Figure 7.5

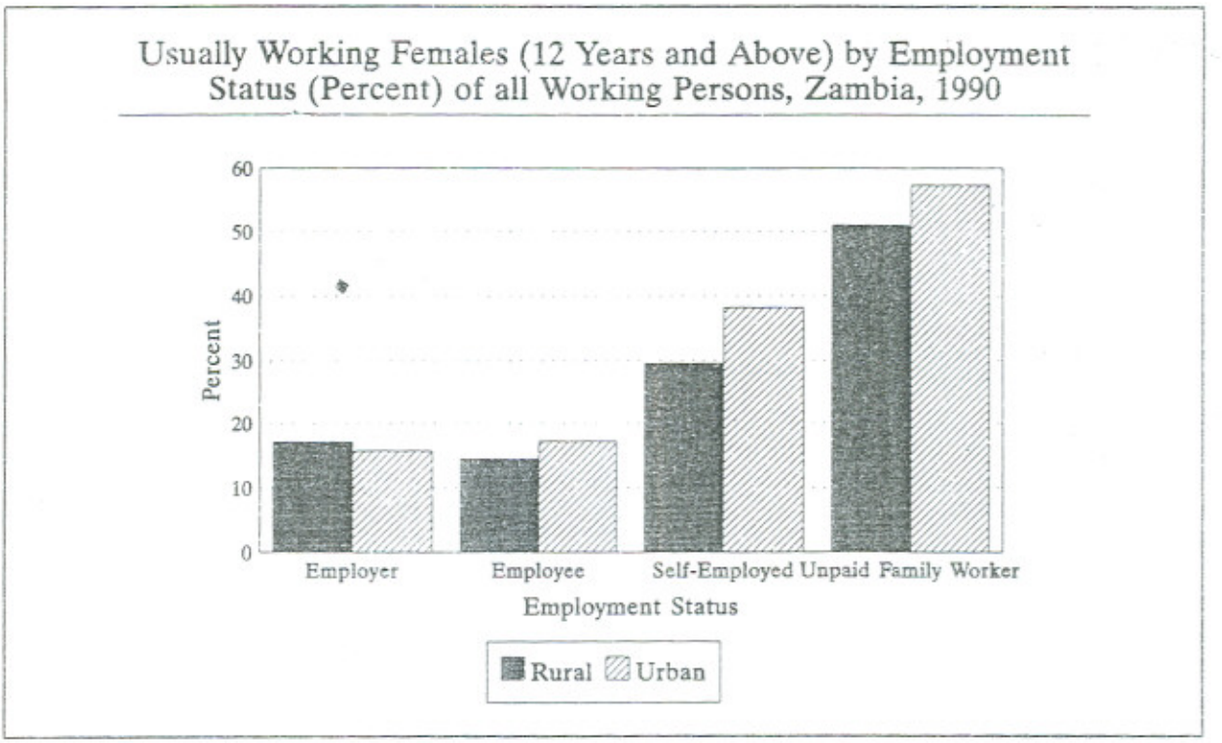


Figure 7.5 shows that except for employer category, all the employment status categories show lower proportions of working women in rural than urban areas.

Table 7.14 breaks down the working females into occupation and employment status as a proportion of the total working population. For Zambia as a whole, the proportion of working females is highest in the sales category, making up 43 percent of the population working in this sector . Also high are their proportions in the Clerical and Agricultural, Husbandry, Forestry and Fisheries occupations. It can be observed from Table 7.14 that a low proportion of women work in Administration and Management, and in Production, Transport and Labourers, with 11 percent in each case. Since women generally achieve low levels of academic training in comparison to men, it is not surprising that they make up a low proportion in administration and management. It should be noted that this is an occupation which usually requires a good educational background as a pre-requisite for engagement.

Table 7.14

Usually Working Females (12 Years and Older) as a Percentage of Total Usually Working Population by Occupation and Employment Status, Rural\Urban, Zambia, 1990

Occupation	Total	Employment Status				
		Employer	Employee	Self-Employed	Unpaid Family Worker	Not Stated
Zambia						
Total	34.4	16.2	16.6	31.8	51.4	40.4
Professional/Technical and Related Workers	29.1	25.2	29.2	19.1	46.0	35.8
Admin. Managerial Workers	11.4	9.8	11.3	13.2	23.0	12.4
Clerical and related workers	40.5	34.0	41.0	26.6	34.3	42.3
Sales Workers	43.2	25.7	25.7	47.9	56.6	47.8
Service workers	19.0	11.4	15.2	39.8	71.9	26.8
Agriculture, Husbandry, Forestry and Fishery	39.2	17.5	12.1	28.3	50.4	35.0
Production, Transport and Labourers	11.0	7.5	5.7	29.2	55.1	12.7
Unclassified Occupations	33.8	13.7	12.6	34.3	55.5	46.9
Not Stated	35.9	9.4	7.5	31.7	53.3	46.2
Rural						
Total	39.7	17.1	14.5	29.6	51.0	42.5
Professional/Technical and Related Workers	27.8	23.0	26.3	24.0	47.1	41.7
Admin. Managerial Workers	8.4	4.3	7.8	16.0	22.2	11.1
Clerical and related workers	24.6	19.9	24.9	21.1	24.5	26.6
Sales Workers	39.7	28.2	30.3	39.4	51.0	43.5
Service workers	26.4	7.9	12.3	42.4	72.3	32.4
Agriculture, Husbandry, Forestry and Fishery	40.0	19.0	12.3	28.5	50.4	36.0
Production, Transport and Labourers	22.1	10.5	7.9	35.6	54.2	22.8
Unclassified Occupations	41.1	9.1	9.3	30.6	53.3	46.8
Not Stated	44.2	10.5	7.8	33.5	52.3	47.3
Urban						
Total	24.8	15.7	17.2	38.2	57.3	38.1
Professional/Technical and Related Workers	29.6	26.4	30.1	15.8	38.8	34.3
Admin. Managerial Workers	11.8	10.5	11.7	12.9	23.7	12.6
Clerical and related workers	42.1	35.7	42.5	28.3	24.8	44.1
Sales Workers	44.0	25.1	24.9	49.7	61.9	48.4
Service workers	17.2	12.2	15.8	38.3	70.4	25.9
Agriculture, Husbandry, Forestry and Fishery	24.2	9.7	11.7	23.9	47.1	25.6
Production, Transport and Labourers	8.3	6.9	5.3	25.4	58.1	10.9
Unclassified Occupations	28.1	15.4	13.4	36.8	62.6	47.0
Not Stated	23.1	9.0	7.4	29.6	60.2	45.0

It can also be observed from Table 7.14 that there are some differences between rural and urban proportions of working females. In rural areas, women constitute the highest proportion in Agriculture, Husbandry, Forestry and Fishery, (40 percent), and in urban areas, their highest proportion is recorded in the Sales occupation, (44 percent). The lowest proportion of working females are Administration and Managerial workers in rural areas and Transport, Production and Labourers in urban areas.

In rural areas, there are almost as many women as men who did not state their occupation, compared to almost a quarter of women in urban areas.

Women in Industry

Table 7.15 shows the industrial sectors of the working women by their employment status as a proportion of the total workers. The highest proportion of women is found in the industry of Wholesale and Retail Trade, Restaurants and Hotels, where they make up 40 percent of the total workers in the industry, in both rural and urban areas. Another high proportion of female workers is in Agriculture, Hunting, Forestry and Fishery, where women make up almost 39 percent of the workers.

It can be observed from Table 7.15 that for Zambia as a whole, low proportions of workers recorded in industries like Mining and Quarrying; Electricity, Gas and water; Construction and Allied Repairs, and Transport, Storage and Communication, are female, with proportions ranging from 3 to 7 percent. This is not surprising as it is generally accepted that these are male dominated sectors. Perhaps, this is due to the notion that women are the weaker sex and cannot withstand the heavy-duty work in these industries. It is also caused by the traditional roles of men and women in the division of labour, where women have been looking after children and doing housework. However, other than custom and belief that women are not suited to factory work, discriminatory legislation could contribute to low proportions of women in factory occupations. For instance, the Employment of Women, Young Persons and Children Act, Chapter 505 of the Laws of Zambia which discriminates against women in indsutrial employment by way of prohibiting them from undertaking night work in any industrial employment.

Low proportions of the working females in the just mentioned industries are also observed in rural and urban areas of Zambia, although little variations in the proportions may be noticed. To mention but one, the proportion of workers in the industry of Transport, Storage and Communication comprising females is higher in urban than rural areas, 7 and 2 percent, respectively. With regard to employment status, female employers and employees constitute only 16 and 17 percent, respectively of the population working in these sectors. They constitute high proportions of workers found in Wholesale and Retail Trade; and Restaurants and Hotels.

Table 7.15

Usually Working Females (12 Years and Older) as a Percentage of Total Usually Working Population by Industrial Category and Employment Status, Rural\Urban, Zambia, 1990

Industry	Total	Employment Status				
		Employer	Employee	Self-Employed	Unpaid Family Worker	Not Stated
Zambia						
Total	34.4	16.2	16.6	31.8	51.4	40.4
Agric., Hunting, Forestry and Fishery	38.7	17.0	12.0	28.3	50.4	34.4
Mining and Quarrying	4.4	4.0	4.3	11.6	18.1	6.7
Manufacturing	17.6	12.4	12.4	25.7	54.6	20.4
Electricity, Gas and Water	6.1	5.1	5.7	13.1	17.1	7.2
Construction and Allied Repairs	2.8	2.7	2.4	2.4	14.1	3.4
Wholesale and Retail Trade, Restaurants and Hotels	40.2	25.4	27.0	48.5	58.4	45.1
Transport, Storage and Communication	6.7	4.8	7.0	3.0	7.6	7.6
Finance, Insurance and Real Estates	31.8	20.8	26.0	42.2	52.9	35.4
Community, Social and Personal Services	30.9	21.9	26.7	40.3	60.8	38.4
Unclassified Industry	36.0	19.6	17.0	36.0	54.9	47.5
Not Stated	43.8	18.1	18.3	41.4	53.8	48.4
Rural						
Total	39.7	17.1	14.5	29.6	51.0	42.5
Agric., Hunting, Forestry and Fishery	39.7	18.4	11.7	28.5	50.4	35.6
Mining and Quarrying	2.5	1.5	1.5	9.5	23.8	4.8
Manufacturing	26.9	14.1	13.2	27.8	53.8	31.7
Electricity, Gas and Water	1.8	0.0	1.5	3.0	17.9	0.0
Construction and Allied Repairs	2.8	2.5	1.5	1.8	13.2	2.7
Wholesale and Retail Trade, Restaurants and Hotels	40.2	26.7	31.8	42.0	58.0	45.0
Transport, Storage and Communication	2.0	0.6	1.9	2.9	6.5	3.5
Finance, Insurance and Real Estates	36.7	20.7	23.5	42.0	49.1	32.5
Community, Social and Personal Services	30.5	20.0	23.3	30.7	59.7	42.7
Unclassified Industry	40.7	14.6	12.8	31.7	52.6	47.5
Not Stated	47.2	15.8	14.0	40.2	52.7	47.7
Urban						
Total	24.8	15.7	17.2	38.2	57.3	38.1
Agric., Hunting, Forestry and Fishery	22.9	10.4	12.7	24.9	47.1	24.6
Mining and Quarrying	4.6	4.2	4.5	13.0	9.9	6.8
Manufacturing	15.4	12.2	12.3	24.5	56.8	18.8
Electricity, Gas and Water	6.7	6.1	6.4	15.1	15.4	8.1
Construction and Allied Repairs	2.8	2.8	2.7	2.8	19.0	3.6
Wholesale and Retail Trade, Restaurants and Hotels	40.2	25.1	26.3	49.6	58.8	45.1
Transport, Storage and Communication	7.4	5.6	7.8	3.1	8.6	8.1
Finance, Insurance and Real Estates	30.9	20.8	26.2	42.2	59.0	35.7
Community, Social and Personal Services	31.1	22.6	27.7	43.6	64.3	37.5
Unclassified Industry	31.8	21.4	18.3	39.4	62.9	47.5
Not Stated	36.8	19.3	19.9	43.1	61.3	49.3

7.5 SUMMARY

The number of children in Zambia has been increasing more slowly than the youth during the intercensal period 1980-90, at rates of 1.9 and 4.4 percent, respectively. The population of Zambia is very young, with children and youth accounting for about two-thirds of the total population. The majority of these children and youth live in the rural areas of the country. There are more girls than boys, with the exception of Eastern, Luapula and Northern provinces. As for the youth, there are more females than males throughout the country. The sex ratios for the children and youth are 99 and 91 per 100 females, respectively.

Information on the social and economic characteristics of the children and youth in Zambia reveals that more female than male youth are married, 60 percent and 24 percent, respectively. Rural and urban differentials show a similar picture to the national one, although it should be noted that the proportion of youth who are married in rural areas (regardless of sex) is much higher than in urban areas. Consequently, the proportion of female youth who have had a birth in rural areas is higher than in urban areas. This may be attributed to the lower age at marriage for female youth in rural areas than for those in urban areas and the higher proportion of births that occur within marriages.

Most of the youth in Zambia have only completed primary level of school. Lower proportions of females than males have completed any of the education levels. Also, more females have had no schooling compared to males. Youth in rural areas, irrespective of sex, show a higher proportion of those who have had no schooling than in urban areas. The unemployment rate of youth in Zambia is about 22 percent. The unemployment rate is substantially higher for urban than rural youth. This may be attributed to the fact that work in rural areas is agriculturally-based, therefore, could be readily available unlike in the urban areas.

The 1990 Census reveals that about 17 percent of Zambia's total households are headed by females, with a higher proportion of female heads of households in rural areas than in urban areas. Amongst the provinces, Western Province has recorded the highest proportion of female heads while Copperbelt has the lowest. On the whole, two-fifths of Zambian women have never attended any formal schooling. In rural areas, more than half of the women have never been to school compared to about a fifth in urban areas. The majority of women who have been to school at all, have only completed primary school. The proportion of women who have obtained secondary education is much higher in urban than rural areas. Of all the provinces, Eastern, Luapula and North-Western have the highest proportion of women who have never been to school. Generally, women tend to become heads of households when they no longer have a spouse, due to separation, divorce or widowhood.

Finally, it has been revealed that women make up only 34 of the total working population in Zambia. Of these, the majority live in rural areas. At the provincial level, Eastern Province has the highest proportion of females who are usually working whilst Copperbelt has the lowest. Generally, most of these women are employed as unpaid family workers. It should be noted that female workers, regardless of their employment status, are concentrated in two industries, namely "Agriculture, Hunting, Forestry and Fishery" and "Wholesale and Retail Trade, Restaurants and Hotels". Low proportions of working females are observed in industries like Mining and Quarrying. This may be due to the heavy manual work found in these industries which is perceived to be more suitable for men than women. Also, despite the weight of custom and belief that women are not suited to factory work and working under ground in the mines, this has also been due to discriminatory legislation in the country.

CHAPTER 8

NUPTIALITY AND FERTILITY

8.1 INTRODUCTION

Effective socio-economic development planning depends on the availability of population and socio-economic data including nuptiality and fertility data. Nuptiality data may allow planners to assess family formation and thus formulate housing programmes, etc. The fertility level of a country is important information for family planning programmes and projects and for the estimation of the population growth rate.

In order to derive nuptiality and fertility patterns and levels, the 1990 Population Census collected the following data items on the subject:-

- Marital Status, i.e. whether a person is married, separated, divorced, widowed or never married (question P-24).
- Age at first marriage (question P-25).

For females aged 12 years and over the following information was solicited pertaining to fertility:-

- Whether they have had a live birth (question F-1).
- Age at first live birth (question F-2).
- Number of children ever born and are still alive by sex (question F-3).
- Number of children dead by sex (question F-4).

The last two data items were also collected for those females who had given birth during the last 12 months prior to the Census.

8.2 CONCEPTS AND DEFINITIONS

Fertility

Fertility refers to the frequency of occurence of births or more specifically live births within populations and sub-populations.

Nuptiality

Nuptiality refers to the frequency, characteristics and dissolution of marriages in a population. Marriage is a characteristic which together with birth and death can be conceived to be a vital event in one's lifecycle.

Singulate Mean Age at Marriage (SMAM)

Refers to the average age at which those who marry before age 50, marry. It is computed from the proportions of persons who are in the "never married" marital category corresponding to five-year age groups from 15-54 years.

Crude Birth Rate (CBR)

Ratio of live births in a specified period (usually a calendar year) to the average population in that period. The ratio is expressed as per 1,000 persons.

Child-Woman Ratio (CWR)

The CWR (Fertility Ratio) is the number of children per 1,000 females of child-bearing age. Various ages have been used, but commonly (as is the case in this Chapter) the numerator refers to children aged 0-4 years and the denominator refers to females aged 15-49 years.

General Fertility Rate (GFR)

Ratio of live births in a specified period (usually a calendar year) to the average number of females of childbearing ages (taken as 15-49 years). It is commonly expressed as per 1,000 females of childbearing period 15-49 years.

Total Fertility Rate (TFR)

The TFR represents the average number of children that a female would have from age 15 to age 49 if the prevailing age-specific fertility rates of childbearing were to persist.

Gross Reproduction Rate (GRR)

GRR is the average number of daughters a female would have or give birth to if she experiences a given set of age-specific fertility rates throughout the reproductive ages with no allowance for mortality over this period.

Net Reproduction Rate (NRR)

The average number of daughters a female would have or give birth to if the prevailing fertility and mortality patterns persist. This provides a measure of the way in which a generation of females replaces itself with daughters given a particular combination of fertility and mortality.

Average Parity

Also referred to as Mean Number of Children Ever Born (MNCEB). Refers to the number of children ever born to females in an age group divided by the number of females in the same age group. The average parity for age group 45-49 years is called Completed Family Size.

8.3 NUPTIALITY

Marital status characteristics and mean age at marriage are some of the topics discussed under this section. Knowledge of the marital characteristics of a population is important for analysis, among other reasons, for the effect they have on the level of fertility.

Marital Status

The basic marital status categories as covered by the 1990 Census are never married, married, widowed, divorced and separated, see Table 8.1. Except for 'never married' persons, all persons falling into the rest of the marital status categories may be referred to as 'ever married' persons. According to the 1990 Census, "marriage may be any permanent living arrangement between a man and a woman to live together and will include church marriages, other religiously approved unions,civil registration at a Boma or other civil ceremony, traditional marriages, or even where no ceremony has been performed but the man and woman are living as husband and wife.

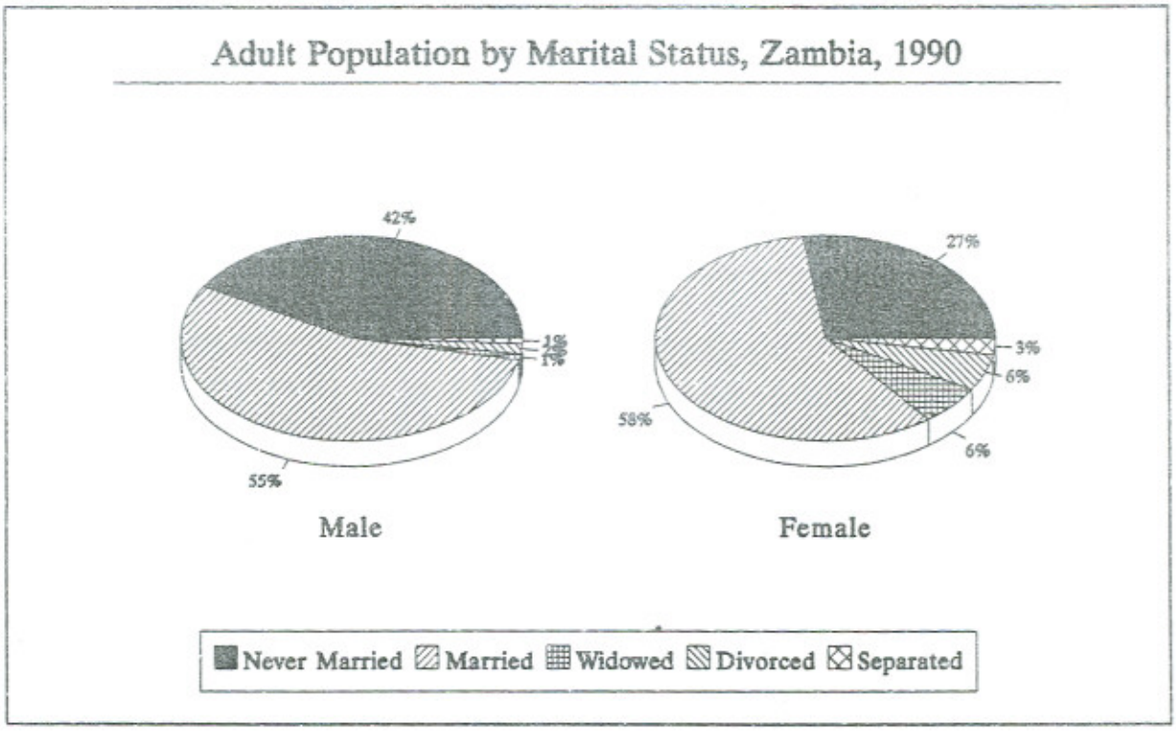
Table 8.1

Adult Population Classified by Age, Sex and Marital Status, (Percent), Zambia, 1990

Age Group	Never Married		Married		Widowed		Divorced		Separated		Total No of Cases	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
15 - 19	98.0	76.1	1.7	22.0	0.1	0.2	0.1	0.9	0.2	0.8	421,993	465,736
20 - 24	73.5	32.1	25.3	61.4	0.1	0.6	0.6	3.7	0.5	2.3	308,360	369,838
25 - 29	33.7	13.7	63.5	76.2	0.3	1.3	1.5	5.9	1.0	2.9	238,073	279,357
30 - 34	13.4	6.8	82.8	79.9	0.5	2.4	2.2	7.6	1.2	3.3	204,549	215,594
35 - 39	7.1	4.2	88.5	80.0	0.6	3.8	2.5	8.6	1.2	3.5	143,406	148,082
40 - 44	4.5	2.9	90.6	78.4	0.9	6.4	2.7	8.9	1.3	3.4	123,675	137,443
45 - 49	3.3	2.5	91.3	75.0	1.1	9.9	2.9	9.1	1.4	3.4	102,223	108,546
50 - 54	2.8	2.8	91.1	67.0	1.6	16.5	3.0	10.0	1.5	3.7	90,260	98,297
55+	2.7	4.6	87.5	45.6	4.4	35.1	3.6	10.8	1.8	3.8	233,785	202,549
Total	41.6	27.2	54.9	58.3	0.9	6.1	1.7	5.8	0.9	2.6		
Size	775,863	550,889	1,024,732	1,180,406	17,048	124,379	31,187	117,223	17,494	52,535	1,866,324	2,025,442

Note: Total excludes not stated cases by Age and Marital Status.

Figure 8.1



Marriage is near-universal in Zambia. At age 45-49 years, only 3.3 percent of males and 2.5 percent of females had never been married. As for the currently married, 55 percent of all men and 58 percent of all women are in this marital status category, according to the 1990 Census, but with substantial variation over the age range. The least percentages of married persons are recorded for the younger age group 15-19 years. Most persons in this age group may still be attending school, considering that this age group is generally a school-going one.

Differentials by Residence

Differences in chacteristics by rural/urban areas is a widely used factor in demographic analysis. Tables 8.2 and 8.3 show the marital status characteristics of the population of Zambia by rural and urban areas.

Table 8.2

Adult Male Population by Age and Marital Status, Rural-Urban Areas, (Percent), Zambia, 1990

Age Group	Never Married		Married		Widowed		Divorced		Separated		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
15 - 19	97.5	98.8	2.1	1.0	0.1	0.1	0.1	0.1	0.2	0.1	252,751	169,242
20 - 24	66.2	82.7	32.4	16.4	0.1	0.1	0.6	0.4	0.7	0.4	172,699	135,661
25 - 29	26.9	41.9	70.1	55.6	0.3	0.3	1.7	1.4	1.1	0.9	130,591	107,482
30 - 34	12.4	14.4	83.4	82.1	0.5	0.4	2.4	2.0	1.4	1.1	107,247	97,302
35 - 39	7.9	6.4	87.4	89.6	0.6	0.6	2.7	2.2	1.3	1.1	69,933	73,473
40 - 44	5.5	3.5	89.0	92.2	0.9	0.9	3.0	2.4	1.5	1.1	61,882	61,793
45 - 49	3.8	2.8	90.6	92.2	1.1	1.1	3.1	2.7	1.5	1.2	56,726	45,497
50 - 54	2.9	2.6	91.0	91.2	1.6	1.7	2.9	3.0	.5	1.5	56,627	33,633
55 +	2.5	3.6	88.1	85.3	4.3	4.8	3.4	4.3	1.7	2.0	183,881	49,904
Total	39.1	45.1	57.1	51.9	1.1	0.7	1.8	1.5	1.0	0.8		
Size	426,655	349,208	623,243	401,489	11,641	5,407	19,591	11,596	11,207	6,287	1,092,337	773,987

Note: Total excludes not stated cases by Age and Marital Status.

Table 8.3

Adult Female Population by Age and Marital Status, Rural- Urban Areas, (Percent), Zambia, 1990

Age Group	Never Married		Married		Widowed		Divorced		Separated		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
15 - 19	71.6	82.4	26.1	16.2	0.2	0.1	1.1	0.6	1.0	0.6	271,494	194,242
20 - 24	26.8	39.0	65.4	56.0	0.7	0.5	4.3	2.8	2.7	1.8	211,164	158,674
25 - 29	11.7	16.4	77.0	75.1	1.3	1.2	6.6	5.1	3.4	2.3	158,863	120,494
30 - 34	6.3	7.4	79.2	80.8	2.5	2.2	8.2	6.9	3.8	2.7	121,339	94,255
35 - 39	4.1	4.4	79.4	80.8	3.8	3.7	8.8	8.2	3.9	2.8	85,840	62,242
40 - 44	2.7	3.2	78.4	78.6	6.4	6.5	8.8	8.9	3.7	2.9	92,290	45,153
45 - 49	2.2	3.4	75.2	74.5	9.9	9.9	9.1	9.2	3.6	3.1	78,677	29,869
50 - 54	2.4	4.2	67.8	63.9	16.2	17.9	9.9	10.6	3.8	3.5	76,471	21,826
55 +	4.1	7.4	46.1	42.9	35.1	35.2	10.8	10.9	3.8	3.7	168,771	33,778
Total	23.2	33.8	59.8	55.7	7.6	3.7	6.4	4.7	3.0	2.0		
Size	293,678	257,221	756,803	423,603	95,961	28,418	81,122	36,101	37,345	15,190	1,264,909	760,533

The percentage of 'never married' persons, when subtracted from 100 percent, results in the proportion of persons who have ever married. In the rural areas, 61 percent of males have ever married. The corresponding figure for males in the urban areas is 55 percent. In the case of females the figures are 76.8 and 66.2 percent for rural and urban residence, respectively. Thus, more rural males and females than urban males and females have ever been married. Moreover, more females than males have ever been married, in both rural and urban areas.

Marital characteristics of the population aged 15-49 years are presented in Table 8.4

Table 8.4

Adult Population (15 Years and Over) by Sex, Marital Status, Rural/Urban and Province, (Percent), Zambia, 1990

Zambia and Provinces	Never Married		Married		Widowed		Divorced		Separated	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Zambia										
Total	41.6	27.2	54.9	58.3	0.9	6.1	1.7	5.8	0.9	2.6
Rural	39.1	23.2	57.1	59.8	1.1	7.6	1.8	6.4	1.0	3.0
Urban	45.1	33.8	51.9	55.7	0.7	3.7	1.5	4.7	0.8	2.0
Provinces										
Central	43.5	29.0	52.6	58.0	1.0	5.1	1.9	5.5	1.0	2.4
Copperuelt	44.4	32.0	52.1	57.4	0.8	3.7	1.6	4.6	1.0	2.3
Eastern	37.1	20.5	59.6	61.4	1.1	9.4	1.4	5.9	0.8	2.8
Luapula	36.6	22.4	60.1	59.3	0.9	7.2	1.3	7.0	1.1	4.1
Lusaka	44.3	32.6	52.5	57.0	0.7	4.0	1.6	4.6	0.8	1.8
Northern	38.0	22.7	59.6	61.6	0.8	7.7	0.8	4.7	0.8	3.3
North-Western	38.7	25.0	57.3	57.2	1.1	6.5	2.0	8.7	0.9	2.7
Southern	44.0	27.8	51.9	60.2	0.9	5.2	2.3	4.8	1.0	1.9
Western	41.4	28.3	53.7	50.6	1.3	8.4	2.4	9.7	1.2	3.1

The inverse of the proportion 'never married' gives an indication of the population who have ever been in marital union. The proportions are 58 percent and 73 percent for males and females, respectively. The proportions of persons who are married are higher in rural than in urban areas. Such high proportions apply to the provinces as well. In the African cultural setting marriage is viewed as an important, but universal institution.

Singulate Mean Age at Marriage (SMAM).

There are two particular characteristics of African marriage which have an important bearing on fertility. These are near-universality of marriage and the early mean age at marriage, especially in the case of females. Age at marriage plays an important role in influencing the level of fertility. The lower the age at marriage, the higher the expected level of fertility and vice versa. A measure of the age at marriage is the Singulate Mean Ages at Marriage (SMAM) shown in Table 8.5.

Table 8.5

Singulate Mean Age at Marriage Classified by Sex, Residence and Province, Zambia, 1990

Residence/ Provinces	S M A M		
	Male	Female	Difference
Zambia			
- Total	26.1	21.2	4.9
- Rural	25.3	20.7	4.6
- Urban	27.0	21.8	5.2
Provinces			
Central	26.4	21.4	5.0
Copperbelt	27.0	21.5	5.5
Eastern	24.6	20.0	4.6
Luapula	23.9	20.3	3.6
Lusaka	26.9	21.7	5.2
Northern	24.9	20.2	4.9
North-Western	25.3	21.0	4.3
Southern	25.8	21.3	4.5
Western	27.1	22.8	4.3

The mean ages at marriage in Zambia are 26.1 and 21.2 years for males and females, respectively. A SMAM of 21.2 years for females may be considered low because the remaining reproductive period before age 49 years is large. As for the provinces the highest figure of 27.1 years for males is reported for Western Province. This province also records the highest SMAM figure for females, at 22.8 years. The lowest SMAM figure (20.0 years) is recorded for females in Eastern Province.

Singulate Mean Age at Marriage by Education

The level of education has a strong influence on the age at marriage. It is generally observed that the longer one stays in school, the longer it takes for one to enter into marriage, see Table 8.6.

Table 8.6

Singulate Mean Age at Marriage by Educational Attainment and Residence, (Females), Zambia, 1990

Zambia and Provinces	All Levels of Education	Level of Education		
		No Schooling	Primary	Secondary+
Zambia				
- Total	21.0	20.1	20.5	22.5
- Rural	20.5	20.0	20.3	22.3
- Urban	21.5	20.4	20.7	22.6
Provinces				
Central	21.2	20.7	20.9	22.2
Copperbelt	21.2	20.2	20.6	22.2
Eastern	20.0	19.4	20.0	22.4
Luapula	20.2	20.0	19.7	21.2
Lusaka	21.5	20.0	20.5	23.1
Northern	20.0	19.4	19.6	20.9
North-Western	20.9	20.4	20.6	21.4
Southern	21.1	20.2	20.6	22.8
Western	22.6	21.8	22.2	24.7

The SMAM figures presented in the table are in agreement with the assumption above. The higher the level of education completed the higher the mean age at marriage. The only exception is Luapula Province where the SMAM figure for females who completed primary education is lower than that for females with no schooling. However, the difference is small and may be considered insignificant.

Generally, there is relatively little difference in SMAM for women who have had no schooling and women who have only completed primary education, only 0.4 years at the national level. The difference is of 2 years quite substantial between females who have attained primary and secondary education. In all provinces the highest age at marriage is of women who have attained secondary level of education and above.

8.4 FERTILITY

Fertility is the most important factor in influencing the growth, size and composition of the population, the other factors being mortality and migration. A number of fertility indices including crude birth, general fertility, total fertility, gross reproduction and net reproduction rates have been calculated. These measures are used in this chapter to describe the fertility differences between the 1980 and 1990 census data for Zambia.

Some of the techniques used are the Brass P/F Ratio method and the Brass Relational Gompertz Model. For further clarifications on the application of these methods refer to United Nations (1983) and Newell (1988).

The summary fertility measure of total fertility rate which is shown in Table 8.7 has been derived by using the Brass Relational Gompertz Model. The Brass P/F Ratio method yields higher fertility estimates. Fertility measures differ in their error tolerance levels of data being used. The Brass Relational Gompertz Model has been found to yield reasonable fertility estimates.

The Gompertz function has been used by many authors to represent the cumulative fertility of a population. The function is

$$F(x) = F = A^{B^x},$$

Where

F(x) is the cumulative fertility by age
F is the total fertility rate by the end of the reproductive period
A and B are constants and lie between zero and one.

The F values can be taken as cumulative fertility derived from age-specific rates or parity data (United Nations, 1992).

Data on Mean Number of Children Ever Born (MNCEB) and Births in the Last one Year (BLY) contain a lot of errors. It is for this reason that methods such as Brass Relational Gompertz Model are used to obtain adjusted fertility rates. The most important error in the reported number of births is the omission of births by older women, especially those births that ended in early deaths. Women in older age groups also tend to forget grown up children, children born to another husband and children not present at home for various reasons. There are also factors that may tend to inflate the number of births by the inclusion of step or adopted children, grandchildren, etc. Another error in the reported number of children is the inclusion of still births. The net effect of these errors is a tendency for mean number of children to steadily decrease as age of women increases. The purpose for the use of the Gompertz function is to overcome these limitations in the fertility data.

Fertility Levels

Table 8.7 presents results on fertility indicators.

Table 8.7

Summary Fertility Measures, Zambia, 1980 and 1990

Residence		Crude Birth Rate	Child Woman Ratio	General Fertility Rate	Adjusted Total Fertility Rate	Adjusted Gross Reproduction Rate	Adjusted Net Reproduction Rate
Zambia							
Total	- 1980	37	834	173	7.2*	3.5	2.6
	- 1990	44	678	185	6.7	3.3	2.2
Rural	- 1980	36	813	166	7.2*	3.5	2.5
	- 1990	45	712	194	7.0	3.4	2.3
Urban	- 1980	40	867	185	7.6*	3.7	2.9
	- 1990	43	629	171	6.3	3.1	2.2

* TFR estimates extracted from Analytical Report Volume IV of the 1980 population census, CSO 1985.

The results shown on the Crude Birth Rate (CBR) suggest a rise in the birth rate in the 1980-90 intercensal period. However, the CBR is affected by the age and sex distribution of the population as only a small proportion of the population can give birth, namely women 15-49 years. It is for this reason that direct comparison of CBRs between populations and sub-populations with different age and sex composition may lead to misleading conclusions. More refined measures such as the Total Fertility Rate (TFR) will be used to make conclusive observations on level and trend of fertility.

Age-Specific Fertility Rate (ASFR) is the number of births divided by the number of females in each age group of the reproductive span, 15-49 years. They show the variability of fertility in the different age groups, usually in 5-year age groups. The fact that births are recorded for the age group 15-19 years shows that the problem of teenage pregnancy is prevalent in Zambia. The number of births occurring to teenagers are higher in 1990 than in 1980. Table 8.8 gives details on the rates.

Table 8.8

Observed and Adjusted Age-Specific Fertility Rates (ASFR), Zambia, 1980 and 1990

Age Group	1980				1990			
	Total Women	Births	ASFR	Adjusted ASFR	Total Women	Births	ASFR	Adjusted ASFR
15 - 19	304,307	18,559	0.0610	0.0779	485,039	42,637	0.0879	0.0940
20 - 24	258,475	61,247	0.2370	0.3027	380,848	95,233	0.2501	0.2674
25 - 29	176,533	44,536	0.2523	0.3222	284,596	78,151	0.2746	0.2936
30 - 34	157,455	34,617	0.2199	0.2808	218,847	55,645	0.2543	0.2719
35 - 39	129,106	23,277	0.1803	0.2303	149,997	31,675	0.2112	0.2258
39 - 44	112,042	12,113	0.1081	0.1381	139,054	16,732	0.1203	0.1286
45 - 49	84,473	5,816	0.0689	0.0880	109,866	6,028	0.0549	0.0587
Total	1,222,391	200,165	1.1275	1.44	1,768,247	326,101	1.2533	1.34
Observed TFR			5.6				6.3	
Adjusted TFR				7.2				6.7
Mean age at Childbearing			30.6				30.3	

The sum of the age-specific fertility rates multiplied by five (of five-year age groups) yields the Total Fertility Rate (TFR). The TFR represents the average number of children a female would have from age 15 to age 49 if she were to bear children at the prevailing age-specific fertility rates. The TFRs presented in Table 8.8 are based on observed births. However, observed TFRs have been adjusted employing the Brass Ralational Gompertz Model. The fertility level in Zambia is 6.7 children per woman. The Gross Reproduction Rate (GRR) and the Net Reproduction Rate (NRR) show the the same fertility pattern as the TFR. The NRRs are shown in Table 8.9.

Figure 8.2

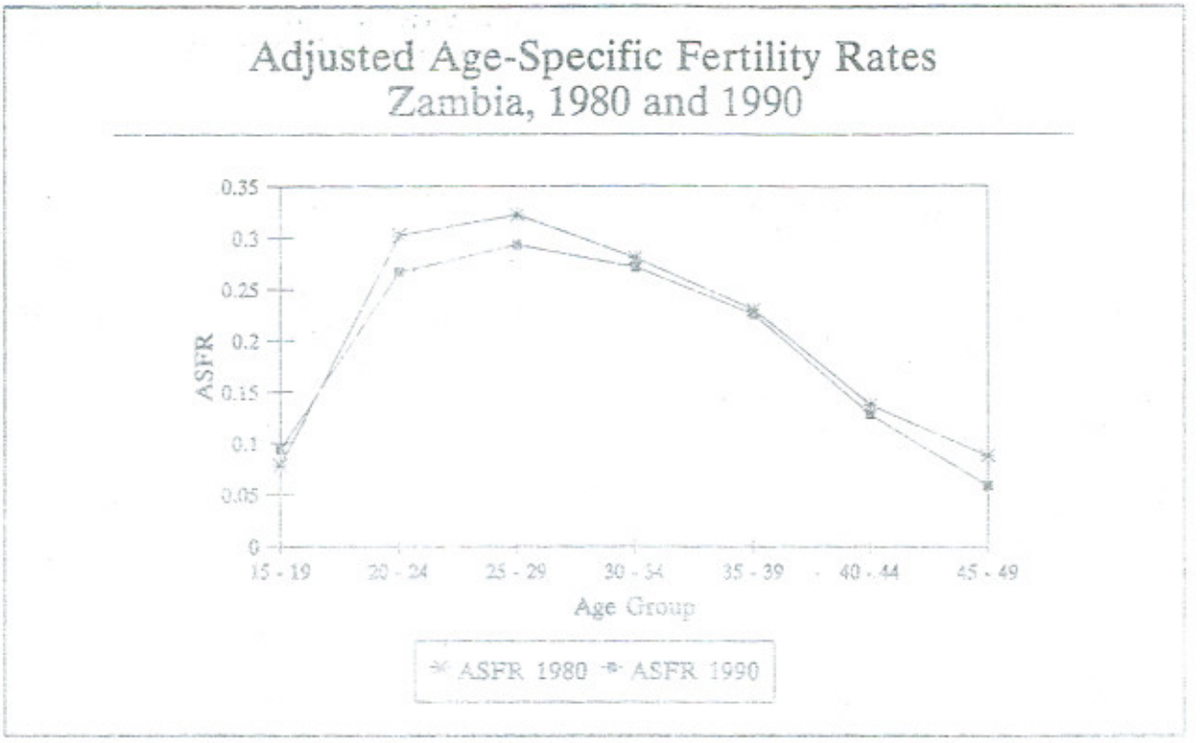


Table 8.9

Another fertility measure discussed in this Chapter is Children Ever Born (CEB). The measure CEB is defined as the number of children ever born to a group of females of a given age during their child-bearing experience beginning from the onset of reproductive life to their present ages. It is obtained by asking women 12-49 about their total lifetime births,(refer to question F1-F4).

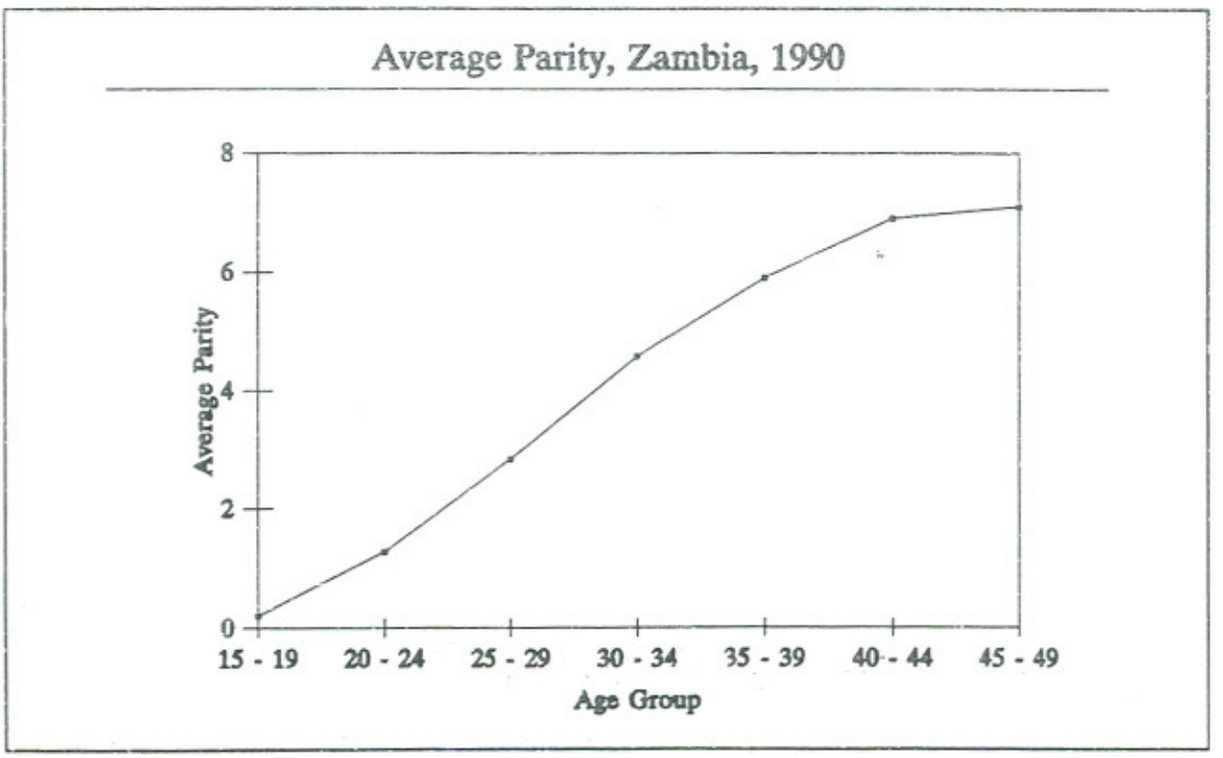
The number of children ever born to females in an age group divided by the number of females in the same age group yields average parity. The average parity for age group 45-49 years is referred to as completed family size and should be equal to the TFR under constant fertility, mortality and migration experiences. The completed family size (average parity) corresponding to age group 45-49 years, is 7.1 as shown in Table 8.10.

Table 8.10

Average Parity, (Observed), Zambia, 1990

Age Group	Total Women	Children Ever Born	Average Parity Reported
15 - 19	485,039	99,326	0.2048
20 - 24	380,848	481,856	1.2652
25 - 29	284,596	806,548	2.8340
30 - 34	218,847	1,001,415	4.5759
35 - 39	149,997	885,038	5.9004
40 - 44	139,054	959,316	6.8989
45 - 49	109,866	780,205	7.1014

Figure 8.3



Time Trend

The adjusted TFRs show that there has been a slight drop in the level of fertility between 1980 and 1990. The drop for the urban areas of Zambia is a marked at about one child difference per woman. The decline in fertility may be observed from Figure 8.2. The adjusted age-specific fertility rates for 1990 fall below those for 1980.

8.5 FERTILITY DIFFERENTIALS

Fertility levels tend to vary according to socio-economic groups. The most widely used socio-economic factors in demographic studies are residence (rural/urban), region (province), marital status, education and economic activity. Fertility trends may also be observed when more than one census are available, or when reliable reproductive data are collected.

Residence and Fertility

The average parity of women in the reproductive age group 15-49, grouped in 5-year age groups by residence is shown in Table 8.11.

Table 8.11

Average Parity and Total Fertility Rates by Age and Residence, Zambia, 1980 and 1990

Age Group	Average Parity					
	1980			1990		
	Total	Rural	Urban	Total	Rural	Urban
15 - 19	0.3	0.3	0.3	0.2	0.2	0.2
20 - 24	1.8	1.7	1.9	1.3	1.4	1.1
25 - 29	3.6	3.5	3.8	2.8	3.0	2.6
30 - 34	5.4	5.2	5.6	4.6	4.7	4.4
35 - 39	6.4	6.3	6.8	5.9	6.0	5.8
40 - 44	6.8	6.7	7.2	6.9	7.0	6.7
45 - 49	6.6	6.5	7.0	7.1	7.2	6.9
Completed Family Size*	6.6	6.5	7.0	7.1	7.2	6.9
Adjusted TFR**	7.2	7.2	7.6	6.7	7.0	6.3

* Parity for age group 45-49

** Estimates by Brass Relational Gompertz Model

In 1980, the fertility level in the urban areas was marginally higher than that for the rural areas. The situation in 1990 is the reverse with urban areas showing lower fertility than the rural areas. Urbanisation usually has a depressing effect on the fertility level. This may help to explain the shift considering that Zambia is becoming more and more urbanised.

Region (Province) and Fertility

Table 8.12 presents average parities and TFRs by provinces.

Table 8.12

Average Parity by Age Group and Estimated Total Fertility Rates by Province, Zambia, 1980 and 1990

Age Group	Average Parity																	
	Central		C/belt		Eastern		Luapula		Lusaka		Northern		N\Western		Southern		Western	
	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990
15-19	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
20-24	1.9	1.2	1.9	1.1	1.7	1.4	1.7	1.5	1.8	1.1	1.8	1.5	1.7	1.3	1.8	1.3	1.4	1.1
25-29	3.6	2.8	3.8	2.7	3.4	3.0	3.4	3.2	3.6	2.5	3.8	3.2	3.6	2.9	3.6	2.9	2.9	2.5
30-34	5.4	4.5	5.6	4.6	5.1	4.7	5.1	5.6	5.4	4.3	5.7	5.0	4.9	4.5	5.7	4.6	4.2	4.1
35-39	6.5	5.9	6.8	5.0	6.1	6.0	6.1	6.4	6.5	5.5	6.8	6.5	5.6	5.6	6.7	5.8	5.0	5.3
40-44	6.9	7.0	7.2	6.9	6.5	7.0	6.5	7.4	7.0	6.5	7.3	7.5	5.8	6.2	7.5	7.0	5.2	6.2
45-49	6.8	7.2	6.8	7.0	7.0	7.3	6.7	7.7	6.9	6.8	7.3	7.8	5.0	6.1	6.9	7.4	5.0	6.1
Completed Family Size*	6.8	7.2	6.8	7.0	7.0	7.3	6.7	7.7	6.9	6.8	7.3	7.8	5.0	6.1	6.9	7.4	5.0	6.1
Adjusted TFR**	7.5	6.3	7.9	6.6	6.9	6.9	8.0.	7.2	7.5	6.0	7.7	7.5	6.5	6.9	7.1	7.0	5.7	6.2

* Average parity for age group 45-49 years
** Estimates by Brass Relational Gompertz Model

According to completed family size, the high fertility provinces in 1980 were Northern (7.3) and Eastern (7.0). The low fertility provinces on the other hand were North-Western (5.0) and Western (5.0). The situation in 1990 shows Northern (7.8), Luapula (7.7), Southern (7.4), Eastern (7.3), Central (7.2) and Copperbelt (7.0) as high fertility Provinces on one hand and North-western (6.1) and Western (6.1) as low fertility provinces on the other hand. On the basis of average parity it may be concluded that the high fertility provinces in Zambia are Northern and Eastern and the low fertility provinces are North-Western and Western. These have consistently shown high fertility levels for both the 1980 and 1990 data sets. A Completed Family Size of 7.0 children or above has been used to determine whether or not a province falls in the high fertility category.

According to the adjusted TFRs the provinces which have shown a shift towards lower fertility between 1980 to 1990 are Central, Copperbelt and Lusaka. Fertility decline has been determined on the basis of a decrease of at least one child. North-Western and Western Provinces have each shown a slight fertility rise.

Table 8.13

Average Lifetime Parity by Current Marital Status of Females, Zambia, 1980 and 1990

Age Group	1980				1990			
	Never Married	Married	Widowed	Divorced/ Separated	Never Married	Married	Widowed	Divorced/ Separated
15-19	0.1	0.7	0.6	0.9	0.0	0.8	0.7	0.8
20-24	0.5	2.1	1.9	1.8	0.2	1.8	1.9	1.6
25-29	1.4	3.9	3.3	3.1	0.5	3.3	3.0	2.6
30-34	2.2	5.6	4.9	4.3	0.9	5.1	4.5	3.8
35-39	3.2	6.6	5.7	5.1	1.1	6.4	5.6	5.0
40-44	5.1	7.1	6.1	5.4	1.1	7.4	6.4	5.8
45-49	2.8	7.0	6.1	5.2	1.1	7.6	6.6	6.1
Completed Family Size*	2.8	7.0	6.1	5.2	1.1	7.6	6.6	6.1

* Average parity for age group 45-49 years

As may be anticipated, the highest fertility level is exhibited by married women both in 1980 and 1990. The reason is that marriage is a culturally sanctioned social institution in which child-bearing takes place. Child-bearing outside marriage is discouraged as much as possible. Compared to 1980 the women in each of the ever-married group bear more children. This indicates that the role of marriage is not decreasing, at least with respect to childbearing.

Education and Fertility

There is a relationship between the level of education completed by females and their level of fertility. The relationship is inverse, meaning that the higher the level of education completed by a female, the lower the expected fertility level. This is largely explained by two factors; females who stay long in school marry late thus reducing their reproductive age span; and it is held that females who are highly educated are more receptive to modern contraceptive methods and may be in a better position to limit the number of children they would give birth to. Table 8.14 presents average parity and TFR by level of education.

Table 8.14

Average Parity by Current Level of Education Completed by Females, Zambia, 1980 and 1990

Age Group	1980				1990			
	No Education	Primary	Secondary	Higher	No Education	Primary	Secondary	Higher
15-19	0.4	0.3	0.1	-	0.3	0.2	0.1	0.1
20-24	1.9	2.0	1.3	0.4	1.4	1.5	0.8	0.3
25-29	3.6	3.8	3.2	1.4	3.0	3.1	2.1	1.0
30-34	5.2	5.7	5.0	2.4	4.7	4.9	3.9	1.9
35-39	6.1	7.0	5.9	3.0	5.9	6.3	5.3	2.6
40-44	6.5	7.7	6.1	4.1	6.8	7.4	5.9	3.0
45-49	6.4	7.7	6.6	4.4	6.9	7.8	6.0	2.7
Complete Family Size *	6.4	7.7	6.6	4.4	6.9	7.8	6.0	2.7
Adjusted TFR**	7.4	7.4	6.4	3.5	7.6	7.4	5.9	3.2

* Average parity for age group 45-49 years

** Estimates by Brass Relational Gompertz Model

Observation of the adjusted TFRs has shown that there is an inverse relationship between level of education completed and fertility level. The higher the level of education completed, the lower the level of fertility. The 'no education' and 'primary level' categories show little difference; infact for 1980 the two were the same. The implication one may draw is that if the goal is fertility decline, females ought to be encouraged to stay longer in school, at least beyond primary level, for fertility decline to take firm effect.

Economic Activity and Fertility

Table 8.15 shows average parity and TFR by economic activity.

Another fertility measure discussed in this Chapter is Children Ever Born (CEB). The measure CEB is defined as the number of children ever born to a group of females of a given age during their child-bearing experience beginning from the onset of reproductive life to their present ages. It is obtained by asking women 12-49 about their total lifetime births,(refer to question F1-F4).

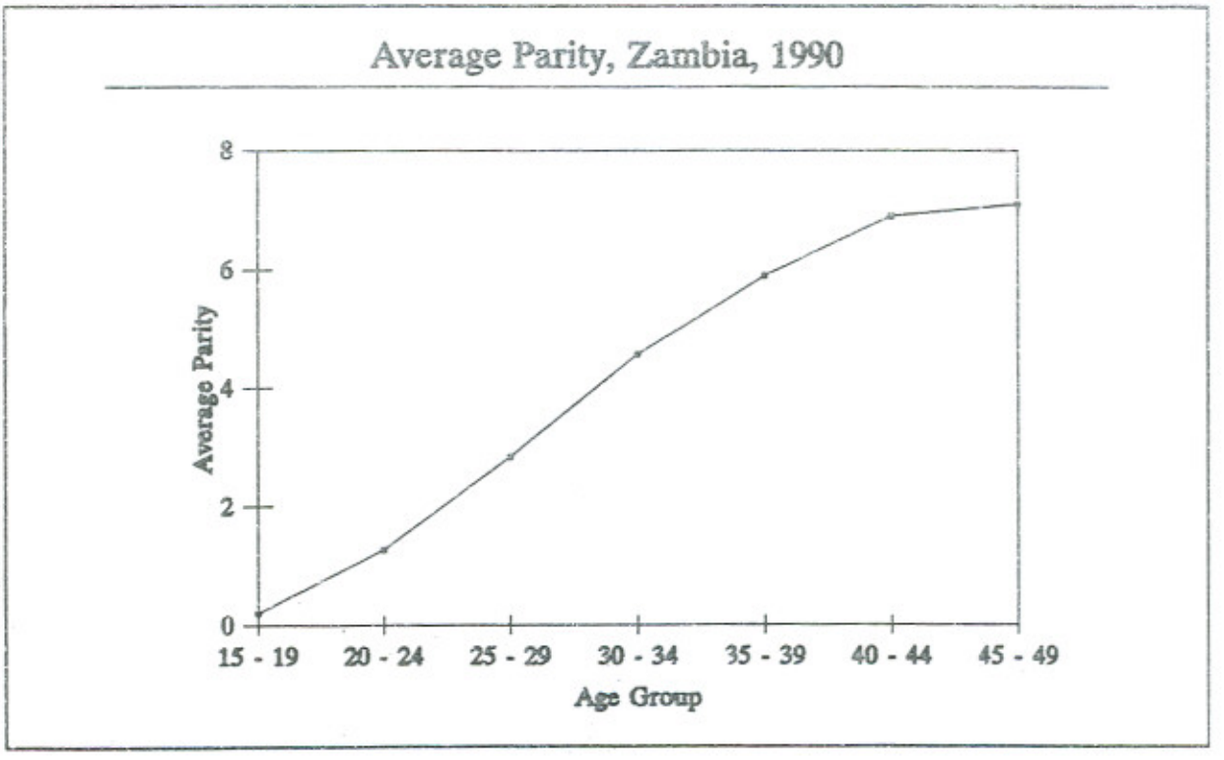
The number of children ever born to females in an age group divided by the number of females in the same age group yields average parity. The average parity for age group 45-49 years is referred to as completed family size and should be equal to the TFR under constant fertility, mortality and migration experiences. The completed family size (average parity) corresponding to age group 45-49 years, is 7.1 as shown in Table 8.10.

Table 8.10

Average Parity, (Observed), Zambia, 1990

Age Group	Total Women	Children Ever Born	Average Parity Reported
15 - 19	485,039	99,326	0.2048
20 - 24	380,848	481,856	1.2652
25 - 29	284,596	806,548	2.8340
30 - 34	218,847	1,001,415	4.5759
35 - 39	149,997	885,038	5.9004
40 - 44	139,054	959,316	6.8989
45 - 49	109,866	780,205	7.1014

Figure 8.3



TFRs of 7.5 and 6.5 children per female have been obtained for the agricultural and non-agricultural sectors, respectively. The completed family sizes show a similar picture. The higher fertility level pertaining to females in the agricultural sector may be explained by the fact that work here is agriculturally based and may not present a friction between work and bringing up children. This is not the case in the non-agricultural sector. Besides, such women need extra hands to look after the children at home while they are away which may be an added inhibiting factor to frequent child-bearing.

8.6 SUMMARY

Marriage is near-universal in Zambia with 96.7 percent of males and 97.5 percent of females having ever married at age group 45-49 years. This is coupled with early mean age at marriage. The singulate mean age at marriage (SMAM) is 26.1 and 21.2 years for males and females, respectively.

The Total Fertility Rate (TFR) has been calculated to be 6.7 children per woman. This shows a slight decline in fertility from TFR of 7.2 children per female calculated for the 1980 census. Fertility differences according to some socio-economic background have been observed. The most important are:

Fertility in the rural areas is higher than in the urban areas. Among the provinces the highest fertility level has been observed for Northern Province and the lowest level for Lusaka Province. As regards marital status, currently married females have higher fertility than females in the other marital status categories. There is an inverse relationship between level of education completed by females and the level of fertility. With regard to current economic activity, full-time housewives exhibit the highest level of fertility. Women engaged in the agricultural sector have approximately one child more than women working in the non-agricultural sector.

CHAPTER 9

MORTALITY

9.1. INTRODUCTION

Direct estimation of mortality levels using 1990 Census data is not possible because it is difficult to collect data on deaths by age. As such, the analysis of mortality is done using indirect methods of estimation. The Brass Method employed here uses information on children ever born and surviving by age of mothers. The Brass Method employs probability measures and assumes the following relationship:-

$$q_{(x)} = D_{(x)}.K_{(x)}$$

where $q_{(x)}$ = probability of dying at exact age x,

$D_{(x)}$ = proportion dead at age x,

$K_{(x)}$ = the correction factor or multiplier at age x.

The exact ages used are 1, 2, 3, 5, 10, 15, and 20. Since the information on children ever born and surviving is usually affected by age pattern of fertility and age errors, the proportion dead is adjusted by multiplying factors at each age. Trussell's (1975) multipliers are used in the equation. In order to facilitate easy computation of these mortality indicators, the United Nations Mortality measurement package "Mortpak-Lite" was used.

Data on children ever born and children surviving yields mortality indicators on infant and child mortality rates that also include reference periods. Levels of mortality may be estimated using the probabilities of dying at exact ages.

Data that is used in analysing mortality is derived from the following:-

- Deaths in household by sex,
- Children still alive by sex,
- Children dead by sex,
- Females 12 years and over by age.

Information on deaths particularly for young ages usually has errors of omission because for some reason, respondents may not register some of their dead children.

9.2 DEFINITIONS AND CONCEPTS

Mortality

Deaths in a population are termed as mortality.

Infant Mortality Rate (IMR)

Refers to the number of deaths among children below the age of 1, per 1,000 live births.

Child Mortality Rate (CMR)

Refers to the number of deaths among children aged 1-4 years per 1,000 live births

Under-Five Mortality Rate (UMR)

The rate at which children below 5 years die. It combines the infant and child mortality.

Crude Death Rate (CDR)

Ratio of deaths in a year to the mid-year population. Usually, the reference period is one calendar year. The value is conventionally expressed per 1,000.

Expectation of Life at Birth

The average number of years that a newly born child is expected to live, if the current existing mortality conditions were to prevail for a long time.

9.3 CRUDE DEATH RATE (CDR)

Information on deaths that had occurred in the household was collected during the 1990 Census of Population, Housing and Agriculture. However, the demographic characteristics of the deaths, such as age, education background, economic activity and last illness, etc. were not solicited from the respondents. The observed crude death rates for 1980 and 1990 are presented in Table 9.1. Zambia experienced an increase in overall mortality rates between 1980 and 1990. Mortpak-Lite computer software package (United Nations, 1988) was used in the estimation of crude death rates. Estimates derived from the 1980 Census have shown lower mortality rates as compared to 1990 Census. Overall, the 1990 Census crude death rate is 18.3 deaths per 1000 population. Crude death rates of males for both 1980 and 1990 censuses are higher than those of females. Similarly, crude death rate in rural areas is higher as compared to urban areas (refer to Table 9.1).

Table 9.1

Crude Death Rate by Sex, Zambia, 1980 and 1990

Sex	1990 Census Observed		Adjusted CDR	
	Deaths	CDR	1980	1990
Zambia - Total	240,639	32.6	13.9	18.3
- Male	125,626	34.7	14.4	18.9
- Female	115,013	30.5	13.4	17.7
Residence - Rural	167,114	37.3	15.7	19.7
- Urban	73,525	25.3	13.0	15.8
Province				
Central	23,707	32.9	12.1	14.3
Copperbelt	37,965	26.6	11.8	17.4
Eastern	34,798	36.0	18.1	25.2
Luapula	22,563	42.9	19.0	24.4
Lusaka	24,366	24.7	12.7	15.7
Northern	36,024	42.1	15.3	20.0
North-Western	12,625	32.6	11.5	14.8
Southern	25,178	27.8	12.8	14.6
Western	23,413	38.6	14.6	20.6

Note: Used Coale and Demeny North Model Life Tables to adjust the crude death rates. Values of mortality level at age of 2 years are used.

Provinces that recorded high crude death rates in 1990 are Eastern, Luapula, Northern and Western Provinces with at least 20 deaths per 1000 population. In 1980, rates ranged between 14 and 19 deaths per 1000 population in these provinces.

9.4 PERIOD MEASURES

Information on children ever born, surviving and proportion dead from the 1980 and 1990 Censuses are used to estimate probabilities of dying for 1980 and 1990 Censuses at exact ages, 1, 2, 3, 5, 10, 15 and 20 years. These probabilities are used in estimating levels of child mortality. Child mortality rates include Infant Mortality Rate (IMR), Child Mortality Rate (CMR) and Under-Five Mortality Rate (UMR). Other indicators derived from probabilities of dying are levels of mortality and expectation of life at birth using Model Life Tables such as United Nations (UN) and Coale-Demeny Model Life Table systems. In Zambia, mortality, fertility patterns and other demographic conditions warrant the use of Coale-Demeny Model North Life Tables.

Estimated probabilities of surviving by sex for 1990 show that values for $q_{(1)}$ for males and females for total Zambia are almost equal at 0.140 and 0.138, respectively. It should be noted that values for $q_{(2)}$, $q_{(3)}$ and $q_{(5)}$ for males are close at between 0.165 and 0.169. Thus, child mortality level might have remained constant for male children as shown by values of $q_{(2)}$, $q_{(3)}$ and $q_{(5)}$. In the older ages, $q_{(15)}$ and $q_{(20)}$ values are very high. Thus, probabilities of surviving at older age groups are less by about 10 percent when compared to younger age groups. Probabilities of surviving for females follow a similar pattern to that of males. Equally important is that chances of surviving for females are high for those aged 1, 2, 3, 5 and 10 as compared to those aged 15 and 20.

Table 9.2

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Zambia, 1990

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female		
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$			Male	Female
15-19	1	.140	.860	.138	.862	11.8	10.3	1988.6	1988.6
20-24	2	.165	.835	.152	.848	12.5	12.0	1987.3	1987.3
25-29	3	.165	.835	.149	.851	13.6	13.4	1985.5	1985.5
30-34	5	.169	.831	.155	.845	14.6	14.3	1983.4	1983.4
35-39	10	.184	.816	.171	.829	15.0	14.7	1981.0	1981.0
40-44	15	.215	.785	.204	.796	14.3	13.9	1978.4	1978.4
45-49	20	.234	.766	.225	.775	14.2	13.7	1975.5	1975.5

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1990.

Results from the 1980 Census shown in Table 9.3 give high probabilities of surviving at exact ages 1, 2, 3, and 5 of above 0.8000. Mortality levels for both males and females were found between levels 13 and 16. In both Censuses of 1980 and 1990, chances of surviving were less at exact ages 10, 15 and 20. Probabilities of surviving for females derived from the 1980 Census were higher at exact ages 1, 2 and 3 years. Thereafter, males had high chances of survival at exact ages 10, 15 and 20 years.

Table 9.3

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Zambia, 1980

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$				
15-19	1	.107	.893	.101	.899	14.4	13.4	1978.7	1978.7
20-24	2	.124	.876	.113	.887	15.1	14.6	1977.4	1977.4
25-29	3	.142	.858	.131	.869	14.9	14.4	1975.3	1975.3
30-34	5	.172	.828	.172	.828	14.4	13.5	1972.8	1972.8
35-39	10	.202	.798	.218	.782	14.3	12.8	1970.2	1970.1
40-44	15	.235	.765	.241	.759	13.5	12.5	1967.3	1967.3
45-49	20	.244	.756	.246	.754	13.9	13.0	1964.3	1964.3

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1990.

Probabilities of dying and surviving for both males and females in rural areas are presented in Tables 9.4 and 9.5. Females had high chances of surviving in 1990 than their male counterparts at all exact ages 1, 2, 3, 5, 10, 15 and 20. However, the results from 1980 Census data had shown females as having higher chances of survival at only exact ages 1, 2 and 3. Males had a high chances of survival at exact ages 5, 10, 15 and 20. Overall, 1980 Census mortality levels are higher than those obtained from 1990 Census for rural areas.

Table 9.4

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Rural Zambia, 1990

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$				
15-19	1	.158	.842	.135	.865	10.6	10.6	1988.6	1988.6
20-24	2	.179	.821	.162	.838	11.7	11.4	1987.3	1987.3
25-29	3	.185	.815	.168	.832	12.6	12.4	1985.4	1985.4
30-34	5	.197	.803	.182	.818	13.3	13.0	1983.3	1983.2
35-39	10	.218	.782	.204	.796	13.6	13.3	1980.8	1980.8
40-44	15	.240	.760	.230	.770	13.3	12.9	1978.2	1978.0
45-49	20	.252	.748	.245	.755	13.6	12.0	1975.3	1975.2

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1990.

Table 9.5

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Rural Zambia, 1980

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female		
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$			Male	Female
15-19	1	.113	.887	.113	.887	13.9	12.3	1978.7	1978.7
20-24	2	.134	.866	.122	.878	14.4	14.0	1977.3	1977.3
25-29	3	.154	.846	.154	.846	14.2	13.1	1975.3	1975.3
30-34	5	.192	.808	.194	.806	13.5	12.4	1972.9	1972.9
35-39	10	.220	.780	.242	.758	13.5	11.8	1970.3	1970.3
40-44	15	.254	.746	.260	.740	12.8	11.8	1967.4	1967.4
45-49	20	.254	.746	.259	.741	13.5	12.5	1964.5	1964.4

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1980.

Persons living in urban areas experienced high chances of survival in 1980 and 1990 than their counterparts in rural areas. Table 9.6 shows 1990 estimates of probabilities of surviving and dying for both males and females. At all exact ages, probabilities of surviving are above 0.820. Levels of mortality derived from 1990 Census range between 13 and 18 at exact ages 2, 3, 5, 10, 15 and 20.

Table 9.6

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Urban Zambia, 1990

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female		
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$			Male	Female
15-19	1	.135	.865	.119	.881	12.2	11.8	1988.6	1988.6
20-24	2	.142	.858	.130	.870	13.9	13.5	1987.4	1987.0
25-29	3	.134	.866	.119	.881	15.4	15.2	1985.8	1985.8
30-34	5	.130	.870	.115	.885	16.5	16.5	1983.7	1983.8
35-39	10	.135	.865	.122	.878	17.2	17.0	1981.4	1981.5
40-44	15	.160	.840	.148	.852	16.6	16.3	1978.8	1978.9
45-49	20	.180	.820	.168	.832	16.4	16.0	1975.9	1976.0

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1990.

Probabilities of surviving at exact ages 1, 2 and 3 were higher for the 1980 Census than the 1990 Census for both males and females. At higher ages, probabilities of surviving are higher for the 1990 Census than the 1980 Census (Refer to Table 9.6 and 9.7).

Table 9.7

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, Urban Zambia, 1980

Age Group	Age (x)	Probabilities of Dying, $q_{(x)}$ and of Surviving, $l_{(x)}$				Mortality Levels		Reference Date	
		Male		Female		Male	Female		
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$			Male	Female
15-19	1	.101	.899	.097	.903	15.0	13.8	1978.8	1978.8
20-24	2	.113	.887	.101	.899	15.8	15.5	1977.4	1977.4
25-29	3	.129	.871	.107	.893	15.6	15.9	1975.3	1975.3
30-34	5	.145	.855	.143	.857	15.8	14.9	1972.8	1972.8
35-39	10	.173	.827	.180	.820	15.5	14.3	1970.0	1970.0
40-44	15	.198	.802	.204	.796	15.0	13.9	1967.1	1967.1
45-49	20	.218	.782	.213	.787	14.8	14.2	1964.2	1964.2

Note: Estimates are based on Trussell's Coefficients and the Reference Date is 25th August, 1980.

Plausible mortality measures are estimates found at exact age of 2 years. It is assumed that reporting errors in the number of children ever born and surviving are minimal by female respondents aged 20-24 years. Thus, mortality measures at exact age 2 might present a true reflection of the existing mortality situation in the country. Mortality measures shown in Tables 9.8, 9.9 and 9.10 are summary rates for 5 year periods preceding the 1980 and 1990 Censuses. The infant and child mortality rates are categorised by sex and residence.

Infant Mortality Rate (CMR)

Zambia has been experiencing high infant mortality rates of above 100 deaths per 1000 live births as estimated from both the 1969 and 1980 Censuses (CSO: 1973, 1985). Results from the 1990 Census show that there was an upward swing in infant mortality rates in the 1980 and 1990 intercensal period. Infant mortality rate estimates for the period 0-4 years prior to both 1980 and 1990 Censuses showed an increase from 98.7 deaths between 1979 and 1980 to 123.3 deaths per 1000 live births between 1986 and 1990. However, there was a decline in infant mortality rates 5-9 and 10-14 years prior to the 1980 and 1990 Censuses (refer to Table 9.8). Infant mortality rate is usually high due to a combination of endogenous and exogenous factors affecting the welfare of the infant.

The mortality rate for male children increased by 25.7 percent from 101 deaths in 1980 to 127.0 deaths per 1000 live births in 1990. In the case of female children the IMR increased from 94 deaths in 1980 to 119.7 deaths in 1990, an increase of 27.3 percent over the 1980-1990 intercensal period. Thus, infant mortality rate for male children is higher than that of female children. In earlier years, 5-9 and 10-14 years prior to the 1980 and 1990 Censuses, the trend was that of reduction of infant mortality rate. Infant mortality rate for female children had reduced substantially as compared to that for male children.

Table 9.8.

Infant Mortality Rates for three 5 Year Periods Preceding the Census, Zambia, 1980 and 1990

Residence and Sex of Child	Years Preceding the Census					
	0 - 4		5 - 9		10 - 14	
	1980	1990	1980	1990	1980	1990
Zambia - Total	98.7	123.3	106.5	96.0	112.5	102.5
Sex of Child						
Male	101.0	127.0	104.5	100.0	111.5	104.5
Female	94.0	119.7	108.5	92.5	113.0	100.5
Residence						
Rural	106.3	133.3	117.5	111.5	119.5	112.5
Urban	88.7	105.7	90.5	74.0	97.5	78.5
Province						
Central	81.0	105.0	83.0	87.5	92.0	90.5
Copperbelt	87.0	109.3	71.0	74.0	82.5	79.5
Eastern	128.0	149.0	137.5	128.0	135.0	131.0
Luapula	127.0	161.0	182.0	123.0	197.5	119.0
Lusaka	87.3	106.3	105.5	74.5	109.0	80.0
Northern	103.7	137.0	113.5	109.0	123.0	108.5
North-Western	76.7	103.0	101.5	86.5	106.5	90.5
Southern	94.0	96.7	111.5	83.5	107.0	90.0
Western	105.7	141.3	115.5	124.5	115.0	130.0

Note: * = Includes female unpaid family workers
= Includes females not seeking work and those not available for work
§ = Includes divorced females
... = Not Available

An analysis of infant mortality rate by residence shows a high rate for rural than urban areas. There are many factors that could explain for the increased infant mortality rate in rural areas. Lack of a health facility within 5 kilometer radius and non-availability of adequate nutritious foods are some of the factors contributing to high infant mortality rate in rural areas. Recent studies have shown that 48 percent of households in rural areas are found within 5 kilometer radius as compared to 99 percent of households in urban areas (CSO:1994). Even though, there were reductions in IMR in 5-9 and 10-14 years prior to the 1980 and 1990 Censuses, rural areas recorded rates of above 110 deaths per 1000 live births. Urban areas recorded rates of below 100 deaths per 1000 live births.

A comparative analysis of IMR by province reveals rates of above 100 deaths per 1000 live births in all provinces except Southern Province. Most notable provinces with relatively high rates from 1990 Census are Luapula Province with 161 followed by Eastern Province with 149 deaths per 1000 live births. Western and Northern provinces also recorded high rates of 141.3 and 137.0, respectively. Lower rates are observed in Central, Copperbelt, Lusaka, North-western and Southern provinces in the 5-9 and 10-14 years prior to the 1980 and 1990 Censuses (see Table 9.8).

Child Mortality rate (CMR)

The child mortality rate (CMR) obtained from the 0-4 years period prior to the 1980 and 1990 Censuses revealed a similar pattern to that of IMR, see Table 9.9. Increases were recorded in the 0-4 years period prior to the 1980 and 1990 Censuses. CMR increased from 70.7 in 1980 to 94.7 in 1990. Reductions were observed in the 5-9 and 10-14 year periods prior to the conduct of the 1980 and 1990 Censuses. Recent male child mortality rate increased from 72.7 in 1980 to 98.3 deaths per 1000 children aged 1-4 years in 1990. The female child mortality rate increased from 66 deaths to 91.3 deaths per 1000 children aged 1-4 years in 1990. Thus, in both Censuses, male children experienced high child mortality rate as compared to their female counterparts.

Table 9.9

Child Mortality Rates by Five Year Period Preceding the Census, Zambia, 1980 and 1990

Residence and Sex of Child	Years Preceding the Census					
	0 - 4		5 - 9		10 - 14	
	1980	1990	1980	1990	1980	1990
Zambia - Total	70.7	94.7	78.5	67.5	84.5	74.5
Sex of Child						
Male	72.7	98.3	76.5	71.0	83.0	76.5
Female	66.0	91.3	80.5	64.5	85.0	72.0
Residence						
Rural	78.3	104.3	89.0	83.0	91.0	84.0
Urban	61.3	77.0	62.5	46.5	69.5	51.5
Province						
Central	54.0	76.7	55.0	59.5	64.0	62.5
Copperbelt	59.0	81.0	44.0	47.0	55.0	52.0
Eastern	99.0	120.0	108.5	99.5	107.0	103.0
Luapula	98.7	131.7	113.0	94.5	116.5	91.0
Lusaka	59.7	78.3	77.5	47.5	81.0	52.0
Northern	75.3	108.0	85.0	81.0	94.5	80.5
North-Western	50.0	75.0	73.0	58.5	78.5	62.5
Southern	66.0	68.7	83.5	56.0	78.5	62.0
Western	77.3	112.7	87.5	96.5	86.0	102.0

Note: $ = Includes "divorce" category.
* = Includes female unpaid family workers
# = Includes females not seeking work and not available for work

Differences in child mortality rate exist between rural and urban areas. Generally, rural areas recorded high child mortality rate of above 20 percent to that of urban areas. Refer to Table 9.9 for details. The estimated child mortality rate from the 1990 Census was 104.3 deaths per 1000 children aged 1-4 years for rural areas. Urban areas recorded a child mortality rate of 77.0 deaths per 1000 children aged 1-4 years in 1990. Corresponding rates in 1980 ranged between 60 and 80 deaths per 1000 children for both rural and urban areas. Child mortality rates for the period 5-9 and 10-14 years prior to the 1980 and 1990 Censuses ranged between 45 and 100 deaths per 1000 children.

A comparative analysis of child mortality rates by province reveals a similar pattern to that of infant mortality rate. Results from the 1990 Census show high child mortality rates for Luapula (131.7), Eastern (120.0), Western (112.7) and Northern Province (108.0) for the period 0-4 years prior to the 1990 Census. The remaining provinces recorded child mortality rates of between 65 and 82. Even though Eastern, Luapula, Northern and Western provinces recorded relatively high child mortality rates in the period 0-4 years prior to the 1980 Census, all rates were below 100. Child mortality rates for Eastern, Luapula, Northern and Western provinces were also high 5-9 and 10-14 years.

Under-Five Mortality Rate (UMR)

Table 9.10 presents under-five mortality rates for the periods 0-4, 5-9 and 10-14 years prior to the 1980 and 1990 Censuses. The under-five child mortality rate for Zambia obtained for the 0-4 year period prior to the 1990 Census was 151.3. For the same period before the 1980 Census, the estimated rate is 121. However, under-five mortality rates were above 200 deaths per 1000 children aged less than 5 years, 5-9 and 10-14 years before the 1980 and 1990 Censuses. Under-five mortality rates for males obtained from the 1990 Census are consistently higher than those of females for 0-4, 5-9 and 10-14 years prior to the census. Exceptions are observed for 1980 Census for periods 5-9 and 10-14 years prior to the census.

Table 9.10

Under-Five Mortality Rates by Five Year Period Preceding the Census, Zambia, 1980 and 1990

Residence and Sex of Child	Years Preceding the Census					
	0 - 4		5 - 9		10 - 14	
	1980	1990	1980	1990	1980	1990
Zambia - Total	121.0	151.3	191.0	169.5	241.5	219.5
Sex of Child						
Male	124.3	156.7	187.0	176.5	239.5	224.5
Female	115.0	146.3	195.0	163.0	243.5	214.5
Residence						
Rural	131.7	164.3	212.0	200.5	256.5	242.0
Urban	107.7	128.0	160.5	125.5	208.5	164.0
Province						
Central	99.7	129.3	144.0	153.5	195.0	191.0
Copperbelt	97.0	132.3	106.0	126.0	159.5	165.5
Eastern	177.0	206.0	248.5	231.0	291.0	282.5
Luapula	160.7	199.0	257.5	222.0	311.5	256.0
Lusaka	106.3	129.0	189.5	126.5	233.5	166.5
Northern	126.7	169.0	204.0	195.5	264.0	233.0
North-Western	94.7	125.7	181.0	151.5	228.0	191.0
Southern	115.3	118.3	201.5	145.0	227.0	189.5
Western	131.7	175.3	209.0	224.5	246.0	280.0

Education

Infant and child mortality rates are high among children of mothers without and with primary level of education, (135 and 125, respectively), for the five year period before the 1990 Census. The rates were lower in the same period before the 1980 Census, (see Table 9.11). The category of "secondary+" recorded an infant mortality rate of below 85 deaths for both 1980 and 1990 Censuses. However, all the education categories recorded positive percentage increases of 22.3 percent or over from the 1980 to 1990 Censuses. "Secondary+" category recorded the highest percentage increase of 26.7 percent.

The pattern observed for the infant mortality rate is similar to that observed for the child mortality rate and under-five mortality rates, see Table 9.11.

Table 9.11

Infant and Child Mortality Rates for the 5 Years Period Preceding the Census by Selected Background Characteristics, Zambia, 1980 and 1990

Background Characteristics	Infant Mortality Rate ($_1q_0$)			Child Mortality Rate ($_4q_1$)			Under-five Mortality Rate ($_5q_0$)		
	1980	1990	% Increase	1980	1990	% Increase	1980	1990	% Increase
Zambia - Total	98.7	123.3	24.9	70.7	94.7	33.9	121.0	151.3	25.0
Sex of Child									
Male	101.0	127.0	25.7	72.7	98.3	35.2	124.3	156.7	26.1
Female	94.0	119.7	27.3	66.0	91.3	38.3	115.0	146.3	27.2
Residence									
Rural	106.3	133.3	25.4	78.3	104.3	33.2	131.7	164.3	24.8
Urban	88.7	105.7	19.2	61.3	77.0	25.6	107.7	128.0	18.8
Province									
Central	81.0	105.0	29.6	54.0	76.7	42.0	99.7	129.3	29.7
Copperbelt	87.0	109.3	25.6	59.0	81.0	37.2	97.0	132.3	36.4
Eastern	128.0	149.0	16.4	99.0	120.0	21.2	177.0	206.0	16.4
Luapula	127.0	161.0	26.8	98.7	131.7	33.4	160.7	199.0	23.8
Lusaka	87.3	106.3	21.8	59.7	78.3	31.1	106.3	129.0	21.4
Northern	103.7	137.0	32.1	75.3	108.0	43.4	126.7	169.0	33.4
North-Western	76.7	103.0	34.3	50.0	75.0	50.0	94.7	125.7	32.7
Southern	94.0	96.7	2.9	66.0	68.7	4.1	115.3	118.3	2.6
Western	105.7	141.3	33.7	77.3	112.7	45.8	131.7	175.3	33.1
Education									
None	111.0	135.7	22.3	82.7	106.7	29.0	139.0	168.3	21.1
Primary	101.3	125.7	24.1	73.0	97.0	32.9	123.7	153.0	23.7
Secondary+	66.3	84.0	26.7	40.0	56.7	41.7	78.7	102.3	29.9
Marital Status									
Never Married	105.0	85.7	-18.4	76.7	58.0	-24.4	131.3	106.7	-18.7
Married	89.5	85.0	-5.0	61.5	58.0	-5.7	121.0	109.3	-9.7
Separated	100.0[$]	103.5	3.5	72.0[$]	75.5	4.9	137.5[$]	142.5	3.6
Divorced	-	107.5	...	-	79.5	...	-	148.0	...
Widowed	96.3	124.3	29.1	69.0	95.7	38.7	123.3	157.0	27.3
Economic Status									
Working	89.7[*]	92.0	2.5	61.7[*]	64.3	4.2	111.0[*]	114.7	3.3
Unpaid Family Worker	-	133.3	...	-	105.0	...	-	166.7	...
Unemployed	91.0[#]	95.7	5.2	63.0[#]	68.3	8.4	114.7[#]	123.3	7.5
Full-Time Housewife	77.3	90.0	16.4	50.3	62.3	23.8	96.7	114.0	17.9
Not Available for Work	-	114.0	...	-	85.3	...	-	144.3	...
Economic Sector									
Agriculture Sector	-	134.7	...	-	106.3	...	-	168.3	...
Non-Agriculture	-	93.0	...	-	65.0	...	-	115.0	...

Note: $ = Includes divorce females
* = Includes female unpaid family workers
\# = Includes females not seeking work and not available for work
... = Not Available

Marital Status

Marital status categories that recorded negative increases in infant mortality rate were "never married" and "married". Children born to "widowed" mothers experienced the highest infant and child mortality rates of 124.3 and 95.7 respectively.Children born to mothers who were "divorced" and "separated" experienced relatively high infant mortality rates in 1990 of above 103 deaths per 1000 live births. Corresponding child mortality rates for the "separated", "divorced" and "widowed" categories derived from the 1990 Census were 75.5, 79.5 and 95.7 deaths respectively per 1000 children aged 1-4 years. Children born to mothers in "never married" and "married" categories experience high survival chances during the first 4 years of life. A similar pattern is exhibited for the under-five mortality rate. Details are provided in Table 9.11.

Economic Status

Child care, eating habits and other general standards of living of household members have a bearing on recorded increased infant and child mortality rates. The state of cleanliness of the households' surroundings is another contributing factor on increased infant and child mortality rate through communicable diseases that affect the young children below the age of 5 years. Results from the 1990 Census might have indicated a general decline in standards of living in Zambia, more especially in households where females are unpaid family workers or were not available for work as children born to these females recorded the highest infant and child mortality rates. It should also be noted that children born to "full-time housewives" are most likely to survive the first 5 years of life. The category of "full-time housewife" recorded the highest percentage increase in infant and child mortality rates of above 16 percent over the 1980-1990 intercensal period. Other economic status categories recorded an increase of less than 10.0 percent in the 10 year period.Infant and child mortality rates are equally high for children born to women working in the agriculture sector.

9.6 INFANT, CHILD AND UNDER-FIVE MORTALITY RATES

Trends of infant, child and under-five mortality rates, and expectation of life at birth derived from the 1990 Census are presented in Tables 9.12, 9.14 and 9.16 for Zambia total, rural and urban areas, respectively. Corresponding rates derived from the 1980 Census are shown in Table 9.13, 9.15 and 9.17 for Zambia total, rural and urban areas, respectively.

Infant Mortality Rate (IMR)

Estimates derived from the 1990 Census show a fluctuating trend in infant mortality rate. The IMR declined from 103 in 1976 to 94 deaths per 1000 live births in 1982. Further increases were recorded in the years between 1984 and 1989. A peak was reached in 1989 when the IMR derived from the 1990 Census was 139 deaths per 1000 live births. Refer to Table 9.12 for details. Results from the 1980 Census gave high IMR's in the later half of the 1960's and early 1970's. The lowest IMR from 1980 Census data was estimated for 1978 when Zambia recorded 93 deaths per 1000 live births. In 1979, IMR had increased to 108 deaths per 1000 live births (see Table 9.13).

Table 9.12

Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, Zambia, 1990

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five MortalityRate	Expectation of Life at Birth
Zambia - Total				
Both Sexes				
1989	139	110	139	43.8
1988	123	94	158	47.0
1986	108	80	157	49.9
1984	98	70	162	52.1
1982	94	65	177	53.1
1979	102	74	210	51.2
1976	103	75	229	50.9
Male				
1989	140	111	140	43.6
1988	128	99	165	45.9
1986	113	85	165	48.9
1984	103	74	169	51.2
1982	97	68	184	52.4
1979	104	76	215	50.7
1976	105	77	234	50.5
Female				
1989	138	109	138	44.0
1988	118	90	152	47.8
1986	103	75	149	51.1
1984	94	66	155	53.0
1982	91	63	171	53.8
1979	99	71	204	51.8
1976	102	73	225	51.3

Differences exist in the trends of infant mortality rate by sex of child. Generally, male children experienced higher IMR than female children in the period between 1976 and 1989. Infant mortality rate in 1989 for males was 140 deaths per 1000 live births. Similarly, the IMR derived from 1980 Census for female children was 138 deaths per 1000 live births. The 1980 Census data had shown a similar trend between male and female children. Even from the 1980 Census, male children experienced high infant mortality rate in the period between 1965 and 1979 as compared to female children. Refer to Table 9.13 for the trends in infant mortality rate by sex derived from the 1980 Census data.

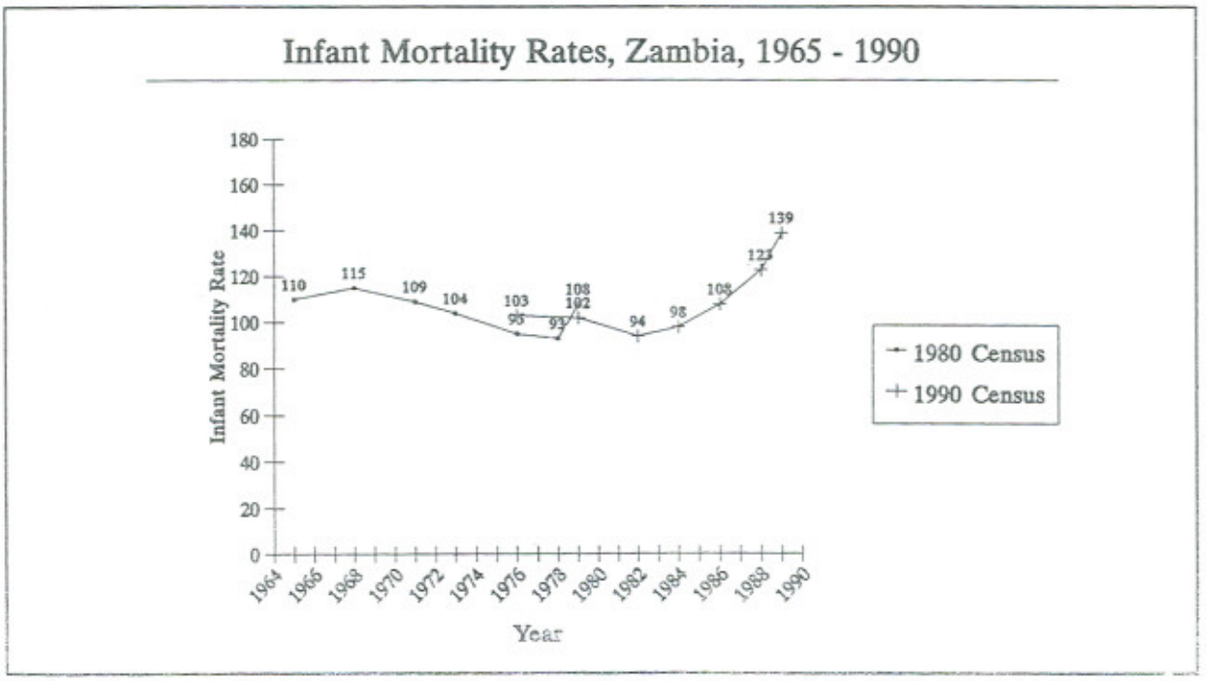
Table 9.13

Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, Zambia, 1980

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five Mortality Rate	Expectation of Life at Birth
Zambia Total				
Both Sexes				
1979	108	80	108	50.0
1978	93	65	118	53.3
1976	95	67	137	52.8
1973	104	76	172	50.8
1971	109	81	210	49.7
1968	115	87	238	48.5
1965	110	82	245	49.5
Male				
1979	107	78	107	50.3
1978	97	69	124	52.4
1976	99	71	142	52.0
1973	104	76	172	50.8
1971	105	77	202	50.5
1968	114	85	235	48.7
1965	109	81	244	49.6
Female				
1979	101	73	101	51.4
1978	89	61	113	54.2
1976	92	64	131	53.6
1973	104	76	172	50.8
1971	113	85	218	48.8
1968	116	88	241	48.2
1965	110	82	246	49.4

Estimates derived from 1980 and 1990 Census data, show that infant mortality increased marginally between 1964 and 1968 from 110 to 115. After 1968, the infant mortality rate continuosly declined until about 1976. Since then, the infant mortality rate has been rising sharply in Zambia, see Figure 9.1

Figure 9.1



Infant mortality rates for rural areas, derived from the 1990 Census data fluctuated between 1979 and 1989. Estimates for 1989 are the highest. An infant mortality rate of 147 deaths per 1,000 live births is estimated for 1989. Male and female infant mortality rates were 158 and 135 deaths per 1,000 live births, respectively. In the 1970's, infant mortality rate estimates for both male and female children were below 120, see Table 9.14.

Table 9.14

Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, Rural Zambia, 1990

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five MortalityRate	Expectation of Life at Birth
Rural Zambia				
Both Sexes				
1989	147	118	147	42.3
1988	132	103	170	45.2
1986	121	92	176	47.3
1984	114	85	190	48.7
1981	109	81	211	49.6
1979	113	85	235	48.8
1976	112	83	249	49.1
Male				
1989	158	129	158	40.3
1988	138	109	179	44.0
1986	126	98	185	46.2
1984	118	90	197	47.9
1981	113	84	218	48.9
1979	116	88	240	48.3
1976	113	85	252	48.8
Female				
1989	135	106	135	44.5
1988	125	97	162	46.4
1986	115	87	168	48.4
1984	110	81	182	49.6
1981	106	78	204	50.3
1979	111	83	230	49.3
1976	110	82	245	49.4

Figure 9.2 shows that the pattern of infant mortality rate since 1965 in rural areas is similar to the overall national pattern but the rates in rural areas are higher. Similarly the pattern in urban areas is similar to that of rural areas and the whole country but the rates are lower, see Figure 9.3. Figure 9.3 shows that between 1976 and 1986 urban areas had experienced infant mortality rates of below 100 deaths per 1,000 live births. Estimates of above 100 deaths were recorded between 1988 and 1989. It is apparent that urban areas might have experienced relatively good standard of living during the 1960's and 1970's as compared to rural areas.

Figure 9.2

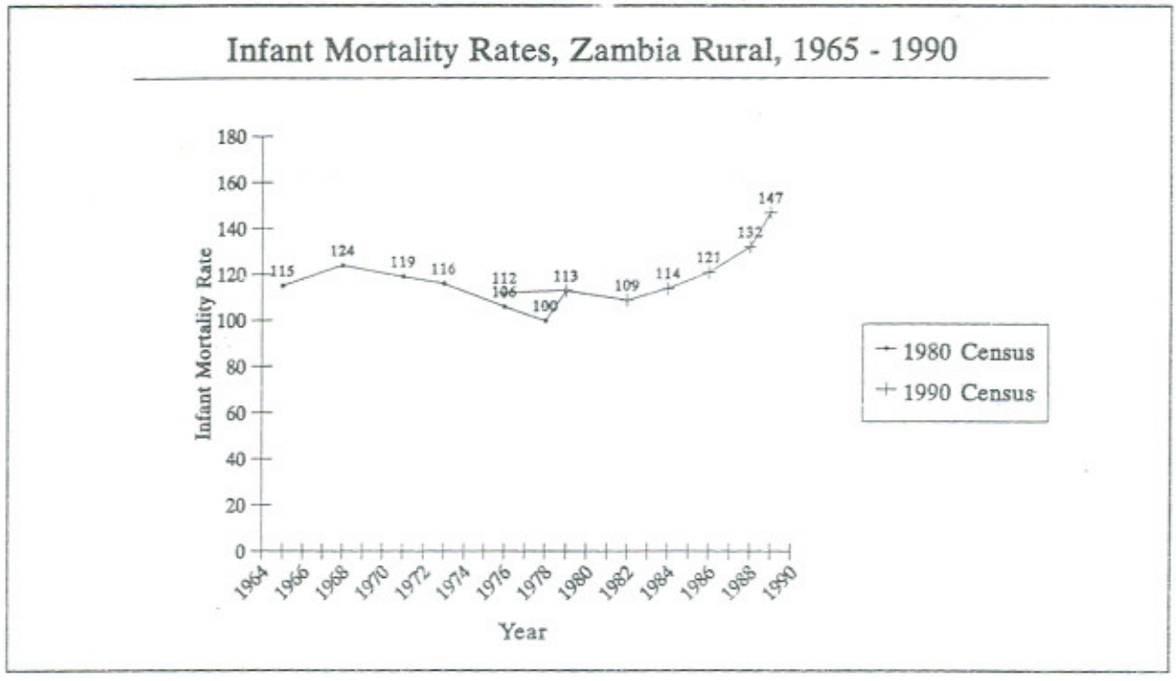
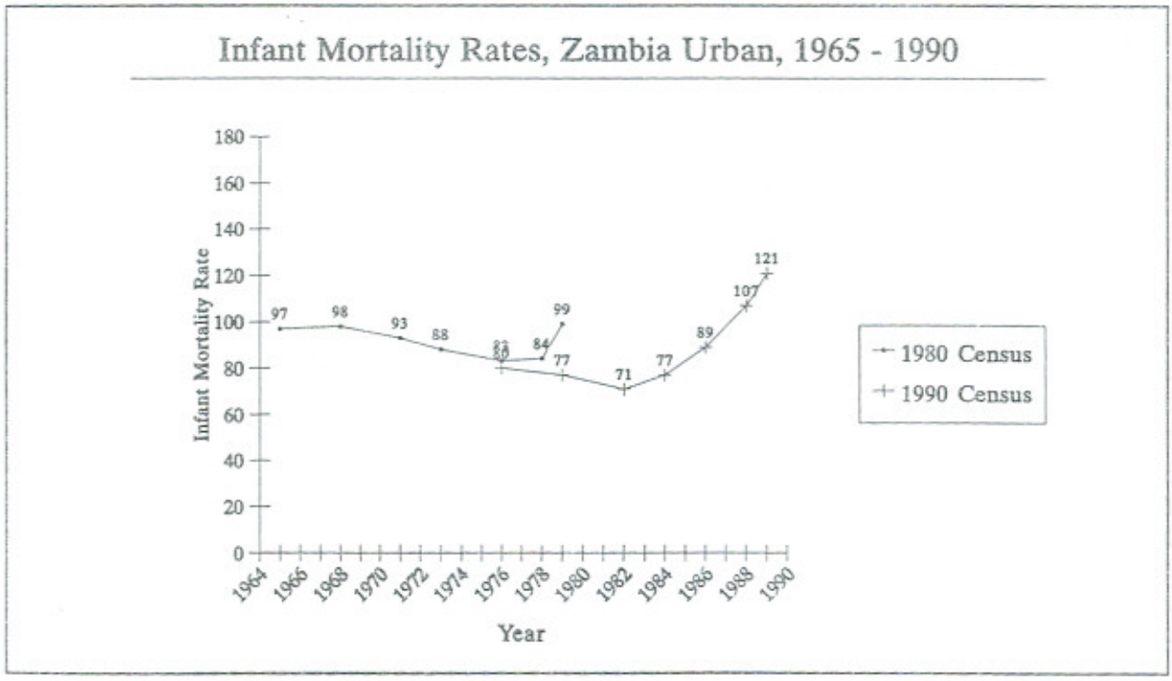


Figure 9.3



Child Mortality Rate (CMR)

The 1990 Census estimates of child mortality rates are less than 100 deaths for the late 1970's and 1980's implying that both male and female children aged between one and four years had higher survival chances in these periods. An overall child mortality rate of over 100 deaths was recorded in 1989 while male and female rates were 111 and 109, respectively. Trends of male and female child mortality rates derived from the 1990 Census are shown in Table 9.12. All estimates of child mortality rate derived from the 1980 Census were less than 100 deaths per 1,000 children aged 1-4 years. Refer to Table 9.13 and Figure 9.4 for more detailed information on child mortality rate trend from the 1980 Census data.

Figure 9.4

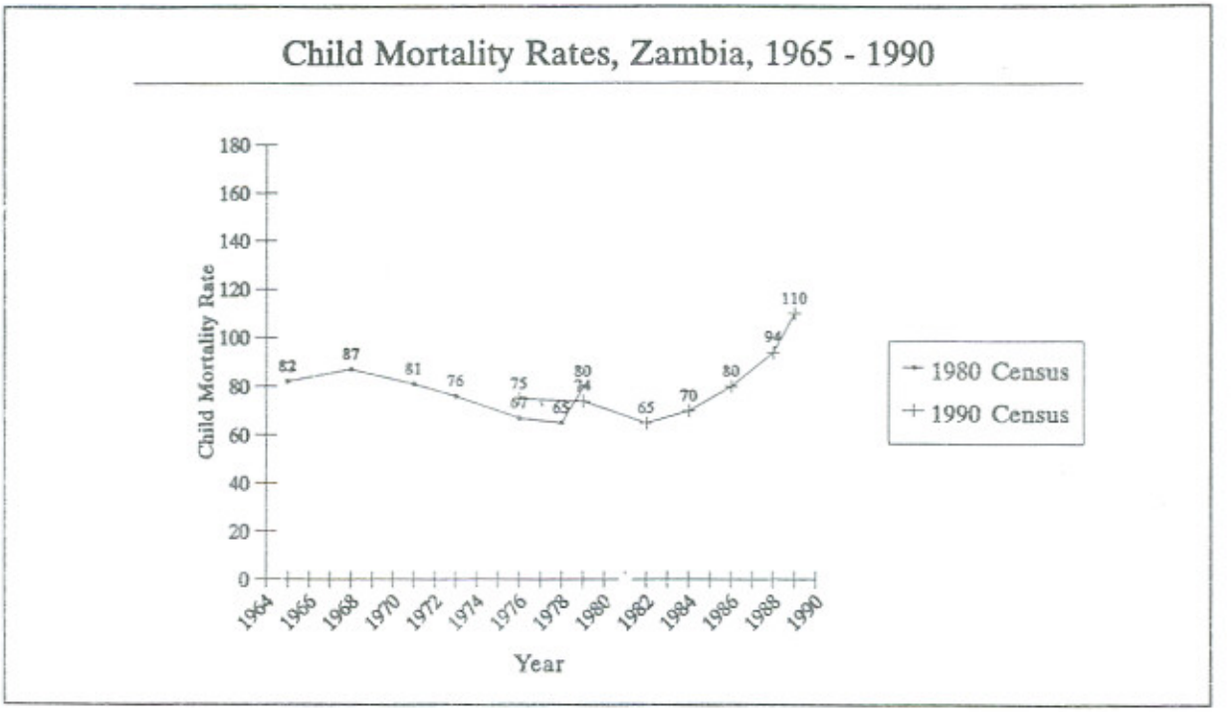


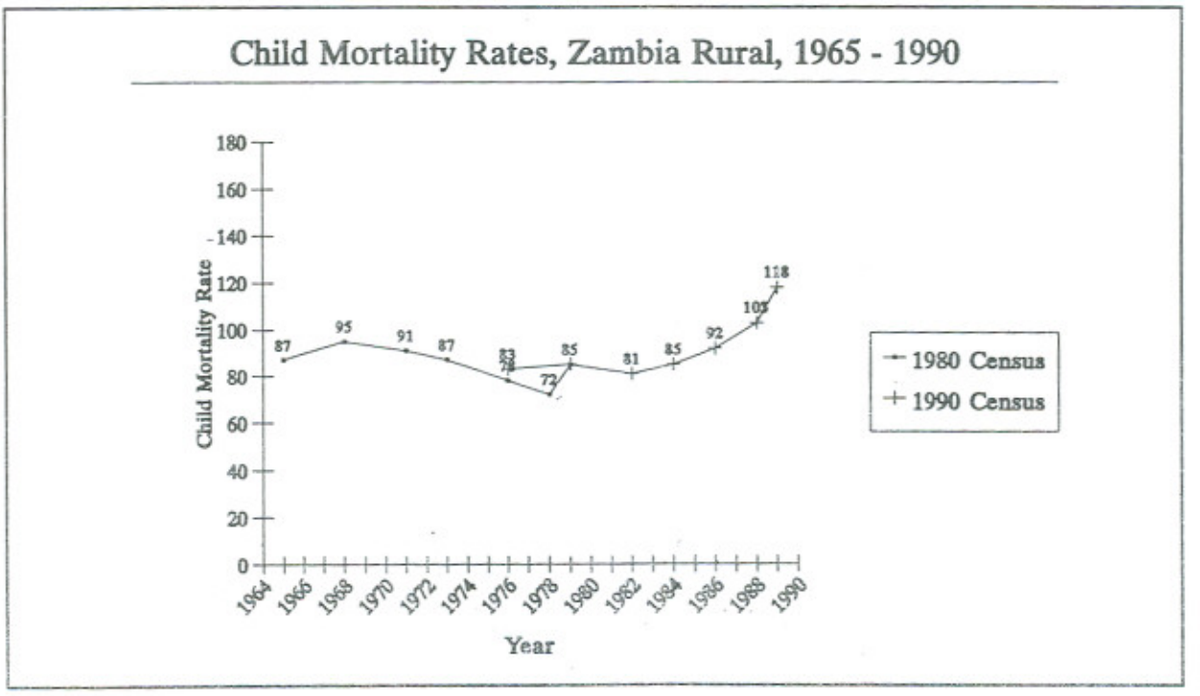
Table 9.14 and Table 9.15 show the trend of child mortality rate derived from the 1990 and 1980 Censuses for rural areas. Rural areas had overall child mortality rates of more than 100 from 1988 to 1989. Estimated child mortality rates showed slight variation between 1976 and 1986. Similarly, rates were less than 100 between 1976 and 1986. A similar pattern had existed in the earlier years between 1965 and 1976 when child mortality rates ranged between 72 and 97 deaths per 1,000 children aged 1-4 years old. See Figure 9.5 for an illustration of the trends shown in Tables 9.14 and 9.15.

Table 9.15

Trends of Infant, Child and Under-Five Mortality Rates. and Expectation of Life at Birth by Sex, Rural Zambia, 1980

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five Mortality Rate	Expectation of Life at Birth
Rural Zambia				
Both Sexes				
1979	113	85	113	48.9
1978	100	72	128	51.6
1976	106	78	154	50.4
1973	116	87	193	48.3
1971	119	91	231	47.6
1968	124	95	257	46.7
1965	115	87	256	48.4
Male				
1979	113	84	113	49.0
1978	105	76	134	50.7
1976	106	78	154	50.3
1973	115	87	192	48.5
1971	114	86	220	48.7
1968	122	94	254	47.0
1965	114	86	254	48.7
Female				
1979	113	85	113	48.9
1978	96	68	122	52.6
1976	106	78	154	50.4
1973	116	88	194	48.2
1971	125	96	242	46.5
1968	125	97	260	46.4
1965	116	88	259	48.1

Figure 9.5



Urban areas experienced low child mortality rates over the 1976-1989 period except in 1989 when child the mortality rate for males reached a peak at 107 deaths per 1,000 children aged 1-4 years old (see Figure 9.6). Similarly, a child mortality rate of 91 deaths per 1,000 female children was recorded in 1989. An overall child mortality rate of 92 deaths was recorded for urban areas in 1989. Table 9.16 provides more details on the trend of child mortality rate for the period 1976-1989. In earlier years between 1965 and 1979, child mortality rate estimates were below 80 deaths per 1,000 children for both male and female children. A declining trend was recorded between 1968 and 1978. Thereafter, child mortality rate had increased for both sexes, see Table 9.17.

Table 9.16

Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, Urban Zambia, 1990

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five MortalityRate	Expectation of Life at Birth
Urban Zambia				
Both Sexes				
1989	121	92	121	47.3
1988	107	78	137	50.2
1986	89	61	126	54.3
1984	77	50	123	57.1
1982	71	43	128	58.7
1979	77	50	154	57.0
1976	80	53	174	56.3
Male				
1989	135	107	135	44.5
1988	110	82	142	49.5
1986	94	65	134	53.2
1984	81	53	130	56.1
1982	73	46	135	58.0
1979	80	52	160	56.4
1976	83	55	180	55.7
Female				
1989	119	91	119	47.6
1988	102	74	130	51.3
1986	84	56	119	55.5
1984	73	46	115	58.1
1982	68	41	122	59.5
1979	75	47	148	57.6
1976	78	50	168	56.9

Figure 9.6

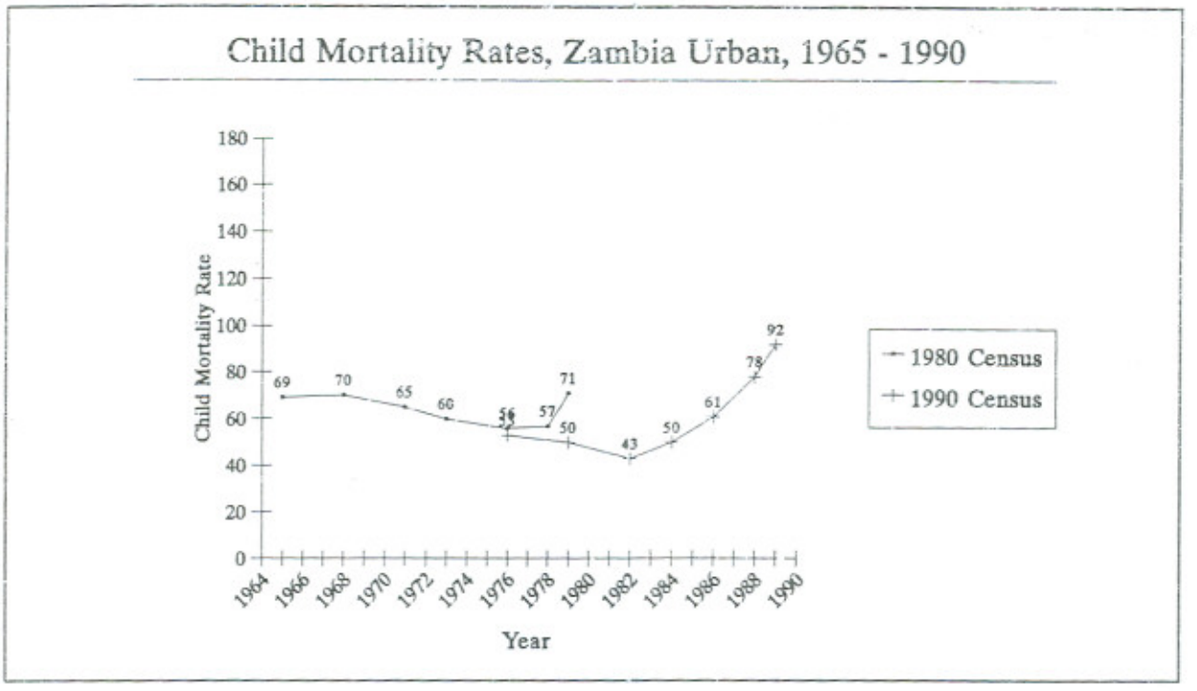


Table 9.17

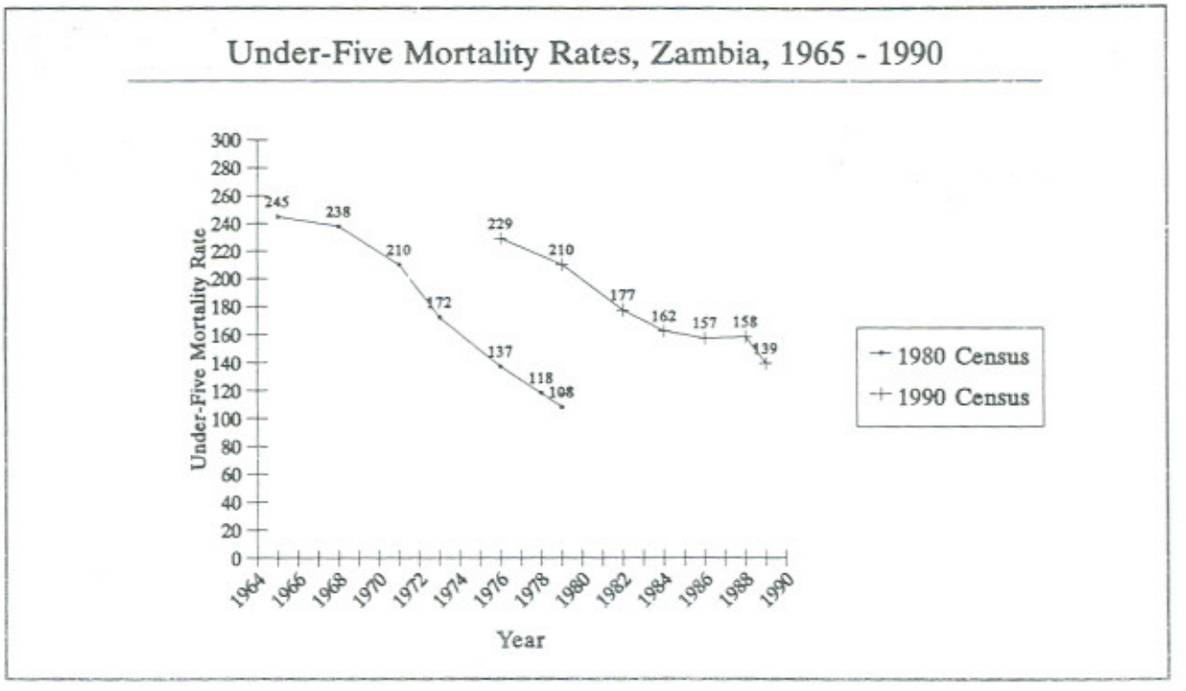
Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, . Urban Zambia, 1980

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five MortalityRate	Expectation of Life at Birth
Urban Zambia				
Both Sexes				
1979	99	71	99	51.9
1978	84	57	106	55.3
1976	83	56	118	55.5
1973	88	60	144	54.4
1971	92	65	177	53.2
1968	98	70	201	52.1
1965	97	69	216	52.2
Male				
1979	101	73	101	51.4
1978	90	62	113	54.1
1976	90	62	129	53.9
1973	89	61	145	54.2
1971	92	63	173	53.2
1968	97	69	198	52.4
1965	99	71	218	52.0
Female				
1979	97	69	97	52.4
1978	81	53	101	56.2
1976	76	49	107	57.3
1973	88	60	143	54.5
1971	95	67	180	52.8
1968	99	71	204	51.8
1965	96	68	213	52.5

Under-five Mortality Rate (UMR)

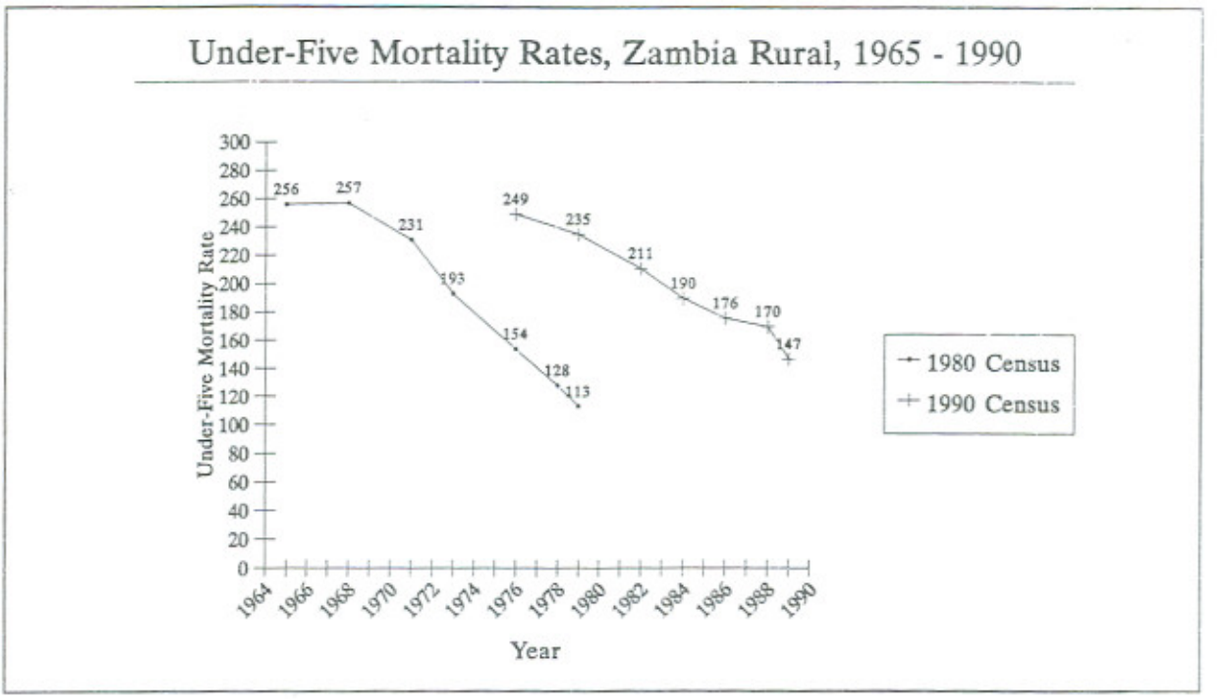
Under-five mortality rate declined substantially from above 200 deaths per 1,000 children aged below 5 years in the late 1970's to nearly 140 deaths in 1989 (see Figure 9.7). Similar results were obtained from the 1980 Census. Rates of above 200 deaths per 1,000 children aged below 5 years were recorded in the period 1965-1971. Thereafter, rates for both male and female children declined to below 110 in the late 1970's, see Table 9.12.

Figure 9.7



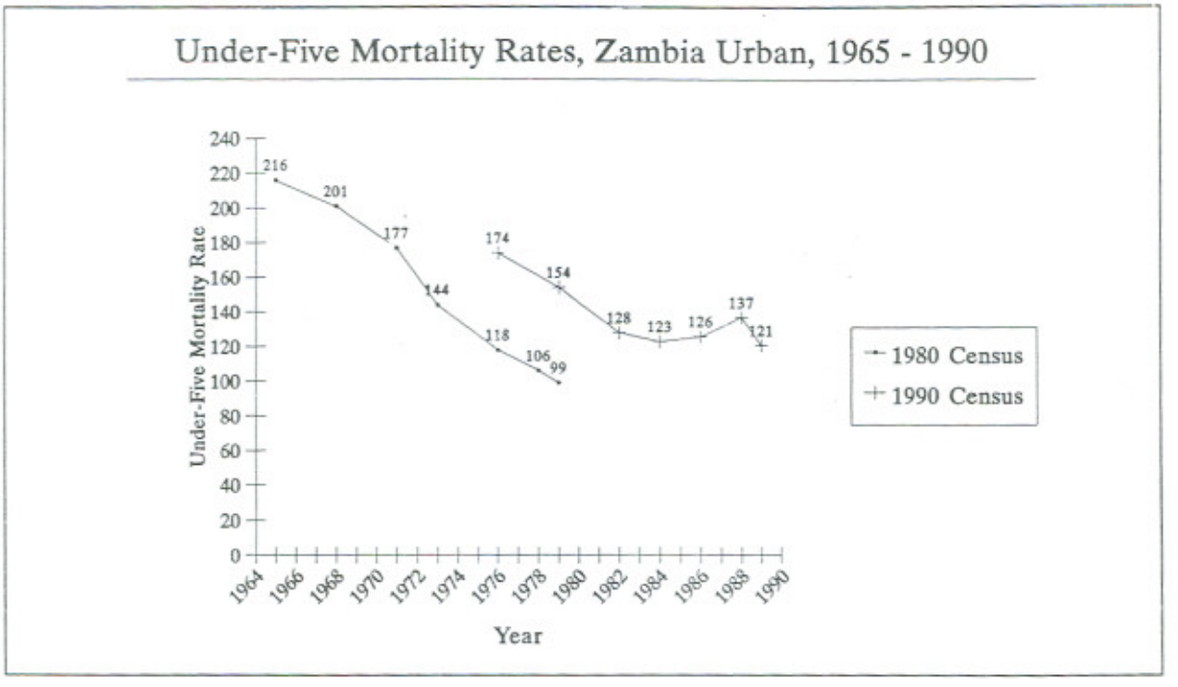
Rural areas recorded the highest under-five mortality rates for both male and female children in the period 1976-1989. Overall, under-five mortality rate declined from 249 deaths in 1976 to 147 deaths per 1,000 children aged below 5 years in 1989. In the case of males, under-five mortality rate declined from 252 deaths in 1976 to 158 deaths in 1989. Similarly, the rate of female children declined from 245 deaths in 1976 to 135 deaths in 1989. Thus, male children experienced higher under-five mortality rate than female children (see Table 9.14). A similar declining pattern of under-five mortality rate emerged in earlier years between 1965 to 1979 (see Table 9.15). The 1980 Census results gave an under-five mortality rate of 113 deaths per 1,000 children aged below 5 years. Between 1965 and 1971, the under-five mortality rate was above 200 deaths per 1,000 children aged below 5 years. Substantial declines in under-five mortality rate were observed as from 1976, see Figure 9.8.

Figure 9.8



Children in urban areas experienced low under-five mortality rate as compared to their rural counterparts. (compare rates in Tables 9.14 and 9.16). It was also observed that male children in urban areas experienced high under-five mortality rate as compared to female children in the period 1976 and 1989. Under-five mortality rate derived from the 1980 Census for both sexes declined from 216 in 1965 to 99 in 1979. Female children experienced substantial reductions in under-five mortality rate as compared to male children in the period 1965 and 1979. Refer to Figure 9.9 for the trend in under-five mortality rate in urban areas.

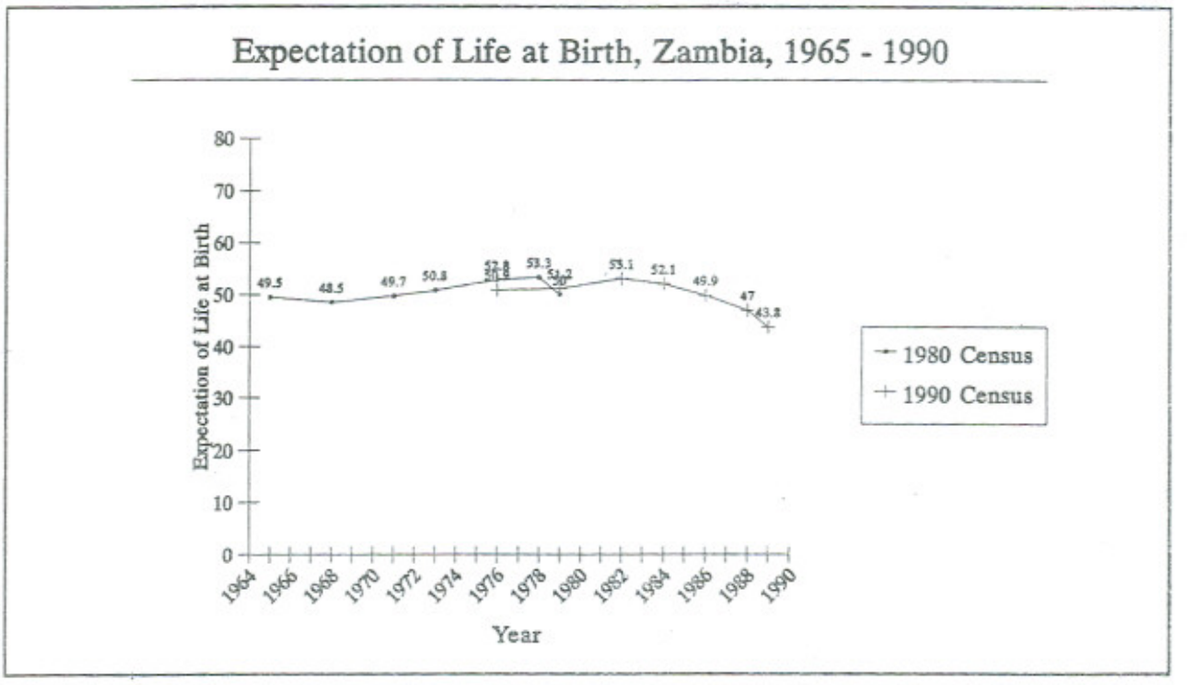
Figure 9.9



9.7 EXPECTATION OF LIFE AT BIRTH

Zambia experienced high infant and child mortality rates in the 1980-1990 intercensal period. As a result, the expectation of life at birth was low. In the period 1976-1984, the trend of expectation of life at birth for all children showed a positive increase. Children had high chances of survival in the period 1976-1984 as compared to the 1986-1989 period. During the period 1986-1989, expectations of life at birth were below 50 years while the opposite was the case in the 1976-1984 period. Similar patterns emerged for both males and females for the periods 1976-1984 and 1986-1989. However, female children experienced relatively high expectations of life at birth as compared to male children. Refer to Table 9.18 for expectations of life at birth for male and female children. Results from the 1980 Census showed that expectations of life at birth were above 50 years in the period 1973-1979, see Table 9.13. Low expectations of life at birth were recorded in the period 1965-1971. See Figure 9.10 for the trend.

Figure 9.10



In rural areas the expectation of life at birth was less than 50 years in all years (1976-1989). The situation was the same in the period 1965-1979. An exception was found in 1976-1978 period when children had recorded expectations of life at birth of above 50 years (see Table 9.15). Children living in urban areas experienced relatively high expectation of life at birth of above 50 years during the period 1976-1988. A drop was recorded in 1989 when the overall expectation of life at birth was 47.3 years for children living in urban areas. Male and female expectations of life at birth were 44.5 and 47.6 years, respectively (see Table 9.16). The 1980 Census results indicate expectations of life at birth of above 51 years in urban areas. The peak was attained in the period 1976-1978 when the overall expectations of life at birth were above 55 years. Female children had higher expectations of life at birth. The trend in the overall (both sexes) expectation of life at birth from 1965-1990 is shown in Figures 9.11 and 9.12 for rural and urban areas, respectively.

Figure 9.11

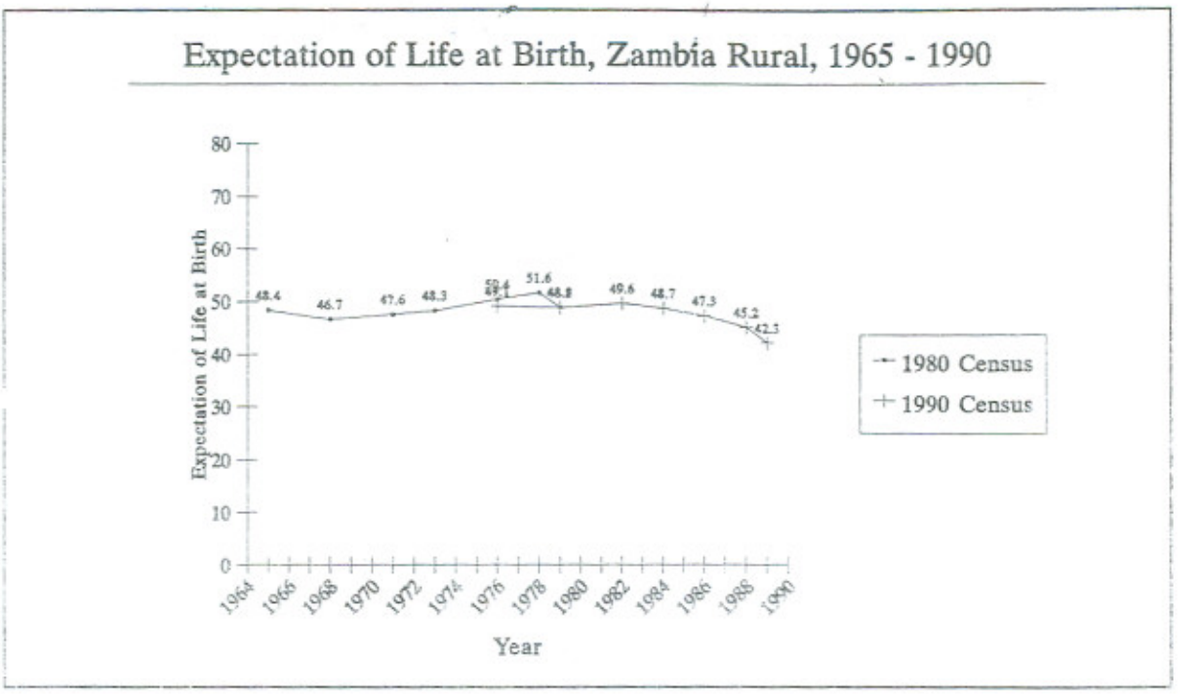
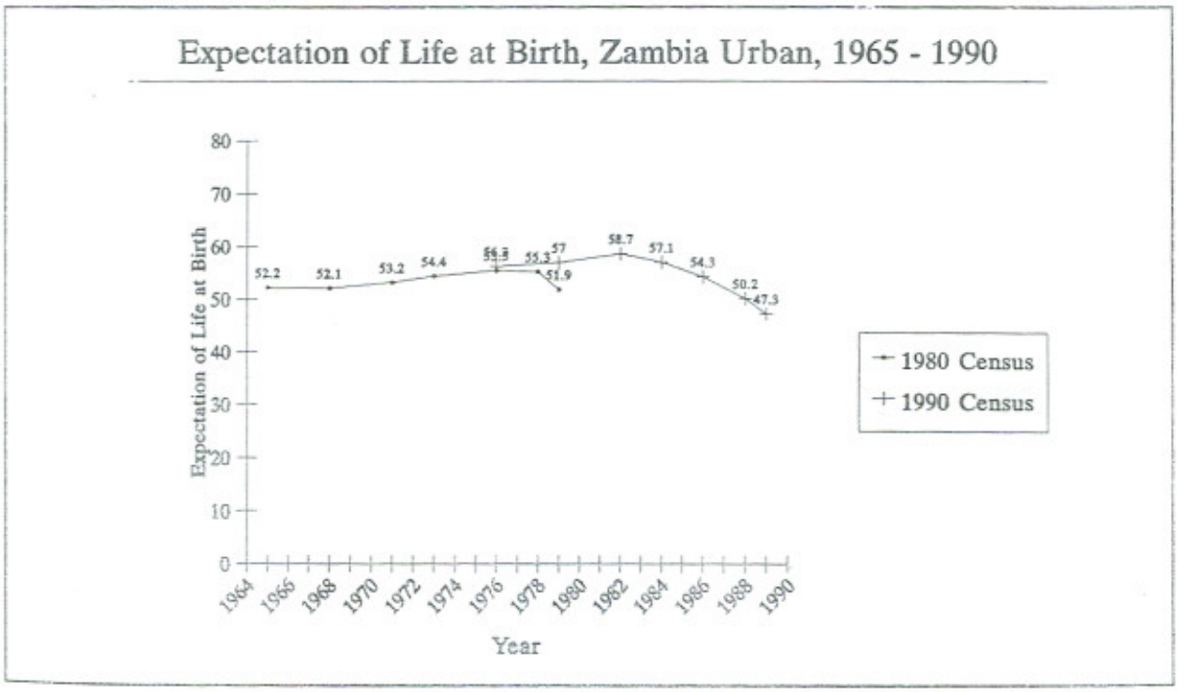


Figure 9.12



Expectation of Life at Birth by Background Mothers

Table 9.18 presents expectations of life at birth by economic status. Low expectations of life at birth of below 50 years are recorded in categories of "unpaid family workers", "not available for work" and "agriculture". In 1980, expectations of life at birth were above 53 years in all economic status categories. The pattern of expectation of life at birth corresponds to the pattern of infant, child and under-five mortality rates. Children of females in a socio-economic group with lower rates have higher expectation of life at birth. The category of "secondary and over" recorded the highest expectation of life at birth of 55.4 years whereas it recorded the lowest rates of infant, child and under-five mortality rates. Generally, the expectations of life at birth are lower in 1990 than in 1980.

Table 9.18

Expectation of Life at birth for the 5 year Period Preceding the Census by Selected Background Characteristics, Zambia, 1980 and 1990

Background Characteristic	Expectation of Life at Birth		Mortality Level	
	1980	1990	1980	1990
Zambia - Total	52.0	46.9	14.7	12.3
Sex of Child				
Male	51.6	46.1	15.0	12.6
Female	53.1	47.6	14.4	11.9
Residence				
Rural	50.3	44.9	14.0	11.6
Urban	54.2	50.6	15.6	13.7
Province				
Central	56.1	50.6	15.5	14.4
Copperbelt	54.2	49.9	16.2	13.4
Eastern	45.9	42.0	11.2	9.6
Luapula	46.1	40.0	12.2	10.0
Lusaka	54.6	50.4	15.8	13.7
Northern	51.0	44.2	14.0	11.3
North-Western	57.1	51.1	16.5	14.4
Southern	55.1	52.5	15.1	14.9
Western	50.5	43.4	14.0	11.3
Education				
None	49.3	44.5	13.5	11.7
Primary	51.5	46.5	14.5	12.6
Secondary +	59.8	55.4	17.7	15.9
Marital Status				
Never Married	50.6	55.0	14.0	15.7
Married	54.1	55.5	14.7	13.6
Separated	51.8[$]	50.9	13.6[$]	13.3
Divorced	-	50.1	-	12.9
Widowed	52.7	46.7	14.6	12.4
Economic Status				
Working	54.1[*]	53.6	15.4[*]	15.1
Unpaid Family Worker	-	44.8	-	11.8
Unemployed	53.9[#]	52.8	15.1[#]	14.6
Full-time Housewife	57.2	54.1	16.4	11.6
Not Available for Work	-	48.8	-	13.2
Economic Sector				
Agriculture	-	44.6	-	11.7
Non-Agriculture	-	53.3	-	15.1

Note: $ = Includes divorce females
* = Includes female unpaid family workers
# = Includes females not seeking work and not available for work
. . = Not Available

9.8 ADULT MORTALITY

Model life tables derived from the Coale and Demeny North family life tables are used to establish the pattern of adult mortality. The input parameter used in the modelling is the expectation of life at birth. Modelling was done using Mortpak Lite Software (United Nations, 1988).

The generated life table columns are as follows:-

${}_nm_x$ = Central death rates between ages x and x + n,

${}_nq_x$ = Probability of dying between exact ages x and x + n,

l_x = Number of persons alive at exact age x,

${}_nD_x$ = Number of persons dying between exact ages x and x + n,

${}_nL_x$ = Person years lived between exact ages x and x + n,

${}_nS_x$ = Probability of surviving between exact ages x and x + n,

T_x = Total number of person years lived after age x,

${}^{o}e_x$ = Expectation of life at age x or the average number of years a person aged x has to live.

$a_{(x,n)}$ = Average number of years lived by those who die.

The Ministry of Youth, Sport and Child Development defines the child population to be in age group 0-14 years while the youth population is in age group 15-24 years. Adult population is defined to be in age group 25 years and over (MSYCD: 1993). Thus, adult mortality analysis covers the population aged 25 years and over. The probability of dying at age 25 years for male adults is 0.03775 with an expectation of life of 38.7 years. At age of 45 years, male adults experience a probability of dying of 0.06527 and an expectation of life of 24.3 years. In Zambia, the legal age of retirement is 55 years for both males and females in formal employment. Probability of dying at age of 55 years is 0.10799 with 17.5 years as an expectation of life. Above 70 years, males are expected to live for less than 10 years. Refer to Table 9.19 for details on the life table columns. Figure 9.13 shows that expectation of life at birth in the adult age range declines with an increase in age.

Table 9.19

Coale and Demeny North Model Life Table for Zambia - Males, 1990.

Age	$m_{(x,n)}$	$q_{(x,n)}$	$l_{(x)}$	$D_{(x,n)}$	$L_{(x,n)}$	$S_{(x,n)}$	$T_{(x)}$	$^{o}e_{(x)}$	$a_{(x,n)}$	Age
0	.13964	.12769	100000.	12769.	91445.	.83759/A/	4610000.	46.100	.330	0
1	.02489	.09339	87231.	8147.	327351.	.92538/B/	4518555.	51.800	1.352	1
5	.00813	.03984	79084.	3151.	387545.	.96929	4191204.	52.997	2.500	5
10	.00428	.02120	75934.	1610.	375644.	.97729	3803659.	50.092	2.500	10
15	.00512	.02528	74324.	1879.	367112.	.96944	3428015.	46.123	2.601	15
20	.00732	.03596	72445.	2605.	355894.	.96273	3060903.	42.251	2.570	20
25	.00769	.03775	69840.	2636.	342629.	.96117	2705009.	38.732	2.508	25
30	.00820	.04019	67203.	2701.	329324.	.95751	2362380.	35.519	2.522	30
35	.00928	.04535	64502.	2925.	315331.	.95048	2033056.	31.519	2.545	35
40	.01115	.05428	61578.	3342.	299714.	.94063	1717725.	27.895	2.555	40
45	.01348	.06527	58235	3801.	281920.	.92619	1418011.	24.350	2.565	45
50	01745	.08371	54534.	4557.	261111.	.90521	1136091.	20.871	2.573	50
55	.02279	.10799	49877.	5386.	236361.	.87287	874980.	17.543	2.582	55
60	.03242	.15034	44491.	6689.	206312.	.82101	638620.	14.354	2.586	60
65	.04772	.21383	37802.	8083.	169383.	.74195	432308.	11.426	2.572	65
70	.07372	.31175	29719.	9265.	125674.	.63148	262924	8.847	2.526	70
75	.11296	.43826	20454.	8964.	79360.	.42179/C/	137251.	6 710	2.444	75
80	.19848	.....	11490.	11490.	57891.	.....	57891.	5.038	5.038	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5) = L(5,5)/L(0,5)
/C/ Value Given is S(75+,5) = T(80)/T(75)

Note. The expectation of life at Birth was used as an input parameter in the Coale and Demeny Model Life Tables

Figure 9.13

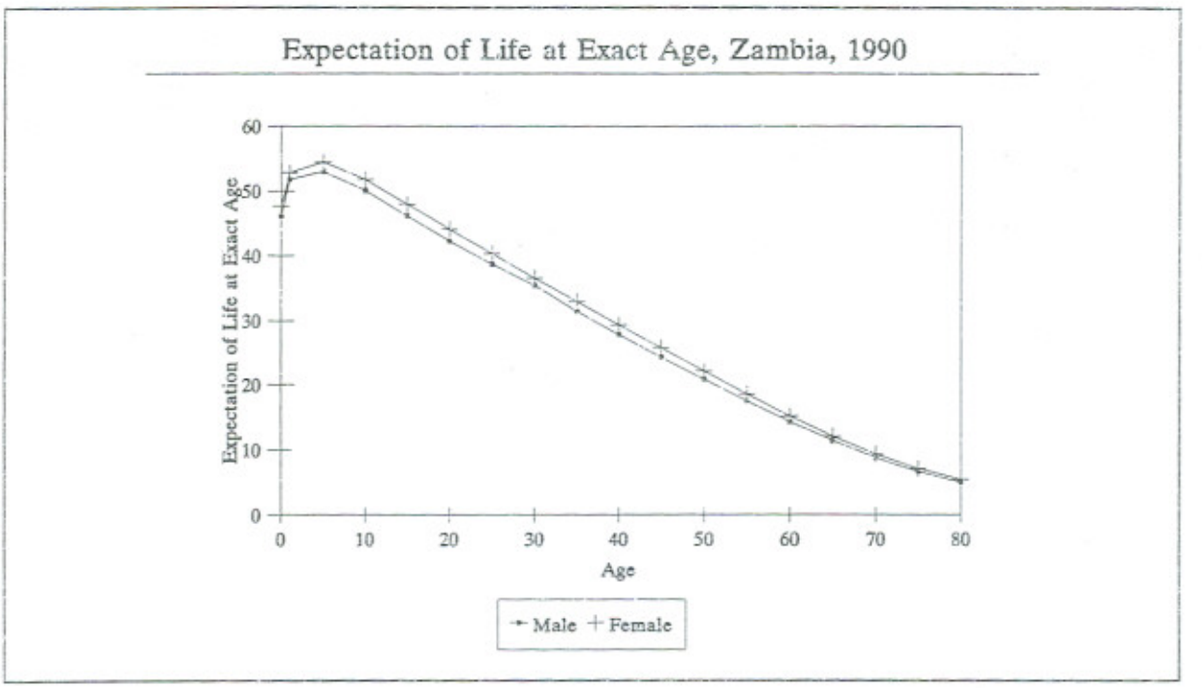


Table 9.20

Coale and Demeny North Model Life Table for Zambia - Females, 1990

Age	$m_{(x,n)}$	$q_{(x,n)}$	$l_{(x)}$	$D_{(x,n)}$	$L_{(x,n)}$	$S_{(x,n)}$	$T_{(x)}$	$^{o}e_{(x)}$	$a_{(x,n)}$	Age
0	.12672	.11708	100000.	11708.	92390.	84527/A/	4759989.	47.600	.350	0
1	.02630	.09839	88292.	8687.	330245.	.92183/B/	4667599.	52.865	1.361	1
5	.00866	.04236	79605.	3372.	389596.	.96711	4337355.	54.486	2.500	5
10	.00465	.02301	76233.	1754.	376781	.97633	3947759.	51.785	2.500	10
15	.00501	.02473	74479.	1842.	367861.	.97330	3570978.	47.946	2.538	15
20	.00587	.02895	72637.	2103.	358037.	.96883	3203117.	44.098	2.552	20
25	.00681	.03349	70534.	2362.	346878.	.96396	2845079.	40.336	2.547	25
30	.00789	.03871	68172.	2639.	334376.	.95854	2498202.	36.646	2.43	30
35	.00905	.04425	65533.	2900.	320512.	.95319	2163825.	33.019	2.533	35
40	.01012	.04934	62633.	3091.	305508.	.94857	1843314.	29.430	2.522	40
45	.01113	.05417	59543.	3226.	289796.	.93974	1537805.	25.827	2.545	45
50	.01405	.06795	56317.	3827.	272353.	.92176	1248009	22.160	2.582	50
55	.01900	.09086	52490.	4769.	251025.	.89091	975676.	18.588	2.604	55
60	.02802	.13132	47721.	6266.	223641.	.83971	724651.	15.185	2.612	60
65	.04309	.19520	414554.	8092	187794.	.76204	501010.	12.086	2.592	65
70	.06737	.28897	33362.	9641.	143108.	.65728	313216.	9.388	2.541	70
75	.10302	.40851	23722.	9691.	94062.	.44705/C/	170108.	7.171	2.467	75
80	.84551	.....	14031.	14031.	76046.	.....	76046.	5.420	5.420	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5)=L(5,5)/L(0,5)
/C/ Value Given is S(75+,5)=T(80)/T(75)

Note: The expectation of life at birth was used as an input parameter in the Coale and Demeny Model Life Tables.

Table 9.20 shows the female life table for Zambia. The probability of dying at age 25 for females is slightly lower than that of males at 0.03349 with an expectation of life at 40.3 years. Expectations of life for female adults at ages 45 and 55 years are equally higher than those of male adults. At age 55 years, the expectation of life is 18.6 years and reduces to 9.4 years at age of 70 years. The probability of dying also increases substantially from age 60 years upwards. Refer to Table 9.20 for further details. The reducing patterns in life expectancy for males in both rural and urban areas are the same except that males in urban areas experience high survival chances (see Tables 9.21 and 9.23). Similarly, female adults residing in urban areas experience high chances of surivival compared to their counterparts in rural areas (see Tables 9.22 and 9.24).

Table 9.21

Coale and Demeny North Model Life Table for Zambia Rural - Males, 1990.

Age	$m_{(x,x)}$	$q_{(x,x)}$	$l_{(x)}$	$D_{(x,x)}$	$L_{(x,x)}$	$S_{(x,x)}$	$T_{(x)}$	$^{o}e_{(x)}$	$a_{(x,x)}$	Age
0	.15697	.14203	100000.	14203.	90484.	.81864/A/	4349999.	43.500	.330	0
1	.02884	.10718	85797.	9196	318838.	.91456/B/	4259515.	49.646	1.352	1
5	.00925	.04521	76601	3463.	374349.	.96528	3940677.	51.444	2.500	5
10	.00480	.02373	73138.	1736.	361353.	.97491	3566328.	48.761	2.500	10
15	.00558	.02751	71403.	1964.	352286.	.96684	3204976.	44.886	2.593	15
20	.00795	.03902	69438.	2709.	340603.	.95955	2852689.	41.082	2.568	20
25	.00837	.04098	66729.	2735.	326827.	.95783	2512086.	37.646	2.507	25
30	.00893	.04368	63994.	2795.	313044.	.95375	2185259.	34.148	2.521	30
35	.01014	.04945	61199.	3026.	298565.	.94594	1872215.	30.592	2.544	35
40	.01222	.05932	58173.	3451.	282424.	.93504	1573650.	27.051	2.553	40
45	.01480	.07142	54723.	3908.	264078.	.91976	1291226.	23.596	2.560	45
50	.01893	.09048	50814.	4598.	242888.	.89753	1027148.	20.214	2.568	50
55	.02475	.11676	46216.	5396.	217999.	.86336	784260.	16.969	2.576	55
60	.03485	.16068	40820.	6559.	188212.	.80968	566261.	13.872	2.578	60
65	.05093	.22653	34261.	7761.	152392.	.72742	378049.	11.034	2.563	65
70	.07855	.32859	26500.	8708.	110853.	.61376	225657.	8.515	2.514	70
75	.11960	.45735	17792.	8137.	68037.	.40736/C/	114804.	6.452	2.429	75
80	.20645	.....	9655.	9655.	46766.	.....	46766.	4.844	5.844	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5)=L(5,5)/L(0,5)
/C/ Value Given is S(75+,5)=T(80)/T(75

Figure 9.14

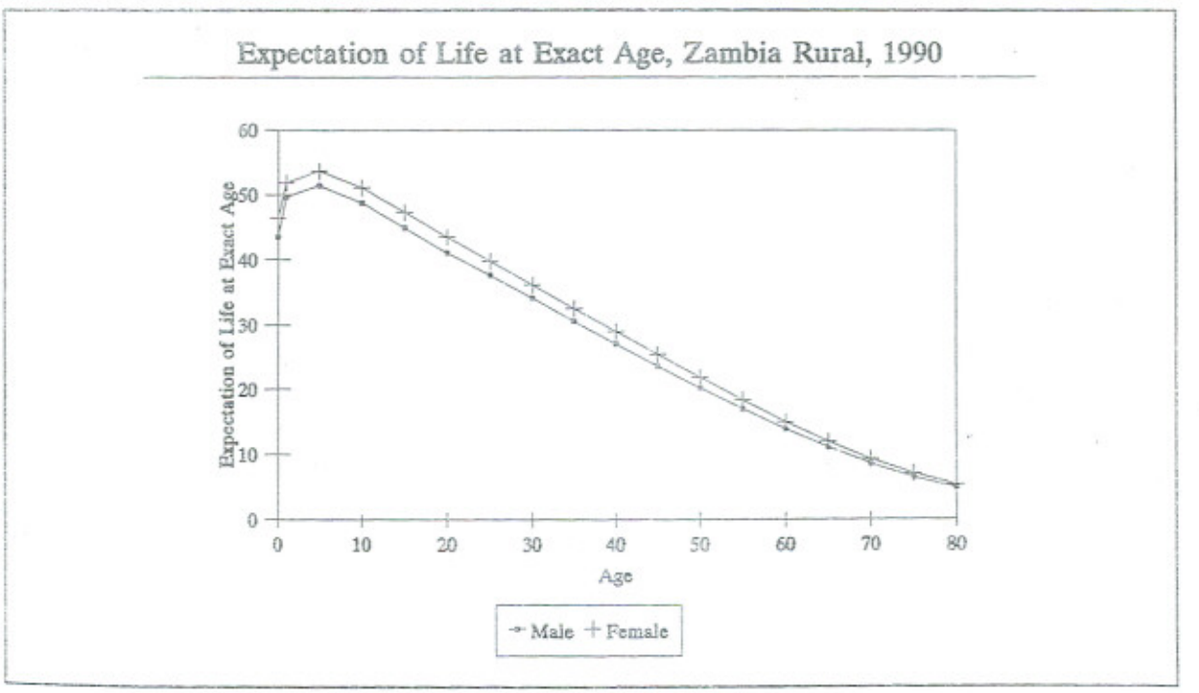


Table 9.22

Coale and Demeny North Model Life Table for Zambia Rural - Females, 1990

Age	$m_{(x,n)}$	$q_{(x,n)}$	$l_{(x)}$	$D_{(x,n)}$	$L_{(x,n)}$	$S_{(x,n)}$	$T_{(x)}$	$^{o}e_{(x)}$	$a_{(x,n)}$	Age
0	.13347	.12282	100000.	12282.	92017.	.83761/A/	4639999	46.400	.350	0
1	.02792	.10403	87718.	9126.	326790.	.91728/B/	4547983	51.848	1.361	1
5	.00916	.04479	78593.	3520.	384162.	.96524	4221193	53.710	2.500	5
10	.00491	.02425	75072.	1820.	370810.	.97509	3837031	51.111	2.500	10
15	.00526	.02596	73252.	1902.	361574.	.97202	3466220	47.319	2.536	15
20	.00615	.03029	71350.	2161.	351457.	.96738	3104647	43.513	2.551	20
25	.00713	.03506	69189.	2426.	339994.	.96225	2753189	39.792	2.547	25
30	.00828	.04057	66763.	2708.	327159.	.95654	2413195	36.146	2.542	30
35	.00949	.04638	64055.	2971.	312939.	.95103	2086036	32.566	2.531	35
40	.01057	.05151	61084.	3146.	297616.	.94637	1773097	29.027	2.520	40
45	.01161	.05642	57938.	3269.	281655.	.93740	1475481	25.467	2.543	45
50	.01459	.07045	54669.	3851.	264023.	.91888	1193825	21.838	2.580	50
55	.01974	.09423	50817.	4788.	242606.	.88699	929802	18.297	2.603	55
60	.02907	.13590	46029.	6255.	215189.	.83447	687196	14.930	2.609	60
65	.04458	.20126	39774.	8005	179570.	.75503	472006	11.867	2.589	65
70	.06963	.29717	31769.	9441.	135580.	.64843	292437	9.205	2.536	70
75	.10623	.41828	22328.	9339.	87914.	.43953/C/	156856	7.025	2.460	75
80	.18840	.....	12989.	12989.	68942.	.....	68942	5.308	5.308	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5)=L(5,5)/L(0,5)
/C/ Value Given is S(75+,5)=T(80)/T(75)

Note: The expectation of life at birth was used as an input parameter in the Coale and Demeny Model Life Tables.

Table 9.23

Coale and Demeny North Model Life Table for Zambia Urban - Males, 1990.

Age	$m_{(x,n)}$	$q_{(x,n)}$	$l_{(x)}$	$D_{(x,n)}$	$L_{(x,n)}$	$S_{(x,n)}$	$T_{(x)}$	$^{o}e_{(x)}$	$a_{(x,n)}$	Age
0	.12186	.11266	100000.	11266.	92452	.85830/A/	4910000.	49.100	.330	0
1	.02045	.07761	88734.	6887.	336699.	.93748/B/	4817548.	54.292	1.352	1
5	.00687	.03379	81847	2765.	402321.	.97380	4480849.	54.747	2.500	5
10	.00370	.01834	79082.	1450	391782.	.98001	4078528.	51.574	2.500	10
15	.00458	.02267	77631.	1760.	383949.	.97253	3686746.	47.491	2.610	15
20	.00656	.03231	75871	2451.	373401	.96655	3302798.	43.532	2.571	20
25	.00688	.03384	73420.	2484.	360911.	.96516	2929396.	39.899	2.509	25
30	.00735	.03610	70935.	2561.	348336.	.96184	2568485	36.209	2.524	30
35	.00831	.04072	68375.	2784.	335044.	.95545	2220148.	32.470	2.547	35
40	.01002	.04892	65590.	3209.	320119.	.94630	1885105.	28.741	2.559	40
45	.01221	.05929	62381.	3699.	302929.	.93234	1564986.	25.087	2.573	45
50	.01606	.07731	58683	4537.	282434.	.91227	1262057.	21.506	2.580	50
55	.02104	.10011	54146.	5421.	257655.	88144	979623.	18.092	2.588	55
60	.03024	.14094	48725.	6867	227108.	.83135	721968.	14.817	2.595	60
65	.04483	.20220	41858.	8464.	188806.	.75522	494860.	11.822	2.580	65
70	.06942	.29610	33394.	9898.	142590.	.64769	306054.	9.165	2.537	70
75	.10704	.43207	23496.	9898	92354.	.43502/C/	163464.	6.957	2.458	75
80	.19140		13610.	13610.	71110.	.....	71110.	5.225	5.225	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5)=L(5,5)/L(0,5)
/C/ Value Given is S(75+,5)=T(80)/T(75

Figure 9.15

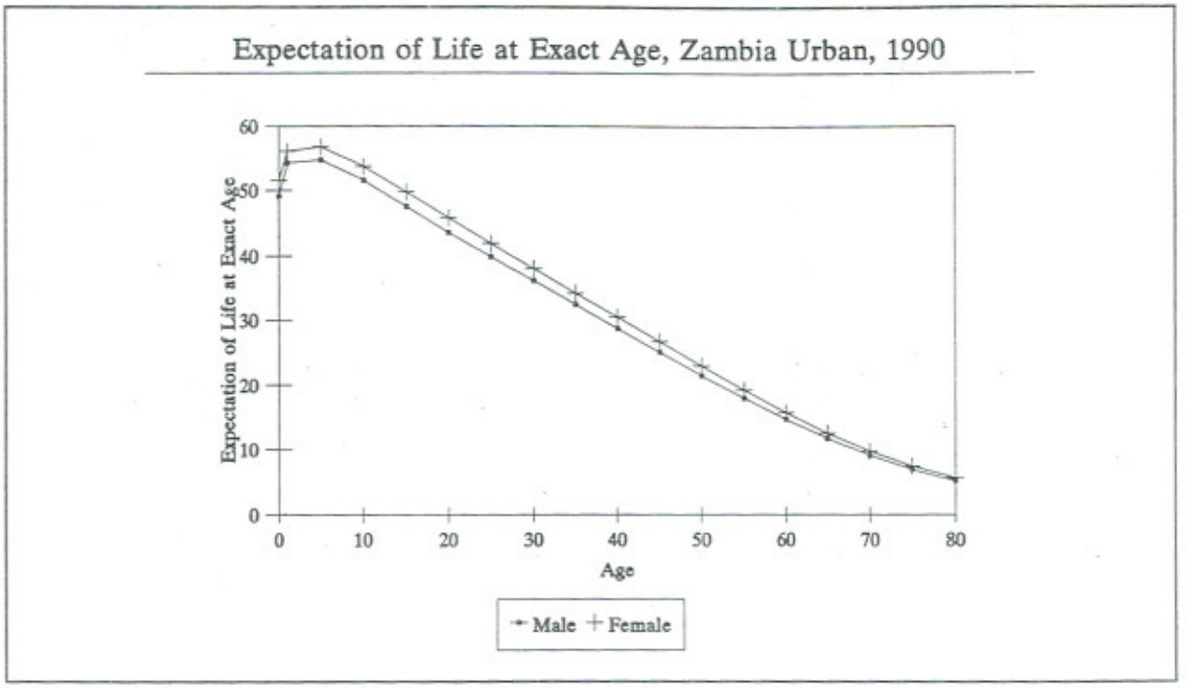


Table 9.24

Coale and Demeny North Model Life Table for Zambia Urban - Females, 1990

Age	$m_{(x,n)}$	$q_{(x,n)}$	$l_{(x)}$	$D_{(x,n)}$	$L_{(x,n)}$	$S_{(x,n)}$	$T_{(x)}$	$e_{(x)}$	$a_{(x,n)}$	Age
0	.10682	.09988	100000.	9988.	93504.	.86984/A/	5150000.	51.500	.350	0
1	.02068	.07845	90012.	7061.	341417.	.93746/B/	5056496.	56.176	1.361	1
5	.00690	.03391	82951.	2813.	407721.	.97339	4715079.	56.842	2.500	5
10	.00385	.01904	80138.	1526.	396873.	.98015	4307358.	53.749	2.500	10
15	.00426	.02108	78612.	1657.	388997.	.97702	3910485.	49.744	2.549	15
20	.00508	.02507	76955.	1930.	380058.	.97300	3521489.	45.761	2.556	20
25	.00588	.02897	75025.	2173.	369796.	.96892	3141431.	41.872	2.548	25
30	.00677	.03330	72852.	2426.	358301.	.96437	2771635.	38.045	2.544	30
35	.00776	.03807	70426.	2681.	345534.	.95933	2413334.	34.268	2.540	35
40	.00885	.04331	67745.	2934.	331482.	.95463	2067800.	30.523	2.531	40
45	.00983	.04801	64811.	3111.	316444.	.94609	1736318.	26.790	2.553	45
50	.01262	.06124	61700.	3779.	299384.	.92956	1419874.	23.013	2.588	50
55	.01700	.08168	57921.	4731.	278296.	.90138	1120490.	19.345	2.610	55
60	.02531	.11936	53190.	6349.	250851.	.85331	842194.	15.834	2.622	60
65	.03930	.17961	46841.	8413.	214055.	.77952	591343.	12.624	2.605	65
70	.06201	.26927	38428.	10347.	166860.	.67787	377288.	9.818	2.557	70
75	.09598	.38663	28081.	10857.	113110.	.46248/C/	210428.	7.494	2.486	75
80	.17699	.....	17224.	17224.	97318.	.....	97318.	5.650	5.650	80

/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 = L(0,5)/500000
/B/ Value Given is for S(0,5)=L(5,5)/L(0,5)
/C/ Value Given is S(75+,5)=T(80)/T(75)

Note: The expectation of life at Birth was used as an input parameter in the Coale and Demeny Model Life Tables

9.9 SUMMARY

Zambia experienced high mortality rates in the 1980-1990 intercensal period as demonstrated by high crude death and child mortality rates. The crude death rate had risen from 13.9 in 1980 and 18.3 deaths per 1,000 persons in 1990. Mortality rates for the 1980 Census were calculated using the Mortpak-Lite computer software package (UN: 1988) for comparison.

Infant and child mortality rates derived from the 1990 Census for the 0-4 years preceding the census, were higher than those obtained in the period 0-4 years before the 1980 Census. Overall, infant mortality rate for Zambia is 123.3. Male and female rates were 127 and 119.7 deaths per 1,000 live births. It has also been observed that infant mortality rates in rural areas (133.3) are higher as compared to urban areas (105.7). In all provinces the IMR was above 100 except for Southern Province with 96.7.

The analysis of trends of infant and child mortality rate point to the effect that substantial increases were observed during the period 1986-1989. Males exhibited very high infant and child mortality rates as compared to female children. Children residing in rural areas experienced relatively high infant and child mortality rates. As a result low expectations of life at birth were recorded for both male and female children residing in rural areas. Urban areas exhibited relatively high expectations of life at birth for both male and female children.

Life expectancy analysis shows that female adults live longer at older ages as compared to their male counterparts. The same applies in rural and urban areas.

CHAPTER 10

DISABILITY

10.1 INTRODUCTION

Data on disabled persons, among other variables, was collected during the 1990 Census. However, only visible disabilities were identified because it was difficult for enumerators to identify invisible disabilities. The disabled persons were classified as:-

- Totally blind
- Totally deaf/dumb
- Crippled or
- Mentally retarded

The above classifications do not take into account the detailed international definition of disability which includes variations in the intensity of disability. The partially blind and deaf are not included in the above classifications although these can be identified with the use of medical instruments by qualified medical personnel. Such an approach, however, would require a special survey.

Some cultural factors pose problems in the identifications of disabled persons. In some communities, disability may be regarded as a curse and hence a shame in the family which should not be discussed. Census enumerators may not see such persons and the respondent may not provide accurate information.

Nevertheless the results presented in this chapter provide useful information for the understanding of the levels and patterns of disability in Zambia.

10.2. CONCEPTS AND DEFINITIONS

Disability

Refers to the inability to do something. In this report, disability refers to a person who is totally blind, totally dumb/deaf, crippled and mentally retarded. Hence a disabled person may have one or more of the following attributes;

Totally blind

Refers to a person who has completely lost the sense of sight.

Totally deaf/dumb

A person lacking the senses of hearing and of speech.

Crippled

Loss of one or more limbs or loss of the power to use one or more limbs.

Mentally retarded

A person whose psychological functioning is defective to some degree.

Multiple disabilities

Having more than one of the above stated disabilities.

10.3 DISTRIBUTION OF DISABLED PERSONS

Table 10.1 shows that the largest proportion of the disabled in the country comprises the crippled making up 28.4 percent closely followed by the multiple disabled with 28.0 percent. The crippled and multiple disabled make up the largest proportions of the disabled males and females, respectively. The smallest proportion of the disabled comprises the mentally retarded in rural areas and the dumb/deaf in urban areas.

Table 10.1

Disabled Persons by Type of Disability, Sex, Residence and Province, (Percent), Zambia, 1990

Residence and Sex	Type of Disability						
	Total Number	Total	Blind	Deaf/ Dumb	Crippled	Mentally Retarded	Multiple Disability
Zambia							
Both Sexes	69,073	100	17.0	14.7	28.4	11.9	28.0
Male	36,892	100	15.8	14.4	30.0	13.0	26.8
Female	32,181	100	18.3	15.0	26.7	10.7	29.3
Residence							
Rural							
Both Sexes	48,976	100	19.3	16.4	28.1	12.4	23.8
Male	25,774	100	17.8	16.1	29.9	13.5	22.7
Female	23,202	100	21.0	16.6	26.1	11.1	25.2
Urban							
Both Sexes	20,097	100	11.3	10.6	29.2	10.9	38.0
Male	11,118	100	11.3	10.5	30.0	11.9	36.3
Female	8,979	100	11.4	10.8	28.2	9.6	40.0
Provinces							
Central							
Both Sexes	5,376	100	16.2	14.9	28.6	14.0	26.3
Male	2,952	100	15.3	14.4	30.5	14.6	25.1
Female	2,424	100	17.3	15.5	26.2	13.2	27.8
Copperbelt							
Both Sexes	10,272	100	13.2	11.7	30.2	8.9	36.0
Male	5,528	100	13.3	12.0	31.2	9.8	33.7
Female	4,741	100	13.1	11.4	29.1	7.8	38.6
Eastern							
Both Sexes	10,776	100	13.3	16.8	31.3	14.3	24.2
Male	5,652	100	11.8	16.2	32.9	15.3	23.8
Female	5,124	100	15.1	17.5	29.5	13.3	24.6
Luapula							
Both Sexes	4,457	100	25.3	16.1	24.2	16.7	17.7
Male	2,318	100	22.6	15.6	25.2	19.3	17.2
Female	2,139	100	28.1	16.6	23.2	13.9	18.2
Lusaka							
Both Sexes	7,979	100	9.7	11.2	25.2	10.9	43.0
Male	4,595	100	9.8	10.6	25.5	11.8	42.3
Female	3,384	100	9.6	11.9	24.8	9.7	44.0
Northern							
Both Sexes	9,356	100	18.7	13.7	24.7	13.8	29.1
Male	4,945	100	17.7	14.2	26.0	15.4	26.7
Female	4,411	100	19.8	13.0	23.4	12.0	31.8
North-Western							
Both Sexes	3,231	100	16.9	15.8	36.2	11.6	19.5
Male	1,717	100	16.1	14.4	39.5	12.6	17.4
Female	1,514	100	17.8	17.4	32.5	10.4	21.9
Southern							
Both Sexes	8,874	100	17.7	16.1	26.7	10.6	28.9
Male	4,708	100	16.4	16.2	28.8	11.8	26.7
Female	4,166	100	19.2	16.0	24.2	9.3	31.3
Western							
Both Sexes	8,753	100	26.2	17.3	30.6	9.3	16.6
Male	4,473	100	24.2	16.9	33.1	10.0	15.8
Female	4,280	100	28.2	17.6	28.9	8.6	17.6

The majority of the disabled in Central, Eastern, North-Western and Western provinces are crippled, while the majority in Luapula are blind and in Copperbelt, Lusaka, Northern and Southern Provinces, multiple disabled. During 1990 Census, 69,073 persons were recorded as disabled in Zambia. Of these, 36,892 are male and the remaining 32,181, female. In all provinces, there are more disabled males than females. A comparison of the provinces shows that the largest number of the disabled is found in Eastern Province, with 10,776, while the least is found in North-Western Province with 3,231. The percentage distribution of the disabled by province is shown in Figure 10.1.

Figure 10.1

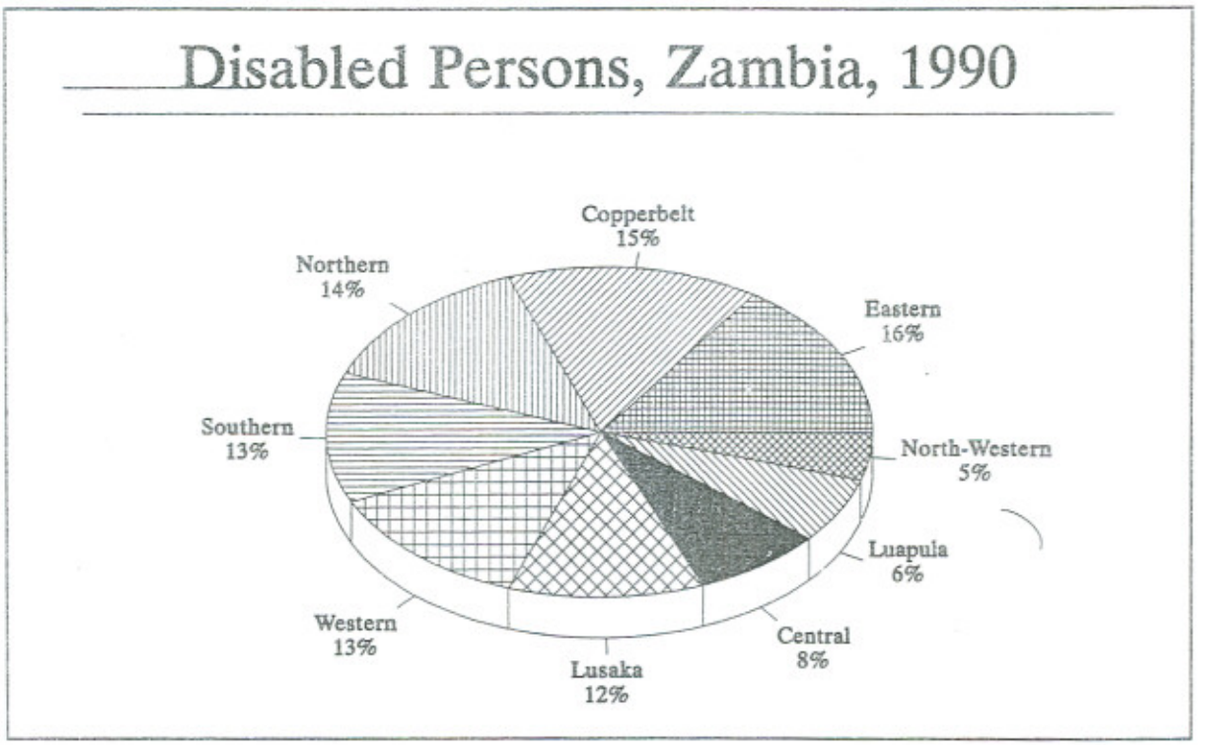


Table 10.2 shows the distribution of the disabled as a proportion of total population. Out of Zambia's population 7.4 million, 0.9 percent are disabled. Of the 0.9 percent, 0.2 are blind, 0.3 crippled, 0.2 multiple disabled, 0.1 dumb and deaf, and another 0.1 mentally retarded.

Table 10.2

Disabled Persons as a Proportion of Total Population by Residence and Type of Disability, (Percent), Zambia, 1990

Residence	Total Population	Type of Disability					
		Total	Blind	Deaf/ Dumb	Crippled	Mentally Retarded	Multiple Disability
Zambia							
Total	7,383,097	0.9	0.2	0.1	0.3	0.1	0.2
Rural	4,477,814	1.1	0.2	0.2	0.3	0.1	0.3
Urban	2,905,283	0.7	0.1	0.1	0.2	0.1	0.2
Provinces							
Central	720,627	0.7	0.1	0.1	0.2	0.1	0.2
Copperbelt	1,427,545	0.7	0.1	0.1	0.2	0.1	0.2
Eastern	965,967	1.1	0.1	0.2	0.3	0.2	0.3
Luapula	525,160	0.8	0.2	0.1	0.2	0.1	0.2
Lusaka	987,102	0.8	0.1	0.1	0.2	0.1	0.3
Northern	855,177	1.1	0.2	0.1	0.3	0.2	0.3
North-Western	387,552	0.8	0.1	0.1	0.3	0.1	0.2
Southern	907,150	1.0	0.2	0.2	0.2	0.1	0.3
Western	606,813	1.4	0.4	0.3	0.4	0.1	0.2

Rural areas have a large share of the disabled compared to urban areas. This could be related to the population size because most of the people in Zambia live in rural areas. Western Province has the largest proportion of the disabled with 1.4 percent while Central and Copperbelt have the least with 0.7 percent in each case. This is unusual because Copperbelt with the largest population in Zambia would have been expected to have the largest proportion of the disabled while Western with one of the smallest populations in Zambia would have been expected to have one of the least proportions of the disabled. It could be that Copperbelt Province which has grown mostly from migration attracts few disabled migrants. This is quite likely because the disabled are not likely to have the skills to work in Copperbelt.

10.4 CHARACTERISTICS OF DISABLED PERSONS

Sex Ratios

Table 10.3 shows sex ratios of disabled by province and type of disability. The sex ratios reflect the number of males per 100 females. Hence, a sex ratio of 114.6 for all the disabled in the country implies that there are 114.6 disabled males per 100 disabled females. A sex ratio of less than 100 implies there are more disabled males than females. In all disability categories except the [illegible] there are more disabled males than females. In urban areas, there are [illegible]

Table 10.3

Sex Ratio of Disabled Persons by Residence and Type of Disability, Zambia, 1990

Sex Ratio and Residence	Type of Disability					
	Total	Blind	Dumb/Deaf	Crippled	Mentally Retarded	Multiple Disability
Zambia						
Total	114.6	99.3	110.1	128.6	139.7	104.7
Rural	111.1	100.5	107.3	127.4	135.4	100.0
Urban	123.8	123.2	121.4	131.4	152.5	112.4
Provinces						
Central	122.0	108.0	113.0	142.0	135.0	109.0
Copperbelt	116.5	118.5	122.6	125.0	145.3	101.9
Eastern	110.3	86.1	101.7	122.9	127.4	106.9
Luapula	108.4	87.2	101.7	117.9	150.8	102.6
Lusaka	135.8	139.5	121.1	139.9	165.0	130.2
Northern	112.1	100.5	122.9	124.3	143.1	94.2
North-Western	113.4	102.2	93.9	137.5	137.6	90.6
Southern	113.0	96.9	114.6	134.6	142.4	96.6
western	104.5	89.1	100.0	123.6	121.7	93.9

In the provinces, sex ratios range from 104.5 in Western Province to 135.8 in Lusaka. In all disability groups, the sex ratio is above 100 except for the blind in Eastern, Luapula, Southern and Western Provinces, the blind/deaf in North-Western Province and the multiple disabled in Northern, North-Western, Southern and Western provinces.

Age Structure

Table 10.4 shows the age structure of the disabled in broad age groups by type of disability. Of the 20,229 disabled children aged between 0 and 14, 42.2 percent have multiple disabilities, 21.4 are crippled, 17.6 dumb and deaf, 10.3 blind and 8.5 percent are mentally retarded. Blindness is the most common disability for those aged 60 and above and mental retardation is the least common. Of those aged 15 to 59, the largest proportion (32.2 percent) are crippled and the smallest are dumb and deaf.

Table 10.4

Disabled Persons by Type of Disability and Age Group, (Percent), Zambia, 1990

Type of Disability	Age Group			
	Total	0 -14	15 -59	60+
Blind	17.0	10.3	14.8	38.2
Deaf/Dumb	14.7	17.6	13.4	14.0
Crippled	28.4	21.4	32.2	28.5
Mentally Retarded	11.9	8.5	15.1	6.1
Multiple Disabilities	28.0	42.2	24.5	13.2
Total	100.0	100.0	100.0	100.0
Total Number	69,073*	20,229	38,206	10,327

(*) This total includes those who did not state their age.

Usually Economically Active Disabled Population

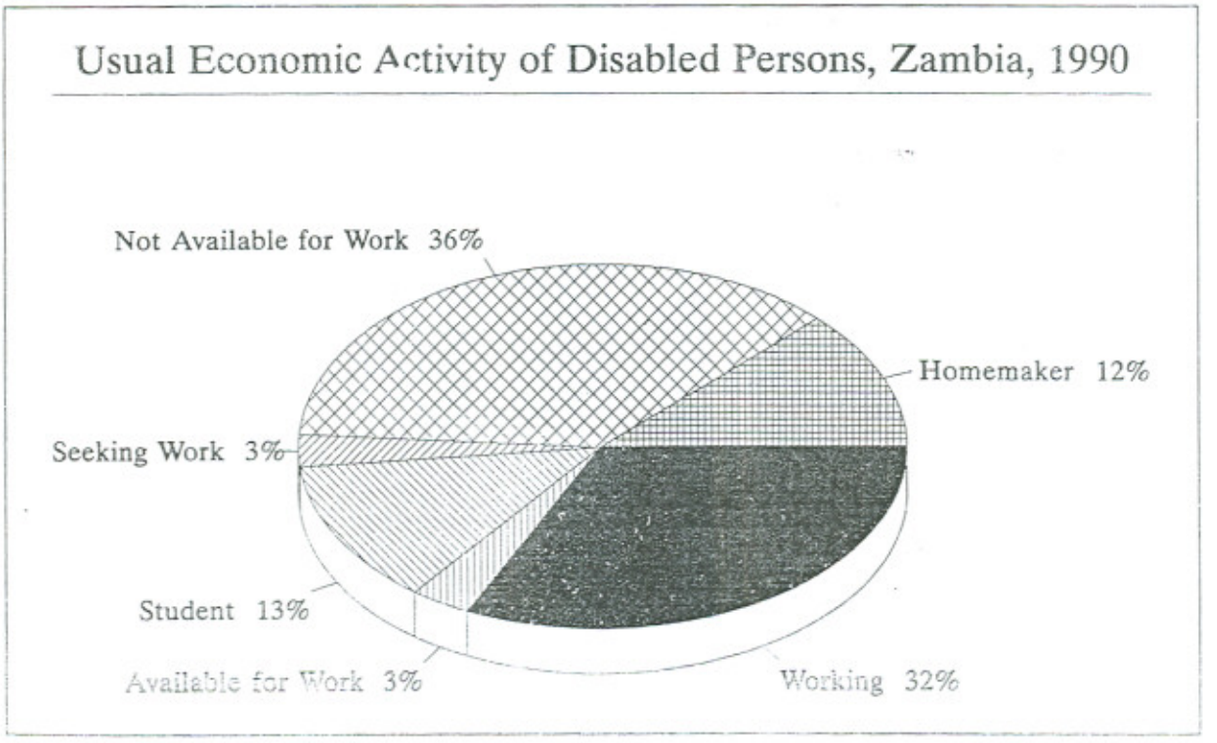
Table 10.5 shows the usual economic activity of the disabled aged 12 and above by type of disability. Detailed definitions of economic activity are given in Chapter 6. Out of the 53,444 economically active disabled persons in the country, 2.8 percent are seeking work, 3.1 available for work, 12.0 homemakers, 12.4 are students, 35 percent are not available for work and 35.2 percent are working.

Table 10.5

Disabled Persons (12 Years and Older) by Type of Disability and Usual Economic Activity, (Percent), Zambia, 1990

Usual Economic Activity	Type of Disability					
	Total	Blind	Deaf/Dumb	Crippled	Mentally Retarded	Multiple Disabilities
Working	31.2	29.7	37.4	34.6	24.4	28.2
Seeking Work	2.8	1.9	2.7	3.1	2.9	3.1
Available for Work	3.1	2.2	3.7	3.2	3.2	3.2
Homemaker	12.0	12.3	13.2	11.0	8.3	14.5
Student	12.4	6.8	10.4	12.1	6.8	21.6
Not Available for work	35.2	44.4	30.1	33.7	48.6	25.3
Not Stated	3.3	2.7	2.5	2.3	5.8	4.1
Percentage Total	100.0	100.0	100.0	100.0	100.0	100.0
Total Number	53,444	10,148	7,378	16,558	7,041	12,319

Figure 10.2



In all groups of disabilities, small proportions are seeking or available for work while the largest proportions are not available for work. Proportions of students range from 6.8 percent among the blind and mentally retarded to 21.6 among those with multiple disabilities. Proportions of homemakers range from 8.3 percent among the mentally retarded to 14.5 among the multiple disabled.

The employment status of disabled household heads are presented in Table 10.6. Of the 2,735 disabled household heads, close to half (48 percent) are employed as family workers, 28 percent are self employed 19.2 are employees, 1.2 are employers and 3.6 percent have not started their employment status.

Table 10.6

Disabled Household Heads Active by Disability and Employment Status, (Percent) Zambia, 1990

Type Disability	Employment Status						
	Total Number	Percentage Total	Employer	Employee	Self Employed	Family Worker	Not Stated
Total	2,735	100.0	1.2	19.2	27.8	48.2	3.6
Blind	404	100.0	1.0	19.8	26.5	50.2	2.5
Deaf/Dumb	500	100.0	2.4	14.8	28.6	51.8	2.4
Crippled	853	100.0	1.5	20.7	30.4	43.6	3.8
Mentally Retarded	477	100.0	0.4	15.3	25.8	54.9	3.6
Multiple Disabilities	501	100.0	0.6	24.3	25.4	44.5	5.2

The majority in all disability categories are family workers. Proportions of employers range from 0.4 percent among the mentally retarded to 2.4 among the dumb and deaf while those of employees range from 14.8 percent among the dumb and deaf to 24.3 among the multiple disabled. The self employed make up the second largest proportion in all disability categories.

Educational Status of Disabled Population

Table 10.7 shows the completed level of education of disabled aged 5 years and above by type of disability. Of the 62,994 disabled persons in this age range, 58 percent have had no formal education and only 0.1 percent have completed higher levels of education. About 30 and 10 percent have completed primary and secondary education, respectively.

Table 10.7

Disabled Persons (5 Years and Older) by Type of Disability and Level Education Completed, (Percent), Zambia, 1990

Type of Disability	Level of Education						
	Total Number	Percentage Total	No Schooling	Primary	Secondary	Higher Level	Not Stated
Total	62,994	100.0	57.2	29.9	9.9	0.1	2.6
Blind	11,142	100.0	67.8	23.4	6.8	0.0	2.0
Deaf/Dumb	9,301	100.0	68.9	24.9	3.5	-	2.7
Crippled	18,633	100.0	50.5	35.7	11.6	0.1	2.1
Mentally Retarded	7,850	100.0	63.6	25.5	8.9	0.1	1.9
Multiple Disabilities	16,068	100.0	49.0	32.9	14.3	0.1	3.7

The proportion of those who have never attended formal schooling range from 49 among the multiple disabled to 69 among the dumb and deaf. In all disability groups, the proportions decrease with increasing level of education. None of the dumb and deaf has completed higher education.

10.5 SUMMARY

Out of a total population of 7.4 million of Zambia, 69,073 persons are recorded as disabled in the 1990 Census. The majority of them reside in rural areas, except in Lusaka and Copperbelt Provinces. In both rural and urban areas, there are more disabled males than females shown by respective sex ratios of 111 and 124. The majority of the disabled are either crippled or with multiple disabilities. The most prevalent disability among those aged 60 and above is blindness (38.2 percent), while the crippled make up the largest proportion (32.2 percent) of those aged 15 to 59 years and the multiple disabled (42.2 percent) of those aged below 15 years.

Analysis of economic activity of the disabled shows that the largest proportion (35.2 percent) of those aged 12 years and older are not available for work while the smallest (2.8 percent) are seeking work. Of the 2,735 disabled heads of households, close to half (48.2 percent) are employed as family workers while only 1.2 percent are employers. The majority (57.5 percent) of the disabled aged 5 years and older have not completed any level of education and only 0.1 percent have completed higher levels of education.

CHAPTER 11

HOUSEHOLDS AND HOUSING CHARACTERISTICS

11.1 INTRODUCTION

Housing is among man's basic needs. In order to provide adequate housing, it is important to take into consideration the population of the country, and the rate at which it is growing. With the ever increasing number of people to provide for, the availability of adequate housing and standards of living is bound to decline if policy makers do not plan ahead.

During the 1990 census, data on housing characteristics for every housing unit and household was collected. The following information was solicited:-

- Type of structure
- Materials used for roofing, walls and floors
- Water and energy sources
- Type of toilet facilities
- Ownership of housing unit and type of tenancy

The last page of the 1990 Census questionnaire provides more details on the type of questions on household and housing characteristics.

11.2 CONCEPTS AND DEFINITIONS

Household

A group of persons who normally live and eat together. These people may or may not be related to each other. They make common provision for food or other essentials for living and have only one person whom they all regard as the head of household.

Household Composition

Description of the household according to some aspect of its membership, such as age, sex and number.

Housing Unit

An independent place of abode intended for habitation by at least one household. It should have its own door to the outside or a hallway.

Aqua Privy

It is a type of toilet in which water from a tank through a large pipe sweeps away human excreta in a gully that leads to a sewerage system.

Age Specific Headship Rate

Ratio of number of heads of households to the population in a specific age category.

11.3 HOUSING CHARACTERISTICS

The analysis of housing characteristics helps gauge the standard of living of a community. Housing characteristics in this report are analysed in terms of number of rooms by households size, building materials, sources of water supply and energy for cooking and lighting.

Number of rooms per housing unit

The number of rooms includes bedrooms and living rooms. Verandahs, lobbies, kitchen, bathrooms and toilets are not included. If a garage or store-room is large enough to fit a bed for an adult and is used for living purposes, it is treated as a room. In rural areas, several huts belonging to one household are treated as rooms of one housing unit.

Table 11.1 shows that in Zambia, there are 1,327,011 households of which 63 percent are in rural and the remaining 37 percent in urban areas. Among the provinces, Copperbelt has the largest number of households with 236,709 while North-Western Province has the lowest with 73,381.

Table 11.1

Households by Number of Rooms, Rural/Urban and Provinces, (Percent), Zambia, 1990

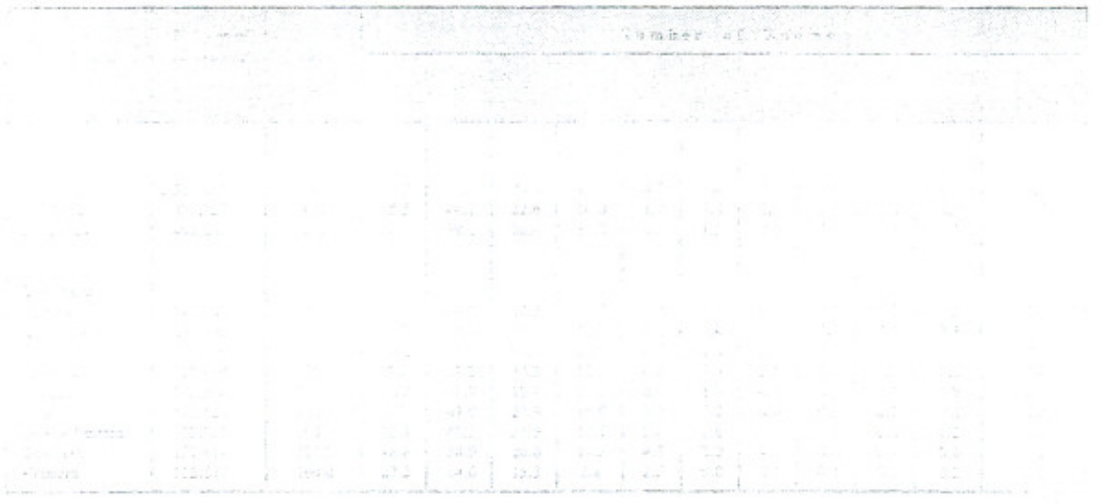
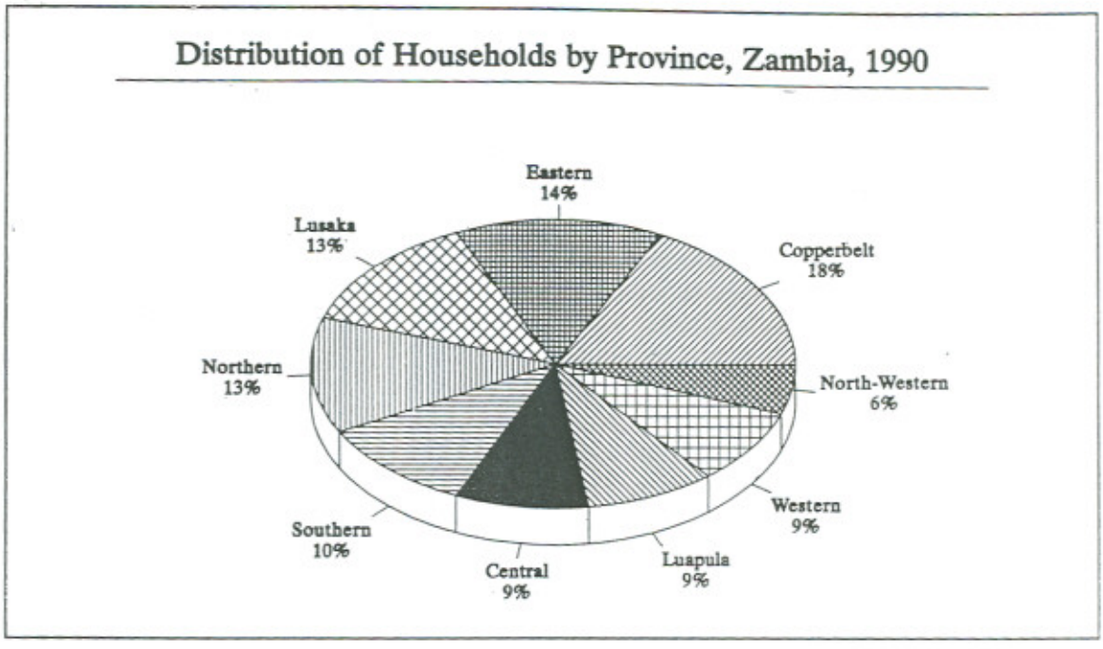


Figure 11 1



The largest proportion of households in the country (42.5%) occupies two-roomed housing units, and the second largest (24%) occupies three-roomed units. Housing units with seven rooms or more are not common. In both rural and urban areas, two roomed housing structures are the most commonly occupied followed by three roomed houses. While two roomed housing structures are the most commonly occupied in all the provinces, the second most commonly occupied are one-roomed structures in Western and Lusaka Provinces and three-roomed ones in the rest of the provinces.

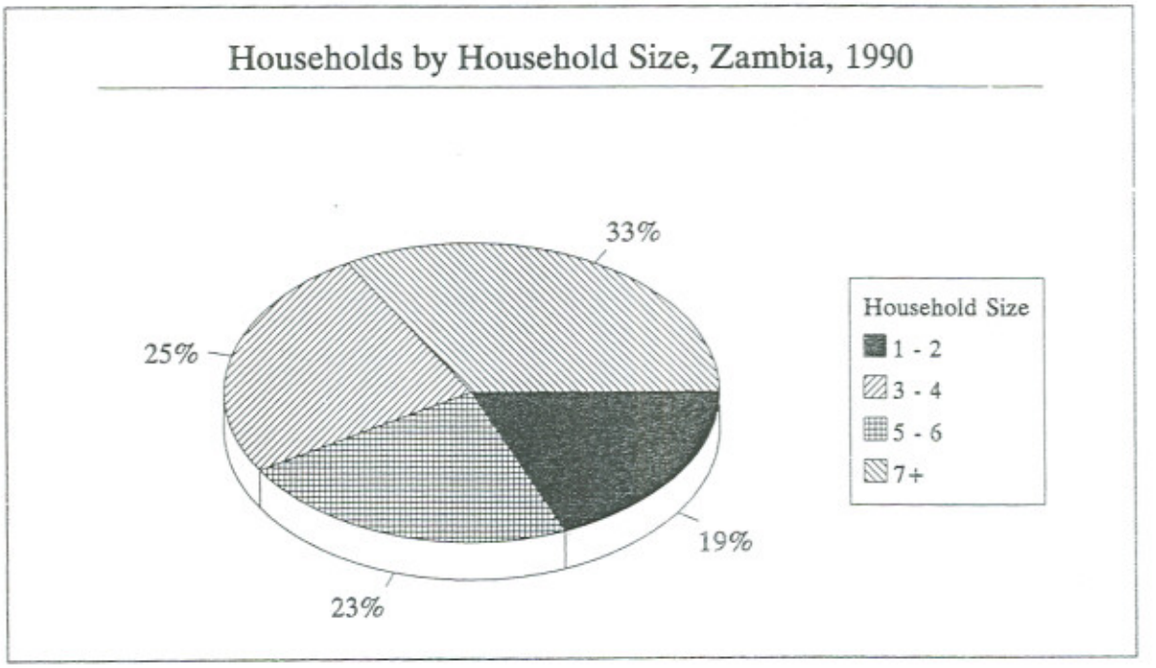
Overcrowding is an apparent feature in Table 11.2 which shows the number of rooms by household size in the country and each province. The table shows that the majority of housing units have at least seven members and of these, most occupy two or three-roomed structures. Of those with five to six members, 44 percent occupy two-roomed structures while only 5 percent occupy housing units of at least 5 rooms, indicating substantial overcrowding. The average number of rooms occupied per household in Zambia is 2.6 while the average number of persons per room is 2.1. This also indicates overcrowding if the ideal number is taken to be two persons per room. In both rural and urban areas, overcrowding is more apparent in households with at least 7 members in which the average number of persons per room is 2.9 in rural and 2.8 in urban areas.

Table 11.2

Households by Household Size, Number of Rooms and Residence, (Percent), Zambia, 1990

Residence and Household Size	Households	Number of Rooms								Average Number of Rooms	Average Persons Per Room
		Total	1	2	3	4	5	6+	Not Stated		
Zambia											
Total	1,327,011	100.0	13.5	42.5	24.0	12.2	4.0	2.8	1.0	2.6	2.1
1-2	250,027	100.0	23.6	50.5	16.4	5.6	1.6	1.2	1.1	2.2	0.7
3-4	336,023	100.0	16.8	49.3	21.7	7.7	2.2	1.4	0.9	2.3	1.5
5-6	299,641	100.0	11.6	43.8	26.5	11.8	3.5	2.0	0.8	2.6	2.1
7+	441,270	100.0	6.5	31.7	28.4	19.6	7.0	5.7	1.1	3.1	2.9
Rural											
Total	835,724	100.0	15.5	44.1	22.6	16.0	3.7	3.1	1.0	2.6	2.0
1-2	171,447	100.0	23.5	51.8	16.3	4.8	1.5	1.0	1.1	2.1	0.7
3-4	225,663	100.0	17.7	50.0	21.4	6.7	2.1	1.2	0.9	2.3	1.5
5-6	188,785	100.0	13.9	44.1	25.6	10.3	3.3	1.9	0.9	2.5	2.2
7+	249,829	100.0	9.3	33.3	25.7	16.2	7.3	6.9	1.3	3.1	2.9
Urban											
Total	491,287	100.0	10.0	39.6	26.4	10.0	4.3	2.8	0.9	2.8	2.1
1-2	78,630	100.0	23.9	47.7	16.6	7.2	1.9	1.5	1.2	2.2	0.7
3-4	110,360	100.0	14.9	48.0	22.2	9.9	2.5	1.7	0.8	2.4	1.4
5-6	110,856	100.0	7.7	43.2	28.1	14.4	3.7	2.2	0.7	2.7	2.0
7+	191,441	100.0	2.8	29.5	31.9	24.0	6.7	4.2	0.9	3.2	2.8

Figure 11.2



Construction materials of walls and roofs

The durability of housing units may be increased by using good quality building materials. These include concrete, iron sheets, tiles, burnt bricks and stone. However, the quality of a building does not only depend on building materials but also on the way the house is built and its age. Low quality in materials include asbestos, pole and dagga, grass etc. Dagga is mixture of mud and grass which is used to fill the space between the poles when making the walls.

Table 11.3

Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), Zambia, 1990

Construction Materials of Walls	Number of H/units	Total	Construction Materials of Roof						
			Concrete/ Cement	Asbestos Sheets	Iron Sheet Corrugated	Grass/ Thatch	Tiles	Other	Not Stated
Burnt Bricks	154,465	100.0	3.6	21.2	37.3	36.6	0.9	0.3	0.1
Mud Bricks	467,195	100.0	0.7	5.1	18.4	74.1	0.1	1.5	0.1
Concrete Blocks	294,566	100.0	2.8	63.7	32.3	0.6	0.3	0.2	0.1
Stone	1,512	100.0	3.4	12.4	22.6	58.7	0.9	0.6	1.5
Iron Sheets	5,707	100.0	2.5	5.0	73.8	12.0	1.2	0.7	4.8
Asbestos/Wood/Hardboard	3,690	100.0	1.5*	34.2	32.2	21.1	0.4	7.3	3.3
Pole and Dagga	330,131	100.0	0.3*	0.6	1.9	96.7	0.1	0.3	0.1
Grass	38,577	100.0	0.6*	0.9	1.6	93.1	0.4	2.2	1.2
Other	252,219	100.0	0.5	2.1	3.8	69.2	0.4	5.8	18.2
Total	1,321,062	100.0	1.4	18.8	19.1	59.0	0.3	0.9	0.5

Note: (*) This combination is unusual. There is a possibility of enumeration errors.

Tables 11.3 and 11.4 show building materials of walls and roofs. See also Figures 11.3 and 11.4. Table 11.3 shows that 59 percent of housing units in the country have thatched roofs. However, only 0.6 percent of housing units with concrete walls have thatched roofs. The majority of these houses have asbestos roofs. Tiles and concrete are not common materials for roofs; they are used in 0.3 and 1.4 percent of the housing units, respectively. More than 90 percent of housing structures with grass or pole and dagga walls have thatched roofs. Close to three-quarters of housing structures with iron sheet walls have iron roofs.

Figure 11.3

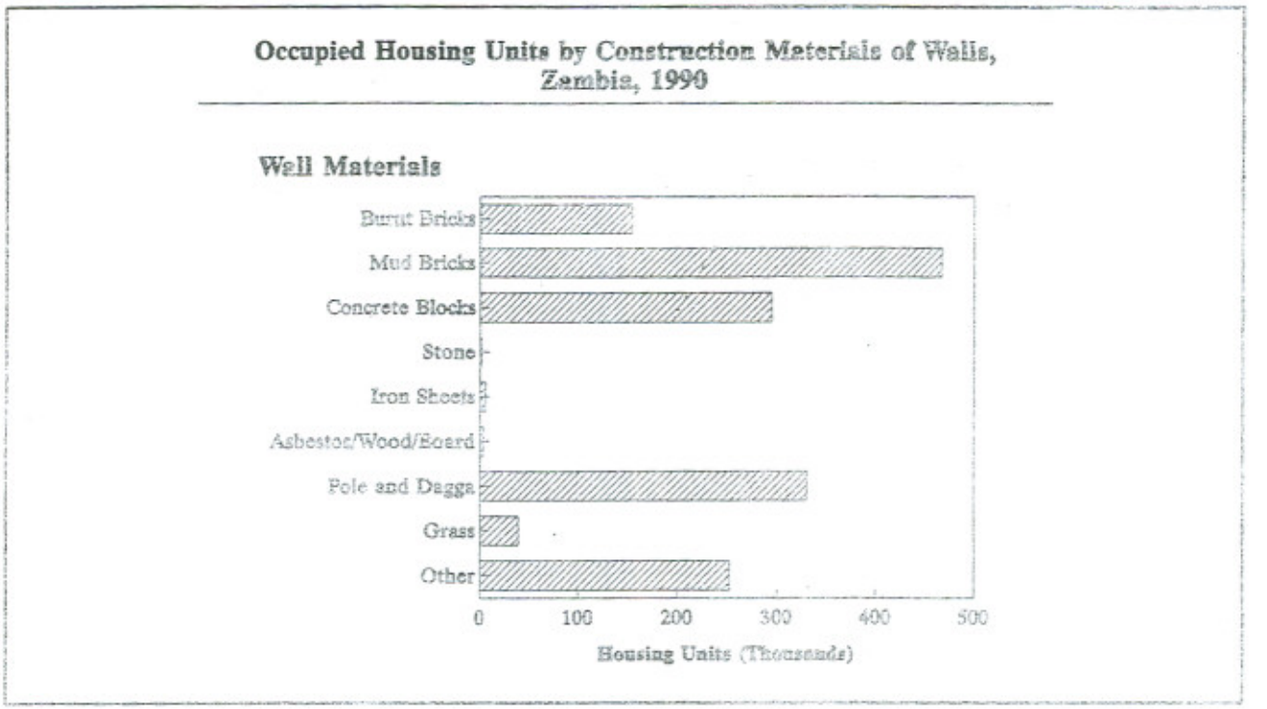


Table 11.4 shows that mud brick walls are the most common followed by pole and dagga walls found in 35 percent and 25 percent of the housing units, respectively. Twenty two percent of the housing units have concrete block walls. Stone, iron sheets, wood and hardboard are not common construction materials for walls. About three-quarters of the houses with asbestos roofs have concrete walls and 10 percent have mud brick walls. Only 0.2 percent of those with thatched roofs have concrete walls. The most common materials of walls for housing structures with tiles for roofs are burnt bricks (39 percent).

Figure 11.4

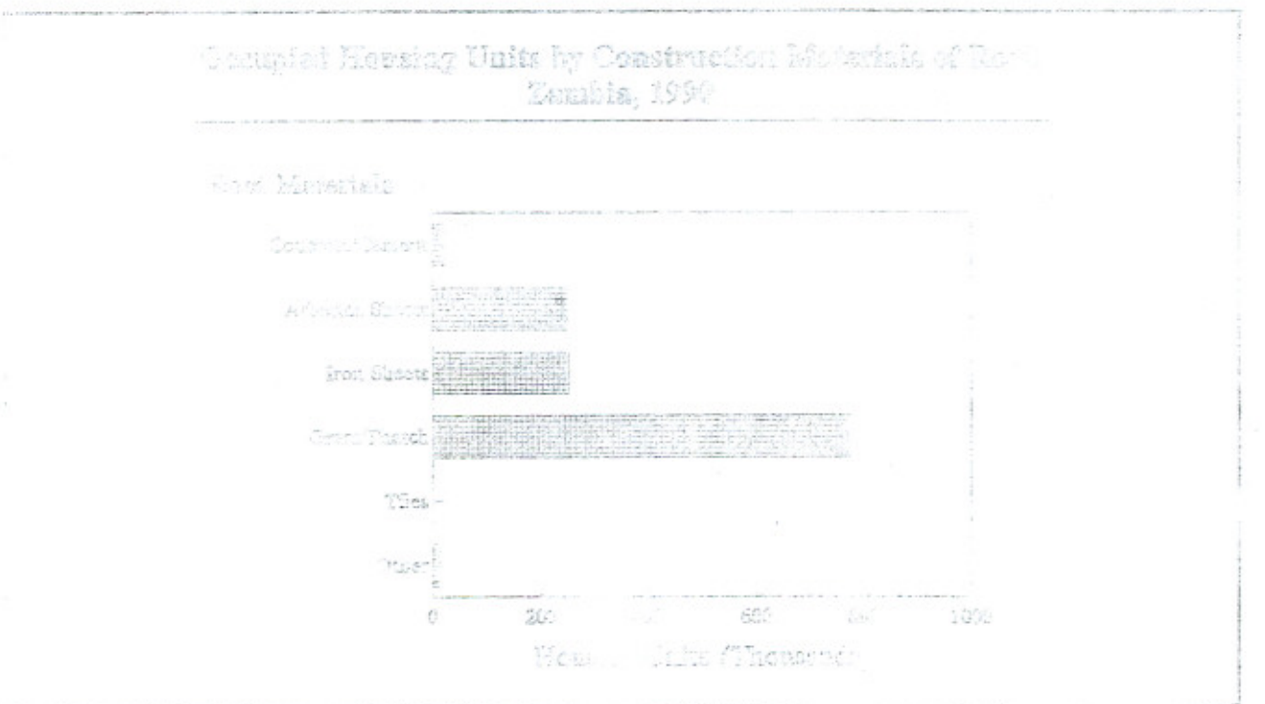


Table 11.4

Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), Zambia, 1990

Construction Materials of Walls	Total	Construction Materials of Roofs						
		Concrete/ Cement	Asbestos Sheets	Iron Sheet Corrugated	Grass/ Thatch	Tiles	Other	Not Stated
Burnt Bricks	11.7	29.9	13.2	22.8	7.3	38.9	3.3	3.3
Mud Bricks	35.4	17.3	9.6	34.1	44.4	14.0	61.2	8.2
Concrete Blocks	22.3	43.8	75.5	37.7	0.2	27.0	4.9	4.7
Stone	0.1	0.3	0.1	0.1	0.1	0.4	0.1	0.3
Iron Sheets	0.4	0.8	0.1	1.7	0.1	1.8	0.4	3.9
Asbestos/Wood/Hardboard	0.3	0.3*	0.5	0.5	0.1	0.4	2.3	1.8
Pole and Dagga	25.0	5.8*	0.7	2.5	41.0	10.8	8.0	4.5
Grass	2.9	1.2*	0.1	0.2	4.6	4.3	7.2	6.8
Other	1.9	0.6	0.2	0.4	2.2	2.4	12.6	66.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	1,321,062	18,802	248,594	252,398	779,032	3,676	11,636	6,924
Rural								
Burnt Bricks	11.3	34.3	23.5	40.0	7.5	15.6	2.9	3.7
Mud Bricks	40.4	27.5	17.4	33.6	42.4	26.2	6.7	11.4
Concrete Blocks	3.5	14.9	51.4	16.7	0.2	6.2	2.1	1.0
Stone	0.1	0.5	0.3	0.2	0.1	0.2	0.1	0.5
Iron Sheets	0.4	1.3	0.4	2.6	0.1	3.3	0.6	3.6
Asbestos/Wood/Hardboard	0.2	0.4*	1.4	0.9	0.1	0.8	5.0	1.3
Pole and Dagga	37.4	16.5*	4.5	5.1	42.6	30.5	18.6	8.5
Grass	4.3	3.3*	0.6	0.4	4.7	11.7	22.6	7.7
Other	2.4	1.3	0.5	0.5	2.3	5.5	31.4	62.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	834,426	6,232	27,378	77,868	714,913	1,191	3,438	3,406
Urban								
Burnt Bricks	12.4	27.7	11.9	15.1	4.1	50.1	3.5	2.8
Mud Bricks	26.8	12.3	8.6	34.3	66.8	8.2	79.9	5.1
Concrete Blocks	54.5	58.1	78.5	47.1	0.7	37.0	6.0	8.3
Stone	0.1	0.2	0.0	0.1	0.1	0.4	0.0	0.1
Iron Sheets	0.6	0.5	0.1	1.3	0.1	1.1	0.3	4.3
Asbestos/Wood/Hardboard	0.3	0.3*	0.4	0.3	0.1	0.1	1.2	2.2
Pole and Dagga	3.7	0.4*	0.2	1.3	23.1	1.4	3.6	0.7
Grass	0.6	0.2*	0.1	0.2	3.3	0.8	0.8	6.0
Other	1.0	0.3	0.2	0.3	1.7	0.9	4.7	70.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	486,636	12,570	221,216	174,530	64,119	2,485	8,198	3,518

Note: (*) A combination of concrete roof with a grass or pole and dagga wall is unusual. There is a possibility of enumeration errors.

Concrete block walls are found in 54.5 percent of the urban housing units compared to 3.5 percent in rural areas. Pole and dagga walls as well as mud brick walls are more common in rural than urban areas. In both rural and urban areas, however, iron sheets, stone, asbestos, wood and hardboard are not common construction materials for walls.

Construction materials of Walls and Floors

Tables 11.5 and 11.6 present data on construction materials of walls and floors. Table 11.5 shows that 60.5 percent of the country's housing units have mud floors. Floors of wood or marble are used in less than 1 percent of the housing units while concrete floors are found in 37 percent.

Table 11.5

Occupied Housing Units by Construction Material of Walls and Floors, (Percent), Zambia, 1990

Construction Materials of Walls	Number of H/units	Total	Construction Material of Floor					
			Concrete/ Cement	Mud	Wood (not Wooden Tile)	Marble	Other	Not Stated
Burnt Bricks	154,465	100.0	63.5	34.5	0.9	0.3	0.5	0.3
Unburnt/Mud Bricks	467,195	100.0	19.4	79.7	0.3	0.2	0.2	0.2
Concrete Blocks/Slab	294,566	100.0	95.6	1.8	1.3	0.2	0.8	0.3
Stone	1,512	100.0	30.9	62.4	0.6	1.7	3.3	1.1
Iron Sheets	5,707	100.0	61.3	33.3	0.9	0.2	3.9	0.4
Asbestos/Hardboard/Wood	3,690	100.0	54.5	37.2	4.8	0.2	2.5	0.8
Pole and Dagga	330,131	100.0	2.2	96.1	0.2	0.2	1.0	0.3
Grass	38,577	100.0	2.0	77.0	0.3	0.4	18.8	1.5
Other	25,219	100.0	6.1	67.2	0.4	0.2	7.5	18.6
Total	1,321,062	100.0	36.8	60.5	0.6	0.2	1.3	0.6

Table 11.6 shows that although pole and dagga walls are generally very common, they are used in only 1.5 percent of the houses with concrete floors as is to be expected since these are unusual combinations. Pole and dagga walls are common in housing units with floors of mud and marble. In housing units with concrete floors, 6 percent have concrete floors, 20 percent have burnt brick walls and 19 percent have mud brick walls.

Table 11.6

Occupied Housing Units by Construction Material of Walls and Floors, (Percent), Zambia, 1990

Construction Materials of Walls	Total	Construction Material of Floor					
		Concrete/ Cement	Mud	Wood (not Wooden Tile)	Marble	Other	Not Stated
Burnt Bricks	11.7	20.2	6.7	18.0	17.4	4.9	4.6
Unburnt/Mud Bricks	35.4	18.7	46.6	16.3	29.7	6.9	12.2
Concrete Blocks/Slab	22.3	58.0	0.7	49.4	22.9	14.0	9.1
Stone	0.1	0.1	0.1	0.1	1.0	0.3	0.2
Iron Sheets	0.4	0.7	0.2	0.6	0.4	1.3	0.3
Asbestos/Hardboard/Wood	0.3	0.4	0.2	2.3	0.3	0.6	0.3
Pole and Dagga	25.0	1.5	39.7	10.4	20.2	19.0	12.2
Grass	2.9	0.1	3.7	1.7	6.7	42.0	6.6
Other	1.9	0.3	2.1	1.2	1.5	11.0	54.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	1,321,062	485,678	799,214	7,713	2,586	17,242	8,629
Rural							
Burnt Bricks	11.3	38.6	7.2	8.9	15.3	2.0	4.4
Unburnt/Mud Bricks	40.4	28.7	43.1	33.2	38.6	6.0	14.8
Concrete Blocks/Slab	3.5	24.7	0.2	14.8	3.6	1.6	1.5
Stone	0.1	0.2	0.1	0.3	1.3	0.3	0.3
Iron Sheets	0.4	1.5	0.2	0.9	0.4	1.0	0.3
Asbestos/Hardboard/Wood	0.2	0.8	0.1	3.3	0.1	0.5	0.3
Pole and Dagga	37.4	4.6	42.9	31.6	30.6	23.8	22.2
Grass	4.3	0.3	4.0	4.6	8.0	52.7	7.6
Other	2.4	0.6	2.2	2.4	2.1	12.1	48.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	834,426	110,320	702,426	2,425	1,611	13,120	4,524
Urban							
Burnt Bricks	12.4	14.8	3.0	22.1	20.8	14.1	4.7
Unburnt/Mud Bricks	26.7	15.7	72.1	8.6	14.9	9.7	9.5
Concrete Blocks/Slab	54.7	67.8	4.1	65.3	54.9	53.6	17.4
Stone	0.1	0.1	0.1	0.0	0.5	0.2	0.0
Iron Sheets	0.6	0.5	0.7	0.5	0.3	2.2	0.3
Asbestos/Hardboard/Wood	0.3	0.3	0.4	1.9	0.5	0.8	0.4
Pole and Dagga	3.7	0.5	16.3	0.6	3.1	3.8	1.3
Grass	0.6	0.1	2.0	0.4	4.5	8.2	5.5
Other	1.0	0.2	1.3	0.6	0.5	7.4	60.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	486,636	375,358	96,788	5,288	975	4,122	4,105

In rural areas, 25 percent of the houses with concrete floors have concrete walls compared to 68 percent in urban areas. In housing units with marble floors, a large proportion has concrete walls in urban than rural areas. About two-thirds of housing units with wooden floors have concrete walls in urban areas compared to 15 percent in rural areas.

The combination of marble floors and pole/dagga walls is unusual. Marble is usually considered to be such an exclusive material that it can very rarely be combined with pole and dagga. The high proportion (20%) of housing units with marble floors and pole/dagga walls could have arisen from a misunderstanding on the part of the enumerator on what a marble floor is.

Water Supply and Sanitation

The availability of clean water supply helps prevent the occurrence of waterborne diseases such as bilharzia, diarrhoea, cholera and dysentery. Piped water, boreholes and protected wells are among the sources of clean water supply. However, in the census questionnaire, protected and unprotected wells as well as boreholes are grouped together, hence, it may be difficult to distinguish between clean and unclean water sources.

Table 11.7 shows the main sources of water supply for Zambia's households in 1980 and 1990. There is a deterioration in the standards of water supply between 1980 and 1990. The proportion of households with access to piped water, inside or outside the housing unit, decreased from 46 percent in 1980 to 35 percent in 1990. In 1980, 31 percent of the households used water from wells or boreholes compared to 37 percent in 1990. There has also been a slight increase in proportion of households using water from rivers and streams between 1980 and 1990.

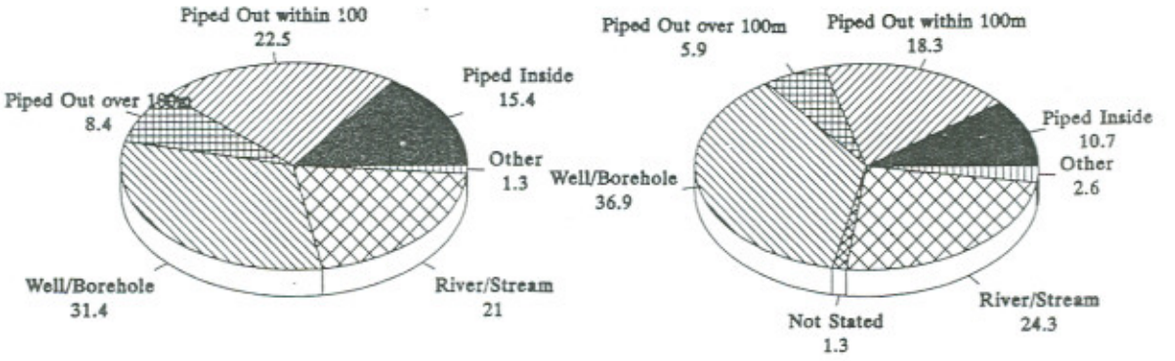
Table 11.7

Households by Main Source of Water Supply by Province, (Percent), Zambia, 1980 and 1990

Main source of water supply	Zambia Total 1980	Residence - 1990											
		Zambia Total	Rural	Urban	Central	C/Belt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
Piped water inside H/unit	15.4	10.7	1.2	26.9	8.6	28.2	2.4	2.3	21.6	3.1	3.4	7.6	2.4
Piped water outside, within 100m	22.5	18.3	3.4	43.7	14.0	34.4	3.9	6.7	46.7	5.9	5.2	18.1	8.6
Piped Water Beyond 100m	8.4	5.9	2.0	12.6	6.6	6.7	2.2	2.9	15.2	3.0	3.0	6.9	4.1
Well/borehole	31.4	36.9	50.9	13.0	52.4	22.9	48.1	43.3	9.9	31.1	63.1	33.7	62.1
River or Stream	21.0	24.3	37.4	2.0	15.9	5.9	36.3	41.1	4.8	54.0	23.7	27.6	15.0
Other	1.3	2.6	4.0	0.3	1.1	0.3	6.3	3.0	0.4	1.9	0.7	4.6	5.8
Not Stated	-	1.3	1.1	1.5	1.4	1.6	0.9	0.7	1.4	1.0	0.1	1.5	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Households	1,128,356	1,327,011	855,724	491,287	119,467	236,709	184,770	115,690	173,684	172,522	73,381	137,911	112,877

Figure 11.5

Households by Main Source of Water Supply, Zambia



In rural areas of the country, the most prevalent sources of water supply are the wells and boreholes which are used by 51 percent of the households while the largest proportion of urban households use piped water outside, within 100 metres radius from the housing unit (44%). Piped water is generally uncommon in rural areas as it is used by only 7 percent of the households. Rivers and streams are more common sources of water in rural than in urban areas. In Copperbelt and Lusaka Provinces, piped water is the most common source of water supply compared to rivers and streams in Northern Province and wells/boreholes in the remaining provinces.

Households drawing water from rivers, streams or wells in areas where pit-latrines are common are vulnerable to various forms of water borne diseases. Seepage containing germs from pit latrines may contaminate water in rivers, streams and wells.

Table 11.8 shows the type of toilet facilities in the entire country, rural/urban areas as well as provinces. The table shows that 53 percent of the country's households use pit latrines, 17 use flush toilets, 0.1 use bucket, 0.6 the aqua-privy, 28 use facilities other than the stated and 2 percent have not stated their facilities.

Table 11.8

Households by Type of Toilet and Residence (Percent), Zambia, 1990

Type of Toilet	1980	Residence - 1990											
		Total	Rural	Urban	Central	C/Belt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
Flush	23.1	16.8	1.6	42.5	13.6	48.7	2.9	3.5	27.3	4.3	4.3	14.2	3.7
Bucket	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.1
Aqua-Privy	2.2	0.6	0.1	1.5	0.2	2.1	0.3	0.2	0.7	0.2	0.1	0.5	0.1
Pit Latrine	45.9	52.7	53.7	51.0	62.1	42.9	38.7	80.0	61.7	78.7	74.4	24.3	22.0
Other	28.5	28.2	42.8	3.4	23.9	4.9	56.5	14.3	9.0	15.0	19.2	59.3	69.6
Not Stated	-	1.6	1.7	1.4	-	1.3	1.6	1.8	1.2	1.6	1.9	1.4	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Households	1,128,356	1,327,007	835,721	491,286	119,464	236,709	184,770	115,690	173,681	172,522	73,381	137,911	112,877

In both rural and urban areas, the largest proportion uses pit-latrines. The second largest uses sources other than th in rural areas and flush toilets in urban areas. The "other" toilet facilities include the bush. The bucket and aqua-pr not common in both rural and urban areas. Flush toilets are much more common in urban than rural areas.

The proportions of households using pit-latrines range from 24 percent in Southern Province to 80 percent in Luapula. T majority of the households in Southern Province use "other" toilet facilities. Flush toilets are common in Copperbelt a Lusaka Provinces, and relatively so in Southern Province compared to the rest of the provinces.

There has been a deterioration in the standard of toilet facilities between 1980 and 1990. The proportion using flush toil declined from 23 percent in 1980 to 17 percent in 1990. Those using pit latrines increased from 46 percent to 53 perce

Domestic Energy

Table 11.9 presents data on sources of energy for cooking. Wood is generally the most common source of cooking ener used by 62 percent of the country's households followed by charcoal which is used by 25 percent and electricity is used 9 percent. The majority of rural households use wood while their urban counterparts mostly use charcoal for cookin Proportions using these sources are 89 and 56 percent, respectively. Gas, paraffin and coal are uncommon sources cooking energy in both rural and urban areas.

Table 11.9

Households by Main Source of Energy used for Cooking and Province, (Percent), Zambia, 1990

Main source of Energy for cooking	Total	Residence		Provinces								
		Rural	Urban	Central	C/Belt	Eastern	Luapula	Lusaka	Northern	North-Western	Southern	Western
Electricity	8.9	0.8	22.7	8.6	21.8	1.4	1.5	20.6	2.1	1.8	7.1	1.4
Gas	0.3	0.3	0.5	0.5	0.4	0.2	0.3	0.6	0.3	0.4	0.4	0.2
Paraffin	2.5	2.0	3.4	2.6	2.1	1.6	2.4	5.6	2.2	1.8	2.1	1.2
Wood	62.2	89.2	16.4	68.4	19.6	93.2	57.3	18.1	86.4	87.3	79.6	92.7
Charcoal	25.1	6.7	56.3	19.3	55.3	3.0	37.3	54.5	8.3	8.1	9.5	1.6
Coal	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.1	0.0
Other	0.4	0.6	0.0	0.0	0.0	0.1	0.7	0.0	0.2	0.2	0.6	2.4
Not Stated	0.5	0.4	0.6	0.5	0.7	0.4	0.3	0.5	0.4	0.4	0.6	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total households	1,326,942	835,648	491,294	119,467	236,709	184,770	115,690	173,641	172,523	73,381	137,911	112,877

In Copperbelt and Lusaka Provinces, charcoal is the most common source of energy for cooking while wood is the most common in the rest of the provinces. Proportions using paraffin range from 1.2 percent in Western Province to 5.6 percent in Lusaka while those using gas range from 0.2 percent in Western and Eastern Provinces to 0.6 in Lusaka.

Table 11.10 shows the proportions of cooking energy sources for 1980 as well as 1990. While the proportion using gas and paraffin has been constant in the intercensal period, there has been very slight changes in proportions using the remaining sources.

Table 11.10

Households by Main Source of Energy for Cooking, (Percent), Rural/Urban, Zambia, 1980 and 1990

Energy Source	Zambia Total		Rural		Urban	
	1980	1990	1980	1990	1980	1990
Electricity	8.8	8.9	4.1	0.8	18.0	22.7
Gas and Kerosene	2.8	2.8	2.4	2.3	3.4	3.9
Wood, Charcoal, Coal	87.5	87.4	92.2	95.7	78.4	72.8
Other	0.9	0.4	1.3	0.6	0.2	0.0
Not stated	_	0.5	-	0.4	-	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Households	1,128,356	1,326,942	727,125	835,648	401,231	491,294

In rural areas, the proportions of households using electricity for cooking has declined from 4 percent in 1980 to 1 percent in 1990, while those using wood, charcoal and coal increased from 92 to 96 percent. The use of gas and kerosene has been more or less stable. In urban areas, the proportion using electricity increased from 18 to 23 percent. This has been mainly at the expense of the use of wood, charcoal and coal whose proportion dropped from 78 to 73 percent.

Table 11.11 shows the sources of lighting energy by province. The table shows that close to three quarters (73.5 percent) of the housing units in Zambia, paraffin is used for lighting. Gas and candle are used in 0.7 and 1.4 percent of the housing units, respectively. Electricity is used in 13.9 percent of the units. In both rural and urban areas, the most prevalent source of lighting energy is paraffin.

Table 11.11

Housing Units by Main Source of Energy Used for Lighting by Province, (Percent), Zambia, 1990

Main source of energy for lighting	Total	Rural	Urban	Provinces								
				Central	C/Belt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
Electricity	13.9	1.8	34.7	13.5	36.2	2.6	3.4	25.5	4.1	4.5	11.6	3.3
Gas	0.7	0.6	0.9	0.8	0.8	0.5	0.7	1.0	0.7	0.6	0.8	0.4
Paraffin	73.5	81.3	60.1	81.3	59.5	82.1	86.1	66.8	83.5	71.3	78.9	57.4
Candle	1.4	0.6	2.8	1.1	1.7	0.4	0.5	4.4	0.6	0.8	1.0	0.8
Other	9.8	15.1	0.8	2.7	1.0	13.8	8.8	1.6	10.5	22.2	6.9	37.4
Not Stated	0.7	0.6	0.8	0.6	0.8	0.6	0.5	0.7	0.6	0.6	0.8	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of H/units	1,321,062	834,426	486,636	119,214	233,468	184,432	115,584	172,969	172,336	73,117	137,198	112,744

The major difference between rural and urban areas is that electricity is used by more than a third of all urban households and by a negligible proportion in rural areas. In rural areas, 15 percent use "other" sources of of lighting energy compared to 1 percent in urban areas. The "other" sources include batteries, wood and solar energy.

Kerosene (Paraffin) is the dominant source of lighting energy in all provinces, while gas and candle are uncommon sources everywhere. The use of electricity for lighting varies substantially, from 3 percent in Eastern Province to 36 percent in Copperbelt Province.

11.4 OWNERSHIP STATUS OF HOUSING UNITS

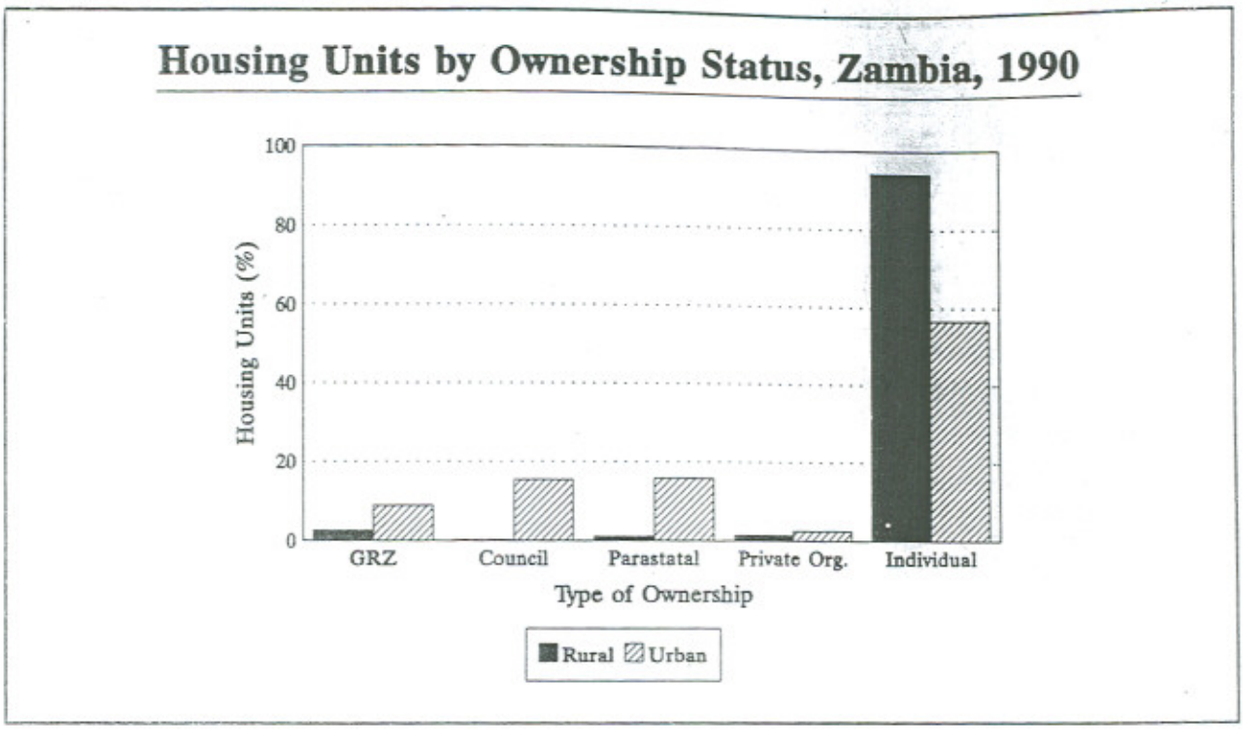
Table 11.12 presents data on ownership status of housing units by residence. The table shows that in the entire country, 80 percent of the 1,321,062 housing units are owned by individuals, 5 percent by the Central Government, 6 percent by the District Council, another 6 percent by Parastatal Organisations and 2 percent by Private Organisations, while the ownership status of 1 percent of the structures is not stated In rural areas, 94 percent of the houses are owned by individuals compared to 57 percent in urban areas. Proportions of housing units owned by the Central Government, District Council, Parastatal and Private Organisations are higher in urban than in rural areas.

Table 11.12

Occupied Housing Units by Ownership Status and Province, (Percent), Zambia, 1990

Ownership Status	Total	Rural	Urban	PROVINCES								
				Central	C/belt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
Central Govt.	4.8	2.5	8.8	6.2	5.2	3.2	2.8	7.7	3.2	4.7	5.6	4.3
District Council	5.8	0.2	15.3	3.7	17.7	1.6	0.9	7.6	1.3	1.4	6.7	0.9
Parastatal	6.4	1.0	15.7	5.5	23.7	0.4	0.7	5.9	1.3	0.8	5.4	0.7
Private Org.	1.7	1.3	2.4	2.4	2.3	0.6	0.4	3.6	0.5	0.8	3.1	0.5
Individual	80.4	94.2	56.7	81.4	49.9	93.5	94.6	74.1	92.9	91.7	78.2	92.8
Not Stated	0.9	0.8	1.1	0.8	1.2	0.6	0.6	1.1	0.8	0.6	1.0	0 8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	1,321,062	834,426	486,636	119,214	233,468	184,432	115,584	172,969	172,336	73,117	137,198	112,744

Figure 11.6



The proportions of housing units owned by individuals range from 50 percent in the Copperbelt to 95 percent in Luapula. The District Councils and Parastatal Organisations own large proportions in the Copperbelt compared to the rest of the provinces.

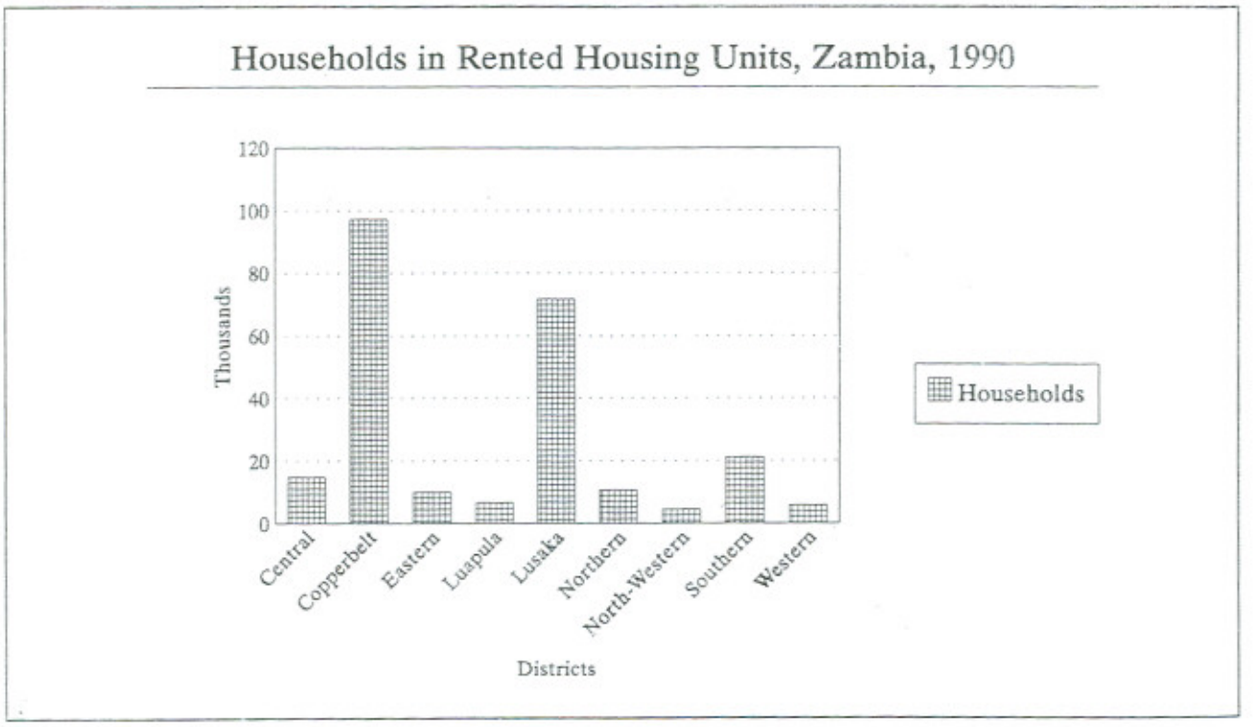
Table 11.13 shows that 242,286 households occupy rented housing units. Of these, 30,497 are in rural and 211,789 in urban areas. The most common landlords in the country are individuals renting out 38 percent while the least common are the Private Organisations which rent out 3 percent. In rural and urban areas, the most common landlords are individuals renting out 50 and 36 percent, respectively.

Table 11.13

Households in Rented Housing Units by Residence and Ownership, (Percent), Zambia, 1990

Residence		Landlord							
		Number of H/holds	Total	Central Government	District Council	Parastatal	Private Organisation	Individual	Not Stated
Zambia									
	- Total	242,286	100.0	11.5	23.1	20.8	2.7	37.9	4.0
	- Rural	30,497	100.0	25.3	2.6	8.7	6.4	49.8	7.2
	- Urban	211,789	100.0	9.5	26.1	22.6	2.1	36.2	3.5
Provinces	Central	14,807	100.0	19.3	17.6	19.1	2.9	36.3	4.8
	Copperbelt	97,310	100.0	5.1	33.8	36.3	1.7	19.7	3.4
	Eastern	9,991	100.0	27.6	17.0	4.2	4.5	42.1	4.6
	Luapula	6,565	100.0	24.8	8.5	5.4	2.9	52.9	5.5
	Lusaka	71,661	100.0	7.6	14.3	8.1	2.4	64.3	3.3
	Northern	10,651	100.0	24.9	11.9	8.4	3.0	45.2	6.6
	North-Western	4,437	100.0	36.7	9.9	7.7	4.1	34.4	7.2
	Southern	21,140	100.0	19.0	27.6	19.5	6.1	23.7	4.1
	Western	5,724	100.0	34.0	7.5	7.0	4.0	40.0	7.5

Figure 11.7



Lusaka has the largest number of households occupying rented housing units, while Western province has the least. In Central, Eastern, Luapula, Lusaka, Northern and Western Provinces, individuals are the most common landlords. Parastatal Organisations are the most common landlords in the Copperbelt, Central Government in North-Western and District Council in the Southern Province. Private Organisations are not common landlords in any of the provinces.

11.5 HOUSEHOLD SIZE AND COMPOSITION

Household Size

Table 11.14 presents data on households by sex of head, household size and province. Male headed households out-number female headed ones in the country as a whole, in rural and urban areas, as well as in each province Proportions of male headed households are smaller than those headed by females for households of size four or less. The opposite holds true for larger households. For instance, among male headed households, 6 percent have one member compared to 17 percent of female headed households. Of the male headed households, 13 percent have at least ten members compared to 6 percent of the female headed households. This pattern is found in all provinces, rural and urban areas.

Table 11.14

Households by Size, Sex of Head and Province, (Percent), Zambia, 1990

Sex of Household Head and Province	Number of H/holds	Total	Household Size									
			1	2	3	4	5	6	7	8	9	10+
Zambia Total												
Male	1,103,088	100.0	5.9	10.5	12.2	12.6	12.0	10.9	9.6	7.7	5.8	12.8
Female	224,010	100.0	16.7	14.1	14.5	13.6	11.6	9.0	6.6	4.7	3.1	6.1
Rural												
Male	678,294	100.0	6.1	11.4	13.3	13.3	12.4	10.8	9.1	6.9	5.0	11.7
Female	157,530	100.0	18.6	15.1	15.1	13.6	11.3	8.5	5.9	4.1	2.6	5.2
Urban												
Male	424,794	100.0	5.6	9.1	10.3	11.5	11.4	11.2	10.3	9.0	7.1	14.5
Female	66,480	100.0	12.2	11.8	13.2	13.5	12.3	10.2	8.3	6.2	4.2	8.1
Central												
Male	101,240	100.0	6.9	9.2	10.4	11.3	11.4	10.7	9.6	8.1	6.5	15.9
Female	18,224	100.0	12.2	11.4	12.2	12.6	11.8	9.9	8.3	6.5	4.4	10.7
Copperbelt												
Male	207,110	100.0	5.5	9.0	9.9	11.1	11.1	10.9	10.4	9.2	7.4	15.4
Female	29,544	100.0	12.6	11.5	12.6	12.9	12.1	10.1	8.4	6.4	4.8	8.7
Eastern												
Male	148,546	100.0	5.2	11.4	13.9	14.0	13.0	11.3	9.5	6.9	4.9	9.9
Female	36,233	100.0	18.0	13.9	14.3	13.6	12.2	9.2	6.5	4.2	2.9	5.2
Luapula												
Male	90,307	100.0	6.5	14.6	15.9	15.0	13.2	11.0	8.5	6.0	3.8	5.4
Female	25,385	100.0	21.0	17.0	17.0	14.3	11.3	7.6	5.1	3.0	1.6	2.1
Lusaka												
Male	151,765	100.0	6.5	10.1	11.5	12.1	11.7	10.9	9.8	8.2	6.3	12.9
Female	21,922	100.0	12.4	11.5	13.1	13.3	12.2	10.5	8.0	6.2	4.1	8.7
Northern												
Male	138,392	100.0	5.2	11.9	14.8	14.4	13.1	11.3	9.4	7.1	4.8	8.0
Female	32,144	100.0	20.2	15.7	16.3	14.3	11.6	8.4	5.4	3.4	2.0	2.7
North-Western												
Male	60,017	100.0	6.6	11.8	12.8	12.9	12.3	10.7	9.0	7.1	5.2	11.6
Female	13,366	100.0	22.5	16.2	14.5	12.8	9.8	7.5	5.3	3.9	2.3	5.2
Southern												
Male	119,542	100.0	6.2	7.8	9.7	10.8	10.8	10.3	9.3	8.0	6.3	20.8
Female	18,377	100.0	12.7	12.0	13.2	13.3	11.5	9.8	7.7	5.9	4.1	9.8
Western												
Male	86,089	100.0	5.5	10.8	12.4	13.3	12.5	10.9	9.2	7.2	5.3	12.9
Female	26,793	100.0	17.5	16.7	16.2	14.2	11.0	8.2	5.5	3.8	2.3	4.6

Table 11.15 shows the average household size for Zambia as well as all the provinces for 1980 and 1990. The average household size increased from 5 in 1980 to 6 in 1990. The household size increased from more in rural than urban areas. In the Copperbelt, Luapula, Lusaka and Northern provinces, the average household sizes remained constant over the 10-year period. In the remaining provinces there has been an increase in average household size. This size is larger for male than female headed households.

Table 11.15

Average Household Size by Residence and Sex of Head, Zambia, 1980 and 1990

Sex of Household Head and Residence	1980	1990
Zambia		
Total	5.0	5.6
Male	5.3	5.8
Female	4.1	4.4
Rural	4.7	5.4
Urban	5.6	5.9
Provinces		
Central	5.7	6.0
Copperbelt	5.7	5.7
Eastern	4.3	5.2
Luapula	4.2	4.2
Lusaka	5.1	5.1
Northern	4.8	4.8
North-Western	4.6	5.3
Southern	5.8	6.6
Western	4.3	5.4

The proportional changes in household sizes between 1980 and 1990 are presented in Table 11.16. The table shows that the proportion of households with a single member declined from 14 percent to 8 percent while that the proportion with more than 4 members increased from 62 to 69 percent.

In both rural and urban areas, there has been a decline in proportions of one-member households during the 1980-90 intercensal period. For households with 2-3 members, there has been a marginal reduction in proportion. In rural areas, the proportion of households with 4 or more members increased by 8 percentage points compared to 4 percentage points in urban areas. The proportion of large households (at least 7 members) increased faster in rural than urban areas but is still significantly higher in urban areas.

Table 11.16

Household Size, (Percent), Rural/Urban, Zambia, 1980 and 1990

Number of Household Members	Zambia Total		Rural		Urban	
	1980	1990	1980	1990	1980	1990
1	13.5	7.7	15.8	8.4	9.4	6.5
2-3	24.5	23.6	26.5	25.7	20.7	20.2
4-6	33.3	35.4	32.9	36.0	34.0	34.3
7+	28.7	33.3	24.8	29.9	35.9	39.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Household Composition

In this section, household composition is described in terms of marital status, educational level of household heads, economically active households members, relationship of household members to household heads and the presence of members below the age of 12 years.

Marital Status of Household Heads

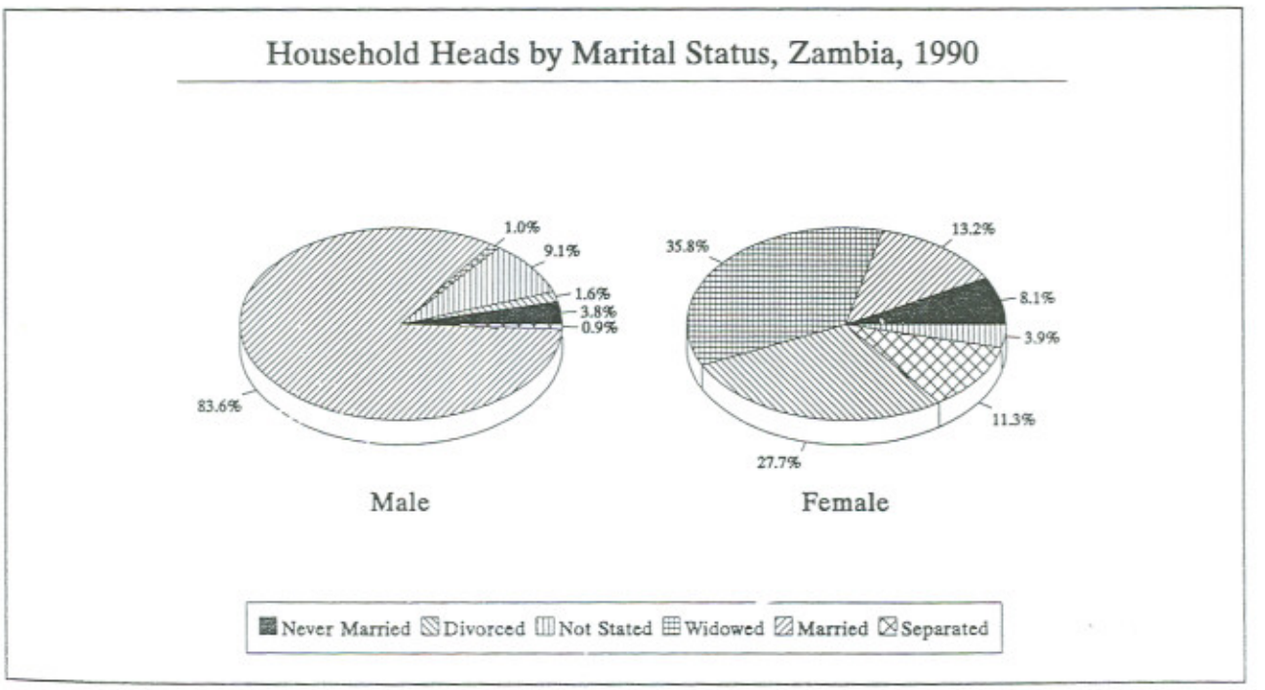
Table 11.17 presents data on marital status of household heads by sex for Zambia as well as for rural and urban areas. The table shows that 84 percent of the male households heads are married compared to 13 percent of female heads,see figure 11.8. Female heads of households are mainly widowed or divorced. Proportions of the separated and never married heads of households are higher for females than for males.

Table 11.17

Household Heads by Marital Status, Sex and Residence, (Percent), Zambia, 1990

Marital Status	Zambia Total		Rural		Urban	
	Male	Female	Male	Female	Male	Female
Never Married	3.8	8.1	2.5	5.1	6.0	15.2
Married	83.6	13.2	82.3	13.2	85.5	13.3
Widowed	1.0	35.9	1.1	39.8	0.9	26.6
Divorced	1.6	27.8	1.6	27.0	1.8	29.5
Separated	0.9	11.3	0.9	11.5	0.9	10.8
Not Stated	9.1	3.7	11.7	3.4	4.9	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Households	1,103,088	224,010	678,294	157,530	424,794	66,480

Figure 11.8



In both rural and urban areas, the vast majority of male heads of households are married. The pattern of the distribution of heads of households by marital status of the entire country is similar to that of both rural and urban areas.

The age structure of household heads by marital status is shown in Table 11.18. The table shows that large proportions of household heads in the age range 12-19 have never been married. However, the proportions of male heads of households aged between 15 and 19 who are married and never been married are very close: 47.3 and 47.0 percent, respectively. At older age groups, small proportions of household heads have never been married. From age 15, male heads of households are concentrated in the "married" category. Large proportions of female heads of households are widowed or divorced especially at older age groups.

Table 11.18

Households Heads by Marital Status, Age and Sex, (Percent), Zambia, 1990

Age of Household Head	Marital Status and Sex of Household Head															
	Number of h/hold heads		Percentage Total		Never Married		Married		Widowed		Divorced		Separated		Not Stated	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
12-14	236	148	100.0	100.0	49.1	77.0	37.3	10.2	0.4	2.0	1.3	2.7	-	2.7	11.9	5.4
15-19	5,445	2,331	100.0	100.0	47.0	51.0	47.3	21.3	0.1	2.8	0.4	12.0	0.5	11.1	4.7	1.8
20-24	72,487	11,104	100.0	100.0	18.0	36.9	74.3	19.9	0.1	4.2	0.7	22.9	0.6	13.8	6.3	2.3
25-29	152,345	18,519	100.0	100.0	9.1	25.1	81.7	17.7	0.2	7.5	1.0	31.6	0.6	15.2	7.4	2.9
30-34	174,754	22,579	100.0	100.0	3.3	12.2	86.4	17.5	0.3	13.2	1.3	37.5	0.8	16.1	7.9	3.5
35-39	134,515	20,938	100.0	100.0	1.6	6.2	87.4	16.3	0.4	19.0	1.5	38.9	0.8	15.6	0.3	4.0
40-44	122,419	24,355	100.0	100.0	1.1	3.3	86.5	16.3	0.7	27.6	1.7	34.9	0.8	13.7	9.2	4.2
45-49	104,164	22,956	100.0	100.0	0.9	2.5	85.6	14.1	0.8	36.1	1.9	30.9	0.9	12.1	9.9	4.3
50-54	93,789	26,257	100.0	100.0	0.8	2.3	84.1	11.8	1.2	45.3	2.0	26.7	1.1	10.0	10.8	4.0
55-59	76,061	20,442	100.0	100.0	0.7	2.1	83.9	10.2	1.4	52.1	2.0	23.5	1.1	8.5	10.9	3.6
60-64	60,251	20,245	100.0	100.0	0.7	2.5	82.1	8.2	2.1	59.0	2.3	19.9	1.2	7.2	11.6	3.2
65 +	102,435	32,466	100.0	100.0	0.8	3.0	81.0	6.5	4.4	66.2	2.7	16.1	1.5	5.7	9.6	2.5
Not Stated	4,148	1,670	100.0	100.0	1.7	3.4	44.1	4.0	1.4	34.4	1.0	14.2	0.8	5.6	51.0	38.4
Total	1,103,088	224,010	100.0	100.0	3.8	8.1	83.6	13.2	1.0	35.9	1.6	27.8	0.6	11.3	9.1	3.7

Education level of households heads

Table 11.19 shows that 73 percent of heads of households have had no schooling or only completed primary education. About a quarter have completed secondary education while 0.4 percent have completed higher levels of education. The proportion with little or no education is particularly high in rural areas and for female heads, both accounting for 86 percent.

In rural areas, the largest proportion of heads has never attended formal schooling while the majority of their urban counterparts have completed secondary education. Most female heads of households have attended formal schooling while the majority of their male counterparts have completed primary education.

Table 11.19

Household Heads by Level of Education Completed and Province, (Percent), Zambia, 1990

Residence	Total	Percentage Total	Level of education				
			No Schooling	Primary	Secondary	Higher	Not Stated
Zambia							
Total	1,327,098	100.0	36.8	36.2	24.4	0.4	2.2
Rural	835,824	100.0	48.1	37.8	11.9	0.1	2.1
Urban	491,274	100.0	17.6	33.5	45.5	1.0	2.4
Sex of Head							
Male	1,103,088	100.0	31.5	38.9	26.9	0.5	2.2
Female	224,010	100.0	62.8	23.1	11.9	0.1	2.1
Provinces							
Central	119,519	100.0	34.0	38.6	25.1	0.4	1.9
Copperbelt	236,700	100.0	19.8	35.7	41.3	0.6	2.6
Eastern	184,782	100.0	53.4	33.2	10.9	0.1	2.4
Luapula	115,692	100.0	40.8	41.7	16.3	0.1	1.1
Lusaka	173,685	100.0	18.7	35.2	42.5	1.5	2.1
Northern	172,536	100.0	44.0	37.1	15.6	0.1	3.2
North-Western	73,383	100.0	55.5	30.5	12.7	0.2	1.1
Southern	137,919	100.0	34.1	39.7	23.1	0.3	2.8
Western	112,882	100.0	52.2	33.7	12.5	0.1	1.5

In Copperbelt and Lusaka Provinces, more than 40 percent of the heads of households have completed secondary education while the largest proportion of their counterparts in Central, Luapula and Southern Provinces have only completed primary education. In Eastern, Northern, North-Western and Western Provinces, the majority of household heads have never had formal education. Proportions of household heads who have completed higher education levels range from 0.1 percent in Eastern, Luapula, Northern and Western Provinces to 1.5 percent in Lusaka.

Usually Economically Active

Table 11.20 shows the distribution of households by household size and number of members usually economically active. In 14 percent of the households in the country, there is no economically active member. Proportions of households without an economically active member range from 26 percent in households with 1 or 2 members to 8 percent in households with 7 or more members. The proportions with no economically active person is considerably lower in urban than in rural areas, with 17 and 7 percent, respectively.

Table 11.20

Households by Size and Number of Members Economically Active, (Percent), Zambia, 1990

Residence and Household Size	Households	Total	Members usually economically active						
			0	1	2	3	4	5	6+
Zambia									
Total	1,327,098	100.0	13.7	46.2	22.4	9.0	4.3	2.1	2.3
1-2	249,964	100.0	25.6	59.5	14.9	-	-	-	-
3-4	336,005	100.0	15.2	52.6	23.9	7.0	1.4	-	-
5-6	299,655	100.0	11.3	46.4	25.6	10.3	4.4	1.7	0.3
7+	441,474	100.0	7.5	33.8	23.3	14.6	9.0	5.2	6.7
Rural									
Total	835,824	100.0	17.4	41.3	22.0	9.0	4.8	2.5	3.0
1-2	171,399	100.0	30.7	54.4	14.9	-	-		-
3-4	225,678	100.0	18.4	47.0	25.7	7.3	1.6	-	
5-6	188,895	100.0	14.2	40.6	26.0	11.4	5.3	2.1	0.4
7+	249,952	100.0	9.8	27.7	20.5	14.9	10.5	6.8	9.8
Urban									
Total	491,274	100.0	7.4	54.7	23.0	8.8	3.6	1.4	1.1
1-2	78,565	100.0	14.5	70.7	14.8	-	-	-	-
3-4	110,327	100.0	8.5	63.9	20.1	6.3	1.2	-	-
5-6	110,860	100.0	6.4	56.5	24.9	8.3	2.8	0.9	0.2
7+	191,522	100.0	4.5	41.8	26.8	14.2	6.9	3.2	2.6

Relationship to household head

Table 11.21 shows the relationship of household members to household heads for the country as well as rural and urban areas. The table shows that out of 998,217 household heads with spouses, 96 are in monogamous unions and 4 percent have two or more spouses. The proportion of polygamous union is 1.8 percent in urban areas and 6 percent in rural areas. The largest proportion of households in which there are the head's own sons or daughters have at least six children making up 23.4 percent. Over half of the household heads living with step sons or daughters have only one step child. The majority of household heads living with unrelated members of the household live with only one such person.

Table 11.21

Households by Relationship to Household Head and Number of Persons, (Percent), Zambia, 1990

Relationship to Head and Residence	Number of Households	Total	Number of Persons					
			1	2	3	4	5	6+
Zambia Total								
Spouse	998,217	100.0	95.6	3.6	0.6	0.2	0.0	0.0
Own son/daughter	1,032,148	100.0	18.8	17.8	15.6	13.4	11.0	23.4
Step son/daughter	61,759	100.0	51.6	22.5	11.7	6.3	3.5	4.4
Other relatives	560,714	100.0	41.3	23.4	13.4	8.1	4.9	8.9
Unrelated	43,246	100.0	62.5	17.3	7.3	3.9	2.1	6.9
Not stated	4,854	100.0	61.0	11.3	6.4	4.2	3.1	14.0
Rural								
Spouse	625,215	100.0	94.0	4.8	0.9	0.2	0.1	0.0
Own son/daughter	645,774	100.0	20.0	18.3	15.8	13.3	10.7	21.9
Step son/daughter	45,274	100.0	50.8	22.6	11.9	6.5	3.6	4.6
Other relatives	316,805	100.0	41.3	21.9	12.9	8.1	5.2	10.6
Unrelated	23,545	100.0	61.3	18.1	7.8	4.2	2.1	6.5
Not stated	2,776	100.0	59.2	12.9	7.0	4.0	3.7	13.2
Urban								
Spouse	373,002	100.0	98.2	1.6	0.2	0.0	0.0	0.0
Own son/daughter	386,374	100.0	17.1	16.9	15.2	13.5	11.5	25.8
Step son/daughter	16,485	100.0	53.7	22.1	11.2	6.0	3.2	3.8
Other relatives	243,909	100.0	41.3	25.3	14.1	8.1	4.6	6.6
Unrelated	19,701	100.0	63.9	16.4	6.6	3.5	2.1	7.5
Not Stated	2,078	100.0	63.5	9.1	5.7	4.3	2.4	15.0

In rural and urban areas, the pattern of the distribution of households by relationship of household head to household members is similar to that of the country as a whole. The majority of heads of households, for instance, are in monogamous unions in both rural and urban areas.

Children Below 12 years of Age

Table 11.22 shows that one quarter of male heads of households have no child below the age of 12, compared to 37 percent of female heads. Of the male heads, 24 percent have at least four children below the age of 12 years compared to 12 percent of females. In both rural and urban areas, as well as in all provinces, male headed households tend to have more children than female headed ones. Proportions are higher in female headed households for households with none or one member below 12 years of age than for male headed households. The opposite holds true for households with more than two children.

Table 11.22

Households by Sex of Head, Number of Members Below 12 Years of Age and Province, (Percent), Zambia, 199

Sex of Household Head and Residence	Number of households	Members below 12 years of age					
		Total	0	1	2	3	4+
Zambia Total							
Male	1,103,088	100.0	24.8	17.7	17.9	15.9	23.7
Female	224,010	100.0	37.2	20.7	17.7	12.3	12.1
Rural							
Male	678,294	100.0	25.5	18.3	18.0	15.5	22.7
Female	157,530	100.0	39.1	20.3	17.1	11.9	11.6
Urban							
Male	424,794	100.0	23.7	16.6	17.8	16.6	25.3
Female	66,480	100.0	32.9	21.8	18.9	13.2	13.2
Central							
Male	101,271	100.0	25.5	15.8	16.8	15.5	26.4
Female	18,248	100.0	33.6	18.5	17.6	13.4	16.9
Copperbelt							
Male	207,160	100.0	23.9	16.1	17.3	16.4	26.3
Female	29,540	100.0	34.5	20 5	18.1	13.0	13.9
Eastern							
Male	148,546	100.0	24.2	19.4	19.1	16.4	20.9
Female	36,236	100.0	38.2	20.0	17.4	12.6	11.8
Luapula							
Male	90,307	100.0	29.4	20.3	18.3	14.8	17.2
Female	25,385	100.0	42.1	21.2	16.9	11.2	8.6
Lusaka							
Male	151,764	100.0	25.5	17.3	17.9	16.4	22.9
Female	21,921	100.0	32.8	21.9	18.8	13.1	13.4
Northern							
Male	138,392	100.0	24.3	19.6	18.6	16.2	21.3
Female	34,144	100.0	40.5	20.5	17.4	11.6	10.0
North-Western							
Male	60,017	100.0	27.1	17.6	17.6	15.3	22.4
Female	13,366	100.0	43.4	19.7	15.5	10.6	10.8
Southern							
Male	119,542	100.0	21.2	14.7	16.5	15.6	32.0
Female	18,377	100.0	31.0	20.5	18.0	13.7	16.8
Western							
Male	86,089	100.0	25.6	19.2	18.9	15.7	20.6
Female	26,793	100.0	37.4	22.9	18.7	11.2	9.8

Age Specific Headship Rates

The rate of household formation is shown in Table 11.23. The age specific headship rate increases with increasing age. This shows that there is a rise in the proportion of people who become self sufficient to form their own households as age increases. Between age groups 15-19 years and 30-34 years, there is a steep rise in headship rates for males in all the provinces. After age 34, the increase is gradual. At age groups 50-54 and 55-59 years in Zambia for males, headship rates of 1000.0 imply that all males in these age groups are household heads. Headship rates for females are lower than those of males in all provinces and in all groups.

Table 11.23

Age Specific Headship Rates by Sex and Province, Zambia, 1990

Age Group	Province and Sex											
	Zambia	Zambia Rural	Zambia Urban	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North-Western	Southern	Western
Male												
15-19	1.2	1.4	1.1	1.2	0.8	1.4	1.9	1.1	1.7	1.4	1.0	1.0
20-24	22.0	26.7	21.0	18.2	15.1	27.3	36.1	18.6	32.9	27.1	20.3	18.9
25-29	61.4	66.2	62.5	53.2	53.0	68.2	79.4	57.0	79.3	67.4	58.2	56.3
30-34	83.0	84.4	100.0	75.1	78.5	86.6	95.3	82.7	96.6	85.5	79.1	77.4
35-39	91.7	92.6	100.0	85.8	88.9	94.1	100.0	91.2	100.0	95.0	88.0	86.8
40-44	96.8	98.5	100.0	91.8	93.5	100.0	100.0	95.1	100.0	100.0	93.5	92.7
45-49	99.9	100.0	100.0	94.7	96.0	100.0	100.0	97.5	100.0	100.0	97.6	96.9
50-54	100.0	100.0	100.0	96.2	96.2	100.0	100.0	97.2	100.0	100.0	100.0	99.1
55-59	100.0	100.0	100.0	96.9	95.5	100.0	100.0	96.8	100.0	100.0	100.0	100.0
Female												
15-19	0.5	0.6	0.3	0.4	0.3	0.4	1.1	0.3	0.8	0.7	0.2	0.8
20-24	2.9	3.0	2.8	2.4	2.3	2.5	5.5	2.4	4.2	3.3	2.0	3.8
25-29	6.5	6.1	7.0	5.6	5.5	5.7	10.4	6.6	8.7	6.5	4.5	7.9
30-34	10.3	9.8	11.0	8.8	8.8	10.0	15.1	11.3	13.5	10.2	6.9	11.6
35-39	14.0	13.3	14.8	13.0	12.6	13.6	19.1	15.0	16.8	11.7	9.8	15.5
40-44	17.5	17.0	18.4	16.2	15.9	18.0	24.1	18.0	21.1	15.2	12.4	18.0
45-49	20.9	20.7	21.4	18.9	19.7	22.4	27.6	20.4	25.5	18.3	14.4	20.8
50-54	26.3	26.2	26.6	24.2	25.5	28.0	34.6	25.1	31.4	22.7	19.2	24.8
55-59	30.7	30.9	30.0	27.7	29.3	32.3	41.6	26.7	37.4	26.1	23.0	30.4

In the provinces, proportions of the population that comprise heads of households aged between 15 and 19 range from 0.6 percent in Copperbelt and Southern provinces to 1.5 in Lusaka Province. Social and economic factors do not offer avenues for setting up households especially at low age groups, hence, very small proportions of population become heads of households at low age groups.

11.6 SUMMARY

Analysis of households and housing characteristics in Zambia reveals that 42 percent of the households occupy two roomed housing units. Overcrowding is generally more apparent in urban than rural areas since the average number of persons per room is higher in urban than rural areas. The most common construction materials of roofs, walls and floors are grass, mud bricks and mud, used in 59, 35 and 61 percent of the housing units, respectively.

The analysis further shows that generally, households in Zambia mainly depend on wells, boreholes, rivers and streams for their water (61 percent). Urban households have better accessibility (83 percent) to piped water than rural households (7 percent). Pit latrines are the most common sources of toilet facilities except in the Copperbelt (42.9 percent), Eastern (38.7 percent), Southern (24.3 percent) and Western Provinces (22.0 percent). Wood (62 percent) and paraffin (kerosene - 74 percent) are the most common sources of cooking and lighting energy, respectively.

Slightly over four-fifths of the housing units in Zambia are owned by individuals. Individuals own a larger share in rural than in urban areas. Although disparities in ownership of housing units between individuals and other owners are highly pronounced, they are less so, for the units that are rented out.

Male headed households are larger and more than female headed households. Male heads of households also have a tendency of having more children than their female counterparts. The majority of male heads of households are married (84 percent) while most of their female counterparts are either divorced or widowed (64 percent). The proportion of household heads in the country declines as their level of education increases. In urban areas, however, the largest proportion have completed secondary education while the second largest have only completed primary education. Headship rates increase with increasing age. Between age group 15-19 and 20-24, there is a sharp rise in rates for males but after age 34, rates begin to increase gradually. For females, headship rates increase gradually with increasing age.

REFERENCES

Agriculture, Ministry of (1994): 1989/90 Agriculture Statistics Bulletin, Statistics Section, Planning Division, Printed by Central Statistics Office, P.O. Box 31908, Lusaka, Zambia.

Bureau of the Census (1979): Popstan: "A Case Study for the 1980 Censuses of Population and Housing, Part E" Washington D.C. USA.

Bureau of the Census (1989): "Surveys on Economically Active Population, Employment, Unemployment and Underemployment: A Manual on Concepts and Methods", Paper presented at ILO Conference, Geneva, Switzerland.

Central Statistical Office (1973): Census of Population and Housing 1969, Final Report, Vol II(a): Central Province, P.O. Box 31908, Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1973): Census of Population and Housing 1969, Final Report, Vol I: Total Zambia, P.O. Box 31908, Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1984): Selected Socio-Economic Indicators, P.O. Box 31908, Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Vol I. "Administrative Report", P.O. Box 31908, Lusaka, Printed by the CSO, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Analytical Report, Vol II. "Demographic and Socio-Economic Characteristics of Zambia Population", P.O. Box 31908, Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Analytical Report, Vol III. "Major Findings and Conclusions", P.O. Box 31908, Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Analytical Report, Vol IV. "Fertility and Mortality Levels and Trends" P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Analytical Report, Vol V. "Demographic Projections" P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Vol I. "General Population and Migration Tables" P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Vol 2. "Socio-Economic Tables", Parts 1 and 2, P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1985): 1980 Population and Housing Census of Zambia, Vol 3. "Fertility Tables", P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1986): Labourforce Survey, 1986 , P.O. Box 31908 Lusaka, Printed by the Government Printers, Lusaka, Zambia.

Central Statistical Office (1990): 1990 Population and Housing Census of Zambia, "Preliminary Report", P.O. Box 31908 Lusaka, Printed by Central Statistics Office, Lusaka, Zambia.

Central Statistical Office (1990): 1990 Population and Housing Census of Zambia, "Enumerators Instructions Manual", P.O. Box 31908 Lusaka, Printed by Centra' Statistics Office, Lusaka, Zambia.

Central Statistical Office (1991): 1990 Population and Housing Census of Zambia, "Draft Administrative Report", P.O. Box 31908 Lusaka, Printed by Central Statistics Office, Lusaka, Zambia.

Central Statistical Office (1994): National Census of Agriculture (1990/92) "Census Report (Part I)" P.O. Box 31908 Lusaka, Printed by Central Statistics Office, Lusaka, Zambia.

Central Statistical Office (1994): "Provincial Profile of Matebeleland North", Harare, Zimbabwe.

Central Statistical Office (1992): Country Profile - 1992, P.O. Box 31908 Lusaka, Printed by Central Statistics Office, Lusaka, Zambia.

Central Statistical Office (1993): "Mineral and Electricity Production Statistics Quarterly Bulletin" Unpublished report, P.O. Box 31908, Lusaka, Zambia.

Central Statistical Office (1993): Priority Survey I - 1991 Report, Social Dimensions of Adjustment (SDA), P.O. Box 31908, Lusaka, Printed by Co-operative College, Lusaka, Zambia.

Central Statistical Office (1986): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.I, "Evaluation of Data", Rose Hill, Mauritius.

Central Statistical Office (1986): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.II, "Education : Characteristics, Prospects and some Implications", Rose Hill, Mauritius.

Central Statistical Office (1986): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.III, "Households and Housing Needs: Estimates and Implications", Rose Hill, Mauritius.

Central Statistical Office (1987): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.IV, "Economic Activity: Characteristics and Prospects", Rose Hill, Mauritius.

Central Statistical Office (1987): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.V, "Population Distribution and Migration", Rose Hill, Mauritius.

Central Statistical Office (1989): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.VII, "Fertility", Rose Hill, Mauritius.

Central Statistical Office (1988): 1983 Housing and Population Census of Mauritius, Analysis Report Vol.VIII, "Rodrigues: A Population Profile", Rose Hill, Mauritius.

Coale, A. & Demeny, D. (1966): Regional Model Life Tables and Stable Populations, Princeton University Press, New Jersey, USA.

Education, Ministry of (1988): Annual Report for the year 1987, Printed by Printing Services, Lusaka, Zambia.

Education, Ministry of (1988): Educational Statistics - 1982, Printed by Printing Services, Lusaka, Zambia.

Education, Ministry of (1991): Educational Statistics, 1986, Development Planning and Research Unit, P.O. Box 50464, Lusaka, Zambia.

Education, Ministry of (1987): Educational Statistics, 1984, Development and Planning Unit, P.O. Box 50464, Printed by Printing Services, Educational Services Centre, Lusaka, Zambia.

Education, Ministry of (1987): Annual Report - 1986, Department of Technical Education and Vocational Training, Printed by Printing Services, Educational Services Centre, Lusaka, Zambia.

Education, Ministry of (1987): Educational Statistics, 1983, Development and Planning Unit, P.O. Box 50093, Printed by Printing Services, Educational Services Centre, Lusaka, Zambia.

Education, Ministry of (1982): Educational Statistics, 1980, Development and Planning Unit, P.O. Box 50093, Printed by Printing Services, Educational Services Centre, Lusaka, Zambia.

ECA/RIPS (1989): Workbook on Demographic Data Evaluation and Analysis, Based on ECA sub-Regional Training Workshop for Anglophone Countries held at RIPS, Accra, 1-19 August, 1988, Addis Ababa, Ethiopia.

Etiene van de Walle (1982): Multilingual Demographic Dictionary, English Section, IUSSP, rue des Augustins, 34-4000 Liege, Belgium.

Health, Ministry of (1990): Bulletin of Health Statistics, 1987-1988, Major Health Trends 1978-1988, Health Information Unit, P.O. Box 30205, Lusaka, Printed by Co-operative College, Lusaka, Zambia.

Health, Ministry of (1989): Bulletin of Health Statistics, 1985-1986, Major Health Trends 1976-1986, Health Information Unit, P.O. Box 30205, Lusaka, Printed by Co-operative College, Lusaka, Zambia.

Health, Ministry of (1982): Country Health Profile 1978, Planning Unit, P.O. Box 30205, Lusaka, Printed by Government Printers, Lusaka, Zambia.

Health, Ministry of (1990): Health Facilities in Zambia, 1990, Health Information Unit, P.O. Box 30205, Printed by Co-operative College, Lusaka, Zambia.

Kelly, M.J. (1991): "Education in a Declining Economy, The Case of Zambia - 1975-1985", EDI Development Policy Case Series, Analytical Case Studies, Number 8, The World Bank, 1818 H Street, N.W. Washington, D.C. 20433, USA.

Mitchell (1965) The Rhodes-Livingstone Journal, Human Problems in British Central Africa. "An Estimate of Fertility Among Africans on the Copperbelt of Northern Rhodesia". (University of Zambia, Manchester University Press).

NCDP, Ministry of (1988): New Economic Recovery Programme, Interim National Development Plan, Progress Report No.2, P.O. 50268, Lusaka, Printed by Government Printers, Lusaka, Zambia.

NCDP, Ministry of (1989): New Economic Recovery Programme, Fourth National Development Plan, 1989-1993, Vol II. P.O. Box 50268, Lusaka, Zambia. Printed by the Government Printers.

NCDP, Ministry of (1993): Economic Review - January - June, 1993, P.O. Box 50268, Lusaka, Zambia. Printed by the Government Printers.

NCDP, Ministry of (1989): Zambia's National Population Policy, P.O. Box 50268, Lusaka, Zambia. Printed by the Government Printers.

NCDP, Ministry of (1989): Economic Report 1989, P.O. Box 50268, Lusaka, Zambia. Printed by the Government Printers

Newell, Colin (1988): Methods and Models in Demography, Belhaven Press, A division of Printer Publishers, London, UK.

McGirr, N. & Pinal, J. (1985): Micro-Computer Programs for Demographic Analysis (MCPDA), (MS-DOS Version), Demographic Data for Development, Institute for Resource Development at Westinghouse , P.O. Box 866, Columbia, MD.21044, USA.

Roland Pressat (1985): The Dictionary of Demography, Christopher Wilson (eds.) Basil Blackwell Ltd. 432 Park Avenue South, Suite 1503, New York 10016, USA.

Shryock, S. & Siegel, S. (1976): Studies in Population, "The Methods and Materials of Demography", Condensed Edition, Academic Press, INC., 1250 Sixth Avenue, San Diego, California 92101, USA.

United Nations (1968): "A System of Nations Accounts" , Studies in Methods, Series F. No. 2, Rev.3 New York, USA.

United Nations (1983): "Indirect Techniques for Demographic Estimation" , Population Studies, No.81, Department of International Economic and Social Affairs.

United Nations (1984): "Handbook of Household Surveys", Revised Edition, Studies in Methods, Series F No. 31, New York, USA.

United Nations (1988): Population Studies, No.104, "MortPak-Lite, The United Nations Software Package for Mortality Measurement", Department of International Economic and Social Affairs, ST/ESA/SER.A/104.

APPENDIX I

KEY PERSONS INVOLVED IN THE 1990 CENSUS ANALYSIS

SECRETARIATE

Mr. David S. Diangamo
Mr. Emmanuel .M. Silanda
Mr. Modesto F.C. Banda
Mr. Kumbutso Dzekedzeke
Mr. Richard Zulu
Mr. Patrick M. Chewe
Ms. Margaret Tembo

ANALYSTS

Mr. Modesto F. C. Banda
Mr. Richard Zulu
Ms. Margaret Tembo
Mr. Patrick M. Chewe
Mr. Gandson Moyo
Ms. Sheila M. Shimwambwa
Ms. Loveness Maambo
Mr. Emmanuel M. Silanda
Ms. Nchimunya Nkombo

EDITORS

Mr. Kumbutso Dzekedzeke
Ms. Margaret Tembo
Mr. Richard Zulu
Mr. Patrick M. Chewe
Mr. Ackim T. Jere
Mr. Alfred M. Kaili

CONSULTANTS

Dr. Helge Brumborg
Mr. Moulie A. Gibril
Mr. Anders Falnes
Mr. Halvard Skiri

PROGRAMMERS

Mr. Keith Chipako
Mr. Martin Kakar (UNFPA - DPA)
Mr. Robert Kaonga
Mr. Chrispin Sapele
Mr. George Namasiku
Mr. Lackson Mitti
Mr. Elija Kashona
Ms. Samantha Mulendema
Mr. Matthews Muvombo

DESKTOP SPECIALISTS

Mr. Anthony M. Nkole
Mr. Webster S. Chileshe

APPENDIX II

STRICTLY CONFIDENTIAL

CENTRAL STATISTICAL OFFICE
P.O. BOX 31908,
LUSAKA

REPUBLIC OF ZAMBIA

QUESTIONNAIRE SERIAL NO:

FORM C P H A 9 0 .0 1

QUESTIONNAIRE NO ☐☐ OF ☐☐

1990 CENSUS OF POPULATION, HOUSING AND AGRICULTURE

QUESTIONNAIRE IDENTIFICATION	
1. PROVINCE NAME	☐ 1
2. DISTRICT NAME	☐☐ 2 - 3
3. CSA NUMBER	☐☐☐ 4 - 6
4. RURAL/URBAN	☐ 7
5. SEA NUMBER	☐ 8 CD ☐ 9
6. CENSUS BUILDING NUMBER (CBN)	☐☐☐ 13 - 14
7. HOUSING UNIT NUMBER (HUN)	☐☐
8. HOUSEHOLD NUMBER (HHN)	☐ 15
AREA IDENTIFICATION	
9. VILLAGE/LOCALITY NAME	
10. RESIDENTIAL ADDRESS/VILLAGE NAME	
11. CHIEF'S AREA	☐☐☐ 16 - 18
12. WARD	☐☐ 19 - 20
13. INSTITUTION/COLLECTIVE QUARTER	☐ 21

ASSIGNMENT RECORD		INTERVIEW STATUS
Name	Date	1 - Interview completed (Occupied) 2 - Non - contact (Occupied) 3 - Not Interviewed (Vacant)- Go to H-1 on page 9 4 - Non-residential - Go to H - 1 on page 9
Enumerator	Completed	
Supervisor	Checked	
Coder	Coded	
Editor	Edited	☐ 22

SUMMARY COUNT
(DEFACTO POPULATION CODE 1 AND 2 OF P-3)

CODE	MALE	FEMALE	TOTAL
1			
2			
TOTAL			

RECORD TYPE		FOR ALL PERSONS									
		GENERAL CHARACTERISTICS									
	SERIAL NUMBER	NAME (a) What is the name of the head of household? (b) What are the names of persons who spent last night here (other than the head of household)? (c) What are the names of usual household members who didn't spend last night here (other than the head of household)?	MEMBERSHIP STATUS Is.....a 1- Usual member present last night ? 2- Visitor ? 3- Usual member absent? (Enter Code)	RELATIONSHIP What is.....'s relationship to the head of h/hold? 1- Head 2- Spouse 3- Own Son/daughter 4- Step Son/daughter 5- Other relative 6- Unrelated (Enter Code)	SEX What is.....'s sex ? 1 - Male 2 - Female	AGE What is.....'s age ? (Enter age in completed year or '00' if less than 1 year)	DISABILITY Is..... (a) BLIND ? 1 - Yes 2 - No (Enter Code)	(b) DEAF/DUMB? 1 - Yes 2 - No (Enter Code)	(c) CRIPPLED? 1 - Yes 2 - No (Enter Code)	(d) MENTALLY/ RETARDED? 1 - Yes 2 - No (Enter Code)
	P 1	P - 2	P - 3	P - 4	P - 5	P - 6	P - 7				
23	24 25		26	27	28	29 - 30	31	32	33	34	
P	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	0										
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	0										

FOR ALL PERSONS					
GENERAL CHARACTERISTICS					
SERIAL NUMBER	MIGRATION				
	Where was.....born ?		What is.....'s country of citizenship ?	How long has..... been continuously living in this district ?	
	a. State district if born in Zambia and Country if born outside Zambia (Refers to usual district/country of residence of member at time of giving birth) (Enter district name and 3-digit code from list of provinces and districts)	b. Was this part of the district rural or urban at time of birth ? 1 - Rural 2 - Urban 8 - Not Applicable (Outside Zambia) (Enter Code)	(For non Zambians write name of country and enter its code; For Zambians just enter code 148)	(Enter completed years and months)	
				Years	Months
	P - 8		P - 9	P - 10	
	35 - 37	38	39 - 41	42 - 43	44 - 45
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					

FOR ALL PERSONS					
GENERAL CHARACTERISTICS					
SERIAL NUMBER	MIGRATION		ETHNICITY AND LANGUAGE		
	Where was.....staying in August last year ?		What is .....'s ethnic group ?	What is.....'s LANGUAGE OF COMMUNICATION ?	
	State district if in Zambia and country if outside Zambia (Enter district name 3-digit code from list of provinces and districts)	Is this part of the district rural or urban ? 1 - Rural 2 - Urban 8 - Not Applicable (Outside Zambia or child less than 1 year) (Enter Code)	(Enter Zambian tribe, if not applicable enter major racial group) Code - 64 - African 65 - American 66 - Asian 67 - European 68 - Other	a. PREDOMINANT (Write the name of the language and enter the code. If not applicable enter 88)	b. SECOND (Write the name of the language and enter the code. If not applicable enter 88)
	P - 11		P - 12	P - 13	
	46 - 48	49	50 - 51	52 - 53	54 - 54
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					

FORM CPHA-9001

FOR PERSONS 5 YEARS AND OVER					
	EDUCATION				
SERIAL NUMBER	Can ..... read and write in any language ? 1 - Yes 2 - No	Does.....go to any institution of learning ? 1 - Yes-Full time 2 - Yes-Part time 3 - Yes-Correspondence Go to P-17 4-No	Did.....previously go to any institution of learning ? 1 - Yes-Full time 2 - Yes-Part time 3 - Yes-Correspondence 4 - No - Go to P-18	What highest level of academic education has..... completed ?	What highest professional or vocational education has..... completed ? (Write level and field of study, then enter code - 1 - Certificate 2 - Diploma 3 - Degree in the first box and two digit code from the list of educational programmes)
	P - 14	P - 15	P - 16	P - 17	P - 18
	56	57	58	59 - 60	61 62 - 63
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					

FORM CPHA-9001

FOR PERSONS 12 YEARS AND OVER					
	ECONOMIC ACTIVITY		EMPLOYMENT STATUS	OCCUPATION	INDUSTRY
SERIAL NUMBER	What was..... mainly doing in the last 7 days ? 1 - Working for pay or profit 2 - On leave 3 - Unpaid work on household holding or business 4 - Unemployed and seeking work 5 - Not seeking work but available for work 6 - Full-time housewife/ homemaker 7 - Full-time student 8 - Not available for work for other reasons (Enter Code)	What has..... mainly been doing since.....1989 ? 1 - Working for pay or profit 2 - On leave 3 - Unpaid work on household holding or business 4 - Unemployed and seeking work 5 - Not seeking work but available for work 6 - Full-time housewife/ homemaker 7 - Full-time student 8 - Not available for work for other reasons Go to P-24 (Enter Code)	Since.....1989 ? has.....been mainly ? 1 - an employer ? 2 - an employee ? 3 - self-employed ? 4 - an unpaid family worker ?	What was..... 's main occuption since....1989? (Write name of occuption and enter code)	What kind of main product of service is (was) produced ? Where..... works/worked? (Write name of industry and enter code)
	P - 19	P - 20	P - 21	P.....22	P.....23
	64	65	66	67 - 69	70 - 72
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					

FORM CPHA-9001

FOR PERSONS 12 YRS AND OVER			FOR FEMALES 12 YEARS AND OVER									
			FERTILITY (Own children ever born alive)									
MARITAL STATUS		AGE AT FIRST MARRIAGE	LIVE BIRTH	AGE AT FIRST LIVE BIRTH	How many children born to you are still alive ? If 'None' enter '00' GO TO F-4c		Of the children born to you alive -					
							a. How many are still living with you ?		b. How many are living elsewhere in some other household ?		c. How many died ?	
SERIAL NUMBER	Is..... 1-Married ? 2-Separated ? 3-Divorced ? 4-Widowed ? 5-Never married? (If female, GO TO F-1, otherwise go to next person or M-1 if last person)	What was .....'s age when he/she first got married ? (If male GO TO next person otherwise M-1) (Give age in completed years only)	Have you ever had a live birth ? (Including babies who died after birth) 1-Yes 2-No (If 'No' GO TO next person or M-1)	How old were you when you first had a live birth ?	How many of these are male and how many are female ?		How many many of these are male and how many are female ?		How many of these are male and how many are female ?		How many of these are male and how many are female ?	
					Male	Female	Male	Female	Male	Female	Male	Female
	P - 24	P - 25	F-1	F-2	F-3		F-4					
	73	74 - 75	76	77 - 78	79 - 80	81 - 82	83 - 84	85 - 86	87 - 88	89 - 90	91 - 92	93 - 94
1												
2												
3												
4												
5												
6												
7												
8												
9												
0												
1												
2												
3												
4												
5												
6												
7												
8												
9												
0												

FORM CPHA-9001

FOR FEMALES 12 YEARS AND OVER								GENERAL COMMENTS
FERTILITY (Own children ever born alive)								
SERIAL NUMBER	Have you had any live birth since..... 1989 ? 1 - Yes GO TO next person otherwise go to M-1 (Enter Code)	CHILDREN BORN IN LAST 12 months Of the children born to youalive since.....1989 ?						
		a. How manyare still living today ? How many of these are male and how many are females ?		b. how many are living elsewhere in some other household ? How many of these are male and how many are female ?		c. How many died ? How many of these are male and how many are female ?		
		Male	Female	Male	Female	Male	Female	
	F - 5	F - 6						
	93	94	95	96	97	98	99	
1	☐	☐	☐	☐	☐	☐	☐	
2	☐	☐	☐	☐	☐	☐	☐	
3	☐	☐	☐	☐	☐	☐	☐	
4	☐	☐	☐	☐	☐	☐	☐	
5	☐	☐	☐	☐	☐	☐	☐	
6	☐	☐	☐	☐	☐	☐	☐	
7	☐	☐	☐	☐	☐	☐	☐	
8	☐	☐	☐	☐	☐	☐	☐	
9	☐	☐	☐	☐	☐	☐	☐	
0	☐	☐	☐	☐	☐	☐	☐	
1	☐	☐	☐	☐	☐	☐	☐	
2	☐	☐	☐	☐	☐	☐	☐	
3	☐	☐	☐	☐	☐	☐	☐	
4	☐	☐	☐	☐	☐	☐	☐	
5	☐	☐	☐	☐	☐	☐	☐	
6	☐	☐	☐	☐	☐	☐	☐	
7	☐	☐	☐	☐	☐	☐	☐	
8	☐	☐	☐	☐	☐	☐	☐	
9	☐	☐	☐	☐	☐	☐	☐	
0	☐	☐	☐	☐	☐	☐	☐	

RECORD TYPE: H

23

MORTALITY

M-1 Has there been any death in this household since...1989 ? | 1 - Yes; 2 - No - Go to HH-1 | 24

M-2 How many died ? How many of these are - | Male ? | 25

Female ? | 26

HOUSEHOLD CHARACTERISTICS

HH-1 What is the main source of energy used for energy used for lighting by this household ? | 1 - Electricity; 2 - Gas; 3 - Paraffin/Kerosene; 4 - Candle; 5 - Other | 27

HH-2 What is the main source of energy used for cooking by this household ? | 1 - Electricity; 2 - Gas; 3 - Paraffin/Kerosene; 4 - Wood; 5 - Charcoal; 6 - Coal; 7 - Other | 28

HH-3 What type of toilet is used by members of this household ? | 1 - Flush; 2 - Pit latrine; 3 - Aqua privy; 4 - Bucket; 5 - Other - Go to HH-6 | 29

HH-4 Is this toilet inside or outside this housing unit ? | 1 - Yes; 2 - No | 30

HH-5 Is this toilet exclusively used by members of this household ? | 1 - Yes; 2 - No | 31

HH-6 Is this housing unit owned by any member of this household ? | 1 - Yes; 2 - No - Go to HH-8 | 32

HH-7 Was this housing unit - | 1 - Built by any member of this household ?; 2 - Bought ?; 3 - Inherited/given | Go to HH-13 | 33

HH-8 Is this housing unit provided free by the employer/friend or relative of any member of this household ? | 1 - Yes-Employer - Go to HH-10; 2 - Yes-By friend or relative-Go to HH-13; 3 - No | 34

HH-9 Is this housing unit rented from the employer of any member of this household ? | 1 - Yes; 2 - No - Go to HH-11 | 35

HH-10 Is the employer - | 1 - The Central Govt?; 2 - The District Council?; 3 - A Parastal ?; 4 - A Private Organ. ?; 5 - An individual ?; GO to HH-12 | 36

HH-11 Is this housing unit rented from - | 1 - The Central Govt?; 2 - The District Council?; 3 - A Parastal ?; 4 - A Private Organ. ?; 5 - An individual ? | 37

HH-12 Is this housing unit owned by - | 1 - The Central Govt?; 2 - The District Council?; 3 - A Parastal ?; 4 - A Private Organ. ?; 5 - An individual ? | 38

HH-13 a. How many radios does this household/institution have ? | 39----41

b. How many television sets does this household/institution have? | 42----44

HOUSING CHARACTERISTICS

H-1 Type of housing | 1 - Single Structure; 2 - Several Structures; 3 - Part of Structure; 4 - Improvised/makeshift; 5 - Unitended; 6 - Collective; 7 - Institutional; 8 - Other | 45

H-2 Type of roofing material | 1 - Concrete/Cement; 2 - Asbestos sheet; 3 - Iron sheet/corrugated iron sheet; 4 - Grass/thatch; 5 - Tiles; 6 - Other | 46

H-3 What are the walls of this housing unit made of? | 1 - Burnt bricks; 2 - Unburnt ornud bricks; 3 - Concrete blocks/slab; 4 - Stone; 5 - Iron sheets; 6 - Asbestos/hardboard/Wood; 7 - Pole and dagga/mud; 8 - Grass; 9 - Other | 47

H-4 What is the floor of this housing unit made of? | 1 - Concrete/cement; 2 - Mud; 3 - Wood(not wooden tiles); 4 - Marble; 5 - Other | 48

H-5 Occupancy | 1 - Single household; 2 - One household in several housing units; 3 - Shared (Enter number of households sharing in box 50); 4 - Vacant; 5 - Non-residential - END HERE | 49 | 50

H-6 How many living rooms and bedrooms does this housing unit have ? | Living rooms | 51

| 52 - 53

H-7 Does this housing unit have a kitchen ? | 1 - Yes; 2 - No | 54

H-8 What is the main source of water supply for this house ? | 1 - Piped water inside the housing unit; 2 - Piped water outside the housing unit and within distance of 100 metres; 3 - Piped water outside the housing unit and beyond 100 metres; 4 - Well or borehole; 5 - River/Streams; 6 - Other | 55

AGRICULTURAL ACTIVITY

A-1 Has any member of this household been engaged in any agricultural activity for this household since 1st October 1989 ? | 1 - Yes; 2 - No - Go to A-3 | 56

A-2 Is this holding managed by someone else who is not a member of this household ? | 1 - Yes; 2 - No - COMPLETE AGRICULTURE SUPPLEMENT | 57

A-3 Has any member of this household been managing any holding which does not belong to this household since 1st October 1989 ? | 1 - Yes - COMPLETE AGRICULTURE SUPPLEMENT; 2 - No - End interview & thank respondent | 58

ENUMERATOR - Complete an Agriculture supplement questionnaire for each of the responses: 'NO' in A-2 and 'Yes' in A-3.