (3.5 percent) followed by English. In the urban areas of Copperbelt Province, however, the next most widely spoken language after the Bemba group is English, followed by languages in the Nyanja group. This suggests a higher prevalence of formal education and employment in urban centers as opposed to rural centers.

Table 4.3: Predominant Language Groups by Sex and Residence, Copperbelt Province, 2000

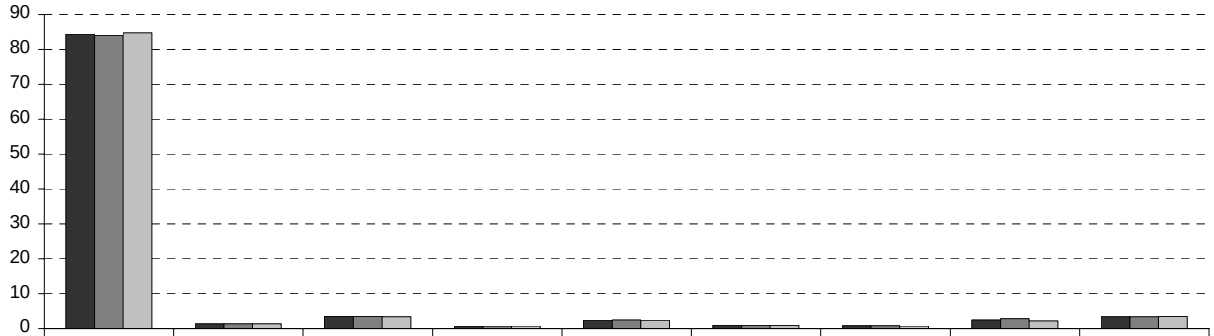
Predominant Language	Total			Rural			Urban		
Group	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba_speaking	84.4	84	84.8	81.2	81	81.4	85.1	84.7	85.6
Tonga_speaking	1.4	1.4	1.4	2.3	2.3	2.3	1.2	1.1	1.2
Northwestern	3.5	3.5	3.4	9.1	9.1	9.1	2.2	2.2	2.1
Barotse	0.7	0.7	0.7	0.4	0.5	0.4	0.8	0.8	0.8

Nyanja_speaking	2.4	2.5	2.4	1.5	1.7	1.4	2.6	2.7	2.6
Mambwe	0.9	0.9	0.9	0.6	0.6	0.6	0.9	0.9	0.9
Tumbuka	0.8	0.8	0.7	0.5	0.6	0.5	0.8	0.8	0.8
English	2.5	2.8	2.2	0.3	0.3	0.2	3	3.3	2.7
Other Language	3.4	3.4	3.5	4.1	3.9	4.1	3.4	3.5	3.3
Total Percent	100	100	100	100	100	100	100	100	100
Total Population	1,439,298	720,643	718,655	270,376	137,366	137,366	1,168,922	583,277	585,645

e: 2000 Census of Population and Housing

ere are more females than males who speak languages in the Bemba group. There are more males however, than females throughout the Copperbelt who speak English.

Figure 4.1: Predominant Language Group by Sex, Copperbelt Province, 2000.



	Bemba	Tonga	Northwestern	Barotse	Nyanja	Mambwe	Tumbuka	English	Other Language
oth Sexes	84.4	1.4	3.5	0.7	2.4	0.9	0.8	2.5	3.4
Male	84	1.4	3.5	0.7	2.5	0.9	0.8	2.8	3.4
emale	84.8	1.4	3.4	0.7	2.4	0.9	0.7	2.2	3.5

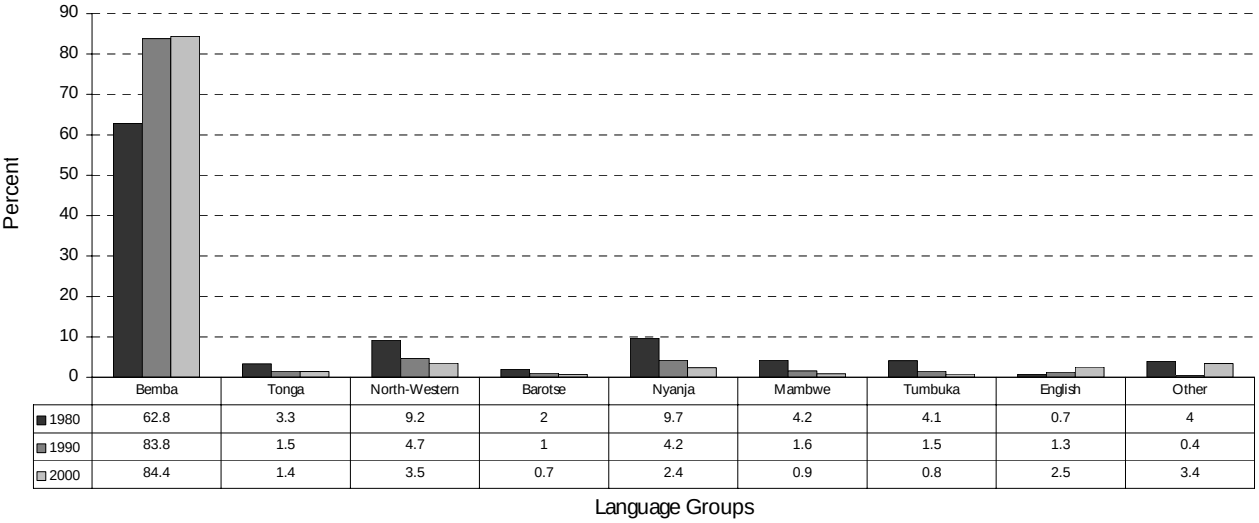
Language Group

: 2000 Census of Population and Housing

Trends in Language Groups' Distribution, 1980 – 2000

ure 4.2 and Table 4.4 show trends in the percentage share of each language group for the period 1980–2000. The Bemba group has not only remained the most predominant but has also increased during the last 20 years. It was followed by languages in the Nyanja and North-western groups respectively. However, over the thirty years both language groups have diminished in predominance. In the 1990 and 2000 censuses the North-western language group rose to and maintained second place in predominance after the Bemba group, while the Nyanja group lost third place to English and is now in fourth place. The English language has more than tripled over the thirty-year period to end up in third place in predominance.

Figure 4.2 : Predominant Language Groups by Census Year, Copperbelt Province, 1980-2000



Source: CSO, 1980, 1990 and 2000 Census of Population and Housing.

ble 4.4: Predominant Language Groups by Census year, Copperbelt Province. 1980 – 2000.

Language group	Percentage of Total Population		
	1980	1990	2000
Bemba	62.8	83.8	84.4
Tonga	3.3	1.5	1.4
North-Western	9.2	4.7	3.5
Barotse	2	1	0.7
Nyanja	9.7	4.2	2.4
Mambwe	4.2	1.6	0.9
Tumbuka	4.1	1.5	0.8
English	0.7	1.3	2.5
Other	4	0.4	3.4
Total Percent	100	100	100
Total Population	**1,249,252**	**1,350,634**	**1,439,298**

rce: CSO, 1980, 1990 and 2000 Census of Population and Housing.

4.6 Second Language of Communication

As a direct consequence of the presence of so many languages of communication in Copperbelt Province, a fairly large proportion of the people speak more than one language. For each respondent, the 2000 census collected information on not only the predominant language of communication but their second language of communication as well. From Table 4.5 it is noted that 94.3 percent or 1.44 million people in the province spoke a second language.

The distribution of the second language of communication follows a similar pattern to that of the predominant language. Most notable here is the fact that the most spoken second language of communication is English with a percentage share of 23.0 percent. Thus the three most widely spoken languages as the second languages are English (23.0 percent), Bemba (9.7 percent), and North-Western (2.8 percent). These three main languages represent more than one-third of the population that reported speaking a second language of communication.

Table 4.5: Percent Distribution of Population by Second Language and Residence: Copperbelt Province, 2000

Second Language of Communication	Total	Rural	Urban
Bemba	9.7	17.4	7.9
Lunda (Luapula)	0.2	0.1	0.2
Lala	0.8	1.1	0.7

Bisa	0.2	0.1	0.2
Ushi	0.3	0.3	0.3
Lamba	2.0	6.4	1.0
Tonga	0.7	0.7	0.7
Lenje	0.2	0.5	0.2
Northwestern	2.8	5.0	2.3
Luvale	0.5	0.8	0.4
Lunda (North-western)	0.6	1.0	0.5
Chokwe	0.3	0.6	0.2
Kaonde	1.3	2.5	1.1
Lozi	0.5	0.4	0.5
Chewa	0.3	0.2	0.4
Nsenga	0.7	0.4	0.8
Ngoni	0.3	0.2	0.4
Nyanja	2.3	1.6	2.4
Mambwe	0.4	0.2	0.4
Namwanga	0.7	0.3	0.8
Tumbuka	0.7	0.4	0.8
English	23.0	4.4	27.3
Other Language	51.1	54.9	50.2
Total Percent	100	100	100
Total Population	1,439,298	270,376	1,168,922

Source: 2000 Census of Population and Housing

Table 4.6 presents the distribution of the Second language groups by sex and residence. Disaggregated by sex and residence, the language groups present a pattern similar to that of predominant languages with the exception of the proportion of the population using English that is significantly higher. This may be attributed to the fact that it is the nation's official language and as such many people who have had some years of schooling speak it.

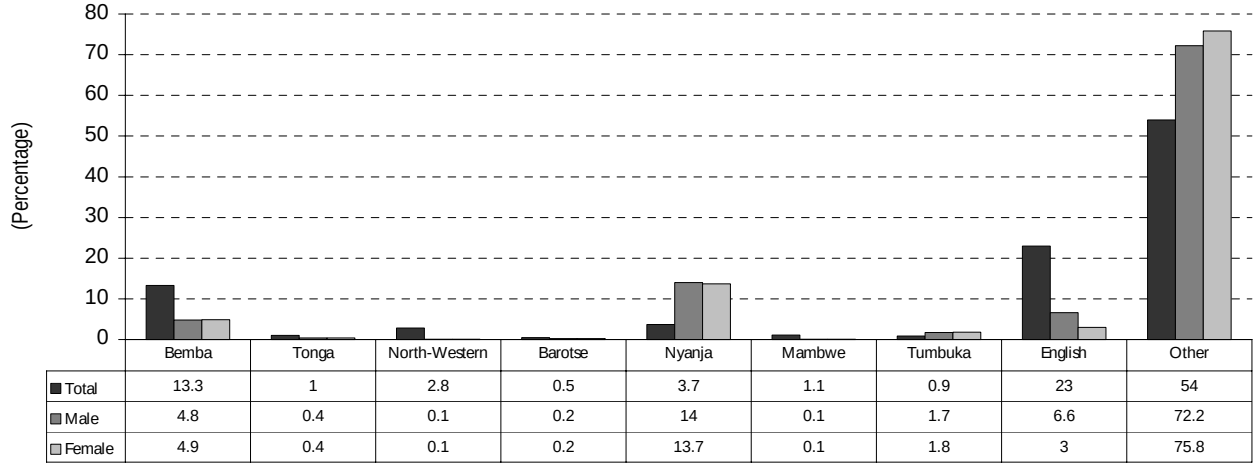
Table 4.6: Percent Distribution of Population by Second Language, Sex and Residence: Copperbelt Province, 2000

	Total			Rural			Urban		
Language Group	**Both Sexes**	**Male**	**Female**	**Both Sexes**	**Male**	**Female**	**Both Sexes**	**Male**	**Female**
Bemba	13.3	4.8	4.9	25.8	25.7	25.8	10.4	8	7.9
Tonga	1	0.4	0.4	1.3	1.3	1.2	1	0.9	1.1
North-Western	2.8	0.1	0.1	5	5	5	2.3	2.2	2.4
Barotse	0.5	0.2	0.2	0.4	0.5	0.4	0.5	0.5	0.6
Nyanja	3.7	14	13.7	2.4	2.6	2.1	4	3.8	4.2
Mambwe	1.1	0.1	0.1	0.5	0.5	0.5	1.3	1.1	1.4
Tumbuka	0.9	1.7	1.8	0.4	0.5	0.4	0.9	0.9	1
English	23	6.6	3	4.4	6.1	2.7	27.3	30.6	24
Other	53.7	72.1	75.8	59.8	57.8	61.9	52.3	52	57.4
Total Percent	100	100	100	100	100	100	100	100	100
Total Population	1,439,298	720,643	718,655	270,376	137366	133010	1,168,922	583,277	585,645

rce: 2000 Census of Population and Housing

Language groups showing dominance in magnitude are English (23.0 percent), Bemba (13.3 percent), and Nyanja (3.7 percent). These three language groups account for almost two fifths of the population speaking a second language (40.0 percent). It is noted that English is spoken as the second language by more than one quarter (27.3 percent) of the population in urban areas compared with just 4.4 percent speaking the language in rural areas. There is also a significant difference between urban women who speak English as a second language (24.0) and their rural counterparts at only 2.7 percent. Furthermore, the only two language groups that are spoken by more males than females are English and Nyanja.

Figure 4.3: Percent Distribution of Second Language of Communication by Sex, Copperbelt, 2000



	Bemba	Tonga	North-Western	Barotse	Nyanja	Mambwe	Tumbuka	English	Other
Total	13.3	1	2.8	0.5	3.7	1.1	0.9	23	54
Male	4.8	0.4	0.1	0.2	14	0.1	1.7	6.6	72.2
Female	4.9	0.4	0.1	0.2	13.7	0.1	1.8	3	75.8

rce: 2000 Census of Population and Housing

4.6 ETHNICITY

he 2000 Census of Population and Housing, seven broad groups of tribes were identified. These are: Bemba group, Tonga group, North-Western group, Barotse group, Nyanja or Eastern Group, Mambwe group and the Tumbuka group. The groups are such that all the tribes in Zambia belong to one of these broad tribal groupings. The Bemba group includes all tribes of Luapula Province, some tribes in Central and Copperbelt provinces and all but those tribes belonging to the Mambwe group in the Northern Province. The Tonga group consists of all the tribes of Southern Province in addition to Lenje from Central Province and also the Soli and Gowa tribes from Lusaka province. The North-Western and Barotse groups consist of all the tribes of the North-Western and Western Provinces respectively. The Nyanja group (getting its name from the lingua franca from the languages spoken by the people in its group) consists of some tribes of the Eastern Province including the Chikunda of Lusaka Province. Lungu, Mambwe Namwanga, Wina and Tambo make up the Mambwe group while the Tumbuka group is made up of Tumbuka, Senga and the Yombe on the northern part of Eastern Province bordering the Northern Province.

The 21 most predominant ethnic groups in the Copperbelt Province are shown in Table 4.7. In descending order, the 10 largest ethnic groups on the Copperbelt are Bemba (32.7 percent), Lamba (9.9 percent), Lala (5.1 percent) and Tumbuka and Kaonde at 4.7 percent each. Others are: Nsenga (4.2 percent), Namwanga (4.1 percent), Ushi (3.5 percent) and Ngoni and Tonga at 3.1 percent of the total population each.

ble 4.7: Ethnic groups by Residence, Copperbelt Province, 2000

Ethnic group	Total	Rural	Urban
Bemba	32.7	15.3	36.8
Lunda (Luapula)	1.5	0.6	1.7
Lala	5.1	5.5	5.0
Bisa	1.8	0.7	2.0
Ushi	3.5	2.7	3.7
Ngumbo	1.0	0.4	1.2
Lamba	9.9	36.7	3.5
Tonga	3.1	3.1	3.1
Lenje	1.1	1.4	1.0
Luvale	2.1	3.1	1.8
Lunda (N/West)	2.9	4.3	2.6
Chokwe	1.3	3.1	0.8
Kaonde	4.7	6.9	4.1
Lozi	2.2	1.3	2.4
Chewa	2.6	1.1	2.9
Nsenga	4.2	1.9	4.8
Ngoni	3.1	1.3	3.5
Mambwe	2.2	0.9	2.5
Namwanga	4.1	1.7	4.6
Tumbuka	4.7	2.0	5.3
Africans	1.3	1.9	1.1
Others	4.9	4.1	5.6
Total Percent	**100**	**100**	**100**
Total Population	**1,527,294**	**290,724**	**1,236,570**

Source: 2000 Census of Population and Housing

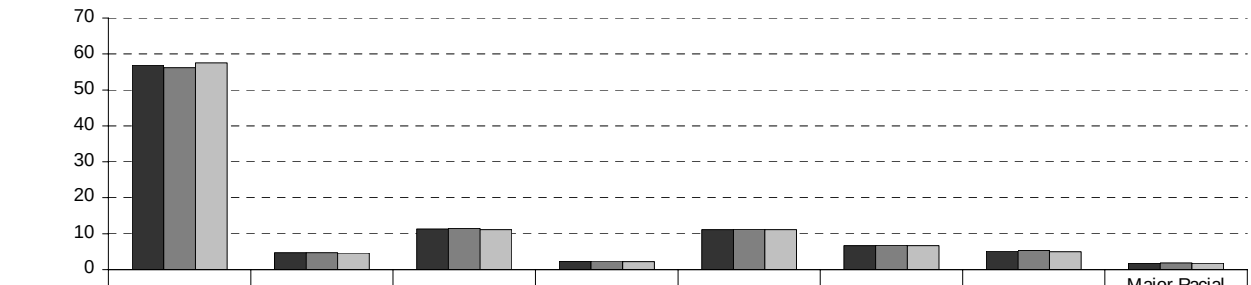
These 10 groups, representing 6 of the nation's nine provinces, account for over three quarters of the ethnic groups on the Copperbelt. It is worth noting here that 3 of the 10 largest ethnic groups above are from the Eastern Province. These three ethnic groups are Tumbuka, Nsenga and Ngoni and they account for over a tenth of all ethnic groups on the Copperbelt. The first two largest ethnic groups correspond with the first two most widely spoken languages (see previous section).

In terms of residence, Bemba, Ushi and the three Eastern province ethnic groups (Tumbuka, Nsenga, Ngoni) are more prevalent in urban than in rural areas of the province. There are more than twice as many Bemba people in urban than in rural areas. Conversely, tribes such as the Lamba, Lala, Kaonde (North western) and Tonga (Southern) are more prevalent in the rural areas. These tribal groupings with the exception of Tonga (Southern) are largely rural populations because, unlike the others, they did not migrate to the Copperbelt to work in the mines. The Copperbelt is the principal settlement of the Lamba people. The Lala and Kaonde people are from the surrounding geographical areas.

Broad Ethnic Groups

e distribution of broad ethnic groups, as defined in the introduction above, are analyzed sex and residence (see Table 4.8). Tribes in the Bemba ethnic group account for more than half of all tribes in Copperbelt province. Additionally, 63.5 percent and 55.3 percent of the people belonging to the Bemba tribal group reside in rural and urban areas respectively. The distribution of people of the Bemba group by sex shows very little.

Figure 4.4: Broad Ethnic Group by Sex, Copperbelt Province, 2000



	Bemba	Tonga	North-Western	Barotse	Nyanja	Mambwe	Tumbuka	Major Racial Groups
Both Sexes	56.9	4.7	11.3	2.3	11.1	6.7	5.2	1.8
Male	56.2	4.7	11.5	2.4	11.2	6.8	5.3	1.9
Female	57.5	4.6	11.1	2.2	11.1	6.7	5	1.8

Language Group

urce: 2000 Census of Population and Housing

ure 4.4 further reveals that in order of size, the North-Western Group is the next largest of the tribal groups (11.3 percent) of the population in the province, followed by the Nyanja Group (11.1 percent). The others are Mambwe group (6.7 percent), Tumbuka (5.2 percent), Tonga (4.7 percent) and Barotse (2.3 percent). Other categories, which are included in non-Zambian tribes/ethnic groups accounted for 1.8 percent. The distribution by residence of all these tribes does not show much variation.

ble 4.8 Broad Ethnic Groups by Sex and Residence, Copperbelt Province, 2000

Ethnic	Total			Rural			Urban		
Group	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba	56.9	56.2	57.5	63.5	62.5	64.6	55.3	54.7	55.9
Tonga	4.7	4.7	4.6	4.8	5.0	4.7	4.6	4.7	4.6
North-Western	11.3	11.5	11.1	18.0	18.2	17.8	9.7	9.9	9.6
Barotse	2.3	2.4	2.2	1.4	1.5	1.3	2.6	2.7	2.5
Nyanja	11.1	11.2	11.1	4.9	5.2	4.6	12.6	12.6	12.6
Mambwe	6.7	6.8	6.7	2.8	2.9	2.6	7.6	7.7	7.6
Tumbuka	5.2	5.3	5.0	2.3	2.4	2.2	5.9	6.0	5.7
Major Racial Groups	1.8	1.9	1.8	2.3	2.3	2.2	1.7	1.7	1.5
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total Population	**1,527,294**	**764,550**	**762,744**	**290,724**	**147,506**	**143,218**	**1,236,570**	**617,044**	**619,526**

rce: 2000 Census of Population and Housing

provincial level, more than three quarters of the population belong to the Bemba, North-western and Nyanja tribal groups. This distribution is the same by residence as well.

le 4.9 shows that seven (7) out of ten (10) districts in Copperbelt Province have Bemba as the most predominant ethnic group at district level. The seven districts follow the provincial pattern. The other three districts, which are an exception, have Lamba as the most predominant ethnic group. These are Lufwanyama, Masaiti and Mpongwe. The three are rural districts

ble 4.9. Ethnic Groups by District, Copperbelt Province, 2000.

Ethnic Group	Total	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Bemba	32.7	39.1	38.9	36.4	38.1	34.3	9	10.8	10.8	39.8	32.3
Lunda (Luapula)	1.5	1.6	1.6	1.5	1.6	1.5	0.2	0.3	0.4	2.9	1.3
Lala	5.1	2.9	2.3	2.9	4.1	8.7	1.4	11.2	3.5	3.8	6.6
Bisa	1.8	1.9	1.1	1.2	1.8	3.6	0.3	0.7	0.6	2.1	1.9
Ushi	3.5	2.4	1.5	2.1	2.7	4.4	1.2	2.4	1	7.6	4.8
Chishinga	0.5	0.5	0.8	0.4	0.4	0.5	0.1	0.1	0.1	1.4	0.2
Ngumbo	1	1	1.2	1	1.7	0.6	0.1	0.2	0.1	2.5	0.5
Lamba	9.9	5.6	3.3	4.7	2.8	3.9	44.2	50.3	47.6	3.1	4.7
Tabwa	0.3	0.2	0.3	0.2	0.3	0.3	0	0.1	0.1	0.8	0.3
Swaka	0.4	0.1	0.1	0.2	0.3	0.3	0.1	1.1	0.6	0.2	0.6
Tonga	3.1	1.9	2.3	2.9	3.1	2.5	2.2	2.8	6	2.3	3.8
Lenje	1.1	0.5	0.6	0.7	0.9	1.4	0.8	1.3	3.4	0.6	1.4
Soli	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.3
Luvale	2.1	3.5	3.2	3.9	2.1	1.6	2.8	1.4	1.6	2.1	1.3
Lunda (N/West)	2.9	3.4	5.6	5.1	2.8	2.1	5.2	1.8	1.9	1.9	1.9
Luchazi	0.3	0.3	0.5	0.3	0.3	0.2	0.4	0.1	0.3	0.5	0.1
Chokwe	1.3	1.9	2.3	3.8	1	0.4	5	0.1	1.5	1.4	0.3
Kaonde	4.7	6	7.2	6.4	4.3	3.5	16.9	1.8	3.9	3	3.2
Lozi	2.2	2.3	2.1	2.4	2.4	1.9	1.1	1.2	1.5	1.8	2.7
Chewa	2.6	1.8	1.8	1.8	2.8	2.5	0.6	1.3	0.9	1.8	4.1
Nsenga	4.2	3	3.1	3.2	5	6.1	1	2.1	1.8	3	5.6
Ngoni	3.1	2.2	2.3	2.2	3.4	3.9	0.7	1.3	1	2.3	4.7
Nyanja	0.6	0.2	0.3	0.6	0.9	0.6	0.2	0.4	0.5	0.6	0.7
Kunda	0.5	0.5	0.3	0.4	0.7	0.7	0.1	0.2	0.1	0.5	0.8
Lungu	0.4	0.4	0.3	0.4	0.4	0.4	0.1	0.1	0	0.5	0.5
Mambwe	2.2	2.3	2.7	2.4	2.3	2.2	0.5	0.7	0.7	2.4	2.6
Namwanga	4.1	6.3	5.6	4.7	3.9	4.9	1.3	1.4	0.8	5.1	3.9
Tumbuka	4.7	5.2	5.4	5.1	6	4.9	1.2	1.8	1.1	3.7	5
Senga	0.5	0.4	0.6	0.4	0.5	0.4	0.2	0.2	0.1	0.5	0.6
Africans	1.3	0.5	1.1	0.9	1.4	0.5	1.4	1.8	4	0.5	1.5
Other	1.2	1.9	1.5	1.6	1.7	1.0	1.7	0.8	3.9	1.1	1.8
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total Population	**1,527,294**	**66,692**	**164,964**	**70,656**	**362,423**	**144,009**	**59,863**	**90,711**	**59,483**	**137,272**	**371,221**

Source: 2000 Census of Population and Housing

4.8 Summary

Overall, there were 1,439,298 persons who spoke predominant language. The same number of people also spoke a second language.

As the predominant language of communication, Bemba remains the most widely spoken language in Copperbelt Province with a percentage share of 73.3 percent of the whole population. Lamba is the next most widely spoken language at 8.9 percent.

The distribution of languages by residence shows that of the 5 most spoken predominant language groups of communication, Bemba, English and Nyanja are more widely used in urban areas as opposed to Tonga, and Northwestern that are mostly spoken in rural areas.

More than twice as many people speak Bemba in urban than in rural areas (82.7 percent versus 34.7 percent). About 3 times as many people speak Lala and Kaonde in rural areas (1.9 and 3.2 percent respectively) than in urban areas (0.6 and 0.9 percent respectively) whereas Lamba speakers are by far more in rural than in urban areas; (42.8 percent versus 1.0 percent)

The most commonly spoken second language of communication in Copperbelt Province is English 23.0 percent followed by Bemba 13.3 percent. Rural residents outnumber urban dwellers in almost all the major second languages of communication. By sex males and females have a fairly balanced use of all major second languages of communication.

Chapter 5

EDUCATION CHARACTERISTICS

5.1 Introduction

Education plays a fundamental role in the overall development of a nation. It is for this reason that education has been declared by many countries as a human rights issue as attested to by the 1990 Jomtien declaration on Education For All and 1990 Convention on the Rights of the Child. As such the Zambian Government has recognized the important role education plays in grooming morally and intellectually upright individuals with the intentions of using the acquired skills and knowledge for the overall development of the country.

However, these declarations have come under threat in the light of economic recessions being experienced by many developing countries including Zambia. In the case of Zambia, the post independence era was marked by drastic policy shifts in the education sector. The sector experienced exceptional expansion during the early years of political independence as a result of efforts aimed at redressing previous impediments and discrimination in the case of access and participation in education. After 1990, two major policies were at play in as far as education provision was concerned, namely "Focus on Learning of 1992 and "Educating Our Future" of 1996. Despite these well-articulated policies, the last decade witnessed subdued expansion in the sector mainly as a result of new policy initiatives, which included among others, liberalized market economy with its attendant privatization, liquidation/ closure of industries and retrenchments, and the reintroduction of user service fees as a cost-sharing measure.

The embracement and implementation of these largely over ambitious policies of economic liberalization and privatization as blueprints for socio-economic transformation under Structural Adjustment Programme (SAP), adversely affected all sectors of the economy including education. These new economic measures resulted in increased poverty levels, which manifested themselves in high unemployment, poor performance of the agriculture, education and health sectors, and growth of the informal sector at the expense of the shrinking formal sector. Education and poverty have definitely an impact on each other. Therefore periodical monitoring of an education system is beyond doubt necessary especially that education has become a human rights issue.

5.2 Census undertaking and Education

There are four main sources of education statistics in Zambia:

- Annual school censuses (sometimes supplemented by school surveys) conducted by the Ministry of Education
- Household Surveys conducted by the Central Statistical Office
- Population Censuses conducted by Central Statistical Office, and
- Administrative registers

The strength of a population census is that it is undertaken on the basis of a complete count of the population. This means that analysis of the education sector in this case can be done even at the smallest administrative unit in the country such as districts and constituencies. For any conscious policy target setting, there is need to identify areas where primary, secondary or tertiary school attendance is particularly poor.

Therefore, censuses in general provide a good basis for monitoring the participation of the population in an education system and also reveal the absorption power of the same system. The 2000 Census of Population and Housing captured the following education aspects for all persons as per UN recommendations for the 2000 census round:

- Literacy, i.e. whether an individual can read and write in any language,
- School attendance
- Academic Educational attainment
- Professional or Vocational Education attainment, and

- Fields of Study

This chapter looks at school attendance as a measure of participation in the education system at all levels and literacy levels as a measure of effectiveness of the education system. In addition, various fields of study available in Copperbelt Province have been shown.

5.3. CONCEPTS AND DEFINITIONS

- **EDUCATIONAL SYSTEM**

An education system refers to a set of programmes tailored to impart knowledge and skills, formally acquired through a framework of an established schooling system, or informally through interaction with one's society, by an individual. The term "Education" is understood to comprise all deliberate, systematic and organized communication designed to bring about learning.

Zambian education system conforms to the 1997 International Standard Classification of Education (ISCED97), which consists of 7 levels of education provision. These levels can be outlined as follows:

- Level 0: Early childhood Education programmes including Pre-Schools
- Level 1: Primary education programmes
- Level 2: Junior Secondary Education programmes (Also referred to as Upper Basic education)
- Level 3: Upper Secondary Education programmes (Also referred to as High School education)
- Level 4: "A" Level Education programmes
- Level 5: College and undergraduate education programmes, and
- Level 6: Graduate and Post Graduate education programmes

In Zambia, formal education is mainly based on a three-tier system, which starts with primary education from grade 1 to 7, followed, by secondary education from grade 8 to 12. The next level relate to tertiary education, which basically include college and university education. Selective examination of pupils in grades 7, 9 and 12 inhibit universal progression of pupils from one level to another.

The primary and secondary cycles last for 7 and 5 years respectively. Alternatively, the duration of tertiary education varies widely depending on the education program load and certification requirements. These three levels constitute formal education system in Zambia. According to the 1996 education policy, the Government of Zambia intends to abolish grade 7 examinations by 2015 in order to achieve universal education up to grade 9.

In addition to primary and secondary education, the last two decades saw the mushrooming of community schools and institutions offering early childhood education such as pre-schools, mainly in urban areas. Some of the pre-schools have since started enrolling children in formal grades. This development has made it increasingly difficult to monitor school enrolment and attendance since these schools fall outside the data collection and monitoring system implemented by the Ministry of Education. In addition to early childhood institutions, there has been an increase in community schools, which mainly cater for the less privileged or vulnerable children including school dropouts and orphans. Some of the major characteristics of community schools are that they are near to homes of learners. They are not demanding in terms of entry requirements and that they are community driven. The enrolment levels in these schools have tremendously increased from less than 10,000 in 1996 to over 50,000 learners by 2000 (ZCSS, 1999). However, efforts are under way towards the establishment of a sector–wide Education Management Information System (EMIS), which will comprehensively cover all institutions of learning including privately run ones and community schools.

Another form of learning in Zambia takes place through non-formal education, which comprises continuing and adult education. There is also education for better living that is normally imparted through both the media and theatre.

- **SCHOOL ATTENDANCE**

School attendance in population censuses is defined as attendance at any accredited educational institution or programme, public or private, for organized learning at any level of education. The primary school entry age in Zambia is seven years. Taking the admission age to grade 1 as 7 years, the following age-grade match applies for a given educational level:

- Lower primary (Lower basic) grades 1 to 4 correspond to pupils aged 7 to 10 years.
- Upper primary (Middle basic) grades 5 to 7 correspond to pupils aged 11 to 13 years.
- Junior secondary (Upper basic) grades 8 to 9 correspond to pupils aged 14 to 15 years.
- Senior Secondary (High School) grades 10 to 12 correspond to pupils aged 16 to 18 years.
- Students above the age of 18 years are, by expectation, supposed to be in higher institution of learning.

However, there are in most cases age-grade mismatches arising from either early or late entries in a given level of education.

- **GROSS SCHOOL ATTENDANCE RATE**

Gross School Attendance Rate is defined as the ratio of the population aged five years and above attending a specified education level to the applicable official school-age population. In some instances where there is rampant 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 proportion of the school-age population that is attending a designated level of education. This indicator is much more refined than the crude gross attendance rate 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. The difference between gross and net school attendance is an indication of the degree of under and over age enrolment in a designated level of education.

- **ACADEMIC EDUCATION COMPLETED**

This is the highest level of formal education that an individual has attained or completed regardless of duration in school. Education qualifications acquired such as certificate, diploma, etc, are included in the educational outputs. If an individual is attending grade seven, the highest level completed is grade six. In this chapter, adding 1 to the variable defining highest level of education completed determines current grade for those reported to be presently attending school.

- **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 SAID TO BE LITERATE.

5.4 LITERACY RATE

General literacy rate refers to the proportion of the population aged 5 years and above who can read and write. Adult Literacy rate refers to the percentage of the population aged 15 years and above who can read and write. Conversely, Youth Literacy Rate is in this case defined as the proportion of the population aged 15 to 24 years who are literate.

5.4.1 Literacy Levels for the Population Aged 5 Years and Above.

A literate nation is more likely to develop than an illiterate one since the former is well informed and much more knowledgeable about realities of life. Table 5.1 shows that in the year 2000 the literacy rate for the proportion of the population aged 5 years and above in Copperbelt Province, marginally increased from 69.9 percent to 70.5 percent between 1990 and 2000. It is worth noting that literacy levels for those aged 5 years

and above in the province is higher than the national average of 55.3 percent. A similar pattern is also observed for both males and females. The rate for the male population remained at 74 percent since 1990 while the rate for the female population increased from 65.4 to 66.8 percent during the same period.

Results further show that the problem of illiteracy is still more common among the female than their male counterpart since 1990. The table reveals that almost 1 in every 3 females (66.8 percent) was illiterate compared to nearly 1 in every 4 males (74.3 percent) by the year 2000.

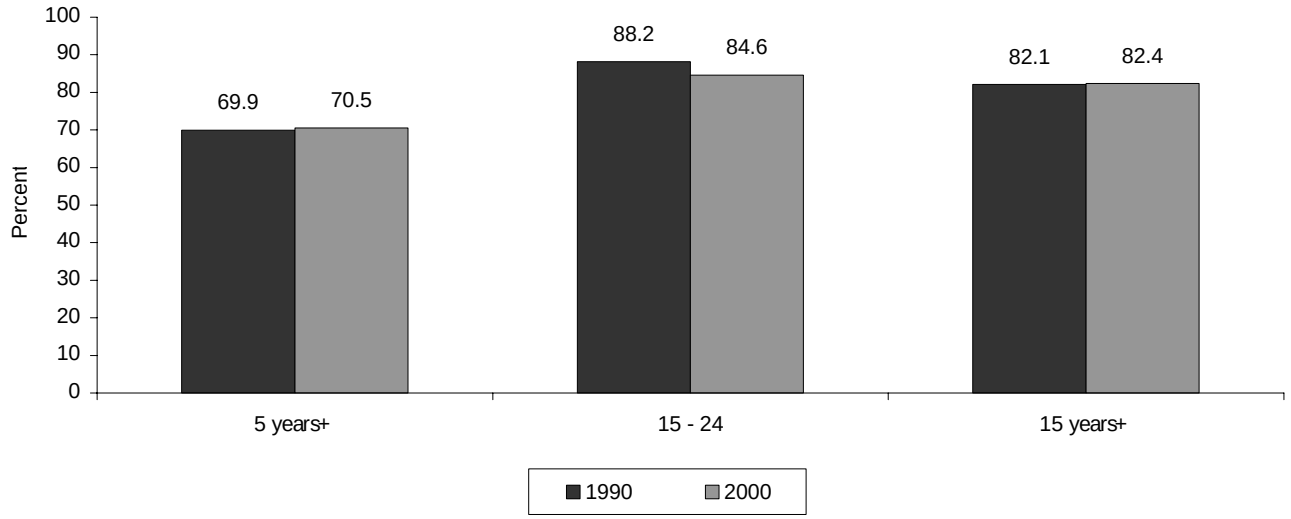
The problem of illiteracy was more pervasive among the rural population. In rural areas, the proportion of the population that could read and write in any language almost stagnated at 52.6 percent between 1990 and 2000. On the other hand, literacy levels for the general population slightly increased in urban areas by 2 percentage points during the same period, from 72.7 to 75.3 percent. More than half of the rural population aged 5 years and above remained illiterate compared to only a quarter of the urban population in the Copperbelt.

Table 5.1: Literacy Rates by Age Group and Sex, Copperbelt Province, 1990 – 2000

Sex, Residence and District	5 Years and Above	15 - 24	15 and Above	Population
Zambia (1990)	55.3	74.9	66.0	6,181,285
Copperbelt (1990)				
Both sexes	69.9	88.2	82.1	1,206,663
Male	74.2	90.1	88.3	611,568
Female	65.4	86.4	75.5	595,095
Rural	53.4	72.8	63.3	176,512
Urban	72.7	90.6	85.4	1,030,151
Zambia (2000)	55.3	70.1	67.2	7,680,705
Copperbelt (2000)				
Both sexes	70.5	84.6	82.4	1,287,161
Male	74.3	87.2	88.1	644,591
Female	66.8	82.3	76.7	642,570
Rural	52.6	67.1	65.6	269,158
Urban	75.3	88.7	86.9	1,018,003
District				
Chililabombwe	71.7	85.8	83.0	55,919
Chingola	74.2	88.1	84.7	138,838
Kalulushi	73.1	85.9	82.9	59,859
Kitwe	74.9	88.7	87.2	306,940
Luanshya	74.2	87.7	84.7	123,107
Lufwanyama	47.5	63.2	61.9	48,805
Masaiti	53.5	68.3	67.1	74,400
Mpongwe	51.7	64.1	66.3	47,965
Mufulira	75.4	89.9	86.9	116,818
Ndola	71.1	84.6	83.2	314,510

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

Figure 5.1: Literate Population by Age Group,(Percent), Copperbelt Province, 1990 and 2000



Source: CSO, 1990 and 2000 Censuses of Population and

Comparison of literacy rates among districts in Copperbelt Province reveals high literacy rates for the general population in Mufulira (75.4 percent) and Kitwe (74.9 percent), followed by Luanshya (74.2 percent), Chingola (74.2 percent), Kalulushi (73.1 percent), Chililabombwe (71.7 percent) and Ndola districts (71.1 percent) in the year 2000. The lowest literacy rates were observed in predominantly remote districts such as Lufwanyama (47.5 percent), Mpongwe (51.7 percent) and Masaiti (53.5 percent). Overall, results indicate that the population in predominantly rural districts is less likely to be literate than the population in urbanized districts. This is the case mainly because of the disparities in the availability of educational facilities between urbanized and rural districts.

5.4.2 Literacy Levels for the Population Aged 15 – 24 Years (Youth Literacy)

Youth literacy rate had declined from 88.2 percent in 1990 to 84.6 percent in 2000. However, this rate still remains above the national average that declined from 74.9 percent in 1990 to 70.1 percent in 2000. The drop in the literacy rates of the population aged 15 to 24 years was more drastic among females (from 86.4 to 82.3 percent) than the males (from 90.1 percent in 1990 to 87.2 percent in 2000). The problem of youth illiteracy still remained pervasive among female than male youths between 1990 and 2000. By the year 2000, about 13 percent of the males aged 15 to 24 years were illiterate compared to 18 percent of females of the same age group.

In comparison to the national, the youth literacy rate for the province in 2000 is above the national youth literacy rate of 70.1 percent.

The problem of youth illiteracy is still more of a rural than urban phenomena. By the year 2000, 33 percent of the population aged 15 to 24 years in rural areas compared to only 11 percent in urban areas was illiterate. The youth literacy rate in rural areas plummeted by 6 percentage points, from 72.8 percent to 67.1 percent, between 1990 and 2000. The rate equally dropped in urban areas by almost 2-percentage points during the same period.

Mufulira District recorded the highest youth literacy rate of about 90 percent in the year 2000, followed by Kitwe (89 percent), Chingola and Luanshya districts, each at 88 percent. The districts with the lowest proportion of literate youths were Lufwanyama, Mpongwe and Masaiti, at 63, 64 and 68 percent, respectively. Thus, the problem of youth literacy is more identifiable with predominantly remote districts than the urbanized ones in Copperbelt Province.

5.4.3 Literacy Levels for the Population Aged 15 Years and Above (Adult Literacy Rates)

Adult literacy rate for 2000 stagnated at the 1990 level of 82 percent. The proportion of female adults who were literate barely increased by 1 percentage point over the 1990 level of 76 percent while the rate for males almost stagnated at 88 percent. In rural areas, the rate increased by 3 percentage points over the 1990 level (63 percent) compared to the increase of 2 percent in the case of urban areas. By 2000, the problem of adult illiteracy still remained more among females (23 percent) than males (12 percent). The provincial adult literacy rate is above the national adult literacy rate of 67.2 percent

Kitwe and Mufulira, at 87 percent each, were in the year 2000 associated with the highest percentages of adults who could read and write in any language compared to the rest of the districts in the Copperbelt province. Conversely, Lufwanyama, Mpongwe and Masaiti districts recorded the lowest rates of 62, 66 and 67 percent, respectively. The remaining districts had rates, which were above the provincial average of 82 percent.

5.5 School Attendance

One of the measures used to assess the participation of the population in an education system and the absorption capacity of the system is school attendance. Analysis of school attendance becomes more meaningful if the information available relates to the population of official school age.

Table 5.2 shows the population aged 5 years and above presently attending school in Copperbelt Province. Overall, the proportion of the population presently attending school stagnated at 33 percent between 1990 and 2000. Compared to the national average, the proportion of the population currently attending school still remains higher for the province than the national (33 percent for the province against 26.7 percent for the nation). Since 1990, there have been proportionately more males than females attending school. The percentage of both males and females attending school remained at the 1990 level of 34 and 32 percent, respectively.

During the same period under review, there was an increase in the proportion of children aged 5 to 14 years presently attending school between 1990 and 2000. This population cohort almost befits the official primary school age population. Marginal declines were recorded for the secondary and tertiary school age population (15 – 24 years).

This decline for this age group could be attributed to lack of both financial and physical access to higher education. Whilst there have been a lot of activities regarding expansion of basic education through BESSIP, little has been done to increase access to higher levels of education. There is absolute need to increase participation in secondary and tertiary education by increasing financial resources to these sectors in all the provinces including Copperbelt province.

Table 5.2: Population Age 5 Years and Above Presently Attending School by Sex and Age Group, (Percent), Copperbelt Province, 1990 – 2000

Age	1990				2000			
	Total	**Male**	**Female**	**Population**	**Total**	**Male**	**Female**	**Population**
5 – 9	40.6	39.5	41.6	215,355	49.5	48.5	50.5	235,357
10 – 14	81.7	82.3	81.0	204,632	81.4	81.7	81.0	198,557
15 – 19	57.9	66.3	50.1	192,241	55.9	62.5	49.8	183,895
20 – 24	15.4	21.1	10.2	149,577	14.8	19.5	10.7	158,752
25 – 29	4.1	5.1	3.1	110,843	4.8	5.6	4.1	128,936
30 – 44	2.3	2.8	1.8	211,409	3.3	3.9	2.7	235,194
45+	1.1	1.3	0.8	122,606	1.8	2.2	1.3	146,470
Total	33.1	34.0	32.3	1,206,663	32.7	33.5	32.0	1,287,161

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

Table 5.3 shows school attendance rates by residence and age group in Copperbelt Province. Results census data further reveals that 1 in every 5 persons in rural areas of Copperbelt Province was attending school, as opposed to 1 in every 3 in urban areas of the same region. By 2000, the percentage of the rural and urban population presently attending school remained static at the 1990 levels of 23 and 35 percent, respectively. Results further indicate that prospects of attending school for older members of the population in the Copperbelt are very slim, particularly among the rural population.

Table 5.3: Population age 5 years and above Presently Attending School by residence and age group, **(**Percent), Copperbelt Province, 1990 – 2000

Age	1990				2000			
	Total	Rural	Urban	Population	Total	Rural	Urban	Population
Copperbelt	33.1	22.6	34.9	1,206,663	32.7	23.2	35.2	1,287,161
5 – 9	40.6	28.5	42.5	215,355	49.5	34.1	53.7	235,357
10 – 14	81.7	64.2	84.4	204,632	81.4	68.0	84.8	198,557
15 – 19	57.9	39.0	60.9	192,241	55.9	38.5	59.8	183,895
20 – 24	15.4	9.0	16.4	149,577	14.8	7.2	16.6	158,752
25 – 29	4.1	3.0	4.3	110,843	4.8	2.9	5.3	128,936
30 – 44	2.3	2.0	2.4	211,409	3.3	2.4	3.6	235,194
45+	1.1	0.9	1.1	122,606	1.8	1.4	2.0	146,470
Total								

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

Furthermore, Table 5.4 reveals that females are less likely to be attending school than their male counterpart, particularly those residing in rural areas. By the year 2000, about 1 in every 5 females was attending school in rural parts of the province compared to 1 in every 3 females in urban areas. No major sex differences in terms of school attendance were observed in both rural and urban areas since 1990.

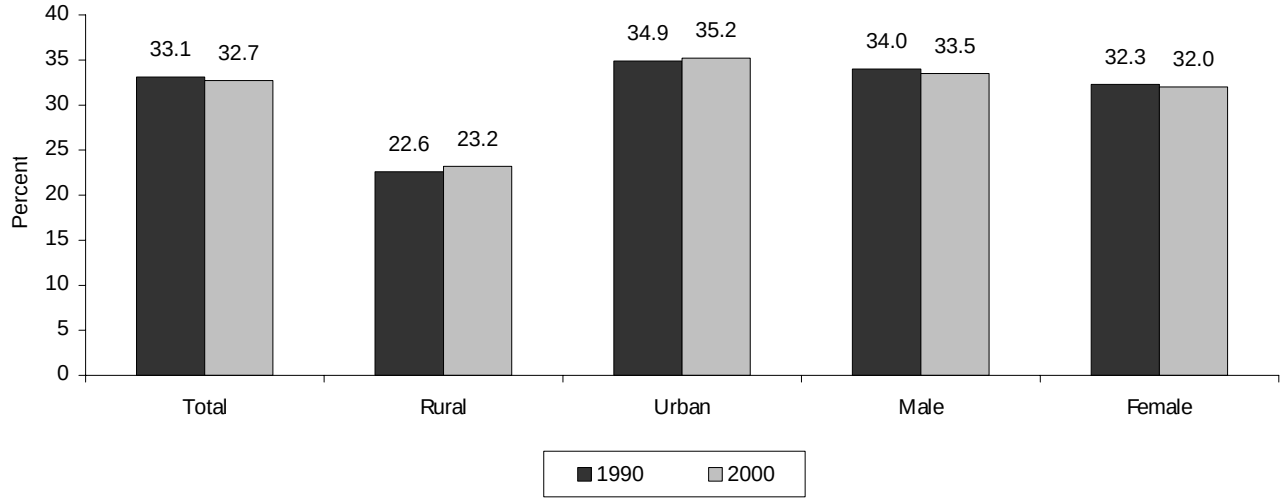
Variations in the proportion of the population presently attending school in all the ten districts of Copperbelt Province have also been observed. Table 5.4 shows that during the year 2000, about 1 in every 3 persons aged 5 years and above attended school in almost all the districts in the province except in Mpongwe, Lufwanyama and Masaiti districts where about 1 in every 5 persons attended school. No major sex differences were revealed especially in urbanized districts of the province.

Table 5.4: Population aged 5 Years and Above Presently Attending School by residence, (Percent), Copperbelt Province, 1990 – 2000

Residence and Province	School Attendance Rates			Population Aged 5 Years and Above
	Sex			
	Total	Male	Female	
Zambia (1990)	25.8	28.1	23.6	6,181,285
Copperbelt (1990)				
Total	33.1	34.0	32.3	1,206,663
Rural	22.6	23.9	21.2	176,512
Urban	34.9	35.7	34.1	1,030,151
Zambia (2000)	26.7	28.7	24.9	7,680,705
Copperbelt (2000)				
Total	32.7	33.5	32.0	1,287,161
Rural	23.2	24.4	22.1	269,158
Urban	35.2	35.9	34.5	1,018,003
District				
Chililabombwe	36.4	36.5	36.2	55,919
Chingola	36.0	36.9	35.1	138,838
Kalulushi	36.5	37.1	35.8	59,859
Kitwe	34.2	34.8	33.7	306,940
Luanshya	36.2	37.2	35.2	123,107
Lufwanyama	22.9	24.4	21.3	48,805
Masaiti	23.1	24.7	21.6	74,400
Mpongwe	22.8	24.0	21.5	47,965
Mufulira	36.2	36.9	35.6	116,818
Ndola	31.0	31.6	30.5	314,510

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

Figure 5.2: Population Aged 5 Years and Above Attending School, (Percent), Copperbelt Province, 1990 and 2000



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

5.6 School Attendance by the Primary School Age Population (7 – 13 Years)

Analysis of school attendance becomes more meaningful when the data relates to some official school age population. In Zambia the official primary school age range is 7 to 13 years. This population cohort constitutes the target population for offering the first 7 grades of basic education. However, some of the members of this cohort may not be attending any form of school. The 2000 Census results in Table 5.5 show that school attendance by the population aged 7 to 13 years in Copperbelt province increased by 3 percent, from 72.3 percent in 1990 to 75.4 percent in 2000. This increase is less than the national average increase of 6 percent. However, the rates for the province are higher than those of the national average for both censuses (72.3 percent versus 55.8 in 1990 and 75.4 percent versus 62.2 percent in 2000 for Copperbelt and National Average respectively).

The increase in school attendance was slightly higher among females, (from 72.5 to about 75.9 percent) than among males (72.0 to 74.8 percent) between 1990 and 2000. Surprisingly for this age cohort, girls were more likely to be attending school than boys especially in rural areas of the province. No major sex differences existed in school attendance among children in both the rural and urban parts of the province.

The 1990 rural-urban differentials show that out of the total 40,177 rural children aged 7 to 13 years in Copperbelt Province, only 55 percent were attending school, compared to 75 percent of the 251,956 urban children. These results imply that 1 in every 2 was not in school in rural areas compared to 1 in every 4 in urban areas. The percentage of the population aged 7 to 13 years presently attending school in rural and urban areas drastically rose from 55 to 60 percent and from 75 to 79 percent between 1990 and 2000, respectively. School attendance among rural and urban girls increased by 5 percentage points above the 1990 levels of 56 and 76 percent. Conversely, school attendance by boys in rural and urban areas also increased by 5 and 4 percent, respectively, between 1990 and 2000.

Despite the high rate of increase in rural areas, these results clearly indicate the continued disparities in education participation between the rural and urban children of primary school age. Urban children are more likely to be attending school than their rural counterpart.

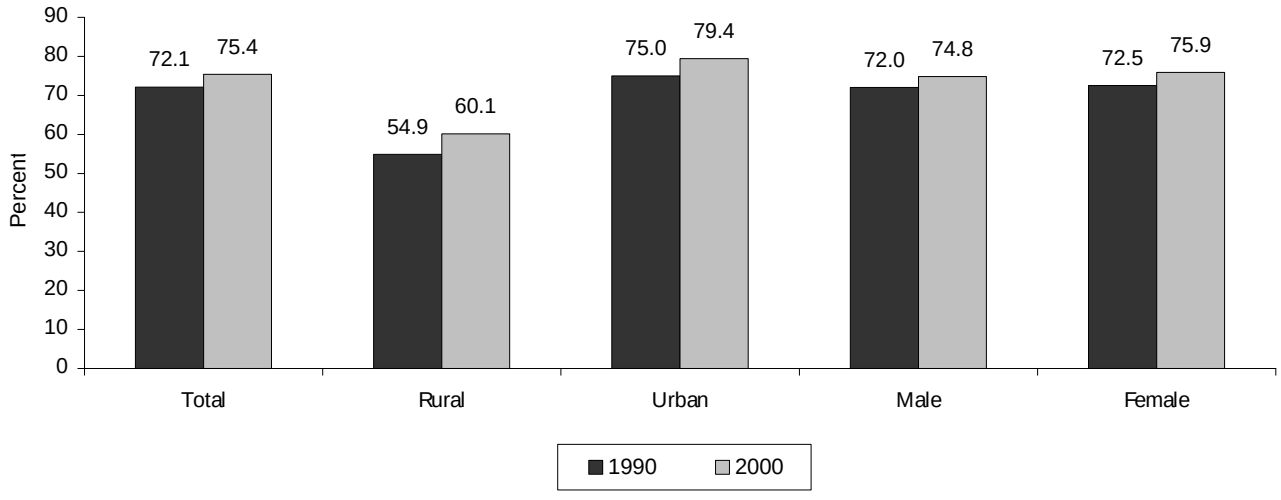
Table 5.5 further reveals that during the year 2000, Lufwanyama and Masaiti districts had the lowest percentage of children attending school (58 percent), followed by Mpongwe, at 60 percent. On the other hand, school attendance by the primary school age population was highest in Chililabombwe district (82 percent), closely followed by Luanshya, Chingola, Mufulira and Kitwe districts, all at 79 percent each. Generally, girls of the official primary school age were more likely to be attending school than boys.

Table 5.5: Population aged 7 to 13 years Presently Attending School by Sex and Residence, (Percent) Copperbelt Province, 1990 – 2000

Residence and Province	School Attendance Rates			
	Total	Male	Female	Population
Zambia (1990)	55.8	55.4	56.2	1,486,062
Copperbelt (1990)	72.3	72.0	72.5	292,133
Total	54.9	54.3	55.6	40,177
Rural	75.0	75.0	75.1	251,956
Urban				
Zambia (2000)	62.2	61.8	62.6	1,826,590
Copperbelt (2000)	75.4	74.8	75.9	298,762
Total	60.1	59.3	60.8	62,200
Rural	79.4	79.1	79.8	236,562
Urban				
District				
Chililabombwe	82.3	81.7	82.9	13,549
Chingola	79.2	78.8	79.5	32,828
Kalulushi	78.4	77.5	79.4	14,340
Kitwe	78.8	78.5	79.1	69,560
Luanshya	79.4	78.6	80.2	28,925
Lufwanyama	57.9	57.3	58.4	11,437
Masaiti	58.4	57.5	59.3	17,592
Mpongwe	60.4	60.0	60.8	11,494
Mufulira	79.1	78.4	79.6	28,521
Ndola	74.7	74.4	75.0	70,516

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

Figure 5.3: Population Aged 7 to 13 Years Attending School, (Percent), Copperbelt Province, 1990 and 2000



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

5.7 Gross Primary School Attendance Rates by Children of all Ages

Gross school attendance rate at primary level shows the ratio of children of all ages attending exact primary grades to the eligible school age population. Due to school attendance by under-age and over-age children in primary schools, the ratio is sometimes more than 100 percent. Results in Table 5.6 show that the gross primary school attendance ratio in the Copperbelt Province declined from about 102 percent in 1990 to about 90 percent in 2000. In comparison to the national average, the gross rates for the province are higher for both censuses. The gross rates for males declined by 14 percent, from 105 to 91 percent during the same period while that of the females declined by 10 percent from 99 to 89 percent.

Results from the 1990 and 2000 censuses further demonstrate that more males than females have had access to primary education in relative terms. The Gender Parity Index (GPI) calculated as a ratio of female gross rate to that of males slightly increased from 0.94 to 0.97 between 1990 and 2000, indicating that there are some signs of growing equality in terms of participation of girls and boys in primary education.

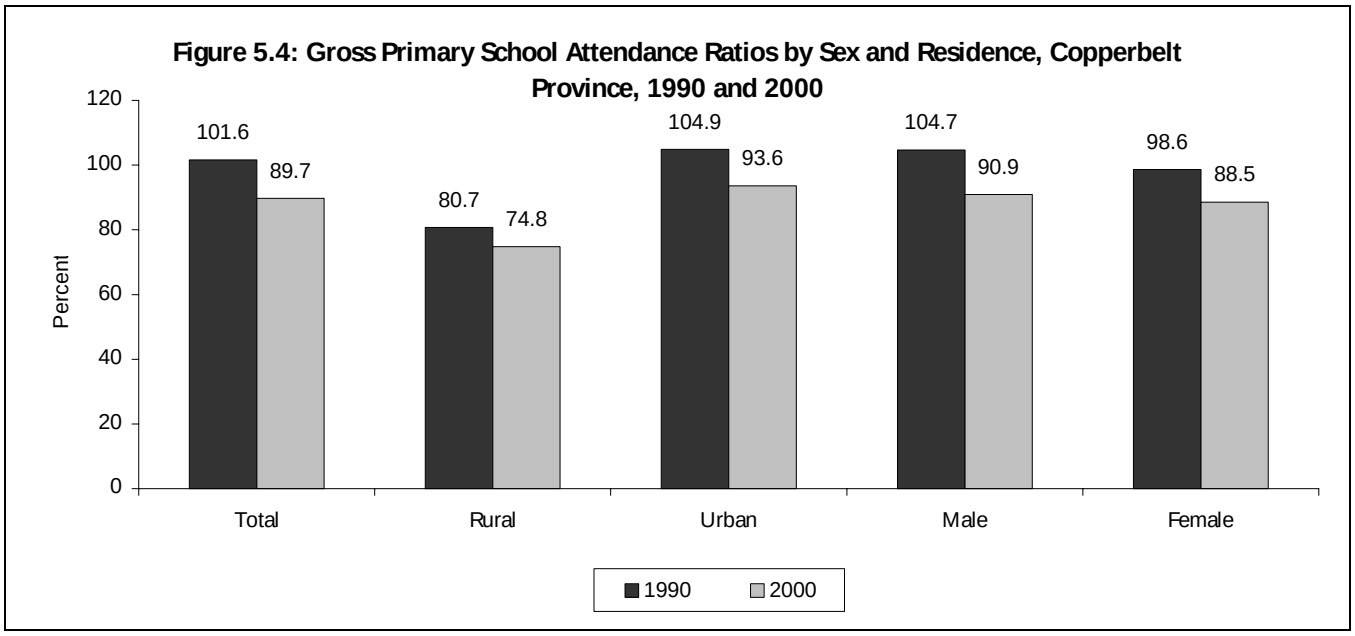
The gross primary school attendance ratio for urban children declined from 104.9 percent to 93.6 percent between 1990 and 2000. In rural areas, the ratio also dropped by 6 percent from about 81 to 75 percent during the same period. The Gender Parity Index (GPI) for 2000 results exhibits gross inequality in terms of education participation in rural (0.95) than in urban areas, (0.98). Therefore, gender equality in terms of education participation can be said to be within reach in urban areas than in rural areas of the province. Generally, the GPI indices for both the rural and urban areas of Copperbelt Province have revealed increased female participation in primary education since 1990.

District level analysis of the 2000 gross primary school attendance rates shows high levels of participation in Chililabombwe district (99.3 percent), closely followed by Luanshya district at 96 percent. The remaining urbanized districts recorded rates in excess of 85 percent. Conversely, the predominantly rural districts namely Lufwanyama (73 percent), Masaiti (73 percent) and Mpongwe (76 percent) were associated with low levels of participation. In general, the gross primary school ratios remained high in predominantly urbanized districts, especially in districts with mining activities.

Table 5.6: Gross Primary School Attendance Ratio by Sex, Residence and District, Copperbelt Province, 1990 – 2000

Residence and District	Gross Primary School Attendance Rates			
	Total	Male	Female	Population
Zambia (1990)	82.3	85.7	78.9	1,486,062
Copperbelt (1990)	101.6	104.7	98.6	292,133
Total	80.7	83.5	77.9	40,177
Rural	104.9	108.2	101.8	251,956
Urban				
Zambia (2000)	79.1	81.4	76.8	1,826,590
Copperbelt (2000)	89.7	90.9	88.5	298,762
Total	74.8	76.9	72.7	62,200
Rural	93.6	94.7	92.5	236,562
Urban				
District				
Chililabombwe	99.3	100.3	98.3	13,549
Chingola	92.1	93.5	90.8	32,828
Kalulushi	90.9	92.5	89.3	14,340
Kitwe	93.8	94.6	93.0	69,560
Luanshya	96.0	97.3	94.7	28,925
Lufwanyama	73.2	75.2	71.2	11,437
Masaiti	73.2	75.2	71.2	17,592
Mpongwe	76.2	78.6	73.8	11,494
Mufulira	94.1	95.6	92.7	28,521
Ndola	87.0	88.0	86.0	70,516

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



Source: CSO, 1990 and 2000 Censuses of Population and

5.8 Net Primary School Attendance by Children Aged 7 to 13 Years

Net school attendance rate at primary level shows the percentage of the primary school age population currently attending exact primary grades (Grades 1 to 7). Table 5.7 shows marginal increase in the proportion of the primary school age population attending primary education in Copperbelt Province, from about 71 percent in 1990 to 72 percent in 2000. In both 1990 and 2000, the net primary school attendance rates are higher for the province than the national (71.1 versus 55.0 percent in 1990 and 71.6 versus 60.0 percent in 2000). The rate for males almost remained at the 1990 level of 71 percent while the rate for female children barely increased by 1 percent during the 1990 to 2000 intercensal period. Since 1990, the attendance of girls of primary school age has been slightly higher than that of boys, particularly in rural areas. The 1990 and 2000 census results on net school attendance rates further indicate that about 29 and 28 percent of children of the official primary school age were out of the school system in the province, respectively.

Since 1990, net primary school attendance rates have been higher in urban than in rural areas, clearly indicating a higher likelihood of urban children to be in school. In 1990, almost half of the rural children aged 7 to 13 years (45.7 percent) were out of primary education compared to about a quarter of their urban counterpart (73.7 percent). By 2000, the proportion of children attending school in rural areas increased by 4 percentage points, from about 54 to about 58 percent. These results imply that about 3 in every 2 children aged 7 to 13 years in rural areas was attending primary education by 2000. In urban areas, net school attendance increased by 1 percentage point, from about 74 percent in 1990 to about 75 percent in 2000. No major sex differences were noticed in both rural and urban areas since 1990, an indication of efforts towards achievement of gender parity in net attendance at primary level.

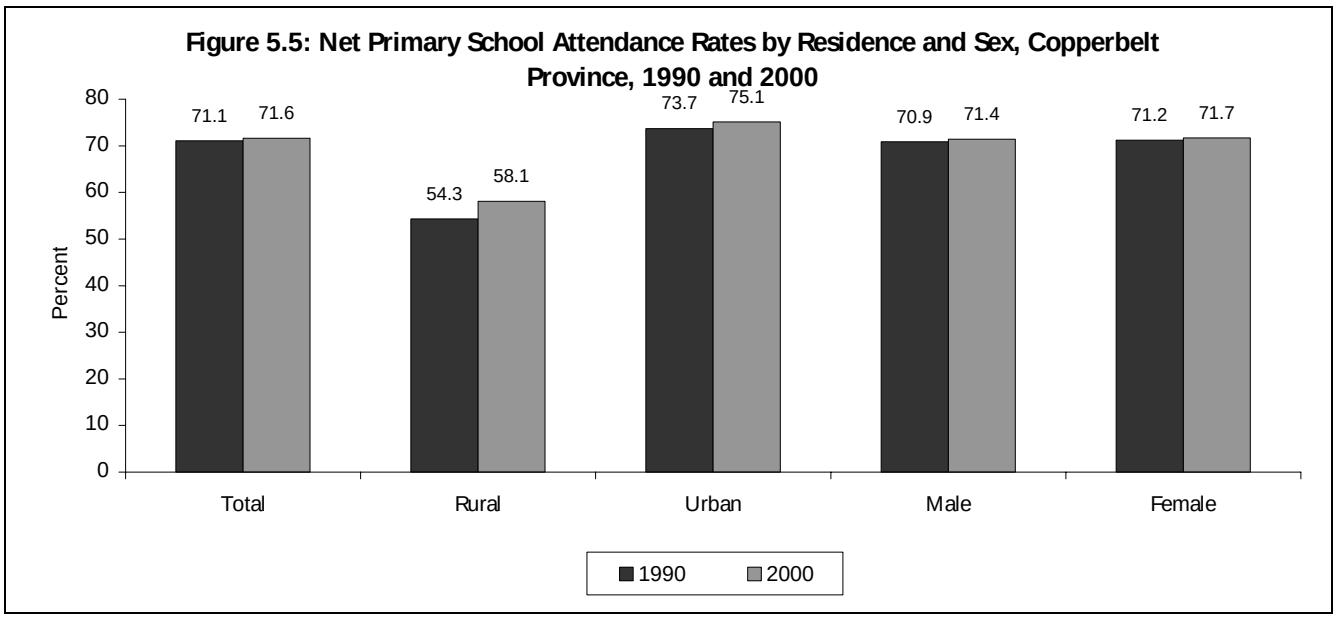
The urban – rural differences are mainly as a result of existing disparities in resource allocation and availability of accessible amenities such as schools, health facilities, recreational facilities and pre-schools. The Living Conditions Monitoring Surveys have shown that long distance to schools inhibits school attendance particularly for younger children who may not safely walk alone to school. (CSO, LCMS reports, 1996 and 1998).

In 2000, the proportion of children aged 7 to 13 years attending primary education was highest in Chililabombwe (78.4 percent) followed by Luanshya and Mufulira (75.2 percent), Kitwe, (74.8 percent) and Chingola districts (74.6 percent). The other urbanized districts such as Kalulushi and Ndola recorded Net rates of 73.1 and 70.5 percent respectively. Primary school attendance by children aged 7 to 13 years was very poor in Lufwanyama (56.6 percent), Masaiti (56.7 percent) and Mpongwe Districts (59 percent). No major sex differences were noticed in all the districts though at a glance girls were more likely to be attending primary school than boys, more so for the remote districts.

Table 5.7: Net Primary School Attendance Rates by sex, Residence and District, Copperbelt Province 1990 – 2000

Residence and District	Net Primary School Attendance Rates			
	Total	Male	Female	Population
Zambia (1990)	55.0	54.6	55.3	1,486,062
Copperbelt (1990)				
Total	71.1	70.9	71.2	292,133
Rural	54.3	53.6	54.9	40,177
Urban	73.7	73.8	73.7	251,956
Zambia (2000)	60.0	59.8	60.2	1,826,590
Copperbelt (2000)				
Total	71.6	71.4	71.7	298,762
Rural	58.1	57.6	58.6	62,200
Urban	75.1	75.1	75.1	236,562
District				
Chililabombwe	78.4	78.0	78.7	13,549
Chingola	74.6	74.8	74.5	32,828
Kalulushi	73.1	72.9	73.2	14,340
Kitwe	74.8	74.9	74.7	69,560
Luanshya	75.2	75.0	75.4	28,925
Lufwanyama	56.6	56.0	57.3	11,437
Masaiti	56.7	55.8	57.7	17,592
Mpongwe	59.0	58.8	59.3	11,494
Mufulira	75.2	75.1	75.3	28,521
Ndola	70.5	70.5	70.5	70,516

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



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

5.9 School Attendance by the Secondary School Age Population (14-18)

Table 5.8 shows the proportion of children aged 14 to 18 years attending school in the province. Overall, the percentage of the secondary school age children attending school declined from 65.7 percent in 1990 to 63.3 percent in 2000. However this rate is still higher than the national average one which remained constant at 53.9 percent in the same period. Since 1990, there were proportionately more boys than girls attending school. School attendance by the male and female population aged 14 to 18 years was 72.3 and 59.5 percent in 1990 and 68.5 and 58.5 percent by 2000, respectively. Notable from table 5.8 is the high rate of school attendance in urban areas compared to rural areas. By 2000, more than half of the rural children (54 percent) were not attending school as opposed to only 1 third of children (33 percent) in urban areas of the province. In rural areas, the percentage of children attending school more or less remained at the 1990 level of 46.5 percent whereas it dropped from 68.7 to 67.3 percent in urban areas. Also, the proportion of boys attending school was much higher in both rural and urban areas than that of girls. Results further reveal that nearly, two-thirds in 2000 of the female population aged 14 to 18 years in rural areas was not attending school compared to only one third of their urban counterpart. In general, these results clearly indicate that the problem of the 'girl child' is more associated to older (14 to 18 years) than younger children (7 to 13 years), particularly in rural areas. At primary level there is normally near equality in terms of school attendance by boys and girls.

In 2000, school attendance by children of secondary school age was highest in Chililabombwe, about 70 percent, followed by Luanshya, Chingola and Kalulushi, all at 69 percent. The attendance rates were also quite high in Mufulira (68.4 percent), Kitwe (65.1 percent) and Ndola (61.3 percent).

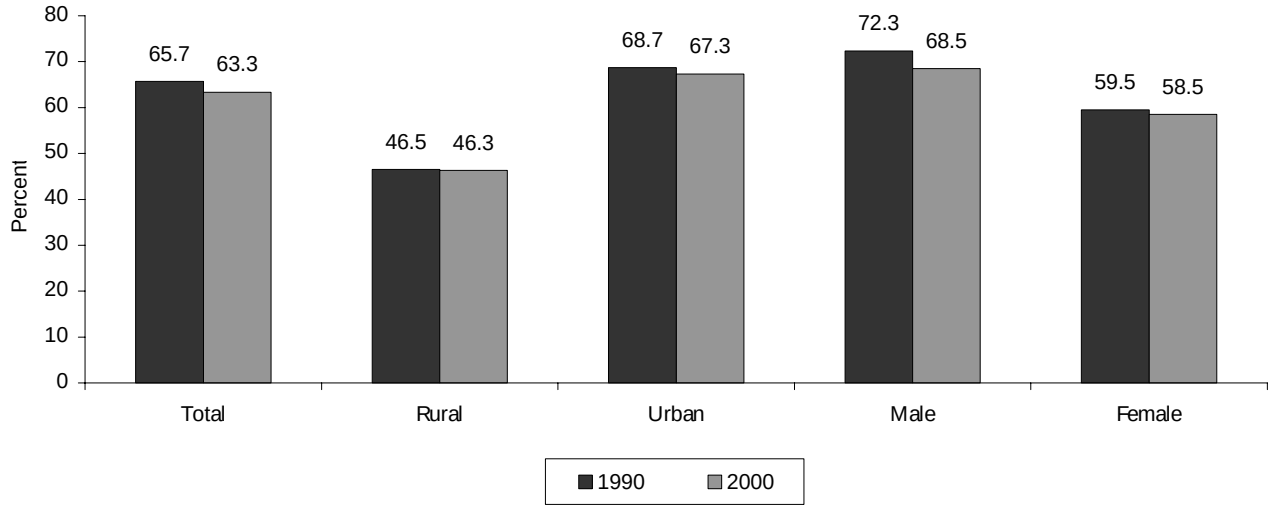
The least percentage of the population aged 14 to 18 years attending school was observed in Mpongwe (42.7 percent), followed by Masaiti and Lufwanyama, at 45.8 and 47.4 percent respectively. Results clearly indicate lower levels of school attendance in the predominantly remote districts namely Lufwanyama, Mpongwe and Masaiti where more than half of the eligible secondary school age population was not in school. Generally, more boys than girls of the same cohort are likely to be attending school in all districts.

Table 5.8: Population Aged 14 to 18 Years Presently Attending School by Sex, Residence and District, (Percent) Copperbelt Province, 1990 – 2000

Residence and District	School Attendance Rates			
	Total	Male	Female	Population (14 – 18 Yrs)
Zambia (1990)	53.9	61.1	47.1	996,450
Copperbelt (1990)				
Total	65.7	72.3	59.5	202,266
Rural	46.5	53.6	39.5	27,813
Urban	68.7	75.4	62.6	174,453
Zambia (2000)	53.9	61.3	47.0	1,105,484
Copperbelt (2000)				
Total	63.3	68.5	58.5	189,300
Rural	46.3	54.0	38.7	35,809
Urban	67.3	72.0	62.9	153,491
District				
Chililabombwe	69.5	74.6	64.7	8,578
Chingola	68.8	74.0	64.1	21,186
Kalulushi	68.8	74.5	63.5	8,898
Kitwe	65.1	70.1	60.6	45,258
Luanshya	68.9	73.4	64.6	19,164
Lufwanyama	47.4	54.7	40.0	6,369
Masaiti	45.8	54.4	37.2	10,182
Mpongwe	42.7	50.7	35.0	6,367
Mufulira	68.4	71.8	65.1	18,348
Ndola	61.3	66.4	56.8	44,950

Source: CSO, 1990 and 2000 Censuses of Population and Housing.

Figure 5.6 School Attendance Rates by Children Aged 14 to 18 Years by Residence and Sex, Copperbelt Province,1990 and 2000



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

5.10 Gross Secondary School Attendance Ratio

Table 5.9 shows the gross secondary school attendance rates by sex, residence and district. Results in the table reveal that a sizeable proportion of secondary school age population in Copperbelt Province has had no access to secondary education. Overall, the proportion of children attending secondary education expressed as a percentage of the eligible secondary school age population increased from 47.0 to about 66.6 percent between 1990 and 2000. This increase of about 20 percent is much higher than the national one, which only increased by 10 percent between 1990 and 2000. The increase in the attendance ratio was more pronounced in urban (24 percent) than in rural parts of the province (11 percent). The ratios rose from 49 percent to 72 percent in urban areas and from 25 percent to 36 percent in rural parts of the province. Results further indicate that children in urban areas of the province are more likely to be attending secondary school education than those in rural areas. In 1990, the gross rate for urban areas (50.4 percent) was twice that obtaining in rural areas (25.4 percent). Once again the gross ratios indicate that females, more especially those

residing in rural areas, are less likely to be attending secondary education than their male counterpart in the province.

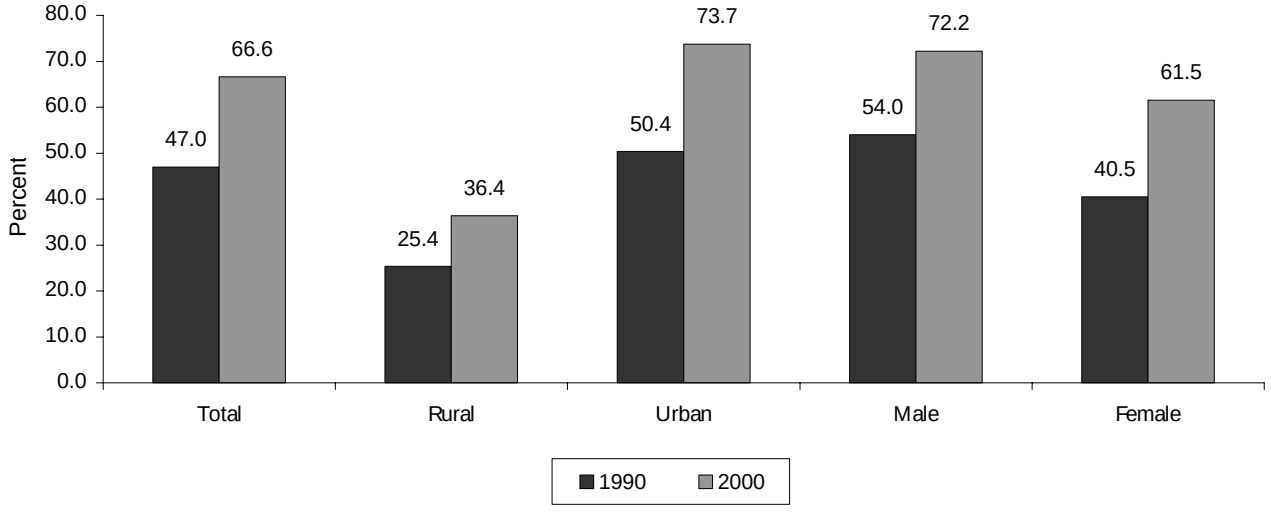
The 2000 census results further demonstrate high levels of participation in secondary education in Kalulushi and Chingola districts, at 78 percent each. The other districts namely Chililabombwe, Luanshya, Mufulira and Kitwe equally recorded higher gross secondary school rates in excess of 70 percent in the province. The least rate was observed in Mpongwe (27.4 percent) followed by Masaiti and Lufwanyama districts, at 34 and 36 percent. Results clearly portray male domination in terms of secondary school attendance in all the districts in the Copperbelt Province.

Table 5.9: Gross Secondary School Attendance Ratio by Sex, Residence and District, Copperbelt Province, 1990 and 2000.

Residence and District	**Gross Secondary School Attendance Rates**			
	Total	**Male**	**Female**	**Population (14 – 18 Yrs)**
Zambia (1990)	34.6	40.4	29.0	996,450
Copperbelt (1990)				
Total	47.0	54.0	40.5	202,266
Rural	25.4	30.8	20.2	27,813
Urban	50.4	57.8	43.6	174,453
Zambia (2000)	44.5	50.2	39.1	1,105,484
Copperbelt (2000)				
Total	66.6	72.2	61.5	189,300
Rural	36.4	41.3	31.5	35,809
Urban	73.7	79.7	68.2	153,491
District				
Chililabombwe	74.2	80.2	68.5	8,578
Chingola	77.9	84.3	72.0	21,186
Kalulushi	78.1	83.0	73.4	8,898
Kitwe	71.1	77.5	65.3	45,258
Luanshya	73.1	78.4	68.0	19,164
Lufwanyama	36.2	42.7	29.7	6,369
Masaiti	33.9	39.7	28.1	10,182
Mpongwe	27.4	31.1	23.9	6,367
Mufulira	73.1	76.8	69.5	18,348
Ndola	65.1	70.8	59.9	44,950

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

Figure 5.7: Gross Secondary School Attendance Ratio by Residence and Sex, Copperbelt Province, 1990 and 2000



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

5.11 Net Secondary School Attendance Rates by Children aged 14 to 18 Years

Results in Table 5.10 indicate that a significant proportion of the secondary school age population had no access to education in Copperbelt Province. In 1990, only 30 percent of the children aged 14 to 18 years were attending secondary education. This proportion increased to 47 percent during the year 2000 and it's much higher than that of the national average, which increased to 30.9 percent in 2000. Since 1990 there were proportionately more boys than girls attending secondary school.

Glaring rural – urban differentials in net secondary school attendance rates have existed since 1990. In 1990, the proportion of urban eligible children attending secondary education (32.3 percent) was twice that of their rural counterpart (16 percent). Net secondary school attendance rate for rural areas increased by 9 percentage points compared to an increase of 19 percentage points for urban areas. By 2000, only one in every four children was attending secondary school education in rural areas as opposed to almost one in every two children in urban parts of the province. These results clearly indicate how inaccessible secondary education is to majority of the rural children aged 14 to 18 years particularly among females.

Analysis of the 2000 Census results by districts shows low levels of secondary school attendance among children aged 14 to 18 years in the predominantly rural districts of the province, namely Mpongwe (20.1 percent), Masaiti and Lufwanyama both with 24.3 percent. Conversely, high rates of secondary school attendance were observed in Chingola (55 percent), Kalulushi (53.2 percent), Chililabombwe (52.8 percent, Mufulira (51.9 percent) and Luanshya (50.5 percent). In Kitwe and Ndola districts, only 49.2 and 46.2 percent of the eligible children were attending secondary education.

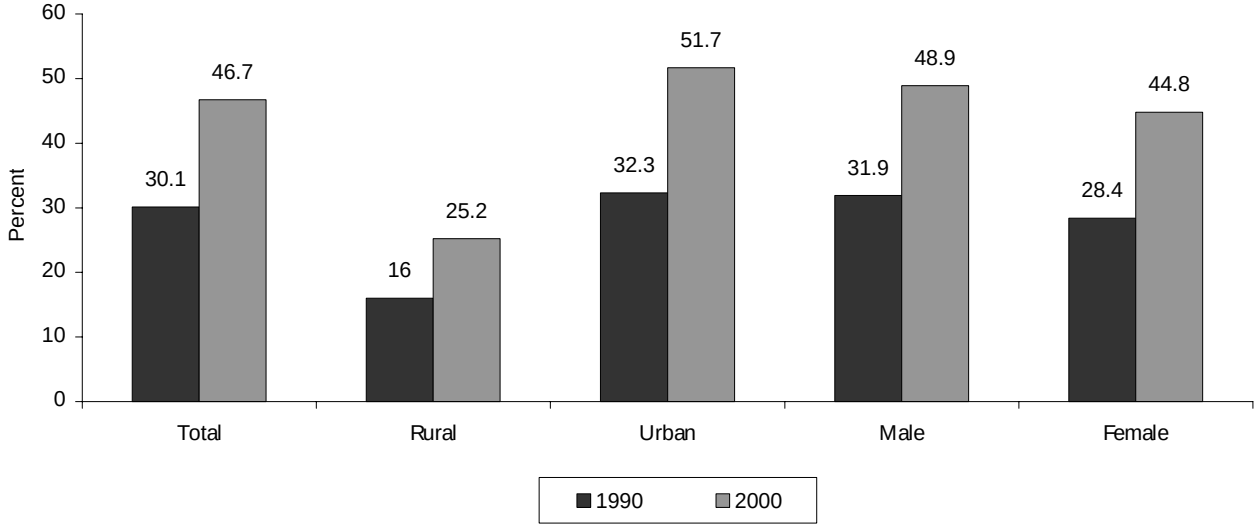
The obvious increase in net secondary school attendance between 1990 and 2000 could be attributed to the rise in basic schools, which have provided additional school spaces for grades 8 and 9 pupils, which are in this case regarded as part of secondary education. As for urban areas there has been marked increases in the number of private schools offering secondary education. The 1996 education policy has championed the need to promote private participation in education delivery system at all levels.

Table 5.10: Net Secondary School Attendance Rate by Sex, Residence and District, Copperbelt Province, 1990 – 2000

Residence and District	Net Secondary School Attendance Rates			
	Total	Male	Female	Population (14 – 18 Yrs)
Zambia (1990)	21.4	22.8	20.0	996,450
Copperbelt (1990)				
Total	30.1	31.9	28.4	202,266
Rural	16.0	17.8	14.3	27,813
Urban	32.3	34.2	30.6	174,453
Zambia (2000)	30.9	33.3	28.7	1,105,484
Copperbelt (2000)				
Total	46.7	48.9	44.8	189,300
Rural	25.2	27.7	22.7	35,809
Urban	51.7	54.0	49.7	153,491
District				
Chililabombwe	52.8	55.0	50.8	8,578
Chingola	55.0	57.4	52.7	21,186
Kalulushi	53.2	55.4	51.2	8,898
Kitwe	49.2	52.0	46.7	45,258
Luanshya	50.5	52.3	48.8	19,164
Lufwanyama	24.3	26.3	22.3	6,369
Masaiti	24.3	27.6	21.1	10,182
Mpongwe	20.1	21.6	18.6	6,367
Mufulira	51.9	52.3	51.5	18,348
Ndola	46.2	48.6	44.0	44,950

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

Figure 5.8: Net Secondary School Attendance Raios by Residence and Sex, Copperbelt Province, 1990 and 2000



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

5.12 Population Distribution by Fields of Study

Table 5.11 shows the distribution of the population aged 5 years and over by some selected fields of study and sex. The table reveals that the most popular fields of study since 1990 have been Teacher training, Secretarial training, Accountancy, Nursing, Business administration, electrical and Mechanics/mechanical engineering. The table reveals that in 1990, the most popular fields of study were Teacher training (21 percent), Mechanics/mechanical engineering (11 percent), Accountancy (10 percent), Nursing (8 percent), Electrical engineering (7 percent), Business administration and Secretarial training, at 6 percent each.
These fields account for more than 50 percent of the population undertaking the selected fields of study. Results further indicate that males have had more varied fields than females since 1990.

In 1990, more than 50 percent of females were concentrated in teacher training (31 percent), nursing (23 percent) and secretarial training (17 percent). By 2000, these fields of study still catered for a large segment of the population (60 percent). Females were still concentrated in teacher training, nursing, secretarial and textile trade.

Further examination of the results in Table 5.11 highlights the fact that very few females have been attempting more technically oriented fields of study such as engineering and other technical programmes since 1990. In order to enhance the participation of females in sciences and mathematics, the Ministry of Education started a program aimed at enhancing pupils' performance in English, mathematics and Sciences called AIEMS in 1994.

Table 5.11: Percentage Distribution of the Population by Sex and Selected Field of Study, Copperbelt Province, 1990 and 2000

Field of Study	1990			2000		
	Total	Male	Female	Total	Male	Female
All Fields	42,488	28,568	13,920	65,935	41,712	24,223
Total	100.0	100.0	100.0	100.0	100.0	100.0
Natural Science	2.0	2.3	1.3	1.0	1.4	0.4
Civil Engineering	1.5	2.1	0.2	1.1	1.7	0.1
Electronic Engineering	6.7	9.8	0.5	6.8	10.1	1.1
Mechanic Engineering	10.7	15.7	0.3	9.5	14.7	0.6
Mining Engineering	2.8	4.0	0.2	2.6	4.1	0.1
Industrial Engineering	2.5	2.9	1.7	0.9	1.3	0.1
Architecture	1.3	1.5	0.7	0.5	0.7	0.1
Medicine/Surgery	1.4	1.7	0.7	0.9	1.2	0.5
Pharmacy	1.5	1.6	1.3	0.5	0.6	0.3
Nursing	8.0	0.6	23.1	12.7	8.1	20.7
Medical Technology	1.1	1.4	0.5	1.0	1.3	0.5
Computer Science	0.8	0.8	0.8	2.4	2.0	3.2
Economics	1.3	0.9	2.0	1.0	0.8	1.2
Accountancy	10.0	12.4	5.1	10.8	13.3	6.6
Teacher Training	20.8	15.8	30.9	19.8	14.0	29.8
Law/jurisprudence	1.6	2.1	0.5	1.3	1.8	0.5
Fine arts	0.8	0.9	0.7	0.8	0.9	0.5
Social Welfare	1.1	1.0	1.3	0.8	0.8	0.8
Criminology	1.7	2.3	0.4	1.7	2.5	0.3
Business Administration	6.2	8.1	2.5	6.0	7.4	3.8
Secretarial Training	5.8	0.5	16.9	6.3	0.8	15.7
Office Machine	1.2	1.4	0.8	0.6	0.7	0.3
Service Trade	1.6	1.1	2.5	1.6	0.9	2.8
Agriculture/Forestry/Fisheries	2.9	3.8	1.0	2.5	3.4	1.0
Wood Working	2.9	4.2	0.2	3.0	4.5	0.4
Textile Trade	2.0	1.1	3.9	3.9	1.1	8.7

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

Table 5.12a and 5.12b show the distribution of the population aged 5 years and above by field of study and education level completed. The table reveals the type of restrictions education attainment imposes on field of study. Results clearly indicate that the minimum education level required for the majority of the fields of study is grades 10 – 12. This is more of the case for those in the field of engineering, medicine, natural and social sciences. Other programmes such as Accountancy, Business Administration, Teacher Training, Journalism and Secretarial training have overtime become more demanding in terms of educational entry requirements.

Table 5.12a: Education Level Completed by Field of Study (Percent), Copperbelt Province, 1990

Field of Study	Size	Total	Level of Education Completed				
			1-7	8-9	10-12	'A' Level	Degree
Natural Science	829	100	6.3	4.7	70.2	7.7	11.1
Civil Engineering	634	100	13.7	5.2	70.2	4.6	6.3
Electronics/Engineering	2,860	100	9.6	5.4	78.9	2.1	4.1
Mechanics/Engineering	4,534	100	13.4	7.9	73.2	2.1	3.5
Chemical Engineering	273	100	15.4	3.7	65.9	5.9	9.2
Mining Engineering	1,176	100	12.9	4.4	71.3	4.8	6.6
Industrial Engineering	1,066	100	44.5	11.4	39.2	1.4	3.6
Metallurgical Engineering	782	100	27.6	9.0	41.3	4.0	18.2
Architecture	536	100	7.8	38.6	45.1	1.9	6.5
Other Engineering	1,320	100	10.8	5.9	75.9	2.2	5.2
Medicine/Surgery	577	100	8.5	4.9	72.6	5.0	9.0
Pharmacy	650	100	5.2	0.9	84.5	1.4	8.0
Dentistry	178	100	7.9	2.2	73.6	6.2	10.1
Nursing	3,390	100	6.0	7.6	83.8	0.9	1.7
Medical Technology	477	100	12.4	8.2	72.3	2.5	4.6
Veterinary	80	100	11.3	12.5	71.3	1.3	3.8
Computer Science	353	100	3.4	2.5	80.5	4.2	9.3
Economics	541	100	13.9	7.8	67.8	4.3	6.3
Accountancy	4,270	100	5.0	3.4	86.4	2.6	2.5
Teacher Training	8,817	100	7.0	11.3	77.7	1.6	2.3
Law/jurisprudence	669	100	14.5	6.9	72.6	3.0	3.0
Journalism	176	100	4.0	2.3	91.5	1.1	1.1
Fine arts	347	100	13.5	6.3	67.4	3.7	8.9
Social Welfare	473	100	19.5	14.8	60.9	1.1	3.8
Criminology	704	100	14.9	15.3	68.3	0.1	1.3
Business Administration	2,651	100	9.1	6.1	78.5	2.8	3.4
Secretarial Training	2,483	100	4.0	5.9	87.2	0.8	2.2
Shorthand Typing	1,393	100	6.6	12.2	79.1	0.5	1.6
Clerical typing	1,693	100	8.6	15.7	74.0	0.1	1.7
Office Machine	505	100	18.2	10.9	66.7	0.6	3.6
Service Trade	664	100	35.1	13.6	46.8	1.1	3.5
Agriculture/Forestry/Fisheries	1,213	100	17.5	11	67.1	2.1	2.3
Food/Drink Production	232	100	28.9	14.7	53.9	.	2.6
Wood Working	1,223	100	39.6	14.4	42.5	0.2	3.3
Textile Trade	846	100	29.6	18.1	48.5	1.4	2.5

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

Note: The ISIC codes for field of study have been reduced to 3 digits to enhance analysis. However, this could lead to the lumping up of specific fields of study into a broad class based on a 3-digit description.

Table 5.12b: Education Level Completed by Field of Study (Percent), Copperbelt Province, 2000

Field of Study	Size	Total	Level of Education Completed				
			1-7	8-9	10-12	'A' Level	Degree
Natural Science	683	100	1.2	1.5	63.3	0.9	33.2
Civil Engineering	740	100	3.8	4.6	61.9	0.8	28.9
Electronics/Engineering	4,491	100	3.0	3.3	65.2	1.5	26.9
Mechanics/Engineering	6,260	100	3.4	5.6	63.7	1.3	26.1
Chemical Engineering	372	100	4.3	3.8	55.6	1.9	34.4
Mining Engineering	1,726	100	2.7	3.7	67.6	1.9	24.2
Industrial Engineering	575	100	4.3	6.1	60.7	2.6	26.3
Metallurgical Engineering	626	100	1.8	3.2	66.6	1.1	27.3
Architecture	299	100	4.0	7.4	51.2	1.7	35.8
Other Engineering	1,324	100	3.6	6.0	61.9	0.9	27.6
Medicine/Surgery	610	100	1.5	2.0	50.3	0.8	45.4
Pharmacy	322	100	4.0	2.2	68.3	0.3	25.2
Dentistry	252	100	1.6	2.0	66.3	3.6	26.6
Nursing	8,389	100	5.3	6.5	66.4	1.1	20.7
Medical Technology	674	100	1.6	1.9	66.5	1.9	28.0
Veterinary	112	100	5.4	6.3	57.1	0.9	30.4
Computer Science	1,605	100	1.0	1.2	58.0	2.7	37.1
Economics	635	100	8.5	8.7	52.0	1.3	29.6
Accountancy	7,119	100	1.0	1.7	59.8	1.5	36.1
Teacher Training	13,029	100	2.1	3.8	68.3	1.2	24.7
Law/jurisprudence	879	100	3.5	4.0	50.4	1.7	40.4
Journalism	321	100	0.6	1.6	58.9	2.5	36.4
Fine arts	504	100	6.0	11.7	55.4	2.0	25.0
Social Welfare	529	100	10.4	9.5	53.7	0.9	25.5
Criminology	1,121	100	3.2	5.6	64.4	0.4	26.4
Business Administration	3,987	100	1.4	1.8	54.8	1.4	40.7
Secretarial Training	4,142	100	0.9	3.8	58.8	1.6	34.9
Shorthand Typing	948	100	3.7	13.1	59.1	1.9	22.3
Clerical typing	1,130	100	4.9	15.8	58.0	1.2	20.2
Office Machine	367	100	7.4	9.0	55.3	0.8	27.5
Service Trade	1,038	100	13.0	15.1	46.0	0.8	25.1
Agriculture/Forestry/Fisheries	1,643	100	7.8	9.8	57.8	0.9	23.7
Food/Drink Production	555	100	11.4	10.6	44.9	0.5	32.6
Wood Working	1,971	100	14.9	19.4	46.8	0.7	18.2
Textile Trade	2,586	100	14.1	30.8	36.9	0.6	17.6

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

Note: The ISIC codes for field of study have been reduced to 3 digits to enhance analysis. However, this could lead to the lumping up of specific fields of study into a broad class based on a 3-digit description.

5.13 Certificate and Diploma Holders by Level of Education Completed

Table 5.13 shows the education level completed by certificate and diploma holders. Overall, the number of certificate holders rose by 29.6 percent between 1990 (47,130) and 2000 (61,058). The percent increase was more dramatic among the females (48.3 percent) than their male counterpart (19.2 percent).

The proportion of persons with certificates who had attained grades 1 to 7 and 8 to 9 declined from 17.8 percent and 12.4 to 7.3 percent I, respectively, between 1990 and 2000, whilst the proportions attaining higher grades increased drastically. These findings demonstrate how difficult it has become to get certification with limited education background. On the other hand, the number of diploma holders after grades increased by 17.8 percent from 13,373 in 1990 to 15,754 in 2000. The growth in the number of diploma holders was much more marked among females (by 39.5 percent) than males (by 12.7 percent). Once again there was a decline in the proportions of diploma holders with up to grade 7 and 9 education from 4.7 and 3.2 percent to 1.9 and 2.1 percent respectively. The same scenario applies to male and female holders.

Table 5.13: Certificate and Diploma Holders by Level of Education and Sex, 1990-2000, Copperbelt Province.

Certificates	Size	Education Level Completed				
		1-7	8-9	10-12	'A' Level	Total
Copperbelt 1990						
Total	47,130	17.8	12.4	69.3	0.5	100
Male	30,430	20.5	12.0	67.0	0.5	100
Female	16,700	12.9	13.2	73.5	0.4	100
Copperbelt 2000						
Total	61,058	7.3	11.9	79.0	1.7	100
Male	36,284	7.9	10.4	80.1	1.6	100
Female	24,774	6.5	14.2	77.3	2.0	100
Diploma						
Copperbelt 1990						
Total	13,373	4.7	3.2	85.8	6.3	100
Male	10,839	4.9	3.1	85.8	6.2	100
Female	2,534	4.1	3.7	85.8	6.4	100
Copperbelt 2000						
Total	15,754	1.9	2.1	94.3	1.8	100
Male	12,218	1.9	2.0	94.6	1.5	100
Female	3,536	1.7	2.4	93.1	2.7	100

Source: CSO, 1990 and 2000 Census of Population and Housing

5.14 Summary

The level of literacy for the population aged 5 years and above barely increased from 69.9 to 70.5 percent between 1990 and 2000. By the year 2000, the rate varied from 47.5 percent in Lufwanyama district to 75 percent in Mufulira district. Youth literacy rate declined from 88.2 to 84.6 percent during the same period. Adult literacy rate nearly stagnated at the 1990 level of about 82 percent.

School attendance among the population aged 5 years and above stagnated at the 1990 level of about 33 percent. The rate of attendance remained higher in urban than in rural areas, particularly among males. The proportion of the primary school-age population (7 to 13 years) attending school increased from 72.3 percent in 1990 to 75.4 percent by 2000.

No major sex differences were observed in school attendance rates of the population aged 7 to 13 years. Children in urban areas are more likely to attend school than their rural counterpart. The rate of attendance has been poorer in remote districts like Lufwanyama (57.9 percent) and superior in predominantly urban mine districts like Chililabombwe, at about 82.3 percent.

The gross primary school attendance rates declined from 101.6 to 89.7 percent between 1990 and 2000. By 2000, the rates remained higher in urban than in rural areas. Net primary school attendance rates barely increased from about 71 to 72 percent between 1990 and 2000. By 2000, the rate remained higher in urban (75.1 percent) than in rural areas of the province (58.1 percent).

During the 1990-2000 intercensal period, school attendance by the secondary school-age population (14 to 18 years) barely declined from 65.7 to 63.3 percent. More males than females of the same age cohort have had access to education since 1990. Children in urban areas are more likely to attend school, particularly at the secondary level, than those in rural areas.

Crude measures of participation in secondary education reveal marked improvements in secondary school attendance especially in urban areas. The gross secondary school attendance rate increased from about 47 to 67 percent between 1990 and 2000. However, gross school attendance rates for rural areas show low levels of education participation compared to urban areas. Net secondary school attendance rate equally increased from about 30.1 percent in 1990 to 46.7 percent by 2000.

Teacher training, Secretarial training, accountancy, nursing and Mechanics are still among the most popular fields of study in Copperbelt Province. However, more males than females have had varied occupational fields of study since independence. Analysis of fields of study by level of education completed explicitly illuminates the restrictions education background imposes on the choice of the field of study. Secondary education has of late become the minimum requirement for most of the fields of study. Indeed certification at any level has become heavily dependant on the level of education that an individual has completed. It has become much more difficult now to obtain a certificate than it was ten years ago.

Chapter 6

ECONOMIC CHARATERISTICS

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.

Most studies have revealed that employment levels to a large extent determine the production and consumption levels of any given economy. In a developing country like Zambia, it becomes imperative to constantly measure and monitor changes in the levels of economic activities overtime as fluctuations in labourforce participation rates, employment levels and economic dependency levels have an impact on poverty and vice versa.

In the population censuses of 1990 and 2000, data pertaining to economic characteristics of the population was collected. The main topics covered were:

- Labourforce participation
- Employment and unemployment
- Employment status
- Occupation
- Industry and
- Educational attainment

6.2 Concepts and Definitions

- **Working Age Population:** The employed population includes all persons who: work for remuneration in the form of wages, salaries, commissions or pay in kind; operate their own businesses without employing others, and; work in a family business or farm without pay or profit.

    - **Economically Inactive Population:** This category includes all persons who are full time housewives/home-makers, full time students and those who are not available for work aged 12 years and over.

- **Economically Active Population (Labourforce):** The economically active population or the Labour force is defined as all persons aged 12 years and above whose main economic activity status is to supply their labour force to the production of economic goods and services. It is composed of the employed and unemployed. It includes all those who are working, those who are unemployed but seeking work and those not seeking work but available for work. Included also are those unpaid on family business.

- **Economic Dependency Ratio:** Economic dependency measures the extent to which the economically inactive population is dependent on the economically active population. Therefore, the economic dependency ratio is the ratio of the economically inactive population divided by the economically active population.

- **Labourforce Paticipation Rates:** The Labour force participation rate is defined as the proportion of persons of a particular age- group who were in the labour force. It measures the extent to which a particular age and/or sex group is involved in economic activities.

- **Employment Status:** Employment status refers to whether a worker 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, salary, commission, 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. Finally, an unpaid family worker is a person who works without pay in an economic enterprise operated by a related member of the same household (including peasant farmers).

- **Occupation:** Occupation is a concept, which identifies a set of characteristics of a job and a group of specific tasks that are performed by a person.

- **Industry:** Industry or economic sector defines the type of product or service produced at a workplace.

- **Unemployment:** The unemployed population consists of all persons 12 years and over who are actively seeking work or are available for work during reference period, i.e. the last seven days before the enumeration day.

6.3 Working-Age Population

In the 1990 and 2000 Census of Population and Housing, the working-age population is defined as all persons aged 12 years and over.

Figure 6.1: Working Age Population 12 years and above

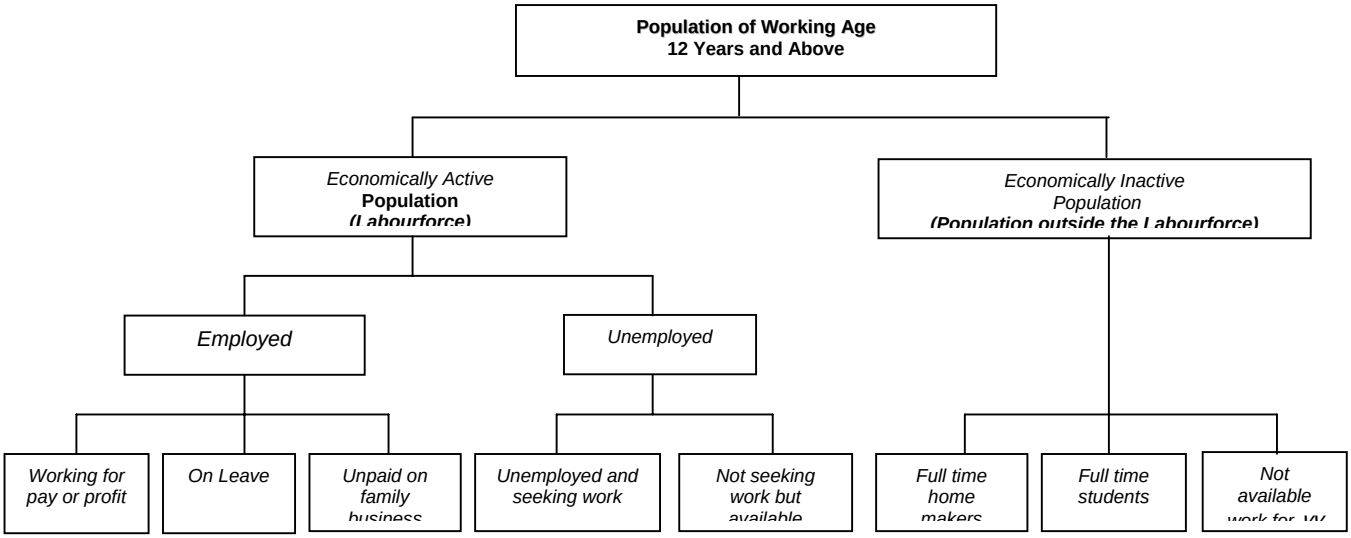


Figure 6.1 is a diagrammatic presentation of the various categories of the population of working age. Table 6.1 presents the population 12 years and over by age group, residence and sex for 1990 and 2000. The working-age population in Copperbelt Province has increased by 6.2 percent. The increase of the female working-age population of 8.2 percent is higher than the increase in the male working-age population of 4.4 percent. In rural areas, the working-age population has increased by 31.7 percent, while in urban areas it has increased by only 1.8 percent. The increase of 32.2 percent for the male working-age population in rural areas

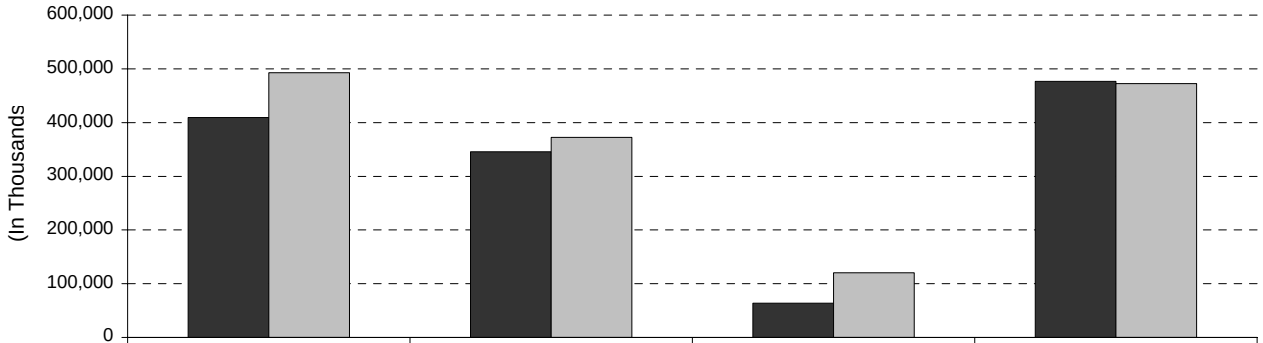
is slightly more than the increase of 31.2 percent for the female working-age population; In urban areas, on the other hand, the male working-age population decreased by 0.4 percent, whereas the female working-age population increased by 4.1 percent.

Table 6.1: Population 12 years and Over by Broad Age Groups-Residence and Sex, Copperbelt Province, 1990 and 2000

Residence and Sex	Year	Size	Total	12-19	20-24	25-29	30-59	60+	Not
Total	1990	908,650	100	34.5	16.5	12.2	33.2	3.4	0.2
	2000	965,270	100	30.7	16.4	13.4	34.9	4.7	0.0
Percent increase		6.2							
Male	1990	465,043	100	32.7	15.5	11.6	36.0	4.0	0.2
	2000	485,449	100	29.4	15.3	13.2	37.0	5.1	0.0
Percent increase		4.4							
Female	1990	443,607	100	36.5	17.5	12.9	30.2	2.7	0.2
	2000	479821	100	32.0	17.6	13.5	32.7	4.2	0.0
Percent increase		8.2							
Residence									
Rural									
Total	1990	134,751	100	31.7	14.6	11.1	34.8	7.6	0.2
	2000	177,481	100	28	14.9	12.7	35.3	9.0	0.0
Percent increase		31.7							
Male	1990	68,618	100	3.1	14.3	11.0	34.3	9.2	0.2
	2000	90,731	100	27.2	13.8	13.1	35.6	10.3	0.0
Percent increase		32.2							
Female	1990	66,133	100	32.5	14.9	11.2	35.2	6.0	0.2
	2000	86,750	100	28.9	16.2	12.3	35	7.7	0.0
Percent increase		31.2							
Urban									
Total	1990	773,899	100	35.0	16.8	12.4	33	2.6	0.2
	2000	787,789	100	31.2	16.8	13.5	34.8	3.7	0.0
Percent increase		1.8							
Male	1990	396,425	100	32.9	15.7	11.7	36.4	3.1	0.2
	2000	394,718	100	29.9	15.7	13.2	37.3	3.9	0.0
Percent increase		-0.4							
Female	1990	377,474	100	37.2	17.9	13.2	29.4	2.2	0.1
	2000	393,071	100	32.6	17.9	13.8	32.2	3.5	0.0
Percent increase		4.1							

Sources: 1990 and 2000 Censuses of Population and Housing

Figure 6.2: Current Economically Active Population (12 Years and Over), Copperbelt Province, 1990 and 2000



	Labour force	Employed	Unemployed	Inactive
1990	409,237	345,440	63,797	476,489
2000	492,644	372,337	120,307	472,626

Sources: 1990 and 2000 Censuses of Population and Housing

6.4 The Economically Inactive Population

Table 6.2 shows the current economically inactive population by reason of inactivity, residence and sex in 2000. Almost two thirds (65.5 percent) of the inactive population is female, while about a third (34.5 percent) are male. About 14 percent are in rural areas while 86 percent are in urban areas. Studying (44.9 percent) is the most important reason for inactivity, followed by homemaking (37.0) and lastly other reasons (18.1 percent). Groups of people included in the category of those who are economically inactive for "other reasons" include pensioners, those that are too old to work, prisoners, invalids, beggars and the disabled. In both rural and urban areas, the reasons for inactivity are in an order similar to the one for the whole country. The only thing to note is that there are slightly more home makers in the urban areas (37.1 percent) than in the rural areas (36.2 percent); slightly more students in the urban areas (45.7 percent) than in the rural areas (40.1 percent); there are more economically inactive people for other reasons in rural areas (23.8 percent) compared to urban areas (17.2 percent).

In 2000, males are economically inactive mainly because of studying (68.6 percent) while females are inactive primarily because of home making (54.0 percent).

Table 6.2: Current Economically Inactive Population By Reason For Inactivity, Residence and Sex, Copperbelt Province, 2000

Residence and Sex	Total Number	Percent	Reasons for Inactive		
			Home Maker	**Student**	**Other**
Copperbelt-Total	472,626	100	37.0	44.9	18.1
Rural	63,935	100	36.2	40.1	23.8
Urban	408,691	100	37.1	45.7	17.2
Male	163,175	100	4.7	68.6	26.6
Female	309,451	100	54.0	32.4	13.6

Sources: 2000 Censuses of Population and Housing.

6.5 The Economically Active Population (Labour force)

Figure 6.1 gives an illustration of the economically active population and economically inactive population. The economically active population by residence and sex on the Copperbelt Province are given in Table 6.3. According to this table, the labour force increased by 20.4 percent, from 409,237 in 1990 to 492,644 in 2000. The growth rate in the labour force for the province (1.9 percent) is less than that of the national average (3.8 percent). The increase of 9.3 percent in the male labour force is less than the increase of 48.9 in the female labour force. A big proportion of the labour force (80.7 percent in 1990 and 77percent in 2000) is in urban areas, as compared to the labour force in rural areas (19.3 percent in 1990 and 23 percent in 2000).

TABLE 6.3: TRENDS IN THE LABOUR FORCE AND AVERAGE ANNUAL GROWTH RATE OF THE LABOUR FORCE BY District, Copperbelt Province, 1990 and 2000

Districts	1990	2000	Growth rate
Zambia	2,162,487	3,165,151	3.8
Copperbelt Province	409,237	492,644	1.9
Chililabombwe	16,075	36,962	8.7
Chingola	42,473	51,483	1.9
Kalulushi	18,600	20,770	1.1
Kitwe	96,919	104,132	0.7
Luanshya	40,982	39,905	-0.3
Lufwanyama	-	24,549	-
Masaiti	-	35,608	-
Mpongwe	-	23,014	-
Mufulira	39,184	37,604	-0.4
Ndola	155,004	118,617	-2.6

Sources: 1990 and 2000 Censuses of Population and Housing

Chililabombwe district recorded the highest average annual growth rates in the labour force between 1990 and 2000 of 8.7 percent. Ndola, Mufulira and Luanshya recorded negative annual growth rates with -2.6 percent, -0.4 percent and -0.3 percent, respectively. The most likely reason for the lower annual growth rate for Ndola could be that three new districts, Masaiti, Lufwanyama and Mpogwe were formed between 1990 and 2000 and this could have reduced the labour force for Ndola in 2000.

In terms of percentage distribution of the labourforce in 2000, Ndola district had the highest proportion (24.1 percent), followed by Kitwe, Chingola and Luanshya with 21.1 percent, 10.5 and 8.1 percent respectively. Mpongwe and Kalulushi districts had the least with 4.7 and 4.2 percent, respectively.

Table 6.4: Percentage Distribution of the Labourforce by District, Copperbelt Province, 2000

District	Both Sexes	Male	Female
Copperbelt Province	100.0	100.0	100.0
Chililabombwe	7.5	6.0	10.4
Chingola	10.5	10.4	10.6
Kalulushi	4.2	4.4	3.8
Kitwe	21.1	22.9	17.8
Luanshya	8.1	8.6	7.1
Lufwanyama	5.0	4.2	6.4
Masaiti	7.2	6.5	8.6
Mpongwe	4.7	4.2	5.6
Mufulira	7.6	8.0	6.9
Ndola	24.1	24.8	22.6

Sources: 2000 Censuses of Population and Housing

Of the 492,644 total labourforce in Copperbelt Province, 372,337 or 75.6 percent are employed. The employed population increased by 7.8 percent from 345,440 in 1990 to 372,337 in 2000. The female employed labour force experienced an increase of 43.4 while the male employed labour force experienced a decrease of 4.5 percent. The proportion of the employed population residing in rural areas has increased from 19.3 percent in 1990 to 28.3 percent in 2000 while the proportion of the employed labour force residing in urban areas has decreased from 80.7 percent in 1990 to 71.7 percent in 2000.

The unemployed population has increased by 88.6 percent from 63,797 in 1990 to 120,307 in 2000. The increase of 102.5percent in the male unemployed population is more than the increase in the female unemployed population of 68.0 percent. In both 1990 and 2000, there were more unemployed people in the urban areas (85.6 percent for total; 84.9 percent for males and 86.8 for females) and (93.2 percent for total; 92.7 percent for males and 93.9 percent for females) respectively, than in the rural areas (14.4 percent for total; 15.1 percent for males and 13.2 for females) and (6.8 percent for total; 7.1 percent for males and 6.1 for females) respectively.

Table 6.5: Current Economically Active Population 12 Years and Over by Residence and Sex, Copperbelt Province, 1990 and 2000

Activity and Sex	Residence/Year							
	1990				2000			
	Total Number	Total	Rural	Urban	Total Number	Total	Rural	Urban
Population								
Total	908,650	100	14.8	85.2	965,270	100	18.4	81.6
Male	465,043	100	14.8	85.2	485,449	100	18.7	81.3
Female	443,607	100	14.9	85.1	479,821	100	18.1	81.9
Labour Force								

Total	409,237	100	19.3	80.7	492,644	100.0	23.0	76.9
Male	294,856	100	16.9	83.1	322,274	100.0	21.1	78.9
Female	114,381	100	26.5	73.5	170,370	100.0	26.8	73.2
Employed								
Total	345,440	100	19.3	80.7	372,337	100.0	28.3	71.69
Male	256,844	100	16.9	83.1	245,292	100.0	25.5	74.54
Female	88,596	100	26.5	73.5	127,045	100.0	33.8	66.19
Unemployed								
Total	63,797	100	14.4	85.6	120,307	100.0	6.8	93.2
Male	38,012	100	15.1	84.9	76,982	100.0	7.1	92.7
Female	25,785	100	13.2	86.8	43,325	100.0	6.1	93. 9
Inactive								
Total	476,490	100	11.7	88.3	472,626	100.0	13.5	86.5
Male	159,239	100	11.3	88.7	163,175	100.0	14.0	86.0
Female	317,251	100	11.9	88.1	309,451	100.0	13.3	86.7
Not Stated								
Total	22,923	100	13.1	86.9	0.0	0.0	0.0	0.0
Male	10,948	100	13.5	86.5	0.0	0.0	0.0	0.0
Female	11,975	100	12.8	87.5	0.0	0.0	0.0	0.0

Sources: 1990 and 2000 Censuses of Population and Housing

The economically inactive population comprises all persons 12 years and over who are classified neither as employed nor as unemployed during the reference period; that is that part of the population that is considered to be outside the labour force. The economically inactive population has declined slightly by 0.8 percent from 476,490 in 1990 to 472,626 in 2000. Economic inactivity for males increased slightly by 2.5 percent from 159,239 in 1990 to 163,175 in 2000. However, economic inactivity for females declined by 2.5 percent from 317,251 in 1990 to 309,451 in 2000. In both 1990 and 2000, urban areas had more economically inactive persons than rural areas.

Table 6.6 shows the economically active and economically inactive population by age, sex and nature of current economic activity.

For the Labour force and the employed, the peak age group was 35-54 years (30.2 percent for total; 32.2 percent for males and 26.47 percent for females and 34.9 percent for total;36.5 percent for males and 31.9 percent for females, respectively).

For the unemployed population, the peak was in the age groups 12-19 years (24.5 percent for total: 19.6 percent for males and 33.2 percent for females) and 20-24 (29.3 percent for total; 27.6 percent for males and 32.3 percent for females).

In as far as the economically inactive population is concerned, the peak was in the 12-19 age-group largely due to the fact that this is the age-range where there are a lot of school going persons on a full time basis.

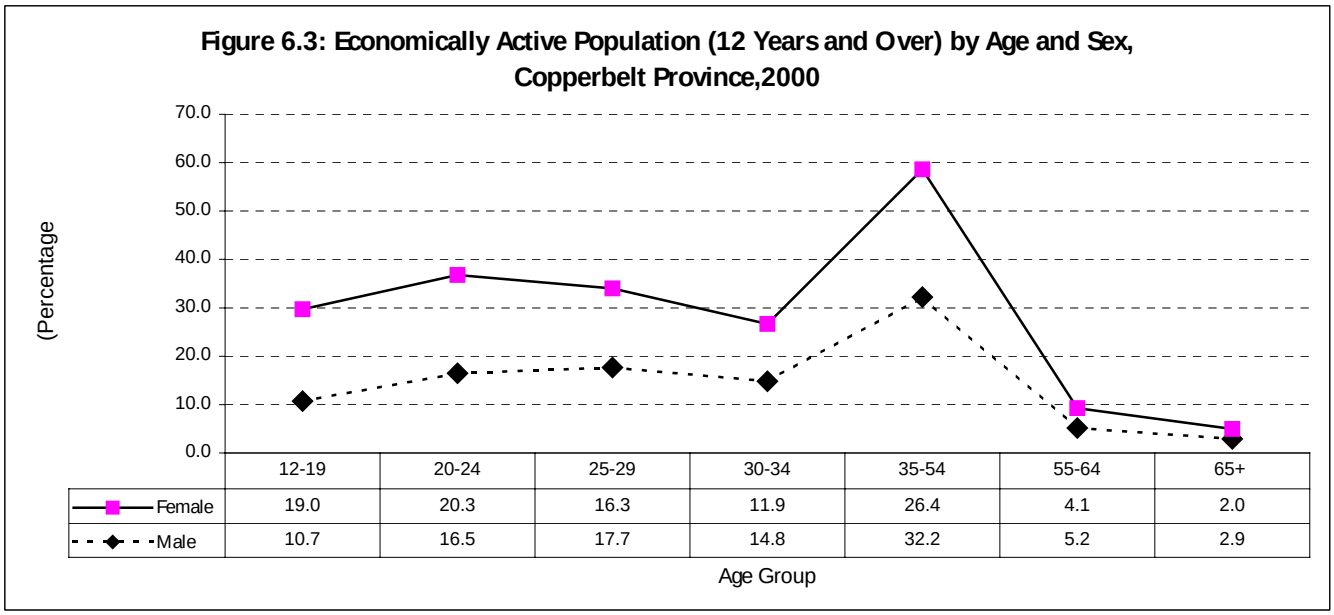
Figure 6.3 shows a diagrammatic presentation by age and sex of the economically active population in 2000. The peak is in the age-range 35-54

Table 6.6: Economically Active Population (12 Years and older) by Age, Sex, and Nature of Current Economic Activity, Copperbelt Province, 2000

Activity and Sex	Total Number	Total	Age Group						
			12-19	20-24	25-29	30-34	35-54	55-64	65+
Labour Force									
Total	492,644	100.0	13.6	17.8	17.2	13.8	30.2	4.8	2.6
Male	322,274	100.0	10.7	16.5	17.7	14.8	32.2	5.2	2.9
Female	170,370	100.0	19.0	20.3	16.3	11.9	26.4	4.1	2.0
Employed									

Total	372,337	100.0	10.1	14.1	17.0	15.1	34.9	5.6	3.2
Male	245,292	100.0	7.9	12.9	17.2	16.0	36.5	5.9	3.5
Female	127,045	100.0	14.1	16.2	16.6	13.4	31.9	5.1	2.6
Unemployed									
Total	120,307	100.0	24.5	29.3	18.0	9.7	15.6	2.1	0.8
Male	76,982	100.0	19.6	27.6	19.3	11.1	18.7	2.7	0.9
Female	43,325	100.0	33.2	32.3	15.6	7.2	10.2	1.0	0.4
Inactive									
Total	472,626	100.0	48.5	15.0	9.3	6.5	14.3	3.2	3.2
Male	163,175	100.0	66.2	13.1	4.3	2.5	6.9	3.2	3.9
Female	309,451	100.0	39.1	16.1	12.0	8.5	18.2	3.3	2.9

Source**: 2000 Censuses of Population and Housing**



Sources: 1990 and 2000 Censuses of Population and Housing

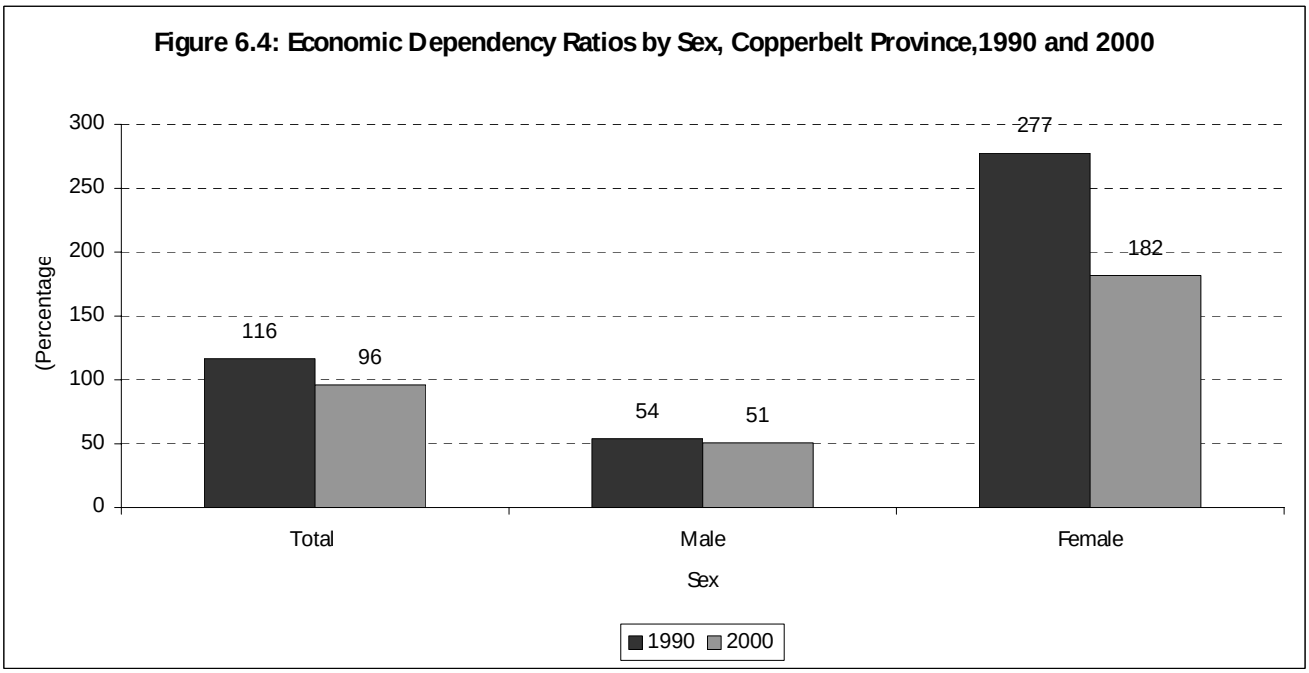
6.6. Economic Dependency Ratios

Table 6.7 shows the current economically active population and economic dependency ratios by sex and residence. The table shows that the ratios have decreased for all categories. The decreases are mostly for the females (277 percent in 1990 to 182 percent in 2000) and in rural areas (74 percent in 1990 to 56 percent in 2000). This pattern is in line with the national ratios for all the categories. A diagrammatic illustration of the decreases are indicated in figure 6.4.

Table 6.7: Current Economically Active Population and Economic Dependency Ratio by Sex and Residence, Copperbelt Province, 2000

Labourforce	**1990**	**2000**
Total Zambia	2162487	3165151
Total Copperbelt	409,237	492,644
Male	294,856	322,274
Female	114,381	170,370
Rural	76,334	113,546
Urban	332,903	379,098
Economic dependency ratios (Percentage)		
Total Zambia	114	79
Total Copperbelt	116	96
Male	54	51
Female	277	182
Rural	74	56
Urban	126	108

Sources: 1990 and 2000 Censuses of Population and Housing



Sources: 1990 and 2000 Censuses of Population and Housing

6.7 Current Labour Force Participation Rates

The Labour force rate is defined as the proportion of persons of a particular age- group who are in the labour force. It measures the extent to which a particular age and/or sex group is involved in economic activities. Labour force participation rates by age, sex, and residence are shown in table 6.8. There has been an increase in the extent to which the working-age population are involved in economic activities between the two censuses, as seen from the increase in the labour force participation from 45.0 percent in 1990 to 51 percent in 2000. However, the labour force participation rates for the province are slightly lower than the national, which increased from 46.6 percent in 1990 to 56.0 percent in 2000. In absolute terms, the increase in the female labour force from 25.8 percent to 45.0 percent is more than the increase for males from 63.4 percent to 66.0 percent.

Chililabombwe district had the largest increase in labour force participation rates (from 41.6 percent in 1990 to 89.2 percent in 2000). It was followed by Chingola (from 42.7 percent to 49.7 percent), Kalulushi (from43.2 percent to 46.6 percent) and Mufulira (from 42.6 percent to 43.3 percent). Ndola district had a slight increase from 48.0 percent in 1990 to 49.8 percent in2000; While Luanshya district recorded a decline from 45.4 percent in 1990 to 43.5 percent in 2000.

Table 6.8: Trends in Labour force Participation Rates by District and Sex, Copperbelt Province, 1990 and 2000

Districts	1990			2000		
	Total	Male	Female	Total	Male	Female
Zambia	46.6	62.2	31.9	56.0	67.0	45.0
Copperbelt	45.0	63.4	25.8	51.0	66.0	36.0
Chililabombwe	41.6	60.2	21.7	89.2	90.3	87.9
Chingola	42.7	62.4	21.8	49.5	64.0	34.9
Kalulushi	43.2	62.1	23.0	46.6	63.1	29.8
Kitwe	43.7	62.4	24.0	44.9	63.3	26.3
Luanshya	45.4	63.4	26.1	43.5	60.0	26.7
Lufwanyama	-	-	-	67.9	74.4	61.2
Masaiti	-	-	-	65.0	75.5	54.2
Mpongwe	-	-	-	65.4	75.7	54.9
Mufulira	42.6	60.9	23.5	43.3	59.7	27.1
Ndola	48.0	65.8	29.6	49.8	67.0	32.4

Sources: 1990 and 2000 Censuses of Population and Housing

* The dash (-) on the table denotes that the district did not exist at that time.

The increase in the rural labour force participation rate (from 56.3 percent to 64 percent) is greater than the increase in the urban areas (from 43.1 percent in 1990 to 48.1 percent in 2000).

The increase in labour force participation rates is greater for females than for males in both rural and urban areas. In the rural areas, the female participation rate has increased from 40.6 percent in 1990 to 52.6 percent in 2000, while the male participation rate has increased from 71.5 percent in 1990 to 74.9 percent in 2000. In the urban areas, the female labour force participation rate has increased from 23.2 percent in 1990 to 31.7 percent in 2000, while the participation rate of males has increased from 62 percent in 1990 to 64.4 percent in 2000.

An examination of the labour force participation rates by age reveals that they were lowest (12.84 percent) in the age-group 12-14 years and rose with the increase in ages to reach a peak of 70.1 percent for the age-group 45-49 years, and then started to decline until it reached 34.1 percent for the oldest age-group 75 years and over. The pattern of the distribution of the labour force participation rates by age in rural and urban areas are similar to the pattern described above for the total population. The patterns are also the same for both sexes except for the pattern for the males total and urban areas where the peak is reached in the age group 30-34 age group.

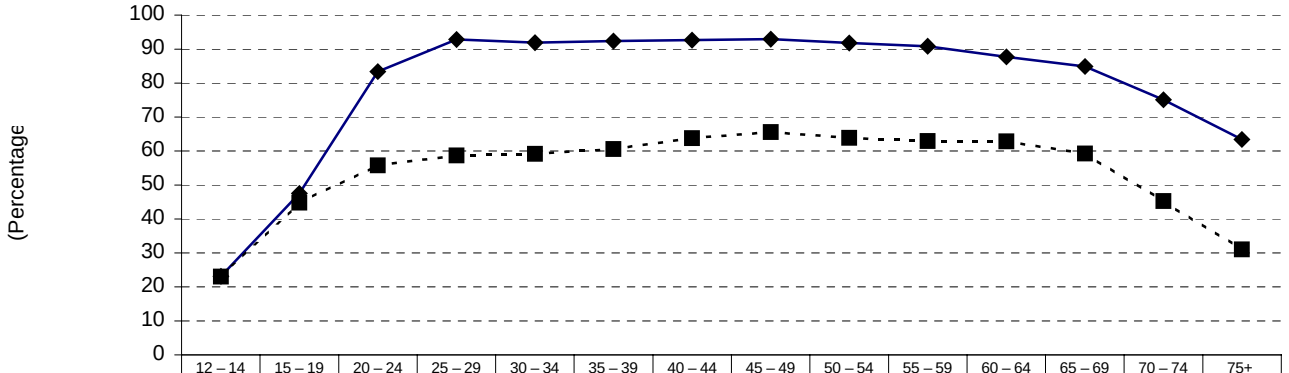
The male labour force participation rates are higher than those for females at every age group; this pattern is the same between the two sexes and in both rural and urban areas.

Table 6.9: Current Labour Force Participation Rates by Age, Sex and Residence, Copperbelt, 1990 and 2000

Age-Group	Current Participation Rates								
	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
1990	45.0	63.4	25.8	56.3	71.5	40.6	43.1	62.0	23.2
2000	51.0	66.0	36.0	64.0	74.9	52.6	48.1	64.4	31.7
2000 Census Age Group									
Total	51.04	66.0	36.00	63.98	74.89	52.56	48.12	64.43	31.74
12 – 14	12.84	13.33	12.37	23.04	23.10	22.99	10.67	11.16	10.21
15 – 19	28.56	31.00	26.32	46.17	47.55	44.85	25.11	27.67	22.79
20 – 24	55.21	71.28	41.03	68.79	83.41	55.76	52.49	68.84	38.10
25 – 29	65.79	89.02	42.87	76.74	92.86	58.68	63.46	88.14	39.77
30 – 34	69.03	92.14	43.35	76.76	91.87	59.19	67.40	92.20	40.10
35 – 39	68.32	92.13	43.11	76.90	92.36	60.54	66.55	92.08	39.50
40 – 44	69.14	91.81	44.65	78.39	92.67	63.80	67.24	91.63	40.56
45 – 49	70.11	89.61	46.34	79.43	92.95	65.52	68.00	88.92	41.48
50 – 54	67.75	84.91	44.78	77.54	91.78	63.84	64.96	83.29	37.92
55 – 59	63.90	79.01	43.04	77.38	90.85	62.94	58.67	75.08	33.63
60 – 64	56.73	72.55	38.34	76.09	87.70	62.85	47.20	65.19	26.05
65 – 69	54.33	69.72	35.59	74.10	84.86	59.26	42.90	60.17	23.30
70 – 74	45.05	58.60	26.84	63.61	75.12	45.32	34.05	47.66	17.46
75+	34.06	47.15	17.31	51.92	63.37	31.05	23.39	34.89	11.36

Sources: 1990 and 2000 Censuses of Population and Housing

Figure 6.5:Current Labourforce Participation Rates by Age and Sex, Copperbelt Province Rural, 2000

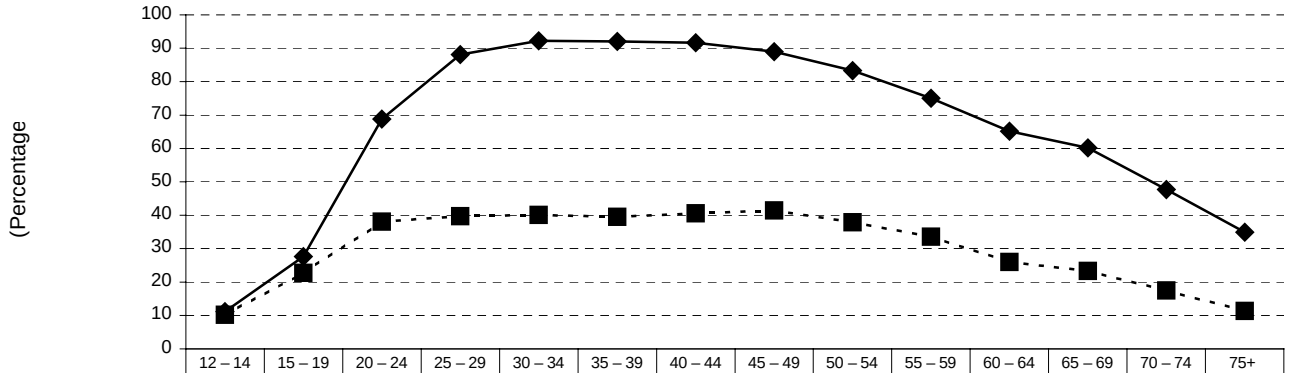


	12 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 – 44	45 – 49	50 – 54	55 – 59	60 – 64	65 – 69	70 – 74	75+
Male	23.1	47.55	83.41	92.86	91.87	92.36	92.67	92.95	91.78	90.85	87.7	84.86	75.12	63.37
Female	22.99	44.85	55.76	58.68	59.19	60.54	63.8	65.52	63.84	62.94	62.85	59.26	45.32	31.05

Age Group

Sources: 1990 and 2000 Censuses of Population and Housing

Figure 6.6:Current Labourforce Participation Rates by Age and Sex, Copperbelt Province Urban, 2000



	12 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 – 44	45 – 49	50 – 54	55 – 59	60 – 64	65 – 69	70 – 74	75+
Male	11.16	27.67	68.84	88.14	92.2	92.08	91.63	88.92	83.29	75.08	65.19	60.17	47.66	34.89
Female	10.21	22.79	38.1	39.77	40.1	39.5	40.56	41.48	37.92	33.63	26.05	23.3	17.46	11.36

Age Goup

Sources: 2000 Census of Population and Housing.

6.8 Employment Status, Occupation And Industrial Classification

The occupational and industrial structure and employment status of a country's labour force reflect the level of its economic development and the efficiency with which it uses and allocates its resources. If economic progress is experienced in a country, this will easily be reflected from the increased division and specialization of its labour force. In an economy in which economic progress is negligible, it is typical to find the majority of the workforce employed in it's primary industries. The labour force is found in various forms of self-employment activities and unskilled work. These activities are in the agricultural sector and other occupations characterized by low skill requirements.

6.8.1 Employment status

Table 6.10 shows that the usually working population increased by 4.2 percent between 1990 and 2000 from 323,338 in 1990 to 336,895 in 2000. This increase is much lower as compared to the national one, which rose by 52.9 percent during the same period.

In terms of employment status, the total self-employed persons as a proportion of the total usually working population increased from 22.6 percent in 1990 to 36.5 in 2000. The ratio of the self-employed persons by sex

has also increased between the two periods. However, the increase in the male self- employed persons (from 19.2 percent in 1990 to 35.2 percent in 2000) is more than the increase in the female self-employed persons (from 33.22 percent in 1990 to 39.1 percent in 2000). With regard to residence, a similar pattern is observed where the proportion of the male self-employed population has increased by a bigger percentage (from 34.9 percent in 1990 to 59.6 percent for the rural areas and from 16.1 percent to 26.5 percent for the urban areas) than the female self-employed population which has increased from 29.8 percent in 1990 to 42.1 percent in 2000 for the rural areas and from 34.5 percent in 1990 to 37.3 percent in 2000.

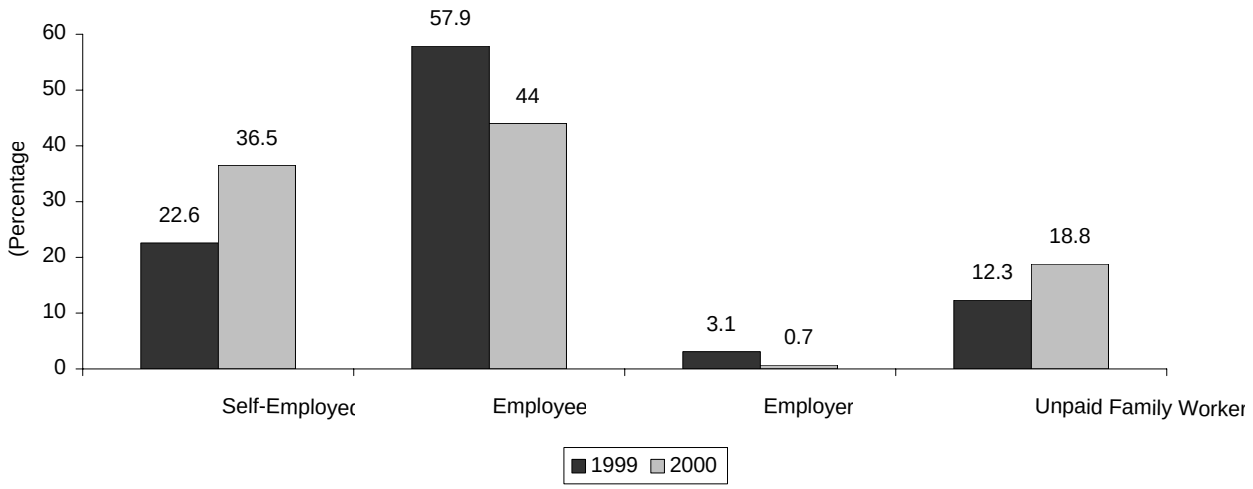
There has been a decrease in the proportion of the workforce classified as employers. From a proportion of 3.1 percent in 1990 the proportion dropped to 0.7 percent in 2000. A similar trend by sex and residence is observed.

Similarly, the proportion of the population classified as employees has decreased. The proportion of the total population classified as employees decreased from 57.9 percent in 1990 to 44.0 percent in 2000. The decline in the male employees (from 66.1 percent in 1990 to 52.8 percent in 2000 is more than the increase in the female employees (from 32.6 percent in 1990 to 26.5 percent in 2000).

The proportion of the unpaid family workers has increased in general from 12.3 percent in 1990 to 18.8 percent in 2000. In terms of residence increases in the urban unpaid family workers have been observed, especially for females who have increased from 13.7 percent in 1990 to 21.6 percent in 2000. In the rural areas the opposite was the case. The biggest decrease was observed in the male unpaid family workers (from 33.5 percent in 1990 to 23.4 percent in 2000).

The economic transformation of the Copperbelt Province's economy between 1990 and 2000 could have led to these developments. There was an ambitious privatization programme, which resulted into a lot of parastatals, including ZCCM, being privatized. In the process a good number of poor performing companies folded up. This could account for the significant decline in the proportion of the employers and employee. Poverty levels during the same period have increased. In order to cope with the hard times, we see an increase in the self-employed population.

Figure 6.7: Usually working Population (12 years and over) by Employment Status Copperbelt Province, 1990 and 2000



Sources: 1990 and 2000 Censuses of Population and Housing.

Table 6.10: Percent Distribution of the Usually Working Population 1(2 Years and Over) by Employment Status, Sex and Residence, Copperbelt Province, 1990 and 2000

Employment Status and Sex	Residence and Year					
	Total		Rural		Urban	
	1990	2000	1990	2000	1990	2000
Total Number						
Total	323,338	336,895	61,112	102,154	262,226	234,741
Male	244,588	224,155	40,195	59,151	204,393	165,004
Female	78,750	112,740	20,917	43,003	57,833	69,737
Total						
Total	100	100	100	100	100	100
Male	100	100	100	100	100	100

Female	100	100	100	100	100	100
Self -Employed						
Total	22.6	36.5	33.2	52.2	20.2	29.7
Male	19.2	35.2	34.9	59.6	16.1	26.5
Female	33.2	39.1	29.8	42.1	34.5	37.3
Employee						
Total	57.9	44.0	20.1	11.3	66.7	58.2
Male	66.1	52.8	27.6	16.7	73.7	65.7
Female	32.6	26.5	5.8	3.9	42.3	40.5
Employer						
Total	3.1	0.7	1.3	0.2	3.5	1
Male	3.5	0.9	1.7	0.3	3.9	1.1
Female	1.7	0.5	0.6	0.1	2.1	0.7
Unpaid family worker						
Total	12.3	18.8	42.8	36.3	5.1	11.2
Male	7.8	11.2	33.5	23.4	2.7	6.7
Female	26.2	33.9	60.6	53.9	13.7	21.6
Not Stated						
Total	4.1	0.0	2.6	0.0	4.5	0.0
Male	3.4	0.0	2.3	0.0	3.7	0.0
Female	6.3	0.0	3.2	0.0	7.4	0.0

Sources: 1990 and 2000 Censuses of Population and Housing.

6.8.2 Working Population by Occupation

The distribution of male and female workers among occupations showed some similarities. The three most common occupations for males are Production and related workers (28.7 percent in 1990 and 25.5 percent in 2000), Agriculture (14.0 percent in 1990 and 31.9 percent in 2000) and Professional, Technical and related occupations (10.5 percent in 1990 and 11.8 percent in 2000).

The three most important occupations for females are Agriculture (20.9 percent in 1990 and 48.1 percent in 2000), Sales workers (21.3 percent in 1990 and 19.4 percent in 2000) and Professional, Technical and related occupations (12.9 in 1990 and 10.7 percent in 2000.

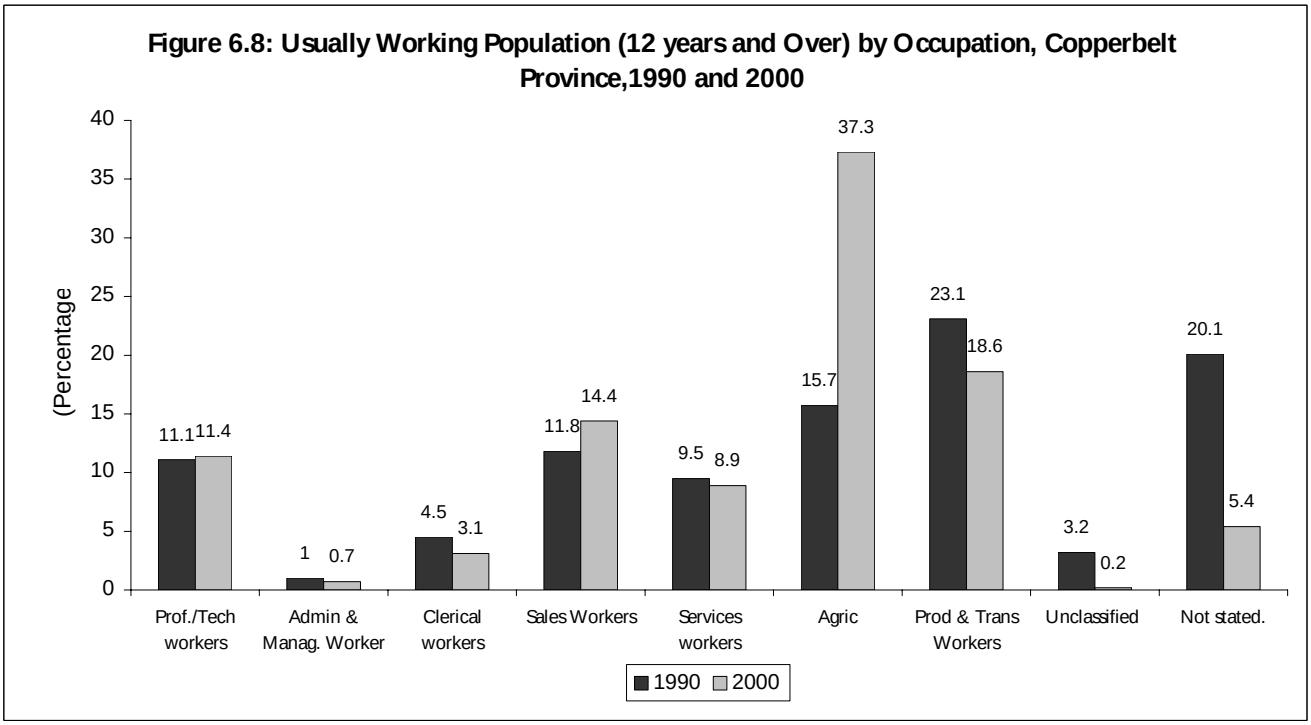
In rural areas, the distribution of workers among the various occupations is similar to the one for total Copperbelt, except that the proportion of workers who are in Agriculture and related occupations is much higher in rural areas. The differences between the distributions of male and female workers over the various occupations in rural areas are not so significant. The distribution of workers over occupations in urban areas is different from both that of the total and that of the rural areas. In urban areas, workers are more widely distributed over many occupations, and not concentrated in few occupations. The four most common occupations in urban areas are Production and related workers (25.1 percent in 2000), Sales workers (19.7 percent in 2000), Agriculture (15.8 percent in 2000) and Professional, technical and related workers (15.5 percent).

Table 6.11: Percent Distribution of the Usually Working Population By Occupation, Sex and Residence, Copperbelt Province, 1990 and 2000

Occupation		Percentage of Working Population								
		Total			Rural			Urban		
		Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
Total Number of Workers	1990	323,338	244,588	78,750	61,112	40,195	20,917	262,226	204,393	57,833
	2000	336,895	224,155	112,740	102,154	59,151	43,003	234,741	165,004	69,737
Total (%)	1990	100	100	100	100	100	100	100	100	100
	2000	100	100	100	100	100	100	100	100	100
Prof.Tech Workers	1990	11.1	10.5	12.9	2.6	2.8	2.2	13.1	12	16.8
	2000	11.4	11.8	10.7	2.0	2.4	1.3	15.5	15.1	16.4
Admin & Manag. Workers	1990	1.0	1.1	0.4	0.2	0.2	0.0	1.1	1.3	0.5
	2000	0.7	0.8	0.4	0.1	0.1	0.0	1.0	1.1	0.6
Clerical Workers	1990	4.5	3.6	7.4	0.5	0.6	0.4	5.4	4.2	9.9
	2000	3.1	3.1	3.2	0.3	0.5	0.1	4.3	4.0	5.1
Sales Workers	1990	11.8	8.8	21.3	3.8	3.6	4.0	13.7	9.8	27.6
	2000	14.4	11.8	19.4	2.0	1.9	2.2	19.7	15.4	29.9
Service Workers	1990	9.5	10.7	6.0	3.0	3.6	1.8	11.1	12.1	7.5
	2000	8.9	9.5	7.8	1.4	1.8	0.9	12.2	12.2	12.1
Agric.	1990	15.7	14.0	20.9	58.3	56.7	61.5	5.7	5.6	6.1
	2000	37.3	31.9	48.1	86.9	84.1	90.7	15.8	13.2	21.8

Prod. Trans. & worker	1990	23.1	28.7	5.6	7.8	10.5	2.7	26.6	32.3	6.7
	2000	18.6	25.5	4.7	3.7	5.6	1.1	25.1	32.7	7.0
Unclassified	1990	3.2	2.9	4.2	3.2	2.8	3.8	3.3	2.9	4.4
	2000	0.2	0.3	0.1	0.0	0.0	0.0	0.3	0.4	0.2
Not stated	1990	20.1	19.7	21.3	20.6	19.2	23.6	20.0	19.8	20.5
	2000	5.4	5.3	5.6	3.6	3.6	3.6	6.1	5.9	6.9

Sources: 1990 and 2000 Censuses of Population and Housing.



Sources: 1990 and 2000 Censuses of Population and Housing.

6.8.3 Working Population by Industry

The distribution of the usually working population 12 years and over by industry and employment status for 1990 and 2000 is shown in Table 6.12.

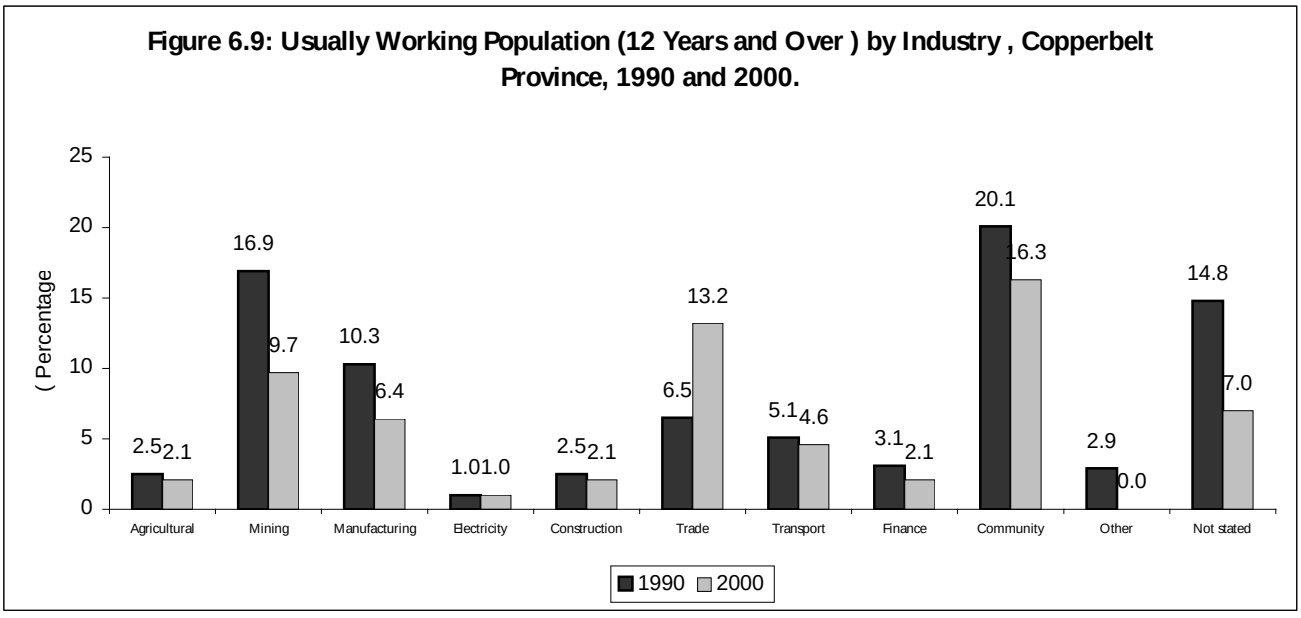
The industrial structure on the Copperbelt used to be dominated by the Mining (16.9 percent in 1990), Agriculture (16.8 percent in 1990) and Manufacturing (10.9 percent). However, the scenario has changed in 2000. Agriculture (37.5 percent) is now the most important, followed by Community (16.3 percent) and Trade (13.2 percent). Mining (9.7 percent) and Manufacturing (6.4 percent) have declined drastically in terms of importance largely due to the economic restructuring of the Copperbelt in the 1990's. In 2000 the Agriculture sector employed 37.5 percent of the workers, the Mining industry employed 9.7 percent, secondary activities together employed 9.5 percent, while tertiary industries together employed 36.2 percent. In comparison to 1990, the Agriculture (16.8 percent in 1990 to 37.5 percent in 2000) and the Trade (6.5 percent in 1990 to 13.2 percent in 2000) Primary Sectors are the only sectors, which have recorded some increases from 1990 to 2000. The rest of the sectors have shown decreases. The most significant are Mining (16.9 percent in 1990 to 9.7 percent in 2000) and Manufacturing (10.3 percent in 1990 to 6.4 percent in 2000). A study of the shifts of workers from one industry to another shows that except for Trade, all non-agricultural industries have experienced manpower losses during the 1990's, while the Agricultural industry is the only industry which has gained manpower. The industrial distribution of workers by employment status reveals that the unpaid family workers (53.1 percent in 1990 and 80.0 percent in 2000) were predominant in Agriculture. Self-employed and Employees are more widely distributed over the industries than other statuses. Employers are more important to Agriculture (27.8 percent in 1990 and 52.6 percent in 2000) and Trade (15.7 percent in 1990 and 22.1 percent in 2000).

Table 6.12: Percent Distribution of the Usually Working Population (12 Years and Over) by Employment Status and Industry, Copperbelt Province, 1990 and 2000

Industry and Year		Total Number Working	Self-employed	Employee	Employer	Unpaid Family Worker	Not stated
Total Number	1990	323,338	9,929	187,285	73,149	39,601	13,374
	2000	336,895	2,4711	148,164	123,026	63,234	0.0
Total Percentage	1990	100	100	100	100	100	100
	2000	100	100	100	100	100	100
Agriculture	1990	16.8	8.3	6.0	27.8	53.1	6.2
	2000	37.5	12.4	7.2	52.6	80.0	0.0
Mining	1990	16.9	18.2	27.4	0.4	0.2	8.8
	2000	9.7	8.9	21.4	0.5	0.2	0.0
Manufacturing	1990	10.3	13.2	12.8	8.7	1.9	7.3
	2000	6.4	10.6	9.2	5.7	1.0	0.0
Electricity	1990	1.0	1.6	1.5	0.2	0.0	0.6
	2000	1.0	1.2	2.1	0.2	0.0	0.0
Construction	1990	2.5	2.9	3.4	1.5	0.2	1.7
	2000	2.1	4.4	3.3	1.7	0.2	0.0
Trade	1990	6.5	5.9	4.1	15.7	1.6	5.7
	2000	13.2	14.3	7.8	22.1	8.7	0.0
Transport	1990	5.1	7.2	7.4	1.8	0.3	3.6
	2000	4.6	9.3	9.0	1.3	0.5	0.0
Finance	1990	3.1	3.6	3.5	3.5	0.4	2.0
	2000	2.1	5.3	3.1	1.7	0.4	0.0
Community	1990	20.1	25.4	23.3	21.0	4.4	12.9
	2000	16.3	24.4	29.7	7.3	2.4	0.0
Other	1990	2.9	2.0	2.0	2.9	6.1	7.8
	2000	0.0	0.0	0.0	0.0	0.0	0.0
Not Stated	1990	14.8	11.7	8.7	16.6	31.9	43.3
	2000	7.0	9.3	7.3	6.8	6.7	0.0

Sources: 1990 and 2000 Censuses of Population and Housing.

Figure 6.9: Usually Working Population (12 Years and Over) by Industry , Copperbelt Province, 1990 and 2000.



Sources: 1990 and 2000 Censuses of Population and Housing.

The distribution of the usually working population by employment status in each industry is shown in Table 6.13. Employees (57.9 percent in 1990 and 44.0 percent in 2000) are the most important status for all industries except for the Agriculture and Trade industries. There has been an increase in the number of Employers in the Trade industry (from 2.8 percent in 1990 to 60.9 percent in 2000) and in the Agricultural industry (from 1.5 percent in 1990 to 51.3 percent in 2000). The self-Employed declined in all industries between 1990 and 2000 and more significantly in trade from 54.2 percent to 0.8 percent. Unpaid family

workers are only mainly found in the Agricultural industry in both Censuses and have increased from 38.8 percent in 1990 to 40.0 percent in 2000.

Table 6.13: Percent Distribution of the Usually Working Population (12 Years and Over) by Employment Status and Industry, Copperbelt Province, 1990 and 2000

Industry and Year		Total Number Working	Total	Self Employed	Employee	Employer	Unpaid Family	Not stated
Total Number	1990	323,338	100	22.6	57.9	3.1	12.3	4.1
	2000	336,895	100	36.5	44.0	0.7	18.8	0.0
Agriculture	1990	54,192	100	37.5	20.7	1.5	38.8	1.5
	2000	126,345	100	0.2	8.5	51.3	40.0	0.0
Mining	1990	54,697	100	0.6	93.9	3.3	0.1	2.1
	2000	57,722	100	0.7	97.2	1.8	0.3	0.0
Manufacturing	1990	33,269	100	19.1	71.8	3.9	2.2	3.0
	2000	23,688	100	1.2	63.1	32.7	3.0	0.0
Electricity	1990	3,200	100	3.9	88.3	5.0	0.1	2.7
	2000	3,425	100	0.9	89.9	8.6	0.6	0.0
Construction	1990	8,022	100	13.4	79.3	3.5	0.9	2.9
	2000	10,612	100	1.5	68.0	29.1	1.4	0.0
Trade	1990	21,161	100	54.2	36.4	2.8	3.0	3.6
	2000	44,574	100	0.8	25.9	60.9	12.4	0.0
Transport	1990	16,437	100	8.0	84.0	4.4	0.7	2.9
	2000	15,350	100	1.5	86.4	10.2	1.9	0.0
Finance	1990	9,870	100	26.1	66.0	3.6	1.6	2.7
	2000	7,080	100	1.8	64.5	29.8	3.8	0.0
Community	1990	64,970	100	23.6	67.2	3.9	2.7	2.6
	2000	58,212	100	1.1	79.8	16.3	2.8	0.0
Other	1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Not Stated	1990	48,001	100	25.3	33.9	2.4	26.3	12.1
	2000	13,911	100	1.0	45.6	35.6	17.8	0.0

Sources: 1990 and 2000 Censuses of Population and Housing.

Tables 6.14 and 6.15 show the distribution of the usually working population by industry, sex residence for the year 2000. The majority of the labourforce are employed in the agricultural sector (38 percent) followed by the Trade Restaurant and Hotels sector with 13.0 percent. By residence, the rural areas employs 88 percent in the Agricultural Industry, a percentage which is slightly lower than the national average of 90 percent people in rural areas involved in agriculture. In urban areas, Community and Personal services and Trade, Restaurant and Hotels account for 22 percent and 18 percent, respectively.

Table 6.14: Percentage Distribution of Usually Working Population by Industry, Residence and Sex,
Copperbelt Province, 2000

Industry	Total Number	Rural	Urban	Male	Female
Agriculture	38	88	16	32	48
Mining & Quarrying	10	1	13	14	1
Manufacturing	6	1	9	8	4
Electricity, Gas, and Water	1	0	1	1	0
Construction	2	1	3	3	0
Trade, Restaurant, and Hotels	13	2	18	11	18
Transport and communication	5	0	6	6	1
Finance and Real Estates	2	0	3	2	2
Community and Personal services	16	3	22	15	18
Not Stated	7	4	8	7	7
Total Percentage	100	100	100	100	100
Total Number	336,895	102,154	234,741	224,155	112,740

Source: 2000 Census of Population and Housing

Disaggregated by sex 48 percent of the total usually working female population are in the Agricultural sector while 18 percent are in the Trade sector.

Table 6.15 Percent Distribution of the Usually working population by Industry, Residence and Sex, Copperbelt Province, 2000

Industry	Total Number	Total Percent	Male	Female	Rural Number	Total Percent	Male	Female	Urban Number	Total Percent	Male	Female
Agriculture	126,345	100	57.0	43.0	89,512	100	40.0	30.9	3,833	100	17.0	12.1
Mining	32,655	100	95.1	4.9	1,182	100	3.6	0.0	31,473	100	91.5	4.9
Manufacturing	21,545	100	81.4	18.6	932	100	3.0	1.3	20,613	100	78.4	17.3
Electricity,	3,425	100	89.5	10.5	55	100	1.6	0.0	3,370	100	87.9	10.5
Construction	7,177	100	95.3	4.7	550	100	7.5	0.2	6,627	100	87.9	4.5
Trade,	44,574	100	54.3	45.7	1,862	100	2.2	2.0	42,712	100	52.1	43.8
Transport	15,350	100	92.6	7.4	395	100	2.5	0.1	14,955	100	90.1	7.3
Finance	7,080	100	68.5	31.5	196	100	1.7	1.1	6,884	100	66.8	30.4
Community	55,063	100	62.7	37.3	2,967	100	3.7	1.6	52,096	100	58.9	35.7
Total Number	336,895	100	66.5	33.5	102,154	100	17.6	12.8	234,741	100	49.0	20.7

Source: 2000 Census of Population and Housing

From the total working population by industry sex and residence 66.5 percent were males and 33.5 percent were females. The Mining, Electricity Construction and Transport sectors account for the majority of the male working population of 95.1 percent, 89.5 percent, 95.3 percent and 92.6 percent respectively. The distribution by rural and urban does not differ much from the total distribution. The concentration of males in the Construction sector and females in the Agricultural sector is similar to the national pattern.

6.9 Educational Attainment

The main objective of human resource development is to secure the optimal number of people with the right qualifications for the right jobs at the right time.

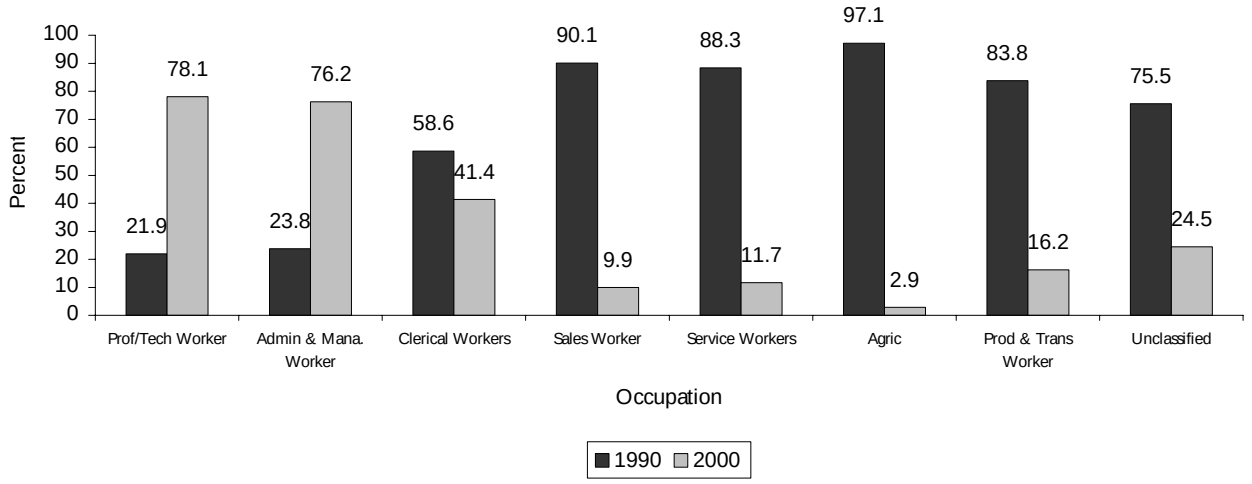
It is necessary for a country to invest time and money in the development of its human resources because of the benefits, which result from increased efficiency and productivity of those who receive training. Then specific type and number of skills required will be determined by the needs of economic growth and development. The total human resources needed in a country will by definition be equal to the number required to maintain the existing level of output, plus the number of people required to produce the planned additional volume of output, not forgetting to add some percentage for those who will die, retire, be upgraded, become disabled or emigrate. The information required on the development of human resources should give indications of the number of workers who possess skills that are critical for sustained economic development. Professional education is training which will enable a person to practice in an occupation in which only those who have acquired a pre-determined amount of knowledge, usually at degree level can practice.

Vocational education is training which prepares one for a specific occupation or family of occupations, but at a level that is lower than professional education.

Table 6.16 shows the distribution of the usually working population 12 years and over by professional/vocational training and occupation in 2000. According to this table, 81.8 percent of the workforce on the Copperbelt have absolutely no professional /vocational education while only 18.2 percent have such education. This is however, below the national average of about 92.1 percent of working people having no professional/vocational training. The distribution among the various occupations shows more, than three quarters of those in the Professional, Technical and related occupations have professional education, while a third do not have. The same proportions apply to the Administrative and Managerial occupations. For the Clerical and related workers, almost three fifths (58.6 percent) do not have professional training while about two fifths (41.4 percent) have. About ninety percent of the sales, service workers have no professional education, while over ninety percent of the Agriculture and production workers do not have professional education. A comparison of the distribution of male and female workers by professional/vocational workers does not show significant differences.

An examination of the levels of training of those who are reported to have professional education shows that almost three quarters (72.0 percent) are trained at Certificate level, a fifth (20.5 percent) are trained up to Diploma level and only 7.6 percent are trained up to Degree level, which is a similar pattern as that of the nation as a whole. In all the occupations, the proportion that has been trained up to Degree level is still low by 2000 apart from the Administrative and Managerial (29.7 percent) and the professional and Technical (10.2 percent) occupations. A substantial number of workers are trained up to Diploma level in the three occupations; Administrative and managerial (38.5 percent); Professional and technical (25.1 percent) and Sales workers (25.1 percent). The majority (ranging from 31.8 percent to 89.4 percent) of the workers are trained up to Certificate level in all the remaining occupations. The proportion of Diploma and degree holders is higher for males than for females, while the opposite is true of certificate holders. This pattern is the same in the majority of the occupations.

Figure 6.10 Usually Working Population (12 Years and Over) by Professional Training and Occupation, Copperbelt Province, 2000



Sources: 1990 and 2000 Censuses of Population and Housing.

Table 6.16: Usually Working Population 12 Years and Over by Professional/Vocational Training; Occupation and Sex (Percent), Copperbelt Province, 2000

Sex and occupation	Total usually Working Population	Working Population			Working Population With Professional Education				
		Total	No Professional Education	With Professional Education	Number Having Professional Education	Total	Certificate	Diploma	Degree

		Working Population			Working Population With Professional Education				
Both Sexes									
Total	336,895	100.0	81.8	18.2	61,149	100	72.0	20.5	7.6
Prof/Tech	38,417	100.0	21.9	78.1	30,009	100	64.7	25.1	10.2
Admin. Managerial	2,308	100.0	23.8	76.2	1,758	100	31.8	38.5	29.7
Clerical & Related	10,508	100.0	58.6	41.4	4,354	100	81.5	15.8	2.7
Sales workers	48,387	100.0	90.1	9.9	4,795	100	69.1	25.1	5.8
Service workers	30,009	100.0	88.3	11.7	3,525	100	89.4	8.8	1.8
Agric.	125,800	100.0	97.1	2.9	3,645	100	79.5	15.9	4.6
Production	62,588	100.0	83.8	16.2	10,164	100	89.1	9.3	1.6
Unclassified	748	100.0	75.5	24.5	183	100	69.9	16.4	13.7
Not stated. .	18,130	100.0	85.0	15.0	2,716	100	71.7	20.1	8.2
Males									
Total	224,155	100.0	81.0	19.0	42,560	100	67.1	23.6	9.3
Prof/Tech	26,400	100.0	26.1	73.9	19,509	100	56.1	30.4	13.5
Admin. Managerial	1,893	100.0	23.5	76.5	1,448	100	29.4	39.4	31.2
Clerical & Related	6,873	100.0	73.6	26.4	1,815	100	72.3	22.6	5.1
Sales workers	26,560	100.0	88.2	11.8	3,143	100	60.7	32.3	7.1
Service workers. .	21,215	100.0	86.6	13.4	2,853	100	89.4	8.7	1.9
Agric., Husbandry	128,825	100.0	90.9	9.1	11,759	100	85.5	11.9	2.6
Production	606	100.0	77.2	22.8	138	100	69.6	16.7	13.8
Unclassified	0	0	0	0	0	0	0	0	0
Not stated	11,783	100.0	83.9	16.1	1,895	100	67.0	23.2	9.8
Females									
Total	112,740	100.0	83.5	16.5	18,589	100	83.1	13.4	3.5
Prof/Tech workers.	12,017	100.0	12.6	87.4	10,500	100	80.6	15.4	4.0
Admin. Workers. .	415	100.0	25.3	74.7	310	100	42.9	34.2	22.9
Clerical & Related	3,635	100.0	30.2	69.8	2,539	100	88.1	10.9	0.9
Sales workers.	21,827	100.0	92.4	7.6	1,652	100	85.0	11.6	3.4
Service workers.	8,794	100.0	92.4	7.6	672	100	89.3	9.2	1.5
Agric., Husbandry	54,217	100.0	98.7	1.3	722	100	90.2	7.5	2.4
Production, Transport	5,346	100.0	75.2	24.8	1,328	100.0	94.2	5.3	0.5
Unclassified	142	100.0	68.3	31.7	45	100.0	71.1	15.6	13.3
Not stated.	6,347	100.0	87.1	12.9	821	100	82.6	13.0	4.4

Sources: 1990 and 2000 Censuses of Population and Housing**.**

Table 6.17 shows the usual working population 12 years and over by professional/vocational training, occupation and sex in 1990. Intercensal comparisons of training in human resources shows that the proportion of those having professional education increased from 17 percent in 1990 to 18.2 percent in 2000 while those having no professional qualification have declined from 83 percent in 1990 to 81.8 percent in 2000. This pattern is similar in all the occupations. The declines (especially in the technical and administrative sectors) could be as a result of the brain drain, as doctors, nurses and teachers, college and University lecturers go to work abroad (within the Southern African sub-region, as well as overseas) where they get better remuneration and conditions of service.

The comparison of those educational levels reached by those having professional/vocational training shows that the proportion both those who are trained at the level Certificate and Diploma have declined (from 76 percent in 1990 to 72.0 percent in 2000 for Certificate and from 23 percent in 1990 to 20.5 percent in 2000). The proportion of those trained at degree level has increased from 0.9 percent in 1990 to 7.6 percent in 2000. It must be noted that there is a remarkable increase in the proportion of those trained at Degree level in the two occupations of Administrative and Managerial (from 1.9 percent in 1990 to 29.7 percent in 2000), and Professional and Technical (from 1.6 percent in 1990 to 10.2 percent in 2000).

Although Copperbelt province has made big strides in increasing the number of workers who have received professional/vocational training at Certificate, Diploma and Degree levels in view of the fact that the province had very few persons with university education and with secondary education at the time of independence in 1964-the above data still shows that the bulk of the province's workforce is unskilled (and may hence have low productivity), while critical skills in the professional, Technical, administrative, managerial

and related occupations may still be too inadequate to enable the province to sustain appreciable development efforts.

Table **6.17: Usually Working Population 12 Years and Over by Professional/Vocational Training; Occupation and Sex (Percent), Copperbelt Province, 1990**

Sex and occupational Category	Total usually Working Population	Working Population			Working population with professional education				
		Total	No Professional Education	With Professional Education	Number Having Professional Education	Total	Certificate	Diploma	Degree
Both Sexes									
Total	323,338	100	83.0	17.0	54,061	100	76.0	23.0	0.9
Prof/Tech	35,851	100	31.6	68.4	23,962	100	67.0	31.3	1.6
Admin. Managerial	3,086	100	41.7	58.3	1,726	100	40.5	57.6	1.9
Clerical & Related	14,588	100	63.6	36.4	5,217	100	88.0	11.9	0.2
Sales workers	38,218	100	91.0	9.0	3,371	100	73.7	25.9	0.4
Service workers	30,804	100	89.9	10.1	3,061	100	87.6	12.3	0.1
Agric.	50,654	100	95.7	4.3	2,151	100	82.0	17.5	0.5
Production	74,678	100	89.2	10.8	7,959	100	89.0	10.7	0.3
Unclassified	10,456	100	92.1	7.9	812	100	75.0	24.3	0.7
Not stated	65,003	100	90.9	9.1	5,802	100	88.4	11.3	0.3
Male									
Total	244,588	100	83.4	16.6	39,818	100	72.7	26.2	1.1
Prof/Tech	25,664	100	36.0	64.0	16,018	100	59.3	38.5	2.1
Admin. Managerial	2,771	100	41.4	58.6	1,556	100	39.1	59.0	1.9
Clerical & Related	8,802	100	77.1	22.9	1,971	100	81.1	18.5	0.4
Sales workers	21,429	100	87.7	12.3	2,573	100	69.6	29.9	0.5
Service workers	26,068	100	89.3	10.7	2,744	100	87.4	12.6	0.1
Agric., Husbandry	104,495	100	94.3	5.7	9,328	100	87.3	12.3	0.3
Production	7,135	100	89.3	10.7	645	100	74.0	25.3	0.8
Unclassified	0	100	90.7	9.3	0	0	0	0	0
Not stated	48,224	100	89.5	10.5	4,983	100	88.5	11.3	0.3
Female									
Total	78,750	100	81.6	18.4	14,243	100	85.5	14.1	0.4
Prof/Tech workers	10,187	100	20.6	79.4	7,944	100	82.6	16.8	0.6
Admin. Workers	315	100	43.9	56.1	170	100	53.5	44.7	1.8
Clerical & Related	5,786	100	43.0	57.0	3,246	100	92.1	7.8	0.1
Sales workers.	16,789	100	95.2	4.8	798	100	86.8	13.0	0.1
Service workers.	4,736	100	93.2	6.8	317	100	89.6	10.1	0.3
Agric., Husbandry	16,419	100	98.7	1.3	214	100	85.5	14.0	0.5
Prod/ Transport	4,418	100	87.0	13.0	568	100.2	91.5	8.5	0.2
Unclassified	3,321	100	94.9	5.1	167	99.4	79.0	20.4	0.0
Not stated	16,779	100	95.0	5.0	819	100	88.2	11.6	0.2

Source: 1990 Census of Population and Housing

Table 6.18 shows the usually working population 12 years and over by field of training and professional/vocational training level completed by 2000. The biggest proportion of the province's labourforce of 67.4 percent had not received training at any level by 2000. There was more concentration of training in the Social sciences and arts than in the natural sciences. The following are the five most important fields of training for those who received professional/vocational training in 2000: Teacher training (17.5 percent); Nursing (10.5 percent); Accountancy (8.7 percent); Mechanical Engineering (8.1 percent); Electrical and Electronic Engineering (5.7 percent) and Business Administration (4.7 percent).

A comparison of fields of training by level of training completed shows patterns, which are similar to the one, described for the total workers who had received professional training by 2000. There is need to either increase training in such fields as Engineering, medicine and related areas or to retain professionals trained in these fields. This is because economic growth is highest in the secondary sectors of Manufacturing and Construction where natural science related skills are essential.

Table 6.18: Usually Working Population (12 Years and Over) by Field of Training and Professional/Vocational Training Completed (Percent), Copperbelt Province, 2000

Field of Training	Total usually Working Population	No Professional Education	Professional/vocational training			
			Total	Certificate	Diploma	Degree
Total Working Number	336,895	275,746	61,149	44,006	12,520	4,623
Percent Total	100.0	100.0	100.0	100.0	100.0	100.0
Natural science	0.2	0.0	0.9	0.3	1.1	6.4
Civil engineering	0.2	0.0	1.0	0.7	1.4	2.8
Elec. & Electronic Engineering.	1.0	0.0	5.7	5.3	7.0	5.1
Mechanical Engineering	1.5	0.0	8.1	8.1	8.2	7.1
Chemical Engineering	0.1	0.0	0.5	0.3	0.8	1.8
Mining Engineering	0.4	0.0	2.4	1.9	3.5	4.8
Industrial Engineering	0.0	0.0	0.0	0.0	0.0	0.0
Metallurgical Engineering	0.2	0.0	0.9	0.5	1.3	2.9
Architectural& T/Planning	0.1	0.0	0.4	0.2	0.7	1.1
Other Engineering	0.3	0.0	1.7	1.7	1.8	1.9
Medicine and Surgery	0.2	0.0	0.8	0.2	1.0	6.7
Pharmacy	0.1	0.0	0.4	0.3	0.7	0.7
Dentistry	0.1	0.0	0.3	0.3	0.3	0.4
Nursing	1.9	0.0	10.5	12.5	6.7	1.7
Medical Technology	0.2	0.0	0.9	0.3	1.6	4.5
X-RAY Technology	0.0	0.0	0.1	0.0	0.3	0.6
Veterinary	0.0	0.0	0.2	0.1	0.2	0.3
Statistics	0.0	0.0	0.1	0.1	0.1	0.3
Mathematics	0.0	0.0	0.1	0.1	0.3	0.6
Computer Science	0.3	0.0	1.6	1.2	2.5	2.1
Economics	0.1	0.0	0.6	0.3	0.7	2.6
Accountancy	1.6	0.0	8.7	6.5	15.6	10.7
Teacher Training	3.2	0.0	17.5	19.1	14.9	9.3
Law and Jurisprudence	0.2	0.0	1.3	1.2	1.1	2.8
Journalism	0.1	0.0	0.3	0.2	0.9	0.5
Fine Arts	0.1	0.0	0.6	0.6	0.4	0.8
Physical Education	0.0	0.0	0.1	0.1	0.1	0.3
Library Science	0.0	0.0	0.2	0.2	0.2	0.4
Social Welfare	0.1	0.0	0.6	0.5	0.7	1.1
Criminology	0.3	0.0	1.6	2.1	0.4	0.3
Business Administration	0.9	0.0	4.7	3.0	9.6	7.9
Secretarial Training	0.7	0.0	4.0	5.0	2.0	0.3
Shorthand Typing	0.1	0.0	0.8	1.0	0.2	0.1
Clerical Typing	0.2	0.0	1.0	1.3	0.2	0.2
Operating of Off. Machine	0.1	0.0	0.5	0.6	0.2	0.0
Service Trade	0.2	0.0	0.9	1.1	0.6	0.2
Radio & TV Broadcasting	0.0	0.0	0.1	0.1	0.2	0.2
Fire Protection & Fire Fighting	0.0	0.0	0.3	0.3	0.1	0.1
Agriculture, Forestry & Fishery	0.4	0.0	2.1	2.1	2.0	2.1
Food and drink Processing	0.1	0.0	0.5	0.6	0.4	0.1
Wood working	0.4	0.0	2.4	3.3	0.3	0.1
Textile Trades	0.4	0.0	2.2	2.9	0.4	0.3
Leather Trades	0.0	0.0	0.1	0.1	0.0	0.0
Other Programmers	2.1	0.0	11.7	13.1	8.4	7.1
No Training	67.4	82.3	0.0	0.0	0.0	0.0
Not stated	14.6	17.7	0.8	0.7	0.9	0.7

Source: 2000 Census of Population and Housing

6.10 Unemployment

Table 6.19 and table 6.20 show unemployment ratios by sex and residence for 1990 and 2000. There was an increase in the overall unemployment rate from 15.6 percent in 1990 to 24.4 percent in 2000. This is in contrast with the national average unemployment rate, which has reduced from 15.0 in 1990 to 12.9 in 2000. The Female unemployment rate of 25.4 percent is higher than that of males of 23.9 percent in 2000. However, the male unemployment rate has increased much more (from 12.9 percent in 1990 to 23.9 percent) than the female unemployment rate (22.5 percent to 25.4 percent) during the two reference periods.

In the rural areas the unemployment rate has declined for both male and females. The total unemployment rate has declined from 12.1 percent in 1990 to 7.2 percent in 2000. The Male unemployment rate has declined from 11.7 percent in 1990 to 8.1 percent in 2000 while the Female unemployment rate has declined from 12.7 percent in 1990 to 5.8 percent in 2000. However unemployment rates have increased in the urban areas. The total unemployment rate has increased from 16.4 percent in 1990 to 29.6 percent in 2000. The

increase in the male urban unemployment rate (from 13.1 percent in 1990 to 28.1 percent in 2000) is more than the increase in the urban female unemployment rate (from 25.6 percent in 1990 to 32.6 percent in 2000). The increase in the unemployment rates in the urban areas could be accounted for by the fact that there were a lot of job losses because a good number of companies were liquidated in the Mining and Manufacturing sectors. Correspondingly, this can explain the decrease in unemployment rates in the rural areas probably because those who lost jobs in the urban areas got employed in the rural areas primarily in the Agricultural sector.

Unemployment rates have increased the most in Luanshya district (15.8 percent in 1990 to 32.9 percent in 2000), followed by Kitwe, which also recorded an increase in the unemployment rate from 16.5 percent in 1990 to 32.6 percent in 2000. Chililabombwe district recorded a significant decline in unemployment rate from 23.0 percent in 1990 to 2.2 percent in 2000. Disaggregated by sex, the unemployment rates for both males and females have increased most in Luanshya district followed by Kitwe district

Table 6.19: Trends in Unemployment Rates by District and Sex, Copperbelt Province, 1990 and 2000

District	1990			2000		
	Total	Male	Female	Total	Male	Female
Zambia	15.0	14.1	16.7	12.9	14.1	11.3
Copperbelt Province	15.6	12.9	22.5	24.4	23.9	25.4
Districts						
Chililabombwe	23.0	18.9	35.1	2.2	2.4	2.1
Chingola	15.7	12.3	26.0	25.3	23.1	29.4
Kalulushi	17.6	14.9	25.4	24.4	25.1	22.8
Kitwe	16.5	12.9	26.1	32.6	30.7	37.3
Luanshya	15.8	12.6	24.2	32.9	30.0	39.4
Lufwanyama	-	-	-	3.5	4.4	2.3
Masaiti	-	-	-	5.6	6.2	4.6
Mpongwe	-	-	-	7.1	7.8	6.0
Mufulira	17.5	13.9	27.0	27.8	26.0	31.8
Ndola	13.5	11.9	17.0	33.2	30.7	38.3

Sources: 1990 and 2000 Censuses of Population and Housing.

Note: "-" denotes not applicable as they refer either to new or non-existent districts.

The 1990 rates for Ndola district are an average of Ndola rural and Ndola urban.

Table 6.20: Unemployment Rates by Sex and Residence, Copperbelt Province, 1990 and 2000

Employment Status, Sex and Residence		1990	2000
Copperbelt	Total	15.6	24.4
	Male	12.9	23.9
	Female	22.5	25.4
Rural	Total	12.1	7.2
	Male	11.7	8.1
	Female	12.7	5.8
Urban	Total	16.4	29.6
	Male	13.1	28.1
	Female	25.6	32.6

Source: 2000 Census of Population and Housing

Current unemployment rates by age, sex and residence on the Copperbelt in 2000 are shown in table 6.21. This table shows that unemployment is a more serious problem in the young age groups 12-14 (36.3 percent); 15-19 (46.2 percent); 20-24 (40.2 percent) and 25-29 (25.5 percent). The peak is in the age-group 15-19 years. This pattern is the same for both sexes and in rural areas. In the urban areas, the peak is in the age-group 12-14 for both sexes.

The overall unemployment rate of 23.9 percent for males is slightly less than that of females of 25.4 percent. A comparison of the rates by age between the two sexes shows that apart from the age groups 12-14, 15-19 and 20-24 years, the male unemployment rates are higher than the female unemployment rates at all ages.

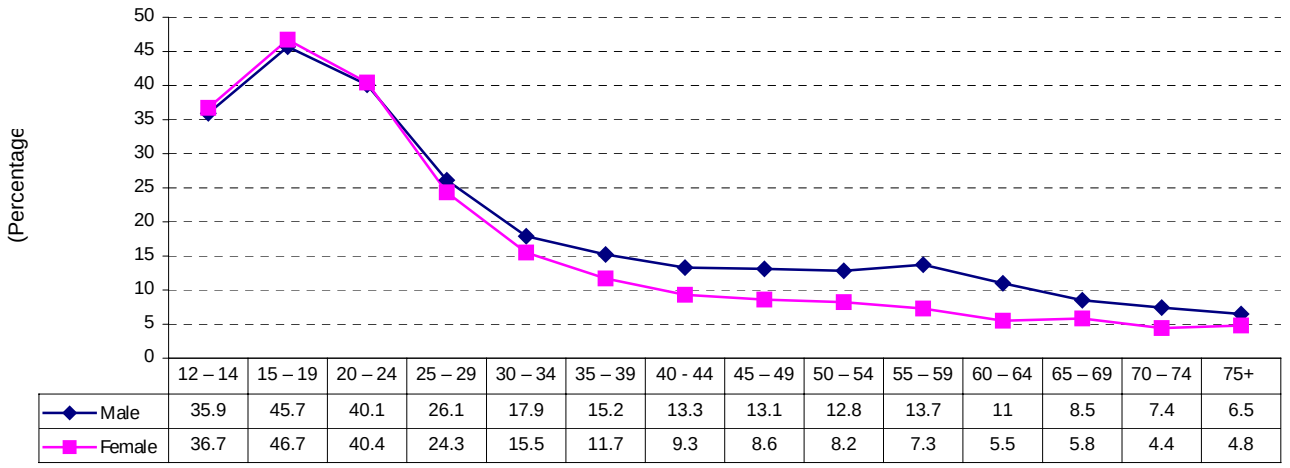
In rural areas, the male unemployment rates are higher than the female unemployment rates at all ages while in the urban areas, the female unemployment rates are higher than the male unemployment rates in the age-groups 12-14 up to the age-group 30-34. In the remaining age groups the male unemployment rates are higher than the female unemployment rates.

Table 6.21: Current Unemployment Rates by Age, Sex and Residence Copperbelt Province, 2000

Age Groups	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total	24.4	23.9	25.4	8.8	10.2	6.7	33.6	31.5	38.0
12 – 14	36.3	35.9	36.7	18.8	19.8	17.8	77.8	76.5	79.2
15 – 19	46.2	45.7	46.7	16.6	19.7	13.6	70.8	68.2	73.8
20 – 24	40.2	40.1	40.4	14.2	17.5	9.9	54.0	52.3	56.7
25 – 29	25.5	26.1	24.3	9.5	11.0	6.9	33.8	33.5	34.5
30 – 34	17.2	17.9	15.5	6.8	8.4	4.1	22.7	22.9	22.0
35 – 39	14.1	15.2	11.7	5.9	7.2	3.9	18.5	19.2	16.6
40 - 44	12.0	13.3	9.3	4.1	5.4	2.3	15.9	16.8	13.5
45 – 49	11.8	13.1	8.6	4.7	6.5	2.1	16.1	17.0	13.7
50 – 54	11.5	12.8	8.2	3.3	4.4	1.9	16.3	16.8	14.7
55 – 59	11.9	13.7	7.3	3.0	4.0	1.4	18.9	19.8	15.5
60 – 64	9.3	11.0	5.5	2.3	2.9	1.4	16.4	17.8	12.3
65 – 69	7.7	8.5	5.8	2.6	3.2	1.5	15.5	16.2	13.6
70 – 74	6.6	7.4	4.4	2.3	2.8	1.0	14.7	15.4	12.4
75+	6.1	6.5	4.8	2.1	2.6	0.6	14.5	14.9	13.1
Not stated	-	-	-	-	-	-	-	-	-

Source: 2000 Census of Population and Housing

Figure 6.11: Current Unemployment Rates by Age and Sex, Copperbelt Province,2000



Source: 2000 Census of Population and Housing

Table 6.22 shows the usually unemployed population by level of education completed and age in 2000.

A small percentage (13.2 percent) of the unemployed population in the province has completed no education, while almost (43.4 percent) had a primary education of grade 1 to

7. About two fifths of the unemployed population (40.6 percent) had secondary school education of grade 8 to 12. Those who have 'A' level education and Degree are almost negligible (2.8 percent). The distribution of the unemployed population by age shows that the proportion of those who have no education increase with the increase in age, while the proportion of those with grade 8-12 decrease with the increase in age.

The data in table 6.22 strongly suggests that unemployment in the province is a bigger problem for those with little or no education. However, this also appears to be a growing problem for those with a secondary education of grade 8-12, especially in the age group 20-54 years. This situation is the same as that of the nation as a whole.

Table 6.22: Usually Unemployed by Level of Academic Educational Completed and Age, Copperbelt Province, 2000

Age Group	Total Number Unemployed	Total	None	Grade 1-7	Grade 8-12	"A" Level	Degree
Total	628,375	100.0	13.2	43.4	40.6	1.2	1.6
12-19	107,634	100.0	7.0	85.1	7.8	0.0	0.0
20-24	163,660	100.0	6.7	40.0	52.8	0.5	0.0
25-29	113,614	100.0	10.2	28.0	59.3	1.9	0.6
30-34	70,591	100.0	12.7	31.9	51.5	2.1	1.8
35-39	45,744	100.0	15.3	35.0	43.0	1.8	4.9
40-44	34,280	100.0	17.0	36.2	39.4	1.6	5.8
45-49	24,817	100.0	21.0	36.8	35.2	2.0	5.1
50-54	18,739	100.0	24.7	35.6	32.6	2.3	4.8
55-59	14,477	100.0	31.3	36.5	26.1	2.4	3.8
60-64	9,849	100.0	36.4	36.6	21.4	2.2	3.4
65-69	8,409	100.0	46.0	36.8	13.5	1.2	2.4
70-74	6,298	100.0	50.2	35.8	10.5	0.9	2.6
75+	4,432	100.0	56.7	32.1	8.5	1.0	1.7

Source: 2000 Census of Population and Housing

6.11 Marital Status of the Unemployed

Table 6.23 shows the distribution of the currently unemployed population by marital status, sex and residence. According to the table, the majority (61.3 percent) of the unemployed population are married, slightly over a quarter (27.9 percent) are separated and 10.7 percent are either, divorced, widowed, never married or living together. The pattern is almost the same in both rural and urban areas and between the sexes.

Table 6.23: Currently Unemployed by Marital Status, Sex and Residence, (Percent), Copperbelt Province, 2000

Residence And Sex	Total Number Unemployed	Marital Status						
		Total	Married	Separated	Divorced	Widowed	Never Married	Living Together
Total								
Both Sexes	120,307	100.0	61.3	27.9	3.4	3.7	2.9	0.7
Male	76,982	100.0	60.1	34.5	1.4	2.0	1.6	0.5
Female	43,325	100.0	63.6	16.3	7.1	6.8	5.1	1.0
Rural								
Both Sexes	8,142	100.0	58.3	30.2	2.6	4.3	3.6	1.1
Male	5,494	100.0	57.8	34.7	1.5	2.6	2.6	0.7
Female	2,648	100.0	59.3	20.9	4.9	7.7	5.6	1.7
Urban								
Both Sexes	112,165	100.0	61.6	27.8	3.5	3.7	2.8	0.7
Male	71,488	100.0	60.2	34.5	1.4	1.9	1.6	0.5
Female	40,677	95.2	63.9	16.0	2.4	6.8	5.1	1.0

Source: 2000 Census of Population and Housing

6.11.1 Youth Unemployment

Data presented in Table 6.24 shows that youth unemployment is high in the province, 46.2 percent for the age group 15-19 and 40.2 percent in the age group 20-24. Comparing these rates with the rest of the age groups (refer to Table 6.21 above) it can be seen that youth unemployment is still a big problem in the province. In Terms of residence youth unemployment is higher in urban areas as opposed to rural areas. The reason here could be that youths in rural areas may be involved in agricultural activities thereby reducing the number of those unemployed whereas in urban areas where there are less agricultural activities youths end up having no employment. It is interesting to note that in rural areas male unemployment rates are higher than female unemployment rates whilst the opposite is the case in urban areas. The rates are also higher among youths in the age group 15-19 as opposed to those in the age group 20-24. This however could be attributed to the fact that youths in the age group 15-19 could still be attending school.

Table 6.24: Youth Unemployment Rate by Residence and Sex, Copperbelt Province, 2000.

Current Unemployment Rates									
Age Group	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total.	24.4	23.9	25.4	7.2	8.1	5.8	29.6	28.1	32.6
15 - 19.	46.2	45.7	46.7	13.5	15.3	11.7	57.9	56.2	59.8
20 - 24.	40.2	40.1	40.4	12.0	14.3	8.9	47.6	46.4	49.6

Source: 2000 Census of Population and Housing

6.11 Summary

The size of the working-age population on the Copperbelt has increased by 6.2 percent between 1990 and 2000. The distribution of this population by age shows that it declines with the increase in age, just as the total population.

The Labour force has increased by 20.4 percent between 1990 and 2000. Slightly above three quarters (76.9 percent) of the Labour force is in urban areas, while 23.0 percent is in rural areas. Almost one third (30.2 percent) of the Labour force is in the middle age group of 35-54 years.

The employed population has increased by 7.8 percent. The female employed population has increased by 43.4 percent, while male employed Labour force has decreased by 4.5 percent. The increase in the female employed population must have been due to both the increased female participation in informal sector activities, as well as due to the improved coverage of informal sector activities in the 2000 Census compared to the 1990 Census.

The number of the unemployed has increased by 88.6 percent between 1990 and 2000. The size of the male unemployed population has increased by 102.5 percent, while that of females has increased by 68.0 percent. There are more unemployed persons in the urban than in the rural areas for both males and females. In 2000, unemployment is a more serious problem for the young age-group of 20-24 years (29.3 percent) than for the adult age-group of 30 years and over.

The economically inactive population has declined slightly by 0.8 percent against an increase of 20.4 percent in the Labour force between 1990 and 2000. This implies that the increase in the working-age population (6.2 percent) between 1990 and 2000 has reduced the inactive population but increased the Labour force. Hence the Labour force participation rate has increased from 45 percent in 1990 to 51 percent in 2000. However,

the overall unemployment rate has increased from 15.6 percent in 1990 to 24.4 percent in 2000.

Economic activities are still organized around family Labour as evidenced by the predominance (55.3 percent) of workers who are classified as either self-employed or unpaid family workers. In contrast, only 44.7 percent are classified as employees or employers. The transformation of the Zambian economy (more so on the Copperbelt) in the 1990's seems to have reduced employment opportunities in the formal sector, thereby forcing a large part of the Labour force into self-employment in the informal sector.

There is a large concentration of workers (37.5 percent) in the Agricultural and related occupations because of the ease with which it is to enter the sector even with very low educational attainment. The Copperbelt has undergone a process of extensive labour market restructuring as can be seen by the decline in the importance of Mining (16.9 percent in 1990 to 9.7 percent in 2000) and Manufacturing (10.3 percent in 1990 to 6.4 percent in 2000) and the emergence of Agriculture (16.8 percent in 1990 to 37.5 percent in 2000) and Trade (6.5 percent in 1990 to 13.2 percent in 2000). This situation has been exacerbated by the economic stagnation of the 1990's, which has caused manpower losses in all the non-agricultural industries and manpower gains in the Agriculture and Trading industries.

Chapter 7

FERTILITY LEVELS, PATTERNS AND TRENDS

7.1 Introduction

Fertility is one of the three dynamics of population change; the other two being mortality and migration. Fertility analysis is important in understanding past, current and future trends of population size, composition and growth. Information on fertility levels, patterns and trends experienced by a country is important for socio-economic planning, monitoring and evaluating programs.

7.2. Concepts and Definitions:

- **Fertility:** refers to the frequency of occurrence of live births among women in a population.
- **Crude Birth Rate (CBR):** is the number of live births per thousand mid-year population during a specified period.
- **Completed Family Size (Mean Parity):** is the number of children ever born to women who have completed their reproduction i.e. those aged 45-49.
- **Age Specific Fertility Rate (ASFR):** is the number of live births per thousand women of a specific age group during a specific period.
- **Total Fertility Rate (TFR):** is the number of children that a woman would have by the end of her childbearing period if she were to experience the currently observed age-specific fertility rates.
- **Child Woman Ratio (CWR):** is the ratio of all children aged 0-4 to women aged 15-49 in the population.
- **General Fertility Rate (GFR):** is the number of live births occurring during a specified period 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 reaches the end of her reproduction if she experienced age specific fertility rates prevailing in that year.
- **Net Reproduction Rate (NRR):** refers to the average number of female births born to women aged 15-49, that would survive to the end of their reproductive period after experiencing the prevailing fertility and mortality levels.

7.3 Nature and Quality of Fertility Data

7.3.1. Data Availability and Limitations

The 2000 Census of Population and Housing collected data on fertility using a question on Children Ever Born (CEB) and a question on births in the last twelve months prior to the census. Information was collected from all women present in the household at the time of enumeration. Information on CEB was collected from women aged 12 years and older, while information on births in the last 12 months prior to the census was collected from women aged 12-49 years.

The question on CEB provides required information for estimating lifetime fertility of women. Estimates of Completed Family Size (Mean Parity) were computed using data from this question.

Information collected using the question on births in the 12 months prior to the census is useful in estimating current fertility. Data collected using this question was used in the computation of Age Specific Fertility Rates (ASFR), Total Fertility Rates (TFR), Gross Reproduction Rates (GRR) and the Net Reproduction Rates (NRR).

It is important to note that data on CEB sometimes do not yield good results due to omission of births, particularly by women aged 35 years and above. Children who died soon after birth, those born before marriage and not living with the mother for example, are usually omitted in the census, especially that birth histories are not used to collect this information in the census. Mean parities calculated from children ever born data are also affected by age misreporting by women (See Chapter 2).

In order to reduce on the chances of children being omitted, especially children who have died or live in different households from those of their mothers, the 2000 Census of Population and Housing included questions on whether the child lives in the same household as the mother or whether the child lives elsewhere, and whether the child died. The sex of the child was asked for each of these questions.

7.3.2. Data Evaluation and Adjustment

The 2000 Census fertility analysis used the Trussel variant of the Brass PF ratio technique to adjust the fertility data and to come up with adjusted Age Specific Fertility Rates (ASFR) and adjusted Total Fertility Rates (TFR). The PF ratio technique originally developed by William Brass provides a method for adjusting reported age specific fertility rates (based on births in the 12 month period prior to the census), to the 'actual ' level of fertility (based on CEB). The PF ratio technique was used to adjust fertility on the basis of the age of the mother at the time of the census, and not the age of the child.

While the Gompertz Relational Technique yielded reasonable estimates of adjusted TFR, the PF Ratio technique was used because it yielded both adjusted ASFR and TFR (See Table 7.1). The analysis of the PF Ratios showed that areas that had experienced fertility declines e.g. urban areas had PF ratios that were rising by age of women suggesting patterns of recent fertility decline, while rural areas with almost constant fertility showed PF ratios with very little deviations from the standard. The analysis and adjustment of fertility used different sets of spreadsheets in the Population Analysis Spreadsheets (PASEX), developed by the US Census Bureau.

The Brass PF Ratio technique is used to estimate fertility by comparing the lifetime fertility (Completed fertility =P) to the current fertility (Age specific fertility pattern prevailing at a particular time=F). If the age pattern and the level of fertility are correctly reported, the ratio of the current fertility and completed fertility, or PF ratio is equal to one.

Deviations from one may indicate the extent and nature of biases in the data, but if consistency checks show that both the P and F are accurate, the deviations with a pattern of increasing ratios with an increase in the age of the woman may be an indication of recent declines in fertility levels.

The Trussel variant of the Brass PF ratio uses adjustment factors developed by Trussel using a set of fertility models (Coale and Trussel, 1974). Since the age specific fertility pattern are with respect to 5-year age groups of women aged 15-19, 20-24, 25-29,… whose mid-point ages are 17.5, 22.5, 27.5, etc, and the completed fertility refer to fertility at exact age 20, 25, 30,..etc, there is need to adjust the data so that the reference ages are harmonized.

The Gompertz fertility model assumes that a relationship exists between the cumulative fertility and the Gompertz function, and hence attempts to fit the completed fertility to the double exponential function.

Table 7.1: Comparison of TFR obtained from the Gompertz Technique and the Trussel/Brass PF Ratio Technique by Province, Zambia, 2000

Province	Gompertz Relational 2+2 Points based on ASFR and CEB Avg. (20-34)	Trussel-Brass PF Ratio Avg. (P2/F2:P3/F3: P4/F4)
Zambia	**6.0**	**6.0**
Central	6.2	6.1
Copperbelt	5.2	5.2
Eastern	6.6	6.7
Luapula	7.0	7.1
Lusaka	4.6	4.6
Northern	6.9	7.0
North Western	6.3	6.6
Southern	6.3	6.3
Western	5.8	5.9

Source: CSO, 2000 Census of Population and Housing

7.4 Fertility Levels, Patterns and Trends

Fertility levels refer to the currently observed fertility rates prevailing in a particular territory at a particular time, while fertility Patterns refer to the prevailing fertility rates by the various background characteristics of women. Fertility trends look at what has been happening to fertility over time.

The ASFR provides a measure of fertility variation by age of women and helps in the calculation of Total Fertility Rate (TFR). In this chapter ASFR refers to the prevailing fertility patterns for women aged 15-49 when plotted on a graph, the ASFR shows a characteristic pattern with an initial rise from low levels in the younger ages rising to a peak usually in the 20s and then falling in the older ages (See figure 7.1).

Table 7.2 shows observed and adjusted Age Specific Fertility Rates (ASFR) and TFR for Copperbelt Province and rural/urban areas. The TFR for Copperbelt is 5.2; less than that of the national average of 6.0. This means that on average, a woman in Copperbelt province will give birth to about 5.2 children by the end of her reproductive period if current fertility levels remain constant. Rural areas have a higher TFR (6.1) than urban areas (5.0).

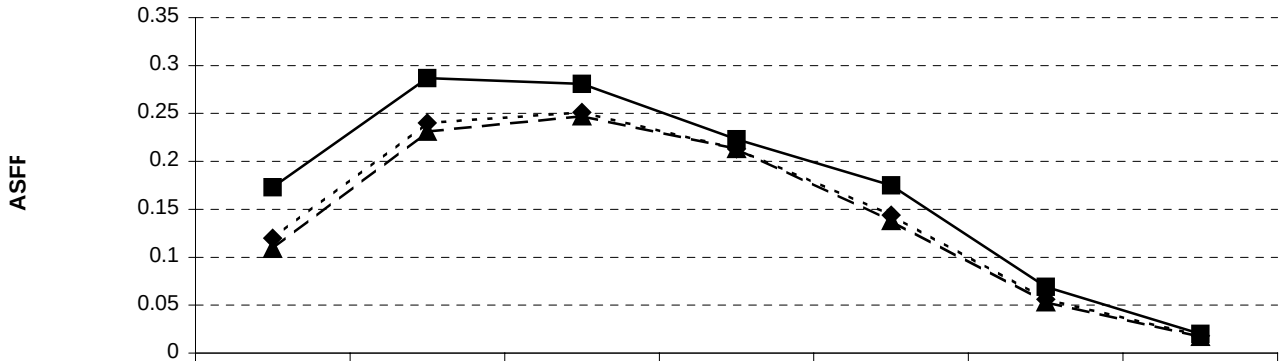
Table 7.2: Age Specific Fertility Rate (ASFR) and Total Fertility Rate (TFR), Copperbelt Province and Rural/Urban, 2000.

Age Group	Total				Rural				Urban			
	Total Women	Births	Observed ASFR	Adjusted ASFR	Total Women	Births	Observed ASFR	Adjusted ASFR	Total Women	Births	Observed ASFR	Adjusted ASFR
15-19	95,999	6,573	0.068	0.120	15,370	1906	0.124	0.173	80,629	4,667	0.058	0.109
20-24	84,347	13,274	0.157	0.240	14,011	3347	0.239	0.287	70,336	9,927	0.141	0.231
25-29	64,912	11,044	0.170	0.251	10,644	2550	0.240	0.281	54,268	8,494	0.157	0.247
30-34	46,634	6,877	0.147	0.213	7,923	1524	0.192	0.223	38,711	5,353	0.138	0.213
35-39	37,651	3,875	0.103	0.144	6,465	999	0.155	0.175	31,186	2,876	0.092	0.138
40-44	28,453	1,180	0.041	0.056	5,008	324	0.065	0.069	23,445	856	0.037	0.053
45-49	20,416	309	0.015	0.018	4,124	89	0.022	0.020	16,292	220	0.014	0.017
Observed TFR			**3.5**				**5.2**				**3.2**	
Adjusted TFR				**5.2**				**6.1**				**5.0**

Source**: 2000 Census of Population and Housing**

The table, as well as figure 7.1 shows that childbearing is at its peak in the age group 20 – 24 after which it steadily declines. The figure also shows that urban women have lower ASFR at all ages compared to women in rural areas. The peak of childbearing for urban women (25-29) occurs later than for rural women (20-25).

Figure 7.1 Age Specific Fertility Rate (ASFR), Copperbelt Province, Rural and Urban, 2000



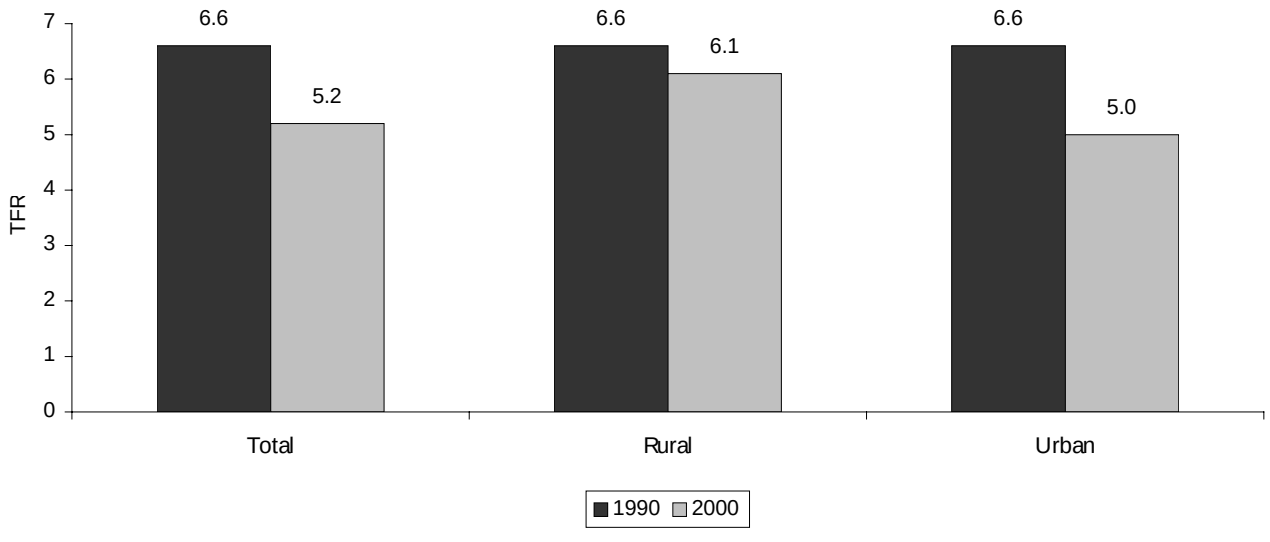
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Total	0.12	0.24	0.251	0.213	0.144	0.056	0.018
Rural	0.173	0.287	0.281	0.223	0.175	0.069	0.02
Urban	0.109	0.231	0.247	0.213	0.138	0.053	0.017

Age Group

Source**: 2000 Census of Population and Housing**

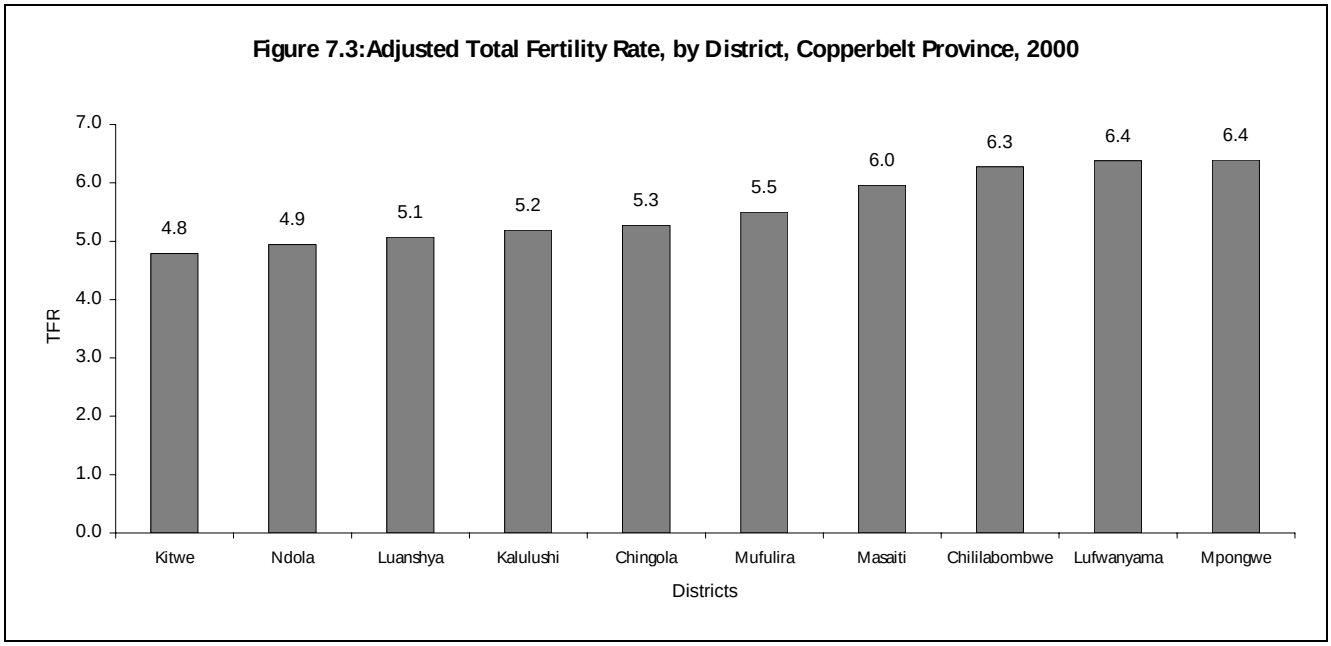
Figure 7.2 shows that the TRFs for Copperbelt has decreased from 6.6 in 1990 to 5.2 in 2000. Much of the decline can be attributed to the larger decline in the urban areas compared to rural areas. The TFR for rural areas decreased from 6.6 to 6.1 while that of urban areas decreased from 6.6 to 5.0 between 1990 to 2000. The decline in fertility in the urban areas could be attributed to the fact that urban areas may have the socio-economic conditions necessary for fertility decline such as access to reproductive health services, better and enhanced access to education by both girls and boys among other reasons as opposed to the conditions prevailing in rural areas.

Figure 7.2: Total Fertility Rate (TFR), Copperbelt Province, Rural and Urban, 1990 & 2000



Source**: 2000 Census of Population and Housing**

The TFR for the districts of Copperbelt ranges from 4.8 in Kitwe to 6.4 in Lufwanyama and Mpongwe. Districts with a TFR that is lower than that of the provincial average include Kitwe(4.8) Ndola (4.9) and Luanshya (5.1).



Source**: 2000 Census of Population and Housing**

7.5 Fertility Differentials by Background Characteristics of Women aged 15-49

This section shows differences in levels of fertility according to various background characteristics of women. These include marital status and economic status.

7.5.1 Fertility Differentials by Marital Status of Women aged 15-49

Marital status has a bearing on the fertility levels of women because of the amount of exposure to the risk of pregnancy that married women have compared to the unmarried. Table 7.3 shows that TFR is highest among the married (5.8) followed by the living together (4.8) and among the never married (1.7).

Table 7.3: Fertility Differentials by Marital Status of Women Aged 15-49, Copperbelt Province, 2000

District	Marital status						
	Total	Married	Separated	Divorced	Widowed	Never Married	Living Together
Chililabombwe	6.3	6.4	4.2	3.2	5.9	1.6	6.1
Chingola	5.3	5.5	3.4	3.5	4.5	1.1	4.0
Kalulushi	5.2	5.3	4.6	4.5	3.3	1.5	5.1
Kitwe	4.8	5.0	3.2	3.2	3.4	1.1	4.1
Luanshya	5.1	5.2	3.4	3.3	4.8	1.5	4.7
Lufwanyama	6.4	6.6	4.2	4.4	4.0	1.1	3.2
Masaiti	6.0	6.2	4.5	3.8	4.0	2.7	3.5
Mpongwe	6.4	6.5	3.8	4.9	4.9	3.2	3.1
Mufulira	5.5	5.8	3.8	3.4	3.9	1.5	2.4
Ndola	4.9	5.1	3.4	3.1	3.7	1.5	3.7
Copperbelt Total	5.2	5.8	4.4	4.3	4.5	1.7	4.8

Source**: 2000 Census of Population and Housing**

7.5.2 Fertility Differentials by Economic Status of Women Aged 15-49

Table 7.4 shows the fertility levels of working and non-working women. Detailed definitions of working are shown in Chapter 6 of this report. Women classified as working have a slightly lower fertility rate of 4.5 than those classified otherwise (5.4). This pattern holds true for all the districts in the province.

Table 7.4**:** Fertility Differentials by Economic Status of Women aged 15-49, Copperbelt Province, 2000

District	Economic Status		
	Total	Working	Not Working
Chililabombwe	6.3	4.8	7.1
Chingola	5.3	4.7	5.3
Kalulushi	5.2	5.0	5.2
Kitwe	4.8	3.7	5.1
Luanshya	5.1	4.0	5.3
Lufwanyama	6.4	6.1	6.4
Masaiti	6.0	5.8	6.0
Mpongwe	6.4	6.1	6.7
Mufulira	5.5	4.4	5.8
Ndola	4.9	4.1	5.2
Copperbelt Total	5.2	4.5	5.4

Source**: 2000 Census of Population and Housing**

7.5.3 Fertility Differentials by level of Education of Women Aged 15-49

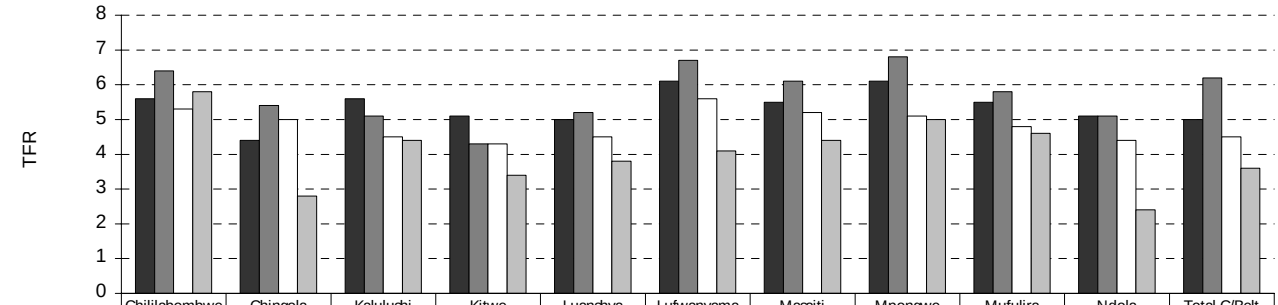
Table 7.5 shows the fertility levels according to women's levels of education in Copperbelt Province. Women with tertiary education have lower fertility than women in other education categories. For instance, women with tertiary education had a TFR of 3.6 compared with TFR of 5.2 for women without any schooling. However, in Chililabombwe, the TFR for women with tertiary education is higher than that of women with no schooling at all.

Table 7.5: Fertility Differentials by level of Education of Women Aged 15-49, Copperbelt Province, 2000

District	Level of education				
	Total	No Education	Primary	Secondary	Tertiary
Chililabombwe	6.3	5.6	6.4	5.3	5.8
Chingola	5.3	4.4	5.4	5.0	2.8
Kalulushi	5.2	5.6	5.1	4.5	4.4
Kitwe	4.8	5.1	4.3	4.3	3.4
Luanshya	5.1	5.0	5.2	4.5	3.8
Lufwanyama	6.4	6.1	6.7	5.6	4.1
Masaiti	6.0	5.5	6.1	5.2	4.4
Mpongwe	6.4	6.1	6.8	5.1	5.0
Mufulira	5.5	5.5	5.8	4.8	4.6
Ndola	4.9	5.1	5.1	4.4	2.4
Copperbelt Total	5.2	5.0	6.2	4.5	3.6

Source: 2000 Census of Population and Housing

Figure 7.4 Fertility Differentials by Educational Attainment of Women Aged 15-49, Copperbelt Province, 2000



	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola	Total C/Belt
No Education	5.6	4.4	5.6	5.1	5	6.1	5.5	6.1	5.5	5.1	5
Primary	6.4	5.4	5.1	4.3	5.2	6.7	6.1	6.8	5.8	5.1	6.2
Secondary	5.3	5	4.5	4.3	4.5	5.6	5.2	5.1	4.8	4.4	4.5
Tertiary	5.8	2.8	4.4	3.4	3.8	4.1	4.4	5	4.6	2.4	3.6

Districts

Source: 2000 Census of Population and Housing

7.6. Gross Reproduction Rate (GRR)

The Gross Reproduction Rate (GRR) is 1.7 for Copperbelt province implying that two daughters will replace a woman experiencing the fertility pattern prevailing at the time of the census by the time she reaches the end of her reproductive period. This Gross Reproductive Rate for the province is lower than the national average one which is estimated at 2.3 daughters. The GRR for rural areas (2.5) is large than that of urban areas (1.5).

Table 7.6: Gross Reproduction Rate (GRR), Copperbelt Province, Rural- Urban, 2000

Age Groups	Total			Rural			Urban		
	Women	Female Births	ASFR(f)	Women	Female Births	ASFR(f)	Women	Female Births	ASFR(f)
15-19	95,999	3190	0.033	15,370	918	0.06	80,629	2272	0.028
20-24	84,347	6406	0.076	14,011	1643	0.117	70,336	4763	0.068
25-29	64,912	5375	0.083	10,644	1250	0.117	54,268	4125	0.076
30-34	46,634	3334	0.071	7,923	739	0.093	38,711	2595	0.067
35-39	37,651	1918	0.051	6,465	477	0.074	31,186	1441	0.046
40-44	28,453	591	0.021	5,008	173	0.035	23,445	418	0.018
45-49	20,416	135	0.007	4,124	44	0.011	16,292	91	0.006
GRR			**1.7**			**2.5**			**1.5**

Source: **2000 Census of Population and Housing**

7.7. Net Reproduction Rate (NRR)

The Net Reproduction Rate is more useful in theoretical demography because it helps in determining the replacement levels of women by taking into consideration the effect of both fertility and mortality on the daughters born to women**.**

An NRR equal to 1.0 is referred to as the "replacement level fertility" because it indicates that on average each woman will be replaced by exactly one daughter after a generation. A higher value indicates a growing population and a lower value shows a declining population.

Table 7.7: Net Reproduction Rate (NRR), Copperbelt, Rural- Urban, 2000

	Total			Rural			Urban		
Age Group	ASFR(f)	Survival Ratios	*ASFR(f)	ASFR(f)	Survival Ratios	*ASFR(f)	ASFR(f)	Survival Ratios	*ASFR(f)
15-19	0.033	0.8054	0.0266	0.060	0.7979	0.047874	0.028	0.8079	0.022621
20-24	0.076	0.7890	0.0600	0.117	0.7811	0.091389	0.068	0.7916	0.053829
25-29	0.083	0.7700	0.0639	0.117	0.7616	0.089107	0.076	0.7728	0.058733
30-34	0.071	0.7487	0.0532	0.093	0.7398	0.068801	0.067	0.7516	0.050357

35-35	0.051	0.7249	0.0370	0.074	0.7156	0.052954	0.046	0.7280	0.033488
40-44	0.021	0.6984	0.0147	0.035	0.6886	0.024101	0.018	0.7017	0.012631
45-49	0.007	0.6695	0.0047	0.011	0.6594	0.007253	0.006	0.673	0.004038
NRR			**1.3**			**1.9**			**1.2**

Source**: 2000 Census of Population and Housing**
Note***: ASFR at prevailing rates of mortality***

Table 7.7 shows that the NRR for Copperbelt as of 2000 is 1.3 daughters, implying that women on the Copperbelt are almost reaching "replacement level fertility", as they will be replaced by one daughters who will survive to the end of her reproductive age, after experiencing the prevailing fertility and mortality rates. This rate is lower than the national average estimated at 1.7 daughters.

Table 7.8 shows that the NRR has been declining steadily over the last 20 years from 3.2 in 1980 to 2.3 in 1990 and to 1.3 in 2000. This implies that population will continue to grow but at a declining rate.

Table 7.8: Trends in Net Reproduction Rate (NRR), Copperbelt Province, 1980-2000

Residence	Census year		
	1980	1990	2000
Total	3.2	2.3	1.3
Rural	2.8	2.3	1.9
Urban	2.3	2.3	1.2

Source: **2000 Census of Population and Housing**

7.8. Mean Parity

Mean Parity is the number of children ever born to women who have completed their reproduction i.e. those aged 45-49. The mean parity for the women aged 15-49 is usually referred to as the Completed Family Size (CFS) and should be equal to TFR under constant fertility, mortality and migration.

Table 7.9 shows that the mean parity (completed family size) for women in Copperbelt Province is 6.7. This is slightly lower than the national average of 6.8 children per woman. Mean parity for rural areas (6.9) is higher than that of urban areas (6.6). A comparison of the TFR with mean parity also shows trends in fertility. While TFR is a measure of current fertility mean parity measures completed fertility. Women age 45–49 have given birth to an average of 6.7 children. The TRF (5.2) is lower than that of the mean parity and this can be attributed to the observed fertility decline overtime.

Another measure of trends in fertility is comparing the TFR with the mean number of CEB to women at the end of their childbearing period, aged 45-49 (mean parity). While TFR is a measure of current fertility, mean parity measures past or completed fertility. Overall, Women age 45–49 reported having given birth to an average of 7 children. This compares with a TFR of 5.2 for women in the age group 15-49; the difference may be attributed to the observed fertility decline overtime.

Table 7.9: Observed Mean Parity, Copperbelt Province, Rural and Urban, 2000

Age Group	Total	Rural	Urban
15-19	0.2	0.4	0.2
20-24	1.2	1.6	1.1
25-29	2.4	3.0	2.3
30-34	3.8	4.2	3.7
35-39	5.1	5.4	5.1
40-44	6.2	6.5	6.2
45-49	**6.7**	**6.9**	**6.6**

Source: **2000 Census of Population and Housing**

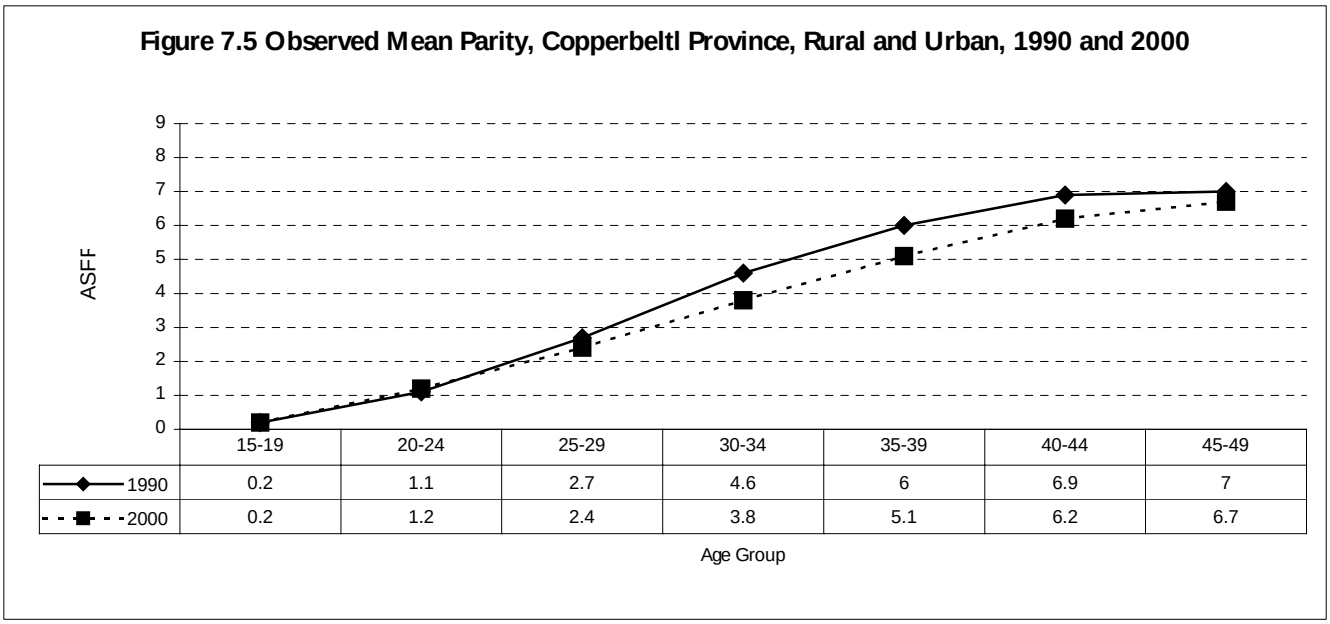
Table 7.10 and Figure 7.5 show that the mean parity has decreased between 1990 and 2000. In the young age group of 15 – 24 years, the mean parity has almost remained constant while in the higher age groups, this rate has decreased.

Table 7.10: Observed Mean, Parity Copperbelt Province, 1990-2000

Age Group	Mean Parity (1990)*	Mean Parity (2000)
15-19	0.2	0.2
20-24	1.1	1.2
25-29	2.7	2.4
30-34	4.6	3.8
35-39	6.0	5.1
40-44	6.9	6.2
45-49	**7.0**	**6.7**

Source: **1990 a d 2000 Census of Population and Housing**

Note: 1990 estimates extracted from Analytical Report Vol. 2 of the 1990 Census of Population, Housing and Agriculture, CSO 1995.



7.9. Other Fertility Indicators

Table 7.11 shows a summary of fertility indicators for districts of Copperbelt Province. The table shows that the Crude Birth Rate, Total Fertility Rate, General Fertility Rate, Child Woman Ratio and Gross Reproduction Rate are lowest in Kitwe and highest in Mpongwe.

Table 7.11: Summary of Fertility Indicators by Districts, Copperbelt Province, 2000

District	Adjusted Total Fertility Rate	Crude Birth Rate	General Fertility Rate	Child Woman Ratio	Mean Parity	Gross Reproduction Rate
Chililabombwe	**6.3**	**32.5**	**134.4**	**667**	**6.5**	**2.1**
Chingola	**5.3**	**28.3**	**114.2**	**639**	**6.7**	**1.7**
Kalulushi	**5.2**	**26.3**	**107.0**	**621**	**6.5**	**1.6**
Kitwe	**4.8**	**26.2**	**101.6**	**593**	**6.6**	**1.5**
Luanshya	**5.1**	**23.7**	**95.6**	**586**	**6.6**	**1.5**
Lufwanyama	**6.4**	**38.6**	**178.1**	**853**	**6.8**	**2.9**
Masaiti	**6.0**	**35.5**	**162.2**	**822**	**7.0**	**2.3**
Mpongwe	**6.4**	**42.8**	**194.9**	**883**	**7.3**	**2.9**
Mufulira	**5.5**	**27.6**	**111.2**	**601**	**7.1**	**1.7**
Ndola	**4.9**	**26.6**	**103.9**	**598**	**6.5**	**1.5**
Copperbelt Total	**5.2**	**28**	**115**	**635**	**6.7**	**2.7**

Source**: 2000 Census of Population and Housing**

7.10. Summary

Fertility levels for Copperbelt Province have declined over the period 1990-2000, from 6.6 to 5.2.This decline has been attributed to the decline in urban areas in which the TFR dropped from 6.0 in 1990 to 5.0 in 2000 while that of the rural areas has declined slightly from 6.6 to 6.1.

Child bearing is at its peak in the age group 20-24 years after which it declines steadily. Mpongwe has the largest TFR (6.4) among the districts while Kitwe has the least (4.8)

Generally, fertility rates are highest in Mpongwe and lowest in Luanshya. These include Crude Birth Rate, General Fertility Rate, Mean Parity and Gross Reproduction Rate.

CHAPTER 8

CHILD AND ADULT MORTALITY

8.1 Introduction

Basic demographic information on the number of deaths by age and sex in a population is a critical input for the determination and evaluation of health policies and programmes, according to the World Health Organisation (WHO, 2002:1). Specifically, child mortality data are important for evaluating and monitoring progress on governments' child survival targets and intervention measures. Equally important for planning and programme implementation purposes is information on adult mortality. This is of particular importance in the era of HIV/AIDS as the pandemic affects the most productive and reproductive ages (15-49 years).

Indirect demographic methods are used to derive both child and adult mortality indicators. Information on child mortality estimation was based on the reports of the mothers, aged 15-49 years, of the survival of their children by sex. This gives information on children surviving and dying out of the total children ever born per woman (mother) in the reproductive age group (15-49 years). The United Nations Mortality measurement package, Mortpak-Lite, as well as Q-5, were used to compute child mortality indicators, namely, infant mortality rate (IMR), child mortality rate (CMR), under-five mortality rate (UMR) and life expectancy at birth (e_0) based on the Coale-Demeny North Model. It is worth noting that these child mortality indicators are based on life tables that were developed on mortality data in the pre-AIDS era. WHO (2002:13) notes that if deaths from HIV/AIDS were to be excluded, life expectancy at birth in some countries in Southern Africa including Zambia would be 15 to 20 years higher.

Information on the number of adult deaths by age and sex in the household was not collected in the 2000 round of Census of Population and Housing. Therefore, measurement of adult mortality was based on estimates of life expectancies by age for ages 10 - 70 years. The measurements were computed using the Population Analysis Spreadsheet (PAS) and two consecutive census populations by 5-year age groups as an input into the measurement (Preston-Bennett Mortality Technique) (US Bureau of the Census, 1994:161). This method indirectly takes into account the effects of the HIV/AIDS pandemic on the population that would not be captured from the model life tables and is also based on large numbers of the populations.

8.2 Concepts and Definitions

- *Mortality* refers to the occurrence of deaths in a population.
- *Infant mortality rate* (IMR) ($_1q_0$) refers to the number of deaths among infants aged below one year per thousand (1,000) live births per year
- *Child mortality rate* (CMR) ($_5q_1$) refers to the number of deaths among children aged between exact age one and five years per thousand (1,000) live births per year
- *Under-five mortality rate* (UMR) ($_5q_0$) refers to the number of deaths among children aged below five years per thousand (1,000) live births per year. UMR, therefore, constitutes both the infant and child mortality.
- *Life expectancy at birth* (e_0) refers to the average number of years a newly born child is expected to live, if the current existing mortality conditions were to prevail for a long time.
- *Life expectancy at exact age* (e_x) refers to the average number of years a person aged X years is expected to live, if the current existing mortality conditions were to prevail for a long time and;
- *Adult mortality* ($_{60}q_{15}$) refers to the number of deaths that occur to persons in the age range 15 to 60 years.

8.3 Infant Mortality Levels, Trends and Differentials

Table 8.1 shows that infant mortality rate (IMR) in Copperbelt Province has increased from 87 deaths per 1000 live births in 1980 to 110 deaths per 1000 live births in 1990. In 2000, it dropped to 92 deaths per 1000 live births.

Compared to the national average IMR of 110 death per 1000 live births, the provincial average (92) is lower.

Table 8.1: Infant Mortality Rates by Sex Of Child, Residence and District, Copperbelt Province, 1980-2000.

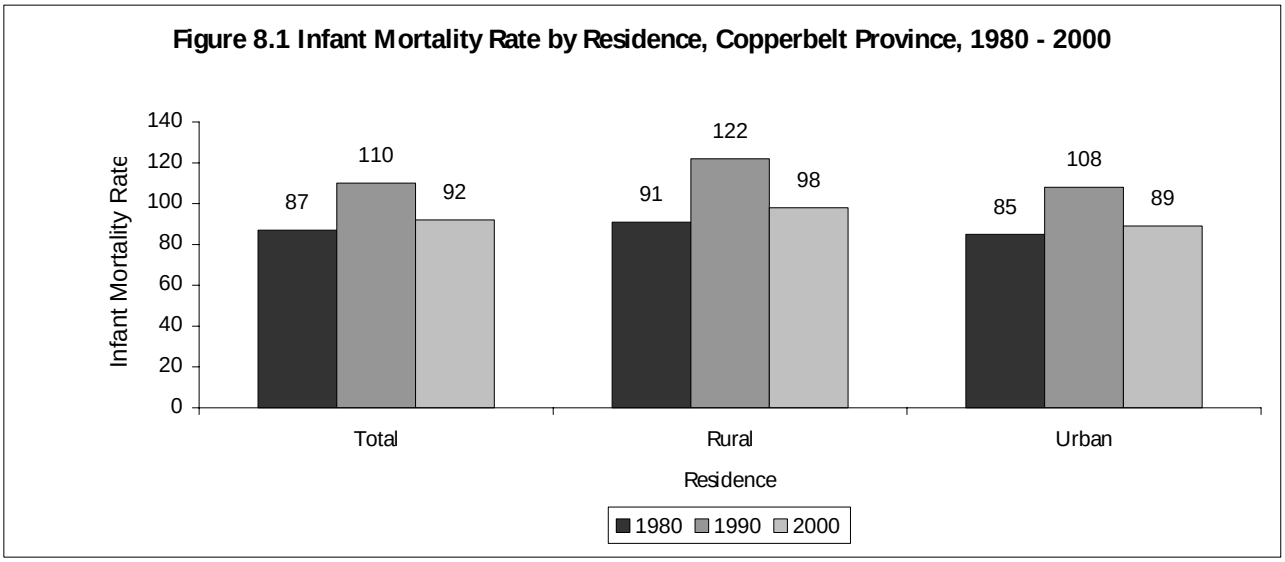
Residence And sex	Infant Mortality Rate (per '000)		
	1980	1990	2000
Zambia	**99**	**124**	**110**
Copperbelt	87	110	92
Residence			
Rural	91	122	98
Urban	85	108	89
Sex Of Child			
Male	88	117	97
Female	87	103	87
District (2000)	**Total (2000)**	**Rural (2000)**	**Urban (2000)**
Chililabombwe	75	-	75
Chingola	78	110	71
Kalulushi	95	94	96
Kitwe	91	85	91
Luanshya	94	94	91
Lufwanyama	113	113	-
Masaiti	101	101	-
Mpongwe	72	72	-
Mufulira	91	120	83
Ndola	93	-	93

Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

Note: (-) Denotes that the district does not have either a rural or an urban area.

8.3.1 Infant Mortality Rate by Residence

Figure 8.1 shows that IMR has also declined between 1990 and 2000, from 122 to 98 deaths per 1000 live births in rural areas and from 108 to 89 deaths per 1000 live births in urban areas. This shows that infants in rural areas of Copperbelt Province have a higher risk of dying before age one than urban infants.



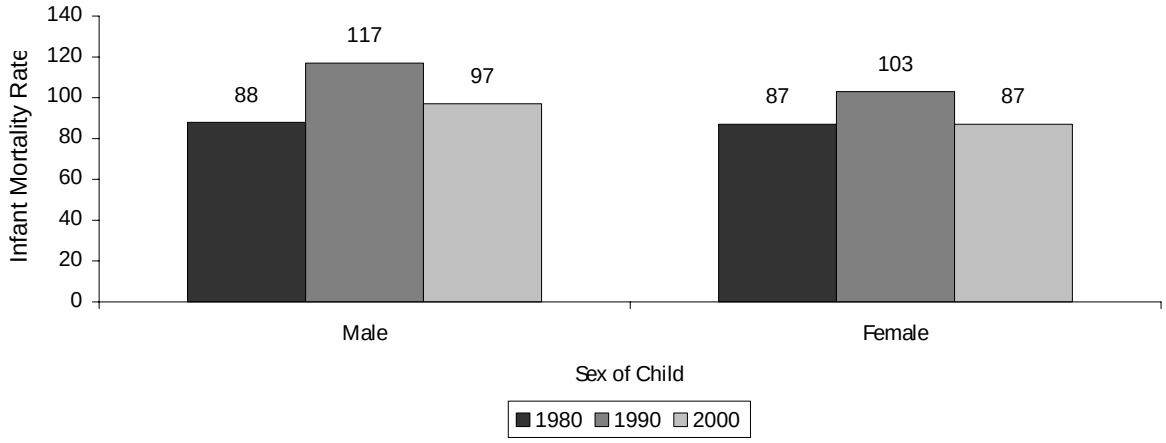
Sources: 1980, 1990 and 2000 Censuses of Population and Housing

8.3.2 Infant Mortality Rate and Sex

IMR is higher among male infants (97) than females (87). A similar pattern was also observed in 1980 and 1990. In 1980, 88 male and 87 female infants died before reaching age one out of 1000 live births. In 1990, IMR for males was 117 and 103 for females. (Figure 8.2).

In 2000 the pattern of infant mortality by sex is similar to that of the national average; females have a lower IMR than males. However, the provincial average in IMR is lower than that of the national average for both males and females.

Figure 8.2: Infant Mortality Rate by Sex of Child, Copperbelt Province, 1980 - 2000

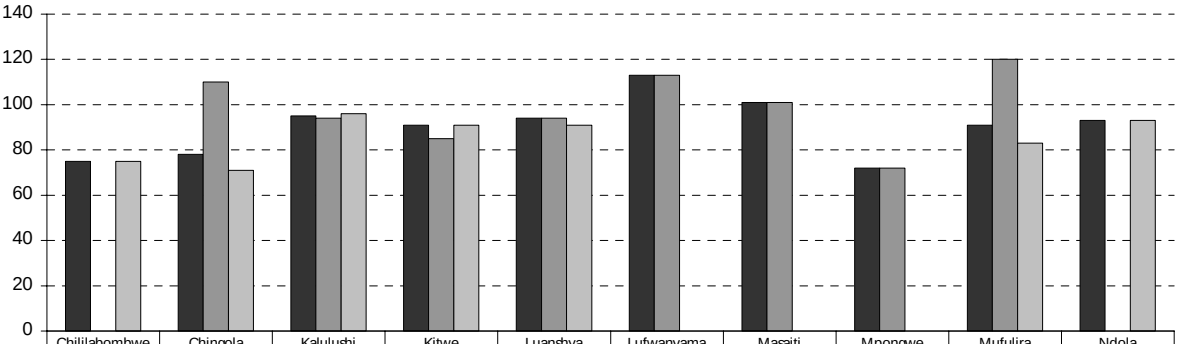


Sources: 1980, 1990 and 2000 Censuses of Population and Housing

8.3.3 Infant Mortality Rate by District

Figure 8.3 shows that at district level infant mortality is highest in Lufwanyama (113) and lowest in Mpongwe (72). Chililabombwe and Chingola also have low IMR of 75 and 78, respectively. Rural areas of Chingola, Luanshya and Mufulira have higher IMR than urban areas. In Kalulushi and Kitwe, the opposite holds true. It is important to note that while Chililabombwe is entirely urban, Lufwanyama, Masaiti and Mpongwe are entirely rural.

Figure 8.3 Infant Mortality Rate by District and Residence, Copperbelt Province,2000

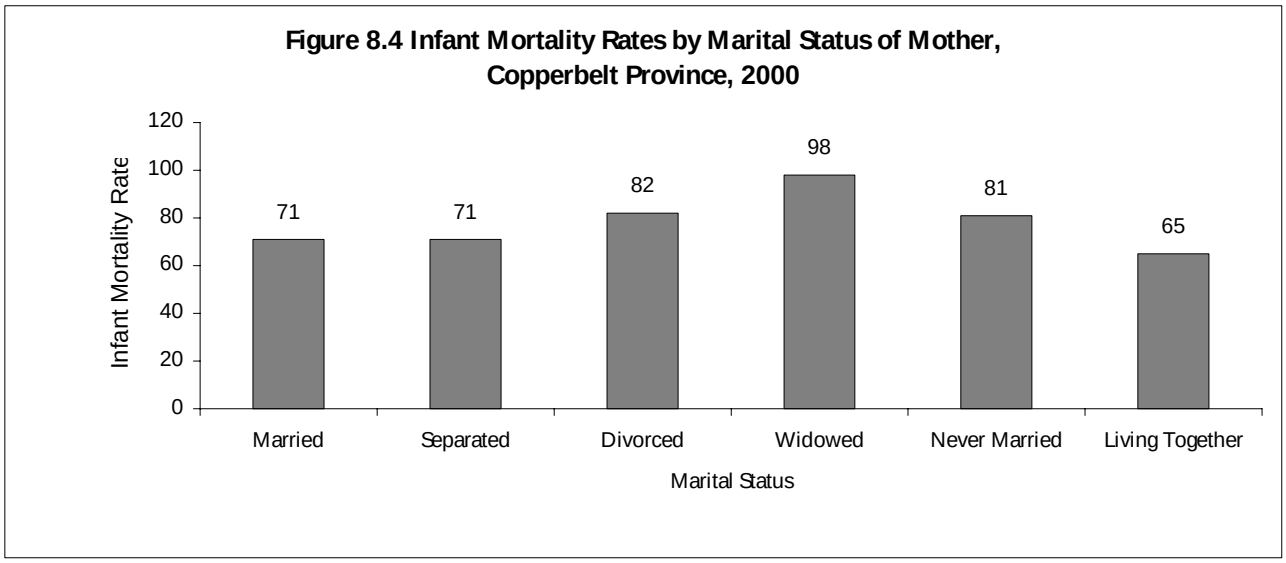


	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total	75	78	95	91	94	113	101	72	91	93
Rural	-	110	94	85	94	113	101	72	120	-
Urban	75	71	96	91	91	-	-	-	83	93

Sources: 2000 Census of Population and Housing

8.3.4 Infant Mortality Rate by Marital Status of the Mother

Figure 8.4 and Table 8.2 show that children born to widowed mothers have the highest chance of dying before age one (98 deaths per 1000 live births), while children born to mothers in the living together category have the lowest IMR (65 deaths in every 1000 babies born).



Sources: CSO, 2000 Census of Population and Housing

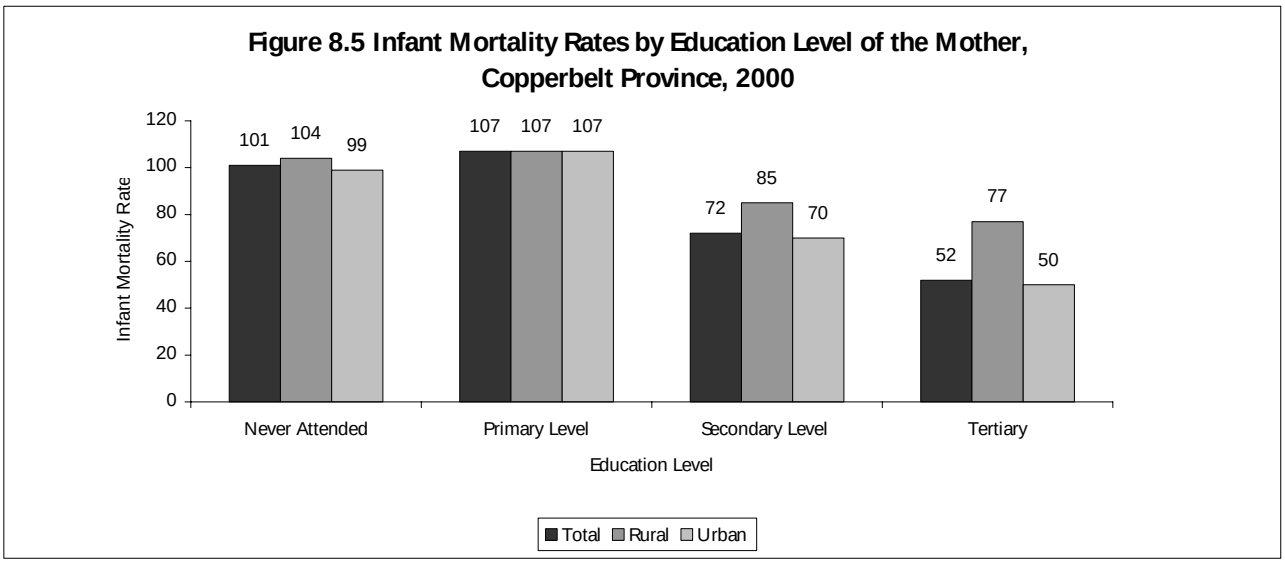
Table 8.2: Infant Mortality Rate by Marital Status and Residence, Copperbelt Province, 2000

Background Characteristics	Infant Mortality Rate (per '000)		
	Total	Rural	Urban
Marital Status			
Married	71	84	67
Separated	71	97	64
Divorced	82	91	79
Widowed	98	126	93
Never Married	81	110	76
Living Together	65	77	62

Source: CSO, 2000 Census of Population and Housing

8.3.5 Infant Mortality Rate by Educational Level of the Mother

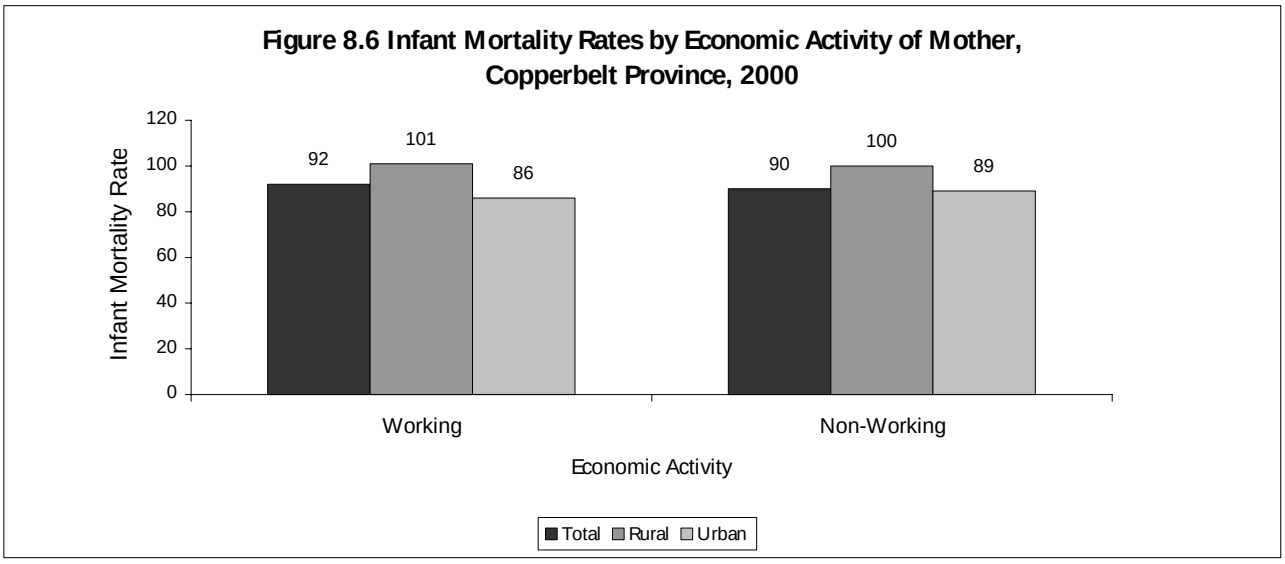
IMR varies markedly according to the level of education of mother (Figure 8.5). IMR decreases with increasing level of education of mothers. Children born to mothers with tertiary level of education had the lowest chances of dying before age one (1 death in every 20 children born), followed by those born to mothers with a secondary education (1 death in every 14 children born). Children born to mothers with only primary level of education had the lowest chances of reaching age one with (1 death in every 10 children born).



Sources: CSO, 2000 Census of Population and Housing

8.3.6 Infant Mortality Rate by Economic Activity of the Mother

Figure 8.6 shows that children born to working mothers have a slightly higher CMR than those born to non-working mothers (92 versus 90 deaths per 1000 respectively). This pattern is similar to that of rural areas of the province. In urban areas, however, children of non-working mothers have a higher CMR than those of working mothers.



Sources: CSO, 2000 Census of Population and Housing

8.4 Child Mortality Levels, Trends and Differentials

Table 8.3 shows that Child Mortality Rate (CMR) has declined between 1990 and 2000 by about 22 percent, from 82 to 63 deaths per 1000 children. However, despite this decline the 2000 levels are slightly higher (7 percent) than that of 1980 of 59 deaths per 1000 children.

In comparison with the national estimate, Copperbelt province has a significantly lower child mortality rate for all the three censuses. In the year 2000, the child mortality rates were 63 and 82 for Copperbelt and Zambia, respectively.

Table 8.3: Child Mortality Rates by Sex Of Child, Residence and District, Copperbelt Province, 1980-2000.

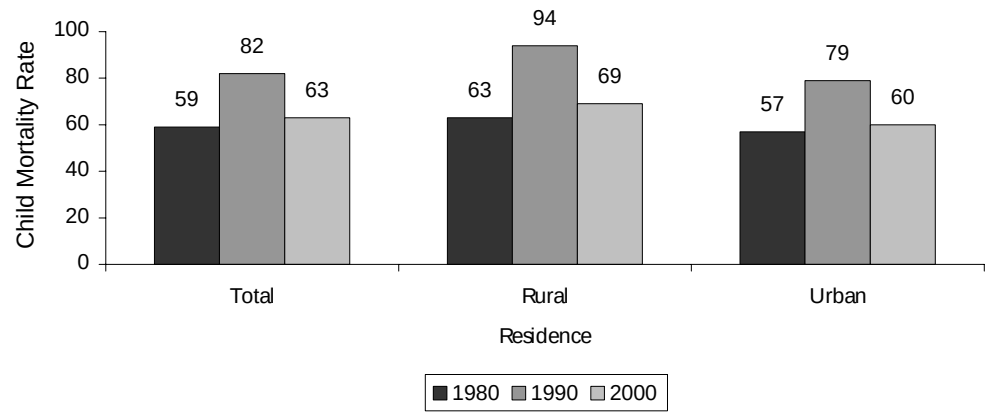
Residence and Sex	Child Mortality Rate (per '000)		
	1980	1990	2000
Zambia	**71**	**96**	**82**
Copperbelt	59	82	63
Residence			
Rural	63	94	69
Urban	57	79	60
Sex Of Child			
Male	60	82	62
Female	59	82	64
District (2000)	**Total (2000)**	**Rural (2000)**	**Urban (2000)**
Chililabombwe	47	-	47
Chingola	50	82	44
Kalulushi	66	65	67
Kitwe	62	62	62
Luanshya	65	65	62
Lufwanyama	85	85	-
Masaiti	72	72	-
Mpongwe	44	44	-
Mufulira	62	92	55
Ndola	64	-	64

Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.4.1 Child Mortality Rate by Residence

Figure 8.7 shows that children born to mothers residing in rural areas have higher risks of dying between age one and five than those residing in urban areas (69 compared to 60 deaths per 1000 children). This pattern holds true for the three censuses.

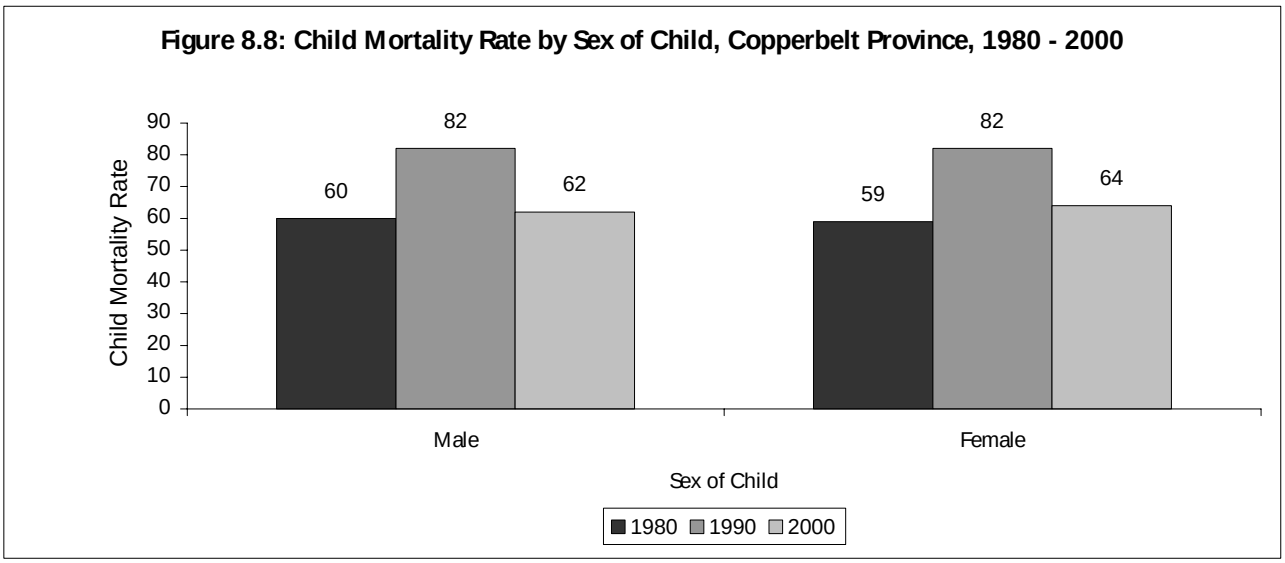
Figure 8.7: Child Mortality Rates by Residence of Mother, Copperbelt Province, 1980 - 2000



Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.4.2 Child Mortality Rate by Sex

Figure 8.8 shows that CMR among male children (62 deaths per 1000 children) is lower than that of females at 64 deaths per 1000 children. In 1980 CMR was 60 for males and 59 for females, while in 1990 it was 82 for both males and females.

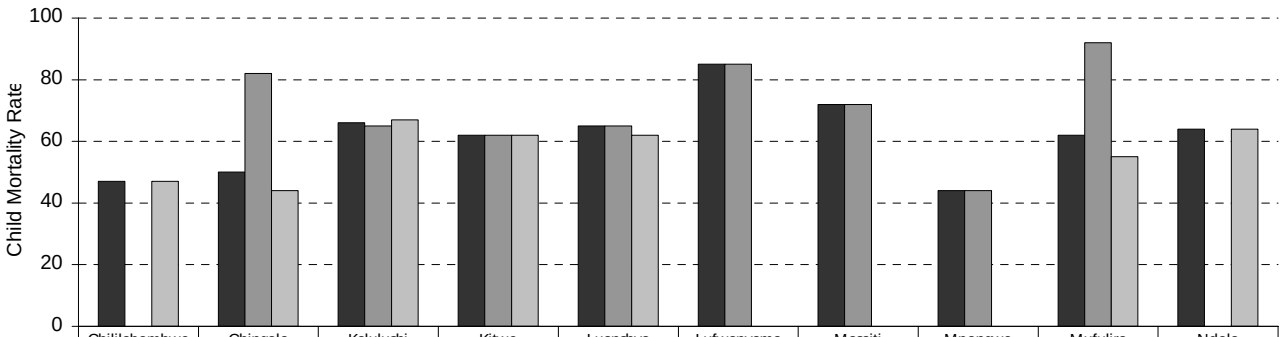


Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.4.3 Child Mortality Rate by District

A comparison of the districts shows that child mortality rates were much higher in Lufwanyama (82),Kalulushi and Masaiti (74), Luanshya (65) and Ndola (67) than in Mpongwe (45), Chililabombwe (48) and Chingola (51). (See Figure 8.9).

Figure 8.9: Child Mortality Rate by District, Copperbelt Province, 2000



	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total	47	50	66	62	65	85	72	44	62	64
Rural	-	82	65	62	65	85	72	44	92	-
Urban	47	44	67	62	62	-	-	-	55	64

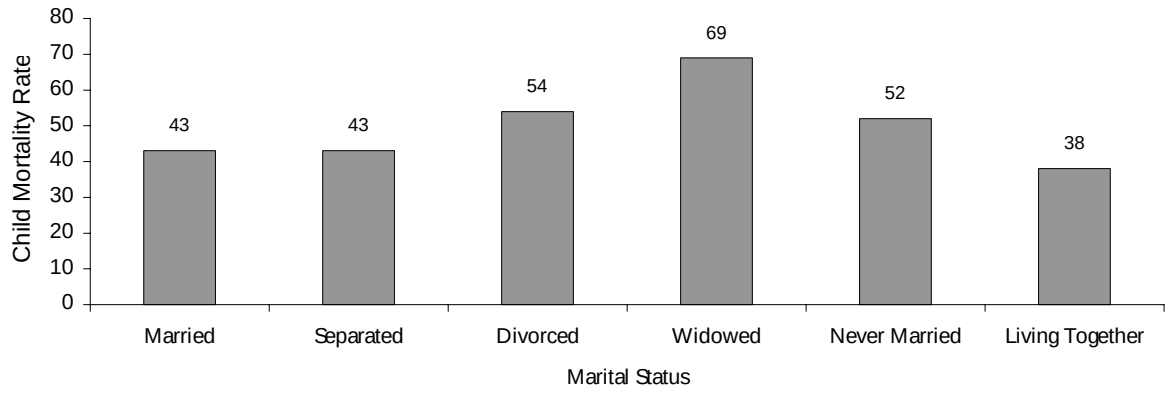
Districts

Sources: 2000 Census of Population and Housing

8.4.4 Child Mortality Rate by Marital Status of the Mother

Figure 8.10 and Tables 9.4 shows the CMR differentials by marital status of mother. Children born to mothers who are cohabiting have the lowest chances of dying between age one and five (1 in every 26), followed by children born to married and separated mothers (1 in 23). For children born to divorced and never married mothers, 1 in every 19 children die between age 1 and 5 while about 2 in 3 of those born to widowed mothers die at this stage.

Figure 8.10 Child Mortality Rate by Marital Status of Mother, Copperbelt Province, 2000



Sources: CSO, 2000 Census of Population and Housing

Table 8.4: Child Mortality Rate by Marital Status and Residence, Copperbelt Province, 2000

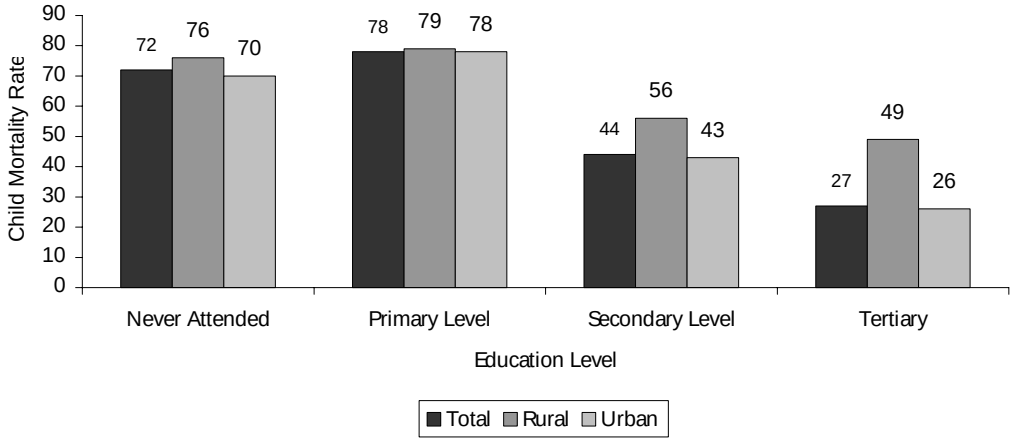
Marital Status	Child Mortality Rate (per '000)		
	Total	Rural	Urban
Married	43	56	40
Separated	43	68	37
Divorced	54	62	51
Widowed	69	99	63
Never Married	52	82	48
Living Together	38	49	35

Source: CSO, 2000 Census of Population and Housing

8.4.5 Child Mortality by Education Level of the Mother

CMR varies markedly according to the level of education of mother (Figure 8.11). Child Mortality Rate decreases with increasing level of education of mother. This, however, only holds true from primary level upwards. Children born to mothers with a tertiary and secondary level education have the lowest CMR of 27 and 44, respectively. Those born to mothers with primary and those born to mothers without any education have the highest CMR of 78 and 72, respectively.

Figure 8.11 Child Mortality Rate by Education Level of Mother, Copperbelt Province, 2000



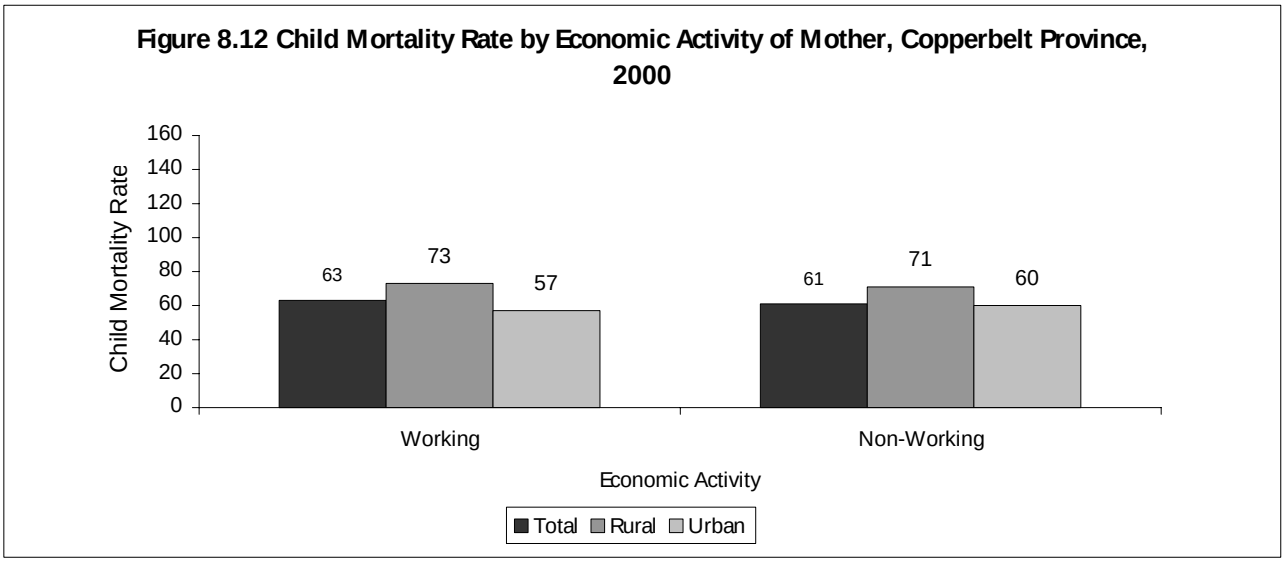
Sources: CSO, 2000 Census of Population and Housing

8.4.6 Child Mortality Rate by Economic Activity of the Mother

Figure 8.12 shows that children born to working mothers have higher chances of dying between age one and five than those born to non-working mothers. However the difference is not so significant (63 compared to

61). Rural areas show a similar picture. In urban areas, however, CMR is higher among the non-working than working mothers.

Figure 8.12 Child Mortality Rate by Economic Activity of Mother, Copperbelt Province, 2000



Sources: CSO, 2000 Census of Population and Housing

8.5 Under-Five Mortality Levels, Trends and Differentials

Table 8.5 shows that Under-five Mortality Rates (UMRs) in Copperbelt Province declined in the period 1990-2000, from 183 to 149 deaths per 1000 children. In 1980, UMR stood at 97 deaths per 1000 children.

Copperbelt province exhibits a lower under- five mortality rate as compared to that of the national average of 183.

Table 8.5: Under Five Mortality Rates by Sex Of Child, Residence and District, Copperbelt Province, 1980-2000.

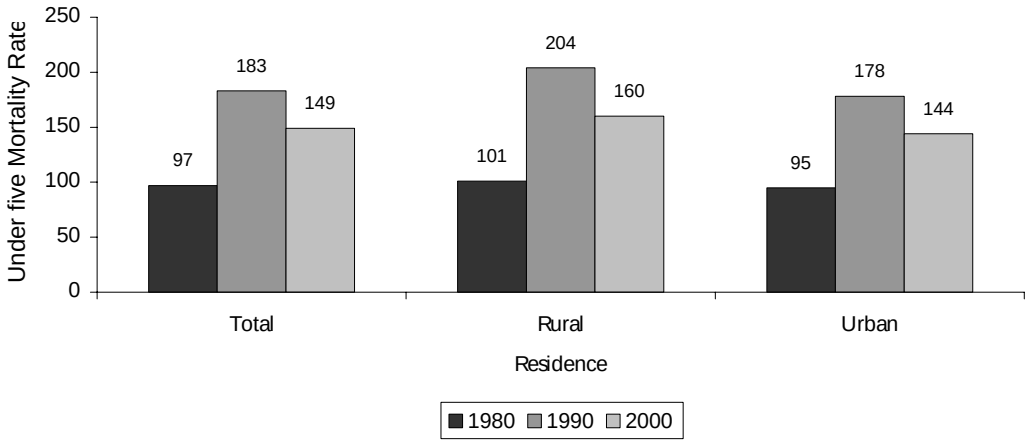
Residence and Sex	Under Five Mortality Rate (per '000)		
	1980	1990	2000
Zambia	**121**	**208**	**183**
Copperbelt	97	183	149
Residence			
Rural	101	151	160
Urban	95	129	144
Sex Of Child			
Male	98	136	153
Female	97	125	145
District (2000)	**Total (2000)**	**Rural (2000)**	**Urban (2000)**
Chililabombwe	119	-	119
Chingola	124	183	112
Kalulushi	156	153	156
Kitwe	148	142	147
Luanshya	152	153	148
Lufwanyama	188	188	-
Masaiti	166	166	-
Mpongwe	113	113	-
Mufulira	148	201	134
Ndola	151	-	151

Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.5.1 Under-Five Mortality Rate by Residence

Figure 8.13 shows that the UMR for rural areas in 1980 stood at 101 deaths per 1000 live births. It increased significantly to 204 deaths then declined to 160 in 2000. In urban areas, it increased from 95 in 1980 to 178 in 1990 then decreased to 144 in 2000. Overall, children born to mothers residing in rural areas have higher risks of dying between birth and age five than those in urban areas.

Figure 8.13: Under-Five Mortality Rates by Residence of Mother, Copperbelt Province, 1980 - 2000

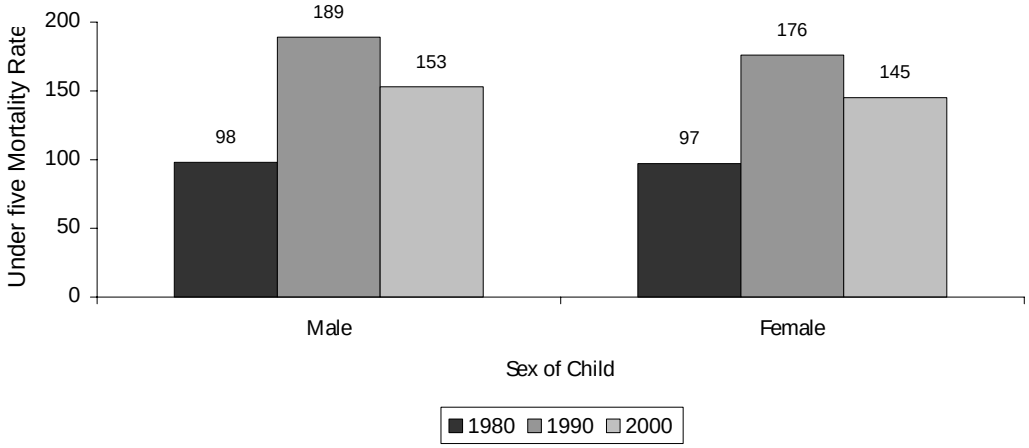


Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.5.2 Under-Five Mortality Rate by Sex

Figure 8.14 shows that males have a higher (153) UMR than female children (145). A similar pattern is also observed in 1980 and 1990. In 1980, UMR was 98 for males and 97 for females while in 1990, it was 189 for males and 176 for females.

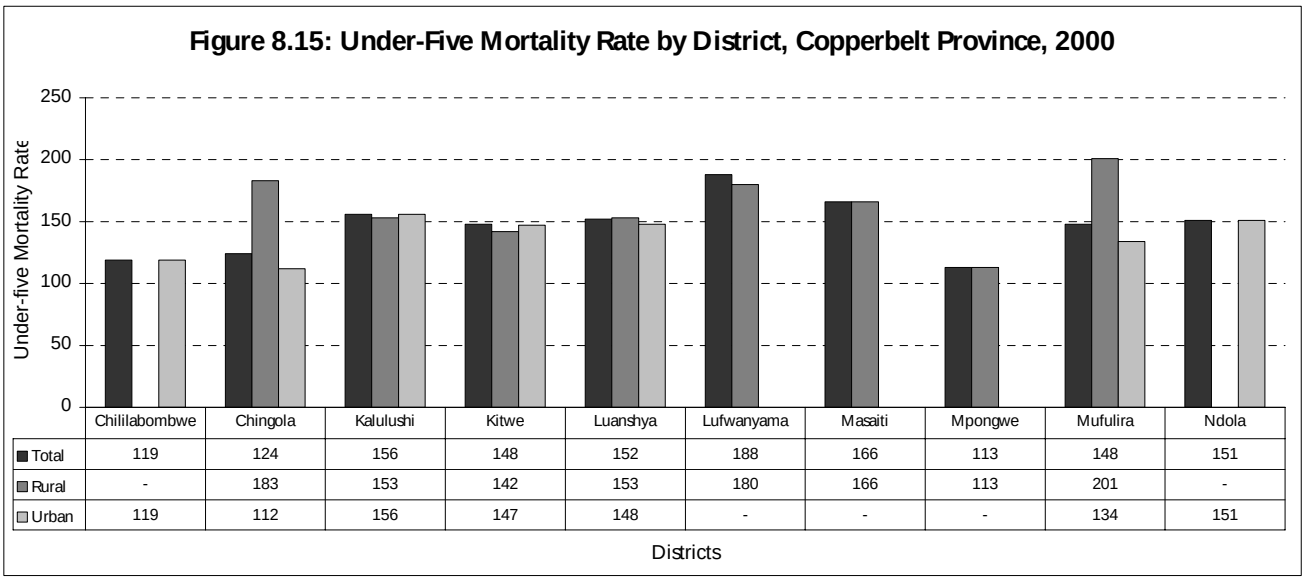
Figure 8.14: Under-Five Mortality Rates by Sex of Child, Copperbelt Province, 1980 - 2000



Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.5.3 Under-Five Mortality Rate by District

At the district level, Under Five Mortality is very high in Lufwanyama (188), Masaiti (166), Ndola(151). It is lowest in Mpongwe (113) followed by Chililabombwe (119); (See Figure 8.15).

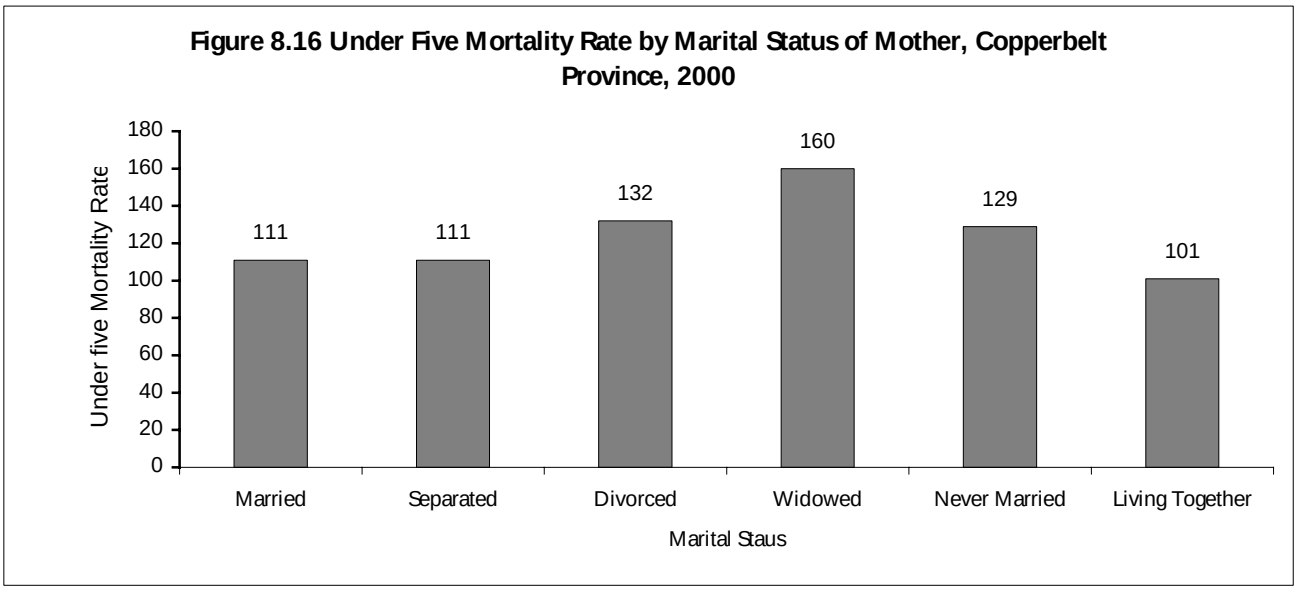


	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total	119	124	156	148	152	188	166	113	148	151
Rural	-	183	153	142	153	180	166	113	201	-
Urban	119	112	156	147	148	-	-	-	134	151

Source: CSO, 2000 Census of Population and Housing

8.5.4 Under-Five Mortality Rate by Marital Status of Mother

The UMR also shows differentials by marital status of mother (Figure 8.16 and Table 8.6). Data show that children born to mothers who are widowed have the highest UMR of 160 deaths per 1000 live births. Those born to cohabiting mothers have the lowest UMR of 101. This pattern is similar in both rural and urban areas.



Source: CSO, 2000 Census of Population and Housing

Table 8.6: Under-Five Mortality Rate by Marital Status and Residence, Copperbelt Province, 2000

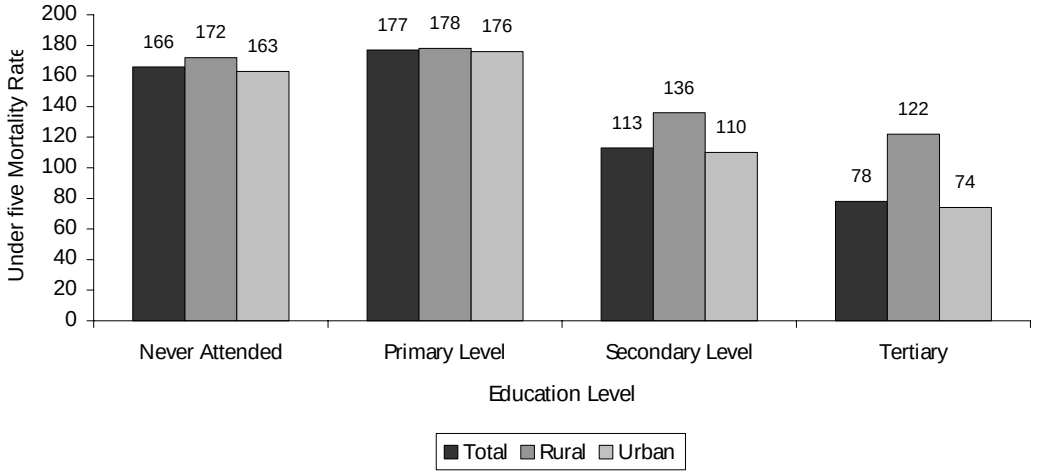
Marital Status	Under-Five Child Mortality Rate (per '000)		
	Total	Rural	Urban
Married	111	135	104
Separated	111	158	99
Divorced	132	148	126
Widowed	160	212	150
Never Married	129	183	121
Living Together	101	122	95

Source: CSO, 2000 Census of Population and Housing

8.5.5 Under-Five Mortality Rate by Educational Level of the Mother.

Under five Mortality Rates vary markedly according to the level of education of mother (Figure 8.17). Children born to mothers with only primary education are at the greatest risk of not celebrating their fifth birthday (with a UMR of 177), while those born to mothers with tertiary education have the lowest risk (78). UMR for children born to mothers with secondary education and mothers who have never attended school (113 and 166, respectively).

Figure 8.17 Under Five Mortality Rate by Education Level of Mother, Copperbelt Province, 2000

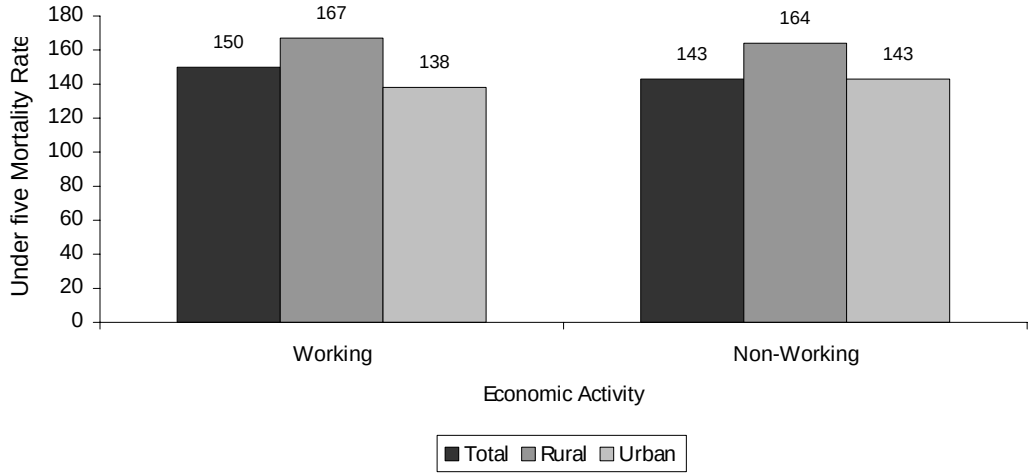


Source: CSO, 2000 Census of Population and Housing

8.5.6 Under-Five Mortality Rate by Economic Activity of the Mother

Figure 8.18 shows the differentials in U5MR by economic activity of mother. Children born to working mothers are at greater risks of dying before age five than those born to non-working mothers. The difference, however, is not so significant (150 versus 143 deaths per 1000 children). This pattern holds true for rural areas. In urban areas, however, children of non-working mothers have a higher risk of dying before age 5.

Figure 8.18 Under Five Mortality Rate by Economic Activity of the Mother, Copperbelt Province, 2000



Source: CSO, 2000 Census of Population and Housing

8.6 LIFE EXPECTANCY AT BIRTH: LEVELS, TRENDS AND DIFFERENTIALS.

Table 8.7 shows that life expectancy decreased from 55 to 49 between 1980 and 1990 then increased to 54 in 2000. When disaggregated by sex, is similar pattern is observed. It is also observed that females have had a higher expectation of life of birth at 55, 51 and 54 years compared to males whose life expectancies were 55, 48 and 53 years in 1980, 1990 and 2000, respectively.

The life expectancy at birth for the province (54) in the year 2000 was about 4 years than that of the national average of 50 years.

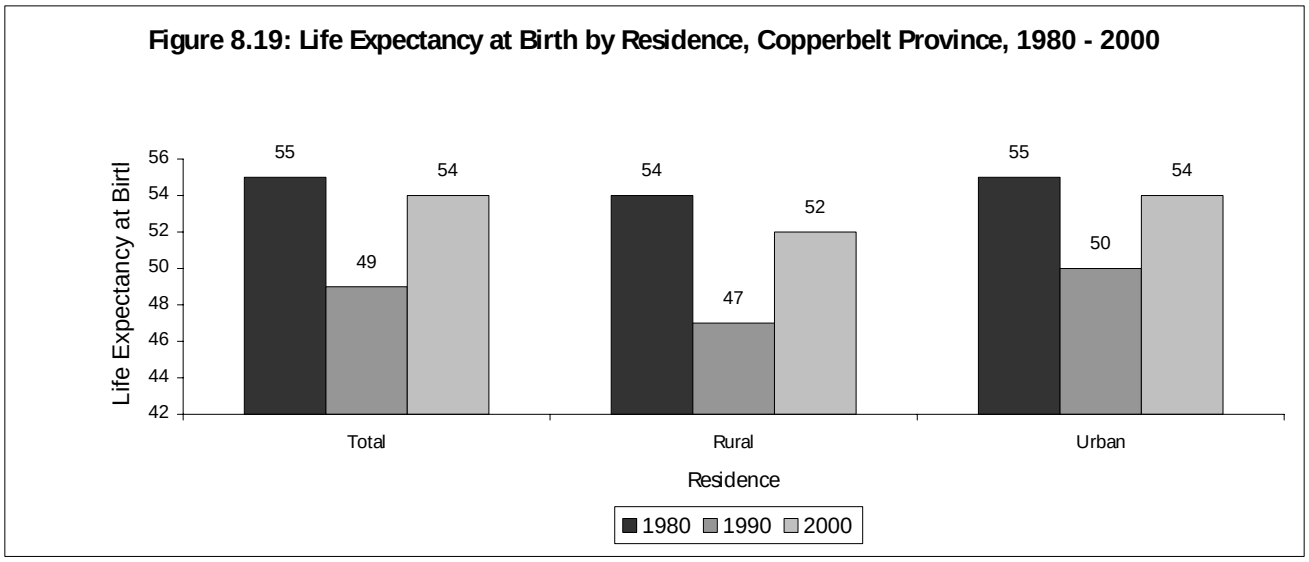
Table 8.7: Life expectancy at birth by Sex Of Child, Residence and District, Copperbelt Province, 1980-2000.

Residence and Sex	Life Expectancy At Birth (Years)		
	1980	1990	2000
Zambia	**52**	**47**	**50**
Copperbelt	55	49	54
Residence			
Rural	54	47	52
Urban	55	50	54
Sex Of Child			
Male	55	48	53
Female	55	51	54
District (2000)	**Total (2000)**	**Rural (2000)**	**Urban (2000)**
Chililabombwe	57	-	57
Chingola	57	49	58
Kalulushi	52	53	52
Kitwe	54	52	54
Luanshya	53	53	54
Lufwanyama	49	49	-
Masaiti	52	52	-
Mpongwe	58	58	-
Mufulira	53	47	55
Ndola	53	-	53

Sources: CSO, 1980, 1990 and 2000 Census of Population and Housing

8.6.1 Life Expectancy at Birth by Residence

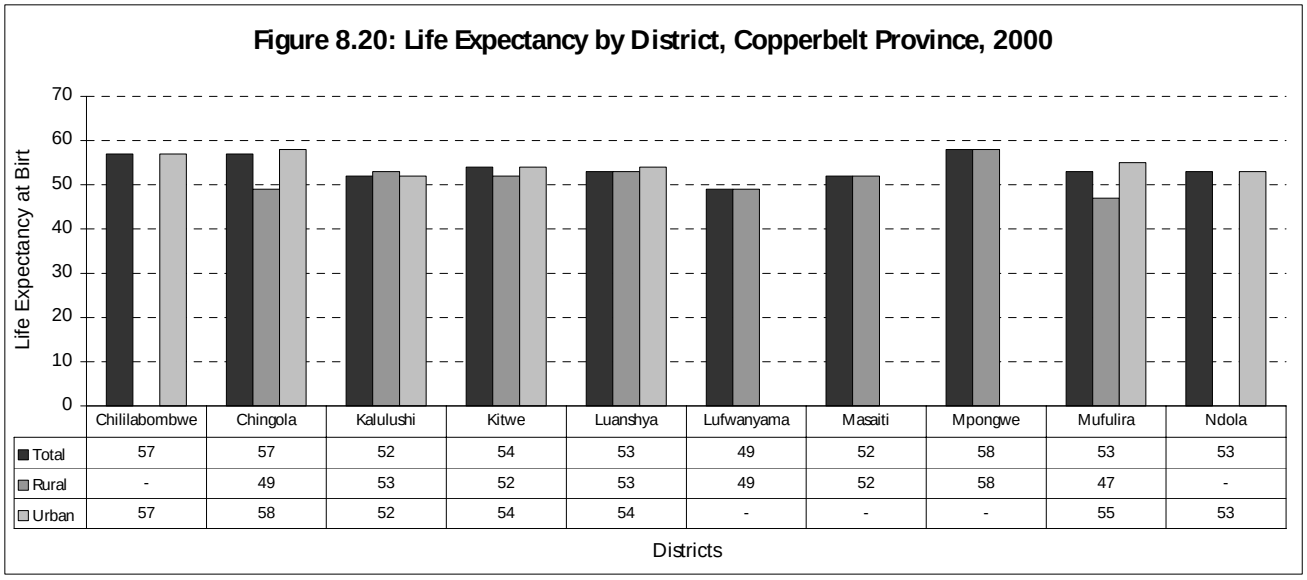
Figure 8.19 shows the life expectancy at birth for Copperbelt province for 1980, 1990 and 2000 for rural and urban areas. It is observed that newly born babies in urban areas have a higher expectation of life at birth than their rural counterparts (in the urban life expectancy was 55, 50 and 54 while the rural areas it was 54, 47 and 51 in 1980, 1990 and 2000, respectively.



Sources: CSO, 1980, 1990 and 2000 Censuses of Population and Housing

8.6.2 Life Expectancy at Birth by District

At the district level, life expectancy at birth is highest in Mpongwe (58), closely followed by Chililabombwe (57) and Chingola (57), and lowest in Lufwanyama (49).(See Figure 8.20).

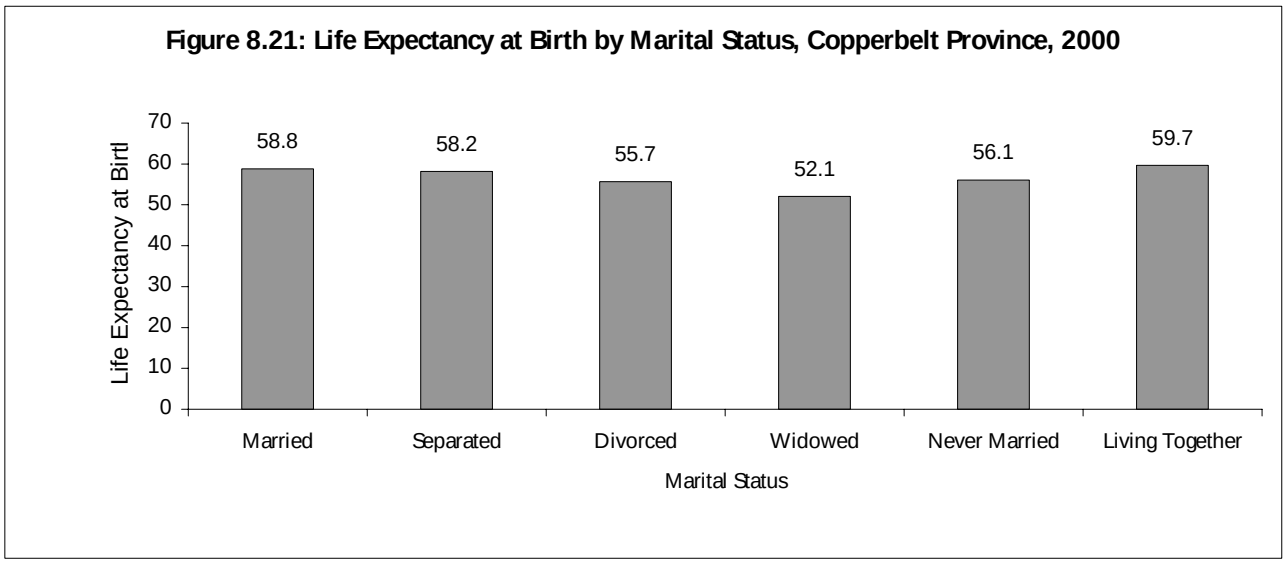


	Chililabombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total	57	57	52	54	53	49	52	58	53	53
Rural	-	49	53	52	53	49	52	58	47	-
Urban	57	58	52	54	54	-	-	-	55	53

Source: CSO, 2000 Census of Population and Housing

8.6.3 Life Expectancy at Birth by Marital Status of the Mother

Figure 8.21 and Table 8.8 show that Life Expectancy at Birth differs by marital status of mother. Data show that babies born to mothers who are cohabiting (60 years), married (59 years) and separated (58) have the highest life expectancy, followed by those born never married (56 years) and divorced mothers (56 years). Those born to widowed mothers (52 years) have the lowest.



Source: CSO, 2000 Census of Population and Housing

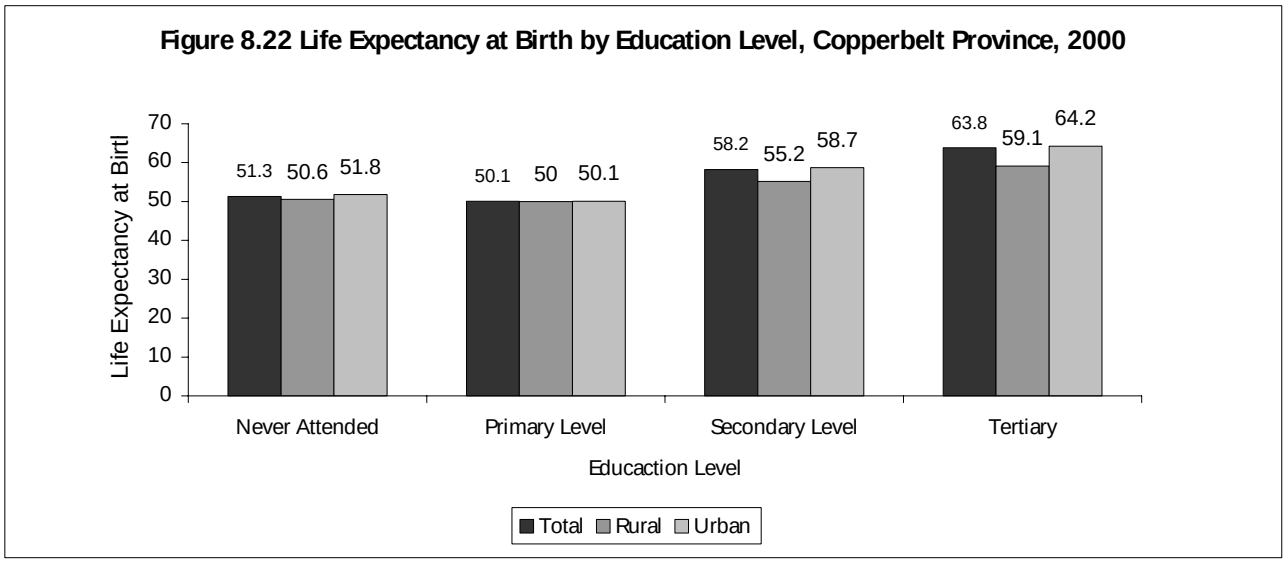
Table 8.8: Life Expectancy at Birth (Years) by Marital Status and Residence, Copperbelt Province, 2000

Marital Status	Life Expectancy at Birth		
	Total	**Rural**	**Urban**
Married	58.8	55.1	59.6
Separated	58.2	52.2	60.4
Divorced	55.7	53.6	56.4
Widowed	52.1	46.1	53.3
Never Married	56.1	49.3	57.2
Living Together	59.7	57.0	61.0

Source: CSO, 2000 Census of Population and Housing

8.6.4 Life Expectancy at Birth by Educational Level of the Mother

Figure 8.22 shows that children of mothers with tertiary education have the highest life expectancy of 64. This is followed by children of mothers with secondary level education with a life expectancy of 58 years. It is worth noting that those born to mothers who have never attended school (51 years) have a slightly higher life expectancy than those born to mothers with primary education (50years).

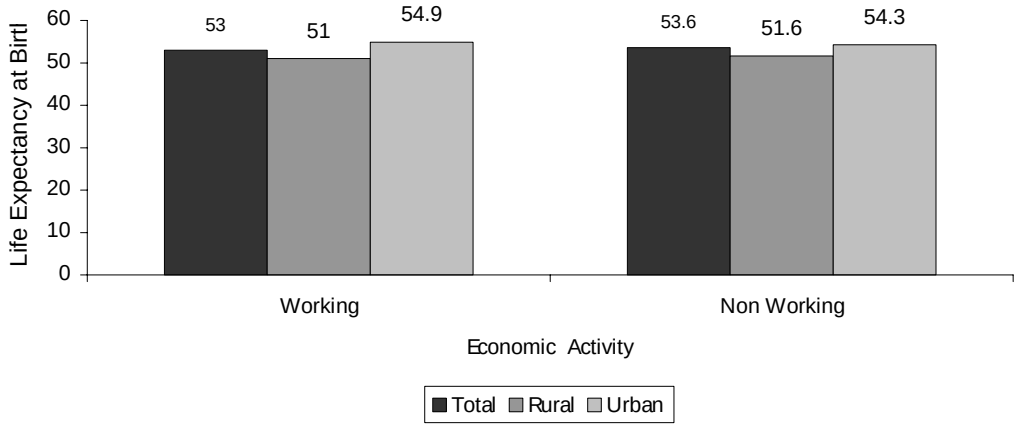


Sources: CSO, 2000 Census of Population and Housing

8.6.5 Life Expectancy at Birth by Economic Activity of Mother

Figure 8.23 shows a comparison of life expectancy with regard to economic activity of mother. There are no significant differences observed in life expectancy. Children born to working and non-working women are expected to live up to about 53 and 54 years respectively.

Figure 8.23 Life Expectancy at Birth by Economic Activity of Mother, Copperbelt Province, 2000

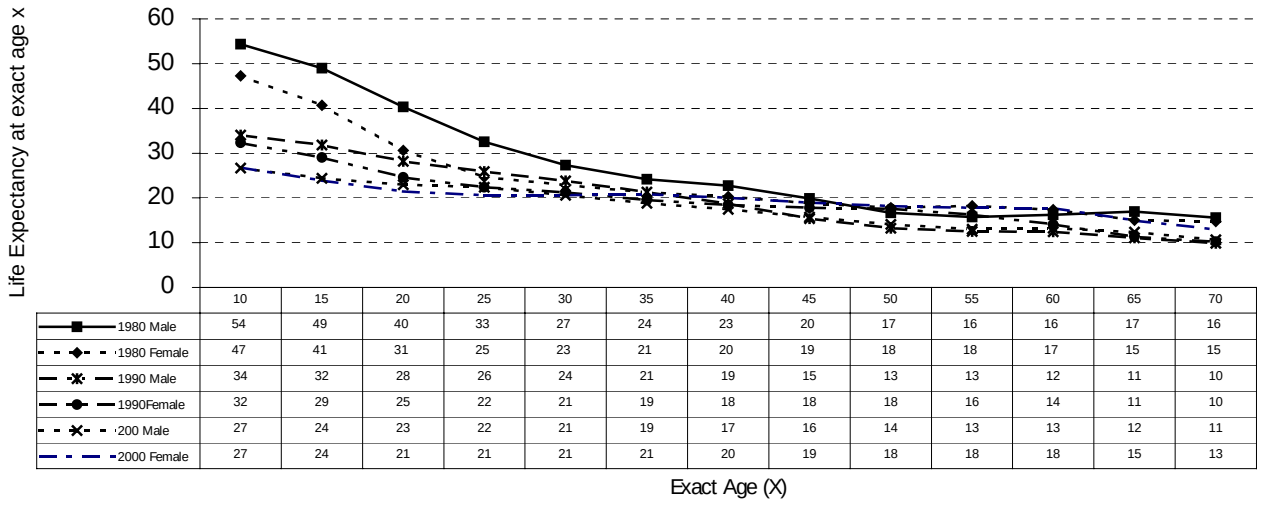


Sources: CSO, 2000 Census of Population and Housing

8.7 Adult Mortality: Life Expectancy Levels, Trends and Differentials

Figure 8.24 shows that adult life expectancy levels in Copperbelt province decreased at exact ages 10 to 40 for males and 10 to 25 for females, between 1990 and 2000. At the older ages, life expectancy increased for both males and females. There has been a continuous decline in life expectancy over the past 20 years. Between 1980 and 1990, it declined at all ages (10-70) for both males and females.

Figure 8.24: Adult Life Expectancy Levels (at exact ages 10-70) by Sex, Copperbelt, 1980-2000

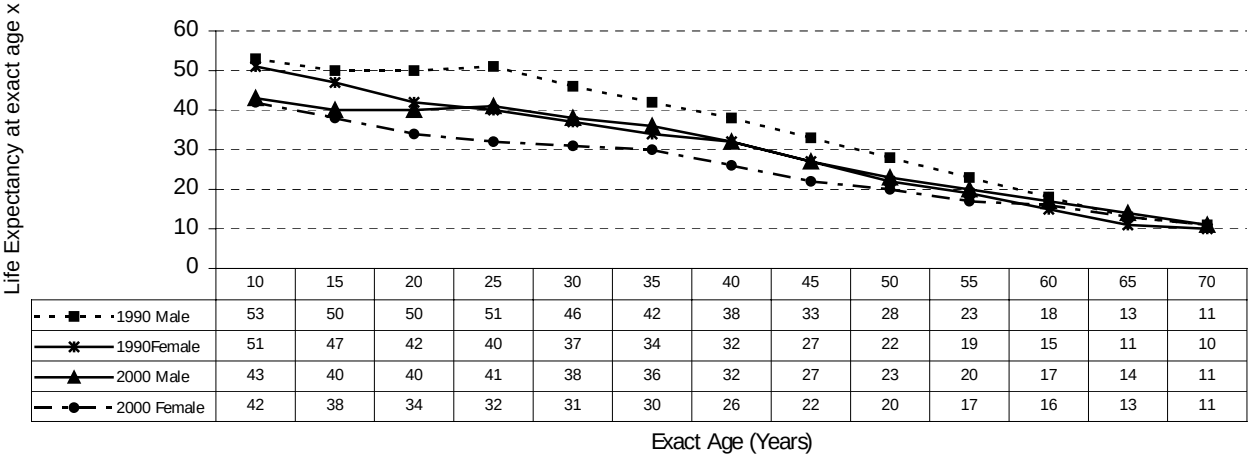


	10	15	20	25	30	35	40	45	50	55	60	65	70
1980 Male	54	49	40	33	27	24	23	20	17	16	16	17	16
1980 Female	47	41	31	25	23	21	20	19	18	18	17	15	15
1990 Male	34	32	28	26	24	21	19	15	13	13	12	11	10
1990Female	32	29	25	22	21	19	18	18	18	16	14	11	10
200 Male	27	24	23	22	21	19	17	16	14	13	13	12	11
2000 Female	27	24	21	21	21	21	20	19	18	18	18	15	13

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

Figures 8.25 and 8.26 show the adult life expectancies at exact ages 10 to 70 years for rural and urban areas, respectively. Adults in rural areas have higher life expectancies than those in urban areas at exact ages 10 to 70 for both males and females. In 1990, the pattern was similar to that of 2000. The only difference is that in 1990, females in urban areas have higher life expectancies than their rural counterparts at ages 60 to 70.

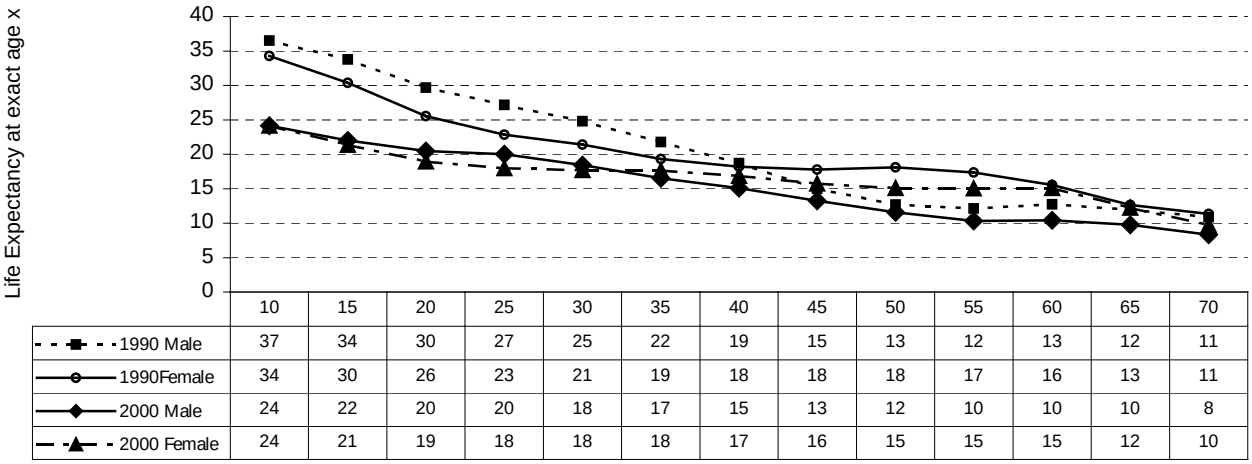
Figure 8.25: Adult Life expectancy Levels (at exact age x) by Sex, Rural, Copperbelt Province, 1990-2000



	10	15	20	25	30	35	40	45	50	55	60	65	70
1990 Male	53	50	50	51	46	42	38	33	28	23	18	13	11
1990Female	51	47	42	40	37	34	32	27	22	19	15	11	10
2000 Male	43	40	40	41	38	36	32	27	23	20	17	14	11
2000 Female	42	38	34	32	31	30	26	22	20	17	16	13	11

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

Figure 8.26: Adult Life expectancy Level (at exact ages 10-70) by Sex, Urban, Copperbelt Province, 1990-2000



	10	15	20	25	30	35	40	45	50	55	60	65	70
1990 Male	37	34	30	27	25	22	19	15	13	12	13	12	11
1990Female	34	30	26	23	21	19	18	18	18	17	16	13	11
2000 Male	24	22	20	20	18	17	15	13	12	10	10	10	8
2000 Female	24	21	19	18	18	18	17	16	15	15	15	12	10

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

8.8 Summary

Overall, infant mortality rate has declined in Copperbelt Province by about 14 percent. Despite the decline, IMR is higher than that of 1980. The decline in infant mortality has had no major impact on reduction of under-five mortality. At district level, Lufwanyama and Masaiti registered the highest infant deaths and Mpongwe the least. In Lufwanyama and Masaiti 1 in 10 infants do not survive to their first birthday compared to 1 in 13 in Mpongwe. Higher Infant mortality risks are associated with mothers who live in a rural area, have less education, widowed and not working.

There was a 22 percent decline in Child Mortality Rate (CMR) between 1990 and 2000, from 81 to 63. However, the 2000 level is still above the 1980 one (59 deaths per 1000). At the district level CMR was highest in Lufwanyama (85) and lowest in Mpongwe (44). Higher incidents of dying among children aged between exact age 1 and 5 were observed in those born to mothers in rural areas, divorced, living together, widowed and separated. It is also associated with children born to mothers with low level education (primary or less) and not working.

The Under five Mortality Rate has increased in Copperbelt Province between 1990 and 2000 by about 5 percent. Currently, 1 in 8 under-five children die before their fifth birthday. At district level, Mpongwe recorded the least under-five deaths, while Lufwanyama district recorded the highest. About one in six under-five children in Lufwanyama die before reaching age five. High UMR was associated with children born to mothers from rural areas, with a low level education and working women.

Life expectancy at birth in Copperbelt Province improved by about 1 year in 2000 compared to 1990, which rose from about 49 to 50 years. At district level, Lufwanyama registered the lowest life expectancy at birth of 49 years, compared to 58 in Mpongwe. Low Life Expectancy at Birth is also associated with babies born to rural women, widowed and mothers with low level education.

Adult life expectancy has declined between 1990-2000 compared to the period 1980-1990. Males have higher chances of surviving than females.

Chapter 9

DISABILITY

9.1. INTRODUCTION

Zambia has been collecting disability data in all the four censuses of 1969, 1980, 1990 and 2000. In collecting information for the past four censuses 1969, 1980, 1990, and 2000, categories used are shown in Table 9.1. During the 2000 Census of population and housing, data collected on disability included eight categories, unlike the 1990 Census where only five categories were captured. This was in recognition of the varying degrees of disability. The increase in the number of disability categories in the 2000 Census was also aimed at capturing more persons with disability who were left out in the previous censuses such as those who are partially sighted and hard of hearing.

Persons with disabilities have the same rights as other citizens to opportunities for self-actualization and participation in the economic and social development of this country. Information on persons with disabilities is important for addressing barriers that limit their enjoyment of these human rights and their integration into the mainstream of society.

Table 9.1: Disability Categories used in Censuses 1969 - 2000

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

***Source**: CSO, 1969, 1980, 1990 and 2000 Censuses of Population and Housing*

The International Classification of Functioning (ICF), Disability and Health provide a theoretical framework for classifying health related human functioning. The ICF provides standardized concepts that provide a standardized classification framework for data compilation. The use of a common framework also contributes to greater comparability of data at the national and international levels and makes it relevant to various users (UN, 2001).

Among the principles of the ICF is neutrality; i.e. classifying disabilities in a neutral language with no use of negative terms. In this chapter, however, some terms used may not be neutral but have been used as was done during data collection. However, effort has been made to provide in brackets the neutral terms that are internationally accepted as will be observed in this and provincial chapters on disability.

9.2. CONCEPTS AND DEFINITIONS

According to the 2000 Census definition, disability refers to a person who is limited in the kind or amount of activities that he or she can do because of on-going difficulties due to a long term physical, mental or health problem. This is in line with the National Policy on Disability which defines disability as any restriction or lack of ability to perform any action in the manner or within the range considered 'normal' for a human being and would or would not entail the use of supportive and auxiliary aids (World Health Organization).

Types of Disability

- Blind (Visually Impaired)- complete loss of sight
- Partially sighted- loss of one eye or poor sight but not complete blindness
- Deaf/Dumb (speech impaired)- complete loss of sense of hearing/speech
- Hard of Hearing- Partial loss of sense of hearing but not complete loss
- Mentally ill- A disorder related to the individuals mental state or state of mind
- Ex-mental- a person that suffered from mental disorder before but is now rehabilitated or undergoing rehabilitation

- Mentally retarded- a person that is very slow to learn or has deficiency of mental intellect
- Physically handicapped (Physically disabled)- A person with a physical impairment relating to the loss of bodily stature

CAUSES OF DISABILITY

- Congenital/Prenatal- disabilities which one is born with
- Disease/illness- e.g. Leprosy, Polio, cataract, etc
- Injury/Accident/Trauma- road accidents, injuries from accidental falls, fire, etc
- Other - e.g. unsuccessful medical operation, wrongful application/misuse of traditional and conventional medicine

9.3. Limitations of Data on Disability

Policy makers and planners require data on disabled persons. Information needs are more than just basic counts of the number of people with disabilities but also on the quality of life of people living with disabilities.

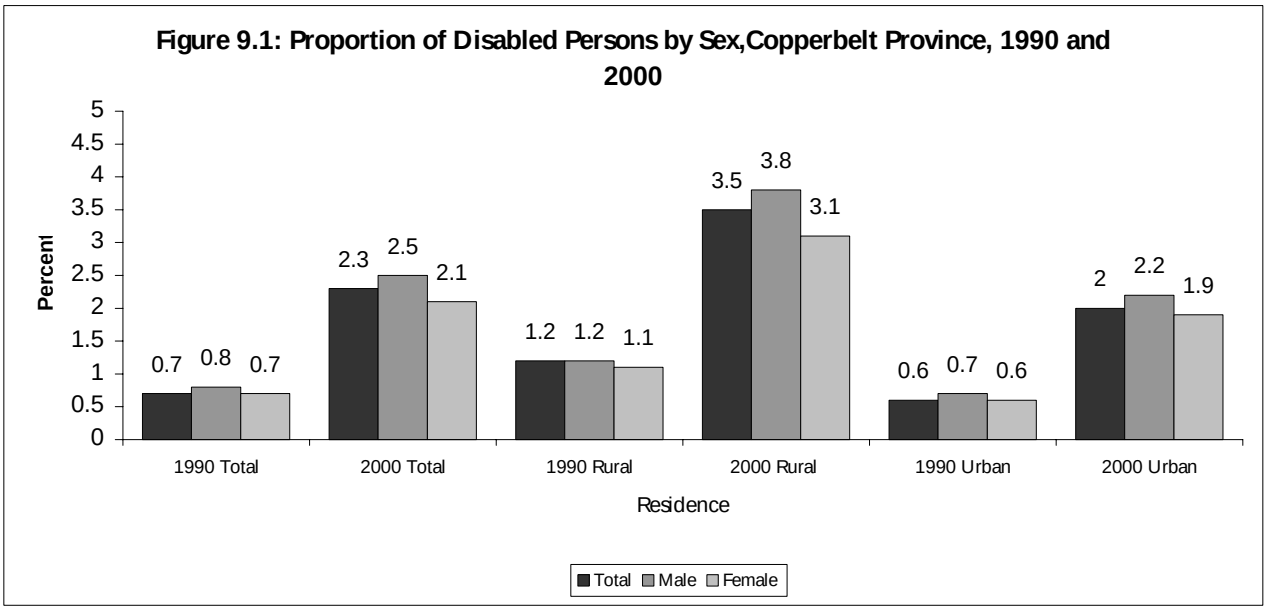
The categories employed in the current census, however, do not take into account the international definitions of disabilities, which include variations in the intensity of disability, such as the loss of feelings in fingers (UN, 1996).

Detailed data on disability can only be included in a specialized survey. Census data on disability are collected mainly to study the socio-economic situations of these individuals. Since the census is a large exercise, which includes a lot of topics, it becomes difficult to include a lot of questions on one topic.

9.4. Proportion of the disabled to the total population

Out of a total population of 1,527,294 million on the Copperbelt province**,** 35,433 reported to be disabled; a proportion of 2.3 percent of the total population. This proportion was an increase over 1990 census when only 0.7 percent of the total population reported to be disabled. Compared to the national average, the proportion of the disabled for the province was slightly lower in both 1990 and 2000 (0.7 percent against 0.9 percent in 1990 and 2.3 percent against 2.7 percent for Copperbelt province and the national average respectively). For both the province and the national average the highest proportions of the disabled are in rural areas as opposed to urban areas. An examination of the proportions of the disabled between the two censuses may indicate that there has been an increase in the prevalence of disability between 1990 and 2000. While this may be true, the observed increase was largely caused by the increase in the categories of the disabled (see Figure 9.1 and Table 9.2).

Figure 9.1: Proportion of Disabled Persons by Sex,Copperbelt Province, 1990 and 2000



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

Table 9.2: Proportion of the Disabled by Sex and Residence, Copperbelt Province, 1990 and 2000

Sex and year	Total Population			Proportions Of The Disabled		
	Total	Rural	Urban	Total	Rural	Urban
1990						
Zambia Total	7,383,097	4,477,814	2,905,283	0.9	1.1	0.7
Copperbelt Total	1,427,545	206,346	1,221,199	0.7	1.2	0.6
Male	721,507	104,281	617,226	0.8	1.2	0.7
Female	706,038	102,065	603,973	0.7	1.1	0.6
2000						
Zambia Total	9,337,425	5,990,356	3,347,069	2.7	3.2	0.2
Copperbelt Total	1,527,294	290,724	1,236,570	2.3	3.5	2
Male	764,550	147,506	617,044	2.5	3.8	2.2
Female	762,744	143,218	619,526	2.1	3.1	1.9

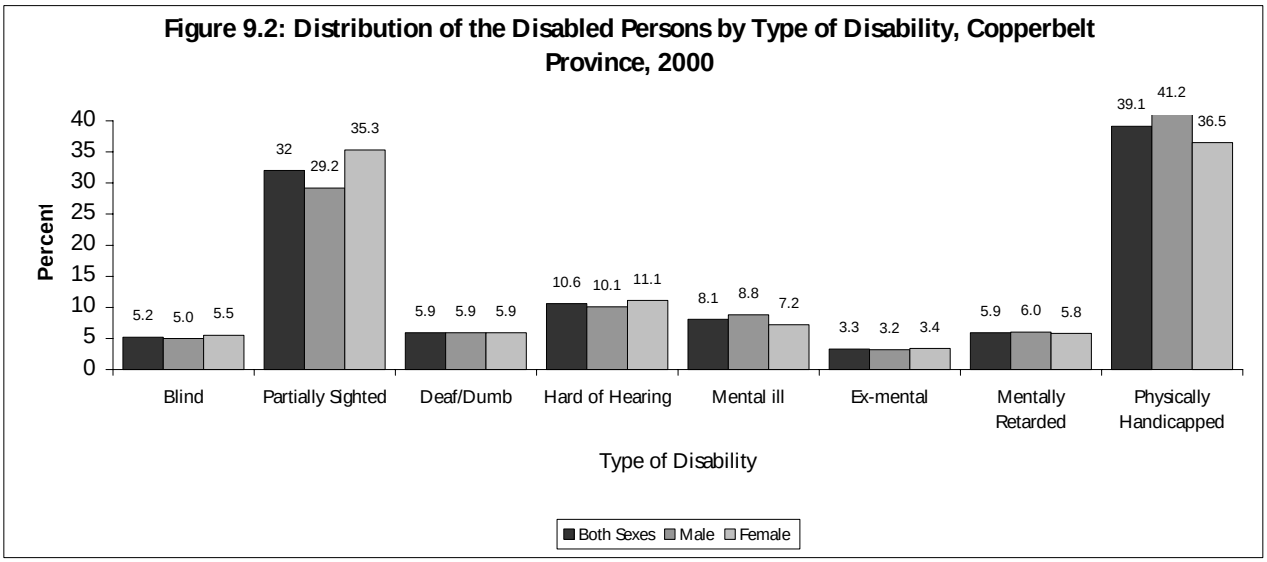
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Rural-urban differentials exist in terms of proportions of persons with disabilities. Of the total rural population, 3.5 percent is disabled compared to 2.0 in urban areas. Differentials also exist between males and females. In both rural and urban areas, the proportion of the disabled is higher for males than females.

9.5. Types of Disability

The distribution of disabled persons by type of disability in this province shows that out of a total of 35,433 persons reported to be disabled in Copperbelt Province, 19,314 are male and 16,115 are female. Although the population of Kitwe is larger than that of Ndola, there are more disabled persons in Ndola (with the largest number) than Kitwe. Chililabombwe has the smallest number of the disabled.

As mentioned earlier, the types of disability include the blind, partially sighted, deaf/dumb, hard of hearing, mentally ill, ex-mental, mentally retarded and the physically handicapped. The physically handicapped form the largest proportion of the disabled persons (39.1 percent). The second most common disability is partial sightedness, which was reported by 32 percent of the disabled population. This scenario is the same as that of the national average, though for both the physically handicapped and the partially sighted the provincial proportions are higher than the national ones. Some disability categories such as blindness (5 percent), ex-mental (3 percent) and mental retardation (6 percent) are less common. The pattern of the distribution of disabled persons is similar for both males and females, as well as across districts (see Figure 9.2 and Table 9.3).



Source: CSO, 2000 Census of Population and Housing

Table 9.3: Percent Distribution of the Disabled by Type of Disability and District, Copperbelt Province, 2000

Type of Disability	Zambia Total	Copperbelt Total	C/bombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total disabled	*256,690*	35,433	1,199	3,240	2,609	6,470	2,558	1,729	3,222	1,694	3,141	9,571
Blind	5.3	5.2	2.9	2.0	4.1	3.2	4.3	2.7	6.4	3.2	3.2	9.6
Partially sighted	30.2	32.0	37.8	33.1	30	33.2	27.8	22.6	26.8	30.9	29.9	36.0
Deaf/dumb	6.2	5.9	4.9	4.1	5.2	4.9	5.5	5.6	4.2	4.2	5.0	8.8
Hard of hearing	12.4	10.6	10.5	8.7	12.6	8.9	8.4	10.9	11	12.2	9.0	12.4
Mentally ill	8.1	8.1	5.0	7.8	8.3	6.8	6.8	13.0	6.1	5.4	6.9	10.3
Ex-mental	3.6	3.3	1.3	1.3	5.3	3.0	1.7	2.8	1.7	1.4	3.0	5.3
Mentally retarded	5.4	5.9	4.9	4.8	7.6	5.4	5.7	3.9	4.7	4.2	4.7	7.9
Physically handicapped	38.8	39.1	37.7	41.9	33.3	38.6	41.1	41.2	38.4	44.9	41.3	37.8
Male	*135,613*	19,314	669	1,722	1,359	3,529	1,472	989	1,757	921	1,666	5,230
Blind	5.0	5.0	2.7	2.1	4.5	3.0	3.7	2.5	6.3	3.0	3.5	8.9
Partially sighted	27.7	29.2	33.3	28.7	27.5	30.3	25.1	20.9	24.9	27.3	26.7	33.8
Deaf/dumb	6.2	5.9	5.2	4.4	4.9	4.7	5.4	5.9	3.9	3.9	5.7	8.8
Hard of hearing	11.5	10.1	11.2	8.0	12.3	8.4	8.6	9.9	10.5	12.4	8.9	11.6
Mentally ill	8.8	8.8	6.4	7.8	7.8	7.9	8.2	14.2	7.2	5.8	8.7	10.6
Ex-mental	3.7	3.2	1.5	1.3	4.7	2.4	2.0	2.4	1.9	1.6	3.9	5.2
Mentally retarded	5.6	6.0	4.9	5.4	7.9	5.4	5.8	4.2	4.9	4.9	5.1	7.6
Physically handicapped	40.7	41.2	41	43.9	36.4	40.9	42.6	43	38.1	44.8	42.6	41.2
Female	*121,077*	16,119	530	1,518	1,250	2,941	1,086	740	1,465	773	1,475	4,341
Blind	5.6	5.5	3.2	2.0	3.8	3.3	5.2	3.0	6.6	3.5	2.9	10.4
Partially sighted	33.0	35.3	43.4	38.1	32.7	36.6	31.5	24.9	29.2	35.2	33.5	38.6
Deaf/dumb	6.2	5.9	4.5	3.8	5.6	5.1	5.6	5.3	4.4	4.5	4.3	8.9
Hard of hearing	13.3	11.1	9.6	9.4	13.0	9.6	8.1	12.2	11.7	11.9	9.1	13.3
Mentally ill	7.3	7.2	3.2	7.8	8.8	5.5	5.1	11.5	4.6	4.9	4.9	9.9
Ex-mental	3.6	3.4	0.9	1.3	6.0	3.8	1.4	3.4	1.5	1.2	2.0	5.4
Mentally retarded	5.3	5.8	4.9	4.1	7.2	5.4	5.5	3.4	4.4	3.4	4.3	8.3
Physically handicapped	36.7	36.5	33.6	39.6	29.9	35.8	39.1	38.8	38.8	44.9	39.9	33.7

Note: It is worth noting that the percentages will not necessarily add up to 100 because some persons reported more than one disability.

Source: CSO, 2000 Census of Population and Housing

9.6. Age Structure Of The Disabled

The age structure of the disabled is shown in Table 9.4. Data show that the number of the disabled increases with increasing age up to age group 15-19 then it declines in the age group 20-24. After this age group, the numbers steadily decline up to age group 70-74. Across age groups 0-4 to 40-44, the largest proportion of the disabled are physically handicapped closely followed by the partially sighted. For the older age groups, the largest proportion is partially sighted closely followed by the physically handicapped.

Table 9.4: Percent Distribution of the Disabled by Type of Disability and Age, Copperbelt Province, 2000

Age Group	Type Of Disability								
	Total	Blind	Partially Sighted	Deaf/Dumb	Hard of Hearing	Mentally ill	Ex Mental	Mentally Retarded	Physically Handicapped
0 - 4	1,811	9.1	23.4	15.4	15.4	14.0	10.3	13.6	41.9
5-9	2,581	3.8	19.7	13.9	14.9	8.1	4.1	8.9	35.5
10-14	2,735	3.8	22.0	12.0	14.6	10.1	4.6	11.2	35.3
15 - 19	2,813	3.4	24.1	7.6	11.2	9.8	5.1	10.0	38.8
20 - 24	2,699	3.2	26.6	6.4	9.3	11.3	3.6	8.3	37.7
25 - 29	2,886	3.1	25.1	5.5	8.5	14.0	3.5	6.4	40.4
30 - 34	2,629	3.8	27.5	4.5	8.3	10.3	3.2	5.7	44.8
35 - 39	2,522	3.8	28.4	3.4	8.2	11.3	2.9	4.4	43.4
40 - 44	2,391	3.9	35.8	2.8	7.3	6.9	3.6	4.1	39.9
45 - 49	2,297	3.9	42.9	2.5	7.3	5.1	2.3	4.0	38.4
50 - 54	2,238	5.5	44.1	2.4	8.0	3.8	1.3	2.4	38.3
55 - 59	1,926	11.5	38.9	2.0	8.7	3.2	0.9	1.3	37.6
60 - 64	1,705	6.9	45.5	3.0	9.5	2.2	1.3	1.8	37.0

65 - 69	1,399	6.8	42.0	3.1	10.5	3.1	1.4	1.4	40.7
70 - 74	1,198	8.4	43.3	2.2	12.5	3.2	1.0	2.1	41.4
75+	1,603	10.9	48.3	2.3	18.7	1.8	0.9	1.3	34.0
Total	35,433	5.2	32.0	5.9	10.6	8.1	3.3	5.9	39.1

Source: CSO, 2000 Census of Population and Housing

9.7. Causes Of Disability

The various causes of disability were categorized as prenatal, disease, injury, other and unknown. Of these, the most common cause is disease/illness, which was reported by 32.6 percent of the disabled population. This is in line with what is depicted on the national level where more than three-thirds (38.9 percent) were disabled due to disease / illness. The pattern is also the same for both males and females in both cases. Prenatal causes were reported by 12.9 percent, injury by 20.5 percent, and other causes by 10.4 percent while 21.1 percent reported that they did not know the cause of their disability.

Some causes of disability affect females more than they do males. These include disease, prenatal, unknown causes and other causes. Injuries are more common among males than females.

Table 9.5: Percent Distribution of the Disabled by District and Cause, Copperbelt Province, 2000

Cause Of Disability	Zambia Total	Copperbelt Total	C/bombwe	Chingola	Kalulushi	Kitwe	Luanshya	Lufwanyama	Masaiti	Mpongwe	Mufulira	Ndola
Total	**256,690**	35,433	1,199	3,240	2,609	6,470	2,558	1,729	3,222	1,694	3,141	9,571
Congenital/pre-natal	13.7	12.9	14.6	17.3	12.4	11	11.5	10.9	10.7	7.7	18.5	13.2
Disease/illness	38.9	32.6	31.9	30.4	28.1	30	32.4	38.3	40.5	32.5	34.6	32.1
Injury/accident/trauma	17.2	20.5	22.1	18.8	20.8	21.5	22.9	19	18.4	19.5	25.7	19
Other	9.3	10.4	6.2	8	13.6	11.9	7.9	7.1	9.6	12.3	14.7	9.8
Unknown	20.2	21.1	22.5	21.6	22.2	22.7	21.6	21	18.2	24	22.7	19.3
Male	**135,613**	19,314	669	1,722	1,359	3,529	1,472	989	1,757	921	1,666	5,230
Congenital/pre-natal	13.7	12.8	14.1	17.2	12.1	11	10.3	11.2	11.4	6.9	18.3	13.3
Disease/illness	36.3	29.7	28.4	26.2	26.3	27.4	29.3	35.8	37.3	31.4	29.9	29.5
Injury/accident/trauma	20.7	24.6	28.1	24.2	25.8	25.7	28	22.4	21.6	22.3	28	22.8
Other	8.9	10.1	6.9	8.2	12.4	11.3	7.4	7	9.8	10.4	14.5	9.7
Unknown	19.4	19.8	20.9	19.1	21.5	21.1	21.3	18.9	17.8	22.9	21.8	17.8
Female	**121,077**	16,119	530	1,518	1,250	2,941	1,086	740	1,465	773	1,475	4,341
Congenital/pre-natal	13.7	13	15.3	17.5	12.7	10.9	13.2	10.4	9.8	8.7	18.6	13
Disease/illness	41.9	36.1	36.4	35.2	30	33.2	36.6	41.6	44.3	33.9	39.9	35.3
Injury/accident/trauma	13.2	15.7	14.5	12.8	15.3	16.4	16.1	14.5	14.5	16.3	23.1	14.4
Other	9.7	10.8	5.3	7.7	15	12.6	8.7	7.2	9.3	14.5	14.8	9.9
Unknown	21.0	22.7	24.5	24.4	22.9	24.7	21.9	23.8	18.7	25.4	23.8	21.1

Note: It is worth noting that the percentages will not necessarily add up to 100 because some persons reported more than one cause of disability.

Source: CSO, 2000 Census of Population and Housing

Among the districts, Masaiti has the largest proportion of 40.5 percent reporting disease as a cause for disability while Kalulushi district has the least proportion with 28.1 percent. In all districts a larger proportion of the disabled females cited disease as a cause of their disability than their male counterparts.

Education Levels Of The Disabled

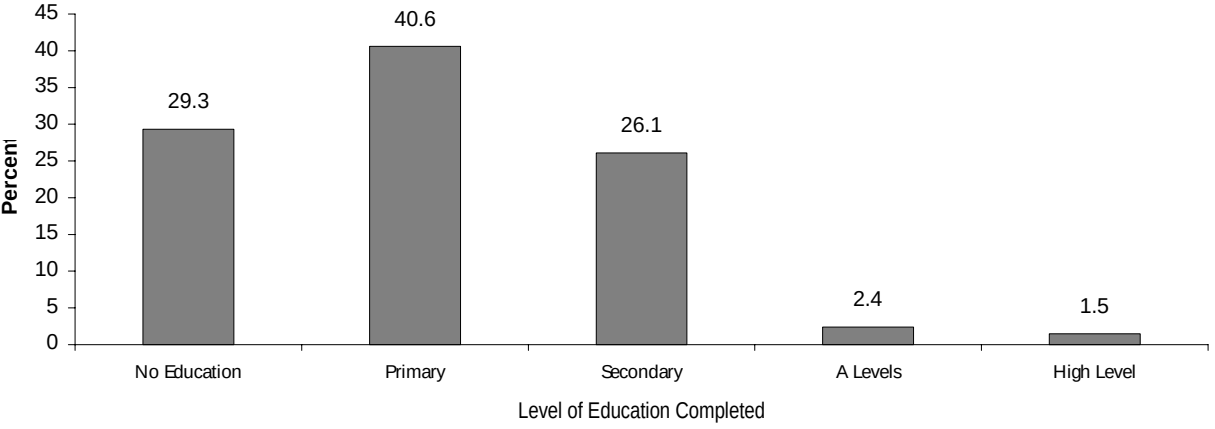
Table 9.6 and Figure 9.3 show the percent distribution of the disabled persons age 5 and above, by type of disability and level of education. The proportion of those who have never attended school is highest among the deaf/dumb (49.1 percent). The highest proportion of those who completed higher education was among the partially sighted and the blind with 1.8 percent each.

Table 9.6: Percent Distribution of the Disabled Persons, 5 Years and Above, by Type of Disability and Level of Education, Copperbelt Province, 2000

Type of Disability	Level of Education Completed						
	Total Number	Percent Total	No Education	Primary	Secondary	A Levels	Higher Level
Blind	1,687	100.0	37.2	35.2	24.4	1.4	1.8
Partially Sighted	10,906	100.0	24.4	40.6	29.6	3.6	1.8
Deaf/Dumb	1,811	100.0	49.1	35.2	14.1	0.6	0.9
Hard of Hearing	3,470	100.0	34.7	44.4	19.0	0.7	1.2
Mentally Ill	2,604	100.0	40.5	37.5	20.5	0.7	0.8
Ex-Mental	984	100.0	32.3	43.2	22.2	0.9	1.4
Mentally Retarded	1,851	100.0	44.8	38.0	15.8	0.6	0.8
Physically Handicapped	13,091	100.0	27.9	41.8	26.2	2.6	1.5
Total	33,622	100.0	29.3	40.6	26.1	2.4	1.5

rce: CSO, 2000 Census of Population and Housing

Figure 9.3: Distribution of the Disabled Population, 5 years and Older by Level of Education, Copperbelt Province, 2000



rce: CSO, 2000 Census of Population and Housing

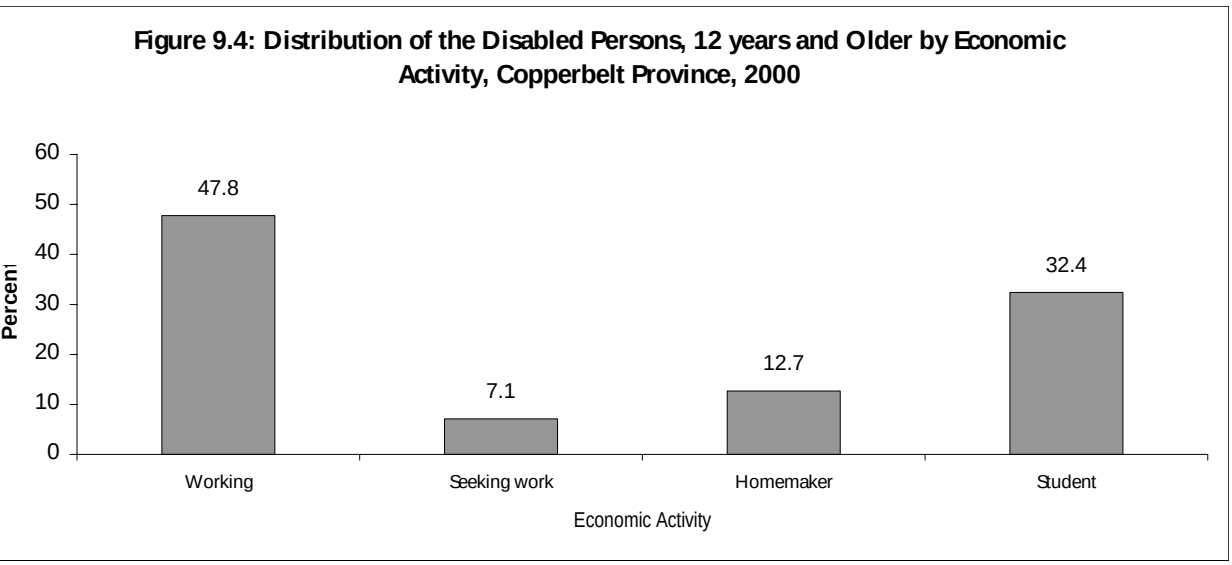
. Economic Activity Of The Disabled

le 9.7 shows the economic activities of the disabled persons. Almost half of the disabled persons are working and about one third are students. The percentages of the disabled who are working and those who are students are lower than those of the national average (47.8 percent against 55.5 percent for the working and 32.4 percent against 33.1 percent for students). It is worth noting that none of the disabled persons falls in the categories "not available for work" and "available for work" but not seeking work. Details on the economic activities are given in Chapter 6. Among the blind, mentally ill and mentally retarded, the majority are students while in the rest of the disability categories, the majority are working followed by students.

Table 9.7: Percent Distribution of the Disabled Persons, 12 Years and Older, by Type of Disability and Economic Activity, Copperbelt Province

Usual Economic Activity	Type Of Disability									
	Zambia Total	Copperbelt Total	Blind	Partially Sighted	Deaf/ Dumb	Hard of Hearing	Mentally ill	Ex-mental	Mentally Retarded	Physically Handicapped
Working	55.5	47.8	32.3	56.7	35.6	46.5	20.3	39.1	26.8	50.7
Seeking work	2.6	7.1	6.5	6.5	9.8	8.1	9.2	14.1	11	7.4
Homemaker	8.8	12.7	8.8	11.7	20.2	15.4	8.8	17.7	15.4	11.5
Student	33.1	32.4	52.4	25.1	34.4	30	61.7	29.2	46.9	30.3
Percent total	100	100	100	100	100	100	100	100	100	100
Total Number	194,039	24,973	1,299	8,188	1,108	2,422	1,974	640	1,302	10,019

rce: CSO, 2000 Census of Population and Housing



Source: CSO, 2000 Census of Population and Housing

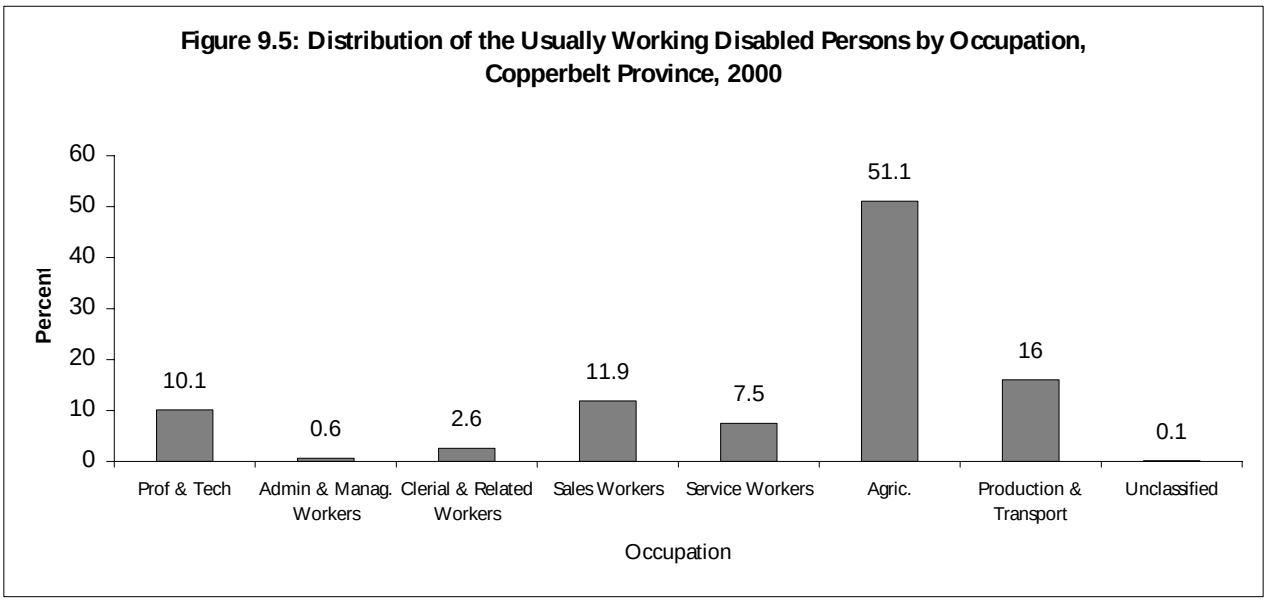
0. Occupation Of The Disabled

Data on occupation of the usually working disabled persons was also collected during the 2000 census. Table 9.8 and Figure 9.5 show that the most common occupation among the disabled is agriculture with 51 percent. Sales, production and transportation are also fairly common occupations with 12 percent and 16 percent, respectively.

Table 9.8: Percent Distribution of the Disabled Persons, Usually Working, by Type of Disability and Occupation, Copperbelt Province, 2000

Type of Disability	Occupation									
	Total Number	Percent Total	Prof & Tech	Admin & manag. Workers	Clerical & Related Workers	Sales Workers	Service Workers	Agric.	Production and Transport	Unclass.
Blind	400	100.0	5.8	0.5	7.0	10.0	9.0	38.3	29.5	0.0
Partially Sighted	4,449	100.0	15.6	1.2	2.7	12.1	7.1	47.1	14.1	0.2
Deaf/Dumb	379	100.0	6.3	0.3	1.6	10.3	10.3	54.4	16.9	0.0
Hard Hearing	1,066	100.0	4.8	0.2	1.3	8.4	7.9	63.0	14.1	0.3
Mentally ill	387	100.0	4.9	0.3	2.1	12.4	8.5	57.9	13.7	0.3
Ex Mental	243	100.0	6.6	0.0	2.1	14.8	11.1	48.6	16.9	0.0
Mentally Retarded	332	100.0	3.6	0.0	2.1	11.1	11.1	60.5	11.4	0.0
Physically Handicapped	4,850	100.0	7.8	0.4	2.5	12.6	7.1	52.0	17.6	0.1
Total	12,106	100.0	10.1	0.6	2.6	11.9	7.5	51.1	16.0	0.1

Source: CSO, 2000 Census of Population and Housing



rce: CSO, 2000 Census of Population and Housing

1. Employment Status Of The Disabled

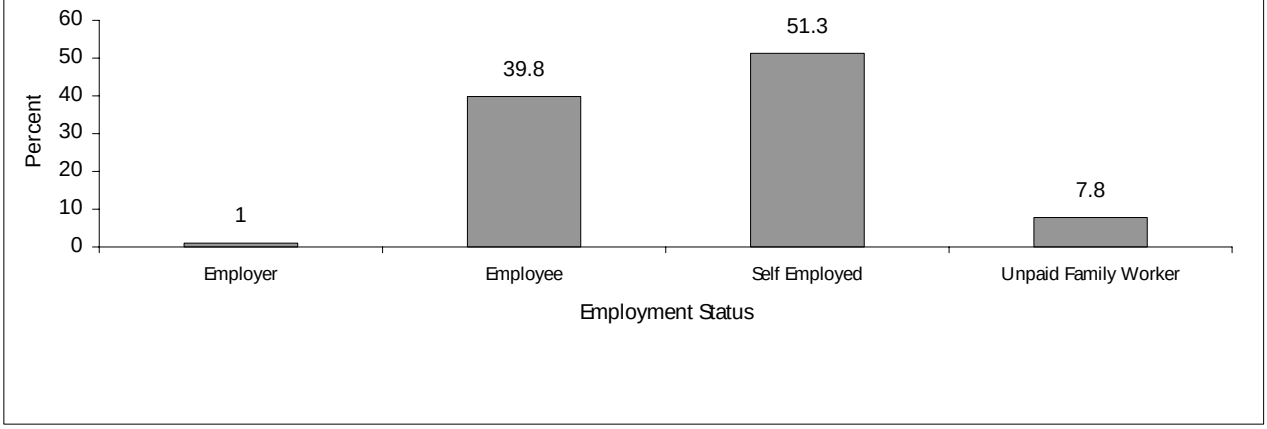
le 9.9 and Figure 9.6 show the usual employment status of the disabled persons age 12 years and over. The largest proportion of the disabled is self-employed (51.3 percent). The least proportion is among the employers (1 percent). This pattern holds true for all disability types except for the blind among whom the largest proportion is of the employers.

Table 9.9: Percent Distribution of the Disabled Household Heads by Type of Disability and Employment Status, Copperbelt Province, 2000

Type of Disability	Employment status					
	Total Number	Percentage Total	Employer	Employee	Self Employed	Family Worker
Blind	309	100.0	1.3	64.1	28.8	5.8
Partially Sighted	3,258	100.0	1.3	40.6	50.5	7.6
Deaf/Dumb	176	100.0	0.6	41.5	47.7	10.2
Hard of Hearing	531	100.0	0.6	31.8	59.5	8.1
Mentally Ill	124	100.0	0.0	33.1	53.2	13.7
Ex-Mental	190	100.0	0.0	26.8	65.3	7.9
Mentally Retarded	185	100.0	2.2	34.6	55.7	7.6
Physically Handicapped	3,168	100.0	0.9	39.2	52.1	7.8
Total	7,951	100.0	1.0	39.8	51.3	7.8

rce: CSO, 2000 Census of Population and Housing

Figure 9.6: Distribution of the Disabled Household Heads by Employment Status, Copperbelt Province, 2000



Source: CSO, 2000 Census of Population and Housing

9.12. Summary

Out of the Total population of 1,527,294 in the Copperbelt Province, 2.3 Percent is disabled. The proportion of the disabled is higher in rural than the urban areas. There are more disabled males (19,314) than females (16,115).

Physical disability is the most common type of disability affecting about 39 Percent of the disabled population while the ex- mental form the smallest proportion of 3 percent.

Disease is the most common cause of disability reported by about 33 percent of the disabled population. Injury causes were reported by 21 percent, while Prenatal by 13 percent, and other causes by 10 percent while 21 percent reported that they did not know the cause of their disability.

About 29 percent of the disabled have never been to school and 41 percent have completed primary education. In terms of employment status, the largest proportions of the disabled are self- employed (51 percent) while the least proportion of the disabled is among the employers (1 percent) amongst all categories of disability. The most common occupation among the disabled in this province is agriculture, husbandry, and fishing which takes up 51 percent.

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Appendix A

KEY PERSONS INVOLVED IN THE ANALYSIS

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- **Stanely Kamocha**
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- **Solomon Tembo**
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- **Anthony Nkole**
- **Perry Musenge**
- **Webster S. Chileshe**
- **Makoselo C. Bowa**

Support Staff

- Margaret M. Ndakala
- Chilekwa Munkonge
- Alice Mbewe
- Micheal Kunda
- Akayombokwa Ngubai