

ZAMBIA

**CENSUS OF POPULATION, HOUSING
AND AGRICULTURE**

1990

VOLUME 10

**ZAMBIA
ANALYTICAL REPORT**



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10TH AUGUST 1995

P R E F A C E

The Census of Population, Housing and Agriculture was conducted from 20th August to 5th September, 1990. However, an allowance of one week was allowed to cover very remote rural areas. This was the third Census since independence in 1964. The other two were carried out in 1969 and 1980. Census operations were undertaken with the use of grade 12 pupils (In some cases, Grade 11 or lower grade pupils were used) as enumerators, secondary and primary school teachers as supervisors while professional and technical staff of the Central Statistical Office undertook various technical and professional tasks.

This publication is one of the 10 in the series of analytical reports produced by the Central Statistical Office (CSO). The report contains data on Population and Housing for Zambia, while data on Agriculture is contained in separate reports.

The various census stages i.e. preparations, data collection, processing, verification, analysis and production of this report was carried out by mainly CSO local personnel. For the first time in the history of Census taking in Zambia, the 1990 Census of Population, Housing and Agriculture was processed using micro-computers.

A Census of Population is usually a massive and costly exercise involving nearly everybody in the country in one way or another. In this regard, I wish to thank the people of Zambia for cooperating in providing the valuable information asked of them. In a similar vein, thanks to the four thousand primary and secondary school teachers who supervised the enumerators during the data collection stage. My thanks are also extended to the sixteen thousand senior secondary school pupils who took leave from their studies to be census enumerators.

My sincere thanks go to donor agencies, namely UNFPA, USAID, NORAD, UNDP and the World Bank for providing financial, material and technical assistance which enabled the CSO carry out the Census.

I extend my gratitude to the Government of Zambia for funding the Census as well as providing the mandate to conduct the Census appropriately in 1990.

Thanks to all those CSO professional and technical staff who bore the blunt of carrying out all the census activities from start to finish. Special mention should be made of personnel in the Population and Demography Division of CSO who provided guidance and plans for implementing the stages of Census operations, especially for writing up this report.

Finally many thanks to all those who contributed directly or indirectly, but not mentioned above, to the success of the Census and in the production of this report.

The statistical data obtained from 1990 Census is massive and rich allowing for extensive use and applications. As such what is contained in the report is not the whole but only a very small portion. I urge all users of the Census data to feel free and request CSO for any data not found in this publication but was collected in the Census.

David S. Diangamo
DIRECTOR OF CENSUS & STATISTICS

Lusaka, ZAMBIA
August 10th, 1995.

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CHAPTER 11: HOUSEHOLDS AND HOUSING CHARACTERISTICS

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EXECUTIVE SUMMARY

The population of Zambia comprises 3,617,577 males and 3,765,520 females making a total of 7,383,097. Of the total population, 4,477,814, which is 60.6 percent, live in the rural areas, leaving 2,905,283 which is 39.4 percent in the urban parts of the country. Of the total population of Zambia, 45.3 percent are less than 15 years. The median age is 16.8 years implying that the population of Zambia is young. The population growth rate between 1980 and 1990 is 2.7 percent per annum. The country's population density is 9.8 persons per square kilometer. The majority of the citizens in Zambia are Africans. Foreign citizens form 2.1 percent of the total population.

Bemba is the major language of communication and is used by almost 30 percent (29.9 percent) of the 7,001,936 people who stated their predominant language of communication. The other languages used for communication are Tonga and Nyanja which are used by 11 percent and 7.8 percent, respectively, of the 7,001,936 people. Although English is the official language, only 1.1 percent use it as a means of communication. There are 8 major language groups in Zambia. Of these 8, the largest (39.7 percent) comprises the Bemba language group followed by (20.1 percent) the Nyanja group.

In Zambia, 56 percent can read and write. The literacy rates are 63 percent for males and 50 percent for females. In 1990 those who were attending school were 39 percent. In rural areas, 29 percent were attending school compared to 58 percent in urban areas. The overall attendance rate is 45 percent for males and 34.2 percent for females. The most common fields of study are; Teacher training, accountancy, engineering and business administration for males and secretarial, teacher training and nursing for females.

In 1990, the working age population i.e. those aged 12 years and above, was 4,640,427. Of these, 2,255,686 are males and 2,384,747 are females. Of the total working population, 2,791,707 live in rural areas and 1,848,720 in the urban areas. The labour force has increased by 23.7 percent between 1980 and 1990. In the rural areas, it has increased by 64.4 percent while in the urban areas, it has increased by 35.6 percent. Half of the labour force is in the young age group of 12-29 years. The employed population makes up 87.6 percent of the labour force. The unemployed population declined by 71.9 for females and 55.1 percent for males between 1980 and 1990. The rate of unemployment declined from 42.2 percent in 1980 to 12.4 percent in 1990. In rural areas, the unemployment rates of males are higher than those of females, while the opposite is true in urban areas. Lack of adequate education has contributed to the problem of unemployment. The majority of the unemployed are young people who have not started marriage lives or are finding it difficult to do so because they have no jobs.

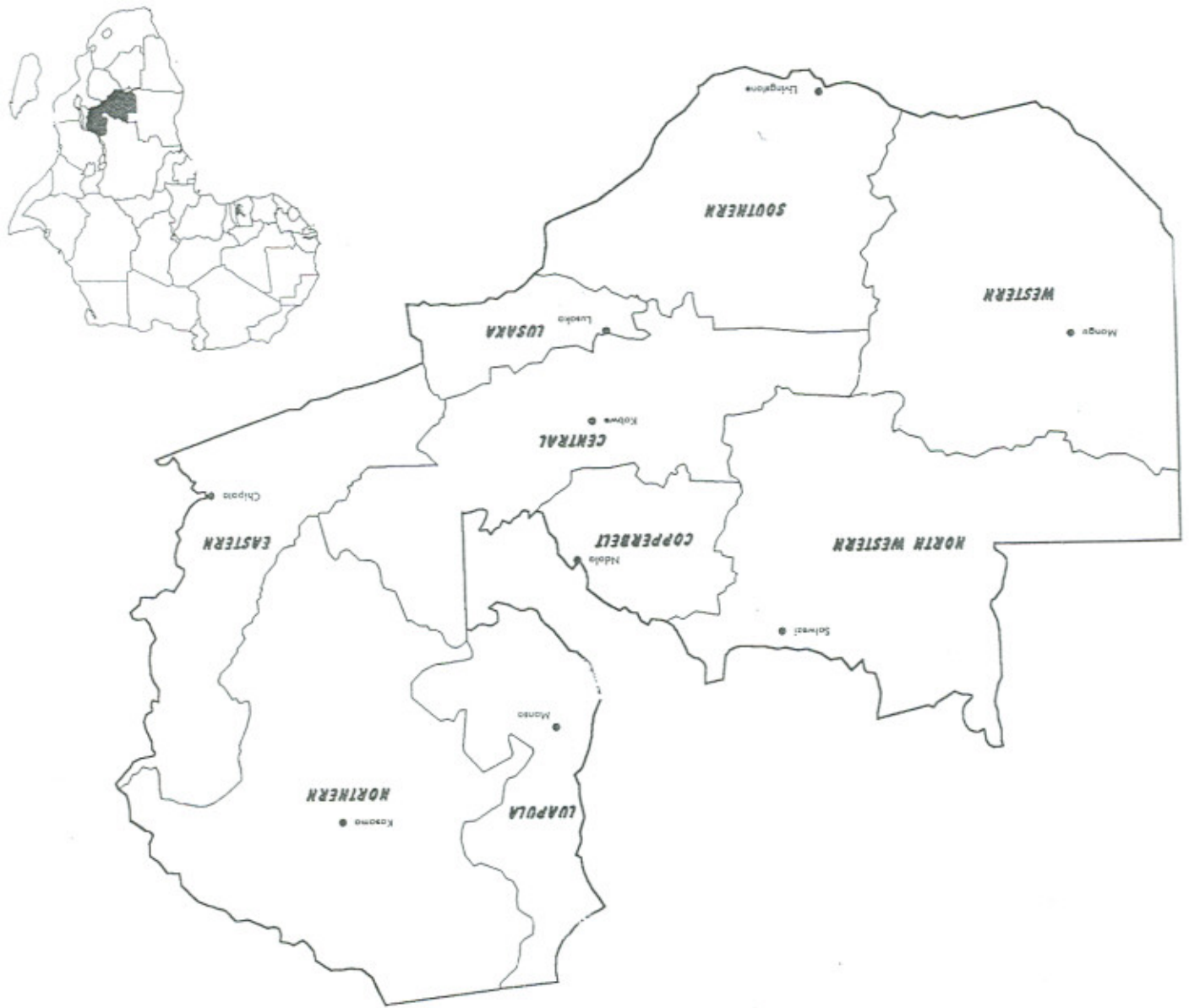
The economically inactive population is 54.2 percent. Two-thirds of the inactive population are females while one-third are males. Economic inactivity in 1990 was caused mainly by home making (41.3 percent) and studying (28.4 percent). Economic activities are mainly organised around family labour because the majority of the workers (64.7 percent) are classified either as self-employed or unpaid family workers. There is a large concentration (48.6 percent) in agriculture and related occupations. This is so perhaps because it is easy to enter such occupations due to the low skill requirements.

Marriage is near universal in Zambia with 96.7 percent of males and 97.2 percent of females having ever-married at the age group of 45-49 years. The Singulate Mean Age at Marriage (SMAM) is 26.1 for males and 21.2 years for females implying that females marry at earlier ages than males. Fertility levels in the country has declined between 1980 and 1990. Total Fertility Rate (TFR) declined from 7.2 in 1980 to 6.7 children in 1990. TFR is 7.6 for women with no education, 7.4 for women with primary level of education, 5.9 for those with secondary level of education and 3.2 children for women with a higher level of education. Fertility is higher for women in rural areas than in urban areas. TFR is 7.0 for those in rural areas and 6.3 children for women in urban areas.

Zambia has experienced high mortality levels between 1980 and 1990. The Crude Death Rate (CDR) rose from 13.9 in 1980 to 18.3 deaths per 1,000 persons in 1990. Infant Mortality Rate (IMR) is 123.3 deaths per 1,000 live births. IMR for males is higher than females. IMR is 127.0 for male and 119.7 deaths per 1,000 live births for females. The life expectancy is 46.1 years for males and 47.6 years for females. This shows that males die at earlier ages than females.

Out of the 7,383,097 people enumerated in 1990, 69,073 are disabled comprising 36,892 males and 42,181 females. The majority of the disabled population (70.9 percent) live in rural areas leaving only 29.1 percent in urban areas. There are more disabled males than females. Of the total disabled persons, 2,735 are household heads. Of these household heads, 48.2 percent are employed as family workers while only 1.2 percent are employers. Of the disabled persons aged 5 years and above, 57.2 percent have not completed any level of education and only 0.1 percent have completed higher levels of education.

The 1990 housing data shows that the majority of the households occupy 2 roomed housing units. These housing units are occupied by 42 percent of the households. The most common construction materials for roofs, walls and floors are grass, mud bricks and mud used in 59 percent, 35 percent and 61 percent, respectively, of the housing units. Households mainly depend on wells, boreholes, rivers and streams for their water. This is shown by 61 percent of the households who rely on the above sources of water. In Zambia, there are 83 percent households in urban areas which have access to piped water leaving only 7 percent of the households in rural areas. Pit latrines are the most source of toilet facilities in Zambia. In rural areas, 53.7 percent use pit latrines and 51 percent in urban areas use them. Flush toilets are much more common in urban areas (42.5 percent) than in rural areas (1.6 percent). The most common source of cooking and lighting energy are wood and Paraffin (Kerosine) used by 62 and 74 percent of the households, respectively. Slightly over four-fifth of the housing units in Zambia are owned by individuals. Individuals own a larger share than in urban areas.



CHAPTER 1

BACKGROUND

1.1 HISTORY

The British South Africa Company administered various parts of what was to become Northern Rhodesia in the late nineteenth century. The British Colonial Office assumed responsibility for administering Northern Rhodesia, now Zambia in 1924. In 1953, the Central African Federation of Rhodesia and Nyasaland was formed when Northern Rhodesia and Southern Rhodesia (Zimbabwe) joined Nyasaland (Malawi). In 1963, this federation was dissolved.

In October 1964, Zambia gained her political independence. From the time of independence, Zambia had a multi-party political system up to 1972. Zambia then became a one party state up to 1991 when it adopted the multi-party system again.

1.2 GEOGRAPHY

Zambia lies in Southern Africa. It is a landlocked country sharing boundaries with eight countries; Zaire and Tanzania in the north, Malawi and Mozambique in the east, Zimbabwe and Botswana in the south, Namibia in the south-west, and Angola in the west.

Zambia covers an area of 752,612 square kilometres. The country has nine administrative provinces, namely Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, North-Western, Southern and Western, and 57 administrative districts.

Zambia is situated on the great plateau of Central Africa, with altitudes ranging from 1,000 to 1,300 metres. There are depressions found on the edges of the plateaus in Zambia and some of these form lakes Bangweulu and Mweru in the North, the Luangwa river in the east, and Kafue basin and the alluvial plains of the Zambezi river in the west.

Apart from the features listed above, Zambia has other interesting physical features. These are, one of the biggest man made lakes in the world, the Lake Kariba on the river Zambezi, and the Victoria Falls on the river Zambezi, which is one of the country's greatest tourist attractions.

Zambia lies between 8 and 18 degrees latitude south and 22 and 34 degrees longitude east. It has a tropical climate and vegetation. There are three distinct seasons. The cool and dry winter season lasts from May to August with mean temperatures between 14°C and 30°C. The hot and dry season lasts from September to October, and the warm and wet season from November to April.

Zambia has some areas with high rainfall and some with medium rainfall. The annual precipitation ranges from 600mm to 1,400mm. The Southern and Eastern parts of the country receive between 600mm and 1,100mm of rain. The Copperbelt, North-Western, Northern and Luapula Provinces receive between 1,100mm and over 1,400mm of rain.

The vegetation of Zambia is a mixture of trees, tall grass herbs and other woodlands which are mainly of the deciduous type. The deciduous type of woodlands are mainly found on the main plateau of the country. The forests are found mainly in the North-Western and Northern parts of Zambia.



1.3 PEOPLE

According to the 1990 Census, the population of Zambia is 7,383,097 persons. The annual population growth rate was 2.7 percent since 1980, when the census enumerated 5,661,801 persons. In 1990, Copperbelt Province with 1,427,545 persons registered the largest population among the provinces. This was 19.3 percent of the whole population of the country. During the same, North-Western Province with 387,552 persons representing 5.2 percent of the total population had the smallest population. Of the total population, 48.9 percent are males and 51.1 percent are females. In Zambia about 60.6 percent of the population are found in rural areas of the country and 39.4 in the urban areas.

The average population density for the country has increased from 7.8 persons per square kilometre in 1980 to 10.2 persons in 1990. The province with the largest population density is Copperbelt with a density of 45.6 persons per square kilometre. Lusaka province also had a high population density of 45.1 persons per square kilometre. North-western has the lowest population density with 3.1 persons per square kilometre.

Table 1.1

Population, Area, Density, Percentage Distribution and Annual Growth Rate by Province, 1969, 1980 and 1990

Province	Population			Area (Sq.Km)	Density Persons per Sq.km			Percentage Distribution			Growth Rate per year, (%)	
	1969	1980	1990		1969	1980	1990	1969	1980	1990	1969-80	1980-90
Central	358,655	511,905	720,627	94,394	3.8	5.4	7.6	8.8	9.0	9.8	3.3	3.5
Copperbelt	816,309	1,251,178	1,427,545	31,328	26.1	39.9	45.6	20.1	22.1	19.3	4.0	1.3
Eastern	509,515	650,902	965,967	69,106	7.4	9.4	14.0	12.6	11.5	13.1	2.3	4.0
Luapula	335,584	420,966	525,160	50,567	6.6	8.3	10.4	8.3	7.4	7.1	2.1	2.2
Lusaka	353,975	691,054	987,106	21,896	16.2	31.7	45.1	8.7	12.2	13.4	6.3	3.6
Northern	545,096	674,750	855,177	147,826	3.7	4.6	5.8	13.5	11.9	11.6	2.0	2.4
North-Western	231,733	302,668	387,552	125,826	1.8	2.4	3.1	5.7	5.4	5.2	2.5	2.5
Southern	496,041	671,923	907,150	85,283	5.8	7.9	10.6	12.2	11.9	12.3	2.8	3.0
Western	410,087	486,455	606,813	126,386	3.3	3.9	4.8	10.1	8.6	8.2	1.6	2.2
Zambia	4,056,995	5,661,801	7,383,097	752,612	5.6	7.8	9.8	100.0	100.0	100.0	3.1	2.7

Source: CSO (1973): 1969 Census of population and housing; CSO (1985): 1980 Census of Population and housing, Final report Volume II; CSO (1985): 1980 Census of Population and Housing; General Population and Migration Tables, Volume 1.

Percent Urban

The percentage of the Zambian population living in urban areas was 29.4 in 1969, 38.9 in 1980 and 39.4 in 1990. Copperbelt Province has the highest percent urban of 85.5 percent. Eastern Province has the lowest percent urban of 9.2. percent. The percent urban for Lusaka Province is also high at 84.1 percent (see Table 1.2 for details).

Table 1.2

Percent Urban by Province, 1969, 1980 and 1990

Province	Population		
	1969	1980	1990
Central	-	29.6	29.6
Copperbelt	91.2	82.3	85.5
Eastern	2.6	9.7	9.2
Luapula	2.2	13.1	15.6
Lusaka	-	79.8	84.1
Northern	2.6	17.5	14.1
North-Western	-	13.5	14.5
Southern	12.8	24.8	23.7
Western	2.3	16.9	12.9
Zambia	29.4	38.9	39.4

Source: CSO, Census Results

Note: (-) figures not available

1.4 ECONOMY

Trend in Gross Domestic Product (GDP)

The GDP is the total market value of goods and services produced in an economy during a specific time period, usually one year. Metal mining notably copper mining has been Zambia's backbone of the economy through which the country predominantly earned its foreign exchange. Indeed Copper is Zambia's major leading export commodity. The periodic boom in the international prices of copper was the main factor behind the growth in the country's GDP in the period 1964-1974. However, due to unfavourable copper prices since 1975, the export earnings have been declining since then. Table 1.3 gives information on the trend in GDP and GDP per capita in the period 1980-90.

Table 1.3

Total Gross Domestic Production and Per Capita Gross Domestic Product, Zambia 1980-90

GDP	YEAR										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total GDP											
Product (K'Million)											
At Current Price	3,064	3,485	3,595	4,181	4,931	7,072	12,963	19,779	30,021	60,025	113,341
At 1977 Price	1,996	2,119	2,059	2,019	1,917	2,045	2,059	2,144	2,247	2,224	2,214
Percent Change from previous year	-	6.1	-2.8	-1.9	-5.1	6.7	0.7	2.7	6.3	-1.0	-0.4
Per Capita GDP											
At Current Price	539	597	594	672	768	1,052	1,865	2,721	3,987	7,696	14,531
At 1977 Price	351	361	340	325	313	304	296	291	298	285	283
Percent Change from previous year	-	2.8	-5.8	-4.4	-3.7	-2.9	-2.6	-1.9	2.4	-4.4	-0.7

Source: C.S.O. Country Profile, 1992 (CSO, Lusaka, 1992) Page 7.

According to Table 1.3 the total GDP at current prices in 1980 registered a level of K3,064 million and K113,341 million in 1990. In real terms, ie GDP at constant prices of 1977, GDP recorded a growth rate of 6.1 percent in 1981. This was followed by a decline in 1982, 1983 and 1984 of 2.8, 1.9 and 5.1 percent respectively. Remarkable growth was recorded in 1985 and 1988 of 6.7 and 6.3 percent respectively. However, the real GDP per capita declined almost every year between 1980 and 1990.

Mineral Production

The Economy of Zambia heavily depends on copper mining. The production of Copper reached it's peak at 713,000 tonnes in 1976 and has been fluctuating ever since. Production in 1980 fell to 607,000 tonnes and continued falling to 459,000 tonnes in 1986 before the slight rise in 1987 to 483,100 tonnes. The decline in Copper production can be attributed to a number of factors. The cost of Copper production in Zambia has been increasing as a result of the continued fall in the ore grade and reduction in investment of advanced technology. The overvalued exchange rates that have been prevailing over the past years has also contributed significantly to the high cost of Copper production.

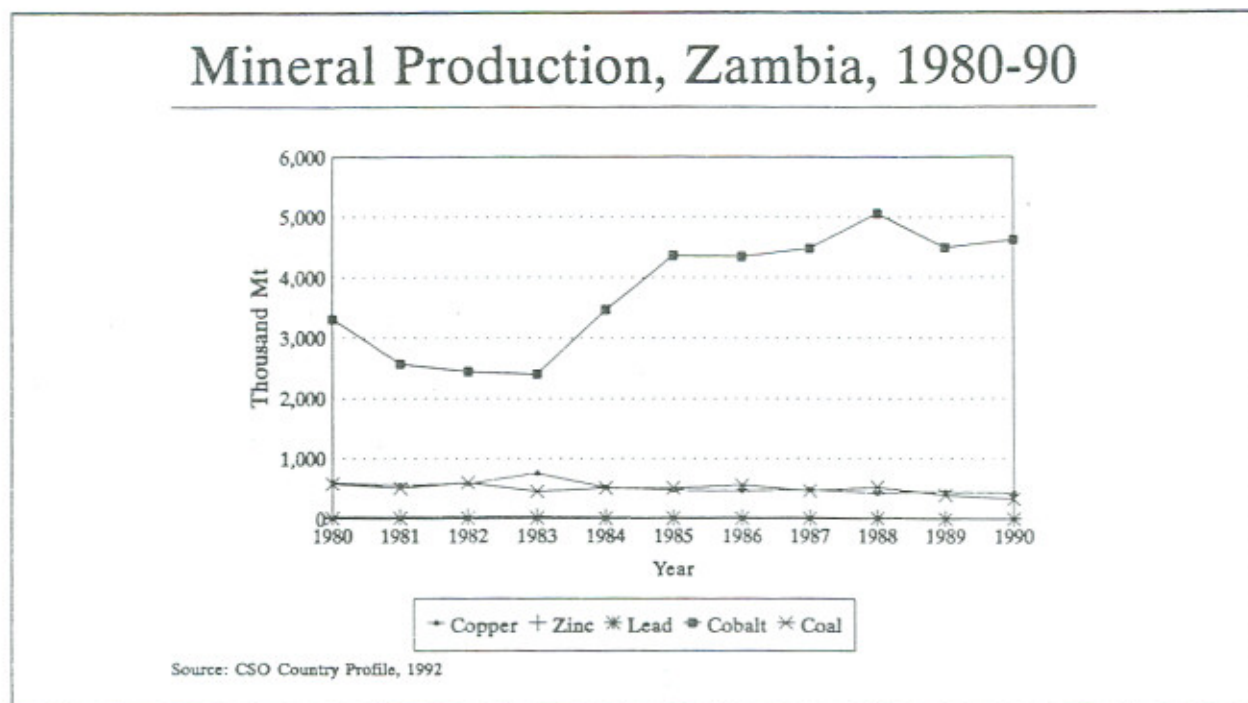
Table 1.4

Mineral Production, Zambia 1980-1990 (Values are at constant 1980 prices)

Year	Total Value (K'M)	Mineral										
		Copper Electrodes		Zinc		Lead		Cobalt		Coal		Other (K'M)
		Qty 1,000 Mt	Value (K'M)	Qty '000' Mt	Value (K'M)	Qty '000' Mt	Value (K'M)	Qty '000' Mt	Value (K'M)	Qty '000' Mt	Value (K'M)	
1980	1174.7	607.2	951.6	32.7	16.8	10.0	6.1	3,309	141.6	579	17.5	41.1
1981	1073.9	560.0	886.8	33.3	27.9	9.9	5.9	2,570	100.4	507	15.6	37.3
1982	1092.5	585.5	908.4	39.2	47.3	14.6	10.3	2,446	77.6	604	18.4	30.5
1983	984.5	576.1	790.4	37.8	57.3	14.6	10.2	2,407	57.2	453	12.8	56.6
1984	1057.3	523.3	840.0	29.8	41.8	8.8	5.0	3,472	104.1	511	15.2	51.2
1985	1071.2	479.9	810.3	22.8	26.6	8.8	4.9	4,359	157.4	511	29.2	40.8
1986	979.2	459.7	773.1	22.5	33.1	6.6	4.9	4,344	115.3	557	16.6	36.2
1987	950.7	483.1	742.2	21.0	29.8	8.0	7.6	4,479	96.5	463	12.2	62.4
1988	852.5	422.2	651.2	20.2	28.5	6.1	4.8	5,055	82.2	524	13.2	72.6
1989	1589.3	450.8	796.1	12.9	137.5	3.8	20.4	4,488	571.6	395	19.6	44.1
1990	806.9	426.2	696.3	10.6	12.4	3.9	2.6	4,615	51.9	330	3.3	40.4

Source: CSO, Country Profile, 1992 (CSO, Lusaka, 1992) Page 20

Figure 1.1



The production of zinc and lead have also been fluctuating showing a downward trend. About 10,600 tonnes of zinc and 3,900 tonnes of lead were produced in 1990 compared with 32,700 tonnes of zinc and 10,000 tonnes of lead produced in 1980.

The table also shows that production of cobalt declined from 3,309 tonnes in 1980 to 2,407 tonnes in 1983 after which production levels began to increase in 1984 to 3,472 tonnes and to 5,055 tonnes in 1988, the highest production level during 1980 to 1990. The production of Cobalt declined from 3,309 tonnes in 1980 to 2,407 tonnes in 1983. Production increased to 5,055 tonnes in 1988. The revenue from Cobalt reached its peak in 1989 and this may be due to the rise in the world demand for Cobalt. The production of coal initially rose at the beginning of the 1980s and then started to decline.

Employment

Table 1.5 provides details on the usually working population of Zambia by industry. This includes the self employed population, employees, employers and the unpaid family workers.

In 1980 the total usually working population of Zambia was 1,072,379. Most of these (about 42 percent) were engaged in agricultural, forestry and fisheries activities. The electricity, gas and water industry had the least population. The agricultural, forestry and fisheries sector has continued engaging the highest number of the usually working population of Zambia. The total number of usually working population has increased from 1,072,379 in 1980 to 1,838,409 in 1990.

Table 1.5

Usually Working Population by Industrial Group, Zambia, 1980 and 1990

Industry	Usually Working Population	
	1980	1990
Agricultural Forestry and Fisheries	450,839	916,084
Mining and Quarrying	64,788	61,540
Manufacturing	64,540	94,218
Electricity, Gas and Water	9,100	10,551
Construction	36,772	34,352
Wholesale and Retail Trade, Restaurant and Hotels	85,671	70,316
Transport, Storage and Communications	48,666	52,423
Finance, Insurance, Real Estates, etc.	22,137	37,399
Commercial, Social and Personnel Services	220,472	222,639
Others	-	35,498
Not Stated	69,344	303,395
Total	1,072,379	1,838,409

Source: 1990 Census Results.

1.5 GOVERNMENT EXPENDITURE ON HEALTH AND EDUCATION

Table 1.6 shows medical facilities in Zambia in 1964, 1980 and 1990. It is evident that after independence in 1964 provision of health facilities increased tremendously. In most cases, medical facilities more than doubled between 1964 and 1980. In both rural and urban areas, the number of health centres increased remarkably. Correspondingly the increase in medical facilities between 1980 and 1990 was comparatively not as large as that between 1964 and 1980. It should be noted that health facilities in the country are mainly provided by the government. However, some institutions and missionaries also do provide health facilities.

Table 1.6

Medical Facilities In Zambia, 1964 - 1990

Medical Facilities	1964	1980	1990	Percent Change	
				1964-80	1980-90
Hospitals	48	81	82	68.8	1.23
Government	19	42	42	121.1	0
Mission	19	29	29	52.6	0
Mine/Other	10	11	11	10.0	0
Health Centres and Clinics	306	721	942	135.6	30.7
Rural health Centres:					
Government	187	469	661	150.8	40.9
Mission	63	66	73	4.8	10.6
Urban/Dept/Industrial Clinics					
Government	39	120	133	207.7	10.8
Mine/Other	17	66	75	288.2	13.6
Total Hospitals and Health Centres	354	802	1,024	126.6	27.7
Number of Beds and Cots in:					
Hospitals	7,710	14,889	16,921	93.1	13.6
Health Centres	3,140	5,630	7,647	79.3	35.8

Source: CSO, Country Profile 1992.

Note: The figures in Table 1.6 exclude the mobile and private surgeries.

The central government's budget on the Ministry of Health since the 1970s has been less than 10 percent of the total budget. In 1990 the allocation for the ministry peaked at 9.9 percent. In the Ministry of Health, most of the allocated funds are used for salaries and recurrent department cost. Table 1.7 provides more details on government expenditure on health between 1986 and 1990 inclusive.

Table 1.7

Health Expenditure, Zambia, 1986-1990 (Values are at constant 1980 prices)

Year	Total Government Expenditure (K'M)	Health Expenditure	Health Expenditure as % of Total Government Expenditure	Components of Health Expenditure (%)			
				Personal Emoluments	Grants	Capital	Recurrent Dept Charges
1986	949.5	39.4	4.2	38.4	27.7	7.7	26.8
1987	558.3	28.7	5.1	26.7	30.3	5.2	37.7
1988	716.8	55.6	7.8	26.9	26.4	5.4	41.3
1989	576.2	40.7	7.1	22.9	23.7	15.3	37.6
1990	289.0	28.5	9.9	18.0	3.7	10.1	39.7

Source: CSO, Country Profile 1992 (CSO, Lusaka, 1992) Page 46

The total government expenditure on education in Zambia declined from 1983 to 1988. The percentage of government expenditure peaked in 1983 at 18.1 percent. Expenditure on education during the 1980-1990 period varied between 8.1 and 18.1 percent, (see Table 1.8).

Table 1.8

Government Expenditure on Education, Zambia 1980-89 (Values are at constant 1980 prices)

	Recurrent		Capital		Total	
	(K'000')	% of Total Govt Current Expenditure	(K'000')	% of Total Govt. Expenditure	(K'000')	% of Govt Expenditure
1980	129,640	12.0	7,790	1.4	137,430	8.3
1981	148,946	12.7	4,454	3.0	153,400	11.6
1982	190,312	16.2	13,179	4.6	203,491	13.9
1983	160,736	19.5	11,751	8.8	172,487	18.1
1984	129,016	17.7	11,131	10.9	140,147	16.8
1985	104,067	14.3	7,928	7.5	111,995	13.5
1986	72,021	9.3	4,513	2.6	76,534	8.1
1987	48,000	9.7	6,911	10.1	54,911	9.8
1988	58,578	9.8	4,660	3.9	63,239	8.8
1989	56,294	11.6	6,652	7.4	62,946	10.9

Source: CSO, Country Profile 1992 (CSO, Lusaka, 1992) Page 60

Generally, both the Health and Education sectors have suffered because of the declining expenditure in these sectors by the government. The total expenditure on the two sectors, particularly capital and recurrent departmental charges as well as salaries have declined to levels where the sectors' capacity to deliver adequate services has been undermined.

1.6 MAJOR CONCEPTS AND DEFINITIONS USED IN THE 1990 CENSUS

In the 1990 Census, information was collected by applying concepts. The major concepts have been defined below, and the questions through which this information was collected, indicated. All information collected in the census referred to or up to the census night.

Census Night

The census night during the census was the night before the day the enumerator asked for information from the household.

De jure Population

The de jure population count in the census includes usual members present and usual household members temporarily absent at the time of the census night. In the census a usual member of the household was a person who had continuously lived with the household for at least six months. Persons temporarily absent such as children in boarding school, patients in hospitals etc were considered as usual members of the household irrespective of the duration they had been absent. Question P-3 codes 1 and 3 in the census identified de jure members of the household.

De facto Population

The de facto population count includes usual members and visitors who spent the census night at the household. They are identified by codes 1 and 2 in question p-3

Housing Unit

An independent place of abode intended for habitation by one household. This unit must have had at least one door leading to the outside in the open or into a public corridor. The type of housing unit the respondents stayed in were identified by question H-1 codes 1 to 8.

Household

The household in the census constituted a group of persons who normally lived and ate together. These people did not have to be blood relatives but made common provision for food or other essentials for living. In instances where people ate together and even slept under one roof but had different persons whom they regarded as head, these were regarded as separate households. Question P-3 codes 1 and 3 identified the members of the household. The relationship of the member of a household to the head of a household was identified by question P-4 codes 1 to 6.

Head of Household

The person whom all members of the household regarded as the head was considered as the head of the household. This was the person in-charge of the day to day decisions governing the running of the household. Code 1 of question P-2 identified the head of the household.

Residence

Whether the respondent lived in rural or urban area. Question P-11 codes 1 and 2 identified areas the respondents lived at the time of the census.

CHAPTER 2

EVALUATION OF COVERAGE AND CONTENT ERRORS

2.1 INTRODUCTION

This chapter looks at the content and coverage errors of the census data. The data have to be evaluated in order to ensure that they are of acceptable standard. Moreover, they may be subjected to possible adjustment. Information that is used in evaluating the quality of the data is derived from the following questions that were included in the census questionnaire;

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

2.2 DEFINITION OF CONCEPTS

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

Census of Population

Complete enumeration of all persons at a specified time period in a demarcated geographical area.

Coverage Error

Under or over-enumeration in a population census due to either omission or enumeration of persons more than once.

Content Error

Error made when the characteristics of a person such as age, sex, marital status, fertility, mortality economic activity, etc, collected during the census are incorrectly reported or recorded.

Digit Preference

Reporting of age by respondents often ending in digits they prefer. This results in heaping of population in ages ending with certain digits.

Evaluation of Census Data

The measurement of census data quality.

Sex Ratio

Number of males per 100 females in a population.

2.3 METHODS OF EVALUATION

In spite of the checks and controls instituted during the enumeration, there are usually chances of errors being introduced into the census data. For instance, some people may be completely omitted or some characteristics of an individual such as age, sex, fertility, economic activity, etc. may be incorrectly reported or tabulated. Generally two approaches, namely the direct and indirect methods, are used in the process of evaluating the quality of data.

The direct method on one hand basically employs what is referred to as a Post Enumeration Survey (PES). In a PES, a sample of households is revisited after the census and data are again collected on a smaller scale, which are later compared with that collected during the actual census. The matching of the two sets of data can then be used to evaluate the quality of the census data. With regard to the 1990 Census, the PES was conducted in December 1990. The results from this study are presented in a separate report.

The indirect method on the other hand usually involves comparison of data using both internal and external consistency checks. Internal consistency checks compare relationships of data within the census, whereas external consistency checks compare census data with data generated from other sources. For instance, one can compare data on education obtained during a census with administrative data maintained by the Ministry of Education.

Digit Preference

The tendency of enumerators or respondents to report certain ages at the expense of others is referred to as age heaping or digit preference. The latter term refers to preference for the various ages having the same terminal digit. Therefore, when age is distributed in single years of age, the irregular pattern is displayed with peaks at certain ages such as 10, 20, 30, 45, 50, etc. and troughs at ages such as 13, 21, 33, 41, etc. Distributing age data into five-year age groups reduces the errors arising from age misstatements, hence, the pattern is less irregular than if age data is distributed in single years. However, age heaping is most prevalent among the illiterates who do not know the exact ages. Figures 2.1 to 2.4 show the patterns of age heaping with respect to the 1980 and 1990 Census data.

With respect to the 1980 and 1990 Censuses, assessment of age heaping in Zambia was accomplished through the calculation of Myer's Index and results are contained in Table 2.1 and Table 2.2. Refer to Shryock, et al (1976) for more details on Myers Index. The minimum value of Myers' Index is 0 and the maximum value is 90. If the index approaches 0, then the age data is improving and if the index approaches 90 then the quality of age reporting is worsening. Therefore, a high Myers' index implies that the quality of age data is poor whereas a low Myers' Index indicates good age data quality.

The Myers' Index is a useful index used for evaluating the quality of age data. Table 2.1 shows that the indices in 1990 have declined compared to those in 1980 except for the urban areas. In the urban areas, indices for males and females for 1990 are higher than that of 1980. Myers' index for Zambia declined from 7.0 in 1980 to 6.8 in 1990 for males and from 7.5 to 7.0 in 1980 and 1990, respectively for females. In rural areas, Myers' index declined from 8.6 in 1980 to 7.7 in 1990 for females. However, in the urban areas, Myers' index increased from 6.1 in 1980 to 6.2 in 1990 for males and from 5.4 in 1980 to 6.0 in 1990. The Myers' index for Zambia, shows that the quality of age data for 1990 is better than that of 1980. The indices in 1990 are lower than those in 1980. One interesting observation which requires further investigation is that age reporting in urban areas is poorer in 1990 than in 1980 while it has improved in rural areas.

Summary of Myers' Index for Digit Preference in Age Data by Rural/Urban, Zambia, 1980 and 1990

Zambia		1980	1990
Total	Male	7.0	6.8
	Female	7.5	7.0
Rural	Male	7.8	7.2
	Female	8.6	7.7
Urban	Male	6.1	6.2
	Female	5.4	6.0

Table 2.2

Myers' Index for Digit Preference in Age Data, Zambia, 1980 and 1990

Digit	Male				Female			
	1980		1990		1980		1990	
	Percent of Blended Pop.	Deviation From 10%	Percent of Blended Pop.	Deviation From 10%	Percent of Blended Pop.	Deviation From 10%	Percent of Blended Pop.	Deviation From 10%
0	13.5	3.5	13.1	3.1	14.3	4.3	13.2	3.2
1	8.6	-1.4	8.6	-1.4	8.7	-1.3	8.7	-1.3
2	11.2	1.2	11.2	1.2	11.4	1.4	11.4	1.4
3	8.7	-1.3	8.6	-1.4	8.6	-1.4	8.3	-1.7
4	9.1	-0.9	9.1	-0.9	9.3	-0.7	9.4	-0.6
5	10.2	0.2	10.4	0.4	10.0	0.0	10.1	0.1
6	10.3	0.3	10.3	0.3	10.1	0.1	10.6	0.6
7	8.0	-2.0	8.7	-1.3	7.6	-2.4	8.5	-1.5
8	11.8	1.8	11.8	1.8	11.8	1.8	11.7	1.7
9	8.5	-1.5	8.1	-1.9	8.4	-1.6	8.1	-1.9
Myers' Index		7.0		6.8		7.5		7.0

Table 2.3 shows the most preferred digits during the 1980 and 1990 censuses among males and females. The digits are presented in decreasing order of preference. The digits which are the most preferred are those for which the blended percent is 11 percent and above.

Table 2.3

Most Preferred Digits, Zambia, 1980 and 1990

Sex/Year			Myers' Index
Zambia	Male	- 1980	0, 8, 2
		- 1990	0, 8, 2
	Female	- 1980	0, 8, 2
		- 1990	0, 8, 2
Rural	Male	- 1980	0, 8, 2
		- 1990	0, 8, 2
	Female	- 1980	0, 8, 2
		- 1990	0, 8, 2
Urban	Male	- 1980	0, 8, 2
		- 1990	0, 8, 2
	Female	- 1980	0, 2 & 8
		- 1990	0, 8, 2

Note: (&) shows same degree of preference.

There was rounding off of some ages during 1980 and 1990 censuses as shown by the Myers' index. Digits 0, 2 and 8 are the most preferred digits for both males and females. The tendency to over estimate the age among males could lead to preference of these digits. However, among the females, the age could have been under estimated. Females prefer to look young. Using Myers' Index in assessing the digit preference shows that in 1980 and 1990, the same digits 0, 2 and 8 were preferred in Zambia, refer to Table 2.3 for details. Age misreporting errors are also clearly visible in Figures 2.1 and 2.2. Figures 2.3 and 2.4 show that when the population is aggregated from one-year to five-year age groups, most, if not all, of the age heaping is hardly noticeable.

Figure 2.1

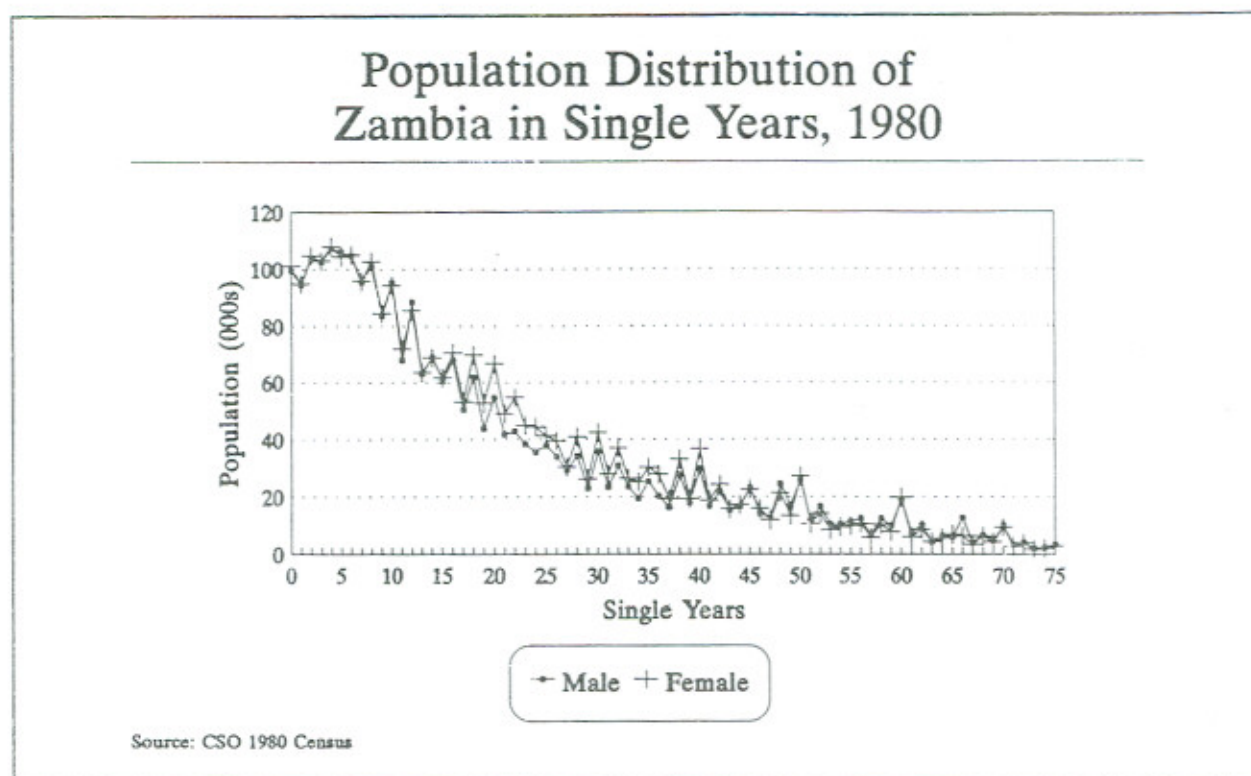
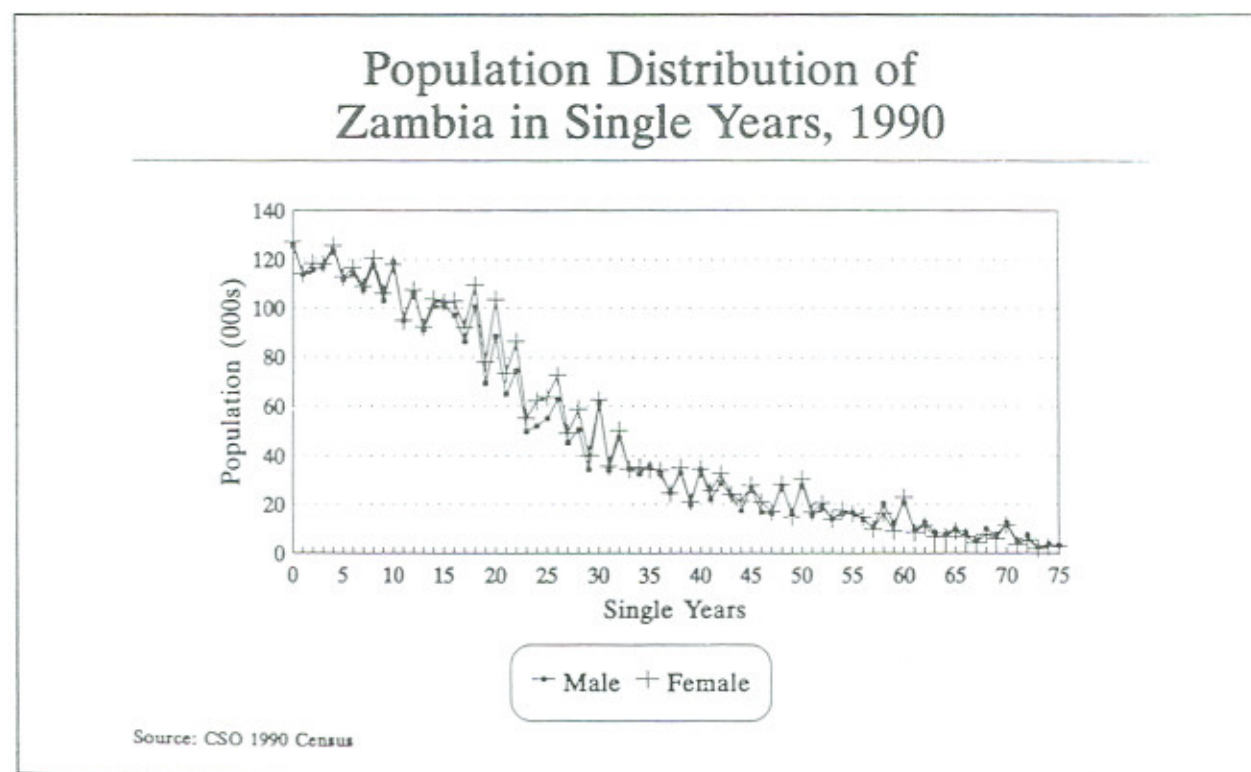
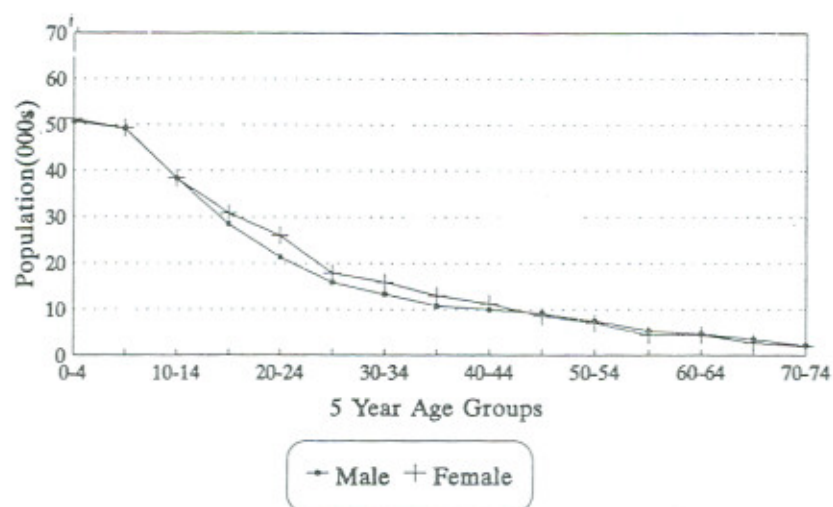


Figure 2.2



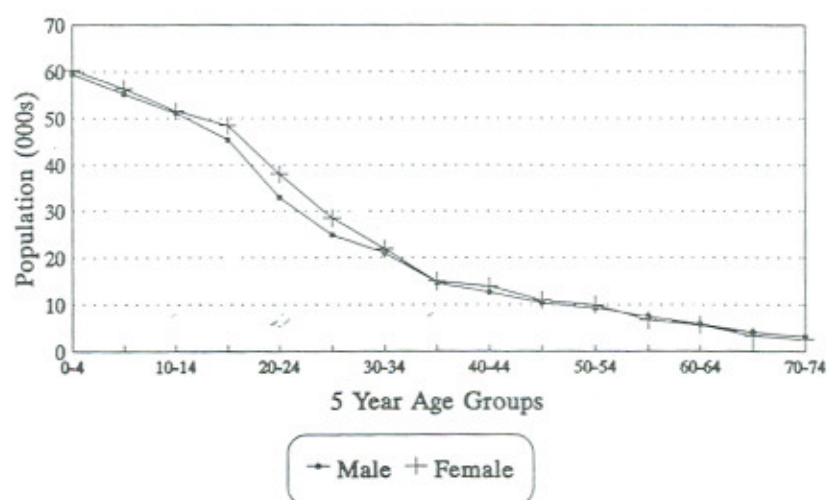
Population Distribution of Zambia by 5 Year Age Group, 1980



Source: CSO 1980 Census

Figure 2.4

Population Distribution of Zambia by 5 Year Age Group, 1990



Source: CSO 1990 Census

Figures 2.5 to 2.10 show reported and smoothed (Adjusted) proportions of the population in five-year age groups. The curves show that there is little discrepancy between the reported and adjusted proportions. Mortality could be a contributing factor for the irregularities in the curves of the reported proportions. Given that the irregularities in the reported proportions are small, it is not advisable to use the smoothed population distribution because genuine irregularities in the reported pattern might be smoothed out.

Figure 2.5

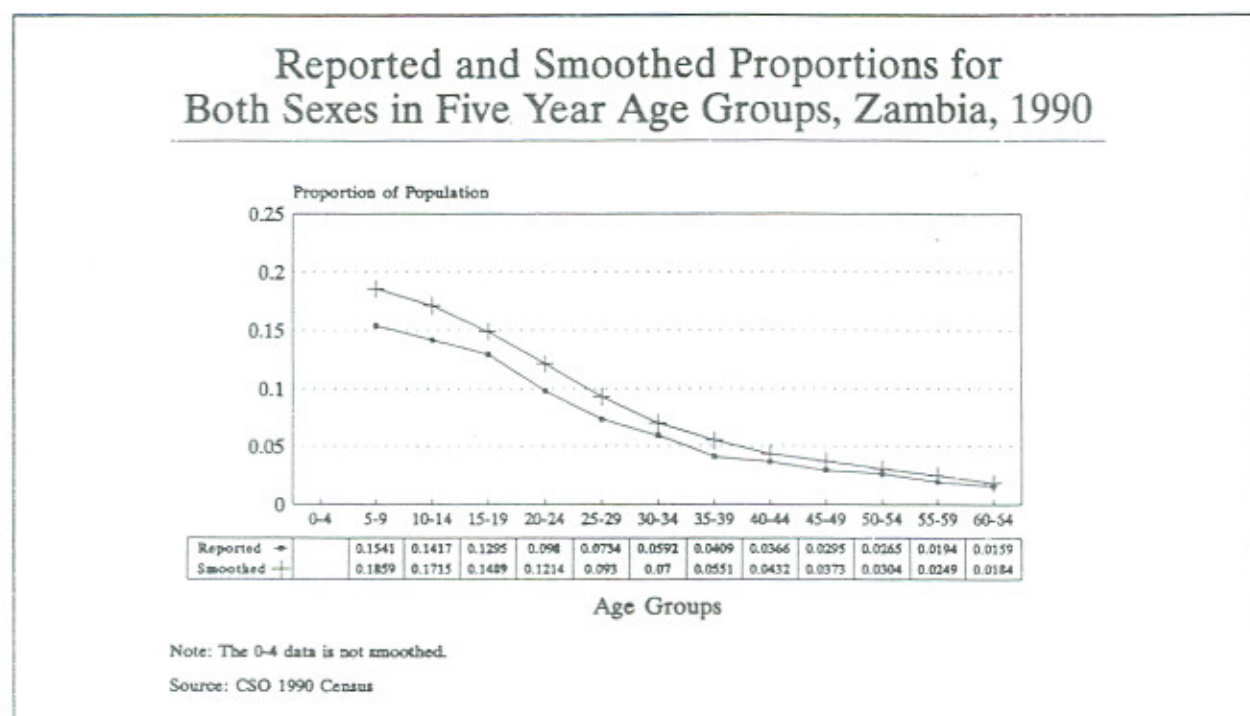
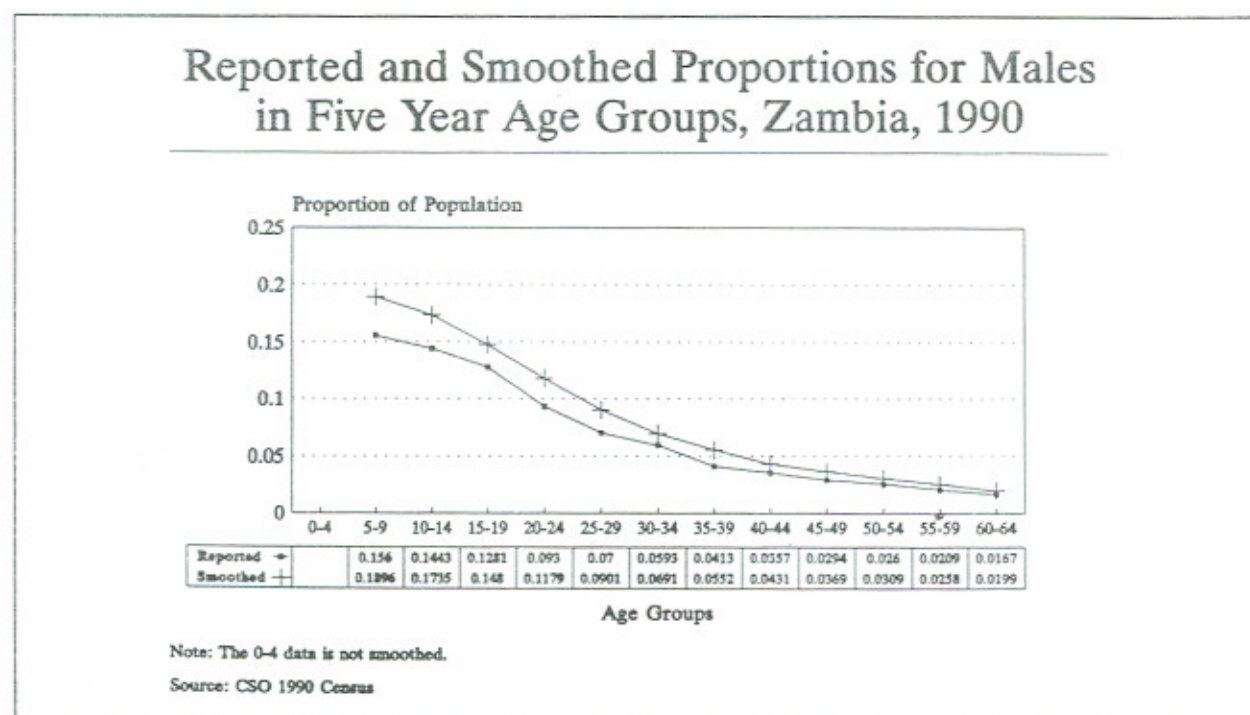


Figure 2.6



Sex Ratios

Errors of omission, age misreporting, in or out-migration, etc. may be detected by studying sex ratios. Sex ratio is the number of males per 100 females. A sex ratio of more than 100 shows an excess of males, a sex ratio of less than 100 shows that there are more females than males and a sex ratio of 100 indicates an equal number of males and females. Sex ratios for Zambia according to the 1980 and 1990 Censuses are given in Tables 2.4, 2.5, 2.6 and Figure 2.11. Table 2.4 shows that there are more females in Zambia than males. This is evidenced by a sex ratio of 96.1. Table 2.4 further shows that there are more females in rural areas than in urban areas of Zambia. Sex ratios for the provinces are also presented in Table 2.4.

Table 2.4

Sex Ratios by Residence, Zambia, 1980 and 1990

Residence	1980	1990
Zambia - Total	95.8	96.1
- Rural	91.5	93.5
- Urban	102.7	100.2
Province		
- Central	101.2	98.9
- Copperbelt	105.5	102.2
- Eastern	87.7	93.3
- Luapula	91.1	92.9
- Lusaka	103.8	100.5
- Northern	90.0	93.5
- North-Western	90.9	91.4
- Southern	95.6	95.6
- Western	83.4	86.8

In 1980 sex ratios of 91.5 and 102.7 were recorded for rural and urban areas respectively. In 1990, the sex ratios of 93.5 in rural areas and a sex ratio of 100.2 males per 100 females was recorded in urban areas of the country. One reason for the low sex ratio in rural areas and a high sex ratio in urban areas could be as a result of out-migration in the former and in-migration in the latter. High male child mortality or high adult male mortality might be a contributing factor of having a sex ratio of 96.1 in Zambia. The provinces recorded sex ratios ranging from 83.4 for Western Province to 105.5 for Copperbelt Province in 1980 and from 86.8 for Western Province to 102.2 for Copperbelt Province in 1990. Copperbelt and Lusaka are the only provinces which have more males than females. The rest of the provinces have more females than males. In 1980, Central Province had more males than females but the reverse was true in 1990.

In the absence of big fluctuations in births, deaths and migration, the sex ratios are expected to be high at the infant ages because the sex ratio at birth is favourable to males. After early childhood, the ratios are expected to decline continuously to reach very low levels at the highest ages when female mortality is much lower than male mortality. Analysis of age-specific sex ratios for 1980 reveals low sex ratios or the deficit of males in age groups from age groups 0-4 to 40-44 (Table 2.5) and from 0-4 to 50-54 in 1990 (Table 2.6). There are many factors responsible for this including high male mortality. The tendency by some men to over estimate their age and some women to under estimate their age could have shifted the former into older ages and the latter into young ages, hence, causing errors in the age data. Under coverage of females could be another possibility since men are mostly the main respondents during enumeration. Sex ratio of 95.8 was recorded in 1990 for those aged between 0-74, see Table 2.6. Since the sex ratio is supposed to be high at age groups 0-4, 5-9 and then decline, the pattern of 1980 and 1990 sex ratios suggest that there was under enumeration of children, (see Figure 2.1).

Age Ratios

The quality of the age data may also be analysed by looking at age ratios. An age ratio is defined as the ratio of the population in the given age group to one-third of the sum of the populations in the age group in question, the preceding age group and the following age group, times 100 (Shryock et al, 1976). When there are no major changes in fertility, mortality, or migration, age ratios do not deviate much from 100. Any substantial deviation is, therefore, explained in terms of age misreporting. Calculations and comparison of age ratios have been done and the results are given according to sex in Tables 2.5 and 2.6 and Figure 2.12. The irregular patterns of the age ratios show that data could be affected by errors from age misreporting, digit preference, omission; migration or fluctuations in births and deaths. The Average Age Ratio Deviation for males was 3.4 and 6.6 for females in 1980 and 3.8 for males and 5.7 for females in 1990. The average age ratio deviation for females are higher than for males in 1980 and 1990. This shows that age reporting was better for males than for females. The Average Sex Ratio Differences were 8.3 and 6.1 in 1980 and 1990, respectively. The Age-Sex Accuracy Index was 34.9 in 1980 and declined to 27.8 in 1990. The United Nations define age-sex data as "accurate, inaccurate and highly inaccurate" if the index is less than 20, from 20-40 and greater than 40, respectively. Therefore, the 1980 and 1990 age data are inaccurate in terms of the United Nations Age-Sex Accuracy Index. However, the 1990 age data shows some improvement as reflected in the age-sex accuracy index of 27.8 in 1990 which is lower than 34.9 in 1980. Refer to Tables 2.5 and 2.6 for details.

Table 2.5

Population by Five Year Age Group, Sex, Age Ratio and the Age-Sex Accuracy Index, Zambia, 1980

Age Group	Population		Age Ratio		Deviation		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	507,782	512,245	-	-	-	-	99.1	-
5-9	491,381	492,890	106.6	106.4	6.6	6.4	99.7	-0.6
10-14	384,016	384,375	99.3	97.3	-0.7	-2.7	99.9	-0.2
15-19	284,668	308,299	96.8	97.1	-3.2	-2.9	92.3	7.6
20-24	213,545	260,246	97.6	104.5	-2.4	4.5	82.1	10.3
25-29	158,386	178,547	94.1	89.6	-5.9	-10.4	88.7	-6.7
30-34	133,179	159,215	100.1	102.1	0.1	2.1	83.6	5.1
35-39	107,611	129,836	94.8	97.0	-5.2	-3.0	82.9	0.8
40-44	99,857	112,680	100.1	103.1	0.1	3.1	88.6	-5.7
45-49	91,743	85,347	103.1	95.5	3.1	-4.5	107.5	-18.9
50-54	75,309	70,202	102.7	105.2	2.7	5.2	107.3	0.2
55-59	52,957	44,675	90.5	84.1	-9.7	-15.9	118.5	-11.3
60-64	47,291	44,564	105.2	114.7	5.2	14.7	106.1	12.4
65-69	34,654	27,363	99.9	89.3	-0.1	-10.7	126.6	-20.5
70-74	22,159	19,980	-	-	-	-	110.9	15.7
Total	2,704,538	2,830,464	-	-	44.8*	86.1*	95.6	116.0*
Mean	-	-	-	-	3.4	6.6	-	8.3

Note: * shows total irrespective of sign.

$$\begin{aligned}
 \text{Age-Sex Accuracy Index} &= (3 \times \text{mean difference in sex ratios}) + (\text{mean deviations of male and female age ratios}) \\
 &= (3 \times 8.3 + 3.4 + 6.6) \\
 &= 34.9
 \end{aligned}$$

Figure 2.11

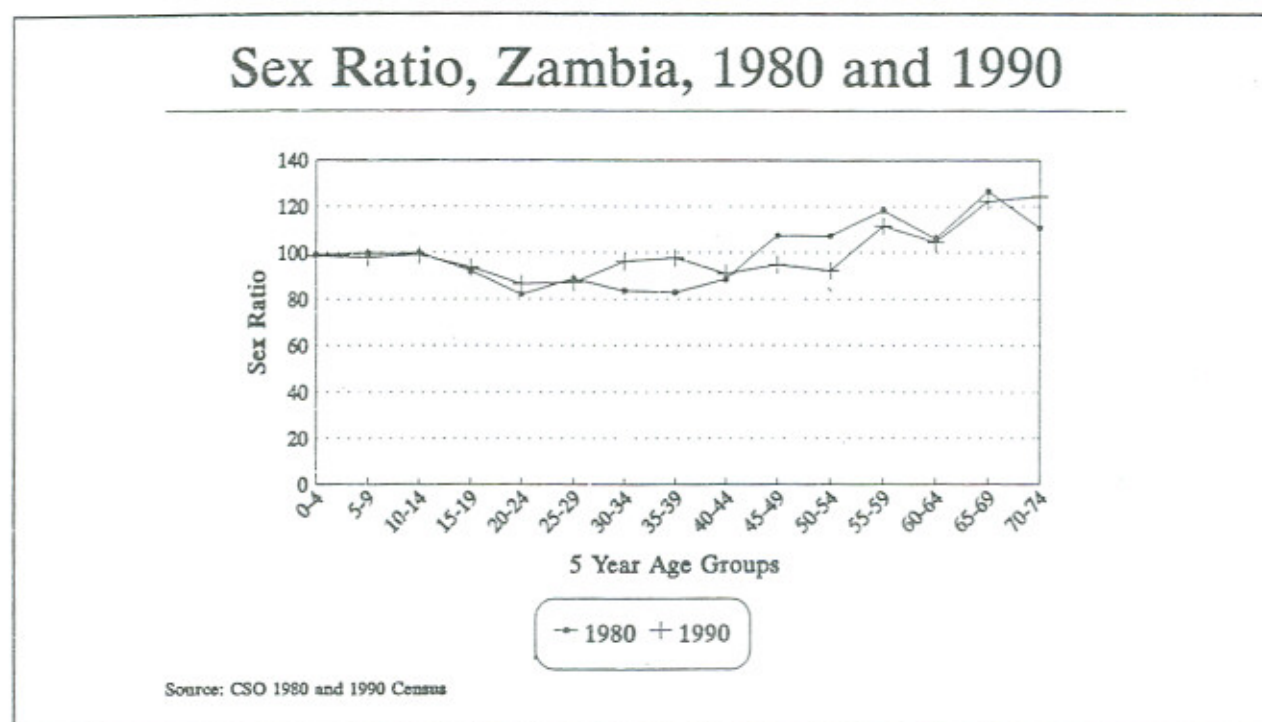


Figure 2.12

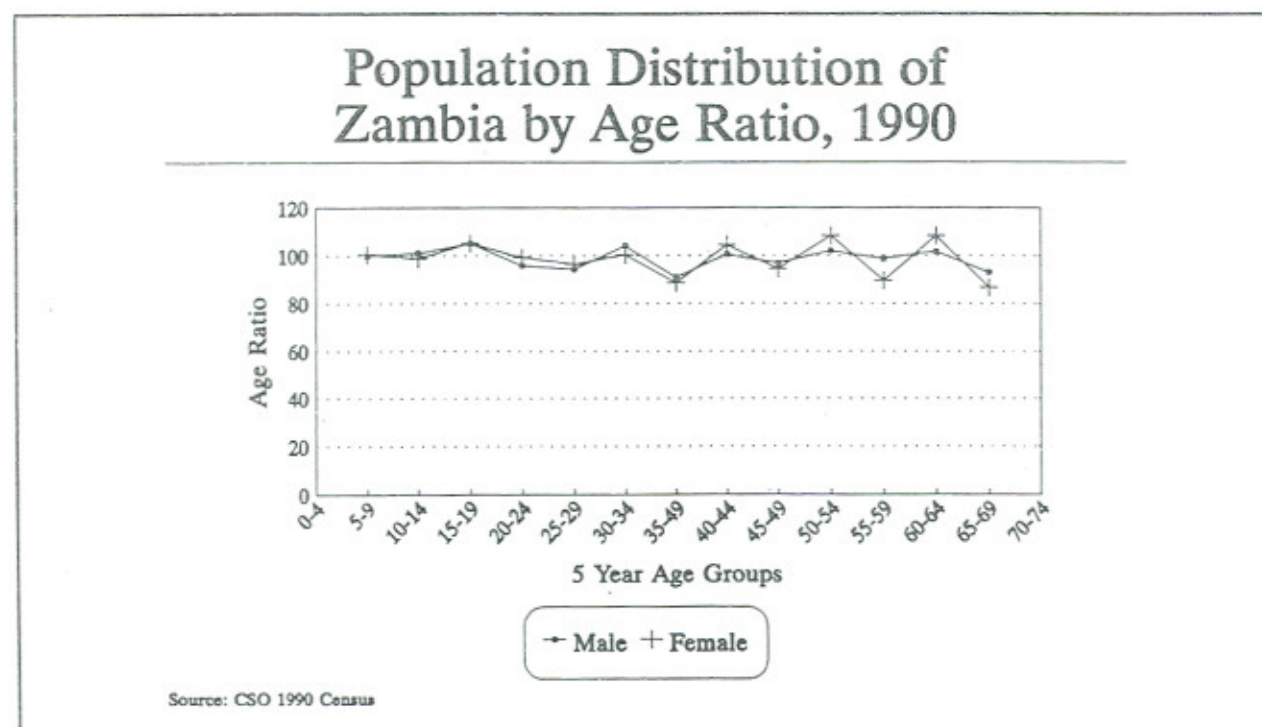


Table 2.6

Population by Five Year Age Group, Sex, Age and the Age-Sex Accuracy Index, Zambia, 1990

Age Group	Population		Age Ratio		Deviation		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	595,163	603,365	-	-	-	-	98.6	-
5-9	553,193	564,638	100.0	100.6	0.0	0.6	98.0	0.7
10-14	511,845	516,401	101.1	98.9	1.1	-1.1	99.1	-1.1
15-19	454,345	485,050	105.2	105.3	5.2	5.3	93.7	5.4
20-24	329,925	380,836	95.9	99.3	-4.1	-0.7	86.6	7.0
25-29	248,186	284,597	94.4	96.6	-5.6	-3.4	87.2	-0.6
30-34	210,486	218,863	104.3	100.5	4.3	0.5	96.2	-9.0
35-39	146,636	150,014	91.0	88.6	-9.0	-11.4	97.7	-1.6
40-44	126,510	139,051	100.6	104.6	0.6	4.6	91.0	6.8
45-49	104,291	109,868	96.9	94.5	-3.1	-5.5	94.9	-3.9
50-54	92,170	99,813	102.1	108.4	2.1	8.4	92.3	2.6
55-59	74,276	66,513	98.8	89.6	-1.2	-10.4	111.7	-19.3
60-64	59,054	56,498	101.8	108.5	1.8	8.5	104.5	7.1
65-69	40,674	33,224	93.1	86.7	-6.9	-13.3	122.4	-17.9
70-74	31,313	25,196	-	-	-	-	124.3	-1.9
Total	3,578,067	3,733,928	-	-	45.0*	73.7*	95.8	84.9*
Mean	-	-	-	-	3.8	5.7	-	6.1

Note: * shows total irrespective of sign.

$$\begin{aligned}
 \text{Age-Sex Accuracy Index} &= (3 \times \text{mean difference in sex ratios}) + (\text{mean deviations of male and female age ratios}) \\
 &= (3 \times 6.1) + (3.8 + 5.7) \\
 &= 27.8
 \end{aligned}$$

Survival Ratio

Survival ratio represents the probability that individuals of the same birth cohort or group of cohorts will still be alive n years later, where n represents the number of years. For the intercensal period of 1980 - 1990, n is 10 years. The uses of survival ratios are many. Evaluating the quality of age and sex data from two censuses using survival ratios is done under the assumptions that the population should be closed to migration and influence of abnormal mortality through wars, disasters, epidemics, etc., over the intercensal period. With the effect of the Acquired Immune Deficiency Syndrome (AIDS) in the recent past, it is difficult to rule out the effect of high mortality on the pattern of survival ratios. Erratic census survival ratios could imply that the age data are inconsistent.

Table 2.7 and Figure 2.13 show fluctuations or irregularities rather than the expected pattern for males and females. There is no systematic decline in the cohort survival ratios with the increase in age. These distortions in data could either be due to age misreporting, under enumeration or over enumeration at some age groups.

Table 2.7

Cohort Survival Ratios By Sex, Zambia, 1980-1990

Age Group	Male	Female
10-14	1.0080	1.0081
15-19	0.9246	0.9841
20-24	0.8591	0.9908
25-29	0.8718	0.9231
30-34	0.9857	0.8410
35-39	0.9258	0.8402
40-44	0.9499	0.8734
45-49	0.9691	0.8462
50-54	0.9230	0.8858
55-59	0.8096	0.7793
60-64	0.7842	0.8048
65-69	0.7681	0.7437
70-74	0.6621	0.5654
75-79	0.5294	0.4338
80-84	0.3770	0.3797
85+	0.5311	0.4916

Figure 2.13

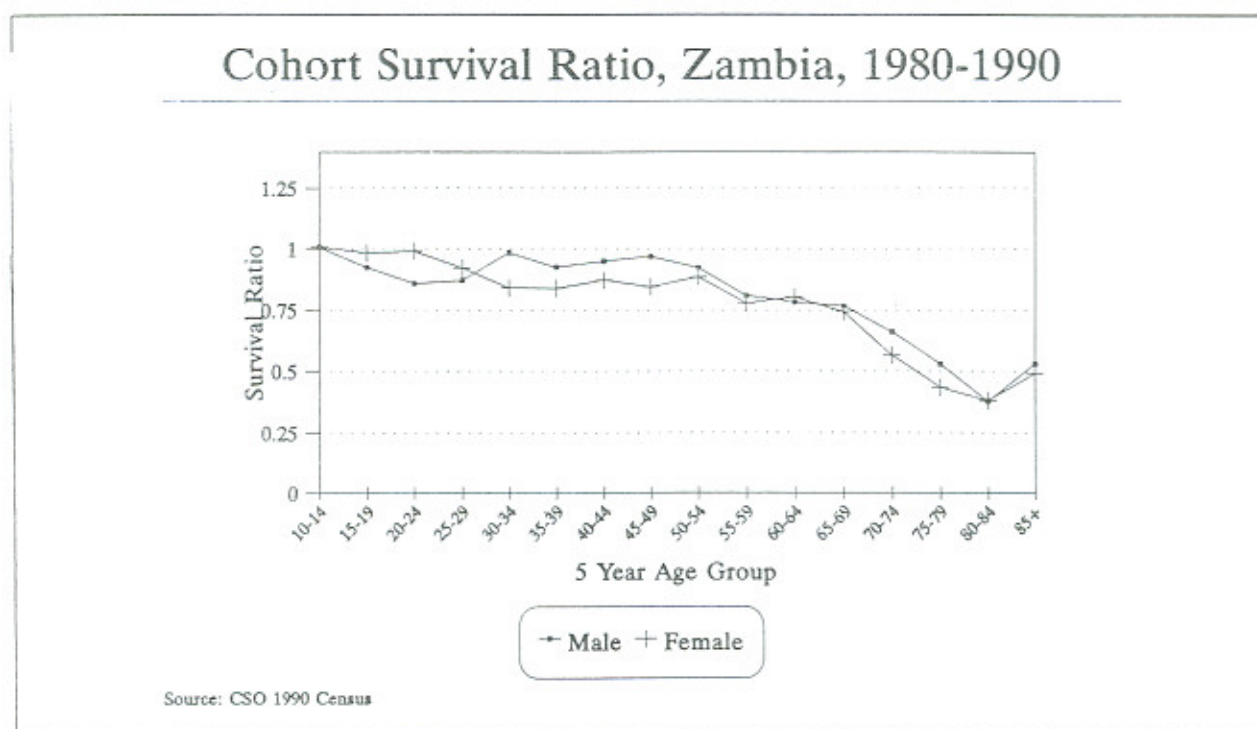


Table 2.8 and Figure 2.14 show the overall (cumulated) survival ratios according to sex and in five-year age groups. Cohort survival ratio refers to the survival ratio of the population in a given age group to the next age whereas the overall survival ratio refers to the ratio of the population aged say 10 years and above, 15 years and above and so on, to the next age. Cohort survival ratios are expected to be high at age group 10-14 where mortality is assumed to be low and then to decline continuously thereafter.

In the absence of migration and abnormal mortality, the overall survival ratio should decline continuously with increasing age. The ratios of females should be higher than those of males because of more favourable mortality for females than for males. Figure 2.14 shows some irregularities in the expected pattern. For example the pattern of having higher overall survival ratios for females than males is only true at age 10+, 15+ and 80+, see Table 2.8 and Figure 2.14. These results suggest that there was age misreporting and under or over coverage in certain age groups especially among females. However, results from Table 2.8 and Figure 2.14 show that the age data for males and females have improved. This is shown by the systematic decline of the overall survival ratios with an increase in age.

Figure 2.14

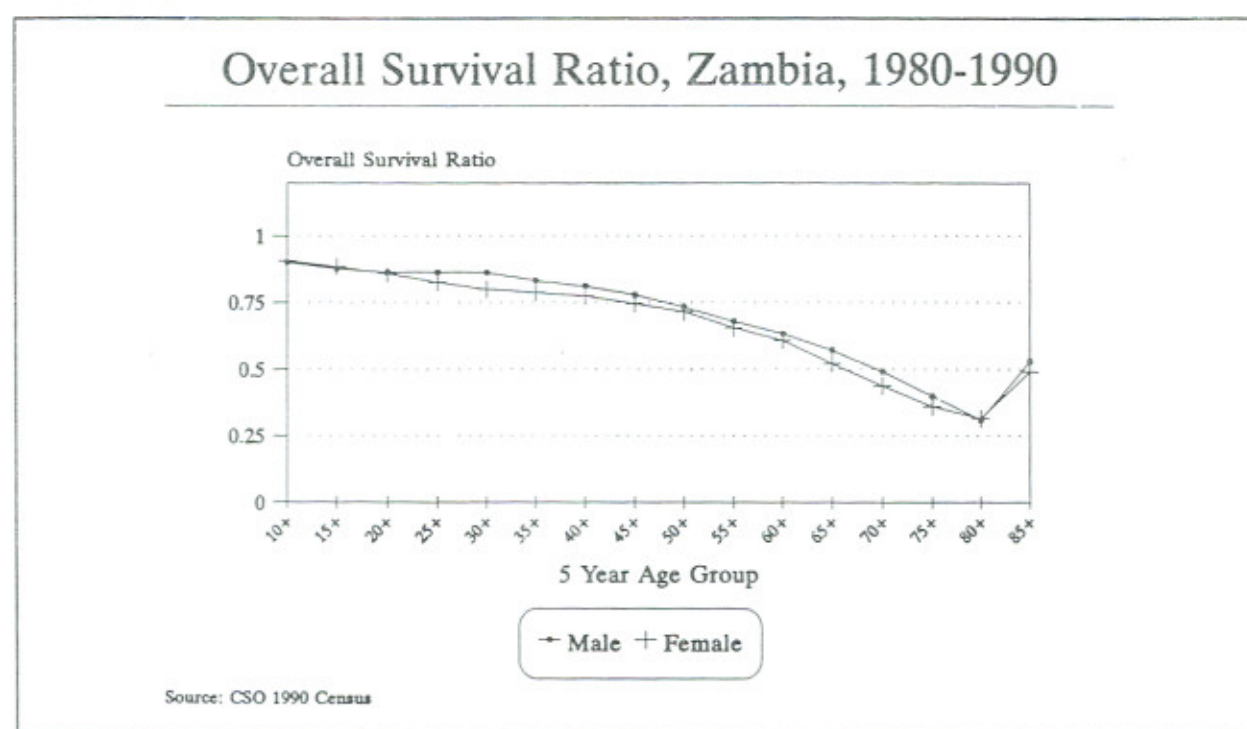


Table 2.8

Overall Survival Ratios, Zambia, 1980-1990

Age Group	Male	Female
10+	0.9015	0.9078
15+	0.8772	0.8858
20+	0.8638	0.8596
25+	0.8651	0.8252
30+	0.8633	0.7992
35+	0.8326	0.7870
40+	0.8113	0.7738
45+	0.7783	0.7455
50+	0.7329	0.7151
55+	0.9791	0.6544
60+	0.6331	0.6083
65+	0.5717	0.5229
70+	0.4931	0.4384
75+	0.3992	0.3600
80+	0.3096	0.3150
85+	0.5311	0.4916

Non-Reporting of Age

Table 2.9 shows that there was a big decline in the number of persons not stating their age from 1980 to 1990 censuses. The percentage of persons whose age was not stated declined more than five times for males and females for the whole country, urban and rural areas. The decline occurred even when calendars of events were not used to estimate age in the 1990 Census. This shows that a lot of people in Zambia have an idea about their numerical age. Further analysis of results from the table shows that 66.8 percent of the total not stated cases in 1990 for both sexes are for rural areas and 33.2 percent for urban areas. Probably as a result of low education levels for the rural population, fewer people compared to urban areas know their numerical age.

Table 2.9

Non-Reporting of Age Zambia, 1980 and 1990

Sex/ Residence	1980 Census			1990 Census		
	Population		Percent Age Not Stated	Population		Percent Age Not Stated
	Total	Age Not Stated		Total	Age Not Stated	
Total						
Both Sexes	5,661,801	73,722	1.3	7,383,097	11,166	0.2
Male	2,769,995	37,223	1.3	3,617,577	5,562	0.2
Female	2,891,806	34,466	1.3	3,765,520	5,604	0.2
Urban						
Both Sexes	3,403,281	37,114	1.1	4,477,814	7,462	0.2
Male	1,625,949	16,482	1.0	2,163,761	3,416	0.2
Female	1,777,332	20,632	1.2	2,314,053	4,046	0.2
Rural						
Both Sexes	2,258,520	36,608	1.6	2,905,283	3,703	0.1
Male	1,144,046	20,741	1.8	1,453,816	2,146	0.1
Female	1,114,474	15,867	1.4	1,451,467	1,557	0.1

2.4 SUMMARY

During the evaluations of content and coverage errors, a lot of observations have been made. Among notable observations made is the digit preference in age reporting with 0, 2 and 8 being the most preferred digits among males and females. There are more females than males in Zambia and a sex ratio of 96.1 males per 100 females was recorded in 1990. Although there was some age heaping during the 1990 Census, the 1990 age sex data shows some improvement over the 1980 age sex data. This is shown by the decline in the Age-Sex Accuracy Index from 34.9 in 1980 to 27.8 in 1990. Over-enumeration and under-enumeration at 0-4 and 5-9 year age groups has been identified through the analysis of age-specific sex ratios and survival ratios.

CHAPTER 3

POPULATION SIZE, GROWTH AND COMPOSITION

3.1 INTRODUCTION

Social and economic development planning requires data on population size, growth and composition as requisite input. A population census offers a very good source for these types of data.

The population censuses of Zambia have been designed to collect the de facto population data. However, in the 1990 population census, both the de facto and de jure population were counted. Nevertheless, results presented in this chapter refer to the de facto count. The de facto population constitutes people actually present at the time of the census with the exception of foreign diplomatic personnel accredited to Zambia. The de facto 1990 population census also excluded Zambian diplomats accredited to embassies in foreign countries and their families, Zambian migrant workers and students residing in other countries. The de jure population constitutes usual household members present and usual household members temporarily absent at the time of the 1990 Census.

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

- Demographic characteristics such as age and sex,
- Social characteristics such as ethnicity and citizenship, and
- Economic characteristics such as economic activity (discussed in Chapter 6).

3.2 POPULATION SIZE AND GROWTH

The population of Zambia, enumerated as 7.4 million in 1990, comprises 3.6 million males and 3.8 million female. Table 3.1 shows more details broken down by sex, residence and province.

Table 3.1

Population Size by Sex, Residence and Province, Zambia, 1990

Province	Total			Rural		Urban	
	Both Sexes	Male	Female	Male	Female	Male	Female
Central	720,627	358,396	362,231	251,725	255,705	106,671	106,526
Copperbelt	1,427,545	721,507	706,038	104,281	102,065	617,226	603,973
Eastern	965,967	466,264	499,703	422,305	455,247	43,959	44,456
Luapula	525,160	252,852	272,308	213,181	230,118	39,671	42,190
Lusaka	997,106	494,884	492,222	78,810	78,058	416,074	414,164
Northern	855,177	413,268	441,909	354,184	380,071	59,084	61,834
North-western	387,552	185,038	202,514	157,918	173,547	27,120	28,967
Southern	907,150	443,315	463,835	336,569	355,684	106,746	108,151
Western	606,813	282,053	324,760	244,788	283,558	37,265	41,202
Zambia	7,383,097	3,617,577	3,765,520	2,163,761	2,314,053	1,453,816	1,451,467

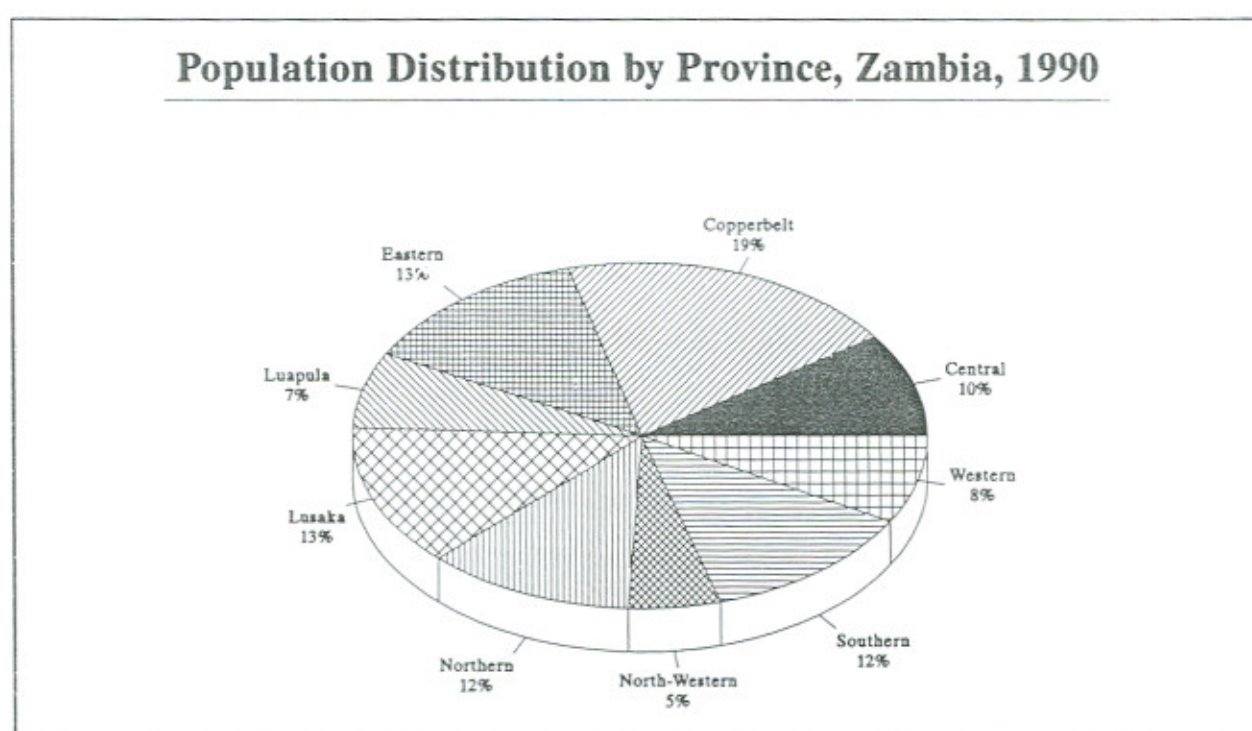
Population sizes and annual growth rates as recorded for the 1969, 1980 and 1990 Censuses of population are presented in Table 3.2.

Table 3.2

Population Size, Percent Distribution and Growth Rates, Zambia, 1969, 1980 and 1990

Country/Province	1969		Annual Growth Rate 1969-80	1980		Annual Growth Rate 1980-90	1990	
	Population Size	Percent		Population Size	Percent		Population Size	Percent
Zambia								
- Total	4,056,995	100.0	3.1	5,661,801	100.0	2.7	7,383,097	100.0
- Rural	2,864,879	70.6	1.6	3,403,281	60.1	2.8	4,477,814	60.6
- Urban	1,192,116	29.4	6.0	2,258,520	39.9	2.6	2,905,283	39.4
Province								
Central	358,655	8.8	3.3	511,905	9.0	3.5	720,627	9.8
Copperbelt	816,309	20.1	4.0	1,251,178	22.1	1.3	1,427,545	19.3
Eastern	509,515	12.6	2.3	650,902	11.5	4.0	965,967	13.1
Luapula	335,584	8.3	2.1	420,966	7.4	2.2	525,160	7.1
Lusaka	353,975	8.7	6.3	691,054	12.2	3.6	987,106	13.4
Northern	545,096	13.5	2.0	674,750	11.9	2.4	855,177	11.6
North-Western	231,733	5.7	2.5	302,668	5.4	2.5	387,552	5.2
Southern	496,041	12.2	2.8	671,923	11.9	3.0	907,150	12.3
Western	410,087	10.1	1.6	486,455	8.6	2.2	606,813	8.2

Figure 3.1



The population of Zambia, enumerated as 4.1 million in 1969, grew to 5.7 million in 1980 and to 7.4 million in 1990. The annual growth rate was 3.1 percent in the 1969-80 intercensal period and marginally dropped to 2.7 percent in the 1980-90 intercensal period. The urban population of the country grew at a very fast pace of 6.0 percent in the 1969-80 intercensal period, but this dropped to 2.6 percent in the 1980-90 intercensal period. This may be attributed to the pronounced rural-urban migration characterised by the initial years after independence in 1964. During this period, there was newly found freedom when all barriers to freedom of movement were lifted. Pertaining to the provinces, the fastest growing ones (in descending order) are Eastern, Lusaka and Central. The Copperbelt province grew least in this period.

Table 3.3 shows that population density for Zambia and all provinces has increased over the three post-independence censuses. These are the smallest provinces in Zambia but they have big populations.

Table 3.3

Area and Population Density by Province and Population Census Year, Zambia, 1969, 1980 and 1990

Country/Province	Area (Sq Km)	Population Density/Census Year (Population Per sq.km)		
		1969	1980	1990
Zambia	752,612	5.4	7.5	9.8
Central	94,394	3.8	5.4	7.6
Copperbelt	31,328	26.1	39.9	45.6
Eastern	69,106	7.4	9.4	13.9
Luapula	50,567	6.6	8.3	10.4
Lusaka	21,896	16.2	31.6	45.1
Northern	147,826	3.7	4.6	5.8
North-Western	125,826	1.8	2.4	3.1
Southern	85,283	5.8	7.9	10.6
Western	126,386	3.3	3.9	4.8

3.3 POPULATION COMPOSITION

Age Composition

Age is an important factor in demographic analysis as it is closely related to demographic and social processes. The number of births, for instance, depends on the number of child-bearing women aged 15-49 years. Migration is also age-selective, and the school-going population and labour force are concentrated in specific age groups.

Age in the census is defined as "the completed number of years (as at last birthday)" before the census date. The median age is considered to be the best basis for describing a population as 'young' or 'old'. The median age is defined as the age which divides a population into two equal groups, one of which is younger and the other of which is older than the median. The median age is 16.8 years, implying that the population of Zambia is young. In 1980, the median age was 15.2 years, giving a rise of about one and half years. The observation that the population of the country is young may also be made on the basis of examining the age pyramids in Figures 3.2 and 3.3.

Figure 3.2

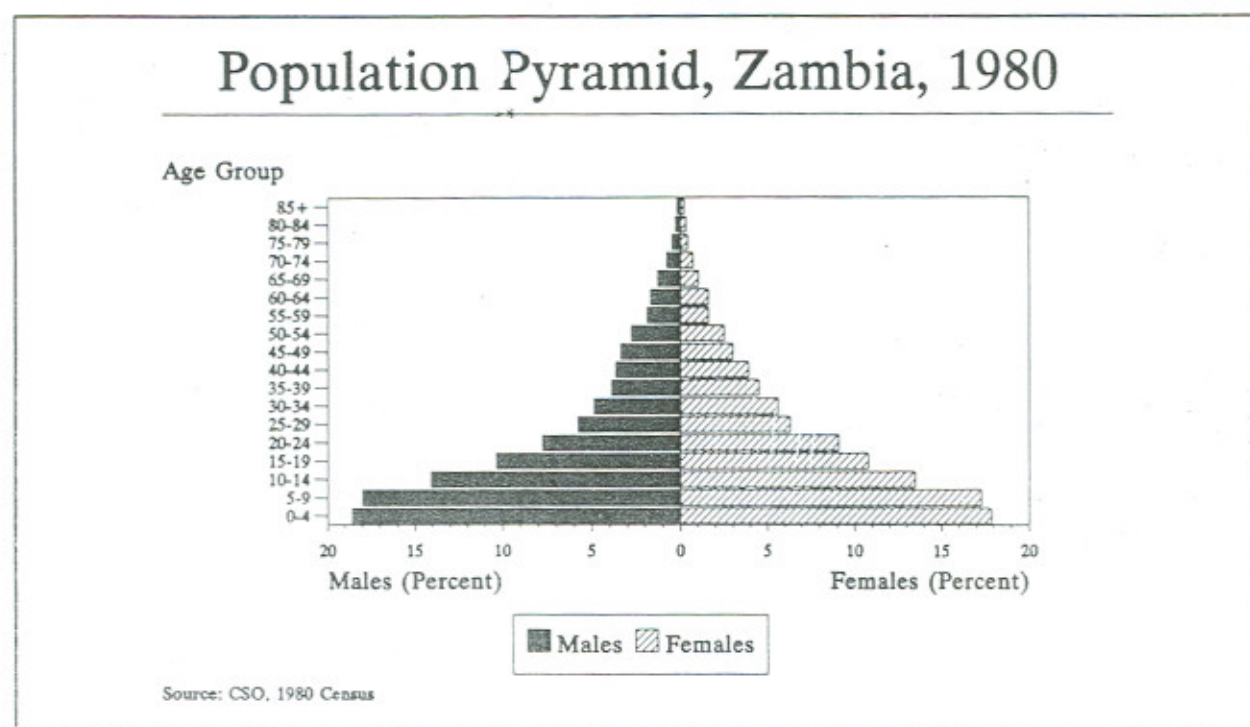
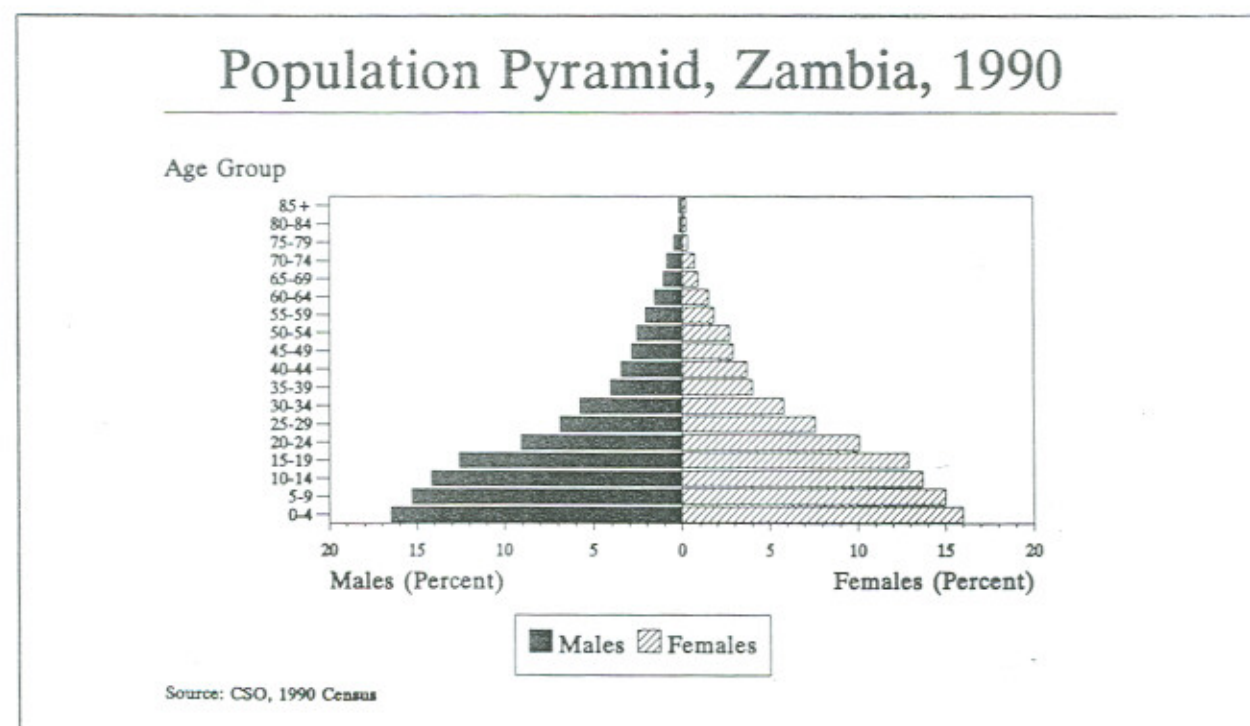


Figure 3.3



The age pyramids have wide bases since the child population is very large. Nations whose population may be termed as 'old' constitute less children and more older people. This is as a result of less births occurring in the population, for example due to effective family planning. Such situations are typical of the advanced, industrialized countries. Barring any unforeseen substantial emigration, prospects for future population growth are high in Zambia because the large child population has yet to enter the reproductive age range 15-49 years.

Additional information on the age-sex population distribution of Zambia is provided in Table 3.4.

Table 3.4

Age-distribution of Population by Rural, Urban and Sex, (Percent), Zambia, 1990

Age Group	Zambia Total			Rural		Urban	
	Both Sexes	Male	Female	Male	Female	Male	Female
0 - 4	16.2	16.5	16.0	17.0	16.1	15.6	15.9
5 - 9	15.1	15.3	15.0	15.8	14.9	14.6	15.2
10 - 14	13.9	14.1	13.7	14.5	13.1	13.6	14.7
15 - 19	12.7	12.6	12.9	12.5	12.1	12.7	14.1
20 - 24	9.6	9.1	10.1	8.5	9.4	10.1	11.3
25 - 29	7.2	6.9	7.6	6.3	7.0	7.8	8.5
30 - 34	5.8	5.8	5.8	5.1	5.3	6.9	6.6
35 - 39	4.0	4.1	4.0	3.3	3.8	5.2	4.4
40 - 44	3.6	3.5	3.7	2.9	4.0	4.3	3.2
45 - 49	2.9	2.9	2.9	2.7	3.4	3.2	2.1
50 - 54	2.6	2.5	2.7	2.7	3.3	2.4	1.5
55 - 59	1.9	2.1	1.8	2.4	2.3	1.5	0.9
60 - 64	1.6	1.6	1.5	2.1	2.0	0.9	0.7
65 - 69	1.0	1.1	0.9	1.5	1.2	0.5	0.4
70 - 74	0.8	0.9	0.7	1.2	0.9	0.3	0.2
75 - 79	0.4	0.5	0.3	0.7	0.4	0.2	0.1
80 - 84	0.3	0.2	0.2	0.3	0.3	0.1	0.1
85 +	0.2	0.2	0.2	0.3	0.2	0.1	0.1
N/Stated	0.2	0.2	0.1	0.2	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Pop.	7,383,097	3,617,577	3,765,520	2,163,761	2,314,053	1,453,816	1,451,467

In the field of demography, the age group 0-14 years is usually taken to be the child population. It is observed that 45.9 percent of the population of males and 44.7 percent of the population of females constitute children. Such a large child population has implications on future population growth. It has an in-built population growth momentum. Even if the fertility levels were to drop dramatically to the reproduction level, the population of the country would continue to grow as the large child population enters the reproductive ages. There are also serious implications of a young population for the economy. Resources meant for investment in the productive sector of the economy would be diverted to the social sectors for building more schools, health institutions and other social infra-structures.

Age Dependency Ratio

This may be defined as the ratio of children aged 0-14 and persons aged 65 years and older, per 100 persons in the age group 15-64 years old. The dependency ratios are shown in Table 3.5.

Table 3.5

Dependency Ratio by Residence and Province, Zambia, 1980 and 1990

Residence/Ratio	1980	1990
Zambia		
- Overall Dependency Ratio	110.2	92.1
- Child Dependency Ratio	104.3	87.2
- Aged Dependency Ratio	5.9	5.0
Rural		
- Overall Dependency Ratio	112.9	97.3
- Child Dependency Ratio	104.3	90.1
- Aged Dependency Ratio	8.6	7.1
Urban		
- Overall Dependency Ratio	106.3	84.7
- Child Dependency Ratio	104.3	82.9
- Aged Dependency Ratio	2.0	1.9
Province		
Central		
- Overall Dependency Ratio	110.8	91.2
- Child Dependency Ratio	105.6	86.5
- Aged Dependency Ratio	5.2	4.7
Copperbelt		
- Overall Dependency Ratio	106.3	85.6
- Child Dependency Ratio	104.4	83.4
- Aged Dependency Ratio	1.8	2.2
Eastern		
- Overall Dependency Ratio	112.5	95.7
- Child Dependency Ratio	103.2	88.6
- Aged Dependency Ratio	9.2	7.1
Luapula		
- Overall Dependency Ratio	114.8	93.5
- Child Dependency Ratio	108.6	87.9
- Aged Dependency Ratio	6.2	5.6
Lusaka		
- Overall Dependency Ratio	102.1	82.4
- Child Dependency Ratio	99.9	80.4
- Aged Dependency Ratio	2.2	2.0
Northern		
- Overall Dependency Ratio	123.8	99.8
- Child Dependency Ratio	155.5	93.9
- Aged Dependency Ratio	8.3	6.0
North-Western		
- Overall Dependency Ratio	111.4	98.1
- Child Dependency Ratio	99.6	89.1
- Aged Dependency Ratio	11.7	9.0
Southern		
- Overall Dependency Ratio	115.6	99.6
- Child Dependency Ratio	109.9	94.9
- Aged Dependency Ratio	5.8	4.7
Western		
- Overall Dependency Ratio	99.6	94.0
- Child Dependency Ratio	88.5	84.4
- Aged Dependency Ratio	11.1	9.6

The overall dependency ratio for Zambia was 110.2 in 1980 and 92.1 in 1990. This shows that in 1990, there is 92.1 dependents for every 100 persons with productive abilities. The child dependency ratio, which is the ratio of those aged 0-14 years to those aged 15-64 years declined from 104.3 in 1980 to 87.2 in 1990. The aged dependency ratio, which is a ratio of those aged 65 years and above to those aged 15-64 years, declined from 5.9 in 1980 to 5.0 dependents in 1990.

There has been a decline in the dependency ratios between the 1980 and 1990 intercensal period except for the aged dependency ratio of Copperbelt Province which rose from 1.8 in 1980 to 2.2 in 1990. The decline in the dependency ratios could either be as a result of an increase in mortality among those aged 0-14 years and those aged above 65 years or a decline in fertility.

Ethnicity and Citizenship

Table 3.6 gives information on the ethnic composition of the population of Zambia.

Table 3.6

Ethnic Composition of the Population of Zambia, 1990

Residence/Sex	Ethnic Group						Total
	African	American	Asian	European	Other	Not Stated	
Total							
Male	3,568,812	587	5,463	3,871	1,022	37,822	3,617,577
Female	3,721,481	508	4,876	3,210	909	34,536	3,765,520
Total	7,290,293	1,095	10,339	7,081	1,931	72,358	7,383,097
% of Total Population	98.74	0.01	0.14	0.10	0.03	0.98	100.0
Rural							
Male	2,143,189	207	222	1,047	453	18,643	2,163,761
Female	2,293,738	193	169	918	473	18,562	2,314,053
Total	4,436,927	400	391	1,965	926	37,205	4,477,814
% of Total Population	99.09	0.01	0.01	0.04	0.02	0.83	100.0
Urban							
Male	1,425,623	380	5,241	2,824	569	19,179	1,453,816
Female	1,427,743	315	4,707	2,292	436	15,974	1,451,467
Total	2,853,366	695	9,948	5,116	1,005	35,153	2,905,283
% of Total Population	98.21	0.02	0.34	0.18	0.03	1.21	100.0

Ethnicity in the 1990 census is defined as continent of origin when referring to the whole population, but when applied to Zambians only, it refers to the indigenous Zambian tribes. The population of Zambia is predominantly African, forming 98.74 percent of the population. Other ethnic groups form only a negligible 0.28 percent of the total population of the country.

Comparison of rural and urban areas shows that the rural population is more homogeneous. The proportion of Africans (99.0 percent) in rural areas is higher than that of urban areas (98.21 percent). This means that a higher proportion of non-African ethnic groups live in the urban areas as opposed to rural areas of Zambia.

Table 3.7 provides details on citizenship status of the population of Zambia.

Table 3.7

Foreign Population of Zambia by Citizenship, 1980 and 1990

Country/Region	Population 1980	Percent 1980	Population 1990	Percent 1990
Zaire	22,906	9.9	8,493	5.6
Other (Central Africa)	111	0.0	73	0.0
Tanzania	16,493	7.1	6,271	4.1
Other (Eastern Africa)	1,440	0.6	1,752	1.1
Northern Africa	1,295	0.6	874	0.6
Angola	27,682	12.0	22,234	14.6
Botswana	29,003	12.5	171	0.1
Malawi	27,089	11.7	13,626	8.9
Mozambique	2,904	1.3	19,503	12.8
Namibia	516	0.2	2,514	1.6
Zimbabwe	48,111	20.8	21,582	14.2
Other (Southern Africa)	4,168	1.8	2,160	1.4
West Africa	3,206	1.4	2,190	1.4
America	4,351	1.9	814	0.5
Asia & Oceanic	11,894	5.1	5,880	3.9
Europe	12,744	5.5	5,769	3.8
Not Stated	17,623	7.6	38,542	25.3
% Total		100.0		100.0
Total Foreign Citizens	231,536		152,448	
% Foreign Population		4.1		2.1

The foreign citizens in Zambia come mainly from three countries; Angola (14.6 percent), Zimbabwe (14.2 percent) and Mozambique (12.8 percent). Most of the foreign citizens from Angola and Mozambique may be refuge seekers considering the civil strife situation in the two respective countries since attainment of independence in 1975.

In 1980, the largest proportion of foreigners were from Zimbabwe followed by Botswana, Angola and Malawi. The position of Zimbabwe in 1980 may be explained by the struggle for independence in that country which led many of her citizens to seek refuge in Zambia. Overall, the number of foreign citizens in Zambia has dropped by about half from 4.1 percent in 1980 to 2.1 in 1990.

3.4 SUMMARY

The post-independence population censuses of Zambia have shown that the population of the country which was enumerated as 4.1 million in 1969, grew to 5.7 million in 1980 and to 7.4 million in 1990. Correspondingly, the annual population growth rate for the two intercensal periods has declined from 3.1 percent (1969-80) to 2.7 percent (1980-90). However, this population is growing very fast. The population of the country may be termed as 'young', with a median age of 16.8 years. The African population forms 98.7 percent of the total population and foreign citizens form 2.1 percent of the population.

CHAPTER 4

LANGUAGE OF COMMUNICATION

4.1 INTRODUCTION

There are many languages and dialects in Zambia. It is estimated that there are 72 tribes in Zambia, each with a unique language or dialect. However, there are seven major languages designated as **Zambian languages**, which are spoken widely, taught in schools and aired on both Radio and Television. The seven **Zambian languages** are Bemba, Nyanja, Tonga, Lozi, Kaonde, Lunda and Luvale. English is the official language in the country. It is used in all government functions and is a media of instruction in schools. English is a compulsory subject at primary and secondary levels of education and each student must pass it to obtain a full certificate.

In the analysis of language of communication, only those who spoke any language have been considered. Since every person was asked the question, the dumb and the very young not yet able to speak any language were recorded either as "not applicable" or "not stated". The "not applicable" and "not stated" cases have been excluded in the tables. Every person's predominant as well as the second language of communication were sought. A predominant language of communication was defined as the language most frequently spoken for day-to-day communication. The second language was conceived to be the most frequently used after the predominant language.

In some cases the languages have been grouped according to similarity of languages and the geographical setting. There are eight language groups identified by earlier language experts (Kay 1964.). The seven language groups are the Bemba, Tonga, North-Western, Barotse, Nyanja, Mambwe and Tumbuka.

4.2 PREDOMINANT LANGUAGE OF COMMUNICATION

At the national level, the first 24 predominantly spoken languages have been identified and shown in Table 4.1. The first seven widely spoken languages in descending order of magnitude are, Bemba (29.7 percent), Tonga (11 percent), Nyanja (7.8 percent), Lozi (6.4 percent), Chewa (5.7 percent), Nsenga (4.3 percent) and Tumbuka (2.9 percent). The seven languages are spoken by 67.7 percent of the **Zambian population**. On the contrary the official government perception has been that the seven predominant **Zambian languages** are Bemba, Nyanja, Tonga, Lozi, Kaonde, Lunda and Luvale. The three languages Kaonde, Lunda and Luvale have been designated as some of the seven predominant language groups on a basis other than being widely spoken. The percentages of the population speaking these three languages are 1.7 percent (Luvale), 2.3 percent (Kaonde) and 2.0 percent (Lunda).

Table 4.1

Predominant Language of Communication by Residence, (Percent), Zambia, 1990

Predominant Language	Total	Rural	Urban
Bemba	29.7	18.1	47.6
Lala	2.4	3.3	1.1
Bisa	1.2	1.8	0.4
Lamba	2.2	2.9	1.1
Tonga	11.0	14.6	5.3
Lenje	1.6	2.1	0.7
Nila	0.9	1.2	0.4
Luvale	1.8	2.2	1.0
Lunda (N-West)	2.0	2.7	1.1
Kaonde	2.3	2.6	1.7
Lozi	6.4	7.3	5.0
Chewa	5.7	7.4	3.0
Nsenga	4.3	5.2	3.0
Ngoni	1.7	1.6	1.9
Nyanja	7.8	3.0	15.2
Lungu	0.7	1.0	0.2
Mambwe	1.2	1.4	0.9
Namwanga	1.4	1.6	1.2
Tumbuka	2.9	3.7	1.8
Senga	0.7	1.0	0.3
English	1.1	0.2	2.5
Other	11.0	15.1	4.6
Percentage Total	100.0	100.0	100.0
Size	7,001,936	4,285,151	2,743,785

Table 4.1 also shows that Bemba and Nyanja are widely spoken in urban than in rural areas. Nearly 63 percent of the urbanites speak either Bemba or Nyanja as their predominant languages of communication. Tonga (14.6 percent), Lozi (7.3 percent) Chewa (7.4 percent), Nsenga (5.2 percent) and Tumbuka (3.7 percent) are more confined to rural areas. Other languages more spoken in urban than rural areas are English and to some extent Ngoni. The majority of other languages are widely spoken in the rural areas.

From Table 4.1 above, the three languages namely, Bemba, Tonga and Nyanja are predominant languages for 48.4 percent of the Zambians. However, in the rural areas about 36 percent of the Zambian population speak the three languages as first languages of communication. English, the official language of Zambia is spoken as a predominant language by a small segment of the population in the whole country but its dominance increases in the urban areas.

4.3 PREDOMINANT LANGUAGE GROUP

The languages presented in Table 4.1 have been grouped according to the language groups described in section 4.1 and presented in Table 4.2. All the seven language groups are presented for the whole country, rural and urban areas as well as sex.

Table 4.2

Predominant Language Groups by Sex and Residence, (Percent), Zambia, 1990

Language Group	Total			Rural			Urban		
	Both sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba	39.7	40.0	39.4	31.7	31.9	31.5	52.1	52.0	52.1
Tonga	14.8	14.6	15.0	19.8	19.8	19.8	7.1	6.8	7.3
N/Western	8.8	8.5	9.0	11.4	11.1	11.6	4.7	4.7	4.8
Barotse	7.5	7.3	7.7	9.0	8.8	9.2	5.3	5.2	5.3
Nyanja	20.1	20.2	20.1	18.0	18.1	17.9	23.5	23.4	23.6
Mambwe	3.4	3.5	3.4	4.2	4.2	4.1	2.3	2.4	2.3
Tumbuka	3.7	3.7	3.7	4.7	4.7	4.8	2.1	2.1	2.0
English	1.1	1.3	0.9	0.2	0.3	0.2	2.5	2.9	2.1
other	0.8	0.8	0.8	1.0	1.0	1.0	0.5	0.5	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pop. Size	7,001,936	3,427,103	3,574,833	4,258,151	2,055,184	2,202,967	2,743,785	1,371,919	1,371,866

The Bemba language group is dominant in both rural and urban areas. In urban areas the Bemba language group is spoken by over one half of the population and together with the Nyanja language group account for the dominant language of over 75 percent of the population. The languages comprising the Bemba language group are mainly from Northern, Luapula and to some extent Central and Copperbelt provinces. The Mambwe language group is from Northern Province while Nyanja and Tumbuka originate from Eastern Province. Tonga, North-Western and Barotse are from Southern and Lusaka; North-Western and Western provinces respectively.

Sex differences in the speaking of languages are minimal. However, some differences are noticed with regard to the English language where more males than females use it as a predominant language of communication.

Table 4.3 shows changes in the share of each language group during the intercensal period, 1980-1990. The most pronounced change is in the Tonga language group of which the percentage of the population speaking it increased by 1.5 percent between 1980 and 1990. The English language seems to be less preferred as a predominant language in 1990 than it was in 1980. The drop in the usage of the English language from 4.6 percent to 1.1 percent amid increased education suggests that local languages are becoming more and more preferred to the foreign English language.

Table 4.3

Predominant Language Groups by Year, (Percent), Zambia, 1980 and 1990

Language Group	Percentage of Total Population	
	1980	1990
Bemba	39.7	39.7
Tonga	13.3	14.8
N/Western	7.7	8.8
Barotse	8.0	7.5
Nyanja	19.0	20.1
Mambwe	3.2	3.4
Tumbuka	3.2	3.7
English	4.6	1.1
Other	1.4	0.8
Total	100.0	100.0
Size	5,226,895	7,001,936

4.4 SECOND LANGUAGE OF COMMUNICATION

In a multilingual country like Zambia, many people speak several languages. The 1990 Census questionnaire solicited information on the second language of communication, see Table 4.4. Of the total population in 1990 about 7 million spoke any language and only about 2.7 million persons spoke a second language. The four major languages spoken as second languages are Bemba (22.2 percent), Nyanja (18.6 percent), English (17.8 percent) and Lozi (7.4 percent). The English and Nyanja languages are spoken widely in the urban areas. However, together with Bemba and Lozi, they provide an alternative language of communication to about two thirds of the rural population.

Table 4.4

Second Language of Communication by Residence, (Percent), Zambia, 1990

Second Language	Total	Rural	Urban
Bemba	22.2	22.1	22.2
Lala	1.3	1.3	1.4
Lamba	1.7	2.3	1.3
Tonga	4.0	4.1	3.9
Lenje	1.8	2.6	1.0
Ila	1.0	1.8	0.4
Luvale	1.7	2.6	1.0
Lunda(N/Western)	1.1	1.2	1.1
Kaonde	2.0	2.1	1.9
Lozi	7.4	12.1	3.3
Chewa	2.6	3.1	2.2
Nsenga	2.3	1.8	2.7
Ngoni	1.6	1.3	1.9
Nyanja	18.6	13.2	23.4
Mambwe	1.0	1.0	1.0
Namwanga	1.0	0.6	1.3
Tumbuka	1.7	1.3	2.1
English	17.8	12.7	22.4
Other	9.2	12.8	5.8
Total Percentage	100.0	100.0	100.0
Size	2,674,111	1,255,618	1,418,493

Table 4.5 shows the second language groups by sex and residence. It is observed from the table that 28 percent of the population comprises the Bemba language group and 26 percent, the Nyanja language group, as a second language group. The English group comprises 18 percent. In rural areas, the largest proportion comprises the Bemba group while the Nyanja predominate in urban areas. English, as a second language group is more predominant in urban than rural areas.

Table 4.5

Second Language Groups by Sex and Residence, (Percent), Zambia, 1990

Language Group	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba	27.5	26.3	28.8	28.2	27.0	29.5	26.8	25.7	28.0
Tonga	8.1	7.7	8.6	10.5	10.0	11.0	6.1	5.6	6.5
N/Western	7.1	6.6	7.7	9.7	8.9	10.6	4.9	4.6	5.2
Barotse	8.4	7.8	9.1	14.0	12.8	15.2	3.5	3.4	3.7
Nyanja	25.5	24.8	26.2	19.7	19.6	19.8	30.6	29.4	31.9
Mambwe	2.4	2.3	2.6	2.2	2.1	2.4	2.6	2.5	2.8
Tumbuka	2.0	1.9	2.1	1.6	1.5	1.7	2.4	2.3	2.4
English	17.8	21.5	13.8	12.7	16.7	8.4	22.4	25.7	18.7
Other	1.1	1.1	1.1	1.4	1.4	1.4	0.7	0.7	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Size	2,674,111	1,382,013	1,292,098	1,255,618	647,697	607,921	1,418,493	734,316	684,177

Table 4.6 shows changes in the proportionate shares of second language groups. As in Table 4.3 the English language share declined. It declined by 1.8 percent during the 1980-1990 decade. With the exception of the Barotse language group the highest being recorded in the Nyanja language group followed by the Bemba group.

Table 4.6

Second Language Groups, (Percent), Zambia 1980 and 1990

Language Group	Percentage of Total Population	
	1980	1990
Bemba	24.4	27.5
Tonga	7.8	8.1
N/Western	5.6	7.1
Barotse	8.9	8.4
Nyanja	18.0	25.5
Mambwe	1.7	2.4
Tumbuka	1.6	2.0
English	19.0	17.8
Other	3.1	1.1
Total	100.0	100.0
Size	1,454,729	2,674,111

Table 4.7 ranks the five mostly spoken individual languages for each province. The ranking of languages is such that the language on top in each cell represents the predominant language while the one below is the second language of communication.

Table 4.7 shows that the Bemba language ranks the first in Zambia as a whole and in four provinces of Central, Copperbelt, Luapula and Northern. In Central, Copperbelt and Northern provinces as well as the whole country, the Bemba language ranks first as a predominant and second language of communication. In Luapula Province, English as a second language ranks first. The Tonga language ranks second in the country and in the Southern Province where it ranks first. Nyanja as a predominant language comes third after Bemba, while it ranks first in Lusaka. The other remaining languages rank first only in provinces where the languages are indigenous ie Chewa in Eastern Province, Lunda in North-Western Province and Lozi in Western Province.

Table 4.7

Rank Order of Predominant and Second Language of Communication by Province-Zambia 1990

Rank Order	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
1.	Bemba	Bemba	Bemba	Chewa	Bemba English	Nyanja	Bemba	Lunda Luvale	Tonga Nyanja	Lozi
2.	Tonga Nyanja	Lala Nyanja	Lamba English	Nsenga Nyanja	Ushi Bemba	Bemba English	Namwanga English	Kaonde Bemba	Lozi English	Luvale English
3.	Nyanja English	Lenje	Kaonde Lamba	Tumbuka Bemba	Ng'umbo Nyanja	Nsenga	Bisa Mambwe	Luchazi Kaonde	Ila Tonga	Nkoya Kwangwa
4.	Lozi	Tonga	English Nyanja	Nyanja English	Kabende Ushi	Tonga	Mambwe Nyanja	Chokwe Lunda	Nyanja Lozi	Mashi Luvale
5.	Chewa Tonga	Nyanja Lala	Tumbuka Kaonde	Ngoni Nsenga	Unga Ngumbo	Chewa Nsenga	Lungu Namwanga	Ndembu English	Tokaleya Bemba	Kwangwa Nyanja

Source: 1990 Census of Population and Housing Provincial Analytical reports Vols. 1 - 9

SUMMARY

Analysis of languages of communication shows that in Zambia, 7,001,936 persons had stated their predominant language. The most widely spoken language is Bemba, spoken by 29.9 percent, followed by Tonga spoken by 11 percent. Nyanja language is spoken by 7.8 percent, Lozi by 6.4 percent, Chewa by 5.7 percent, Nsenga by 4.3 percent and Tumbuka by 2.9 percent. Although English is an official language, it is only spoken by 1.1 percent as a predominant language of communication. In urban areas, close to half (47.6 percent) of the population in question use Bemba as a predominant language of communication. The second largest proportion (15.2 percent) use Nyanja followed by Tonga (5.3 percent). In rural areas, a smaller proportion (18.1 percent) use Bemba. However, it is still the most widely spoken language followed by Tonga (14.6 percent).

Of the 8 language groups in the country, the largest (39.7 percent) comprises the Bemba, followed by the Nyanja (20.1 percent). As a second language of communication, Bemba and Nyanja rank first and second, respectively.

CHAPTER 5

EDUCATIONAL CHARACTERISTICS

5.1 INTRODUCTION

The term education generally refers to the skills and knowledge acquired formally through the framework of an established schooling system, or non-formally through interaction with one's society. In the development of human resources, education is the most important consideration that has an overt impact on the quality of human resources in terms of their skills and knowledge.

In Zambia, as in most countries, formal education implies age-specific, full-time classroom attendance in a graded system in which certificates, diplomas, degrees and other formal credentials are obtained.

In contrast, non-formal education involves activities that are aimed at a wider range of goals. Such activities tend to be heterogeneous, unstandardized and seemingly unrelated. No single institution may be identified as having the major responsibility of providing or regulating the scope and standards of non-formal education. Non-formal education in most developing countries may even have a greater role than formal education in generating skills, influencing attitudes, and moulding values of the people through routinely and often unconsciously learning by-doing, being instructed or inspired by others to perform specific tasks or simply by participating or associating in a community.

The 1990 Census of Population, Housing and Agriculture included the following educational aspects for all persons aged 5 years and over:-

- Whether they can read and write,
- Attendance to any institution of learning,
- Previous attendance to any institution of learning,
- Highest level of academic education completed, and
- Highest professional/vocational education completed.

Information on current grade school attendance by level of education was not collected in the 1990 Census. Thus, no estimates can be made on age-specific current grade attendance rates.

5.2 CONCEPTS AND DEFINITIONS

Educational System

Formal education in Zambia is based on a three-tier system. The formal education system includes public and private institutions. The primary school cycle lasts 7 years with the minimum age of entrance in the first grade being 7 years. The progression from primary to secondary is restricted through examinations. After secondary education, which lasts for 5 years, another selection takes place such that only a small number of graduates proceed to institutions of higher learning. Since the 1980s, there has been an expansion of part of the secondary education system (grades 8 to 9 or junior secondary) due to manpower needs. Basic schools, offering grades 1 to 9 classes, have greatly increased the number of pupils attending grades 8 and 9.

School Attendance

School attendance is synonymous with school enrolment which, refers to enrolment in any regular educational institution, public or private, for systematic instruction at any level of education during a well defined and recent time period. The legal age for a child to start school in Zambia is seven years. Taking the entry to grade 1 as 7 years, the age groups used in the subsequent presentation correspond to a given educational level.

- Lower primary grades 1, 2, 3 and 4 correspond to pupils aged 7-10 years.
- Upper primary grades 5, 6 and 7 correspond to pupils aged 11-13 years.
- Junior secondary grades 8 and 9 correspond to pupils aged 14 and 15 years.
- Senior secondary grades 10, 11 and 12 correspond to pupils aged 16-18 years.
- Students above 18 years could be considered to be in higher institutions of learning.

With this kind of correspondence, there sometimes exists an age-grade mismatch in the educational system. For instance; a person above 19 years could still be in secondary school.

Literacy

Literacy refers to the ability to read and write in any language. Individuals who can read and write are called literate.

Academic education Completed

This is the highest level of formal education that an individual has attained or completed regardless of duration in school. Educational qualifications attained such as certificate, diploma are included in the educational outputs.

Professional/Vocational Education completed

This is the higher qualification attained after formal school (grade 1-12) either at college or university, including specified fields of study.

5.3 LITERACY STATUS

The population of Zambia aged 5 years and over had their literacy status recorded in 1990 population census. This information is contained in Table 5.1.

Literate Population by Age Group, Residence and Province, (Percent, Zambia, 1990)

Province/Sex	Total	Age Group							
		5-9	10-14	15-19	20-24	25-29	30-44	45+	Not Stated
Zambia Total									
- Total	56.2	15.2	58.3	75.2	76.3	76.0	70.0	39.8	30.2
- Rural	45.4	9.7	46.3	65.1	65.6	65.2	57.5	32.3	20.5
- Urban	72.9	24.1	76.2	89.5	90.1	89.7	85.4	61.2	56.4
Province Central									
- Total	56.2	15.6	59.4	74.6	75.0	74.7	69.7	41.7	23.9
- Rural	50.3	12.4	52.9	69.2	69.7	68.8	62.4	38.1	20.8
- Urban	70.0	23.6	74.4	86.6	86.7	87.0	83.5	56.0	32.6
Copperbelt									
- Total	71.4	23.1	74.9	89.0	89.6	89.2	84.2	58.1	59.0
- Rural	54.2	12.7	55.4	73.1	73.9	74.4	66.8	40.7	39.7
- Urban	74.4	24.7	78.0	91.6	92.0	91.5	86.9	63.8	63.9
Eastern									
- Total	38.4	8.0	37.2	54.0	55.9	56.1	49.9	27.8	20.5
- Rural	35.5	6.6	33.5	50.7	52.8	53.0	46.4	26.2	20.5
- Urban	67.4	22.6	71.5	83.4	82.8	82.4	78.1	58.0	*
Luapula									
- Total	49.8	8.5	46.9	69.5	70.7	72.4	65.6	40.7	20.5
- Rural	46.8	6.8	42.5	66.3	67.9	63.0	38.9	17.2	46.8
- Urban	65.6	18.1	68.2	84.1	84.5	85.8	79.4	54.0	43.0
Lusaka									
- Total	70.0	21.8	71.1	85.9	87.3	87.4	83.1	57.1	51.8
- Rural	51.9	13.7	54.2	72.2	71.2	70.6	63.9	35.3	9.6
- Urban	73.3	23.4	74.4	88.3	89.9	90.0	86.0	64.2	63.2
Northern									
- Total	48.4	9.4	47.4	68.6	69.2	68.6	62.0	37.6	20.7
- Rural	45.0	7.5	43.0	65.0	65.8	65.4	57.9	35.6	20.8
- Urban	68.8	20.2	72.1	88.5	88.2	86.9	82.9	57.6	20.0
North-Western									
- Total	42.8	12.3	48.5	66.1	65.3	60.8	51.8	22.7	19.0
- Rural	38.6	10.3	44.0	62.1	59.1	56.2	46.3	20.9	16.6
- Urban	67.3	24.6	73.3	86.6	84.8	83.1	78.8	44.5	41.2
Southern									
- Total	57.7	15.1	60.0	78.0	78.1	78.2	72.6	41.7	26.5
- Rural	52.4	11.7	53.7	73.8	74.0	73.8	67.2	38.1	23.7
- Urban	74.1	27.2	80.4	91.2	90.0	89.6	85.5	58.4	57.1
Western									
- Total	48.5	14.2	57.5	71.5	69.8	68.4	58.4	29.4	23.7
- Rural	45.3	12.2	53.9	68.5	66.8	65.2	54.5	27.6	20.0
- Urban	70.3	27.6	80.1	88.6	87.6	86.0	81.4	49.7	54.2

The literacy rate in Zambia is 56 percent. This means for every two persons in the country over age 5, at least one can read and write. The situation in the urban areas is much more favourable compared to that in the rural areas. Of the target population, 73 percent in the urban areas and 45 percent in the rural areas can read and write. The privileged position of the urban areas may be explained by the observation that urban areas have more schools and that many of the young people educated in rural areas migrate to urban areas in search of employment opportunities and further education.

Among the provinces Copperbelt has the highest percentage of literate population (71 percent). The least is Eastern Province (38 percent). The national pattern, whereby rural areas have lower proportion of literate persons than urban areas, is also reflected in each province. The highest proportions of literate persons are found in age groups 20-24 and 25-29 years. The breakdown of the literate population by sex is given in Table 5.2.

Table 5.2

Literate Population by Age Group, Sex and Province, (Percent), Zambia, 1990

Province and Sex	Total	Age Group							
		5-9	10-14	15-19	20-24	25-29	30-34	45+	Not Stated
Zambia Total									
- Male	62.7	14.8	57.7	78.0	82.2	84.2	84.2	60.2	47.3
- Female	50.1	15.7	58.9	72.6	71.2	68.9	56.5	18.4	16.1
Province									
Central									
- Male	61.9	15.2	58.4	76.7	79.6	81.7	82.6	60.6	33.0
- Female	50.6	16.1	60.4	72.6	70.9	68.2	56.8	20.2	14.7
Copperbelt									
- Male	75.8	22.6	74.5	90.3	92.4	93.6	93.4	75.9	71.9
- Female	66.9	23.5	75.4	87.7	87.1	84.9	73.4	31.0	40.7
Eastern									
- Male	46.6	7.8	36.8	58.5	65.1	68.3	68.1	48.9	25.0
- Female	30.8	8.3	37.6	49.6	47.9	45.7	35.0	10.2	19.4
Luapula									
- Male	57.4	8.5	47.5	73.5	78.8	82.1	81.4	63.5	39.5
- Female	42.8	8.5	46.2	66.0	64.5	64.3	52.3	17.6	8.0
Lusaka									
- Male	75.1	21.3	71.3	88.1	91.8	92.9	92.4	75.1	70.5
- Female	64.8	22.3	70.9	83.8	83.9	82.1	71.7	31.7	31.8
Northern									
- Male	56.6	9.4	48.2	73.9	78.3	80.4	79.9	60.3	21.4
- Female	40.9	9.3	46.6	63.8	61.9	59.0	46.7	15.5	20.0
North-Western									
- Male	50.9	12.0	48.6	70.9	73.5	74.6	72.8	39.4	27.3
- Female	35.5	12.7	48.4	61.4	55.0	50.5	35.5	7.5	11.3
Southern									
- Male	62.4	14.3	58.8	79.6	82.1	84.4	84.3	60.3	26.1
- Female	53.2	15.8	61.3	76.5	74.6	72.8	62.0	23.3	27.0
Western									
- Male	54.7	13.7	56.2	74.3	76.1	77.1	74.5	46.3	37.6
- Female	43.3	14.6	58.9	68.8	65.0	62.2	48.0	14.8	14.2

Figure 5.1

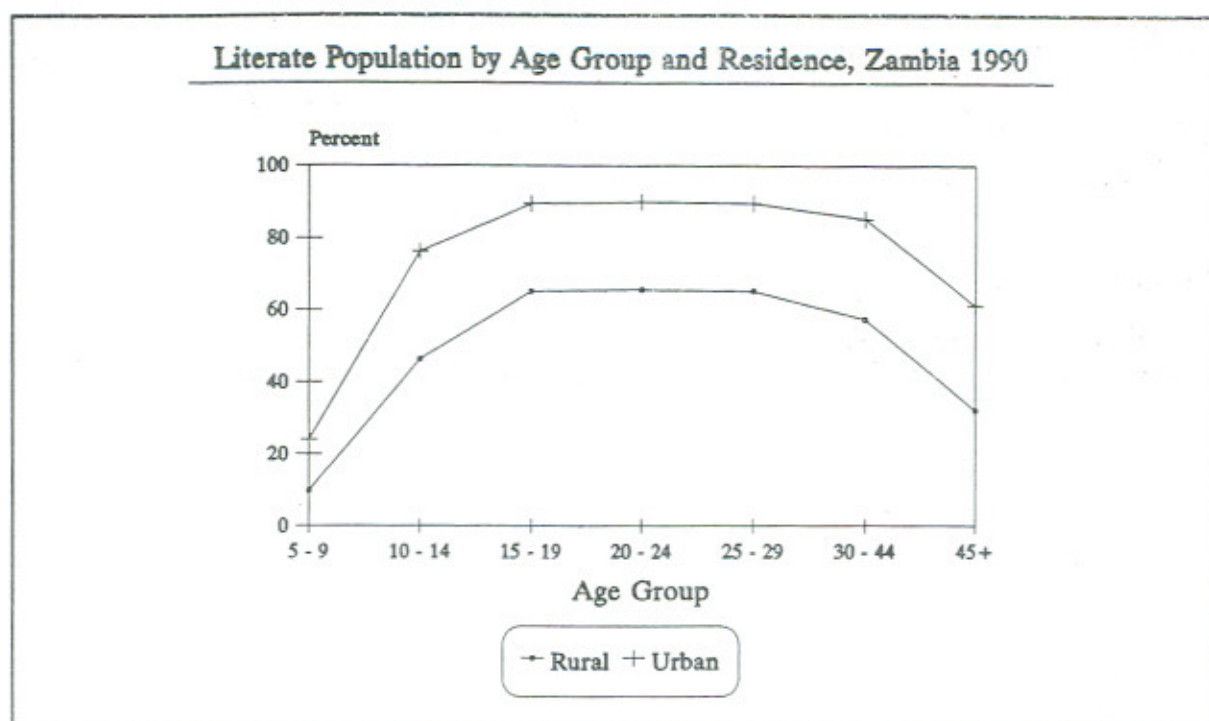
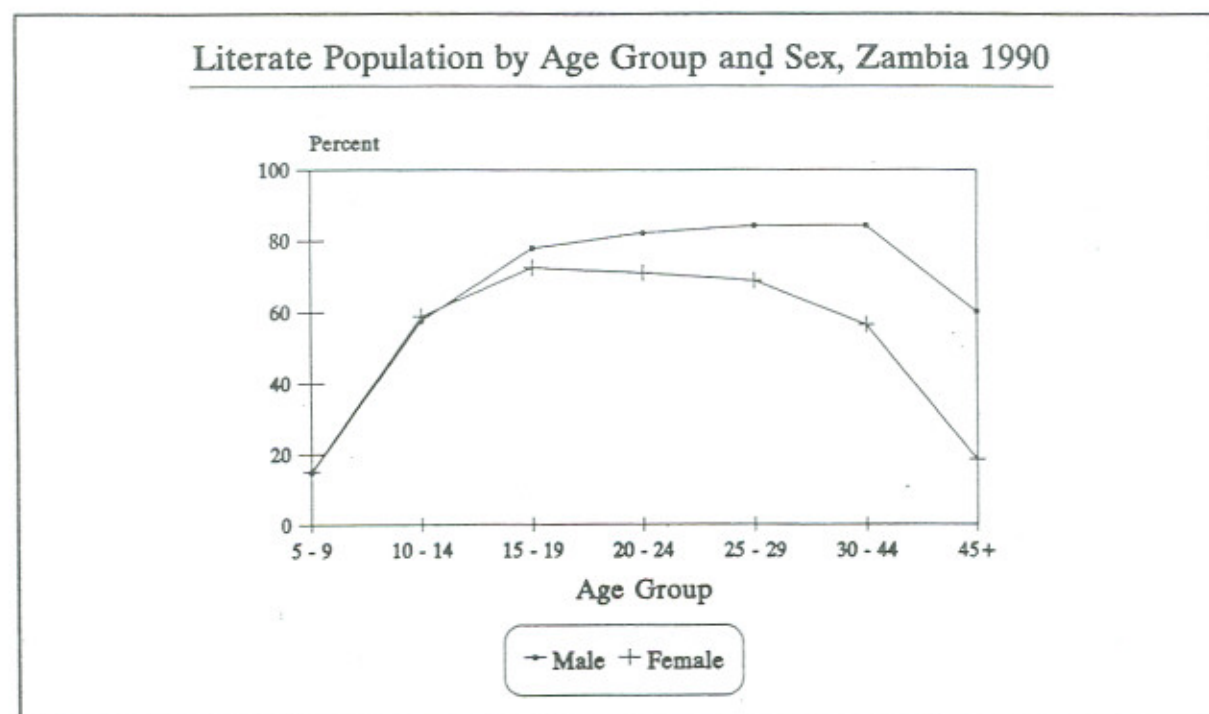


Table 5.2 shows that the total literacy rate is higher for males (63 percent) than females (50 percent). Some parents view the education of daughters as a waste of resources because they bring little long term benefits especially when they are married. This tendency, however, seems to be disappearing. It may be noted that there is practically no difference between male and female literacy proportions for young age groups, i.e., below age 15. The literacy ratio is actually higher for girls than for boys aged 5-14. Above age 15 the disparity increases significantly with the age. For those aged 45 and above the rates are 60 percent for males and 18 percent for females. This is a cohort phenomenon, as few females received any education before independence.

The male-female disparity in literacy is reflected in all provinces of the country. Proportions of literate males range from 47 percent in Eastern to 76 percent in Copperbelt Province, whereas those of females range from 31 percent in Eastern to 67 percent in Copperbelt Province.

Figure 5.2



5.4 SCHOOL ATTENDANCE

Table 5.3 presents information on the population presently attending school.

Table 5.3

Population Presently Attending School by Age, Residence and Province, Zambia, 1980 and 1990

Province/Residence	Age Group						Not Stated
	Total	5-9	10-14	15-19	20-24	25+	
Zambia Total (1980)							
- Total	33.5	22.7	77.5	74.9	30.7	0.9	5.6
- Rural	29.4	20.0	71.0	67.1	23.0	0.8	4.7
- Urban	39.9	26.8	87.1	86.5	46.0	1.2	6.9
Zambia Total (1990)							
- Total	39.2	29.2	70.1	65.8	33.9	16.7	5.2
- Rural	29.3	21.2	59.4	54.3	23.9	11.8	4.6
- Urban	57.8	41.8	86.1	82.8	54.2	31.2	6.6
Province (1990)							
Central	40.5	30.8	71.9	65.7	33.2	15.8	6.3
Copperbelt	56.5	43.6	83.2	59.0	15.8	9.8	7.7
Eastern	23.4	17.3	47.7	44.3	20.6	10.7	1.1
Luapula	33.7	24.2	65.0	60.5	25.5	9.4	4.1
Lusaka	52.2	37.8	82.0	77.2	48.6	29.2	2.6
Northern	32.7	22.8	61.7	57.6	27.3	15.4	3.4
North-Western	30.0	24.4	61.3	59.6	26.3	9.3	5.5
Southern	41.0	28.3	72.2	68.1	35.5	18.6	4.4
Western	30.8	22.9	65.6	61.4	27.4	11.9	5.5

The population of Zambia aged 5 years and over which is presently attending school is 39 percent, 29 percent for rural and 58 percent for urban areas. The highest school attendance is found in age group 10-14 years. This may be the best age group upon which one may make a comment on the success of universal primary education. If enrolment was universal the proportion of the presently attending would be close to 100. Seventy percent of those aged 10-14 are presently attending school in Zambia. In urban and rural areas, the corresponding proportions are 86 and 59 percent, respectively.

In terms of overall enrolment, Copperbelt ranks first with 57 percent, whereas the least is Eastern Province (23 percent). All provinces follow the national pattern whereby rural areas have a lower proportion attending school compared to urban areas. The overall enrolment ratio has risen from 34 percent in 1980 to 39 percent in 1990. The ratio for the rural areas has remained stable at about 29 percent over the 1980-1990 intercensal period. A tremendous improvement has occurred in the urban areas where the enrolment ratio rose from 40 percent in 1980 to 58 percent in 1990.

Table 5.4 gives a breakdown of school attendance by sex.

Population Presently Attending School by Sex, Age and Province, (Percent), Zambia, 1980 and 1990

Province/Sex	Age Group						
	Total	5-9	10-14	15-19	20-24	25+	Not Stated
Zambia Total (1980)							
- Male	42.4	22.1	78.5	83.5	54.3	2.1	8.9
- Female	26.7	23.3	76.5	64.0	11.0	0.5	3.4
Zambia Total (1990)							
- Male	45.0	28.3	70.3	72.3	48.2	27.2	6.6
- Female	34.2	30.0	70.0	58.7	20.9	10.6	3.9
Province (1990)							
Central							
- Male	45.5	29.9	71.5	71.4	45.6	24.6	7.5
- Female	36.1	31.6	72.3	59.2	21.2	10.2	5.2
Copperbelt							
- Male	60.7	42.5	83.9	67.5	21.7	7.5	7.6
- Female	52.4	44.6	82.5	51.1	10.5	11.9	7.8
Eastern							
- Male	29.0	16.8	47.7	52.6	32.5	17.5	-
- Female	18.8	17.8	47.6	35.1	9.9	6.8	2.7
Luapula							
- Male	40.8	23.7	66.5	69.3	42.6	17.0	7.7
- Female	27.9	24.6	63.6	51.0	12.9	5.6	2.1
Lusaka							
- Male	57.2	36.9	83.2	82.4	61.8	47.8	2.0
- Female	47.7	38.6	80.9	71.7	33.8	16.8	3.7
Northern							
- Male	39.8	22.4	63.2	67.9	43.1	26.3	3.1
- Female	26.7	23.1	60.1	46.7	15.1	9.6	3.7
North-Western							
- Male	36.3	23.4	61.8	68.1	42.1	16.8	6.2
- Female	24.8	25.4	60.8	50.1	14.2	5.7	4.9
Southern							
- Male	45.8	27.2	71.8	73.4	47.8	26.6	5.6
- Female	36.7	29.3	72.6	62.1	23.8	13.7	3.4
Western							
- Male	36.6	22.0	64.8	67.8	41.9	18.9	8.7
- Female	26.3	23.7	66.4	54.7	16.3	8.6	3.4

The attendance ratio in the country is 45 percent for males and 34 percent for females. In terms of provincial comparison, males in Copperbelt Province lead with an enrolment ratio of 61 percent. Males in Eastern are the least with 29 percent. As of the males, the enrolment ratio for females is highest (52 percent) in Copperbelt and lowest (19 percent) in Eastern province. For all areas considered, enrolment ratios for females are lower than those for males. As for literacy, the difference is very small at young ages and widens significantly at higher ages.

Figure 5.3

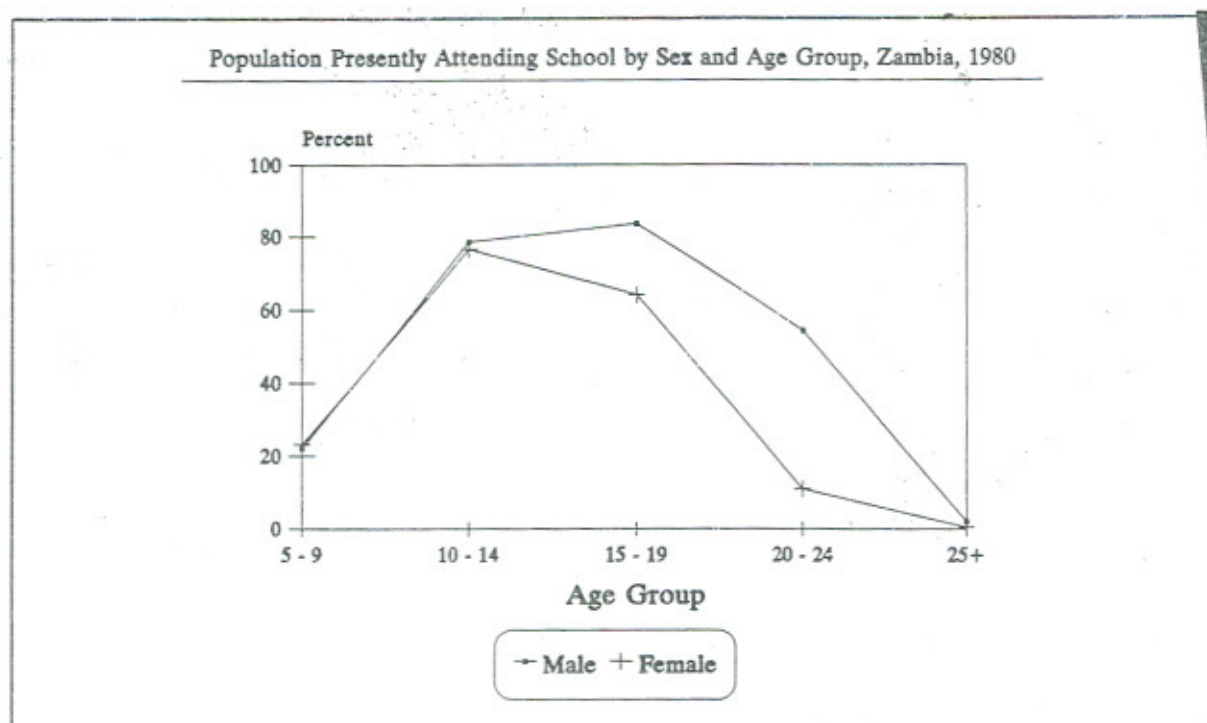
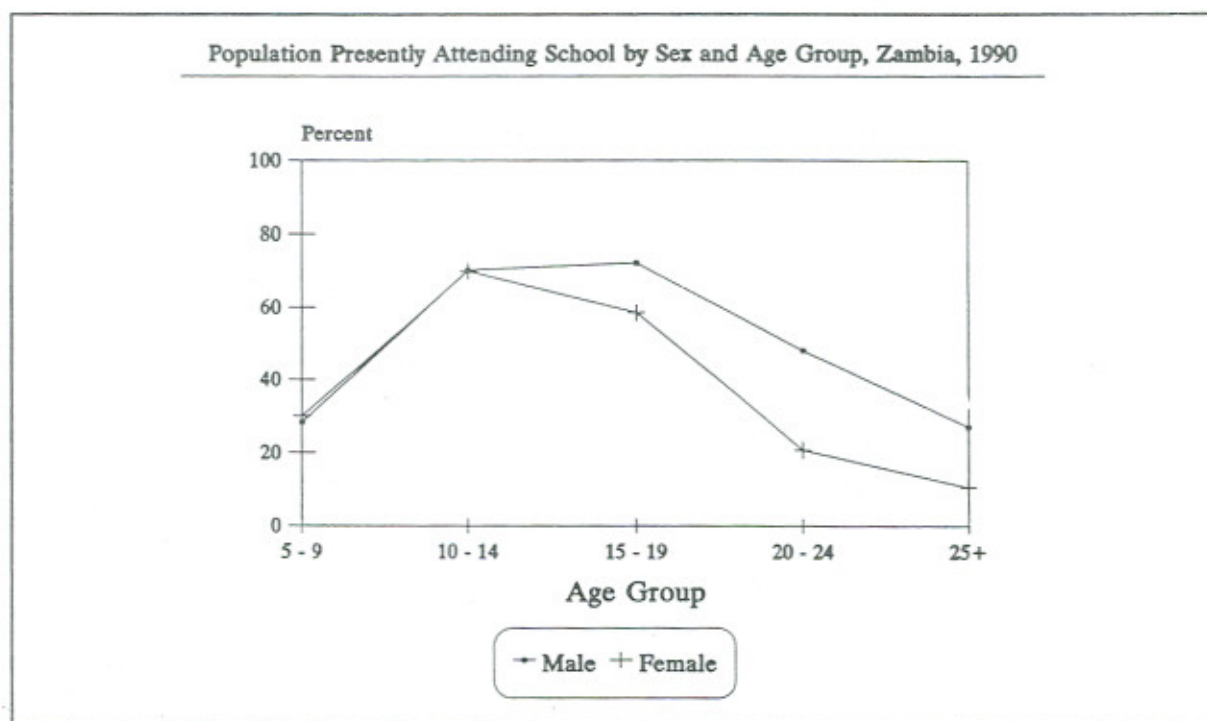


Figure 5.4



Overall enrolment ratios for males and females in Zambia have risen marginally over the 1980 levels. The ratios rose from 42 in 1980 to 45 percent in 1990 for males. As for females the ratios rose from 27 in 1980 to 34 percent in 1990. It may be noted that the enrolment of females grew faster than that of males in the 1980s resulting in a somewhat smaller difference between males and females in 1990 than in 1980. The national picture is reflected in all the provinces except Eastern Province where the ratios declined in the 1980-1990 intercensal period for both males and females.

Data on population presently attending school by age, sex and level of education completed is displayed in Table 5.5.

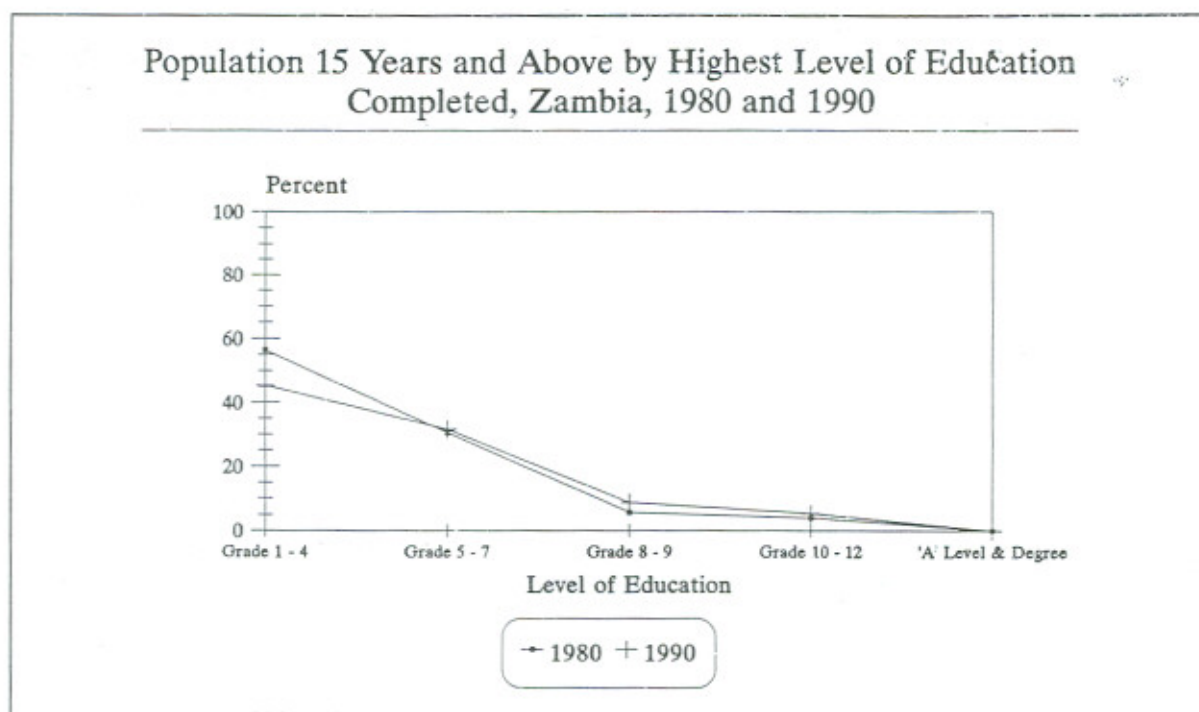
Table 5.5

Population (5 Years and Older) Presently Attending School by Age, Sex, Level of Education Completed and Residence, (Percent), Zambia, 1980 and 1990

Residence/Age Group		Size	Education Level Completed							
			Primary Level		Secondary Level		'A' Level	University	Not Stated	Total
			Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12		Degree		
Zambia Total (1980) Both Sexes										
	Total	1,099,985	56.5	30.5	5.7	4.0	0.0	0.0	3.1	100
	5-9	222,515	89.5	0.5	-	-	-	-	10.0	100
	10-14	555,941	68.3	29.1	0.9	0.1	-	-	1.7	100
	15-19	269,483	13.5	59.6	17.5	8.7	0.0	0.0	0.6	100
	20-24	39,582	5.3	22.3	25.1	44.8	0.8	0.3	1.0	100
	25+	9,742	27.1	28.3	11.7	26.2	0.6	0.7	5.5	100
	Not Stated	2,722	55.4	26.5	6.2	5.1	-	0.0	6.1	100
Zambia Total (1990) Both Sexes										
	Total	1,595,486	45.4	31.6	8.8	5.3	0.0	0.0	8.9	100
	5-9	321,584	73.3	0.0	-	-	-	-	26.7	100
	10-14	682,772	61.8	31.7	1.1	0.0	-	-	5.4	100
	15-19	443,648	12.1	55.5	22.6	7.2	0.0	-	2.5	100
	20-24	94,802	5.4	26.0	27.8	37.3	0.3	0.0	3.2	100
	25-29	21,205	8.8	33.8	12.0	39.0	0.6	0.2	5.6	100
	30+	31,011	18.7	32.6	8.4	27.5	0.5	0.3	12.0	100
	Not Stated	464	37.5	26.3	6.0	11.9	-	-	18.3	100
Male	Total	848,502	43.6	32.1	9.3	6.4	0.0	0.0	8.4	100
	5-9	154,493	72.6	0.0	-	-	-	-	27.4	100
	10-14	342,077	63.4	30.1	1.0	0.0	-	-	5.5	100
	15-19	255,855	13.5	56.2	20.9	6.8	-	-	2.5	100
	20-24	64,146	4.5	24.7	29.3	38.3	0.3	0.0	2.8	100
	25-29	12,587	6.1	29.3	12.9	46.2	0.7	0.3	4.4	100
	30+	19,073	15.5	31.2	9.1	35.6	0.6	0.4	7.6	100
	Not Stated	271	36.9	24.4	6.6	14.0	-	-	18.1	100
Female	Total	746,984	47.4	31.0	8.1	4.0	0.0	0.0	9.5	100
	5-9	167,091	73.9	0.0	-	-	-	-	26.1	100
	10-14	340,695	60.2	33.2	1.3	0.0	-	-	5.3	100
	15-19	187,793	10.2	54.4	25.0	7.8	0.0	-	2.6	100
	20-24	30,656	7.3	28.7	24.6	35.1	0.2	0.0	4.0	100
	25-29	8,618	12.8	40.3	10.7	28.3	0.3	0.2	7.4	100
	30+	11,938	23.8	34.8	7.4	14.6	0.2	0.2	19.0	100
	Not Stated	193	38.3	29.0	5.2	8.8	-	-	18.7	100
Rural										
Male	Total	428,023	47.8	32.1	7.3	4.0	0.0	0.0	8.7	100
	5-9	69,596	71.1	0.0	-	-	-	-	28.9	100
	10-14	177,286	69.6	23.5	0.6	-	-	-	6.4	100
	15-19	132,742	20.3	58.8	14.4	3.8	0.0	-	2.7	100
	20-24	31,406	6.5	34.2	29.2	26.6	0.1	0.0	3.4	100
	25-29	6,123	9.0	42.1	13.9	28.6	0.2	0.2	5.9	100
	30+	10,699	21.6	39.4	8.6	20.0	0.3	0.1	10.1	100
	Not Stated	171	48.5	24.0	7.0	7.6	-	-	12.9	100
Female	Total	352,896	52.7	29.4	5.7	2.1	0.0	0.0	10.1	100
	5-9	73,995	72.8	0.0	-	-	-	-	27.2	100
	10-14	167,651	67.7	25.6	0.7	0.0	-	-	6.0	100
	15-19	85,453	16.4	58.9	17.6	4.2	0.0	-	2.9	100
	20-24	13,350	11.7	40.0	22.6	20.2	0.1	0.0	5.4	100
	25-29	4,658	16.5	49.1	9.6	15.6	0.1	0.0	9.1	100
	30+	7,666	28.3	36.5	5.4	6.6	0.1	0.0	23.1	100
	Not Stated	123	39.8	27.6	4.1	5.7	-	-	22.8	100
Urban										
Male	Total	420,479	39.4	32.1	11.4	8.9	0.1	-	8.1	100
	5-9	84,897	73.8	0.0	-	-	-	-	26.1	100
	10-14	164,791	56.7	37.2	1.5	0.0	-	-	4.6	100
	15-19	123,113	6.3	53.5	27.9	10.1	0.0	-	2.3	100
	20-24	32,740	2.5	15.7	29.5	49.6	0.5	-	2.2	100
	25-29	6,464	3.2	17.2	12.0	63.0	1.2	0.4	3.0	100
	30+	8,374	7.7	20.8	9.8	55.6	1.1	0.7	4.4	100
	Not Stated	100	17.0	25.0	6.0	25.0	-	-	27.0	100
Female	Total	394,088	42.7	32.5	10.3	5.6	0.0	0.0	8.9	100
	5-9	93,096	74.7	0.0	-	-	-	-	25.3	100
	10-14	173,044	53.0	40.6	1.9	0.0	-	-	4.6	100
	15-19	102,340	5.0	50.7	31.1	10.8	0.0	-	2.3	100
	20-24	17,306	3.9	20.0	26.2	46.6	0.4	0.0	2.9	100
	25-29	3,960	8.5	29.9	12.0	43.3	0.6	0.4	5.4	100
	30+	4,272	8.3	22.8	10.2	51.0	0.8	0.7	6.3	100
	Not Stated	70	35.7	31.4	7.1	14.3	-	-	11.4	100

In 1980, 56.5 percent of the population aged 5 years and older had completed primary grades 1-4, 31 had completed grades 5-7, 6 percent had completed grades 8-9 and 4.0 percent had completed grades 10-12. Negligible proportions had completed either 'A' level or Degree studies. The corresponding figures for 1990 are 45 percent for grades 1-4, 32 percent for grades 5-7, 9 percent for grades 8-9 and 5 percent for grades 10-12. A negligible proportion has completed higher levels. It may be noted that the proportion of persons who had completed lower primary grades 1-4 in 1980 was higher than the one for 1990. However, the proportions of persons who completed higher grades such as grades 8-9 and 10-12 are higher in 1990 than in 1980, (See Figure 5.5). This improvement is for both males and females. The situation in urban areas has improved more than in rural areas.

Figure 5.5



5.5 PREVIOUSLY ATTENDED SCHOOL POPULATION

Data on previous school attendance provides a basis for assessing the performance of the educational system over time. If high proportions are found in age group 5-19 years, this may imply high school drop-out rates at both primary and secondary levels. High proportions at higher educational levels would signify completion of at least primary and secondary levels. Table 5.6 shows the proportion of the population in various groups who previously attended school.

Table 5.6

Population Previously Attended School by Age, Residence and Province, Zambia, 1980 and 1990

Province/Residence	Age Group							Total
	Size	5-9	10-14	15-19	20-24	25+	Not Stated	
Zambia Total (1980)								
- Total	1,554,999	0.3	3.3	15.0	22.2	57.6	1.6	100
- Rural	798,873	0.5	4.5	17.7	21.4	54.9	1.0	100
- Urban	756,126	0.2	2.0	12.2	23.0	60.4	2.2	100
Zambia Total (1990)								
- Total	2,112,500	0.7	2.6	12.5	20.4	63.7	0.1	100
- Rural	1,074,378	0.9	3.3	13.9	19.8	62.1	0.1	100
- Urban	1,038,122	0.6	1.9	11.2	21.1	65.1	0.1	100
Province (1990)								
Central	210,730	0.7	2.5	12.7	20.5	63.3	0.2	100
Copperbelt	498,856	0.6	1.9	11.4	21.1	64.9	0.1	100
Eastern	195,643	0.8	3.4	12.8	19.4	63.6	0.0	100
Luapula	154,745	0.7	2.9	13.1	18.8	64.2	0.3	100
Lusaka	359,444	0.6	2.1	11.8	21.6	63.8	0.1	100
Northern	210,318	0.9	3.4	14.3	19.3	62.1	0.0	100
North-Western	80,092	0.8	3.0	13.4	20.9	61.8	0.1	100
Southern	251,457	0.9	2.5	12.7	21.0	62.9	0.0	100
Western	151,215	1.0	3.5	13.6	18.6	63.2	0.1	100

The proportions are small for young age groups, 5-19 years, compared to those for older age groups. This is because the majority of the young people are still in school. At ages of 20 years and over, 84 percent have previously attended school. The corresponding percentages for rural and urban areas are 82 and 86, respectively. In all provinces, proportions of those who previously attended school are higher in urban than rural areas. The proportion of population of those previously attended school by age and sex is shown in Table 5.7

Table 5.7

Population Previously Attended School by Sex, Age and Residence, Zambia, 1990

Province/Residence	Age Group							Total
	Size	5-9	10-14	15-19	20-24	25+	Not Stated	
Zambia Total (1980)								
- Male	846,591	0.3	2.6	9.8	18.3	66.9	2.1	100
- Female	708,408	0.4	4.2	21.2	26.8	46.6	1.0	100
Zambia Total (1990)								
- Male	1,135,549	0.7	2.2	8.9	17.3	70.8	0.1	100
- Female	976,951	0.8	3.0	16.8	24.0	55.5	0.1	100
Province (1990)								
Central								
- Male	114,915	0.6	2.2	9.1	17.6	70.2	0.3	100
- Female	95,815	0.8	2.9	17.1	24.0	55.1	0.1	100
Copperbelt								
- Male	269,585	0.6	1.5	7.8	17.9	72.1	0.1	100
- Female	229,271	0.7	2.3	15.6	24.8	56.6	0.0	100
Eastern								
- Male	110,740	0.7	2.9	9.2	16.4	70.8	0.0	100
- Female	84,903	1.0	4.2	17.6	23.2	54.0	0.0	100
Luapula								
- Male	81,451	0.7	2.5	9.0	15.4	72.0	0.4	100
- Female	73,294	0.7	3.4	17.8	22.5	55.3	0.3	100
Lusaka								
- Male	194,159	0.6	1.6	8.2	18.4	71.2	0.0	100
- Female	165,285	0.7	2.7	16.1	25.4	55.1	0.0	100
Northern								
- Male	113,197	0.9	2.9	9.6	16.2	70.4	0.0	100
- Female	97,121	1.0	4.1	19.9	23.0	52.0	0.0	100
North-Western								
- Male	44,251	0.7	2.5	8.9	17.5	70.3	0.1	100
- Female	35,841	1.0	3.7	19.0	25.0	51.2	0.1	100
Southern								
- Male	130,472	0.8	2.4	9.5	18.4	68.9	0.0	100
- Female	120,985	0.9	2.8	16.1	23.9	56.3	0.0	100
Western								
- Male	76,772	1.0	3.4	11.1	15.7	68.7	0.1	100
- Female	74,443	1.0	3.6	16.3	21.5	57.5	0.1	100

The proportions of males and females aged 20 years and older who previously attended school are 88 and 79 percent, respectively. At age group 15-19 years, the proportions of females who have previously attended school are markedly higher than of males. This is an indication that more females than males drop out of the education system early. This is the case for all provinces of Zambia.

At older age groups of 20 years and older, 80 percent had previously attended school in 1980 compared to 84 percent in 1990. This shows a rise in the proportion of previously attended school population since 1980. The same can be said about the rural and urban areas of Zambia. In 1980, proportions of males in age group 15-19 years are higher than those of females. This means that for both census years (1980 and 1990) females have been dropping out of the education system earlier than males.

5.6 HIGHEST LEVEL OF EDUCATION COMPLETED

Educational achievements are assessed by analysing data on the highest level of education completed by the population aged 15 years and older. This age group is picked because by age 15 years most of them would have completed at least primary level of education. Tables 5.8 and 5.9 show the percentage distribution of population aged 15 years and older by highest level of education completed.

Table 5.8

Population (15 Years and Above) by Highest Level of Education Completed, Sex and Age Group, (Percent), Zambia, 1980 and 1990.

Age Group	Sex	Total Population	Highest Level Completed							Total
			No Schooling	Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12	A'Level/ Degree	Not Stated	
Zambia (1980)										
15+	Both	2,815,386	35.2	18.5	29.6	6.4	9.1	0.2	1.0	100
	Male	1,349,593	24.1	17.8	34.3	8.4	13.9	0.2	1.3	100
	Female	1,465,793	46.2	19.4	24.2	4.5	4.7	0.2	0.8	100
15-19	Both	592,972	14.4	17.0	51.5	9.8	6.6	0.0	0.7	100
	Male	284,668	10.9	16.5	54.4	10.7	6.8	0.0	0.7	100
	Female	308,304	17.7	17.5	48.7	9.0	6.4	0.0	0.7	100
20-24	Both	473,779	17.7	13.0	40.4	7.6	20.2	0.3	0.8	100
	Male	213,545	11.0	9.0	40.5	9.5	28.8	0.3	0.9	100
	Female	260,234	23.2	16.3	40.2	6.1	13.2	0.2	0.8	100
25-44	Both	1,079,312	36.0	19.1	24.4	6.9	11.7	0.6	1.3	100
	Male	499,033	18.9	16.3	31.8	10.6	19.8	1.0	1.6	100
	Female	580,279	50.6	21.5	18.1	3.7	4.7	0.4	1.0	100
45+	Both	669,323	62.0	22.6	10.8	1.7	1.5	0.2	1.2	100
	Male	352,347	50.2	25.2	17.8	2.8	2.3	0.2	1.5	100
	Female	316,976	73.8	20.6	3.7	0.4	0.6	0.1	0.8	100
Zambia (1990)										
15+	Both	3,949,925	33.4	11.2	31.5	9.6	12.9	0.1	1.3	100
	Male	1,915,926	24.2	11.8	33.6	10.9	17.9	0.2	1.4	100
	Female	2,033,999	42.1	10.7	29.5	8.2	8.2	0.1	1.2	100
15-19	Both	922,220	23.2	11.6	44.6	14.4	4.4	0.1	1.7	100
	Male	440,877	20.2	12.7	46.1	14.4	4.7	0.1	1.8	100
	Female	475,343	26.0	10.6	43.3	14.4	4.1	0.0	1.6	100
20-24	Both	695,298	24.3	7.0	36.2	15.9	15.5	-	1.1	100
	Male	322,691	19.1	6.1	35.5	18.8	19.3	-	1.2	100
	Female	372,607	28.8	7.8	36.8	13.3	12.2	-	1.1	100
25-29	Both	522,190	24.9	7.1	35.1	8.4	23.3	0.2	0.9	100
	Male	243,331	17.6	5.5	33.9	10.4	31.4	0.3	0.9	100
	Female	278,859	31.3	8.6	36.1	6.7	16.3	0.1	0.9	100
30-44	Both	973,090	30.9	10.6	28.1	7.2	21.7	0.4	1.1	100
	Male	475,042	18.1	8.1	29.8	8.9	33.3	0.7	1.1	100
	Female	498,048	43.0	13.0	26.5	5.5	10.5	0.4	1.1	100
45+	Both	837,127	60.4	17.6	14.7	2.4	3.3	0.2	1.4	100
	Male	427,985	42.5	22.9	23.4	4.0	5.3	0.3	1.6	100
	Female	409,142	80.9	11.9	4.2	0.8	0.9	0.1	1.2	100
Rural										
15+	Both	2,384,117	44.6	13.4	29.3	6.0	5.5	0.0	1.2	100
	Male	1,117,375	33.6	15.0	33.9	7.8	8.4	0.0	1.3	100
	Female	1,266,742	54.4	11.9	25.1	4.5	3.0	0.0	1.1	100
Urban										
15+	Both	1,565,808	16.4	8.0	34.9	14.9	24.1	0.3	1.4	100
	Male	798,551	11.1	7.4	33.1	15.4	31.3	0.8	1.4	100
	Female	767,257	21.9	8.6	36.7	14.4	16.9	0.2	1.3	100

Table 5.9

Population (15 Years and Above) by Highest Level of Education Completed and Sex, (Percent), Province, 1990

Province	Sex	Total Population	Highest Level Completed							Total
			No Schooling	Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12	A'Level/ Degree	Not Stated	
Central	Both	388,869	32.9	11.5	33.3	9.2	11.6	0.2	1.3	100
	Male	193,666	24.8	12.2	35.0	10.3	16.0	0.3	1.5	100
	Female	195,203	41.0	10.8	31.6	8.1	7.2	0.1	1.3	100
Copperbelt	Both	768,340	17.9	8.7	36.4	14.4	21.0	0.2	1.4	100
	Male	396,800	12.5	8.3	34.8	15.0	27.5	0.4	1.5	100
	Female	371,540	23.6	9.1	38.0	13.7	14.0	0.1	1.5	100
Eastern	Both	516,984	52.5	12.2	23.4	5.4	5.3	0.1	1.1	100
	Male	240,939	40.3	14.3	29.0	6.9	8.1	0.1	1.3	100
	Female	276,045	63.2	10.3	18.6	4.0	2.9	*	1.0	100
Luapula	Both	466,404	61.0	9.6	18.8	5.2	4.9	*	0.5	100
	Male	231,477	57.3	9.3	20.0	5.9	7.0	*	0.5	100
	Female	234,927	64.7	9.8	17.6	2.7	2.9	*	0.5	100
Lusaka	Both	541,115	19.0	8.5	34.0	12.3	24.2	0.7	1.3	100
	Male	277,408	12.9	7.9	33.2	13.1	30.6	1.1	1.2	100
	Female	263,707	25.4	9.0	34.8	11.6	17.5	0.4	1.3	100
Northern	Both	439,350	40.0	12.9	30.3	7.7	7.8	0.0	1.2	100
	Male	205,249	28.0	13.9	35.2	9.6	11.8	0.1	1.3	100
	Female	234,101	50.5	12.0	26.0	6.0	4.2	0.0	1.2	100
N/Western	Both	211,532	50.2	11.4	24.9	6.5	5.7	0.1	1.1	100
	Male	97,466	38.1	13.7	29.5	8.6	8.7	0.1	1.2	100
	Female	114,066	60.5	9.4	21.0	4.6	3.2	0.1	1.0	100
Southern	Both	462,030	31.2	12.0	35.0	9.2	11.2	0.1	1.3	100
	Male	223,068	23.6	12.5	36.7	10.5	15.1	0.2	1.4	100
	Female	238,962	38.2	11.5	33.3	8.0	7.7	0.1	1.2	100
Western	Both	338,994	45.2	12.6	27.8	6.5	6.7	0.1	1.1	100
	Male	149,530	34.9	14.9	31.1	8.0	9.8	0.1	1.2	100
	Female	189,464	53.3	10.8	25.1	5.4	4.4	0.1	0.9	100

Note: (*) The percentages are negligible.

The proportion of the population aged 15 years and over without any formal schooling is 33 percent. The proportions of males and females without formal schooling are 24 and 42 percent, respectively. The proportion of the population which had formal schooling in 1980 was 35 percent. Proportions for males and females were 24 and 46 percent, respectively.

There has been a marginal reduction in the proportion of persons without formal schooling between 1980 and 1990. This situation is also applicable to females, whereas the proportion for males has remained constant at about 24 percent. The proportions of those who have never had formal schooling is much higher in rural (45 percent) than urban areas (16 percent) while of those who have completed secondary education are higher in urban (39 percent) than rural areas (12 percent).

5.7 FIELD OF STUDY

Table 5.10 shows the population of Zambia which has undergone training in some selected fields of study.

Table 5.10

Education Completed by Fields of Study, (Percent), Zambia, 1990

Field of Study	Size	Total	Level of Education Completed					
			1-7	8-9	10-12	'A' Level	Degree	Not Stated
Zambia Total - Males								
Natural Science	1,846	100	9.2	6.3	64.3	7.2	10.8	2.2
Civil Engineering	1,791	100	17.5	6.0	66.2	4.5	3.2	2.6
Electronic Engineering	6,172	100	13.4	6.3	75.3	2.0	1.5	1.5
Mechanic Engineering	11,387	100	17.4	8.6	69.0	1.8	1.1	2.0
Mining Engineering	1,943	100	29.3	5.9	56.2	3.5	2.7	2.3
Architecture	1,337	100	10.9	38.1	44.1	3.1	1.5	2.2
Medicine and Surgery	1,994	100	14.3	6.5	66.3	5.2	5.3	2.3
Pharmacy	1,748	100	7.2	2.7	85.3	1.0	0.8	3.1
Nursing	1,029	100	12.0	7.2	73.5	3.3	2.1	1.9
Medical Technology	1,852	100	12.9	7.6	73.4	2.2	2.4	1.6
Computer Science	766	100	3.3	3.8	79.0	5.0	4.7	4.3
Economics	1,205	100	5.2	3.9	68.0	9.4	11.9	1.7
Accountancy	11,759	100	6.1	5.0	83.5	2.8	1.3	1.4
Teacher Training	22,899	100	10.8	10.5	74.1	1.8	1.2	1.5
Law/Jurisprudence	2,584	100	18.0	9.7	63.9	4.6	2.6	1.2
Fine Arts	856	100	21.6	6.7	61.9	4.2	2.7	2.9
Social Welfare	1,129	100	19.7	11.3	60.4	3.4	2.6	2.6
Criminology	2,583	100	24.5	13.6	59.8	0.3	0.1	1.6
Business Administration	6,816	100	10.0	7.5	74.9	3.7	2.1	1.8
Secretarial Training	3,384	100	18.7	13.0	65.6	0.9	0.2	1.6
Office Machine	1,302	100	24.2	10.3	61.8	0.5	0.5	2.7
Service Trade	1,308	100	38.0	9.6	47.6	0.9	-	3.9
Agricultural/Forestry/Fisheries	6,711	100	20.8	10.4	63.0	2.1	1.6	2.0
Wood-work	4,730	100	48.0	13.3	34.9	0.2	0.0	3.9
Textiles	1,188	100	36.3	13.1	45.3	1.3	0.1	3.9
Zambia Total - Females								
Natural Science	559	100	16.5	10.4	51.2	8.4	10.4	3.2
Civil Engineering	62	100	17.7	12.9	54.8	3.2	3.2	8.1
Electronic Engineering	148	100	18.9	1.4	70.3	2.7	3.4	3.4
Mechanic Engineering	149	100	25.5	5.4	59.7	2.7	2.0	4.7
Mining Engineering	56	100	71.4	-	16.1	1.8	1.8	8.9
Architecture	372	100	4.0	68.3	24.7	9.5	0.3	2.2
Medicine and Surgery	391	100	6.1	5.1	60.1	11.3	4.3	13.0
Pharmacy	584	100	4.5	1.7	85.8	1.5	1.4	5.1
Nursing	9,422	100	7.7	8.2	80.9	0.9	0.8	1.6
Medical Technology	304	100	7.6	6.6	69.4	2.3	6.9	3.3
Computer Science	342	100	4.1	4.1	84.2	2.9	3.2	1.7
Economics	924	100	20.9	14.2	54.2	3.2	5.4	1.3
Accountancy	2,409	100	5.7	3.6	87.6	2.2	1.0	1.3
Teacher Training	14,980	100	5.7	12.6	73.7	1.5	0.8	1.6
Law/Jurisprudence	283	100	5.7	5.7	70.7	7.4	8.5	2.1
Fine Arts	206	100	9.7	3.9	59.2	8.3	15.5	3.4
Social Welfare	592	100	24.7	13.9	51.7	2.4	4.4	3.0
Criminology	159	100	11.3	13.8	69.2	1.3	-	4.4
Business Administration	1,212	100	7.1	6.7	77.0	4.3	3.0	2.0
Secretarial Training	16,954	100	5.6	11.2	81.0	0.7	-	1.5
Office Machine	338	100	8.6	9.8	79.6	0.3	0.6	1.2
Service Trade	1,081	100	37.9	16.6	41.7	0.8	0.3	2.7
Agricultural/Forestry/Fisheries	692	100	13.7	5.9	72.1	3.3	1.9	3.0
Wood work	129	100	39.5	9.3	46.5	0.8	-	3.9
Textiles	2,135	100	25.8	23.6	48.5	0.3	-	1.9

The most popular fields of study for males are Teacher Training (22,899), Accountancy (11,759), Mechanical Engineering (11,387), Business Administration (6,816) and Electronic Engineering (6,172). The most common fields for females are Secretarial (16,954), Teacher training (14,980) and Nursing (9,432). Most persons trained in the selected fields of study completed grades 10-12 because this is the minimum grade range to be attained for acceptance into most training institutions.

Table 5.11 shows the population of those who have undergone training in selected fields of study by provinces.

Table 5.11

Education Completed by Fields of Study, (Percent), by Province, 1990

Field of Study	Province									
	Total	Central	C/belt	Eastern	Luapula	Lusaka	Northern	N/western	Southern	Western
Males										
Electrical Engineering	6,172	517	2,752	156	135	1,822	235	76	386	93
Mechanical Engineering	11,387	917	4,429	412	278	3,562	605	145	822	217
Mining Engineering	1,943	113	1,119	85	118	119	201	50	61	77
Industrial Engineering	2,557	172	820	424	74	252	286	57	249	223
Medicine and Surgery	1,994	199	425	154	130	507	158	71	214	136
Pharmacy	1,748	119	461	243	159	207	200	82	168	109
Nursing	1,029	74	176	162	69	161	100	114	104	69
Medical Technology	1,852	153	395	132	132	458	167	101	175	139
Accountancy	11,759	766	3,498	459	292	5,092	471	158	717	306
Teacher Training	22,899	2,164	4,459	2,476	2,102	2,702	2,853	1,182	2,942	2,019
Law/Jurisprudence	2,584	226	556	193	90	815	203	67	217	217
Criminology	2,583	283	632	138	184	480	295	158	228	185
Business Administration	6,816	473	2,240	279	188	2,691	290	101	385	169
Secretarial Training	2,958	145	268	372	251	730	422	152	381	236
Agricultural/Forestry/Fisheries	6,711	844	1,061	589	480	1,319	661	372	956	429
Wood work	4,730	389	1,186	304	349	1,205	544	160	375	218
Females										
Electrical Engineering	148	8	54	9	4	51	3	4	8	7
Mechanical Engineering	149	9	37	11	3	54	9	-	17	9
Mining Engineering	56	2	17	8	4	3	7	2	3	10
Industrial Engineering	1,152	74	234	226	25	39	187	40	145	182
Medicine and Surgery	391	40	89	28	6	145	23	13	30	17
Pharmacy	584	44	175	68	47	77	60	27	55	31
Nursing	9,422	729	3,181	482	330	2,300	452	321	1,176	451
Medical Technology	304	29	65	14	12	122	17	8	31	6
Accountancy	2,409	154	707	63	28	1,192	48	26	154	37
Teacher Training	14,980	1,341	4,280	1,053	676	3,190	1,139	376	1,879	1,046
Law/Jurisprudence	283	21	68	21	6	133	8	3	11	12
Criminology	159	16	57	2	8	34	11	7	10	14
Business Administration	1,212	57	336	33	22	614	58	13	63	16
Secretarial Training	15,229	701	3,590	587	374	7,537	583	279	1,076	502
Agricultural/Forestry/Fisheries	692	84	138	40	26	188	62	19	90	45
Wood work	129	5	21	6	13	32	21	6	19	6

The largest numbers of males in the field of Teacher Training, Pharmacy, Nursing, Criminology and all Engineering fields are in Copperbelt Province while the remaining fields are most prominent in Lusaka. For females, the largest number are also found in either Lusaka or Copperbelt Provinces. However, in the field of Industrial Engineering a much larger number (226) is in Eastern Province than 39 percent in Lusaka Province. Copperbelt and Lusaka are the most economically developed provinces in Zambia, thus the large share of trained personnel residing in them.

Further, the distribution of the population which has completed training in a particular field appears to be related to the nature of economic activities in the province. Lusaka as the administrative centre is dominated by persons with secretarial training. It also has the highest number of persons trained in accountancy, business administration and law/jurisprudence.

Table 5.12 shows the educational levels completed by persons with certificates and diplomas.

Table 5.12

Certificates and Diplomas by Level of Education, Sex and Residence, (Percent), Zambia, 1990

Certificates and Diplomas	Size	Education Completed				
		1-7	8-9	10-12	'A' Level	Total
Zambia						
Certificates						
Total	178,824	23.4	12.9	63.2	0.5	100
Male	119,361	26.6	12.4	60.5	0.5	100
Female	59,463	16.8	14.0	68.7	0.5	100
Rural						
Total	57,210	37.4	14.9	47.3	0.4	100
Male	43,064	38.4	14.4	46.8	0.4	100
Female	14,146	34.3	16.3	49.0	0.4	100
Urban						
Total	121,614	16.8	12.0	70.7	0.5	100
Male	76,297	20.0	11.2	68.3	0.4	100
Female	45,317	11.4	13.2	74.8	0.6	100
Diplomas						
Total	42,755	5.1	3.6	83.5	7.8	100
Male	34,287	5.5	3.6	83.4	7.5	100
Female	8,468	4.0	3.9	83.5	8.7	100
Rural						
Total	5,850	11.7	6.3	73.8	8.3	100
Male	4,910	11.7	6.3	74.4	7.6	100
Female	940	11.6	6.0	70.3	12.1	100
Urban						
Total	36,905	4.0	3.2	85.1	7.7	100
Male	29,377	4.3	3.1	85.0	7.5	100
Female	7,528	3.2	3.8	90.2	2.7	100

The majority of certificate holders (63 percent) and Diploma holders (84 percent) in Zambia completed grades 10-12. This is also the case rural and urban areas. However in the case of Diploma holders, proportions of persons who completed 'A' level of education are more significant than certificate holders. High proportions of those who completed upper secondary education indicate that in order to pursue most diploma and certificate courses, persons need to complete at least secondary education.

Table 5.13

Diplomas by Level of Education, Sex and Province, (Percent), 1990

Province and Sex		Education Level Completed					Total
		Size	1-7	8-9	10-12	'A' Level	
Diplomas							
Central	Total	3,213	6.1	4.8	81.0	8.1	100
	Male	2,631	6.5	5.0	80.8	7.7	100
	Female	582	4.5	4.1	81.9	9.5	100
Copperbelt	Total	13,621	4.7	3.2	85.8	6.3	100
	Male	11,032	4.9	3.1	85.8	6.2	100
	Female	2,589	4.1	3.7	85.8	6.4	100
Eastern	Total	1,639	9.2	5.8	78.8	6.2	100
	Male	1,392	8.9	5.9	79.2	6.0	100
	Female	247	10.5	4.9	76.9	7.7	100
Luapula	Total	1,182	9.4	3.6	82.6	4.4	100
	Male	1,070	9.0	3.4	83.6	4.0	100
	Female	112	13.4	6.3	72.3	8.0	100
Lusaka	Total	16,136	3.7	3.1	83.9	0.1	100
	Male	12,377	3.9	2.9	83.8	9.4	100
	Female	3,759	2.7	3.6	84.3	9.4	100
Northern	Total	1,934	8.8	4.9	81.1	5.2	100
	Male	1,694	9.2	4.7	81.0	5.0	100
	Female	240	6.3	5.8	81.7	6.3	100
North-Western	Total	889	6.3	4.3	79.8	9.6	100
	Male	724	6.2	4.7	82.1	7.0	100
	Female	165	6.7	2.4	69.7	21.2	100
Southern	Total	3,197	5.6	4.2	82.0	8.3	100
	Male	2,566	6.0	4.3	81.8	8.0	100
	Female	631	4.0	3.6	82.7	9.7	100
Western	Total	1,195	7.4	6.5	76.8	9.2	100
	Male	997	7.4	6.4	77.7	8.4	100
	Female	198	7.6	7.1	72.2	13.1	100

Table 5.13 shows that the majority of diploma holders in all provinces have completed secondary education. In Eastern, Lusaka, Luapula and Northern Provinces, proportions of those who have completed 'A' level of education are lower than those who have completed primary education.

5.8 SUMMARY

Results from the 1990 Census show that 56 percent of Zambians can read and write. The corresponding proportion is higher in urban (73 percent) than rural (45 percent) areas. A higher proportion of males (63 percent) than females (50 percent) are literate. Percentages are 63 and 50 for males and females, respectively.

The population of Zambia which is presently attending school is 39 percent. The percentages for rural and urban areas are 29 and 58 respectively. The overall attendance rate for males in the country is 45 percent while that for females is 34.2 percent. The enrolment ratio has risen from 34 percent in 1980 to 39 percent in 1990. Proportions of persons who have completed higher grades such as 8-9 and 10-12 are higher for 1990 than 1980. The census results also show that the most common fields of study for males are teacher training, accountancy, mechanical engineering, business administration and electronic engineering. As for females, the most common fields of study are secretarial, teacher training and nursing. It has been observed that most of the certificate and diploma holders have completed secondary education. Proportions for those who have completed 'A' level of education are higher for diploma than certificate holders.

CHAPTER 6

ECONOMIC CHARACTERISTICS

6.1 INTRODUCTION

Information on economic characteristics is used to plan, monitor, evaluate and formulate policies and programmes to enhance human resources development. In addition, the information can be used to study the observed level and distribution of income among individuals and households.

During the 1990 Census of population, Housing and Agriculture, information was collected from all persons 12 years and over on the following characteristics:-

- Economic activity,
- Employment Status,
- Occupation,
- Industry and
- Educational attainment.

6.2 WORKING-AGE POPULATION

The Census in 1990 defines the working-age population as all persons 12 years and over. Table 6.1 presents population 12 years and over by age group, residence and sex for 1980 and 1990. The working-age population in Zambia has increased by 39.8 percent between 1980 and 1990. The increase of the male working-age population of 40.8 percent is more than that of the female working-age population of 38.9 percent. In urban areas, the working-age population has increased by 40.9 percent, while it has increased by 39.1 percent in rural areas. The increase of 42.7 percent for the male working-age population in rural areas is more than the increase of 36.0 percent for the female working-age population; in urban areas, on the other hand, the increase of 38.2 percent in the male working-age population is less than the increase in the female working-age population of 43.8 percent.

Table 6.1

Population 12 Years and Over by Broad Age Groups, Residence and Sex, (Percent), Zambia, 1980 and 1990

Residence, Sex and Year			Size	Total	12-19	20-24	25-29	30-59	60+	Not Stated
Zambia										
- Total	1980		3,319,538	100.0	31.0	14.3	10.1	35.0	7.4	2.2
	1990		4,640,427	100.0	33.2	15.3	11.5	33.2	6.6	0.2
- Male	1980		1,602,345	100.0	31.5	13.3	9.9	34.9	8.1	2.3
	1990		2,255,686	100.0	33.4	14.6	11.0	33.4	7.3	0.3
- Female	1980		1,717,193	100.0	30.6	15.2	10.4	35.0	6.7	2.1
	1990		2,384,741	100.0	33.1	16.0	11.9	32.9	5.9	0.2
Residence										
Rural - Total	1980		2,007,298	100.0	30.8	12.7	8.5	35.9	10.3	1.8
	1990		2,791,707	100.0	32.5	14.3	10.6	33.2	9.1	0.3
- Male	1980		926,461	100.0	33.0	12.2	8.0	33.3	11.7	1.8
	1990		1,321,860	100.0	34.2	13.8	10.2	31.3	10.2	0.3
- Female	1980		1,080,837	100.0	28.8	13.2	8.9	38.1	9.1	1.9
	1990		1,469,847	100.0	31.0	14.7	11.0	34.9	8.1	0.3
Urban - Total	1980		1,312,240	100.0	31.4	16.6	12.6	33.7	2.9	2.8
	1990		1,848,720	100.0	34.3	16.8	12.8	33.1	2.8	0.2
- Male	1980		675,884	100.0	29.4	14.8	12.3	37.2	3.2	3.1
	1990		933,826	100.0	32.2	15.8	12.1	36.5	3.2	0.2
- Female	1980		636,356	100.0	33.5	18.0	13.0	29.9	2.6	2.5
	1990		914,894	100.0	36.4	18.5	13.4	29.6	2.4	0.2

6.3 ECONOMICALLY ACTIVE POPULATION

The labour force or economically active population is defined as all persons 12 years and over who are classified as employed or as unemployed. These are the total number of persons who are actually available to produce goods and services for the country. The economically active population by residence and sex are given in Table 6.2. According to this table, the labour force increased by 23.7 percent, from 1,856,593 in 1980 to 2,295,791 in 1990. The increase of 25.1 percent in the male labour force is more than the increase of 21.1 percent for female labour force. A big proportion of the labour force (64.4 percent in 1990 and 61.5 percent in 1980) is in rural areas, as compared to the labour force in urban areas (35.6 percent in 1990 and 38.5 percent in 1980).

The employed population includes all persons who: work for remuneration in the form of wages, salaries, commissions or pay in kind; operate their own businesses without employing others, and; work in a family business or farm without pay or profit. Of the 2,295,791 total labour force in Zambia, 2,101,477 or 87.6 percent are employed. The employed population almost doubled from 1980 to 1990. The remarkable increase of 155.0 percent in the female employed labour force is much more than the increase of 64.2 percent in the male employed labour force. The proportion of the employed population residing in rural areas has increased from only 56.0 percent in 1980 to 88.8 percent in 1990, while in urban areas it has dropped from 44.0 percent in 1980 to 11.2 percent in 1990. The spectacular increase in female employment must have been due both to the increased female participation in the informal sector economic activities, as well as the improved coverage of female economic activities in the 1990 Census compared to the 1980 Census.

The unemployed population has declined by 63.6 percent, from 784,264 in 1980 to 285,314 in 1990. The decline of 71.9 percent in the female unemployed population is more than the decline of 55.1 percent for the male unemployed population. In 1980, more than two thirds of the unemployed are in rural and less than one third are in urban areas, while in 1990, slightly more than half the unemployed are in rural areas and less than half are in urban areas. The big decline in the number of persons who are unemployed between the two censuses is due both to the fact that many persons who were previously unemployed or outside the labour force subsequently took up mainly informal sector economic activities and that there are better screening questions to determine whether or not a person was really unemployed during the 1990 Census enumeration.

The economically inactive population comprises all persons 12 years and over who are classified neither as employed nor as unemployed during the period of reference; that is, that part of the working-age population considered to be outside the labour force. The economically inactive population has increased by 54.2 percent, from 1,458,121 in 1980 to 2,248,942 in 1990. The increase of 75.5 percent in the male economic inactivity is more than the increase of 45.8 percent in the economic inactivity of females. There are only slight changes in the proportions of the economically inactive population in the rural areas and those who reside in urban areas.

The proportion of the inactive population residing in rural areas in 1990 is 56.3 percent, while it is 59.1 percent in 1980. Similarly, the proportion of the economically inactive population residing in urban areas is 43.7 percent in 1990 and 40.9 percent in 1980.

Table 6.2

Current Economically Active Population 12 Years and Over by Residence and Sex, (Percent), Zambia, 1980 and 1990

Activity and Sex	Residence							
	1980				1990			
	Total Number	Total	Rural	Urban	Total Number	Total	Rural	Urban
Population								
- Total	3,319,538	100	60.5	39.5	4,640,426	100	60.2	38.8
- Male	1,602,345	100	57.8	42.2	2,225,685	100	58.6	41.4
- Female	1,717,193	100	62.9	37.1	2,384,741	100	61.6	38.4
Labour Force								
- Total	1,856,593	100	61.5	38.5	2,295,791	100	64.4	35.6
- Male	1,184,596	100	57.8	42.2	1,482,211	100	60.7	39.3
- Female	671,997	100	68.2	31.8	813,580	100	71.1	28.9
Employed								
- Total	1,072,329	100	56.0	44.0	2,010,477	100	88.8	11.2
- Male	796,976	100	52.2	47.8	1,308,282	100	60.9	39.1
- Female	275,353	100	67.1	32.9	702,195	100	74.0	26.0
Unemployed								
- Total	784,264	100	69.0	31.0	285,314	100	56.9	43.1
- Male	387,620	100	69.2	30.8	173,929	100	59.2	40.8
- Female	396,644	100	68.9	31.1	111,385	100	53.2	46.8
Inactive								
- Total	1,458,121	100	59.1	40.9	2,248,942	100	56.3	43.7
- Male	414,210	100	58.0	42.0	727,043	100	54.9	45.1
- Female	1,043,911	100	59.6	40.4	1,521,899	100	57.0	43.0
Not Stated								
- Total	4,824	100	54.7	45.3	95,693	100	49.5	50.5
- Male	3,539	100	51.1	48.9	46,431	100	50.1	49.9
- Female	1,285	100	64.4	35.6	49,262	100	48.9	51.1

Table 6.3 shows the percent distribution of the current economically active population 12 years and over by age in 1990. Of the total labour force, half of the persons are in the broad young age group of 12-29 years, 37.7 percent are in the broad adult age group of 30-54 years and 10.8 percent are in the broad older age group of 55 years and over. Similarly, the percent distribution of the male labour force is 47.1 percent, 40.8 percent and 11.9 percent, and that of the female labour force is 59.1 percent, 32.0 percent and 8.8 percent, for the above respective broad age groups.

The age distribution of the employed labour force shows a pattern that is broadly akin to the one for the total labour force. The percent distribution of the unemployed labour force and the economically inactive by age, however, are different from the pattern displayed by the total labour force. The unemployed and the inactive have even more of their population in the young age group of 12-29 years than in the older broad age groups. Three quarters of the unemployed are 12-29 years, while less than one fourth are more than 30 years. Two thirds of the inactive have ages ranging from 12 to 29 years, while less than one third have ages of 30 years or over.

Figure 6.1

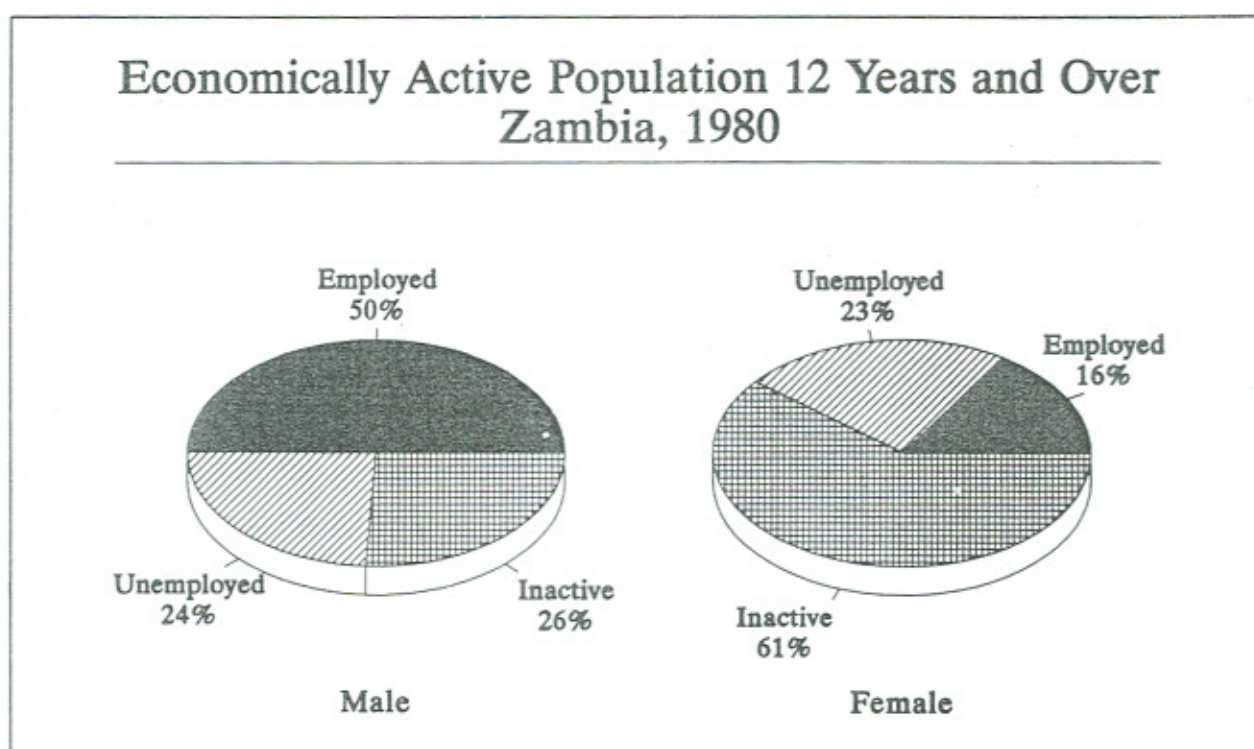


Figure 6.2

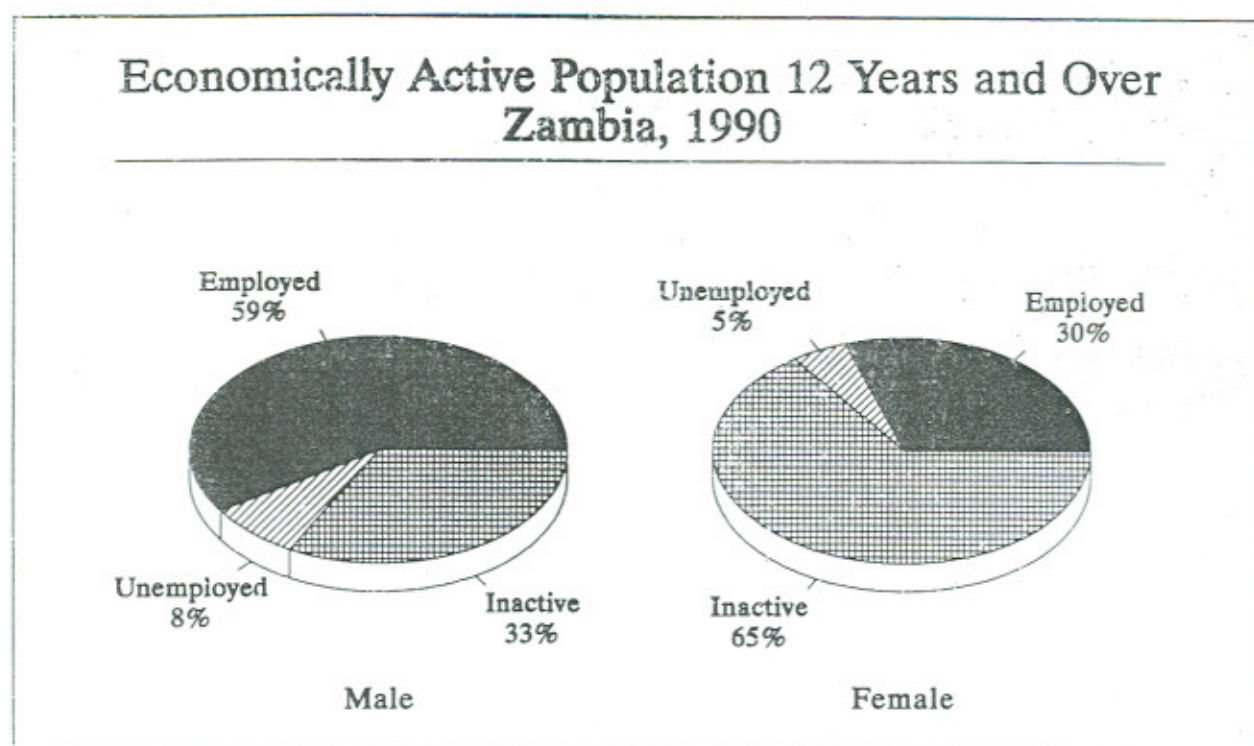


Table 6.3

Current Economically Active Population 12 Years and Over by Age and Sex, (Percent), Zambia, 1990

Activity and Sex	Total Number	Total	Age Group							
			12-19	20-24	25-29	30-34	35-54	55-64	65+	Not Stated
Labour Force										
- Total	2,295,791	100.0	22.1	15.7	13.5	11.5	26.2	6.6	4.2	0.2
- Male	1,482,211	100.0	17.7	15.2	14.2	12.6	28.2	7.2	4.7	0.2
- Female	813,580	100.0	30.1	16.7	12.3	9.5	22.5	5.6	3.2	0.1
Employed										
- Total	2,010,477	100.0	20.0	14.1	13.6	12.2	28.3	7.1	4.5	0.2
- Male	1,308,282	100.0	16.0	13.5	14.2	13.2	30.2	7.7	5.6	0.2
- Female	702,195	100.0	27.5	15.3	12.5	10.2	24.7	6.1	3.5	0.2
Unemployed										
- Total	285,314	100.0	36.8	26.7	12.9	7.0	11.4	3.1	2.0	0.1
- Male	173,929	100.0	30.8	27.2	14.1	8.1	13.4	3.9	2.4	0.1
- Female	111,385	100.0	46.2	25.9	10.9	5.3	8.3	2.0	1.3	0.1
Inactive										
- Total	2,248,942	100.0	43.7	14.9	9.5	7.1	15.9	4.5	4.1	0.3
- Male	727,043	100.0	64.0	13.4	4.7	2.9	6.5	3.4	4.8	0.3
- Female	1,521,899	100.0	34.1	15.6	11.9	9.1	20.4	5.0	3.7	0.2
Not Stated										
- Total	95,693	100.0	52.4	16.6	8.1	4.9	9.6	3.2	3.4	1.8
- Male	46,431	100.0	53.5	17.5	8.2	4.8	8.5	2.6	2.8	2.1
- Female	49,262	100.0	51.4	15.8	8.1	5.0	10.5	3.7	4.0	1.5

6.4 ECONOMICALLY INACTIVE POPULATION

Table 6.4 shows the current economically inactive population by reason for inactivity, residence and sex in 1990. Two thirds of the inactive population are female, while one third are male. Homemaking (41.3 percent) is the most important reason for economic inactivity, followed by other reasons (30.3 percent); studying (28.4 percent) is the least important reason for economic inactivity. (Groups of people included in the category of those who are inactive for "other reasons" include pensioners, those are too old to work, prisoners, invalids, beggars and the disabled). In rural areas the reasons for inactivity are in the order which is similar to the one for the whole country. In urban areas, however, studying (37.9 percent) is the most important reason for inactivity, followed by homemaking (36.1 percent); other reasons are the least important for economic inactivity.

In 1990, males are economically inactive primarily because of studying (48.4 percent), while females are inactive primarily because of homemaking (57.7 percent).

Table 6.4

Current Economically Inactive Population by Reason for Inactivity, Residence and Sex, (Percent), Zambia, 1990

Residence and Sex	Reason for Inactivity				
	Total Number	Total	Home maker	Student	Other
Zambia					
- Total	2,248,942	100.0	41.3	28.4	30.3
- Rural	1,266,048	100.0	45.3	21.1	33.6
- Urban	982,894	100.0	36.1	37.9	26.0
Sex					
- Male	727,043	100.0	6.9	48.4	44.7
- Female	1,521,899	100.0	57.7	18.9	23.4

6.5 CURRENT LABOUR FORCE PARTICIPATION RATES

The labour force participation rate is defined as the proportion of persons of a particular age-group who are in the labour force. This rate (or ratio) measures the extent to which a particular age and/or sex group is involved in economic activities. Labour force participation rates by age, sex and residence are shown in Table 6.5.

There has been a decrease in the extent to which the working-age population are involved in economic activities between the two censuses, as seen from the decline in the labour force participation rate from 55.9 percent in 1980 to 49.5 percent in 1990. The decline in the male labour force participation from 73.9 percent in 1980 to 65.7 percent in 1990 is more than the decline for females from 39.1 percent in 1980 to 34.1 percent in 1990.

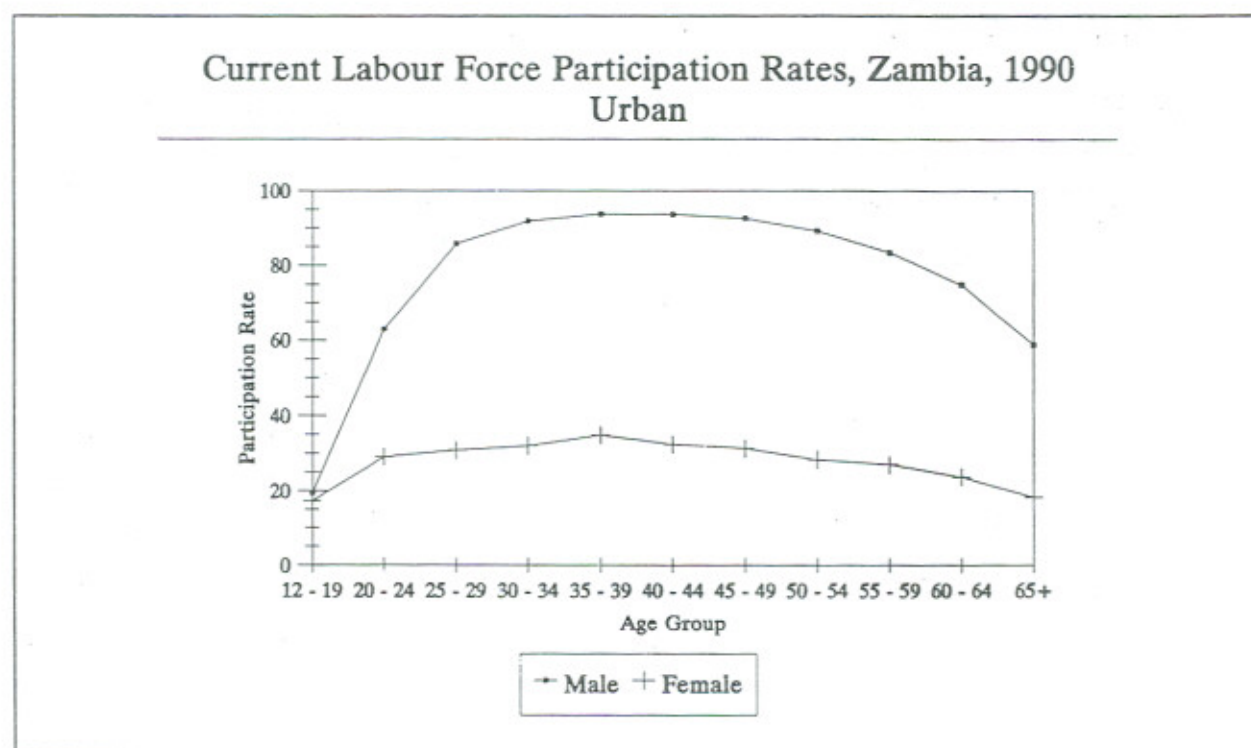
The decline in the urban labour force participation rate (from 54.4 percent in 1980 to 44.2 percent in 1990) is greater than the decline in rural areas (from 56.9 percent 1980 to 52.9 percent in 1990).

The decline in labour force participation rates is larger for males than for females in both rural and urban areas. In rural areas, the male participation rate has declined from 73.9 percent in 1980 to 68.1 percent in 1990, while the female participation rate has declined from 42.4 percent in 1980 to 39.4 percent in 1990. In urban areas, the male labour force participation rate has declined from 74.0 percent in 1980 to 62.4 percent in 1990, while the participation rate of females has declined from 33.6 percent in 1980 to 25.7 percent in 1990.

Figure 6.3



Figure 6.4



6.6 EMPLOYMENT STATUS, OCCUPATION AND INDUSTRIAL CLASSIFICATION

The occupational and industrial structure and employment status of a country's workforce reflect the level of its economic development and the efficiency with which it uses its resources. If economic progress is experienced in a country, this will easily be seen from the increased division and specialisation of its labour force. In an economy in which economic progress is negligible, it is typical to find the majority of the workforce employed in its primary industries, for various forms of self-employment to be the most dominant status in employment, for unskilled workers to be in the majority, and for workers to be generally involved in agricultural and other occupations characterised by low skill requirement.

Employment Status

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

The intercensal period has seen the country experience a big decline in its effort to industrialise, as indicated by the growth in the reliance on family labour, instead of increasing reliance on employers and employees, which is the experience of countries that are undergoing economic progress. Instead of dropping, the number of self-employed and unpaid family workers have together actually increased between the two censuses, while employers and employees have together undergone a corresponding decline. In 1980, 45.2 percent of the workforce are classified as self-employed or unpaid family workers, while 53.2 percent are classified either as employers or employees. In 1990, however, those classified either as self-employed or unpaid family workers have together risen to 64.7 percent, while those classified either as employers or employees have together dropped to 32.4 percent.

The economic slump which the country has experienced during the 1980's forced workers to shift from one form of employment status to another. On one hand, those classified as self-employed have declined from 39.0 percent in 1980 to 27.3 percent in 1990 and those classified as employees have declined from 52.6 percent in 1980 to 30.6 percent in 1990. On the other hand, those classified as unpaid family workers have increased from only 6.2 percent in 1980 to 37.4 percent in 1990 and those classified as employers have increased from 0.6 percent in 1980 to 1.8 percent in 1990.

Evidently, the prolonged adverse effects of the economic recession of the 1980's have led to manpower losses and a big reduction in employment opportunities in the formal sector of the economy, thereby forcing a large and growing part of the labour force into self-employment which characterises informal sector activities.

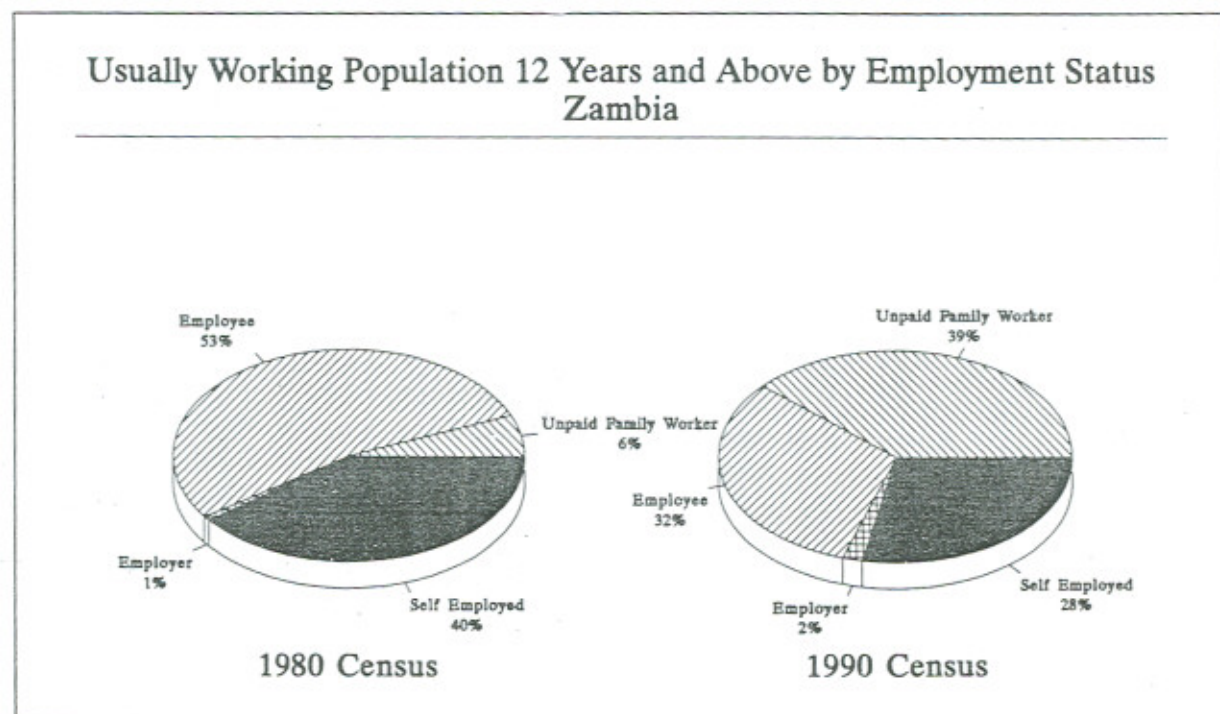
In 1980 the self-employed, with 55.6 percent of the workers, is the dominant employment status in rural areas, while employees, with 80.6 percent of the workers, is the dominant employment status in urban areas. In 1990, unpaid family worker has become the dominant (54.3 percent) employment status in rural areas, while employees has remained the dominant (66.2 percent) employment status in urban areas.

Table 6.6

Usually Working Population 12 Years and Over by Employment Status, Sex and Residence, (Percent), Zambia, 1980 and 1990

Employment Status and Sex	Residence and Year					
	Total		Rural		Urban	
	1980	1990	1980	1990	1980	1990
Total Number						
- Total	1,072,329	1,838,409	600,969	1,192,033	471,360	646,376
- Male	796,976	1,204,938	416,105	719,011	380,871	485,927
- Female	275,353	633,471	184,864	473,022	90,489	160,449
Total Percentage						
- Total	100.0	100.0	100.0	100.0	100.0	100.0
- Male	100.0	100.0	100.0	100.0	100.0	100.0
- Female	100.0	100.0	100.0	100.0	100.0	100.0
Self-Employed						
- Total	39.0	27.3	55.6	31.2	17.7	20.2
- Male	34.6	28.4	55.3	36.4	12.0	16.6
- Female	51.6	25.2	56.4	23.2	41.8	31.2
Employee						
- Total	52.6	30.6	30.6	11.3	80.6	66.2
- Male	61.5	39.0	38.3	16.0	86.8	72.9
- Female	26.8	14.7	13.1	4.2	54.8	46.0
Employer						
- Total	0.6	1.8	0.7	1.0	0.6	3.2
- Male	0.7	2.2	0.9	1.3	0.6	3.6
- Female	0.4	0.8	0.4	0.4	0.4	2.0
Unpaid-Family Worker						
- Total	6.2	37.4	10.5	54.3	0.7	6.4
- Male	2.4	27.8	4.2	44.1	0.3	3.6
- Female	17.3	55.9	24.6	69.8	2.4	14.7
Not Stated						
- Total	1.6	2.9	2.6	2.2	0.4	4.0
- Male	0.8	2.6	1.3	2.2	0.3	3.3
- Female	3.9	3.4	5.5	2.4	0.6	6.1

Figure 6.5



Male and female workers are specialised in different occupations in urban areas. The four important occupations for male workers are production and related workers (19.3 percent), sales workers (14.5 percent), professional, technical and related workers (13.6 percent), and service workers (12.6 percent). The four most important occupations for female workers are sales workers (25.7 percent), professional, technical and related workers (16.2 percent), clerical and related workers (11.8 percent), and service workers (8.7 percent).

Table 6.7 presents the usually working population by occupation, sex and residence for 1980. The distribution of workers over occupations in 1980 follows a pattern which is similar to the one for 1990. However, the intercensal occupational shifts reveal that there have been job losses in all the non-agricultural occupations, on one hand, while the agriculture and related occupations have gained manpower.

Table 6.7

Usual Working Population By Occupation, Sex and Residence, (Percent), Zambia, 1980 and 1990

Occupation		Percentage of Working Population								
		Total			Rural			Urban		
		Both	Male	Female	Both	Male	Female	Both	Male	Female
Total Number of Workers	1980	1,072,329	796,976	275,353	600,969	416,105	184,864	471,360	380,871	90,489
	1990	1,838,489	1,204,938	633,471	1,192,033	719,011	473,022	646,376	485,927	160,449
Total (%)	1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	1990	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Technical	1980	8.2	7.8	9.4	5.7	5.9	5.3	11.4	9.8	18.0
	1990	6.5	7.1	5.5	7.2	3.3	1.9	13.6	12.7	16.2
Administrative and Manage.	1980	1.3	1.6	0.6	0.5	0.6	0.2	2.3	2.5	1.4
	1990	0.5	0.7	0.2	0.1	0.1	0.0	1.4	1.6	0.7
Clerical and related	1980	4.5	4.0	6.1	1.8	1.9	1.7	8.0	6.3	15.1
	1990	2.7	2.4	3.1	0.4	0.5	0.3	6.9	5.3	11.8
Sales Workers	1980	8.3	5.5	16.1	4.0	3.1	6.1	13.7	8.3	36.6
	1990	6.3	5.5	7.9	1.8	1.8	1.8	14.5	10.8	25.7
Service Workers	1980	9.6	11.3	4.8	4.9	6.2	2.2	15.6	17.0	9.9
	1990	5.6	6.9	3.1	1.7	2.1	1.2	12.6	13.9	8.7
Agriculture, Animal Hus.	1980	40.7	35.8	54.9	67.2	62.5	77.5	6.9	6.5	8.5
	1990	48.6	45.0	55.3	71.2	70.7	71.8	6.9	7.0	6.7
Production and Related	1980	19.8	25.0	4.5	10.5	13.7	3.3	31.6	37.4	6.9
	1990	8.4	11.5	2.7	2.6	3.3	1.4	19.3	23.5	6.5
Unclassified	1980	1.6	2.0	0.4	1.0	1.3	0.3	2.4	2.8	0.7
	1990	2.0	2.0	2.0	1.4	1.4	1.4	3.2	3.1	3.6
Not Stated	1980	6.0	7.0	3.2	4.4	4.8	3.4	8.1	9.4	2.9
	1990	19.4	18.9	20.2	18.1	16.8	20.2	21.6	22.1	20.1

Working Population by Industry

Industry or economic sector identifies the type of product or service produced at one's workplace. The distribution of the usually working population 12 years and over by industry and employment status for 1980 and 1990 is shown in Table 6.8.

Lack of industrialisation in Zambia is shown by the continued predominance of primary production activities. In 1990, the agriculture industry employed 49.8 percent of the workers, the mining industry employed 3.4 percent, secondary industries together employed only 7.6 percent, while tertiary industries together employed 20.8 percent. The industrial distribution of workers by employment status revealed that the self-employed (74.8 percent in 1980 and 65.1 percent in 1990) and the unpaid family workers (90.7 percent in 1980 and 71.4 percent in 1990) are important employment statuses in the agriculture industry. Employees are more widely distributed over the industries than other statuses. Employers are more important to agriculture (36.3 percent in 1980 and 24.2 percent in 1990) and Community, Social and personal services (17.7 percent in 1980 and 23.8 percent in 1990).

A study of shifts of workers from one industry to another shows that all non-agricultural industries have experienced manpower losses during the 1980s, while the agriculture industry is the only industry which has gained manpower. This suggests that the majority of retrenchees, retirees and those who are fired, have taken up agriculture activities.

The distribution of usually working population by employment status in each industry is shown in Table 6.9. Unpaid family worker (37.4 percent) is the most important employment status for all industries in 1990, while employee (52.6 percent) is the most important status in 1980. In 1990, self-employed is of importance only in the trading industry (52.9 percent), while in 1980 it is of importance in agriculture (69.3 percent) and trading (67.5 percent). Unpaid family workers are the majority in agriculture in 1990 (53.6 percent). Employee is of importance in all the industries, except those of agriculture and trade in both 1980 and 1990. The employment status of employer is of no importance in any industry in both censuses.

Table 6.8

Usually Working Population (12 Years and Over) by Employment Status and Industry, (Percent), Zambia, 1980 and 1990

Industrial and Year	Total Number Working	Self Employed	Employee	Employer	Unpaid Family Worker	Not Stated
Total Number - 1980	1,072,329	417,889	563,858	6,969	66,114	17,499
- 1990	1,838,409	502,501	562,791	32,275	688,151	52,691
Total Percentage - 1980	100.0	100.0	100.0	100.0	100.0	100.0
- 1990	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture - 1980	42.0	74.8	11.1	36.3	90.7	75.4
- 1990	49.8	65.1	14.1	24.2	71.4	19.9
Mining - 1980	6.0	0.1	11.4	0.7	0.1	0.6
- 1990	3.4	0.1	10.2	6.2	0.0	2.5
Manufacturing - 1980	6.0	3.4	0.8	7.1	0.6	1.4
- 1990	5.1	4.6	11.0	9.4	0.5	4.3
Electricity - 1980	0.9	0.0	1.5	1.0	0.0	0.3
- 1990	0.6	0.1	1.7	1.4	0.0	0.4
Construction - 1980	3.4	1.0	5.7	3.7	0.1	0.5
- 1990	1.9	1.0	4.6	3.8	0.2	1.5
Trade - 1980	8.0	13.8	4.4	16.2	2.3	2.2
- 1990	3.8	7.4	4.7	5.9	0.5	3.3
Transport - 1980	4.5	0.5	8.2	4.5	0.2	0.5
- 1990	2.9	0.7	8.0	6.7	0.1	2.2
Finance - 1980	2.1	0.7	3.4	4.0	0.2	0.3
- 1990	2.0	2.2	4.1	3.6	0.2	1.6
Community - 1980	20.6	2.2	37.0	17.7	1.1	3.3
- 1990	12.1	7.6	28.5	23.8	1.7	8.6
Other - 1990	1.9	1.4	2.3	2.1	1.7	6.3
Not Stated - 1980	6.5	3.5	8.5	8.8	4.7	15.5
- 1990	16.5	9.8	10.8	12.9	23.7	49.4

Figure 6.7

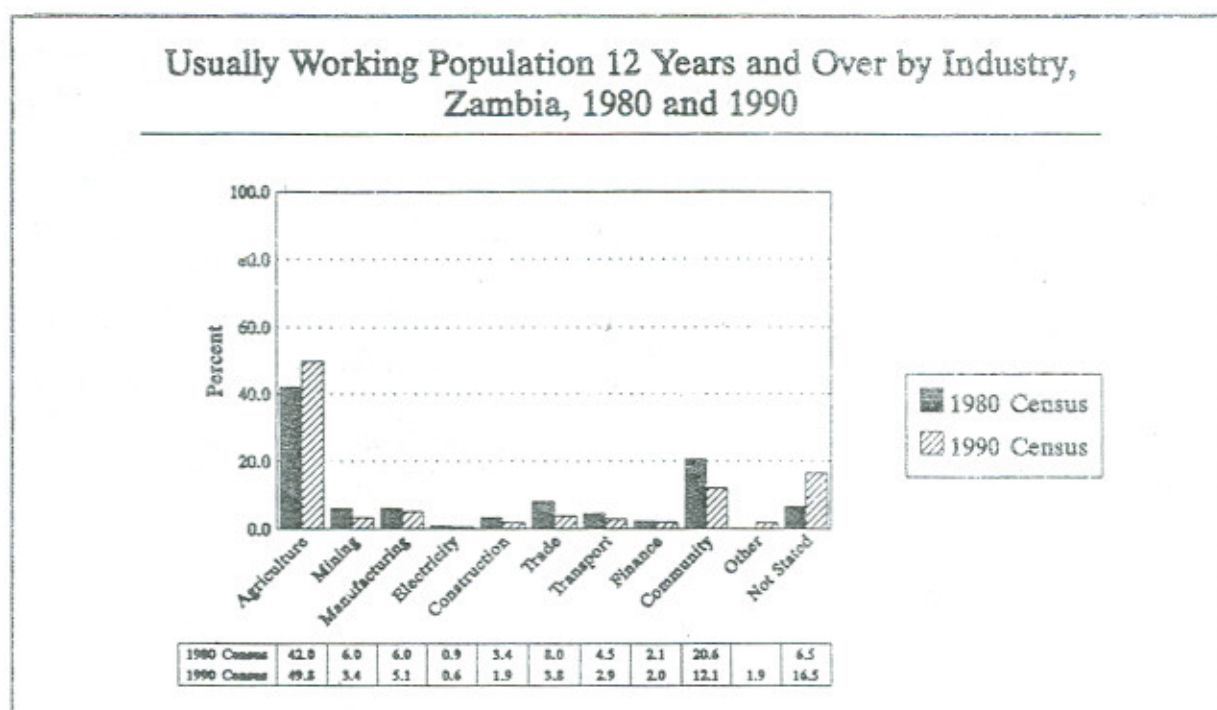


Table 6.9

Usually Working Population 12 years and Over by Industry and Employment Status, (Percent),
Zambia, 1980 and 1990

Industry and Year		Total Number Working	Total	Self Employed	Employee	Employer	Unpaid Family Worker	Not Stated
Total Number	- 1980	1,072,329	100	39.0	52.6	0.6	6.2	1.6
	- 1990	1,838,409	100	27.3	30.6	1.8	37.4	2.9
Agriculture - 1980		450,839	100	69.3	13.9	0.6	13.3	2.9
	- 1990	916,084	100	35.7	8.6	0.9	53.6	1.2
Mining	- 1980	64,788	100	0.5	99.2	0.1	0.0	2.0
	- 1990	61,540	100	1.0	93.3	3.3	0.3	2.1
Manufacturing	- 1980	64,540	100	21.8	76.4	0.7	0.7	0.4
	- 1990	94,218	100	24.7	65.7	3.2	4.0	2.4
Electricity - 1980		9,100	100	1.7	96.9	0.7	0.1	0.6
	- 1990	10,551	100	4.0	89.2	4.2	0.4	2.2
Construction	- 1980	36,772	100	11.6	87.3	0.7	0.2	0.2
	- 1990	34,352	100	15.0	75.8	3.6	3.3	2.3
Trade	- 1980	85,671	100	67.5	29.0	1.3	1.8	0.4
	- 1990	70,310	100	52.9	37.3	2.7	4.6	2.5
Transport	- 1980	48,666	100	3.9	95.0	0.7	0.2	0.2
	- 1990	52,423	100	6.3	86.5	4.1	0.8	2.3
Finance	- 1980	22,137	100	12.7	85.3	1.3	0.5	0.2
	- 1990	37,399	100	29.6	61.2	3.1	3.9	2.2
Community - 1980		220,472	100	4.2	94.7	-0.6	0.3	0.2
	- 1990	222,639	100	17.2	72.1	3.4	5.3	2.0
Other	- 1990	35,498	100	19.0	36.7	1.9	33.0	9.4
Not Stated - 1980		69,344	100	21.4	69.3	0.9	4.5	3.9
	- 1990	303,395	100	16.2	20.0	1.4	53.8	8.6

6.7 EDUCATIONAL ATTAINMENT

The objective of human resources development is to secure the right number of people with the right qualifications for the right jobs at the right time. A country having highly developed human resources can be understood to be one in which the majority of the workforce possess high professional/vocational training. Professional education is training which will enable a person to practice in an occupation in which only those who have acquired a pre-determined amount of knowledge, usually at degree level, can practice. Vocational education is training which prepares one for a specific occupation or family of occupations, but at a level that is lower than professional education.

It is necessary for a country to invest time and money in the development of its human resources (that is, human capital) because of the benefits which result from increased levels of efficiency and productivity of those who receive training. The specific type and number of skills required will be determined by the needs of economic growth and development. The total human resources needed in a country will, by definition, be equal to the number required to maintain the existing level of output, plus the number required to produce the planned additional volume of output, not forgetting to add a certain percentage for those who will die, retire, be upgraded, become disabled or emigrate. The information required on the development of human resources should, therefore, give indications of the number of workers who possess skills that are critical for sustained economic development.

Table 6.10 shows the distribution of the usually working population 12 years and over by professional/vocational training and occupation for 1990. According to this table, 88.4 percent of the country's workforce have absolutely no professional/vocational education in 1990, while only 11.6 percent have such education. The distribution of professional/vocational education among the various occupations, shows that two thirds of those in the professional, technical, managerial and related occupations have professional education, while one third do not have it. Two fifths those with clerical and related occupations have professional education, while four fifths do not have it. The majority of workers in the remaining occupations have no professional education. For sales and service workers, 88.2 percent have no professional education, while only 11.8 percent have it. 96.9 percent of those with agricultural occupations do not have professional education, while only 3.1 percent have it. Finally, 87.2 percent of the production and related workers have no professional education, while only 12.8 percent have it. A comparison of the distribution of male and female workers by professional/vocational education and occupation do not show important differences.

Table 6.10

Usually Working Population 12 years and over by Professional/Vocational Training; Occupation and Sex (Percent), Total Zambia, 1990

Occupation	Total Number Working	Working Population			Working Population With Professional Education					Not Stated
		Total	No Professional Education	Having Professional Education	Number Having Professional Education	Total	Certificate	Diploma	Degree	
Both Sexes										
Total	1,838,409	100	88.4	11.6	195,721	100	78.4	20.3	1.3	17,293
Professional, Technical & Related	120,490	100	30.9	69.1	81,272	100	69.9	28.0	2.1	1,985
Administrative & Management	10,031	100	35.9	64.1	6,122	100	41.5	53.5	5.0	308
Clerical and Related	49,306	100	59.7	40.3	19,125	100	87.1	12.5	0.4	741
Sales Workers	115,655	100	89.7	10.3	10,463	100	75.1	24.0	0.9	1,430
Service Workers	101,997	100	86.7	13.3	12,326	100	89.6	10.2	0.2	1,247
Agriculture, Animal Husbandry	892,966	100	96.9	3.1	22,827	100	88.8	10.7	0.5	4,812
Production and Related	155,161	100	87.2	12.8	18,106	100	89.3	10.5	0.2	1,795
Unclassified	37,138	100	90.2	9.8	3,126	100	70.8	26.8	2.4	517
Not Stated	355,665	100	92.5	7.5	22,354	100	89.4	10.1	0.5	4,455
Male										
Total	1,204,938	100	86.9	13.1	145,057	100	76.0	22.6	1.4	12,434
Professional, Technical & Related	85,414	100	33.6	66.4	55,248	100	64.1	33.4	2.5	1,499
Administrative & Management	8,888	100	36.2	63.8	5,403	100	40.2	54.9	4.9	265
Clerical and Related	29,330	100	72.7	27.3	7,527	100	80.6	18.6	0.8	487
Sales Workers	65,704	100	86.8	13.2	7,770	100	70.9	28.1	1.0	881
Service Workers	82,599	100	85.5	14.5	10,981	100	89.6	10.2	0.2	1,004
Agriculture, Animal Husbandry	542,436	100	95.7	4.3	20,268	100	88.4	11.0	0.5	3,267
Production and Related	138,027	100	87.1	12.9	16,137	100	88.9	10.8	0.3	1,627
Unclassified	24,578	100	88.5	11.5	2,435	100	69.1	28.6	2.3	394
Not Stated	227,962	100	90.2	9.8	19,288	100	89.8	9.8	0.4	3,010
Female										
Total	633,471	100	91.2	8.8	50,664	100	85.4	13.7	0.9	4,859
Professional, Technical & Related	35,076	100	24.4	75.6	26,024	100	82.1	16.6	1.3	456
Administrative & Management	1,143	100	33.3	66.7	719	100	51.0	43.4	5.6	43
Clerical and Related	19,976	100	40.7	59.3	11,598	100	91.3	8.5	0.2	257
Sales Workers	49,951	100	93.5	6.5	2,693	100	87.4	11.9	0.7	519
Service Workers	19,398	100	91.8	8.2	1,345	100	89.4	10.4	0.2	243
Agriculture, Animal Husbandry	350,530	100	98.8	1.2	2,559	100	91.7	8.0	0.3	1,545
Production and Related	17,134	100	87.5	12.5	1,969	100	92.9	7.0	0.1	464
Unclassified	12,560	100	93.5	6.5	691	100	76.6	20.8	2.6	124
Not Stated	127,703	100	96.5	3.5	3,066	100	87.0	12.2	0.8	1,415

A study of the levels of training of those who are reported to have professional education shows that more than three quarters are trained at certificate level, one fifth are trained at diploma level, while only 1.3 percent are trained at degree level.

The proportion of workers who have been trained at degree level by 1990 is very low in all the occupations. There is a substantial number of workers trained at the level of diploma in the four occupations of: Administrative and managerial (53.5 percent); professional, technical and related (28.0 percent); sales workers (24.0 percent), and; clerical and related (12.5 percent). The majority (ranging from 75.1 to 89.6 percent) of the workers are trained at the lowest level of certificate in all the remaining occupations. The proportion of diploma and degree holders is higher for males than for females, while the opposite is true of certificate holders.

This pattern is same in the majority of the occupations. Table 6.11 shows the usual working population 12 years and over by professional/vocational training, occupation and sex in 1980. Intercensal comparisons of training in human resources shows that the proportion of those having professional education declined from 26.9 percent in 1980 to 11.6 percent in 1990, while the proportion of those having no professional education have a corresponding increase, from 73.1 percent in 1980 to 88.4 percent in 1990. This pattern is same in virtually all the occupations. The declines most probably are a result of the brain drain, as such professionals as secondary school teachers, nurses, college and university lecturers and other specialists go to work abroad (within the Southern Africa sub-region, as well as overseas) where they get better remuneration and conditions of service, see Figure 6.7 and Figure 6.8.

Table 6.11

Usually Working Population 12 years and over by Professional/Vocational Training; Occupation and Sex (percent), Total Zambia, 1980

Occupation	Total Number Working	Working Population			Working Population With Professional					Not Stated
		Total	No Professional Education	Having Professional Education	Number Having Professional Education	Total	Certificate	Diploma	Degree	
Both Sexes										
Total	1,072,329	100	73.1	26.9	269,781	100	94.4	3.6	2.0	19,165
Professional, Technical & Related	87,822	100	19.8	80.2	68,154	100	85.7	8.6	5.7	2,259
Administrative & Management	14,050	100	18.2	81.8	10,932	100	84.5	9.8	5.7	563
Clerical and Related	48,529	100	22.1	77.9	36,977	100	98.0	1.7	0.3	850
Sales Workers	88,554	100	78.0	22.0	17,879	100	96.7	2.6	0.7	1,628
Service Workers	103,453	100	73.7	26.3	25,077	100	99.1	0.7	0.2	2,091
Agriculture, Animal Husbandry	436,264	100	93.9	6.1	22,197	100	97.7	1.9	0.4	4,306
Production and Related	211,785	100	69.4	30.6	60,321	100	98.1	1.5	0.4	4,500
Unclassified	17,273	100	34.3	65.7	11,025	100	98.1	1.2	0.7	316
Not Stated	64,599	100	69.2	30.8	17,219	100	98.9	0.8	0.3	2,652
Male										
Total	796,976	100	70.4	29.6	219,486	100	94.3	3.8	1.9	16,167
Professional, Technical & Related	61,829	100	21.8	78.2	46,643	100	85.7	8.6	5.7	1,698
Administrative & Management	12,485	100	18.0	82.0	9,729	100	84.5	9.8	5.7	510
Clerical and Related	31,697	100	28.3	71.7	22,177	100	98.0	1.6	0.4	548
Sales Workers	44,194	100	66.5	33.5	13,786	100	96.1	3.1	0.8	1,020
Service Workers	90,338	100	72.4	27.6	23,017	100	99.2	0.7	0.1	1,932
Agriculture, Animal Husbandry	285,185	100	91.9	8.1	19,519	100	97.7	1.8	0.5	3,472
Production and Related	199,319	100	68.6	31.4	58,188	100	98.1	1.5	0.4	4,320
Unclassified	16,128	100	33.6	66.4	10,415	100	98.2	1.2	0.6	297
Not Stated	55,801	100	67.1	32.9	16,012	100	99.0	0.7	0.3	2,370
Female										
Total	275,353	100	80.7	19.3	50,295	100	95.0	3.1	1.9	2,998
Professional, Technical & Related	25,993	100	15.1	84.9	21,511	100	91.6	4.8	3.6	561
Administrative & Management	1,565	100	19.7	80.3	1,203	100	87.4	7.3	5.3	53
Clerical and Related	16,832	100	10.3	89.7	14,800	100	97.9	1.8	0.3	302
Sales Workers	44,360	100	89.4	10.6	4,093	100	98.7	1.0	0.3	608
Service Workers	13,115	100	83.1	16.9	2,060	100	98.5	1.3	0.2	159
Agriculture, Animal Husbandry	151,079	100	97.7	2.3	2,678	100	98.0	1.7	0.3	834
Production and Related	12,466	100	81.5	18.5	2,133	100	97.8	1.6	0.6	180
Unclassified	1,145	100	45.1	54.9	610	100	95.6	1.6	2.8	19
Not Stated	8,798	100	83.1	16.9	1,207	100	97.4	1.8	0.8	282

Figure 6.8

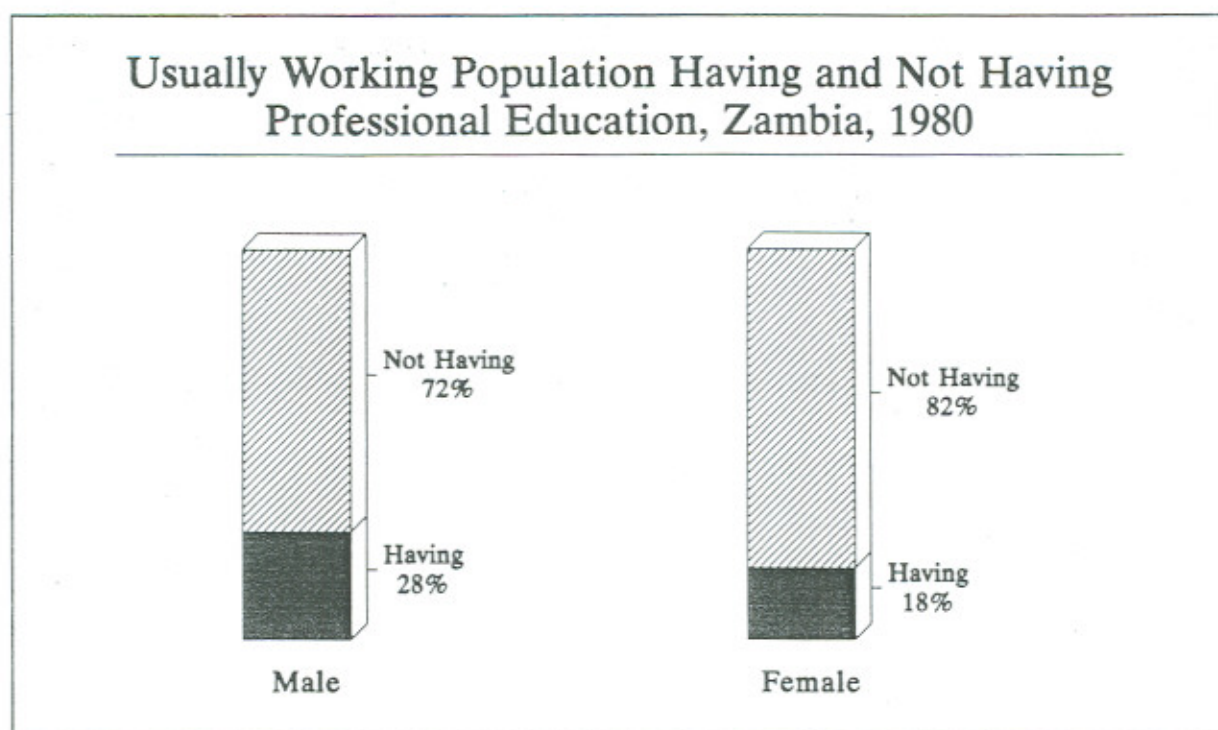
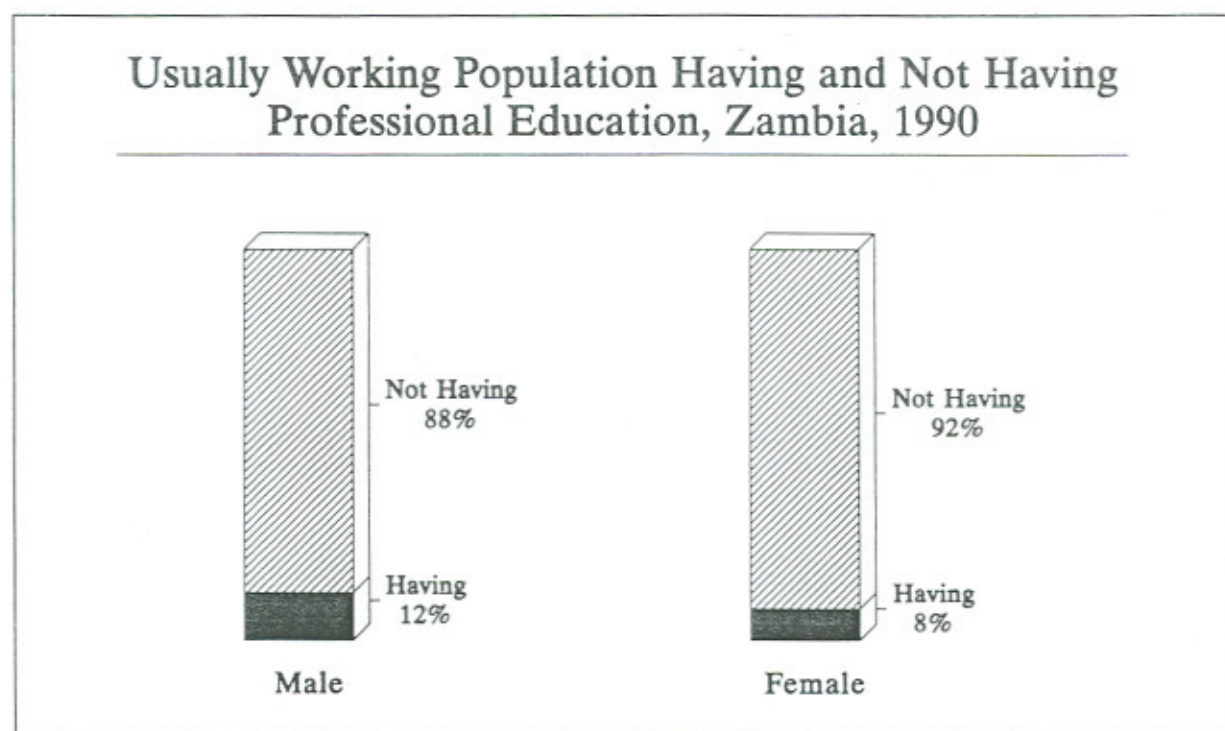


Figure 6.9



The comparison of educational levels reached by those having professional/vocational training shows that the proportion of those who are trained at the level of certificate have declined from 94.4 percent in 1980 to 78.4 percent in 1990, while the proportion of those trained at the level of diploma have increased from 3.6 percent in 1980 to 20.3 percent in 1990. The proportion of those trained at degree level have reduced from 2.0 percent in 1980 to 1.3 percent in 1990. The above pattern of change between the two censuses is maintained in all occupations. It must be mentioned that there is a remarkable increase in the proportion of those trained at diploma level in the three occupations of: Administrative and managerial workers (from 9.8 percent in 1980 to 53.5 percent in 1990); professional, technical and related workers (from 8.6 percent in 1980 to 28.0 percent in 1990), and; sales workers (from 2.6 percent in 1980 to 24.0 percent in 1990).

Although Zambia has made big strides in increasing the number of workers who have received professional/vocational training at certificate, diploma and degree levels - in view of the fact that the country only had 100 persons with university education and 1,200 with secondary education at the time of independence in 1964 - the above data still shows that the bulk of the country's workforce is unskilled (and may hence have low productivity), while critical skills in the professional, technical, administrative, managerial and related occupations may still be too inadequate to enable the country to sustain appreciable development efforts.

Table 6.12 shows the usually working population 12 years and over by field of training and professional/vocational training level completed by 1990. The biggest proportion of the country's workforce of 88.5 percent had not received training at any level by 1990. There is more concentration of training in social sciences than in natural sciences and engineering. The following are the eight most important fields of training for those who received professional/vocational training in 1990: teacher training (17.6 percent); accountancy (6.7 percent); mechanical engineering (5.5 percent); nursing (4.8 percent); business administration (3.8 percent); agriculture, forestry and fishery (3.4 percent); secretarial training (3.3 percent), and; electric and electronic engineering (3.0 percent).

Table 6.12

Usually Working Population (12 Years and Over) by Field of Training and Professional/Vocational Training Completed (percent), Zambia 1990

Field of Training	Total Working Population	No Professional Education	Having Professional/Vocational Training				Not Stated
			Total	Certificate	Diploma	Degree	
Total Number Working	1,838,409	1,625,395	195,721	153,531	39,650	2,540	17,293
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Science	0.1	0.0	1.0	0.5	2.5	8.7	1.5
Civil Engineering	0.1	0.0	0.9	0.6	1.9	2.2	0.3
Elec. & Electronic Eng.	0.3	0.0	3.0	2.7	4.3	3.5	0.3
Mechanical Engineering	0.6	0.0	5.5	5.4	5.6	5.1	0.6
Chemical Engineering	0.0	0.0	0.3	0.2	0.5	1.0	0.1
Mining Engineering	0.1	0.0	0.9	0.8	1.2	2.1	0.2
Industrial Engineering	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metallurgical Engineering	0.1	0.0	0.3	0.3	0.6	1.5	0.1
Architectural & Town/planning	0.1	0.0	0.6	0.5	0.8	0.7	0.2
Other Engineering	0.2	0.0	1.7	1.6	2.0	2.0	0.3
Medicine and Surgery	0.1	0.0	1.1	0.6	2.7	5.7	0.6
Pharmacy	0.1	0.0	0.9	1.0	0.9	0.8	0.2
Dentistry	0.0	0.0	0.3	0.2	0.5	0.3	0.1
Nursing	0.5	0.0	4.8	5.4	2.7	1.7	0.4
Medical Technology	0.1	0.0	1.0	0.7	2.3	2.3	0.3
X-Ray Technology	0.0	0.0	0.1	0.0	0.2	0.1	0.0
Veterinary	0.0	0.0	0.4	0.4	0.4	0.6	0.1
Statistics	0.0	0.0	0.2	0.2	0.4	0.4	0.0
Mathematics	0.0	0.0	0.2	0.1	0.5	1.3	0.1
Computer Science	0.1	0.0	0.3	0.3	1.1	1.6	0.2
Economics	0.1	0.0	0.9	0.4	2.2	6.8	0.4
Accountancy	0.7	0.0	6.7	5.1	12.8	6.5	0.8
Teacher Training	1.9	0.0	17.6	18.2	15.7	14.3	1.0
Law and Jurisprudence	0.2	0.0	1.4	1.2	1.8	3.3	0.8
Journalism	0.0	0.0	0.4	0.2	1.2	0.4	0.0
Fine Arts	0.0	0.0	0.5	0.4	0.6	1.2	0.1
Physical Education	0.0	0.0	0.3	0.3	0.5	0.6	0.1
Library Science	0.0	0.0	0.2	0.1	0.4	0.4	0.0
Social Welfare	0.1	0.0	0.7	0.6	1.0	1.8	0.3
Criminology	0.1	0.0	1.3	1.5	0.6	0.1	0.2
Business Administration	0.4	0.0	3.8	2.6	8.0	6.3	1.1
Secretarial Training	0.4	0.0	3.3	3.8	1.8	0.2	0.2
Shorthand Typing	0.2	0.0	2.3	2.8	0.5	0.0	0.2
Clerical Typing	0.3	0.0	2.5	3.0	0.4	0.1	0.1
Operation off. Machine	0.1	0.0	0.8	0.9	0.4	0.3	0.1
Service Trade	0.1	0.0	0.9	1.0	0.5	0.1	0.1
Radio & TV Broadcasting	0.0	0.0	0.2	0.2	0.3	0.1	0.0
Fire Protection & Fire Fighting	0.0	0.0	0.3	0.3	0.1	0.0	0.0
Agriculture, Forestry & Fishery	0.4	0.0	3.4	3.1	4.5	4.4	0.5
Food and Drink Processing	0.0	0.0	0.4	0.4	0.3	0.0	0.1
Wood working	0.2	0.0	2.2	2.8	0.4	0.1	0.3
Textile Trades	0.1	0.0	1.1	1.3	0.4	0.0	0.4
Leather Trades	0.0	0.0	0.1	0.1	0.1	0.0	0.0
Other Programmes	2.2	0.0	20.0	22.4	11.6	9.6	3.6
No Training	88.5	99.9	1.7	2.0	0.7	0.1	5.9
Not Stated	1.5	0.1	3.3	3.8	2.1	1.7	78.1

A comparison of fields of training by level of training completed shows patterns which are similar to the one described for the total workers who had received professional/vocational training by 1990. There will, thus, be need for this country to increase training in such fields as natural sciences, engineering and related areas, and medicine and related areas, in order to attain the goal of sustained economic growth because these fields are critical to the attainment of this goal.

Table 6.15 shows the usually unemployed population by level of education completed and age in 1990. Three

6.8 UNEMPLOYMENT

The unemployed population consists of all persons 12 years and over who are either actively seeking work or are available for work during the reference period, e.g. the last 7 days before the day of enumeration. The existence of unemployment implies that the supply of labour is greater than its demand. Poor economic conditions are primarily responsible for unemployment, although demographic trends do affect the growth and composition of the labour force. A high unemployment ratio means that many people are without jobs because of a shortfall in employment opportunities. The unemployment rate is found by measuring the number of unemployed persons against the labour force.

Table 6.13 shows unemployment ratios by sex and residence for 1980 and 1990. There is a big decline in the ratio of unemployment in the country, from 42.2 percent in 1980 to 12.4 percent in 1990. Females have experienced a bigger decline in the ratio of unemployment (from 59.0 percent in 1980 to 13.7 percent in 1990) than males (from 32.7 percent in 1980 to 11.7 percent in 1990). The rural areas have registered a bigger drop in unemployment (from 47.4 percent in 1980 to 11.0 percent in 1990) than urban areas (from 34.0 percent in 1980 to 15.1 percent in 1990). The decline in the unemployment ratio of females is bigger than that of males in both rural and urban areas. In rural areas the ratio of unemployment for females has declined from 59.6 percent in 1980 to 10.2 in 1990, while that of males has declined from 39.2 percent in 1980 to 11.4 percent in 1990. In urban areas the ratio of unemployment for females has declined from 57.7 percent in 1980 to 22.2 percent in 1990, while that of males has declined from 23.9 percent in 1980 to 12.2 percent in 1990. The big declines in the unemployment ratios are due to the fact that in 1980 the tendency was for most people without formal sector jobs to consider and report themselves as unemployed. In 1990, on the other hand, any person who at first reported that he/she did not have a formal job was subsequently asked about informal sector activities, including subsistence farming. The 1990 Census thus recognized informal sector economic activities as work and used screening procedures which were more rigorously applied than in the 1980 Census. In addition to the improved enumeration procedures, Zambia has experienced a tremendous growth in informal sector activities.

The distribution of unemployment rates by province shows that they ranged from 9.3 percent in Eastern province to 16.2 percent in Western province in 1990, while they ranged from 32.4 percent in Copperbelt and Lusaka provinces to 58.8 percent in North-Western province in 1980.

Table 6.13

Current Unemployment Rates by Sex and Residence, (Percent), Zambia, 1980 and 1990

Employment Status, Sex and Residence	1980	1990
Zambia	42.2	12.4
-Total	32.7	11.7
-Male	59.0	13.7
-Female		
Residence		
Rural	47.4	11.0
-Total	39.2	11.4
-Male	59.6	10.2
-Female		
Urban	34.0	15.1
-Total	23.9	12.2
-Male	57.7	22.2
-Female		
Provinces		
-Central	35.1	12.7
-Copperbelt	32.4	15.6
-Eastern	54.8	9.3
-Luapula	42.0	11.1
-Lusaka	32.4	12.7
-Northern	50.6	10.5
-North-Western	58.8	13.8
-Southern	39.8	10.9
-Western	50.9	16.2

Marital Status of the Unemployed

Table 6.16 shows the distribution of the currently unemployed population by marital status, sex and residence. According to the table, the majority (62.4 percent) of the unemployed have never been married, one quarter are married and 7.3 percent are either widowed, divorced or separated. The pattern is the same between males and females, and between rural and urban areas.

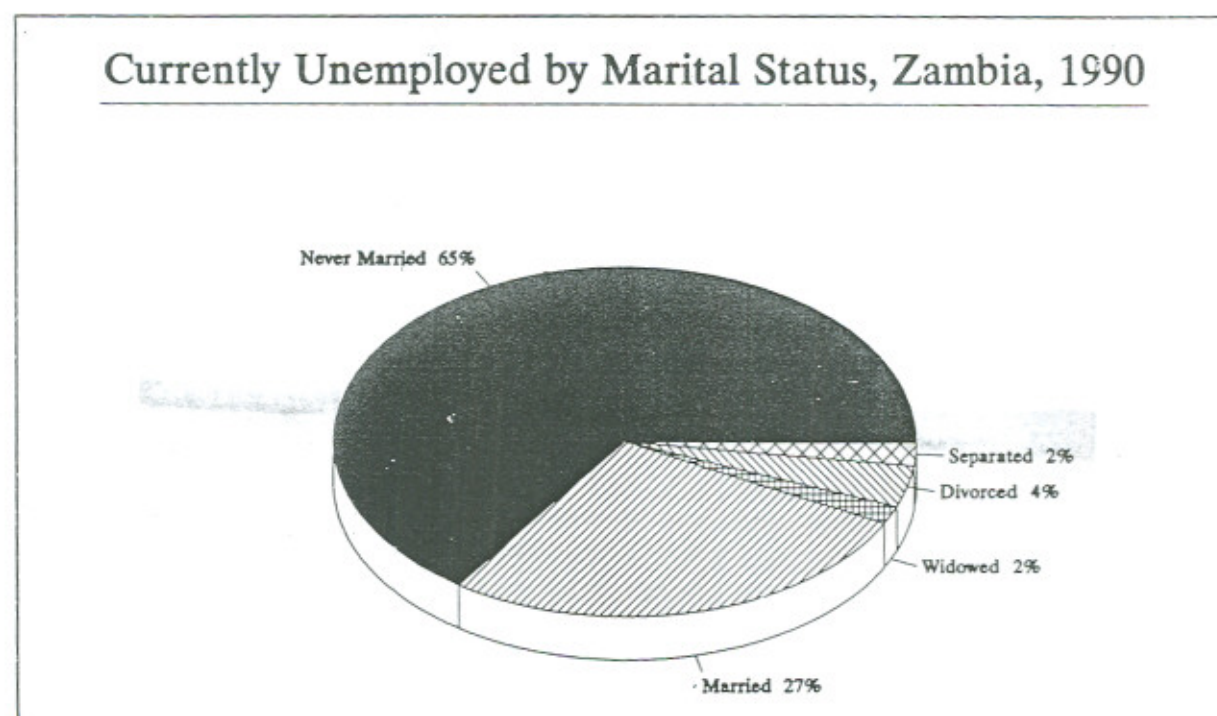
However, the proportion of the single unemployed population is higher in urban areas (70.4 percent) than in rural areas (56.4 percent), while the proportion of the married unemployed population is less in urban areas (17.8 percent) than in rural areas (31.9 percent). This suggests that it is difficult for the unemployed to get married. It is even more difficult for an unemployed person to get married in urban than in rural areas. Alternatively, the majority of the unemployed are young people, who have not yet married.

Table 6.16

Currently Unemployed by Marital Status, Sex and Rural/Urban, (Percent), Zambia, 1990

Residence and Sex	Total Number Unemployed	Marital Status						
		Total	Single	Married	Widowed	Divorced	Separated	Not Stated
Total								
Both Sexes	285,314	100.0	62.4	25.8	1.6	3.7	2.0	4.5
Male	173,929	100.0	60.0	31.8	0.5	1.5	0.9	5.3
Female	11,385	100.0	66.2	16.3	3.5	7.1	3.6	3.3
Rural								
Both Sexes	162,235	100.0	56.4	31.9	2.0	3.9	2.1	3.9
Male	102,955	100.0	53.2	39.3	0.5	1.6	1.0	4.4
Female	59,280	100.0	61.9	18.9	4.6	7.8	4.1	2.7
Urban								
Both Sexes	123,079	100.0	70.4	17.8	1.2	3.4	1.7	5.5
Male	70,974	100.0	69.9	21.0	0.4	1.3	0.8	6.6
Female	52,105	100.0	71.1	13.5	2.2	6.2	3.0	4.0

Figure 6.12



6.8 UNEMPLOYMENT

The unemployed population consists of all persons 12 years and over who are either actively seeking work or are available for work during the reference period, e.g. the last 7 days before the day of enumeration. The existence of unemployment implies that the supply of labour is greater than its demand. Poor economic conditions are primarily responsible for unemployment, although demographic trends do affect the growth and composition of the labour force. A high unemployment ratio means that many people are without jobs because of a shortfall in employment opportunities. The unemployment rate is found by measuring the number of unemployed persons against the labour force.

Table 6.13 shows unemployment ratios by sex and residence for 1980 and 1990. There is a big decline in the ratio of unemployment in the country, from 42.2 percent in 1980 to 12.4 percent in 1990. Females have experienced a bigger decline in the ratio of unemployment (from 59.0 percent in 1980 to 13.7 percent in 1990) than males (from 32.7 percent in 1980 to 11.7 percent in 1990). The rural areas have registered a bigger drop in unemployment (from 47.4 percent in 1980 to 11.0 percent in 1990) than urban areas (from 34.0 percent in 1980 to 15.1 percent in 1990). The decline in the unemployment ratio of females is bigger than that of males in both rural and urban areas. In rural areas the ratio of unemployment for females has declined from 59.6 percent in 1980 to 10.2 in 1990, while that of males has declined from 39.2 percent in 1980 to 11.4 percent in 1990. In urban areas the ratio of unemployment for females has declined from 57.7 percent in 1980 to 22.2 percent in 1990, while that of males has declined from 23.9 percent in 1980 to 12.2 percent in 1990. The big declines in the unemployment ratios are due to the fact that in 1980 the tendency was for most people without formal sector jobs to consider and report themselves as unemployed. In 1990, on the other hand, any person who at first reported that he/she did not have a formal job was subsequently asked about informal sector activities, including subsistence farming. The 1990 Census thus recognized informal sector economic activities as work and used screening procedures which were more rigorously applied than in the 1980 Census. In addition to the improved enumeration procedures, Zambia has experienced a tremendous growth in informal sector activities.

The distribution of unemployment rates by province shows that they ranged from 9.3 percent in Eastern province to 16.2 percent in Western province in 1990, while they ranged from 32.4 percent in Copperbelt and Lusaka provinces to 58.8 percent in North-Western province in 1980.

Table 6.13

Current Unemployment Rates by Sex and Residence, (Percent), Zambia, 1980 and 1990

Employment Status, Sex and Residence	1980	1990
Zambia	42.2	12.4
-Total	32.7	11.7
-Male	59.0	13.7
-Female		
Residence		
Rural	47.4	11.0
-Total	39.2	11.4
-Male	59.6	10.2
-Female		
Urban	34.0	15.1
-Total	23.9	12.2
-Male	57.7	22.2
-Female		
Provinces		
-Central	35.1	12.7
-Copperbelt	32.4	15.6
-Eastern	54.8	9.3
-Luapula	42.0	11.1
-Lusaka	32.4	12.7
-Northern	50.6	10.5
-North-Western	58.8	13.8
-Southern	39.8	10.9
-Western	50.9	16.2

Current unemployment rates by age, sex and residence in 1990 are shown in Table 6.14. This table shows that unemployment is a more acute problem among the young population in the age-group 12-29 years than it is for adults in the age-group of 30 years and over. This pattern is the same for both sexes, and in both rural and urban areas.

The overall unemployment rate of 13.7 percent for females is higher than that of males of 11.7 percent. Comparison of the rates by age between the two sexes shows that the unemployment rates of females are higher than those of males in the age-group 12-34 years, but they are less than those of males in the age-group of 35 years and over. In urban areas, employers are in favour of male applicants for very many jobs, especially in industry.

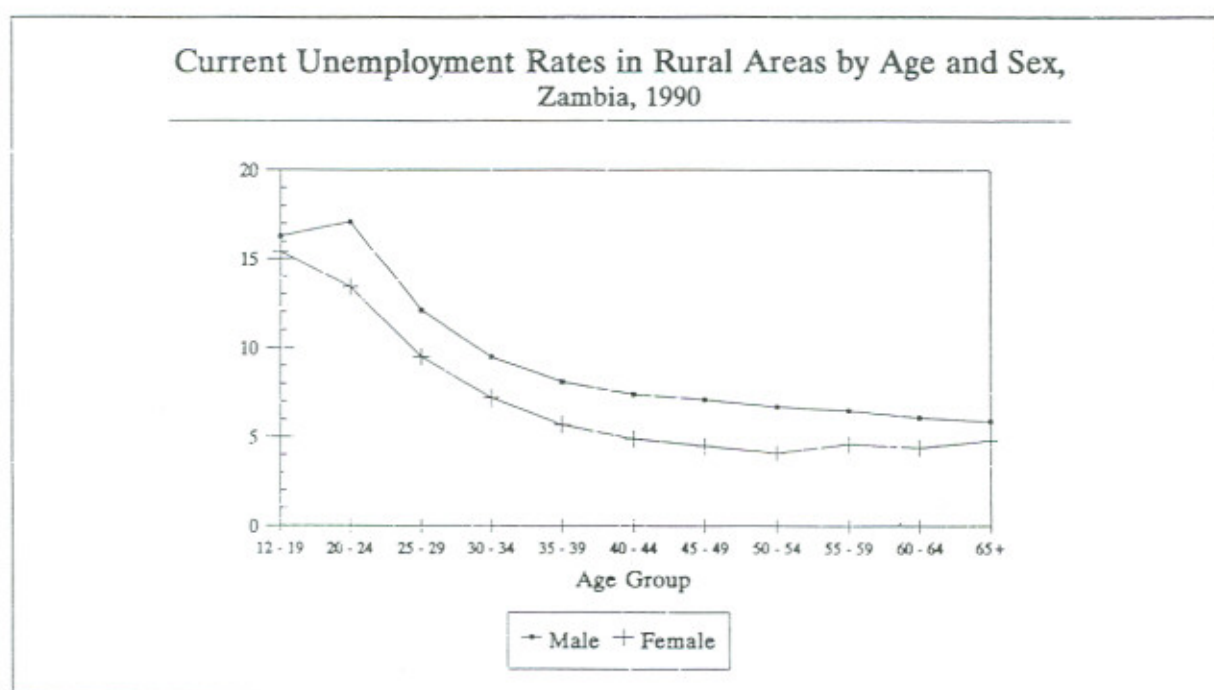
In rural areas, the unemployment rates of males are higher than those of females at all age-groups whereas in urban areas they are less than those of females at all age-groups. In rural areas, females become responsible adults faster than males and are consequently compelled to take up work to support their families.

Table 6.14

Current Unemployment Rates by Age, Sex and Residence, (Percent), Zambia, 1990

Age Group	Current Unemployment Rates								
	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total	12.4	11.7	13.7	11.0	11.4	10.2	15.1	12.2	22.2
12-19	20.7	20.4	21.0	15.9	16.3	15.4	37.0	34.7	39.3
20-24	21.1	21.0	21.2	15.6	17.1	13.4	29.8	26.7	35.7
25-29	11.8	11.7	12.1	11.2	12.1	9.5	12.6	11.2	16.4
30-34	7.5	7.5	7.7	8.7	9.5	7.2	6.1	5.4	8.4
35-39	5.8	5.9	5.7	7.2	8.1	5.7	4.3	3.9	5.6
40-44	5.2	5.3	5.0	6.4	7.4	4.9	3.8	3.4	5.4
45-49	5.2	5.5	4.8	6.1	7.1	4.5	3.9	3.6	5.5
50-54	5.3	5.7	4.6	5.7	6.7	4.1	4.4	4.0	6.7
55-59	5.9	6.2	5.0	5.9	6.5	4.6	5.8	5.5	7.3
60-64	5.9	6.3	5.0	5.5	6.1	4.4	7.4	7.0	9.3
65+	5.9	6.1	5.4	5.6	5.9	4.8	7.9	7.2	11.1
Not Stated	10.1	10.5	9.3	10.1	11.2	8.4	10.2	9.4	12.9

Figure 6.10



6.11 SUMMARY

The size of the working-age population in Zambia has increased by 39.8 percent between 1980 and 1990. The distribution of this population by age shows that it declines with the increase in age, just as the total population.

The labour-force has increased by 23.7 percent between 1980 and 1990. 64.4 percent of the labour force is in rural areas, while 35.6 percent is in urban areas. Half the labour force is in the young age-group of 12-29 years.

The employed population makes up 87.6 percent of the labour force. The employed population has increased by 87.5 percent between the two censuses. The female employed population has increased by an impressive 155.0 percent, while the increase for that of males is 64.2 percent.

The remarkable increase in the female employed population must have been due both to the increase female participation in informal sector economic activities, as well as due to the improved coverage of informal sector activities in which many females participated in the 1990 Census, compared to the 1980 Census.

The number of the unemployed has declined by 63.6 percent. The size of the female unemployed population has declined by 71.9 percent, while that of males has declined by 55.1 percent. The reduction in the problem of unemployment between the two censuses is also reflected in the big decline in the rate of unemployment from 42.2 percent in 1980 to 12.4 percent in 1990. In 1990, unemployment is a more serious problem for the young age-group of 12-29 years than for the adult age-group of 30 years and over.

In rural areas, the unemployment rates of males are higher than those of females at all age groups, while the opposite is true in urban areas.

Lack of adequate education appears to have contributed to the problem of unemployment for the affected persons. The majority of the unemployed are young people who have not yet started married lives, or are finding it difficult to do so because they have no jobs.

The economically inactive population has increased by 54.2 percent between the two censuses; this is more than the 23.7 percent increase for the labour force. This implies that most of the 39.8 percent increase in the working-age population has increased the inactive population more than the labour force. As a matter of fact, this is exactly what is implied by the decline in labour force participation rates from 55.9 percent in 1980 to 49.5 percent in 1990. Two thirds of the inactive population are females, while one third are males. In 1990, economic inactivity is caused primarily by homemaking (41.3 percent) and other reasons (30.3 percent); studying (28.4 percent) is the least important reason for inactivity.

Economic activities in this country are still organised around family labour, as evidenced by the predominance (64.7 percent) of workers who are classified either as self-employed or unpaid family worker. In contrast, only 32.4 percent are classified either as employees or employers; the latter are the employment status categories that result from sustained progress in industrialisation. The economic recession of the 1980's appears to have had the effect of bringing big reductions in employment opportunities in the formal sector, thereby coercing a large part of the labour force into the self-employment of the informal sector.

There is a large concentration of workers (48.6 percent) in the agriculture and related occupations; this is because it is easy to enter such occupation due to their low-skill requirement.

Lack of progress in industrialisation in the country is reflected by the continued predominance of the primary economic activities of agriculture, which has employed half of the workforce in 1990. This situation has been exacerbated by the economic recession of the 1980's, which has caused manpower losses in all the non-agricultural industries and manpower gains in the agriculture industry. Agricultural activities have thus become the only resort for the majority of retrenchees, retirees and those who are fired, as well as new entrants into the labour force.

A young population has an in-built momentum for population growth, due to a large number of young persons entering the reproductive ages in the coming years. Furthermore, a very young population tends to have economic implications as well. To mention but one, enormous amounts of resources are diverted to provide social services such as health and education, leaving little resources for investment and savings.

Table 7.3 shows that the sex ratio of children and youth are 98.6 and 90.6, respectively, meaning that there are less male than female children and youth. The table further shows that in the rural areas of Zambia, the sex ratio of children is 100.4 whilst that of children in urban areas is 95.7. This implies that there are slightly more boys than girls in rural areas unlike the urban areas where there are more girls than boys.

Sex ratios for the youth in rural and urban areas (91.0 and 89.9, respectively), both indicate that the female youth are in excess of the male.

At provincial level, it is generally illustrated in Table 7.3 that the sex ratios for children are higher than those for the youth. It should be noted that in two provinces, namely Eastern and Northern, the sex ratios for children are over 100, which means that there are more boys than girls. It is highly probable that these provinces received more male than female children as a result of net in-migration during the intercensal period, 1980-90. This net in-migration may be attributed to the economic recession in places like Copperbelt Province (due to a fall in copper prices), which forced a lot of people to settle in other provinces.

Table 7.3

Population Distribution and Sex Ratio of Children and Youth by Residence and Province, Zambia, 1990

Residence/Province	Population	Total	Male	Female	Sex Ratio
Zambia	Total	Children 3,344,606	1,660,201	1,684,405	98.6
	Youth	1,650,156	784,270	865,886	90.6
Rural	Children	2,042,842	1,023,624	1,019,218	100.4
	Youth	950,204	452,820	497,384	91.0
Urban	Children	1,301,764	636,577	665,187	95.7
	Youth	692,952	331,450	368,502	89.9
Province Central	Children	324,916	161,417	163,499	98.7
	Youth	164,109	79,706	84,403	94.4
Copperbelt	Children	640,448	315,521	324,927	97.1
	Youth	341,991	164,904	177,087	93.1
Eastern	Children	437,348	220,079	217,269	101.3
	Youth	205,087	99,118	105,969	93.5
Luapula	Children	237,003	118,745	118,258	100.4
	Youth	110,845	50,172	60,673	82.7
Lusaka	Children	434,554	211,382	223,172	94.7
	Youth	237,231	112,291	124,940	89.9
Northern	Children	401,496	201,525	199,971	100.8
	Youth	185,214	85,359	99,855	85.5
N/Western	Children	173,963	86,573	87,390	99.1
	Youth	80,979	38,337	42,642	89.9
Southern	Children	431,226	214,167	217,059	98.7
	Youth	202,151	97,617	104,534	93.4
Western	Children	263,648	130,791	132,857	98.4
	Youth	122,551	56,766	65,785	86.3

6.11 SUMMARY

The size of the working-age population in Zambia has increased by 39.8 percent between 1980 and 1990. The distribution of this population by age shows that it declines with the increase in age, just as the total population.

The labour-force has increased by 23.7 percent between 1980 and 1990. 64.4 percent of the labour force is in rural areas, while 35.6 percent is in urban areas. Half the labour force is in the young age-group of 12-29 years.

The employed population makes up 87.6 percent of the labour force. The employed population has increased by 87.5 percent between the two censuses. The female employed population has increased by an impressive 155.0 percent, while the increase for that of males is 64.2 percent.

The remarkable increase in the female employed population must have been due both to the increase female participation in informal sector economic activities, as well as due to the improved coverage of informal sector activities in which many females participated in the 1990 Census, compared to the 1980 Census.

The number of the unemployed has declined by 63.6 percent. The size of the female unemployed population has declined by 71.9 percent, while that of males has declined by 55.1 percent. The reduction in the problem of unemployment between the two censuses is also reflected in the big decline in the rate of unemployment from 42.2 percent in 1980 to 12.4 percent in 1990. In 1990, unemployment is a more serious problem for the young age-group of 12-29 years than for the adult age-group of 30 years and over.

In rural areas, the unemployment rates of males are higher than those of females at all age groups, while the opposite is true in urban areas.

Lack of adequate education appears to have contributed to the problem of unemployment for the affected persons. The majority of the unemployed are young people who have not yet started married lives, or are finding it difficult to do so because they have no jobs.

The economically inactive population has increased by 54.2 percent between the two censuses; this is more than the 23.7 percent increase for the labour force. This implies that most of the 39.8 percent increase in the working-age population has increased the inactive population more than the labour force. As a matter of fact, this is exactly what is implied by the decline in labour force participation rates from 55.9 percent in 1980 to 49.5 percent in 1990. Two thirds of the inactive population are females, while one third are males. In 1990, economic inactivity is caused primarily by homemaking (41.3 percent) and other reasons (30.3 percent); studying 28.4 percent) is the least important reason for inactivity.

Economic activities in this country are still organised around family labour, as evidenced by the predominance (64.7 percent) of workers who are classified either as self-employed or unpaid family worker. In contrast, only 32.4 percent are classified either as employees or employers; the latter are the employment status categories that result from sustained progress in industrialisation. The economic recession of the 1980's appears to have had the effect of bringing big reductions in employment opportunities in the formal sector, thereby coercing a large part of the labour force into the self-employment of the informal sector.

There is a large concentration of workers (48.6 percent) in the agriculture and related occupations; this is because it is easy to enter such occupation due to their low-skill requirement.

Lack of progress in industrialisation in the country is reflected by the continued predominance of the primary economic activities of agriculture, which has employed half of the workforce in 1990. This situation has been exacerbated by the economic recession of the 1980's, which has caused manpower losses in all the non-agricultural industries and manpower gains in the agriculture industry. Agricultural activities have thus become the only resort for the majority of retrenchees, retirees and those who are fired, as well as new entrants into the labour force.

CHAPTER 7

CHILDREN, YOUTH AND WOMEN

7.1 INTRODUCTION

The subject of children, youth and women has been discussed in a number of national and international fora for sometime now. It is of no debate that they are deemed as being amongst the most unfortunate sub groups of the Zambian population. In this chapter, an attempt is made to examine and analyse the situation of children, youth and women using the following data items from the Census:-

- Distribution within the province,
- Composition and Change over time,
- Marital Status of youth and women,
- Fertility,
- Education, and
- Economic Activity.

For ease of reference, a child is defined as a person below 15 years of age (within age group 0-14 years), whereas a youth is a person within the age group 15-24 years.

7.2 POPULATION CHANGE, COMPOSITION AND DISTRIBUTION OF CHILDREN AND YOUTH

Population Change

Population change over a period of ten years (1980-90) has been studied to come up with the average annual growth rate of children and youth in Zambia. Table 7.1 shows that for the period 1980-90, the number of children and youth increased at an annual growth rate of 1.9 and 4.4 percent, respectively. Thus, the number of children is growing much slower than the number of youths. We also see that the number of children is growing somewhat faster in rural than in urban areas, whereas the number of youth is growing at about the same rate in both rural and urban areas.

Table 7.1

Population Size and Growth Rate of Children and Youth by Broad Age Group, Zambia, 1980 and 1990

	Age Group	Residence	Population		Average Annual Growth Rate (%) 1980-1990
			1980	1990	
Children	0 - 14	Total	2,772,689	3,344,606	1.9
		Rural	1,649,055	2,042,842	2.2
		Urban	1,123,634	1,301,764	1.5
Youth	15 - 24	Total	1,066,758	1,650,156	4.4
		Rural	611,855	950,204	4.5
		Urban	454,903	699,952	4.4

It is observed that Luapula, Northern and Western Provinces have sex ratios of between 82 and 86 for the youth. This may indicate out-migration of young men from these provinces in search of employment or education.

Figure 7.2

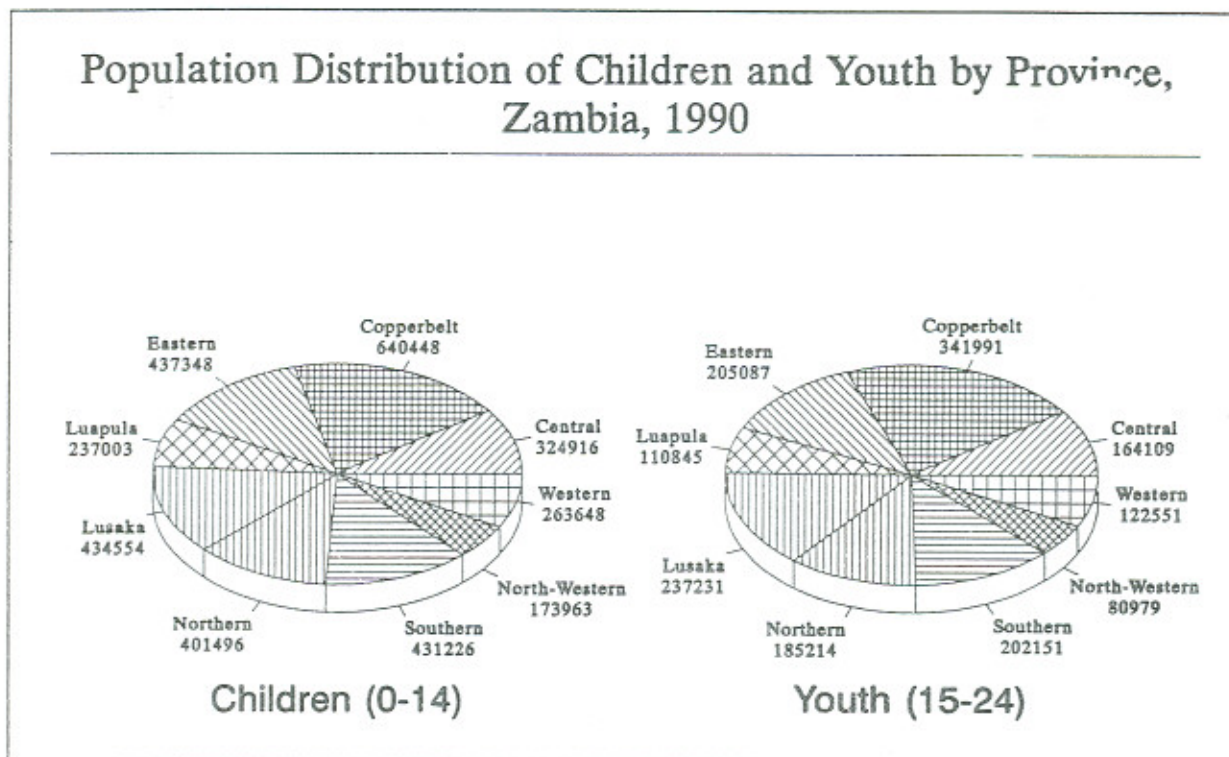


Figure 7.2 shows that the majority of children and youth live in Copperbelt Province.

7.3 SOCIAL AND ECONOMIC CHARACTERISTICS OF CHILDREN AND YOUTH

The level of participation of youth in the development of the Zambian economy is low. The 'young' people of the nation have low levels of education which ultimately handicap them in the working sector, as they do not allow them to acquire essential skills. As a result, unemployment levels of the youth in particular have been found to be higher than for other age groups (for details refer to chapter 6). In this section, marital status, fertility, literacy, education of children and youth, and their economic activities are discussed.

Marital Status of the Youth

Data on marital status of the youth in Zambia by age and sex is presented in Table 7.4. Slightly over 90 and 73 percent of the male and female youth, respectively, have never been married in the age group 15-19 years. It is of interest to note that in the same age group, 2 percent of male youth compared to 21 percent of female youth are married. In the older age group 20-24 years, it is observed that whereas the majority of the male youth have still not married, the majority of the female youth are now married. This is because the average age at marriage differs for males and females. Females marry mostly at the age of 21 years whereas males marry mostly at the age of 26 years (See Chapter 8 for more details). It is not surprising then that the proportions of the widowed, female youth, although low, are higher than those of the male youth. Quite a substantial proportion of youth did not state their marital status. The proportion in urban areas of those who did not state is slightly higher than in rural areas.

Table 7.4

Percent Distribution of Youth by Age, Sex, Marital Status and Rural/Urban (Percent), Zambia, 1990

Residence	Age Group	Sex	Total		Marital Status					
			Number	Percentage	Never Married	Married	Widowed	Divorced	Separated	Not Stated
Zambia	15-19	Male	454,329	100	91.1	1.6	0.0	0.1	0.1	7.1
		Female	485,039	100	73.1	21.1	0.2	0.8	0.8	4.0
	20-24	Male	329,923	100	68.7	23.7	0.1	0.5	0.5	6.5
		Female	380,848	100	31.1	59.6	0.6	3.6	2.2	2.9
Rural	15-19	Male	269,957	100	91.3	2.0	0.0	0.1	0.2	6.4
		Female	280,839	100	69.2	25.2	0.2	1.1	1.0	3.3
	20-24	Male	182,861	100	62.5	30.6	0.1	0.6	0.6	5.6
		Female	216,548	100	26.2	63.8	0.7	4.2	2.6	2.5
Urban	15-19	Male	184,372	100	90.7	0.9	0.0	0.1	0.1	8.2
		Female	204,200	100	78.4	15.4	0.1	0.6	0.6	4.9
	20-24	Male	147,062	100	76.3	15.1	0.1	0.4	0.4	7.7
		Female	164,300	100	37.7	54.1	0.4	2.7	1.7	3.4

The rural and urban situations are similar to that depicted at national level. However, it should be noted that the proportions of married male and female youth are higher in rural than urban areas. For instance, in age group 20-24 years, 30.6 percent of the male youth in rural areas are married compared to 15.1 percent of those in urban areas. This may be supported by the fact that the mean age at marriage is lower for rural males and females than for the urban ones. This means that youth in rural areas marry earlier than those in urban areas maybe because they drop out of school earlier than youth in urban areas. This is probably due to lack of or inadequate school facilities in rural areas and the inability of parents to send their children to school due to lack of the necessary resources.

Fertility of Female Youth

Table 7.5 shows the proportion of female youth in Zambia who have given birth before. About 16 percent of teenage girls (15-19 years) in the country have already given birth. The implication of this early child-bearing may in part explain the high drop-out rate of girls from secondary level of education. Further, it is not easy for these girls to get back into school (after delivering) because they either cannot find anyone to look after the baby or cannot be accepted back into school (unless they get a transfer to another).

In age group 20-24 years, almost 60 percent of female youth have had a birth. Table 7.5 also shows that there are differences in the proportion of female youth who have had a birth between rural and urban areas. Rural areas which have a larger number of female youth than urban areas, also have a higher proportion of those who have had a birth.

Table 7.5

Proportion of Female Youth who have had a Birth by Age, Residence and Province, Zambia, 1990

Residence/Province	Age Group	Total Females	Females Who Have Had a Birth	Proportion of Females who have had a Birth
Zambia Total	15-19	485,039	75,792	15.6
	20-24	380,848	222,480	58.4
Rural	15-19	280,839	50,913	18.1
	20-24	216,548	137,185	63.4
Urban	15-19	204,200	24,879	12.2
	20-24	164,300	85,295	51.9
Province Central	15-19	47,422	7,548	15.9
	20-24	36,981	20,753	56.1
Copperbelt	15-19	99,507	12,784	12.8
	20-24	77,580	40,297	51.9
Eastern	15-19	59,376	10,972	18.5
	20-24	46,593	30,583	65.6
Luapula	15-19	33,955	6,224	18.3
	20-24	26,718	17,245	64.5
Lusaka	15-19	67,138	8,985	13.4
	20-24	57,800	30,800	53.3
Northern	15-19	57,818	10,930	18.9
	20-24	42,037	27,324	65.0
North-Western	15-19	24,200	4,010	16.6
	20-24	18,442	11,384	61.7
Southern	15-19	58,074	9,284	16.0
	20-24	46,460	28,157	60.6
Western	15-19	37,560	5,061	13.5
	20-24	28,225	15,930	56.4

A comparison of provinces shows that Copperbelt, which has the largest number of female youth, has the lowest proportion of those who have had a birth. Eastern, Luapula and Northern provinces show the highest proportion of female youth who have had a birth. Table 7.5 shows that amongst the provinces, those which are mostly rural, have high proportions of female youth who have had a birth unlike those which are mostly urban (like Copperbelt and Lusaka).

Children and Youth who can Read and Write

The proportion of children and youth who can read and write in Zambia has been calculated and shown in Table 7.6. Out of the total population of children aged 5-9 years, only about 15 percent are able to read and write. However, over half (58 percent) of children aged 10-14 years can read and write. There is no major difference in the proportion of male and female children who can read and write.

Table 7.6

Proportion of Children and Youth who can Read and Write by Age and Sex, Zambia, 1990

Age Group	Sex	Total Population	Persons who can Read and Write	Proportion of Persons who can Read and Write
5-9	Both Sexes	1,117,825	162,619	14.5
	Male	553,178	78,099	14.1
	Female	564,647	84,520	15.0
10-14	Both Sexes	1,028,263	591,065	57.5
	Male	511,852	291,205	56.9
	Female	516,411	299,860	58.1
15-19	Both Sexes	939,368	699,617	74.5
	Male	454,329	351,002	77.3
	Female	485,039	348,615	71.9
20-24	Both Sexes	710,771	535,867	75.4
	Male	329,923	267,738	81.2
	Female	380,848	268,129	70.4

Table 7.6 further shows that about three-quarters of the youth (15-24 years) in the country can read and write. Male youth have a higher proportion of those who can read and write than female youth. This is much more noticeable in age group 20-24 years, where 70 and 81 percent of female and male youth, respectively, are able to read and write.

Education Level Completed by Youth

Table 7.7 shows in percent, the youth of Zambia by their highest level of education completed. Over half (56 percent) of the youth in age group 15-19 years, have only completed primary school. The proportion of males who have completed primary school is higher than females.

Less than 20 percent of the youth (aged 15-19 years) have completed secondary school compared to slightly over 30 percent of those aged 20-24 years. The proportion of female youth (20-24 years) who have completed primary level is higher than the male youth in the same age group. At secondary level, the opposite is true.

Table 7.7 also shows that the proportion of females with no schooling is higher than males. Further, rural and urban areas show differences in the proportion of youth with no schooling. The percentages of youth (aged 15-19 years) with no schooling are 32 and 10 for rural and urban areas, respectively. This may be due to the wider availability of school places in urban than in rural areas. Probably, for the same reason, it can be seen that higher proportions of youth in urban than rural areas have completed at least secondary education. For instance, in age group 20-24 years, over half (55 percent) of male youth in urban areas compared to a quarter in rural areas have completed secondary (and above) education. Similarly, a higher proportion of female youth in urban areas have completed at least secondary school than female youth in rural areas.

Table 7.7

Population (15-24 years) by Highest Level of Education Completed, Sex, Age and Residence, (Percent)
Zambia, 1990

Age Group/ Residence	Sex	Total Population	Highest Level of Education Completed				
			Total Percentage	No Schooling	Primary	Secondary +	Not Stated
Zambia	Both Sexes	922,220	100	23.2	56.2	18.9	1.7
	15-19						
	Male	440,877	100	20.2	58.8	19.2	1.8
	Female	475,343	100	26.0	53.9	18.5	1.6
	20-24						
	Both Sexes	695,298	100	24.3	43.2	31.4	1.1
Rural	Male	322,691	100	19.1	41.6	38.1	1.2
	Female	372,607	100	28.8	44.6	25.5	1.1
	15-19						
	Both Sexes	541,043	100	32.2	55.7	10.6	1.5
	Male	265,569	100	28.0	59.1	11.1	1.8
	Female	275,474	100	36.2	52.4	10.1	1.3
	20-24						
	Both Sexes	391,382	100	34.3	46.2	18.5	1.0
	Male	179,301	100	27.0	46.9	24.9	1.2
	Female	212,081	100	40.4	46.5	12.3	0.8
	15-19						
	Both Sexes	381,177	100	10.3	57.1	30.7	1.9
Urban	Male	181,308	100	8.8	58.4	30.8	2.0
	Female	199,869	100	11.9	55.8	30.5	1.8
	20-24						
	Both Sexes	303,916	100	11.5	39.3	48.1	1.1
	Male	143,390	100	9.1	34.6	55.2	1.1
	Female	160,526	100	13.6	43.3	42.1	1.0

Economic Activity of Children and Youth

Table 7.8 shows the population of children and youth by the nature of their usual economic activity. In Zambia as a whole, the majority of children are full-time students. Hence, a small proportion of the children in Zambia are economically active, irrespective of their sex.

The largest proportion of youth in age group 15-19 years are full-time students. It should be noted that in this age group, the proportions of male and female youth show some variation. Whilst 52 percent of the male youth are full-time students, the proportion of their female counterparts is 37 percent. Also, at this young age group of the youth (15-19 years), only 2 percent of the male youth are full-time homemakers compared to 17 percent of the female youth who are full-time housewives.

In age group 20-24 years, the majority of male youth are economically active while the female youth are mostly housewives. Thus, it can be observed that 48 and 26 percent of male and female youth, respectively, are employed, while only 2 percent of male youth compared to 44 percent of female youth are full-time housewives.

Table 7.8

Children and Youth (12-24 years) by Age, Sex and Nature of Usual Economic Activity, Rural/Urban, (Percent), Zambia, 1990

Residence	Age Group	Sex	Total		Economically Active		Economically Inactive			Not Stated
			Population	Percentage	Employed	Unemployed	Full-time Housewife/Homemaker	Full-time Students	Others	
Zambia	12-14	Male	298,310	100	12.5	4.9	1.3	62.9	16.1	2.3
		Female	303,625	100	11.9	4.7	2.7	61.5	16.8	2.4
	15-19	Male	454,345	100	19.6	9.5	1.6	52.2	15.0	2.1
		Female	485,050	100	18.6	8.6	17.0	36.7	16.8	2.3
	20-24	Male	329,925	100	17.9	16.1	2.0	18.0	13.6	2.4
		Female	380,835	100	26.3	8.6	43.6	6.9	12.3	2.3
Rural	12-14	Male	181,723	100	19.0	6.3	1.6	51.4	19.2	2.5
		Female	175,011	100	18.7	6.1	3.5	49.6	19.7	2.4
	15-19	Male	269,963	100	27.1	10.0	1.9	42.8	16.2	2.0
		Female	280,840	100	27.5	8.5	18.4	26.8	16.8	2.0
	20-24	Male	182,857	100	52.3	15.3	2.6	14.2	13.6	2.0
		Female	216,543	100	33.5	7.1	11.9	4.1	11.5	1.9
Urban	12-14	Male	116,587	100	2.3	2.7	0.8	80.9	11.4	1.9
		Female	128,614	100	2.6	2.9	1.7	77.8	12.8	2.2
	15-19	Male	184,382	100	8.8	8.8	1.1	65.9	13.2	2.2
		Female	204,210	100	6.4	8.8	15.0	50.3	16.8	2.7
	20-24	Male	147,068	100	42.4	17.1	1.2	22.7	13.6	3.0
		Female	164,292	100	16.8	10.5	45.8	10.6	13.4	2.9

A larger proportion of the male and female youth in rural areas than urban areas are economically active. It can be observed that the proportions of youth in urban areas who are full-time students are higher than those in rural areas. This implies that youth in rural areas opt for work as opposed to being full-time students like in urban areas. One of the reasons for this may be lack of opportunities for youth in rural areas due to either lack of or inadequate financial support from parents/guardians or inadequate school facilities in these areas.

Figure 7.3 shows that the majority of the youth aged 15-19 years for both males and females are students. Almost half of the male youths aged 20-24 years are employed, whilst most of the female youth in this age group are housewives (See Figure 7.4).

Figure 7.3

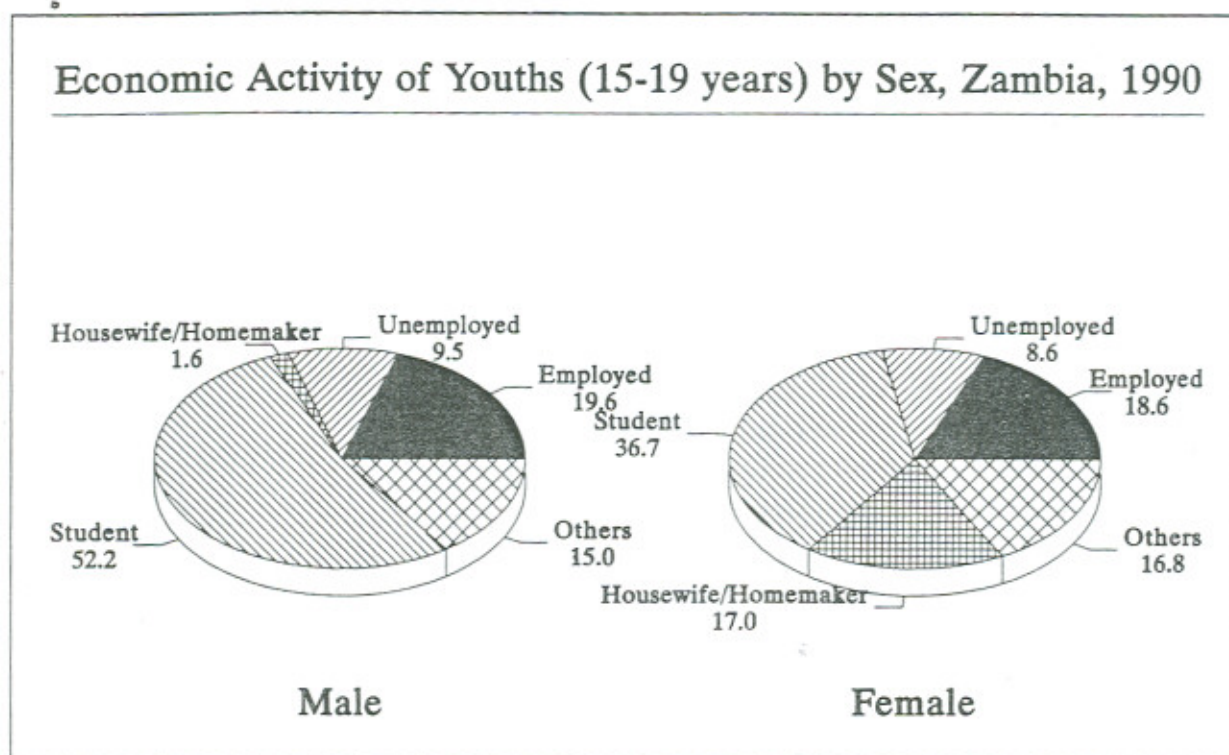
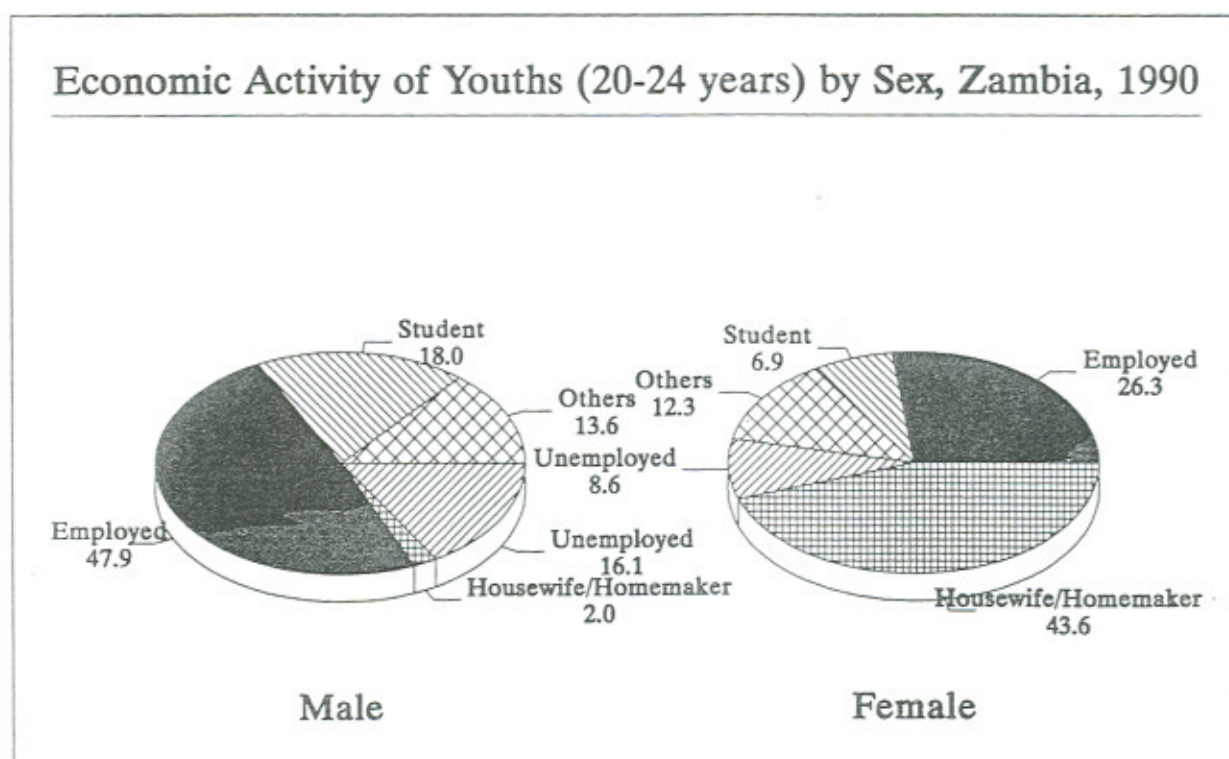


Figure 7.4



Youth Unemployment

Table 7.9 shows the number of unemployed persons (15-24 years) in Zambia by age. The unemployment rates for youth in the country are 23 and 21 percent, in respective age groups. It can be seen that female youth have slightly higher unemployment rates than male youth.

Rural and urban areas of Zambia show vast differences in the unemployment rates of youth. The unemployment rates for youth in rural areas, regardless of sex, are much lower than in urban areas. For instance, in age group 15-19 years, the unemployment rate for youth in rural areas is 17 percent and 41 percent for those in urban areas. It should be noted that female youth in rural areas have lower unemployment rates than male youth, whereas female youth in urban areas have higher unemployment rates than male youth.

The difference in unemployment rates between rural and urban youth may be attributed to the fact that it is much easier for youth in rural areas to be employed by either subsistence farmers or by owning small pieces of farming land unlike in urban areas.

Table 7.9

Unemployment Rate of Youth by Age, Sex and Residence, Zambia, 1990

Age Group/Residence	Sex	Total Labour Force	Unemployed Population	Unemployment Rate (%)
Zambia	Both Sexes	341,185	77,759	22.8
	15-19			
	Male	177,998	39,795	22.4
	Female	163,187	37,964	23.3
	20-24			
	Both Sexes	360,261	76,061	21.1
Rural	Male	224,399	47,246	21.0
	Female	135,862	28,815	21.2
	15-19			
	Both Sexes	254,718	42,594	16.7
	Male	133,176	23,047	17.3
	Female	121,542	19,547	16.1
Urban	20-24			
	Both Sexes	219,954	34,285	15.6
	Male	131,681	22,478	17.1
	Female	88,273	11,807	13.4
	15-19			
	Both Sexes	86,467	35,165	40.7
Urban	Male	44,822	16,748	37.4
	Female	41,645	18,417	44.2
	20-24			
	Both Sexes	140,307	41,776	29.8
	Male	92,718	24,768	26.7
	Female	47,589	17,008	35.7

7.4 SOCIAL AND ECONOMIC CHARACTERISTICS OF WOMEN

Generally, the contribution of women to the development of an economy is usually undervalued and/or overlooked by policy makers and planners. Zambia is no exception, one reason being that little effort is made to quantify women's economic activities or to value the output of their work. As it is, the majority of women do not participate fully in decision-making in the various economic sectors. It is important to look at some of the social and economic factors explaining low participation rates of women in economic development. In this section, marital, education and employment status of female household heads and women in general, are discussed.

Female Household Heads

In Zambia, there are 1,103,088 households of which 224,010 are headed by females. These figures strongly confirm the dominating role of men as heads of households. This is true for both rural and urban areas.

Table 7.10 shows the proportion of all heads of households in a certain category who are women. Proportionately, nearly 17 percent of the total household heads in Zambia are female. The share of female heads of households in rural areas is higher than that in urban areas, 19 and 14 percent, respectively. At the provincial level, Western Province has the largest share of female heads of households with 24 percent, while Copperbelt Province has the smallest, with only 12 percent.

Marital Status of Female Household Heads

Concerning the marital status of heads of households, Table 7.10 reveals that female heads of households dominate in the categories of widowed, divorced and separated. In fact, close to 90 percent of all heads of households who are widowed, are women. The table further indicates that only 3 percent of married heads of households, are women. This suggests that very few women head households whilst in marital union.

This marital pattern of female heads of households is to be found in all the provinces, although a few differences may be noticed. One such variation is that, while some provinces show low proportions of female heads of households in categories like 'separated' and 'divorced', others show high ones. For instance, the proportion of separated female heads in Lusaka and Southern Provinces are about 58 percent, compared to about 83 percent in Luapula and Northern Provinces. Perhaps it is of interest to note that, over half (53 percent) of the total heads of households in Western Province who have never married are female, compared to only 22 percent in Copperbelt Province.

Table 7.10

Female Household Heads as a Percentage of Total Household Heads by Residence, Marital Status and Province, Zambia, 1990

Residence/Province	Total	Never Married	Married	Widowed	Divorced	Separated	Not Stated
Zambia							
Total	16.9	29.8	3.1	87.8	77.5	71.8	7.7
Rural	18.8	32.1	3.6	89.5	80.1	75.5	6.3
Urban	13.5	28.3	2.4	82.3	72.3	64.0	12.9
Province							
Central	15.3	25.1	3.2	83.7	72.4	66.6	10.1
Copperbelt	12.5	21.9	2.2	79.9	69.0	61.5	13.3
Eastern	19.6	36.2	3.2	91.7	84.0	78.3	5.7
Luapula	21.9	30.5	3.5	91.2	87.5	81.7	7.3
Lusaka	12.6	26.5	2.1	82.5	68.8	58.4	11.6
Northern	19.8	33.3	4.7	92.5	89.2	84.3	5.6
North-Western	18.2	44.2	2.8	86.4	81.9	73.3	5.6
Southern	13.3	28.7	3.0	84.5	64.6	58.6	7.8
Western	23.7	52.7	4.3	87.9	82.0	74.5	6.6

Educational Status of Women

Data on the highest level of education obtained by women is shown in Table 7.11. Slightly over 40 percent of women in Zambia have had no schooling. The situation is more serious in rural areas where more than half of the women (54 percent) have never attended school, than only about one-fifth of the women in urban areas.

Of the women who have attended school in the country, the largest proportion (40 percent) have only completed primary school, with 37 percent in rural and 45 percent in urban. A higher proportion of women in urban than rural areas have completed secondary education. In all, only a small proportion (less than 1 percent) of women throughout the country have obtained higher levels of education.

Table 7.11

Female Population (15 Years and Above) by Highest Level of Education Completed, Residence and Province, Zambia, 1990

Residence/Province	Total Population	Total Percentage	Level of Education Completed				
			No Schooling	Primary	Secondary	Higher Education	Not Stated
Zambia							
Total	2,033,999	100	42.1	40.2	16.4	0.1	1.2
Rural	1,266,742	100	54.4	37.0	7.5	0.0	1.1
Urban	767,257	100	21.9	45.3	31.3	0.2	1.3
Province							
Central	195,203	100	41.0	42.4	15.3	0.1	1.2
Copperbelt	371,540	100	23.6	47.1	27.7	0.1	1.5
Eastern	276,045	100	63.2	28.9	6.9	0.0	1.0
Luapula	234,927	100	64.7	27.4	7.4	0.0	0.5
Lusaka	263,707	100	25.4	43.8	29.1	0.4	1.3
Northern	234,101	100	50.5	38.0	10.2	0.0	1.3
North-Western	114,066	100	60.5	30.4	7.8	0.1	1.2
Southern	238,962	100	38.2	44.8	15.7	0.1	1.2
Western	189,464	100	53.3	35.9	9.8	0.1	0.9

Amongst the provinces of Zambia, the highest proportions of women who have never been to school are found in Eastern, Luapula and North-Western. Copperbelt, Lusaka and Southern Provinces have the highest proportion of women who have completed primary school. Only Lusaka and Copperbelt Provinces have over a quarter of women who have completed secondary education.

Table 7.12 shows the proportion of female heads of households in relation to their highest education attainment. In Zambia as a whole, almost 63 percent of females heading households have never attended any formal schooling. A further 23 percent have only completed primary school.

Rural and urban female heads of households in relation to their highest level of education achieved show some variations. Whereas 74 percent of female heads of households in rural areas have never attended any formal school, the proportion is only half as much in urban areas (37 percent). It should be noted that the proportions of female heads of households in urban areas who have attained primary and secondary levels of education are more or less equal (i.e. about 30 percent). However, in the rural areas, 20 percent have completed primary school and only 4 percent have completed secondary school.

Table 7.12

Percent Distribution of Female Household Heads by Highest Level of Education Completed, Residence and Province, Zambia, 1990

Level of Education Completed	Total	Rural	Urban	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	N/Western	Southern	Western
Never Attended	62.8	73.6	37.3	59.3	44.5	79.7	65.5	37.8	69.5	78.2	55.1	69.5
Primary	23.0	20.1	30.1	25.0	30.7	14.0	27.5	28.3	21.3	14.9	25.4	21.7
Secondary	11.9	4.3	29.9	13.8	21.9	3.9	6.0	31.1	5.9	5.9	16.5	7.5
Higher Education	0.2	0.0	0.4	0.1	0.2	0.0	0.0	0.8	0.0	0.1	0.2	0.1
Not Stated	2.1	2.0	2.3	1.8	2.7	2.4	1.0	1.9	3.3	0.9	2.8	1.2
Total Percentage	100	100	100	100	100	100	100	100	100	100	100	100
Total Female Heads	224,010	157,530	66,480	18,247	29,540	36,236	25,385	21,922	34,144	13,366	18,377	26,793
Total Household Heads	1,327,098	835,824	491,274	119,518	236,700	184,782	115,692	173,687	172,536	73,383	137,919	112,882

A provincial breakdown of the female heads of households by their highest education attainment shows that amongst the provinces of Zambia, Eastern Province, has the highest proportion of female heads of households who have never attended any formal school, closely followed by North-Western Province with proportions of 80 and 78 percent, respectively. Lusaka has the lowest proportion of female heads of households who have never been to school at all, (38 percent). Of the women heading households who have been to school, Copperbelt Province has recorded the highest proportion of those who have completed primary education while Eastern has recorded the lowest. Lusaka has the highest proportion of those who have completed secondary education whilst Eastern recorded the lowest. Generally, negligible proportions of female heads of households throughout the country attained the higher level of education.

Tables 7.11 and 7.12 show that generally, women obtain low levels of education, i.e. mainly primary school. The proportions are lower in rural than urban areas, which may be due to the fact that a larger share of women live in rural areas where they do not have much access to educational facilities. Also, unlike men, women are less likely to travel long distance for the sake of schooling. In most cases, they remain in their areas of origin where it is not always possible to continue with their education.

Employment Status of Women

The employment status of women in Zambia is shown in Table 7.13. In all, working females make up 34 percent of the total working population in Zambia, 40 percent in rural areas and 25 percent in urban areas.

Table 7.13 also reveals that the majority of the unpaid family workers in Zambia are female, 51 percent in rural areas and 57 percent in urban areas. Of the total working population who are either employers or employees, only a little more than 16 percent, are female.

Table 7.13

Usually Working Females (12 Years and Older) as a Percentage of Total Usually Working Population by Employment Status, Residence and Province, Zambia, 1990

Residence/Province	Total	Employer	Employee	Self- Employed	Unpaid Family Worker	Not Stated
Zambia Total	34.4	16.2	16.6	31.8	51.4	40.4
Rural	39.7	17.1	14.5	29.6	51.0	42.6
Urban	24.8	15.7	17.2	38.2	57.3	38.1
Province						
Central	32.7	16.8	16.3	30.1	47.0	39.4
C/Belt	24.4	13.5	13.7	35.8	52.0	37.1
Eastern	44.0	17.2	14.8	32.5	56.4	43.1
Luapula	35.4	14.0	16.8	22.0	51.8	36.4
Lusaka	26.8	18.1	20.0	35.7	55.0	39.3
Northern	38.8	17.1	15.1	31.0	49.0	45.2
N/Western	41.6	18.5	16.3	38.7	50.8	41.9
Southern	33.4	17.0	17.0	27.7	47.3	39.6
Western	42.6	21.1	20.7	34.4	51.5	46.3

Analysis of the usually working females as a percentage of the total working population by province shows that Eastern Province has the highest proportion with 44 percent, and Copperbelt Province has the lowest, 24 percent.

Figure 7.5

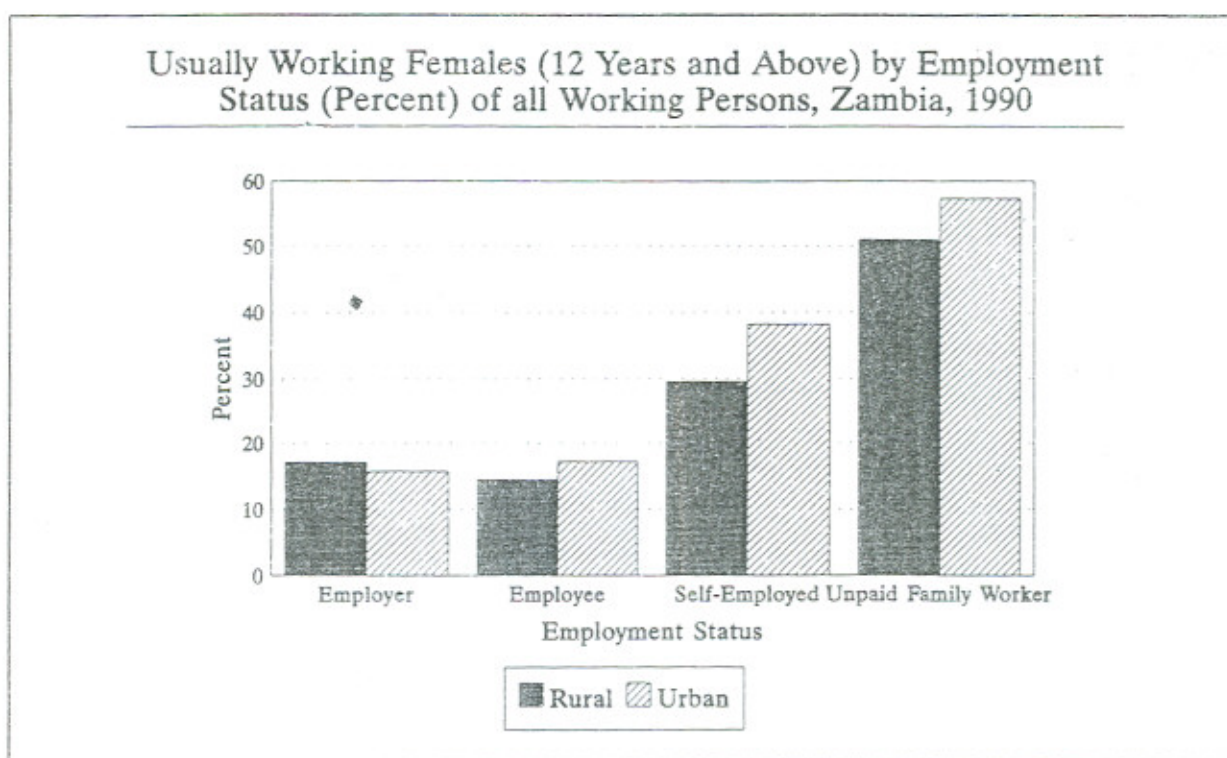


Figure 7.5 shows that except for employer category, all the employment status categories show lower proportions of working women in rural than urban areas.

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 industrial 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	20.2
Electricity, Gas and Water	6.1	5.1	5.7	13.1	17.1	7.8
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 occurrence 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.

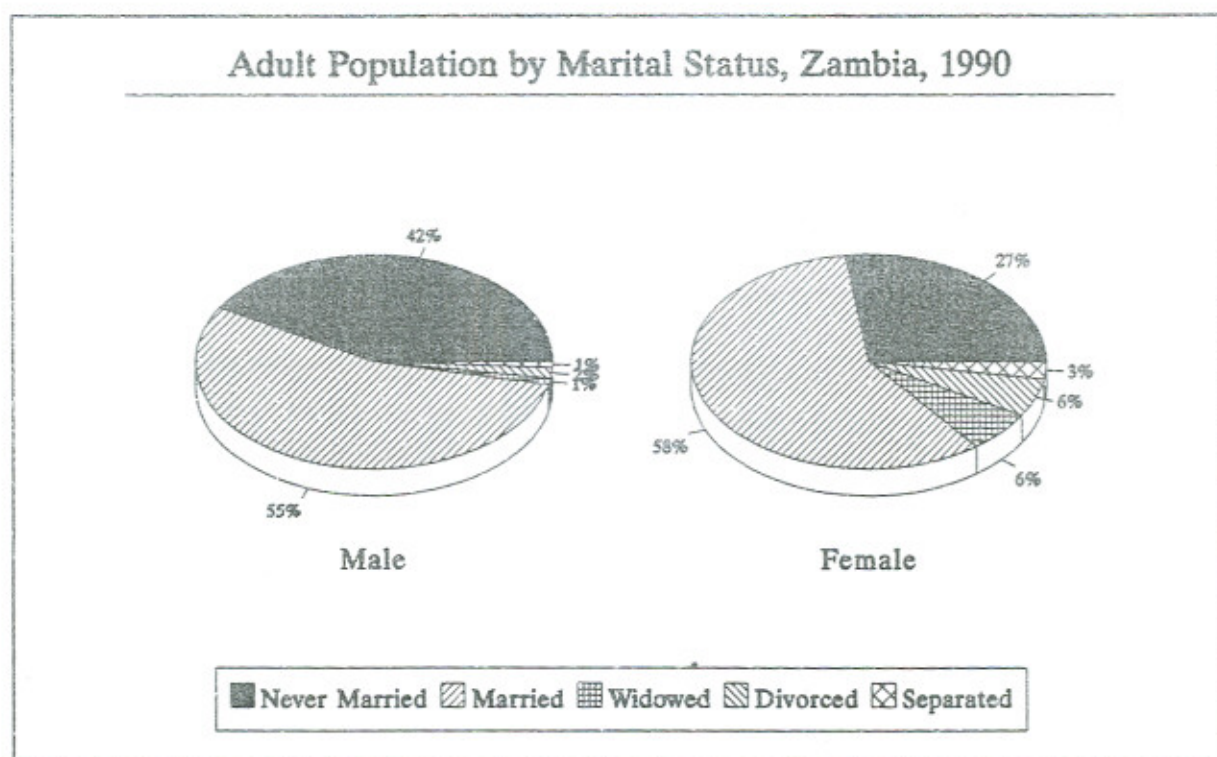
Table 8.1

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	91.0	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 characteristics 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	1.5	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
Copperbelt	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 Relational 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

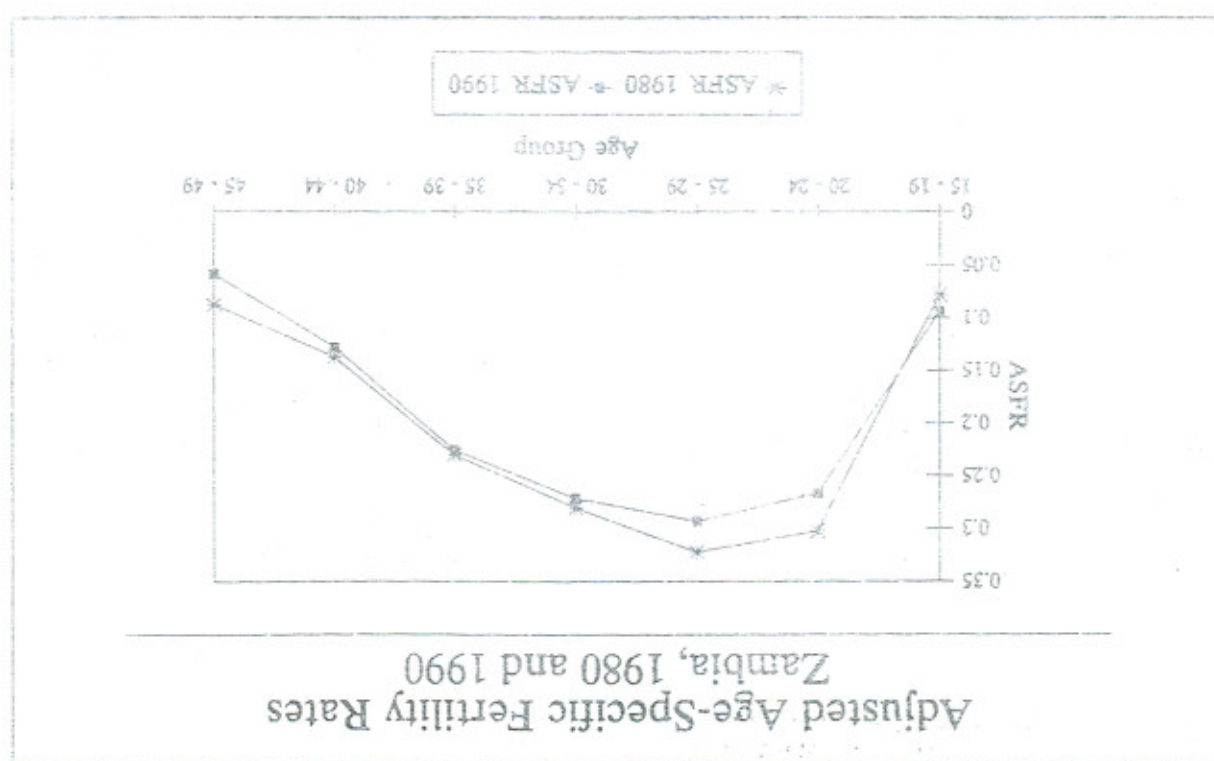


Table 8.9

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).

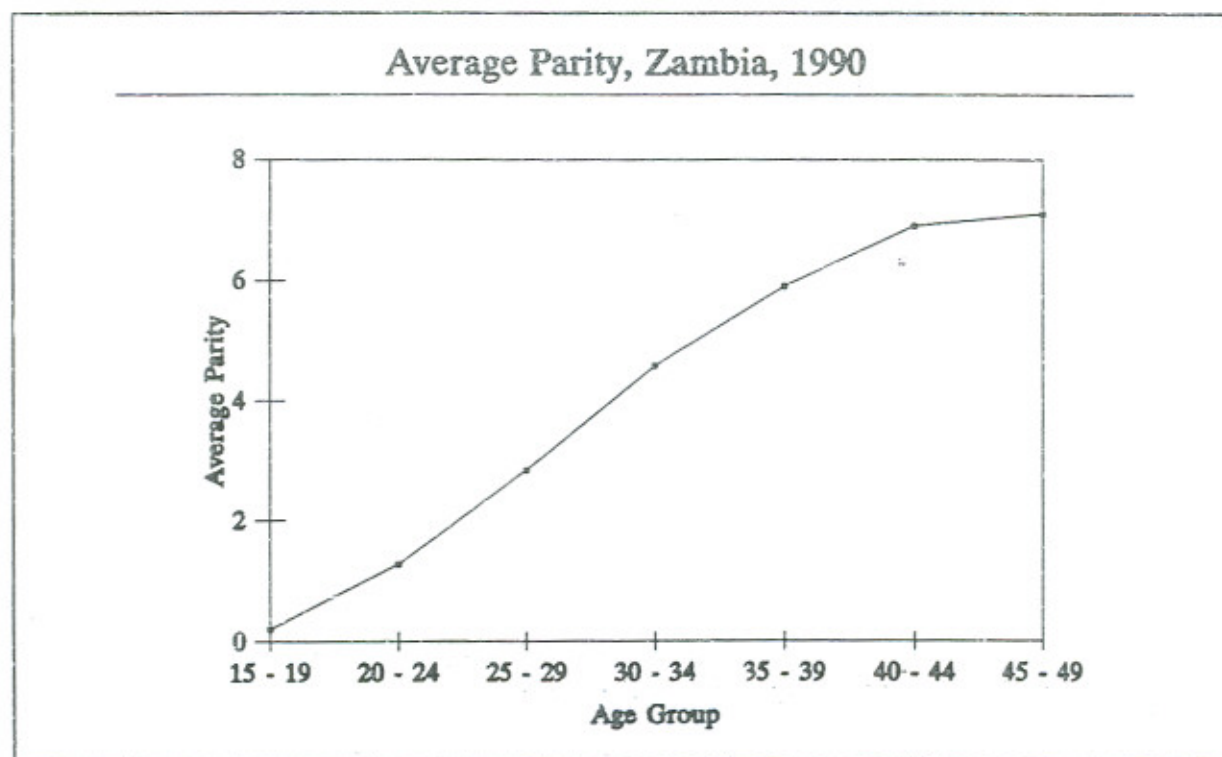
The number of children ever born to females in an age group divided by the number of females in the same age group yields average parity. The average parity for age group 45-49 years is referred to as completed family size and should be equal to the TFR under constant fertility, mortality and migration 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 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		NWWestern		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	5.0	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	2.2	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; in fact 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).

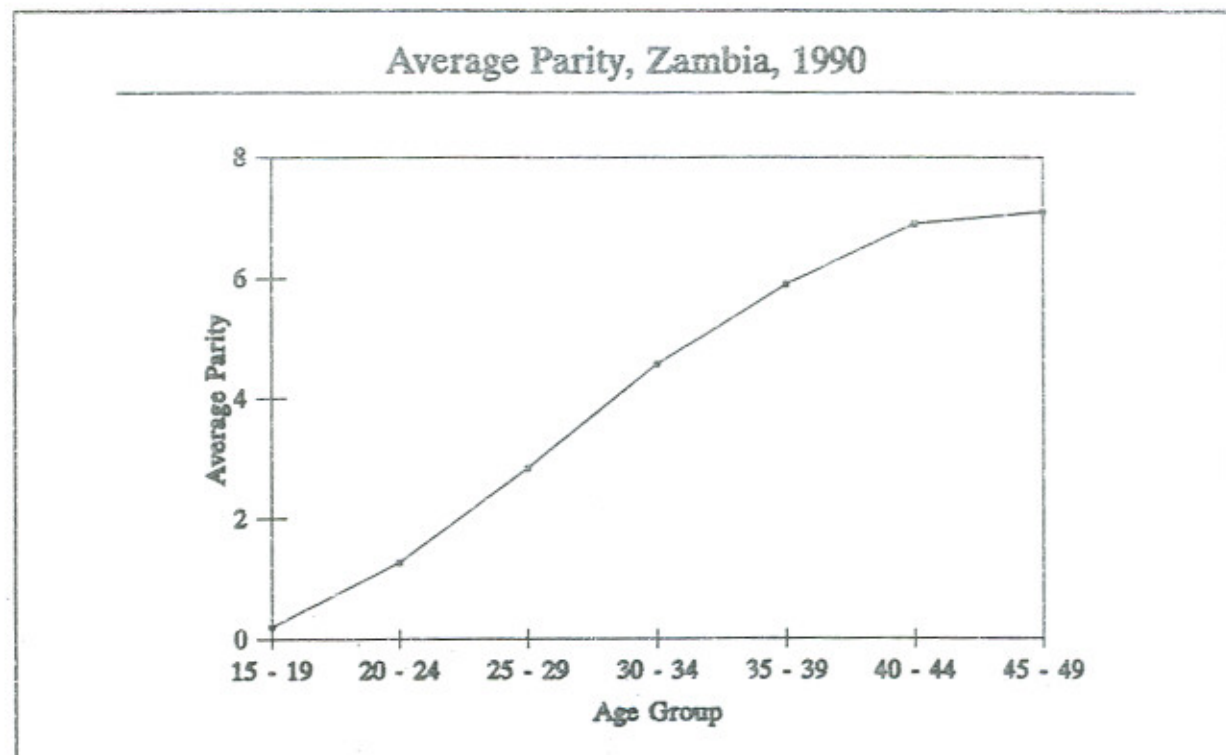
The number of children ever born to females in an age group divided by the number of females in the same age group yields average parity. The average parity for age group 45-49 years is referred to as completed family size and should be equal to the TFR under constant fertility, mortality and migration 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	780,265	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 singular 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:-

$$q_{ix} = D_{ix} \cdot K_{ix}$$

where q_{ix} = probability of dying at exact age x ,

D_{ix} = proportion dead at age x ,

K_{ix} = 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		
		$q_{(x)}$	$l_{(x)}$	$q_{(x)}$	$l_{(x)}$				
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_{10} and of Surviving, l_{10}				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		q_{10}	l_{10}	q_{10}	l_{10}				
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_{10} and of Surviving, l_{10}				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		q_{10}	l_{10}	q_{10}	l_{10}				
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_{00} and of Surviving, l_{00}				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		q_{00}	l_{00}	q_{00}	l_{00}				
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_{00} and of Surviving, l_{00}				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		q_{00}	l_{00}	q_{00}	l_{00}				
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_{x0} and of Surviving, l_{x0}				Mortality Levels		Reference Date	
		Male		Female		Male	Female	Male	Female
		q_{x0}	l_{x0}	q_{x0}	l_{x0}				
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	65.0	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

The situation in urban and rural areas is such that high rates are found in rural areas. For the 0-4 year period prior to the 1990 Census, under-five mortality rate was 164.3 deaths for rural areas while that of urban areas was 128 deaths. Corresponding rates in 1980 were 131.7 and 107.7 for urban areas in the 0-4 year period prior to the 1980 Census. In both rural and urban areas, an increase was recorded for the 0-4 years period to the conduct of censuses. Rates obtained from the 1980 and 1990 Censuses had shown a reduction in both rural and urban areas for the periods 5-9 and 10-14 years prior to the holding of the censuses. The 1980 Census estimates show higher under-five mortality rates as compared to estimates from the 1990 Census.

Provinces with relatively high under-five mortality rates in 1980 were Eastern, Luapula, Northern and Western. Other provinces with equally high under-five mortality rates are Southern and Central provinces. Eastern provinces in 1990 had the highest mortality rates, whereas Copperbelt and Southern provinces with 118.3 and 115.3 deaths per 1,000 children aged below 5 years, respectively, recorded an increase in under-five mortality rates in the period 0-4 years prior to the 1980 and 1990 censuses. In the periods 5-9 and 10-14 years prior to the censuses, provinces that recorded increases were Copperbelt and Western provinces. The remaining provinces recorded reductions in the period 5-9 and 10-14 years prior to the 1980 and 1990 Censuses, for more details refer to Table 9.10.

9.5 INFANT AND CHILD MORTALITY RATES BY SELECTED SOCIO-ECONOMIC BACKGROUND CHARACTERISTICS

Infant and child mortality rate estimates for the period 0-4 years prior to both the 1980 and 1990 Censuses are reclassified by some socio-economic background characteristics of sex, residence, education, marital status and economic status. Variations do exist in infant and child mortality rates when the socio-economic background of their mothers is considered. Table 9.11 shows the infant and child mortality rates together with percentage increases over the 1980 and 1990 intercensal period.

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 (${}_5q_1$)			Under-five Mortality Rate (${}_5q_5$)		
	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 Mortality Rate	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.

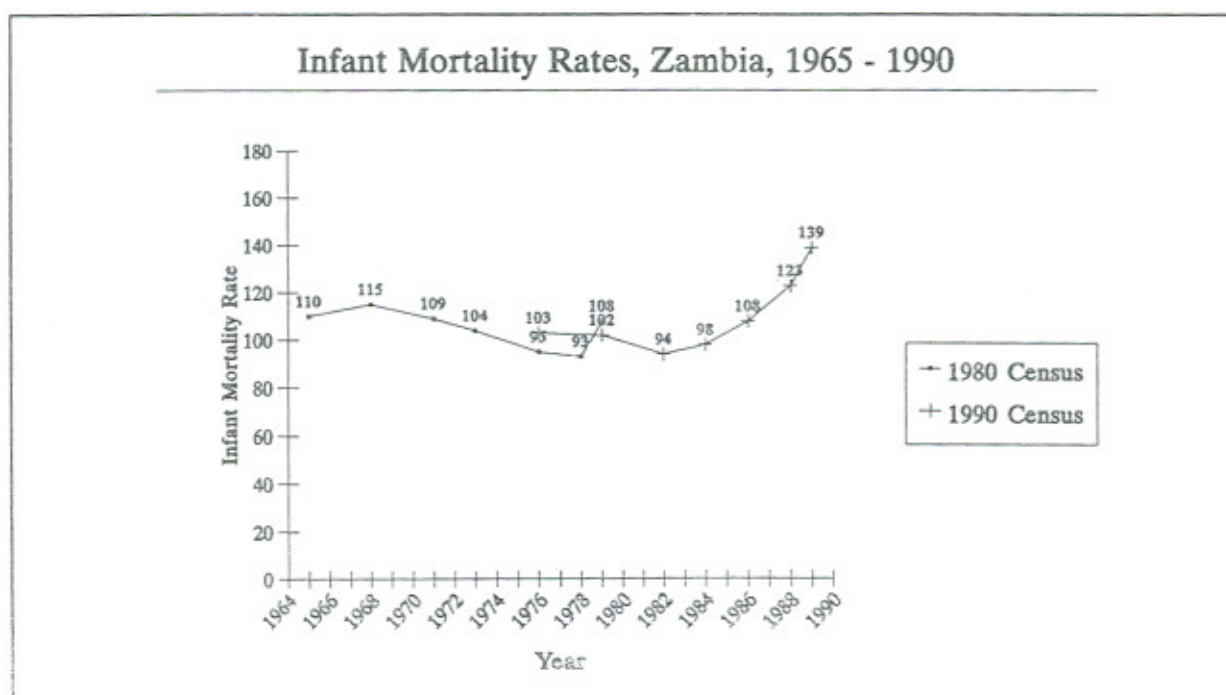
Table 9.13

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 continuously 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 Mortality Rate	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

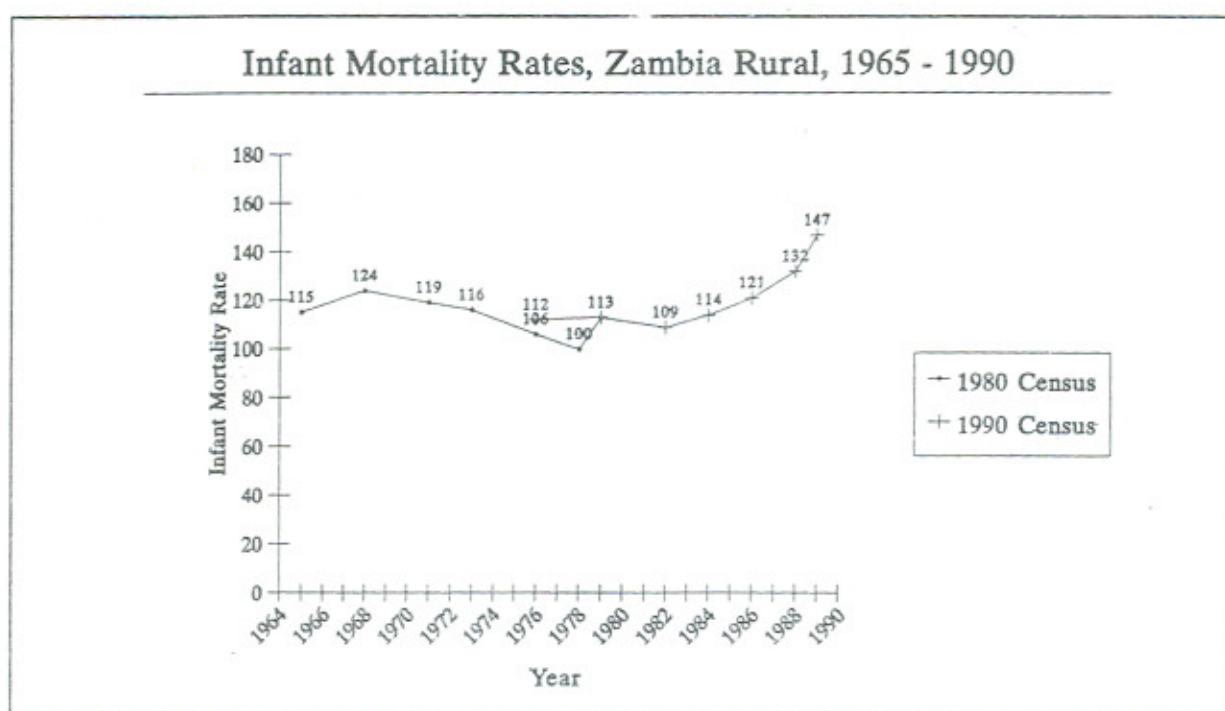
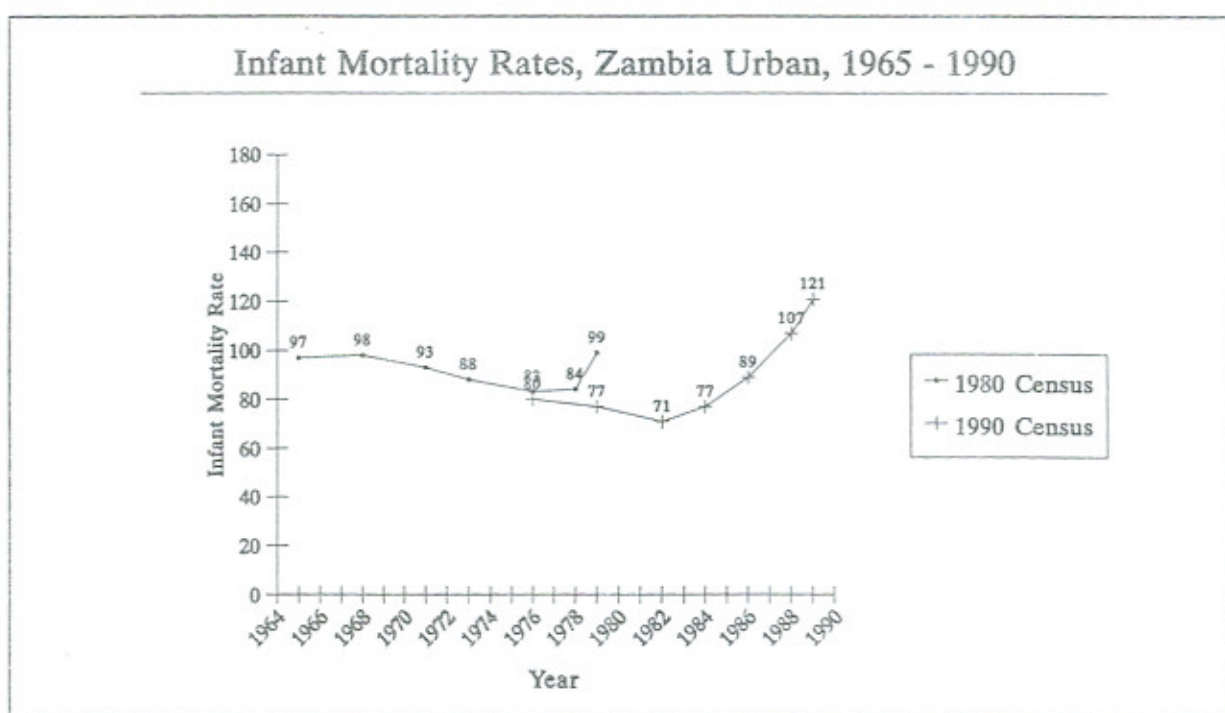


Figure 9.3



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



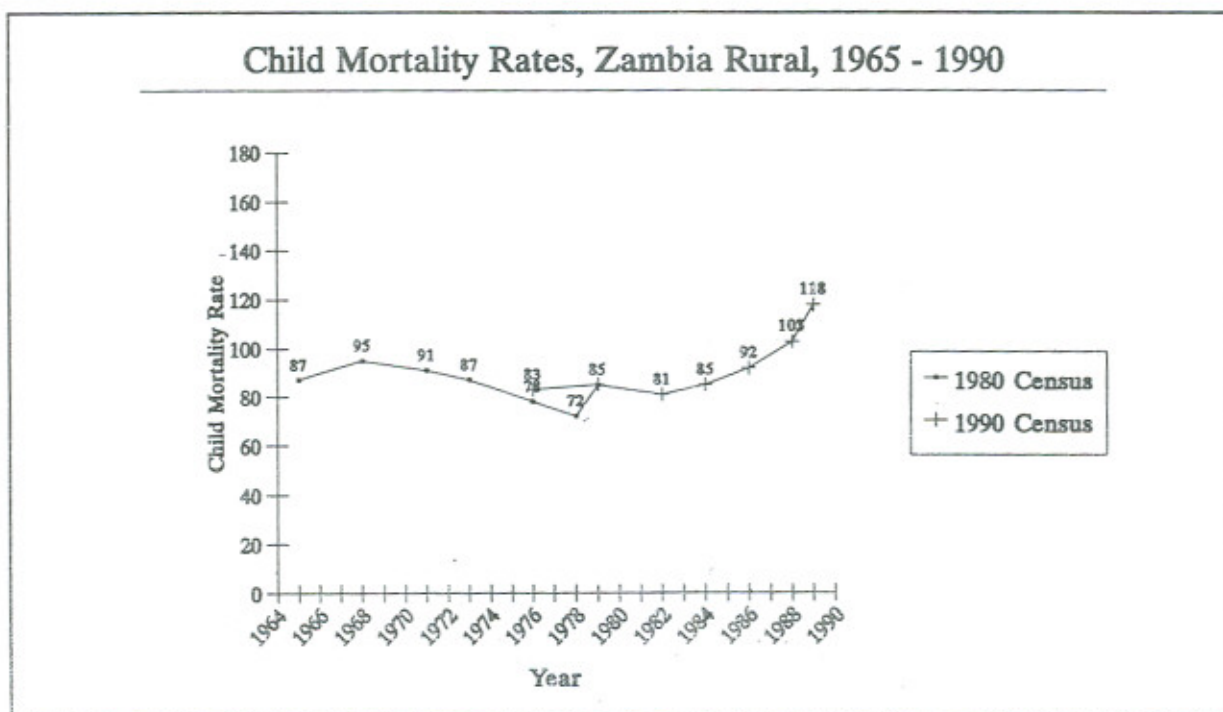
Table 9.14 and Table 9.15 show the trend of child mortality rate derived from the 1990 and 1980 Censuses for rural areas. Rural areas had overall child mortality rates of more than 100 from 1988 to 1989. Estimated child mortality rates showed slight variation between 1976 and 1986. Similarly, rates were 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 Mortality Rate	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

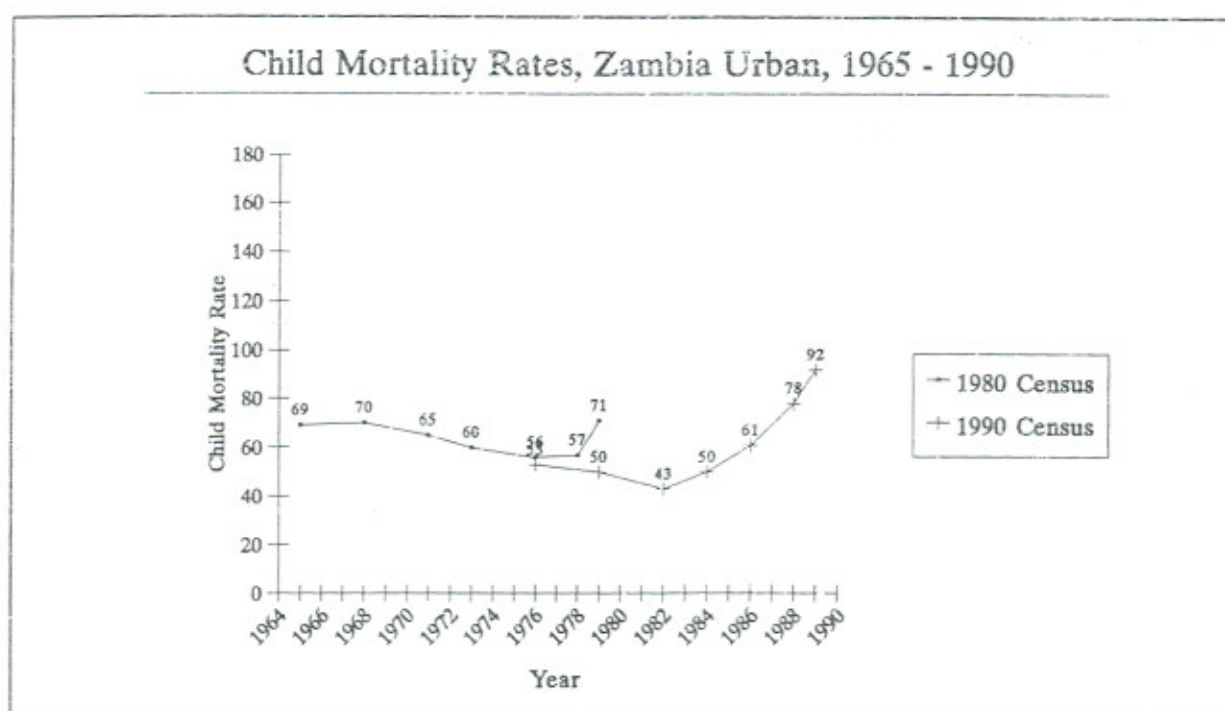


Table 9.17

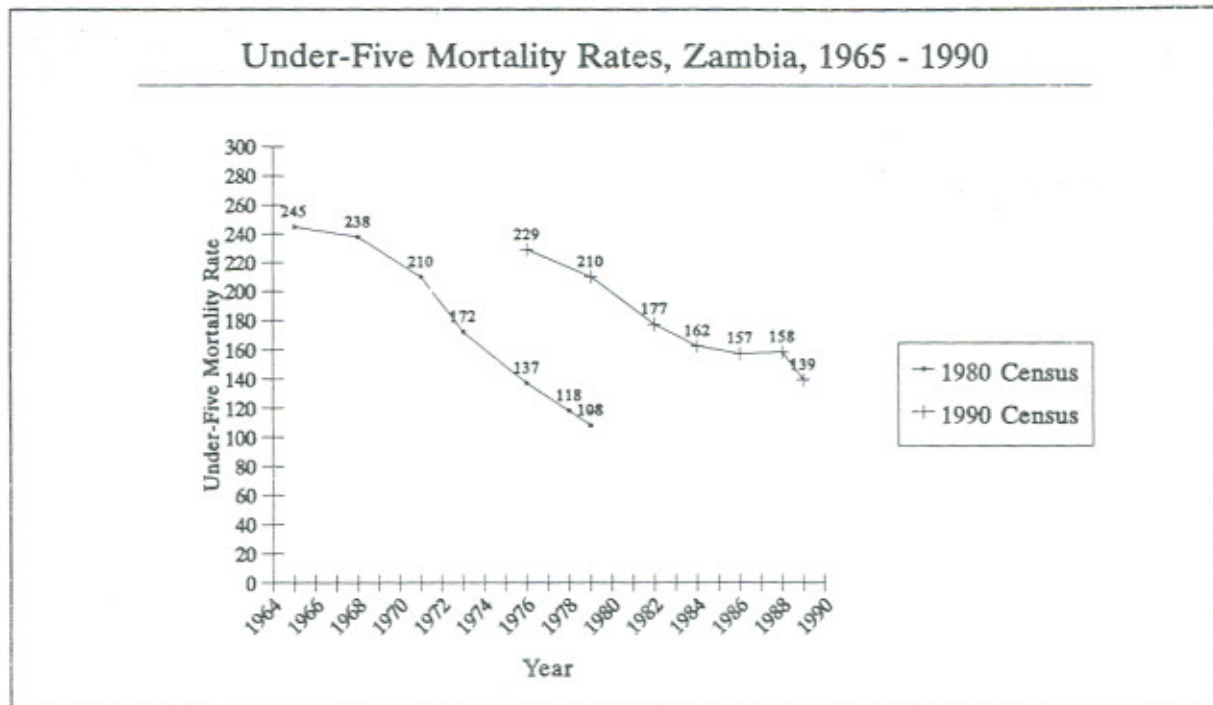
Trends of Infant, Child and Under-Five Mortality Rates, and Expectation of Life at Birth by Sex, Urban Zambia, 1980

Year and Sex	Infant Mortality Rate	Child Mortality Rate	Under-five Mortality Rate	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)

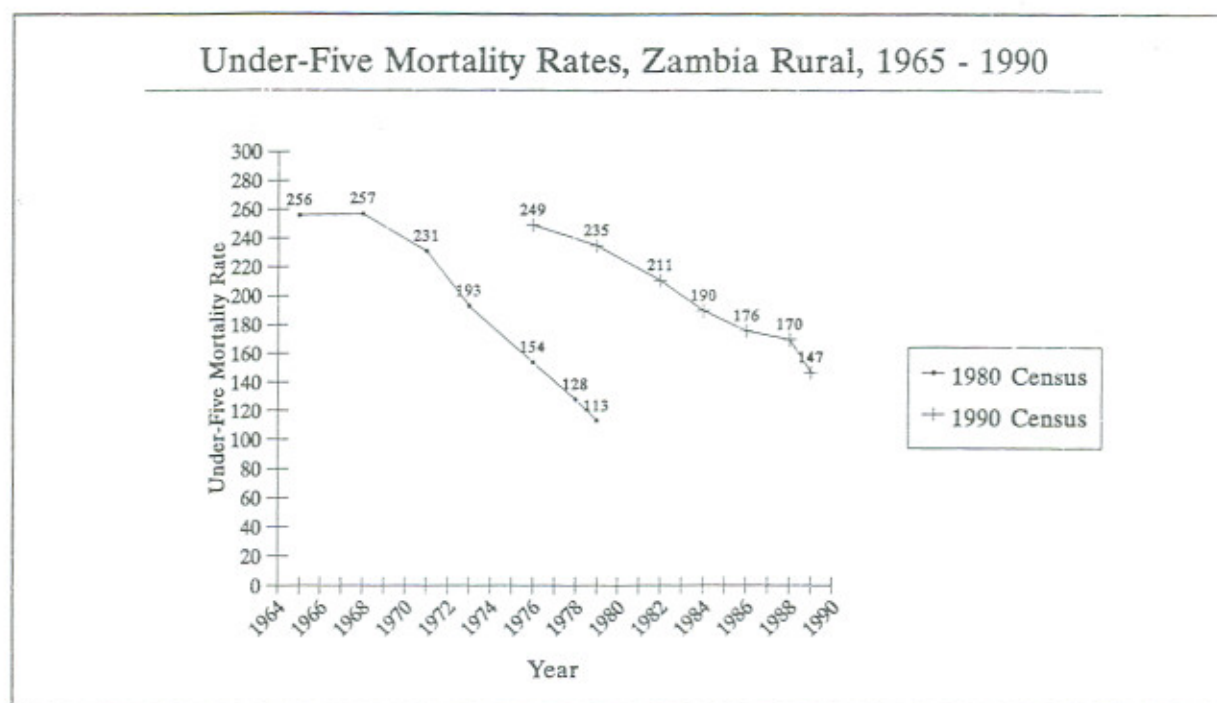
Under-five mortality rate declined substantially from above 200 deaths per 1,000 children aged below 5 years in the late 1970's to nearly 140 deaths in 1989 (see Figure 9.7). Similar results were obtained from the 1980 Census. Rates of above 200 deaths per 1,000 children aged below 5 years were recorded 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



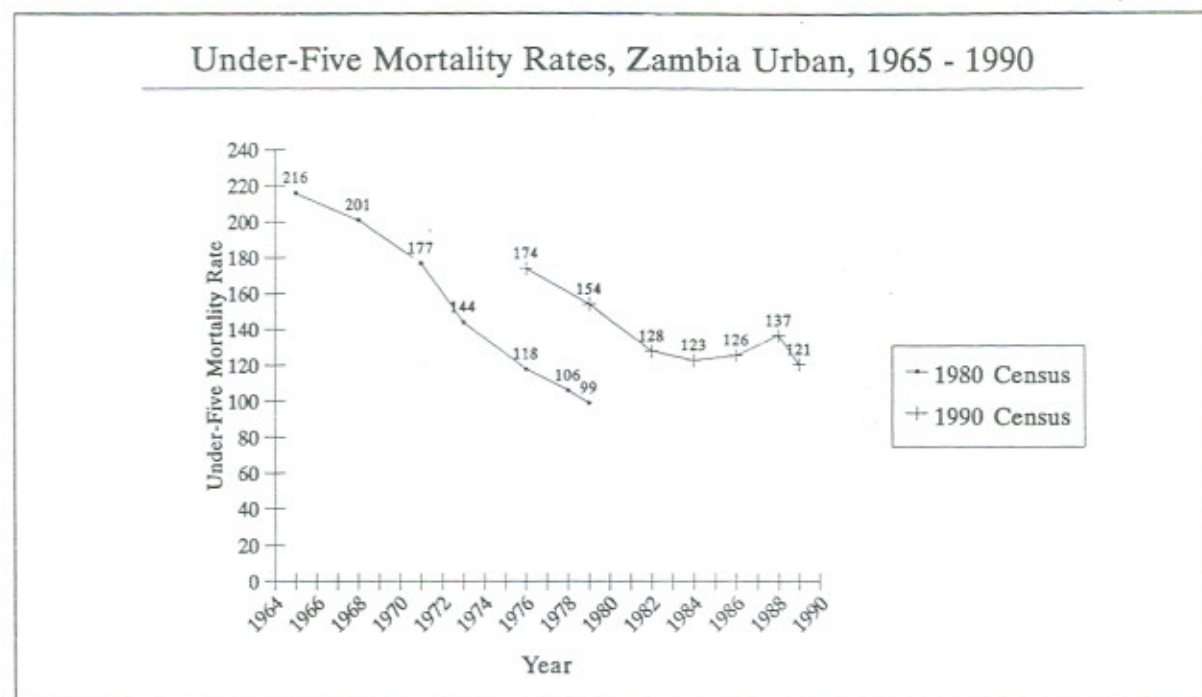
Rural areas recorded the highest under-five mortality rates for both male and female children in the period 1976-1989. Overall, under-five mortality rate declined from 249 deaths in 1976 to 147 deaths per 1,000 children aged below 5 years in 1989. In the case of males, under-five mortality rate declined 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.

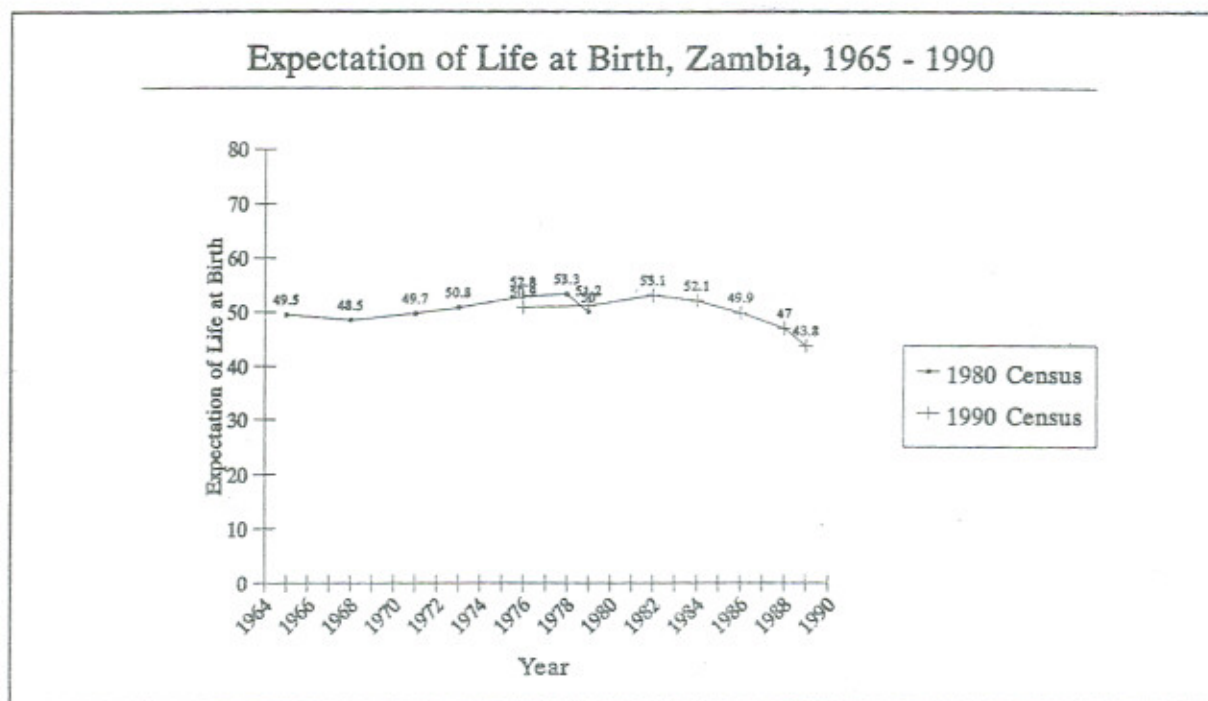
Figure 9.9



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

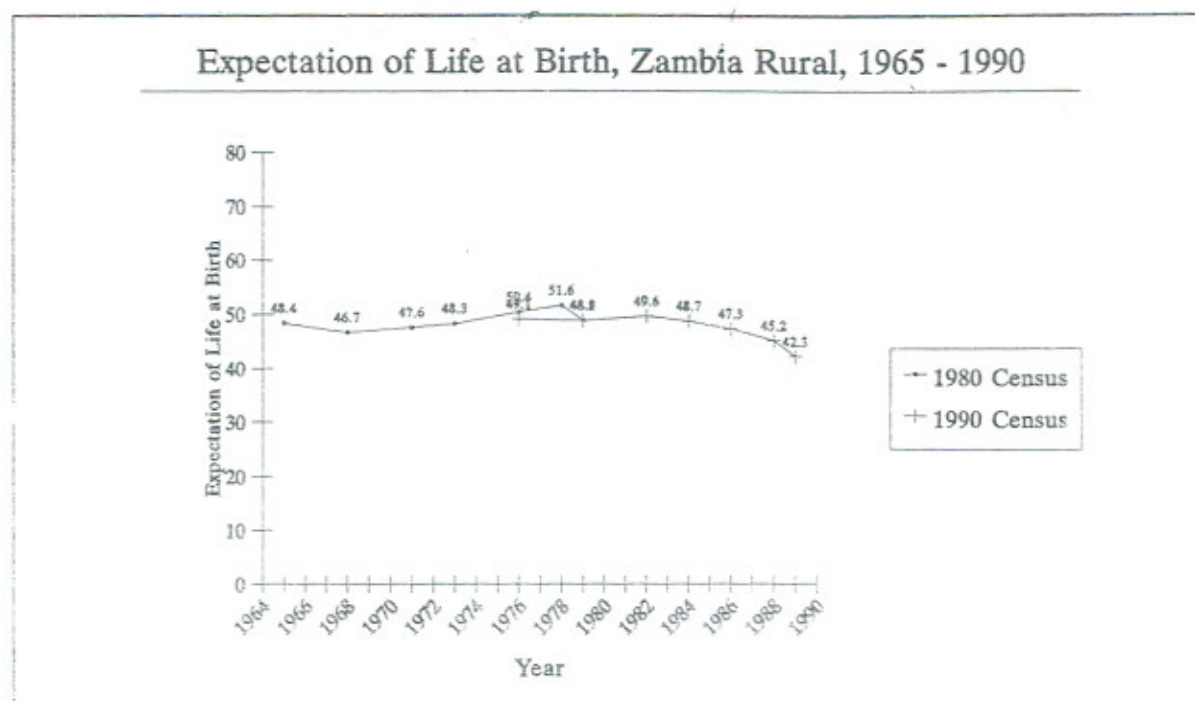
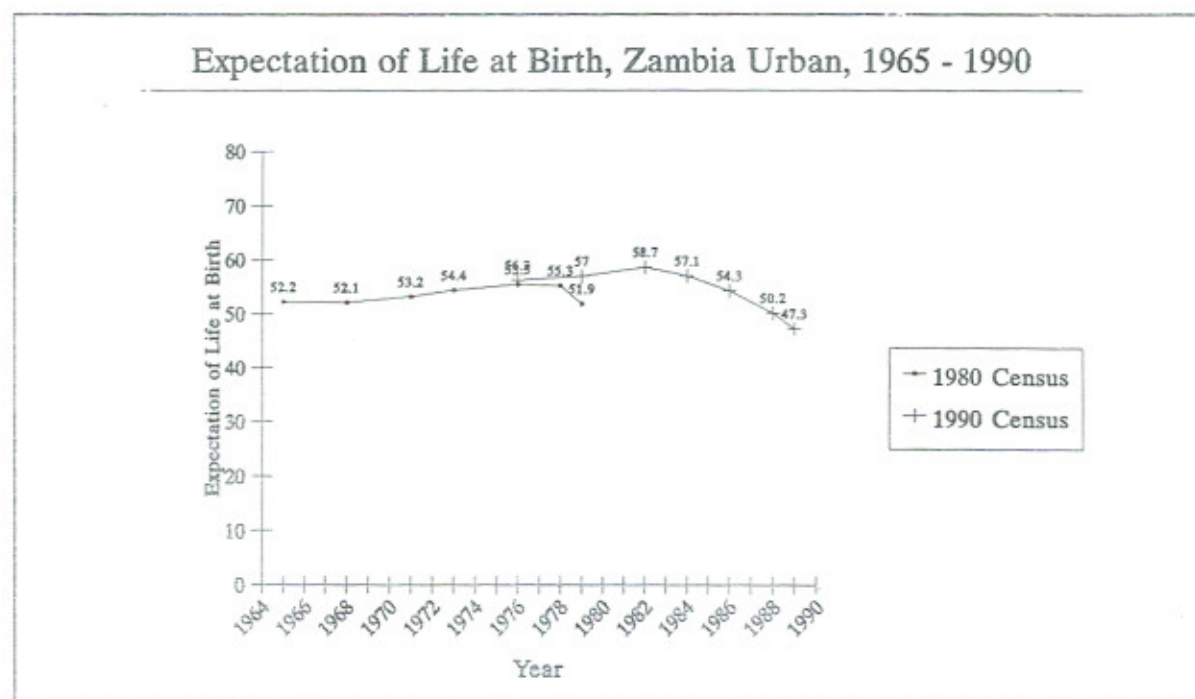


Figure 9.12



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	40.8	12.2	10.0
Lusaka	54.6	50.4	15.4	13.7
Northern	51.0	44.2	14.0	11.3
North-Western	57.1	51.1	16.5	14.4
Southern	53.1	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:-

- m_x = Central death rates between ages x and $x + n$,
- q_x = Probability of dying between exact ages x and $x + n$,
- l_x = Number of persons alive at exact age x ,
- D_x = Number of persons dying between exact ages x and $x + n$,
- L_x = Person years lived between exact ages x and $x + n$,
- S_x = Probability of surviving between exact ages x and $x + n$,
- T_x = Total number of person years lived after age x ,
- 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	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	.95117	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	11.456	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

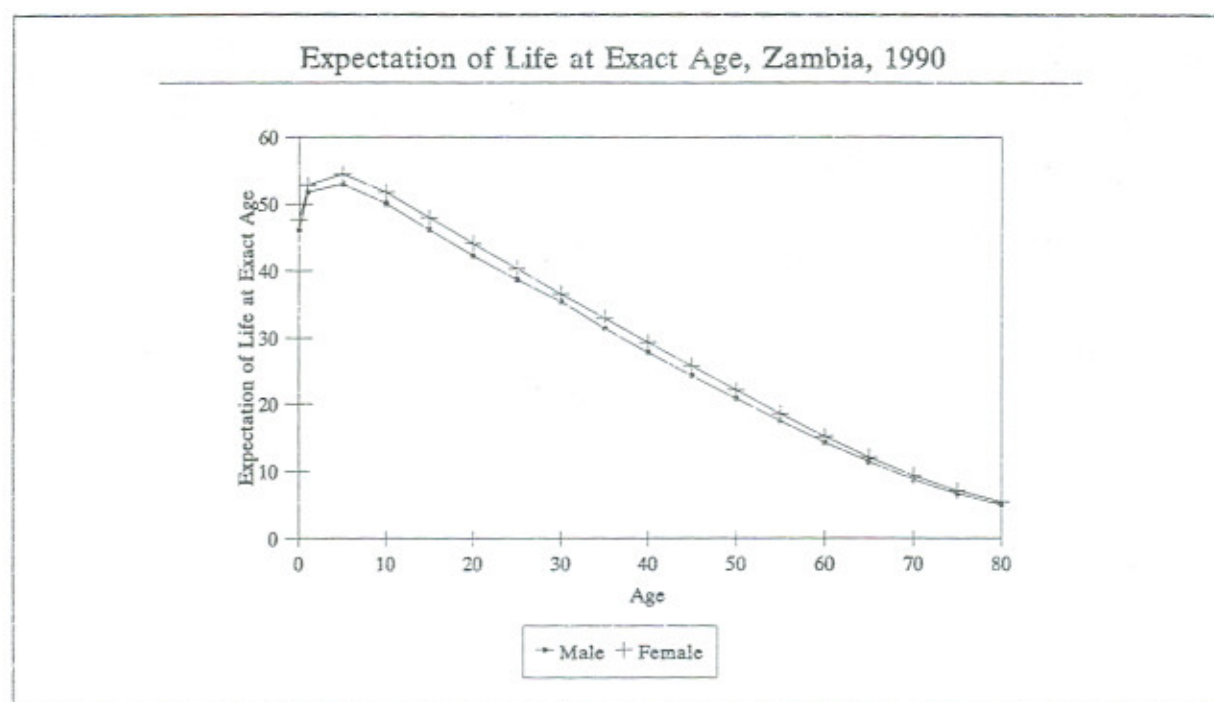


Table 9.20

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

Age	$m_{(x,0)}$	$q_{(x,0)}$	$l_{(x)}$	$D_{(x,0)}$	$L_{(x,0)}$	$S_{(x,0)}$	$T_{(x)}$	${}^ne_{(x)}$	$a_{(x,0)}$	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.	272333.	.92176	1248009.	22.160	2.582	50
55	.01900	.09086	52490.	4769.	251025.	.89091	975676.	18.588	2.604	55
60	.02802	.13132	47721.	6265.	223641.	.83971	724651.	15.185	2.612	60
65	.04309	.19520	414554.	8092.	187794.	.76204	501010.	12.086	2.593	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 survival 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	$m_{(x,0)}$	$q_{(x,0)}$	$l_{(x,0)}$	$D_{(x,0)}$	$L_{(x,0)}$	$S_{(x,0)}$	$T_{(x,0)}$	$e_{(x,0)}$	$a_{(x,0)}$	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

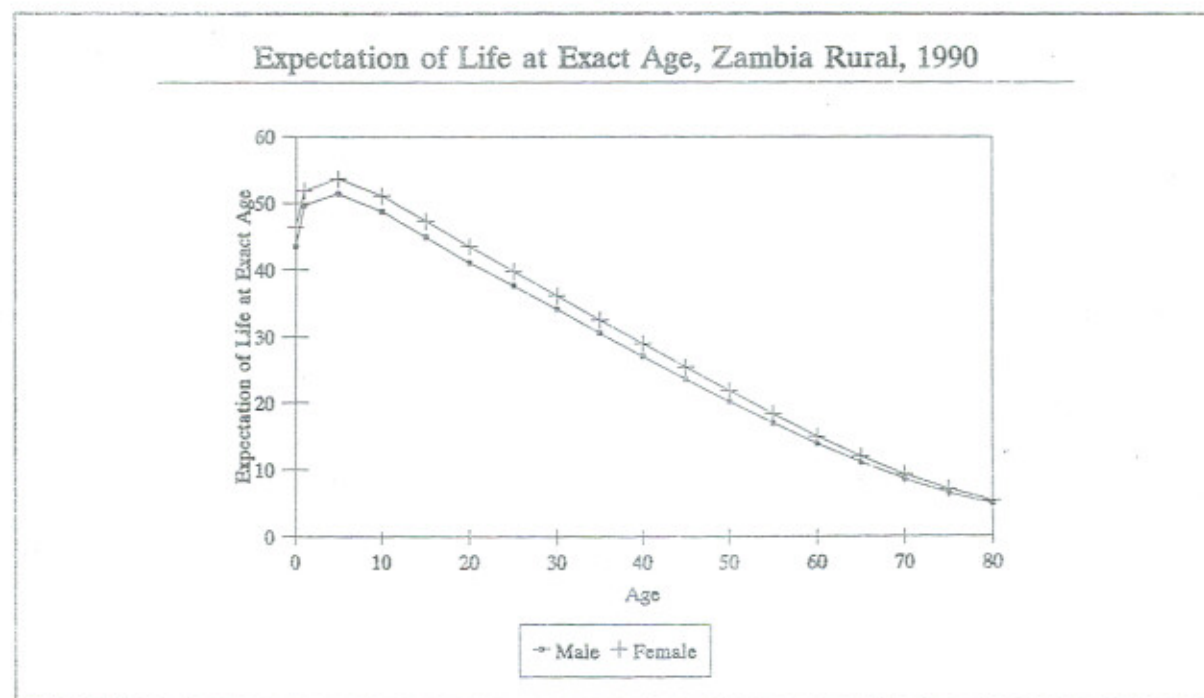


Table 9.22

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

Age	$m_{x,0}$	$q_{x,0}$	$l_{x,0}$	$D_{x,0}$	$L_{x,0}$	$S_{x,0}$	$T_{x,0}$	$e_{x,0}$	$a_{x,0}$	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	.01596	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	.00823	.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	$m_{x,0}$	$q_{x,0}$	$l_{x,0}$	$D_{x,0}$	$L_{x,0}$	$S_{x,0}$	$T_{x,0}$	$e_{x,0}$	$a_{x,0}$	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	.29630	33394	9898	142590	.64769	306054	9.165	2.537	70
75	.10704	.42207	25496	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

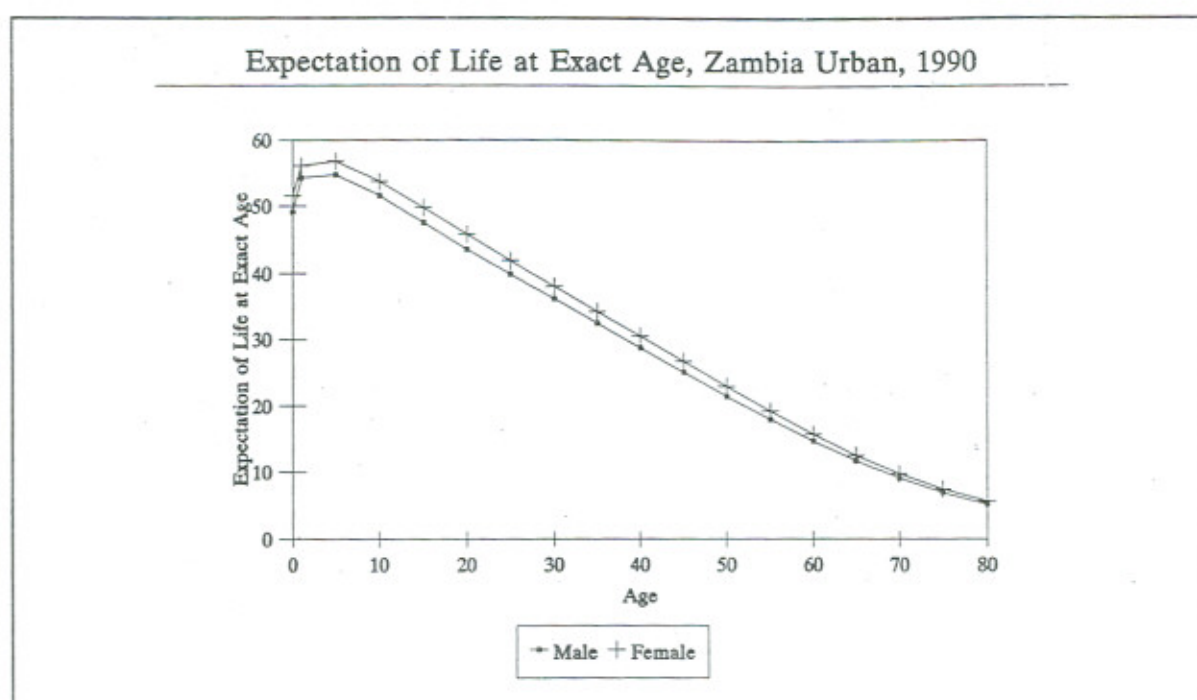


Table 9.24

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

Age	$m_{(x,0)}$	$q_{(x,0)}$	$l_{(x,0)}$	$D_{(x,0)}$	$L_{(x,0)}$	$S_{(x,0)}$	$T_{(x,0)}$	$e_{(x,0)}$	$a_{(x,0)}$	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

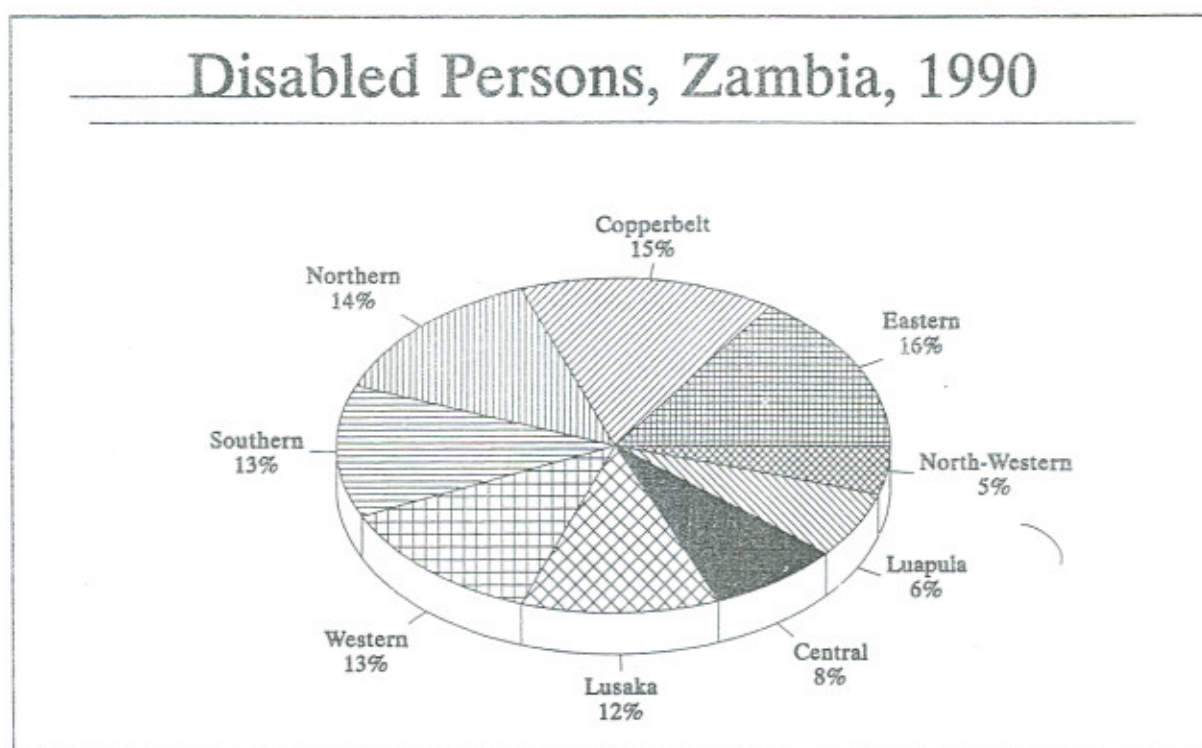


Table 10.2 shows the distribution of the disabled as a proportion of total population. Out of Zambia's population 7.4 million, 0.9 percent are disabled. Of the 0.9 percent, 0.2 are blind, 0.3 crippled, 0.2 multiple disabled, 0.1 dumb and deaf, and another 0.1 mentally retarded.

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 that there are less disabled males than females. In all disability categories except the blind, there are more disabled males than females. In rural areas, there are more disabled males than females (127.1).

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

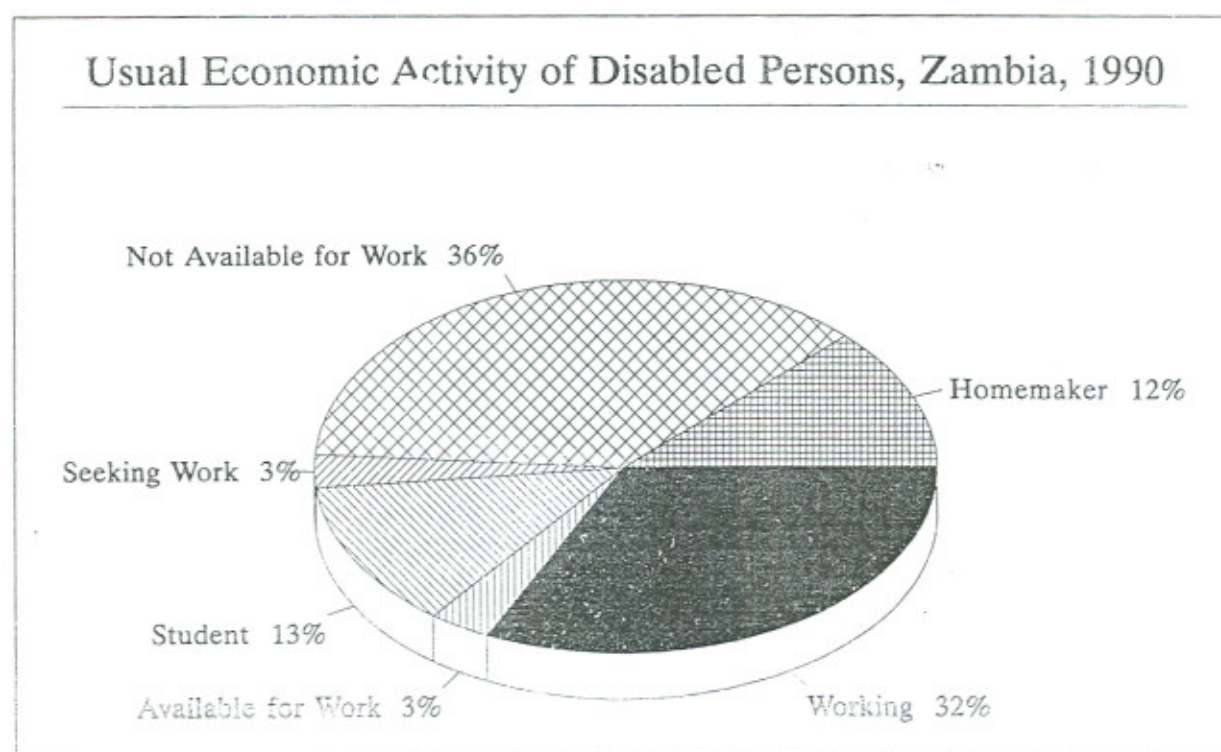
Table 10.5 shows the usual economic activity of the disabled aged 12 and above by type of disability. Detailed definitions of economic activity are given in Chapter 6. Out of the 53,444 economically active disabled persons in the country, 2.8 percent are seeking work, 3.1 available for work, 12.0 homemakers, 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						Not Stated
	Total Number	Percentage Total	Employer	Employee	Self Employed	Family Worker	
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						Not Stated
	Total Number	Percentage Total	No Schooling	Primary	Secondary	Higher Level	
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.

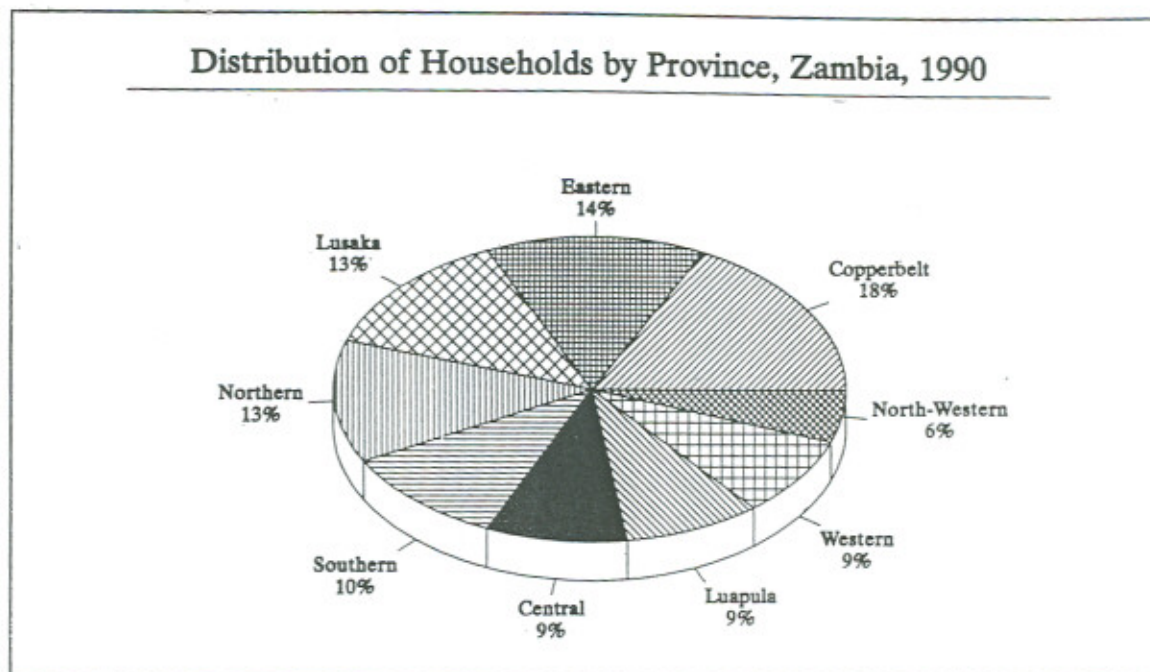
Table 11.1 shows that in Zambia, there are 1,327,011 households of which 63 percent are in rural and the remaining 37 percent in urban areas. Among the provinces, Copperbelt has the largest number of households with 236,709 while North-Western Province has the lowest with 73,381.

Table 11.1

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

Number of Rooms	Total	Rural	Urban	Provinces									
				Central	Copperbelt	East	North	North-Western	North-Eastern	Southern	Southern	Western	Windward
1	10.2	11.5	8.5	12.1	10.8	11.2	10.5	11.8	10.3	11.0	10.7	11.4	10.9
2	28.5	29.8	27.2	30.1	28.5	29.0	28.3	29.6	27.8	28.5	28.2	29.0	28.7
3	35.2	34.5	36.0	34.8	35.2	34.9	35.1	34.7	35.3	34.6	35.0	34.8	35.1
4	18.7	17.9	19.5	18.2	18.8	18.5	18.1	18.6	18.3	18.0	18.4	18.2	18.5
5	5.8	5.2	6.5	5.5	5.8	5.6	5.4	5.7	5.3	5.5	5.4	5.6	5.5
6	1.5	1.2	1.8	1.4	1.5	1.4	1.3	1.4	1.3	1.4	1.3	1.4	1.3
7	0.5	0.4	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.4
8	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1
9	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1,327,011	836,454	490,557	121,234	236,709	118,543	112,345	73,381	125,678	119,876	117,432	120,567	118,921

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.

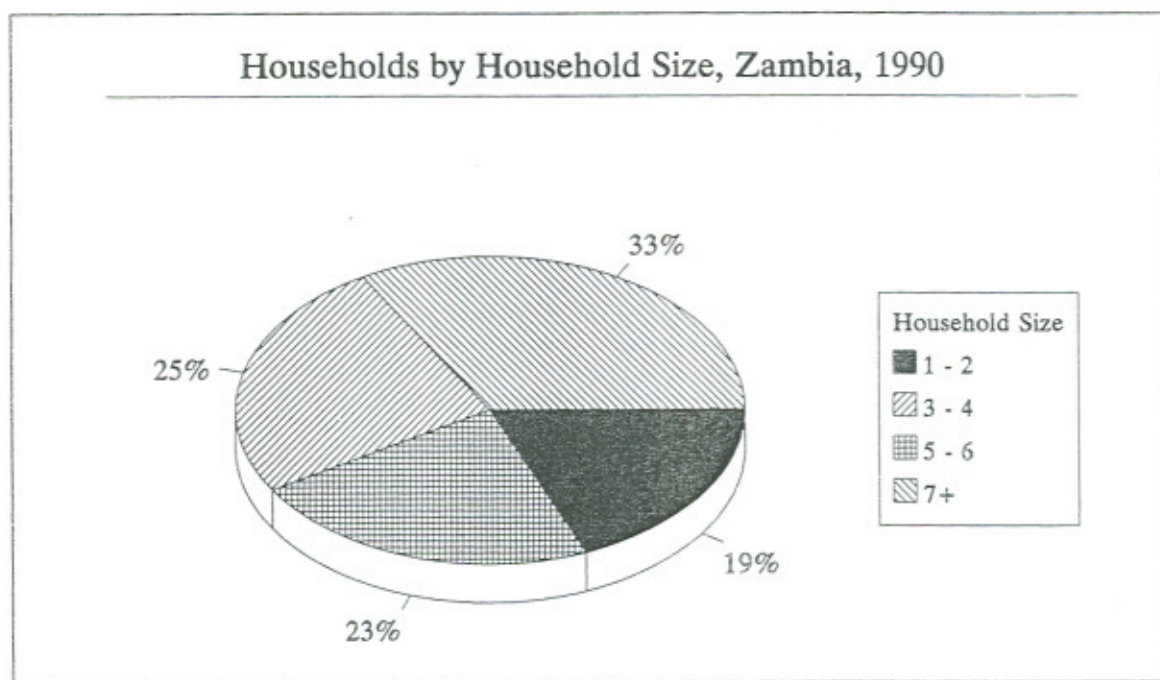
Overcrowding is an apparent feature in Table 11.2 which shows the number of rooms by household size in the country and each province. The table shows that the majority of housing units have at least seven members and of these, most occupy two or three-roomed structures. Of those with five to six members, 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

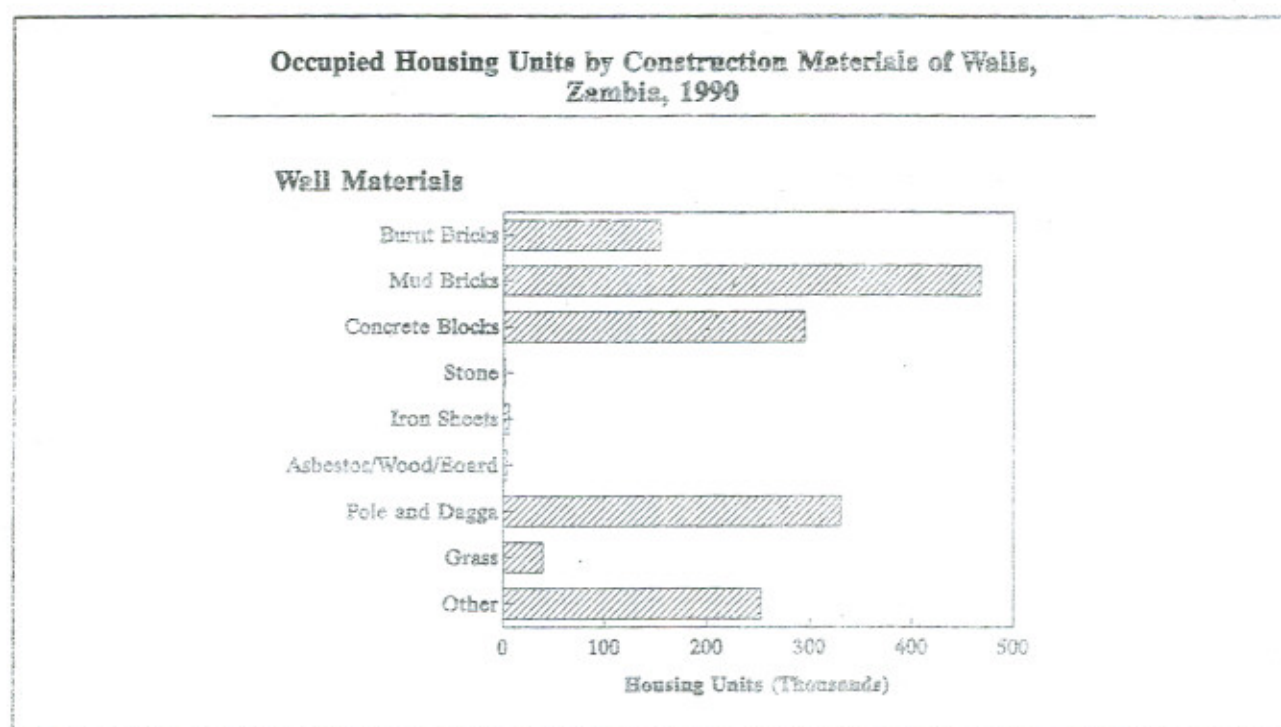


Table 11.4 shows that mud brick walls are the most common followed by pole and dagga walls found in 35 percent and 25 percent of the housing units, respectively. Twenty two percent of the housing units have concrete block walls. Stone, iron sheets, wood and hardboard are not common construction materials 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

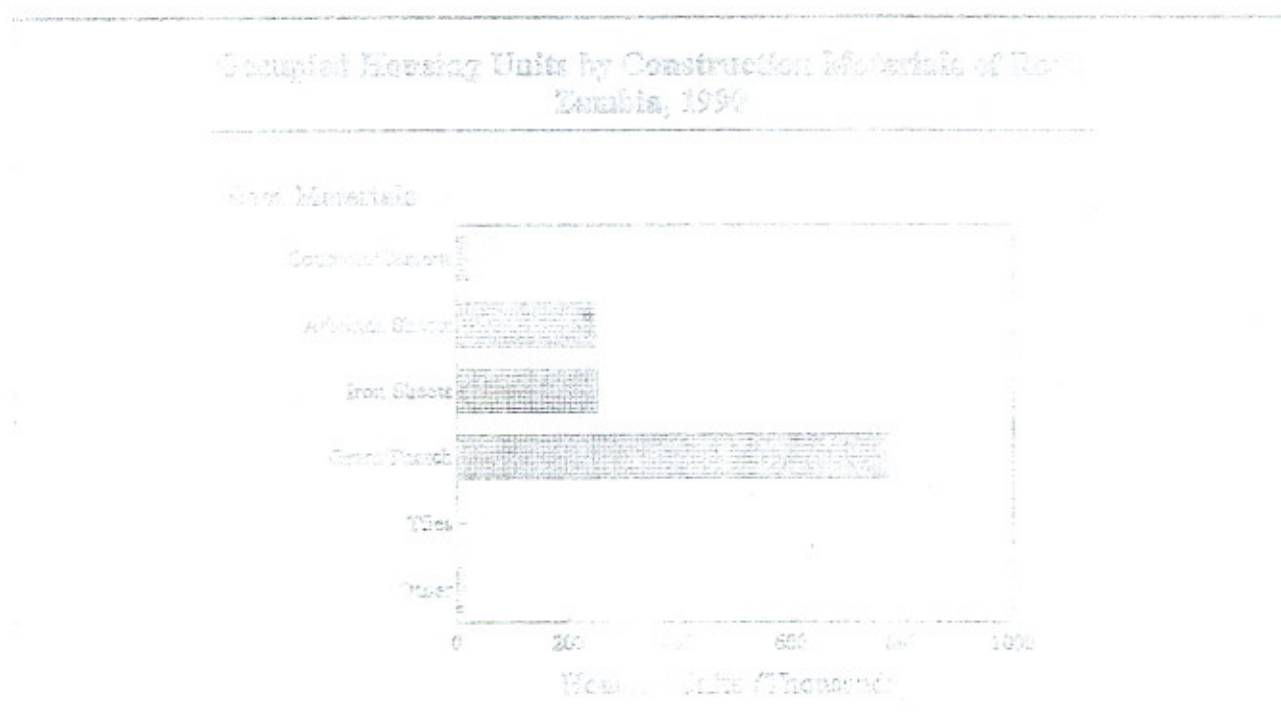


Table 11.4

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.

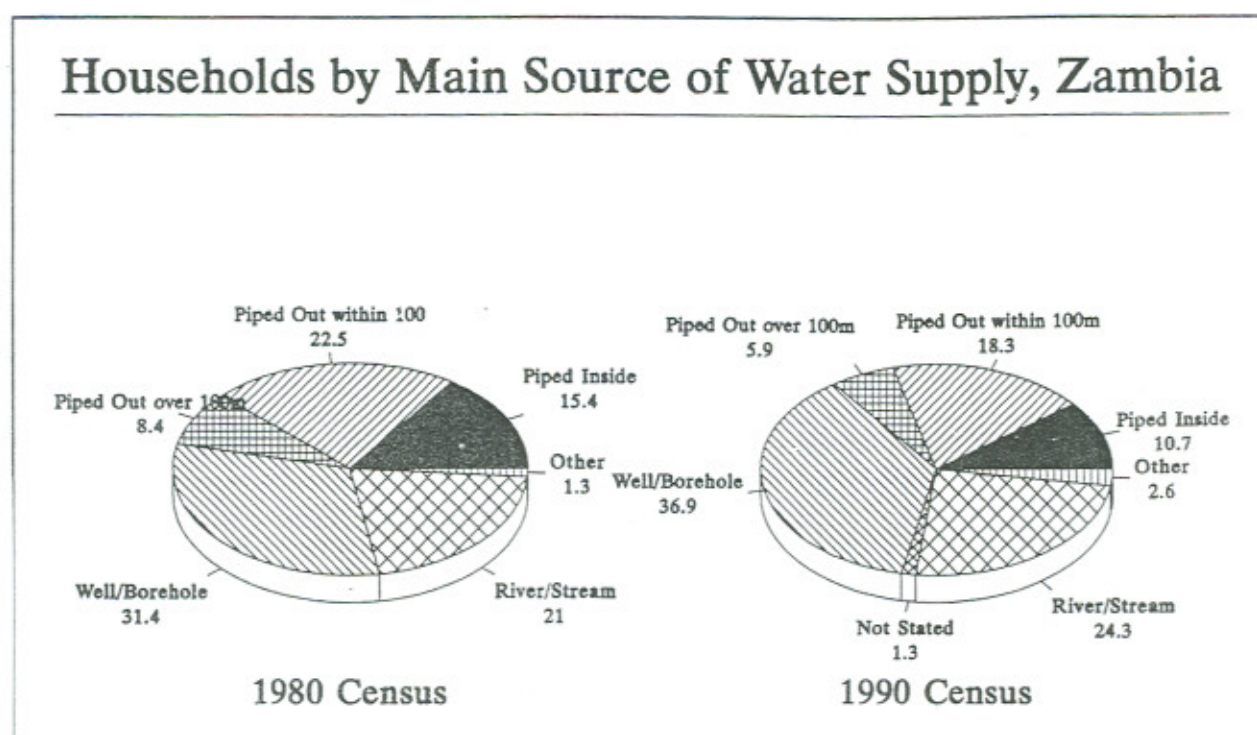
Table 11.7 shows the main sources of water supply for Zambia's households in 1980 and 1990. There is a deterioration in the standards of water supply between 1980 and 1990. The proportion of households with access to piped water, inside or outside the housing unit, decreased from 46 percent in 1980 to 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	Lusaka	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



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 the in rural areas and flush toilets in urban areas. The "other" toilet facilities include the bush. The bucket and aqua-priv 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. The majority of the households in Southern Province use "other" toilet facilities. Flush toilets are common in Copperbelt and 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 toilet declined from 23 percent in 1980 to 17 percent in 1990. Those using pit latrines increased from 46 percent to 53 percent.

Domestic Energy

Table 11.9 presents data on sources of energy for cooking. Wood is generally the most common source of cooking energy 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 cooking. Proportions using these sources are 89 and 56 percent, respectively. Gas, paraffin and coal are uncommon sources of 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 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

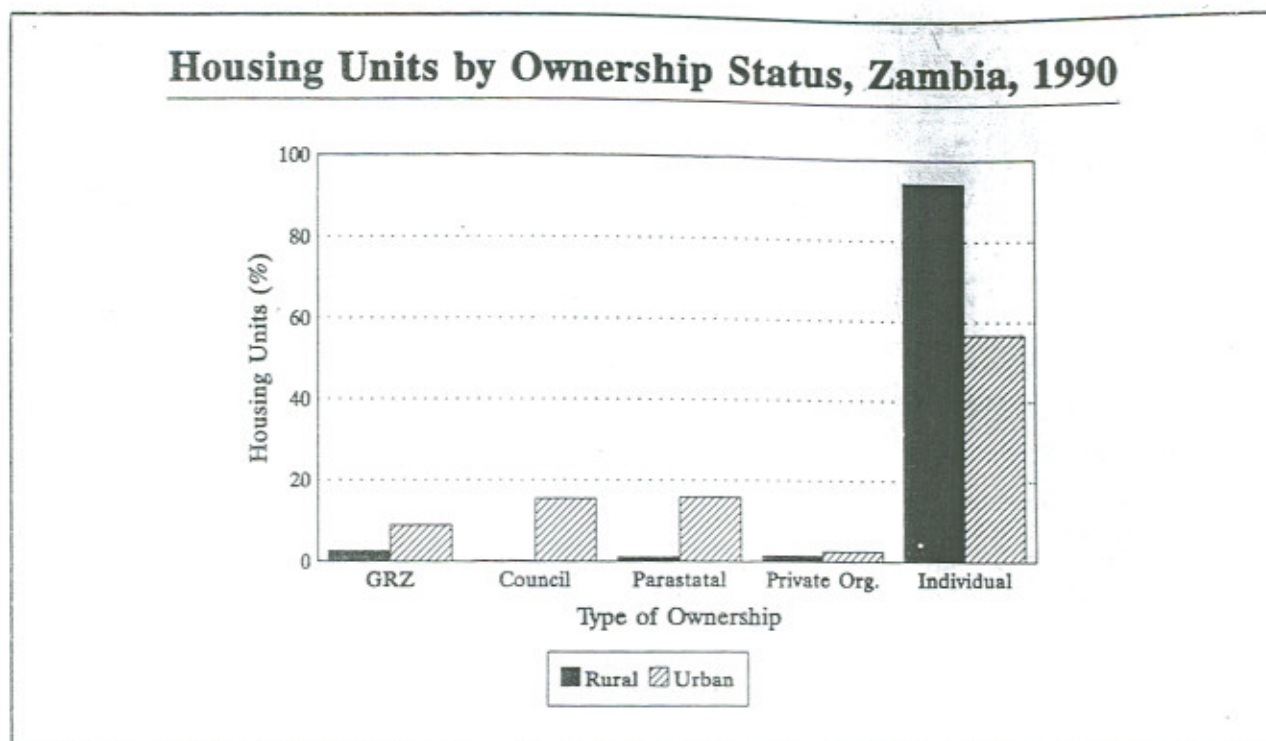
Table 11.12 presents data on ownership status of housing units by residence. The table shows that in the entire country, 80 percent of the 1,321,062 housing units are owned by individuals, 5 percent by the Central Government, 6 percent by the District Council, another 6 percent by Parastatal Organisations 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	Lunapula	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.

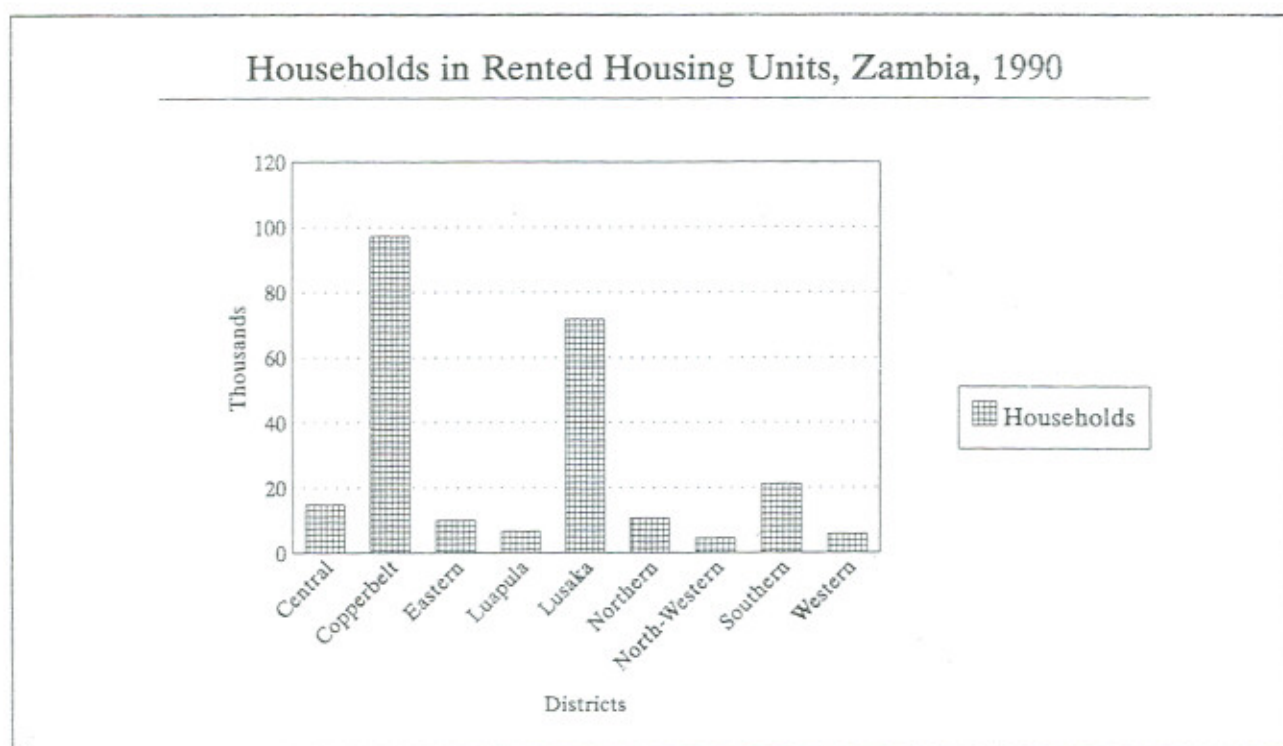
Table 11.13 shows that 242,286 households occupy rented housing units. Of these, 30,497 are in rural and 211,789 in urban areas. The most common landlords in the country are individuals renting out 38 percent while the least common are the Private Organisations which rent out 3 percent. In rural and 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 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 household members, relationship of household members to household heads and the presence of members below the age of 12 years.

Marital Status of Household Heads

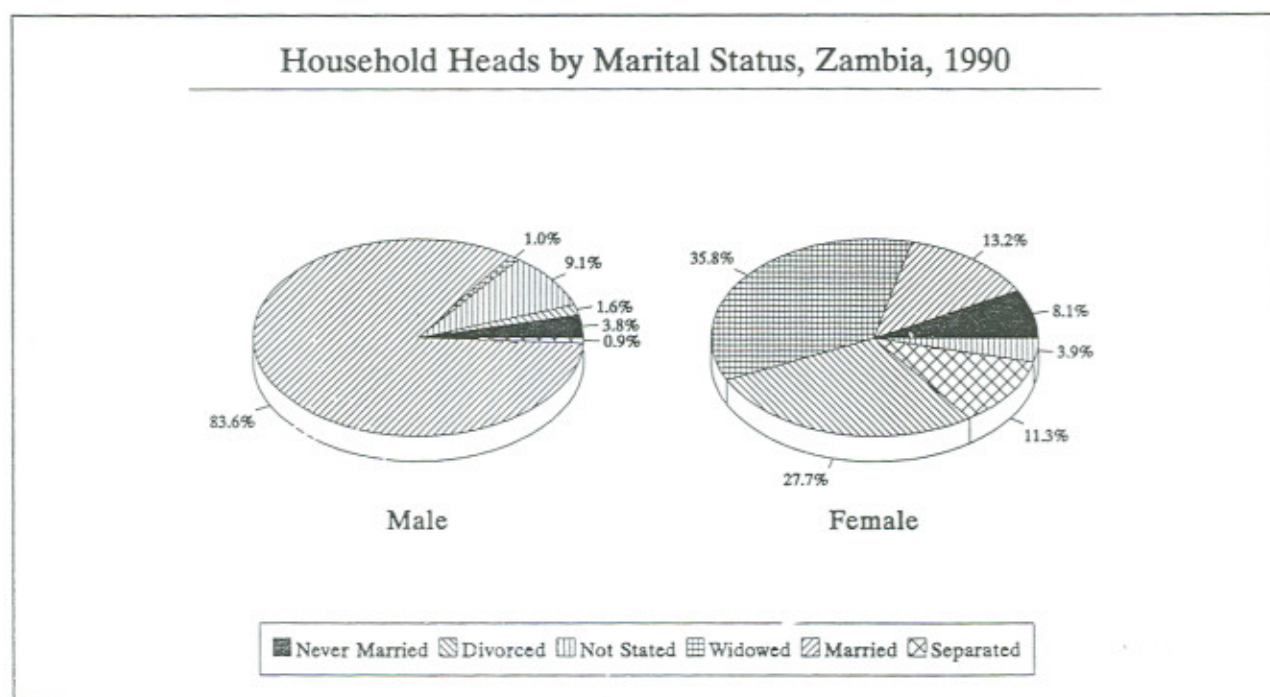
Table 11.17 presents data on marital status of household heads by sex for Zambia as well as for rural and urban areas. The table shows that 84 percent of the male household heads are married compared to 13 percent of female heads, see figure 11.8. Female heads of households are mainly widowed or divorced. 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	7.3	1.0	31.6	0.6	25.2	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, 1990

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.

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APPENDIX I

KEY PERSONS INVOLVED IN THE 1990 CENSUS ANALYSIS

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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
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QUESTIONNAIRE NO

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 OF

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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 (DE FACTO POPULATION CODE 1 AND 2 OF P-3)			
CODE	MALE	FEMALE	TOTAL
1			
2			
TOTAL			

GENERAL CHARACTERISTICS									
PERSONS									
NAME	RELATIONSHIP	SEX	AGE	DISABILITY	15	16	17	18	19
(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 did not spend last night here (other than the head of household)?	(d) What is the name of the head of household?	(e) What are the names of persons who spent last night here (other than the head of household)?	(f) What are the names of usual household members who did not spend last night here (other than the head of household)?	(g) What are the names of persons who spent last night here (other than the head of household)?	(h) What are the names of usual household members who did not spend last night here (other than the head of household)?	(i) What are the names of persons who spent last night here (other than the head of household)?	(j) What are the names of usual household members who did not spend last night here (other than the head of household)?
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

FORM CPMH - 9001

PAGE 3

GENERAL CHARACTERISTICS		MIGRATION		P - 9		P - 10		P - 11		P - 12		P - 13		P - 14		P - 15		P - 16		P - 17		P - 18		P - 19		P - 20		P - 21		P - 22		P - 23		P - 24		P - 25		P - 26		P - 27		P - 28		P - 29		P - 30		P - 31		P - 32		P - 33		P - 34		P - 35		P - 36		P - 37		P - 38		P - 39		P - 40		P - 41		P - 42		P - 43		P - 44		P - 45																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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FORM CPH-9001

GENERAL CHARACTERISTICS		ETHNICITY AND LANGUAGE		MIGRATION		LATINUS		REB		NUM		L	
ALL PERSONS		What is your language of communication?		Where was staying in August last year?		Is this part of the district rural or urban?		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?	
What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?	
What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?		What is your language of communication?	
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[illegible]

FOR PERSONS 12 YEARS AND OVER					
SEX 1 M 2 F	ECONOMIC ACTIVITY		EMPLOYMENT STATUS	OCCUPATION	INDUSTRY
	What was.....mainly doing in the last 7 days?	What has.....mainly been doing since.....1989?	Since.....1989? Has.....been mainly?	What was.....'s main occupation since.....1989? (Write name of occupation and enter code)	What kind of main product of service is (was) produced? Where..... works/worked? (Write name of industry and enter code)
	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)	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)	1 - an employer? 2 - an employee? 3 - self-employed? 4 - an unpaid family worker?		
	P - 19	P - 20	P - 21	P.....22	P.....23
	64	65	66	67 - 69	70 - 72
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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FOR PERSONS 12 YRS AND OVER		FOR FEMALES 12 YEARS AND OVER												
		FERTILITY (Own children ever born alive)												
S E R I A L N U M B E R	MARITAL STATUS 1-Married? 2-Separated? 3-Divorced? 4-Widowed? 5-Never married? (If female, GO TO F-1, other- wise go to next person or M-1 if last person)	AGE AT FIRST MARRIAGE What was ...s age when he/she first got married? (If male GO TO next person other- wise M-1) (Give age in completed years only)	LIVE BIRTH Have you ever had a live birth? (Includ- ing babies who died after birth) 1-Yes 2-No (If "No" GO TO next person or M-1)	AGE AT FIRST LIVE BIRTH How old were you when you first had a 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 -							
					How many of these are male and how many are female?		a. How many are still living with you? How many of these are male and how many are female?		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	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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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MORTALITY		HOUSING CHARACTERISTICS	
RECORD TYPE	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 ? Female ?	25 26
H	HOUSEHOLD CHARACTERISTICS		H-1 Type of housing
23	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 - Aquatic 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 Parastatal ? 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 Parastatal ? 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 Parastatal ? 4 - A Private Organ. ? 5 - An individual ?	38
	HH-13 a. How many radios does this household/institution have ?		39-44
	b. How many television sets does this household/institution have ?		45-46
	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 or mud bricks 3 - Concrete blocks/slab 4 - Stone 5 - Iron sheets 6 - Asbestos/hardboard/wood 7 - Pole and daga/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 Bedrooms	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.		