

**CENSUS OF POPULATION,  
HOUSING AND AGRICULTURE  
1990**

**VOLUME 7**

**NORTH-WESTERN PROVINCE  
ANALYTICAL REPORT**

CENTRAL STATISTICAL OFFICE  
P. O. BOX 31908,  
LUSAKA, ZAMBIA.

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<sup>th</sup> in the series of analytical reports produced by the Central Statistical Office (CSO). The report contains data on Population and Housing for North-Western Province, 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.

# CONTENTS

PREFACE .....	(i)
CONTENTS .....	(ii)
LIST OF TABLES .....	(v)
LIST OF FIGURES .....	(xi)
EXECUTIVE SUMMARY .....	(xiii)

## CHAPTER 1: BACKGROUND

1.1 Geography .....	1
1.2 People .....	1
1.3 Economy .....	2
1.4 Education .....	3
1.5 Health .....	4

## CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

2.1 Introduction .....	7
2.2 Definition of Concepts .....	7
2.3 Methods of Evaluation .....	8
2.4 Summary .....	20

## CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

3.1 Introduction .....	21
3.2 Population Size and Growth .....	21
3.3 Population Composition .....	23
3.4 Summary .....	29

## CHAPTER 4: LANGUAGE OF COMMUNICATION

4.1 Introduction .....	31
4.2 Predominant Language of Communication .....	31
4.3 Predominant Language Group .....	32
4.4 Second Language of Communication .....	34
4.5 Summary .....	36

## CHAPTER 5: EDUCATIONAL CHARACTERISTICS

5.1	Introduction . . . . .	37
5.2	Concepts and Definitions . . . . .	37
5.3	Literacy Status . . . . .	38
5.4	School Attendance . . . . .	41
5.5	Previously Attended School . . . . .	48
5.6	Highest Level of Education Completed . . . . .	50
5.7	Selected Fields of Study . . . . .	54
5.8	Summary . . . . .	56

## CHAPTER 6: ECONOMIC CHARACTERISTICS

6.1	Introduction . . . . .	57
6.2	Working-Age Population . . . . .	57
6.3	Economically Active Population . . . . .	58
6.4	Economically Inactive Population . . . . .	64
6.5	Labour Force Participation Rates . . . . .	63
6.6	Employment Status . . . . .	66
6.7	Working Population by Occupation . . . . .	68
6.8	Working Population by Industry . . . . .	69
6.9	Unemployment . . . . .	72
6.10	Summary . . . . .	76

## CHAPTER 7: CHILDREN, YOUTH AND WOMEN

7.1	Introduction . . . . .	77
7.2	Population Change, Composition and Distribution of Children and Youth . . . . .	77
7.3	Social and Economic Characteristics of Children and Youth . . . . .	80
7.4	Social and Economic Characteristics of Women . . . . .	85
7.5	Summary . . . . .	89

## CHAPTER 8: NUPTIALITY AND FERTILITY

8.1	Introduction . . . . .	91
8.2	Concepts and Definitions . . . . .	91
8.3	Nuptiality . . . . .	92
8.4	Fertility . . . . .	96
8.5	Fertility Differentials . . . . .	101
8.6	Summary . . . . .	101

## CHAPTER 9: MORTALITY

9.1	Introduction . . . . .	103
9.2	Definitions and Concepts . . . . .	103
9.3	Crude Death Rate (CDR) . . . . .	104
9.4	Period Measures . . . . .	104
9.5	Mortality by Selected Background Characteristics . . . . .	107
9.6	Mortality Trends . . . . .	106
9.7	Adult Mortality . . . . .	116
9.8	Summary . . . . .	118



# LIST OF TABLES

## CHAPTER 1: BACKGROUND

Table 1.1	Population, Area, Density, Percent Distribution and Annual Growth Rate by District, 1969, 1980 and 1990	1
Table 1.2	Major Crops Grown, North-Western Province, 1988-90	2
Table 1.3	Livestock Population by Sector, North-Western Province, 1980-1989	3
Table 1.4	Schools, Teachers and Enrolment, North-Western Province 1980 - 1986	4
Table 1.5	Enrolment Ratios of Primary Schools, North-Western Province, 1980-1987	4
Table 1.6	Number of Health Institutions, Beds and Cots by Type of Health Institution, District and year, 1986, 1988 and 1990	5
Table 1.7	Immunisations of Children Below 1 Year, North-Western Province, 1985-1988	5

## CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

Table 2.1	Population Distribution by Broad Age Groups, North-Western Province, 1980 and 1990	8
Table 2.2	Dependency Ratios and Child-Woman Ratio for North-Western Province, 1980 and 1990	10
Table 2.3	Myers' Index for Digit Preference in Age Data, North-Western Province, 1980 and 1990	11
Table 2.4	Summary of Myers' Index for Digit Preference in Age Data by Rural/Urban, North-Western Province, 1980 and 1990	11
Table 2.5	Most Preferred Digits, North-Western Province, 1980 and 1990	12
Table 2.6	Sex Ratios for North-Western Province, 1980 and 1990	15
Table 2.7	Population by Five Year Age Group, Sex, Age Ratio and Age-Sex Accuracy Index, North-Western Province, 1980	16
Table 2.8	Population by Five Year Age Group, Sex, Age and Age-Sex Accuracy Index, North-Western Province, 1990	17
Table 2.9	Cohort Survival Ratios by Sex, North-Western Province, 1980-1990	18
Table 2.10	Overall Survival Ratios, North-Western Province, 1980 - 1990	19

## CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

Table 3.1	Population Size by Sex, Residence and District, North-Western Province, 1990	21
Table 3.2	Population Size and Growth Rates North-Western Province, 1969, 1980 and 1990	22
Table 3.3	Area and Population Density by District and Population Census Year, North-Western Province, 1969, 1980 and 1990	23
Table 3.4	Age-Distribution of Population by Rural, Urban and Districts, (Percentage), North-Western Province, 1990	25
Table 3.5	Ethnic Composition of the Population of North-Western Province, 1990	26
Table 3.6	Foreign Population of North-Western Province by Citizenship, 1990 and Percentage Foreign Citizen, 1980	26
Table 3.7	Crude Activity Ratio, North-Western Province, 1990	27
Table 3.8	Age-Sex Specific Activity Ratio (ASSAR) North-Western Province, 1990	28

## CHAPTER 4: LANGUAGE OF COMMUNICATION

Table 4.1	Predominant Language of Communication by District, (Percent), North-Western Province, 1990	32
Table 4.2	Predominant Language Groups by Sex and Rural/Urban, (Percent), North-Western Province, 1990	33
Table 4.3	Predominant Language Groups by Year, (Percent), North-Western Province, 1980 and 1990	33
Table 4.4	Second Language of Communication by District, (Percent), North-Western Province, 1990	34
Table 4.5	Second Language Groups by Sex and Rural/Urban, (Percent), North-Western Province, 1990	35
Table 4.6	Second Language Groups, (Percent), North-Western Province, 1980 and 1990	35
Table 4.7	Rank Order of Predominant and Second Language of Communication by District, North-Western Province, 1990	36

## CHAPTER 5: EDUCATIONAL CHARACTERISTICS

Table 5.1	Literate Population by Age Group, Sex and Residence, (Percent), North-Western Province, 1990	39
Table 5.2	Population Presently Attending School by Sex, Age and Residence, (Percent), North-Western Province, 1990	42
Table 5.3	Population Presently Attending School by Sex, Age and Residence, (Percent), North-Western Province, 1980	44
Table 5.4	Population (5 Years and Older) Presently Attending School by Age, Sex, Level of Education Completed and Residence, (Percent) North-Western Province, 1990	45
Table 5.5	Population (5 Years and Older) Presently Attending School by Age, Sex, Level of Education Completed and Residence, North-Western Province, 1980	47
Table 5.6	Population Previously Attended School by Sex, Age and Residence, North-Western Province, 1990	49
Table 5.7	Population Previously Attended School by Sex, Age and Residence, North-Western Province, 1980	50
Table 5.8	Population (15 Years and Older) by Highest Level of Education Completed, Sex and Age Group, (Percent), North-Western Province, 1990	51
Table 5.9	Population (15 Years and Older) by Highest Level of Education Completed, Sex and Age Group, (Percent), North-Western Province, 1980	54
Table 5.10	Selected Fields of Study by Level of Education Completed, (Percent), North-Western Province, 1990	55
Table 5.11	Certificate and Diplomas by Level of Education, Sex and Rural/Urban, (Percent), North-Western Province, 1990	56

## CHAPTER 6: ECONOMIC CHARACTERISTICS

Table 6.1	Population 12 Years and Over by Broad Age Groups, Residence and Sex, (Percent), North-Western Province, 1980 and 1990	58
Table 6.2	Economically Active Population 12 Years and Over by Residence and Sex, (Percent), North-Western Province, 1980 and 1990	59
Table 6.3	Current Economically Active Population 12 Years and Over by Age and Sex, (Percent), North-Western Province, 1990	62
Table 6.4	Current Economically Inactive Population by Reason for Inactivity, Residence and Sex, (Percent), North-Western Province, 1990	63
Table 6.5	Current Economically Inactive Population by Reason for Inactivity, Residence and Sex, (Percent), North-Western Province, 1990	63

Table 6.6	Current Labour Force Participation Rates by Age, Sex and Residence, (Percent), North-Western Province, 1980 and 1990 . . . . .	64
Table 6.7	Usually Working Population 12 Years and Over by Employment Status, Sex and Residence, (Percent), North-Western Province, 1980 and 1990 . . . . .	67
Table 6.8	Usually Working Population by Occupation, Sex and Residence, (Percent), North-Western Province, 1980 and 1990 . . . . .	69
Table 6.9	Usual Working Population 12 Years and Over by Employment Status and Industry, (Percent), North-Western Province, 1980 and 1990 . . . . .	70
Table 6.10	Usually Working Population 12 Years and Over by Industry and Employment Status, (Percent), North-Western Province, 1980 and 1990 . . . . .	71
Table 6.11	Current Unemployment Rates by Sex and Residence, (Percent), North-Western Province, 1980 and 1990 . . . . .	73
Table 6.12	Current Unemployment Rates by Age, Sex and Residence, (Percent), North-Western Province, 1990 . . . . .	73
Table 6.13	Usually Unemployed by Level of Education Completed and Age, (Percent), North-Western Province, 1990 . . . . .	74
Table 6.14	Currently Unemployed by Marital Status, Sex and Rural/Urban, (Percent), North-Western Province, 1990 . . . . .	75

## CHAPTER 7: CHILDREN, YOUTH AND WOMEN

Table 7.1	Population Size and Growth Rate of Children and Youth by Broad Age Group, North-Western Province, 1980 and 1990 . . . . .	78
Table 7.2	Population Under 25 Years as a Proportion of Total Population by Sex and Broad Age Group, North-Western Province, 1990 . . . . .	79
Table 7.3	Population Distribution and Sex Ratio of Children and Youth by District, North-Western Province, 1990 . . . . .	79
Table 7.4	Youth by Age, Sex, Marital Status and Residence, (Percent), North-Western Province, 1990 . . . . .	80
Table 7.5	Proportion of Female Youth who have had a Birth by Age and Residence, North-Western Province, 1990 . . . . .	81
Table 7.6	Proportion of Children and Youth who can Read and Write by Age and Sex, North-Western Province, 1990 . . . . .	82
Table 7.7	Population (15-24 Years) by Age, Sex and Highest Level of Education Completed, (Percent), North-Western Province, . . . . .	82
Table 7.8	Children and Youth (12-24 Years) by Age, Sex, Nature of Usual Economic Activity and Residence, (percent), North-Western Province, 1990 . . . . .	83
Table 7.9	Unemployment Rate of Youth by Age, Sex and Residence, North-Western Province, 1990 . . . . .	85
Table 7.10	Female Household Heads as a Proportion of Total Household Heads by Marital Status, Residence and District (Percent), North-Western Province, 1990 . . . . .	86
Table 7.11	Population (15 Years and Above) by Highest Level of Education Completed and Sex, (Percent), North-Western Province, 1990 . . . . .	86
Table 7.12	Female Household Heads by Highest Level of Education Completed and Residence, (Percent), North-Western Province, 1990 . . . . .	87
Table 7.13	Usually Working Females (12 Years and Older) as a Proportion of Total Usually Working Population by Employment Status and Residence (Percent), North-Western Province, 1990 . . . . .	87
Table 7.14	Usually Working Females (12 Years and Older), as a Proportion of Total Usually Working Population by Occupation and Employment Status, (Percent), North-Western Province, 1990 . . . . .	88
Table 7.15	Usually Working Females (12 Years and Older) as a Proportion of Total Usually Working Population by Industrial Category and Employment Status, (Percent), North-Western Province, 1990 . . . . .	89

## CHAPTER 8: NUPTIALITY AND FERTILITY

Table 8.1	Adult Population Classified by Age, Sex and Marital Status, (Percent), North-Western Province, 1990	93
Table 8.2	Adult Male Population by Age and Marital Status, Rural-Urban Areas, (Percent), North-Western Province, 1990	94
Table 8.3	Adult Female Population by Age and Marital Status, Rural-Urban Areas, (Percent), North-Western Province, 1990	94
Table 8.4	Total Adult Population (15-49) by Sex and Marital Status, Rural-Urban and Districts, (Percent), North-Western Province, 1990	95
Table 8.5	Singulate Mean Age at Marriage Classified by Sex and Residence, North-Western Province, 1990	95
Table 8.6	Singulate Mean Age at First Marriage by Educational Attainment and Residence, (Females), North-Western Province, 1990	96
Table 8.7	Summary Fertility Measures, North-Western Province, 1980 and 1990	98
Table 8.8	Age-Specific Fertility Rates (ASFR), North-Western Province, 1990	98
Table 8.9	Net Reproduction Rate (NRR), North-Western Province, 1990	99
Table 8.10	Average Parity, (Observed), North-Western Province, 1990	100
Table 8.11	Completed Family Sizes by Level of Education of Women, North-Western Province, 1990	101

## CHAPTER 9: MORTALITY

Table 9.1	Crude Death Rate by Sex, North-Western Province, 1980 and 1990	104
Table 9.2	Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model North-Western Province, 1990	105
Table 9.3	Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model North-Western Province, 1980	105
Table 9.4	Infant and Child Mortality Rates by Five Year Period Preceding the Census, North-Western Province, 1980 and 1990	106
Table 9.5	Infant and Child Mortality Rates for the 5 Year Period Preceding the Census, by Selected Background Characteristics, North-Western Province, 1980 and 1990	108
Table 9.6	Expectation of Life at Birth for the 5 Year Period Preceding the Census, by Selected Background Characteristics, North-Western Province, 1980 and 1990	111
Table 9.7	Trends of Infant, Child Mortality Rates and Expectation of life at Birth, North-Western Province, 1990	113
Table 9.8	Trends of Infant, Child Mortality Rates and Expectation of life at Birth, North-Western Province, 1980	115
Table 9.9	Coale and Demeny North Model Life Table for North-Western Province - Males, 1990	117
Table 9.10	Coale and Demeny North Model Life Table for North-Western Province - Females, 1990	118

## CHAPTER 10: DISABILITY

Table 10.1	Disabled Persons by Type of Disability, Sex, Residence and District, (Percent), North-Western Province, 1990	120
Table 10.2	Disabled Persons as a Proportion of Total Population by Residence and Type of Disability, (Percent), North-Western Province, 1990	121
Table 10.3	Sex Ratio of Disabled Persons by Residence and Type of Disability, North-Western Province, 1990	122
Table 10.4	Disabled Persons by Type of Disability and Age Group, (Percent) North-Western Province, 1990	122
Table 10.5	Disabled Persons (12 Years and Older) by Type of Disability and Usual Economic Activity, (Percent), North-Western Province, 1990	123
Table 10.6	Disabled Household Heads Usually Active by Disability and Employment Status, (Percent), North-Western Province, 1990	124
Table 10.7	Disabled Persons (5 Years and Older) by Type of Disability and Level of Education Completed, (Percent), North-Western Province, 1990	125

## CHAPTER 11: HOUSEHOLDS AND HOUSING CHARACTERISTICS

Table 11.1	Households by Number of Rooms, Rural/Urban and Districts (Percent), North-Western Province, 1990	128
Table 11.2	Households by Household Size, Number of Rooms and Residence, (Percent), North-Western Province, 1990	130
Table 11.3	Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), North-Western Province, 1990	131
Table 11.4	Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), North-Western Province, 1990	132
Table 11.5	Occupied Housing Units by Construction Materials of Walls and Floors, (Percent), North-Western Province, 1990	133
Table 11.6	Occupied Housing Units by Construction Materials of Walls and Floors, (Percent) North-Western Province, 1990	134
Table 11.7	Households by Main Source of Water Supply, (Percent), North-Western Province, 1980 and 1990	135
Table 11.8	Households by Type of Toilet and Residence, (Percent), North-Western Province, 1990	137
Table 11.9	Households by Main Source of Energy used for Cooking and District, (Percent), North-Western Province, 1990	137
Table 11.10	Households by Main Source of Energy for Cooking, (Percent) North-Western Province, 1980 and 1990	138
Table 11.11	Housing Units by Main Source of Energy Used for Lighting, (Percent) North-Western Province, 1990	138
Table 11.12	Occupied Housing Units by Ownership Status and District, (Percent), North-Western Province, 1990	139
Table 11.13	Households in Rented Housing Units by Residence and Ownership, (Percent), North-Western Province, 1990	139
Table 11.14	Households by Size and Sex of Head and District, (Percent), North-Western Province, 1990	141
Table 11.15	Average Household Size by Residence and Sex of Head, North-Western Province, 1980 and 1990	142
Table 11.16	Household Size, (Percent) North-Western Province, 1980 and 1990	142
Table 11.17	Household Heads by Marital Status, Sex and Residence, (Percent), North-Western Province, 1990	143
Table 11.18	Household Heads by Marital Status, Age and Sex, (Percent), North-Western Province, 1990	144

Table	11.19	Household Heads by Level of Education Completed, (Percent) North-Western Province, 1990 .....	144
Table	11.20	Households by Size and Number of Members Economically Active, (Percent), North-Western Province, 1990 .....	145
Table	11.21	Households by Relationship to Household Head and Number of Persons, (Percent), North-Western Province, 1990 .....	146
Table	11.22	Households by Sex of Heads and Number of Members Below 12 Years of Age, (Percent), North-Western Province, 1990 .....	147

# LIST OF FIGURES

## CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

Figure 2.1	Population Distribution by Broad Age Groups, North-Western Province, 1980 and 1990	9
Figure 2.2	Population Distribution of North-Western Province in Single Years, 1980	13
Figure 2.3	Population Distribution of North-Western Province in Single Years, 1990	13
Figure 2.4	Population Distribution of North-Western Province by 5 Year Age Group, 1980	14
Figure 2.5	Population Distribution of North-Western Province by 5 Year Age Group, 1990	14
Figure 2.6	Population Distribution of North-Western Province by Sex Ratio, 1980 and 1990	16
Figure 2.7	Cohort Survival Ratios by Sex, North-Western Province, 1980-1990	18
Figure 2.8	Overall Survival Ratios by Sex, North-Western Province, 1980-1990	19

## CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

Figure 3.1	Population Distribution by Districts, North-Western Province, 1990	22
Figure 3.2	Population Pyramid, North-Western Province, 1980	24
Figure 3.3	Population Pyramid, North-Western Province, 1990	24
Figure 3.4	Age-Sex Specific Activity Ratio, North-Western Province, 1990, Rural	28
Figure 3.5	Age-Sex Specific Activity Ratio, North-Western Province, 1990, Urban	29

## CHAPTER 5: EDUCATIONAL CHARACTERISTICS

Figure 5.1	Literate Population by Age Group, North-Western Province Rural, 1990	40
Figure 5.2	Literate Population by Age Group, North-Western Province Urban, 1990	40
Figure 5.3	Population Presently Attending School, North-Western Province Rural, 1990	43
Figure 5.4	Population Presently Attending School, North-Western Province Urban, 1990	43
Figure 5.5	Population 15 Years and Older by Highest Level of Education Completed, North-Western Province, 1980	52
Figure 5.6	Population 15 Years and Older by Highest Level of Education Completed, North-Western Province, 1980	52

## CHAPTER 6: ECONOMIC CHARACTERISTICS

Figure 6.1	Economically Active Population 12 Years and Over, Northern Province, 1980	60
Figure 6.2	Current Economically Active Population 12 Years and Over, Northern Province, 1990	60
Figure 6.3	Current Labour Force Participation Rates, North-Western Province, 1990, Rural	65
Figure 6.4	Current Labour Force Participation Rates, North-Western Province, 1990, Urban	65
Figure 6.5	Usually Working Population 12 Years and Over by Industry North-Western Province	68
Figure 6.6	Usually Unemployed by Sex, North-Western Province, 1990	72
Figure 6.7	Currently Unemployed by Marital Status, North-Western Province, 1990	75
Figure 6.7	Usually Working Population 12 Years and Over by Industry, North-Western Province, 1990	76

## CHAPTER 7: CHILDREN, YOUTH AND WOMEN

Figure 7.1	Population Distribution of Children and Youth by Residence, North-Western Province, 1990	78
Figure 7.2	Economic Activity of Youth (15-19 Years) by Sex, North-Western Province, 1990	84
Figure 7.3	Economic Activity of Youth, (20-24 Years) by Sex, North-Western Province, 1990	84
Figure 7.4	Usually Working Females (12 Years and Above) by Employment Status (Percent), of all working Persons, North-Western Province, 1990	88

## CHAPTER 8: NUPTIALITY AND FERTILITY

Figure 8.1	Adult Population by Marital Status, North-Western Province, 1990	93
Figure 8.2	Age-Specific Fertility Rates, (Observed), North-Western Province, 1990	99
Figure 8.3	Average Parity, North-Western Province, 1990	100

## CHAPTER 9: MORTALITY\*

Figure 9.1	Infant Mortality Rates, North-Western Province, 1965 - 1990	113
Figure 9.2	Child Mortality Rates, North-Western Province, 1965 - 1990	114
Figure 9.3	Under-Five Mortality Rates, North-Western Province, 1965 - 1990	115
Figure 9.4	Expectation of Life at Birth, North-Western Province, 1965-1990	116
Figure 9.5	Expectation of Life at Exact Age, North-Western Province, 1990	117

## CHAPTER 10: DISABILITY

Figure 10.1	Usual Economic Activity of Disabled Persons, North-Western Province, 1990	124
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## CHAPTER 11: HOUSEHOLDS AND HOUSING CHARACTERISTICS

Figure 11.1	Households by Districts, North-Western Province, 1990	129
Figure 11.2	Households by Household Size, North-Western Province, 1990	130
Figure 11.3	Households by Main Source of Water Supply, North-Western Province	136
Figure 11.4	Households in Rented Housing Units, North-Western Province, 1990	140
Figure 11.5	Household Heads by Marital Status, North-Western Province, 1990	143

## EXECUTIVE SUMMARY

North-Western Province has a population of 387,552 of which 185,038 are males and 202,514 are females. The majority of the people (331,465) live in rural areas and 56,087 live in urban areas. The median age is 17 years. Forty five percent of the total population in the province is below the age of 15 years implying that the population of the province is young. North-western Province has an area of 125,826 Square Kilometres giving a population density of 3.1 persons per square kilometre in 1990. The population growth rate remained at 20.5 percent for the periods 1969-80 and 1980-90.

The most spoken language in North-Western Province is Lunda spoken by 32.0 percent of the population followed by Kaonde which is spoken by 29 percent and Luvale spoken by 18 percent. Although English is the official language of communication, only 0.7 percent speak it as a predominant language of communication.

Of the population aged 5 years and older, 42.8 percent are able to read and write. The respective proportions of males and females are 50.9 and 35.5 percent. In rural areas, 38.6 percent of the population aged 5 years and older is literate compared to 67.3 percent in urban areas. Of this population 30 percent is currently attending school. The respective proportions of males and females currently attending school are 36.3 percent and 24.8 percent. The proportion of those currently attending school of 26.6 percent in rural areas is lower than in urban areas of where 55.1 percent are currently attending school. The most common fields of study for males are engineering, accountancy, secretarial training, agriculture/forestry/fishery and wood work. Females in the North-Western Province mostly take up courses in nursing, teacher training and secretarial.

The working age population (12 years and above) in the North-Western Province is 244,195 of which 113,717, are males and 130,478 are females. The working age is 209,011 in rural areas and 35,184 in urban areas. In 1990, the agricultural industry employed 72.3 percent of the labour force, the mining industry has employed 0.3 percent. There has been a big decline in unemployment in the province from 58.8 percent in 1980 to 13.8 percent in 1990 for the province. The rate of unemployment declined from 51.2 percent in 1980 to 15.1 percent in 1990 for males and from 69.5 percent in 1980 to 9.3 percent in 1990 for females. The decline in unemployment is due to be the growing popularity of the informal sector as the employer of the last resort and the improved enumeration of the informal sector economic activities in the 1990 Census compared to the 1980 Census.

Marriage in Northern Province is widespread. At age group 45-49 years, only 3.9 percent of males and 3.7 percent of females are never married. Females marry at early ages than males. The average age at marriage is 25.3 years for males and 21.0 years for females.

Total Fertility Rate (TFR) for North-Western Province increased marginally from 6.5 in 1980 to 6.9 children per woman in 1990. Fertility levels vary among women with different backgrounds. Among women with different levels of education, TFR is 6.0 for women with no education, 7.1 for women with primary level, 5.6 with Secondary level and 2.3 for children per woman for women with a higher level of education.

Crude Death Rate in North-Western Province increased from 11.5 in 1980 to 14.8 deaths per 1000 population in 1990. Infant Mortality Rate increased from 76.7 in 1980 to 103.0 deaths per 1000 children aged below 1 year in 1990. Child Mortality Rate also increased from 50 deaths in 1980 to 75 deaths per 1000 children aged between 1 and 4 years in 1990. Similarly, Under Five Mortality Rate increased from 94.7 deaths in 1980 to 125.7 deaths per 1000 children.

Life expectancy declined from 57.1 years in 1980 to 51.1 years in 1990. The expectation of life declined from 58.6 years in 1980 to 49.6 in 1990 for males and from 55.3 years in 1980 to 52.7 years in 1990 for females.

Out of the total population of 387,522 enumerated in North-Western Province in 1990, 3,231 persons are disabled of which 1,717 are males and 1,514 are females. There are more disabled persons in rural areas (2,919 percent) compared to urban areas (312).

Majority of the households in North-Western Province occupy two roomed housing units. Two roomed housing units are occupied by 40.5 percent of the total 73,381 households. The average number of rooms occupied by a household is 2.5 while the average number of persons per room is 2.1.



# CHAPTER 1

## BACKGROUND

### 1.1 GEOGRAPHY

The North-Western Province covers an area of 125,826 sq.km which is about 17 percent of the total area of Zambia. About 47 percent of the province is forest, game management areas and National Parks. In 1990 the province had six administrative districts namely Mufumbwe, Kabompo, Kasempa, Mwinilunga, Solwezi and Zambezi.

The North-Western Province is in the high rainfall zone of Zambia. The rainy season lasts for six months, from November to April. The southern parts of the province have medium rainfall of about 1000mm while Solwezi and Mwinilunga are high rainfall areas with 1300 to 1400 mm per year. The North-Western Province is mainly covered by two types of soils. These are, the Barotse sands which are sandy and acidic and are found in the south-western parts of the province and the sand veldts which are loamy sands and are found in the eastern and northern parts of the province.

North-Western Province is covered by an extensive net-work of rivers and streams. It is the source of the Zambezi, Kafue and Kabompo which are some of the major rivers in Zambia.

### 1.2 PEOPLE

In 1990 the population of North-Western Province was 387,552. The population increased from 302,668 in 1980. This increase represents an average growth rate of 2.5 percent. Of the 387,552 enumerated population of North-Western Province in 1990, 47.7 percent were males and 52.3 percent were females. Solwezi is the provincial headquarters and in 1990 it had the largest population in the province of 124,624. The district with the smallest population in the province was Mufumbwe. The total population of this district was 22979 which is 5.8 percent of the total population of the province. The average population density for the province increased from 2.4 persons in 1980 to 3.1 persons per square kilometre in 1990.

Table 1.1 shows that during the 1969-80 intercensal period all other districts apart from Kabompo, Solwezi and Mwinilunga had population decreases. In the 1980-90 intercensal period, population increased in all the districts in North-Western Province with Solwezi registering the highest increase.

Table 1.1

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

District	Population			Area (Sq.Km)	Density			Percentage Distribution			Growth Rate (%)	
	1969	1980	1990		1969	1980	1990	1969	1980	1990	1969-80	1980-90
Kabompo	33,376	40,347	53,195	14,532	2.3	2.8	3.7	14.4	13.3	13.7	1.9	2.8
Kasempa	32,656	30,606	36,893	20,821	1.6	1.5	1.8	14.0	10.1	9.5	-0.6	1.9
Mufumbwe	-	9,286	22,979	20,856	-	0.5	1.1	-	3.1	5.9	-	9.5
Mwinilunga	51,398	68,845	81,496	21,116	2.4	3.3	3.9	22.2	22.7	21.0	3.0	1.7
Solwezi	52,979	92,773	124,624	30,261	1.8	3.1	4.1	22.9	30.7	32.2	5.8	3.0
Zambezi	61,324	60,811	68,365	18,240	3.3	3.3	3.7	26.5	29.1	17.6	-0.1	1.2
Total	231,733	302,668	387,552	125,826	1.8	2.4	3.1	100.0	100.0	100.0	2.7	2.5

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 I.

The district with the largest geographical area is Solwezi which covers 30,261 square kilometres and the smallest district is Kabompo spread over an area of 14,532 square kilometres.

The average density for the province shows rises of 0.6 persons per square kilometre during the 1969-80 intercensal period and 0.7 persons per square kilometre during the 1980-90 intercensal period.

Solwezi had the largest population growth rate of 5.8 percent during the 1969-80 intercensal period while the least growth rate was recorded in Kasempa in which the population decreased at a rate of 0.6 percent per annum.

### 1.3 ECONOMY

Agriculture is the main economic activity in the province. Agriculture in North-Western Province is still characterised by the predominance of subsistence farming and is based on shifting cultivation. In North-Western Province manufacturing is quite insignificant. The province has two National Parks (Northern part of Kafue and Lunga West) but because of the remoteness of the area, there is hardly any tourism going on.

#### Agriculture

Crop production in North-Western province has not been very good. The major crops produced and marketed in the province are maize, tobacco, cotton, sunflower, soya beans and groundnuts. Table 1.2 shows the production and marketing of these crops in the province for selected years.

Table 1.2

Major Crops Grown, North-Western Province, 1988-90

Crops	Unit	Production and Marketing					
		1988		1989		1990	
		Produced	Marketed	Produced	Marketed	Produced	Marketed
Maize	90kg Bags	306,100	234,659	377,021	159,561	254,673	103,120
Tobacco	Kgs	-	-	11,122	11,122	28,750	6,138
Cotton	Kgs	4,346	4,346	2,071	2,071	21,000	3,054
Sunflower	50Kg Bags	2,170	2,155	1,243	509	1,407	830
Soyabean	90Kg Bags	14,360	12,440	20,974	8	27,054	17,704
Groundnut	80Kg Bags	4,973	4	2,803	0	6,934	21
Wheat	90Kg Bags	-	-	-	-	-	-

Note: (-) Figures not available.

Source: 1989/90 Agricultural Statistics Bulletin.

The people of North-Western Province also rear livestock. This is mainly done using traditional methods. There isn't much commercial livestock rearing done in the province. The livestock mainly reared is cattle, sheep, goats and pigs.

**Table 1.3****Livestock Population by Sector, North-Western Province, 1980-89**

Sector	Year					
	1980	1985	1986	1987	1988	1989
<b>Traditional</b>						
Cattle	38,190	53,807	54,883	55,981	56,557	59,462
Sheep & Goats	17,273	10,995	11,545	12,122	12,728	9,655
Pigs	5,807	10,243	10,755	11,293	11,858	2,540
<b>Commercial</b>						
Cattle		3,567	3,745	3,933	2,929	2,929
Sheep & Goats		10,995	12,095	13,304	14,634	
Pigs		10,243	11,267	12,394	13,633	

Note: (-) Figures not Available.

Source: 1989/90 Agricultural Statistics Bulletin, pp. 23 and 24.

**Communication**

North-Western Province had about 320 km of tarmac roads in 1990 but only 20 percent of the population lived in areas serviced by these roads. Similarly, there were about 870 km of gravel roads and only 25 percent of the population lived in the areas serviced by these roads in their catchment area.

There are two airports in the province, one in Solwezi and the other in Zambezi. There are a number of airstrips in other districts. There is no river transport in the province.

The establishment of a micro-wave system connecting all districts in the province was completed in 1986 and the telephone lines are functioning. However, the number of telephone extensions is not sufficient to meet the demand in some districts such as Solwezi.

**1.4 EDUCATION**

The primary school enrolment in North-Western Province in 1986 was 78,944. This is an increase from 51,814 in 1980 and 64,656 in 1983. The Secondary School enrolment increased from 3,750 in 1980, 5,360 in 1983 to 11,800 in 1986. The increase in enrolment is for both girls and boys. Table 1.4 shows some features of the education sector in the North-Western Province.

**Table 1.4**

**Schools, Teachers and Enrolment, North-Western Province 1980 - 1986**

	Year		
	1980	1983	1986
<b>Schools</b>			
-Primary	204	253	296
-Secondary	5	10	12
<b>Teachers</b>			
-Primary	1,078	1,285	1,700
-Secondary	150	215	249
<b>Enrolment</b>			
Primary - Total	51,814	64,656	78,944
- Boys	29,505	36,133	43,176
- Girls	22,309	28,523	35,768
Secondary - Total	3,750	5,360	11,800
- Boys	2,559	3,699	7,876
- Girls	1,191	1,661	3,924

Source: Educational Statistics Reports for 1980, 1983 and 1986 - Ministry of Education

Table 1.5 shows how enrolment for primary schools has improved over the years. The table shows that enrolment for boys is higher than that for girls for all the given years apart from 1987.

**Table 1.5**

**Enrolment Ratios of Primary Schools, North-Western Province 1980 - 1987**

	1980	1983	1986	1987
Primary				
- Totals	86.4	99.3	111.9	87.1
- Boys	98.4	109.8	120.3	83.0
- Girls	74.4	88.5	103.5	91.9

Source: CSO (1984, 1992): Educational Statistics (1982, 1987)

**1.5 HEALTH**

In 1990, there were 10 hospitals and 109 health centres in North-Western Province. All the districts in the province had at least one hospital apart from Mufumbwe. There are health centres in all the districts in the Province.

Table 1.6 shows that the number of health centres increased from 111 in 1986 to 113 in 1988 and decreased to 109 in 1990. The total number of beds and cots increased from 1,831 in 1986 to 2,544 in 1990.

Table 1.6

Number of Health Institutions, Beds and Cots by Type of Health Institution, Districts and Year, 1986, 1988 and 1990

	Hospitals		Health Centres		Total	
	Number	Beds/Cots	Number	Beds/Cots	Number	Beds/Cots
<b>Year</b>						
1986	10	1,039	111	792	121	1,831
1988	10	1,566	113	969	123	2,535
1990	10	1,566	109	978	119	2,544
<b>Districts -</b>						
Mufumbwe	0	0	7	60	7	60
Kabompo	2	228	13	156	15	384
Kasempa	1	164	11	36	12	200
Mwinilunga	3	361	23	190	26	551
Solwezi	1	304	32	276	33	580
Zambezi	3	509	23	260	26	769

Source: Ministry of Health (Bulletin of Health Statistics, 1985-86 and 1987-88 and Health facilities in Zambia, 1990).

### Diseases

Deaths among children below 5 years in the province are mainly due to diseases which can easily be prevented. These diseases include polio, tuberculosis, diphtheria, measles, pertussis and tetanus. There are vaccines available for these diseases. Table 1.7 shows some information on immunization for some of these diseases.

Table 1.7

Immunisations of Children Below 1 Year, North-Western Province, 1985-1988

Year	BCG	Polio Third Dose	DPT Third Dose	Measles
1985	12,248	6,909	7,380	8,760
1986	14,142	8,649	8,377	9,625
1987	14,318	14,911	8,693	9,708
1988	19,533	12,037	11,525	12,263

Source: Ministry of Health 1985-86, 1987-88 Bulletin of Health Statistics.

Table 1.7 shows that there has been an increase in immunisations administered to children below the age of 1 year during the period 1985-1988 and this could be attributed to the growing population in the province.



## CHAPTER 2

# EVALUATION OF COVERAGE AND CONTENT ERRORS

### 2.1 INTRODUCTION

Checks and controls are taken during census enumeration. However, there are usually errors in the census data despite the measures taken. Data evaluation identifies the errors that are inherent in the data and provides for possible adjustment. Information that is used in evaluating the quality of 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,
- Area of residence (rural or urban) 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.

#### *Age Ratio*

Ratio of the population in a given age group to one third of the sum of the population in the given age group, the preceding age group and the next age group, multiplied by 100.

#### *Census of Population*

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

#### *Child-Woman Ratio*

Number of children aged 0-4 years in a population to every 1000 women aged 15-49 years in the same population.

#### *Content Error*

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

#### *Coverage Error*

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

#### *Dependency-Ratio*

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

**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.

**Sex Ratio**

Number of males per 100 females in a population.

**2.3 METHODS OF EVALUATION**

During the census, some people may be completely omitted while others may be enumerated more than once or, some characteristics of an individual such as age, sex, fertility and economic activity may be incorrectly reported. In general, there are two approaches used to evaluate the quality of data, the direct and indirect methods.

The direct method basically involves carrying out a Post Enumeration Survey (PES). In a PES, a sample of households is revisited after the census and data is then collected on a smaller scale and later compared with that collected during the census. The matching process of the two sets of data can then be used to evaluate the quality of the census data. With regard to the 1990 Census, the PES was undertaken in December 1990 and the PES evaluation is in a separate report.

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

**Age Composition**

One way of assessing the quality of census enumeration is by looking at the distribution of age-sex data. Table 2.1 and Figure 2.1 show the distribution of the population in North-Western Province in broad age groups for 1980 and 1990 Censuses.

**Table 2.1**

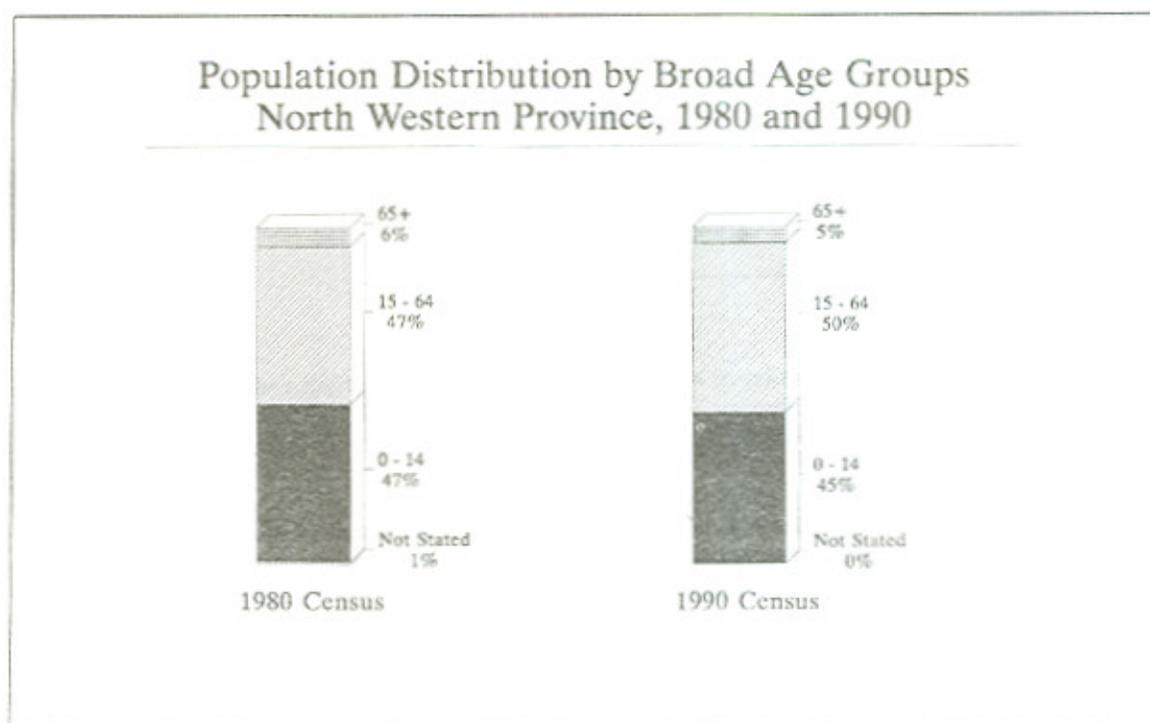
**Population Distribution by Broad Age Groups, North-Western Province, 1980 and 1990**

Age Group	Population Distribution			
	1980 Population	1980 Percent	1990 Population	1990 Percent
0 - 14	141,331	46.7	173,964	44.9
15 - 64	141,834	46.9	195,326	50.4
Age Not Stated	16,665	5.5	17,623	4.5
	2,838	0.9	640	0.2
<b>Total</b>	<b>302,668</b>	<b>100.0</b>	<b>387,552</b>	<b>100.0</b>

The percentage of persons aged 0-14 years in 1980 is higher than in 1990. This result can be due to a decline in fertility as well as a general increase in child mortality between 1980 and 1990 or an undercount of children especially those aged between 0 and 4 years during the 1990 Census. The proportion

of those aged 15-64 years rose from 46.9 percent in 1980 to 50.4 percent in 1990. However, the percentage of those who did not state their age declined from 0.9 in 1980 to 0.2 percent in 1990.

Figure 2.1



#### ***Child-Woman Ratio***

The child-woman ratio is given in Table 2.2. The child-woman ratio declined from 778.7 in 1980 to 695.5 in 1990. This decline in the child-woman ratio is in agreement with the decline in the percentage of the population aged between 0-14 years observed above. The sizeable decline in the child-woman ratio could be due to the increase in mortality levels coupled with a decline in fertility between 1980 and 1990. It's unlikely to be due to under-enumeration.

#### ***Age Dependency Ratio***

The dependency ratios are shown in Table 2.2. The overall dependency ratio for North-Western Province declined from 111.4 in 1980 to 98.1 in 1990. The people in the age range of 15-64 are potential producers or the active population. This shows that in 1990, there were 98.1 dependants for every 100 potential producers compared to 111.4 dependants per 100 potential producers in 1980. The overall dependency ratio, the child dependency ratio (the ratio of children aged 0-14 to persons aged 15-64 years) and the aged dependency ratio (the ratio of those aged 65 years and above to persons aged between 15 and 64 years) have declined between 1980 and 1990. The child dependency ratio is 99.6 for 1980 and 89.1 in 1990. The aged dependency ratio declined from 11.7 to 9 during the period under review. In all the instances, the decline in the dependency ratios could be attributed to either an increase in population aged 15-64 years, an increase in child mortality or a decline in fertility.

The tendency of respondents to report certain ages as ending in certain digits even when they do not is called age heaping or digit preference. This results in heaping the population in ages ending with certain digits. Age heaping is most prevalent among the illiterate persons who do not know the exact ages.

Myers' Index is a useful indicator used for evaluating the quality of age data. An assessment of age heaping in North-Western Province has been done through the calculation of Myers' Index and the results are shown in Tables 2.3 and 2.4. The index is scaled from 0 to 90. An index lower on the scale implies that the age reporting for the population with that index is better than for the population with an index higher up on the scale.

Myers' index is calculated by summing up the number of persons aged between 10 and 69 or 79 years. The population with ages ending in each digit 0, 1, 2, 3 up to 9 is summed separately. Ten summations are, therefore, obtained. This may be done by sex. Weights are then applied to the 10 summations to get the blended population. The blended population is then distributed in percent for each digit 0 to 9. Then deviations are obtained from 10 for each digit 0 to 9. The deviations are summed up irrespective of sign and the sum is divided by 2 to get Myers' Index. Refer to Shryock H.S., et al (1976) for more details on the calculation of Myers' Index.

#### *Digit Preference*

Ratios		North-Western Province	
		- Overall Dependency Ratio	111.4
		- Child Dependency Ratio	99.6
		- Aged Dependency Ratio	11.7
		- Child-Woman Ratio	778.7
1990			695.5
1980			

Table 2.2  
Dependency Ratios and Child-Woman ratio for North-Western Province, 1980 and 1990

Table 2.3

## Myers' Index for Digit Preference in Age Data, North-Western Province, 1980 and 1990

Digit	Male				Female			
	1980		1990		1980		1990	
	Percent	Deviation From 10%						
0	15.5	5.5	13.8	3.8	17.1	7.1	14.4	4.4
1	8.5	-1.5	8.8	-1.2	8.1	-1.9	8.5	-1.5
2	10.8	0.8	11.2	1.2	11.4	1.4	11.3	1.3
3	8.0	-2.0	8.1	-1.9	7.7	-2.3	7.7	-2.3
4	8.5	-1.5	8.9	-1.1	8.7	-1.3	9.2	-0.8
5	10.1	0.1	10.0	0.0	10.2	0.2	10.3	0.3
6	9.9	-0.1	10.1	0.1	9.6	-0.4	10.6	0.6
7	7.8	-2.2	8.7	-1.3	7.1	-2.9	8.5	-1.5
8	11.8	1.8	11.9	1.9	11.4	1.4	11.2	1.2
9	9.1	-0.9	8.5	-1.5	8.7	-1.3	8.3	-1.7
Myers' Index		8.2		7.0		10.1		7.8

Myers' index for digit preference in age data for North-Western Province during 1980 and 1990 Censuses, are shown in Tables 2.3 and 2.4. While Table 2.3 shows a breakdown of the index for males and females in 1980 and 1990 Censuses in North-Western Province, Table 2.4 is a summary of the index. Results from Table 2.4 show that Myers' Index has declined between 1980 and 1990 except for the index of urban males which rose slightly from 5.8 in 1980 to 5.9 in 1990. In rural areas, Myers' Index for males declined from 8.6 in 1980 to 7.2 in 1990 while that of females declined from 10.6 to 8.0 in 1980 to 1990, respectively. The results from Tables 2.3 and 2.4 show that the quality of age data for 1990 has improved compared to that of 1980.

Table 2.4

## Summary of Myers' Index for Digit Preference in Age Data by Rural/Urban, North-Western Province, 1980 and 1990

North-Western Province		1980	1990
Total	Male	8.2	7.0
	Female	10.1	7.8
Rural	Male	8.6	7.2
	Female	10.6	8.0
Urban	Male	5.8	5.9
	Female	6.6	6.4

Table 2.5 shows the most preferred digits during the 1980 and 1990 Censuses among males and females. The digits are shown in decreasing order of preference.

**Table 2.5**

**Most Preferred Digits, North-Western Province, 1980 and 1990**

Sex/Year	Most Preferred Digits		
	Total	Rural	Urban
<b>North-Western Province</b>			
Male - 1980	0, 8	0, 8	0, 8
- 1990	0, 8, 2	0, 8, 2	0, 8, 2
Female - 1980	0, 8, 2	0, 8, 2	0, 2
- 1990	0, 8, 2	0, 2, 8	0, 6, 2, 8

There was age heaping during both the 1980 and 1990 censuses as shown in Table 2.5. This is indicated by the relatively high preference for digits 0,2,6 and 8. The Myers' Index for assessing digit preference shows that the same digits 0,2 and 8 were preferred in North-Western Province in 1980 and 1990.

Age misreporting errors are also presented in Figures 2.2 to 2.5. A comparison of figures reveal that grouping of age data in 5 year age groups than in single years helps minimize age misreporting errors. This is shown by the fluctuations which are more pronounced in Figures 2.2 and 2.3 than in Figures 2.4 and 2.5. The peaks on the curves of the figures show the more preferred digits while the troughs show the less preferred digits.

Figure 2.2

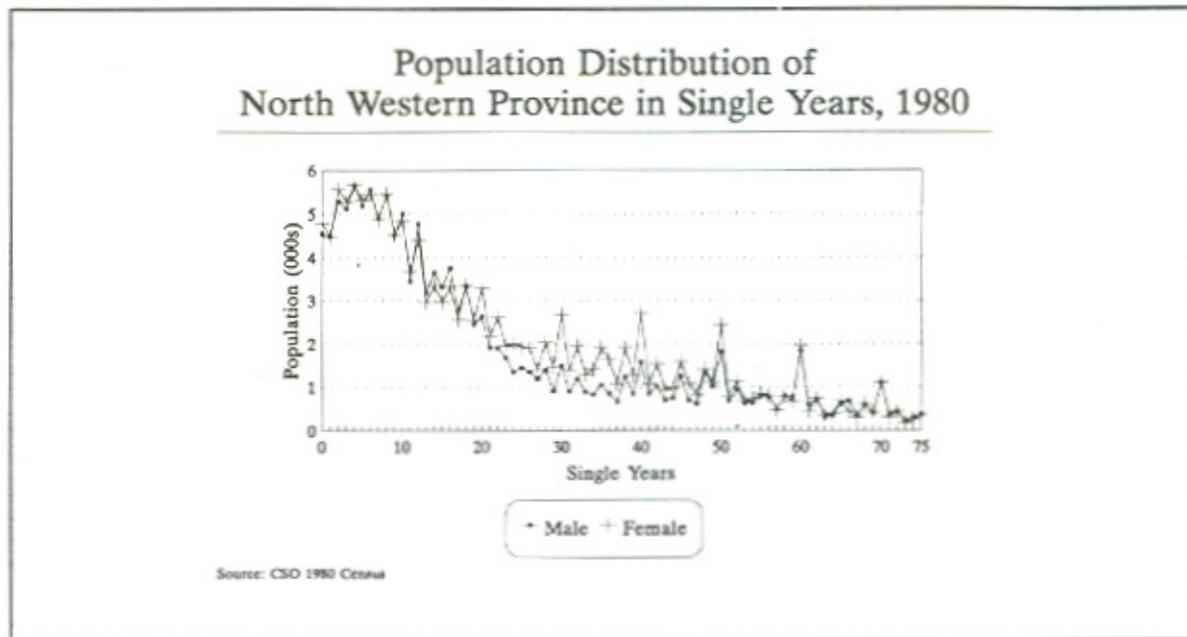


Figure 2.3

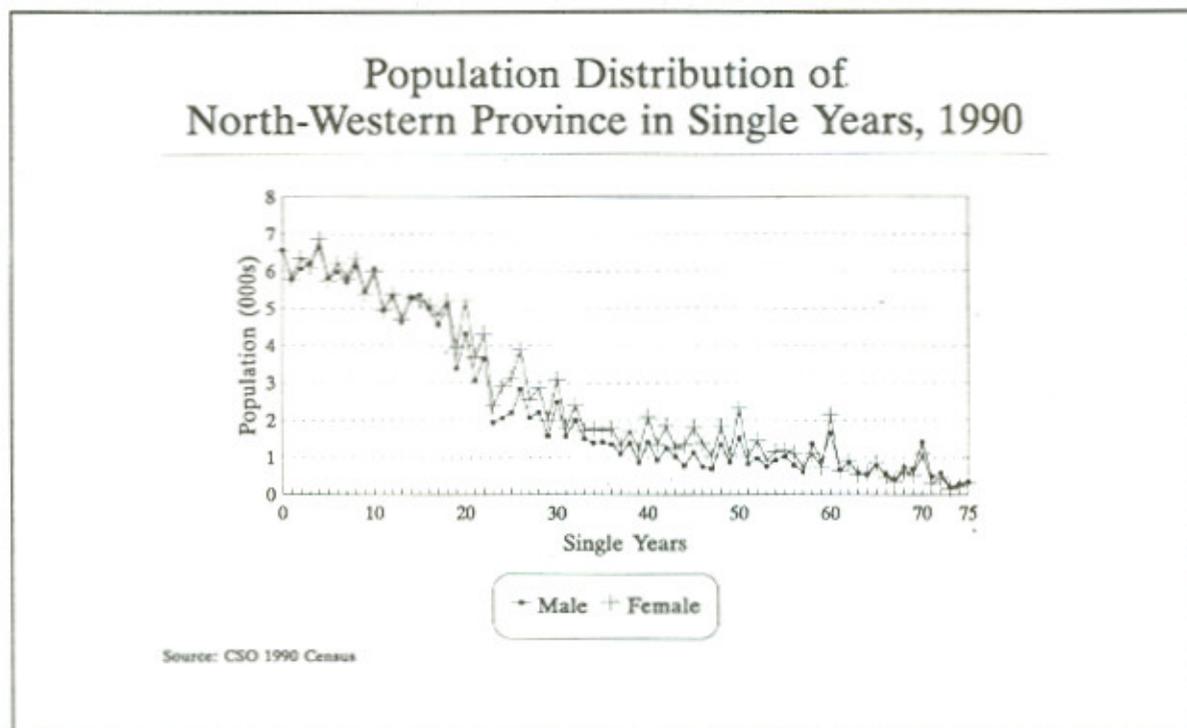


Figure 2.4

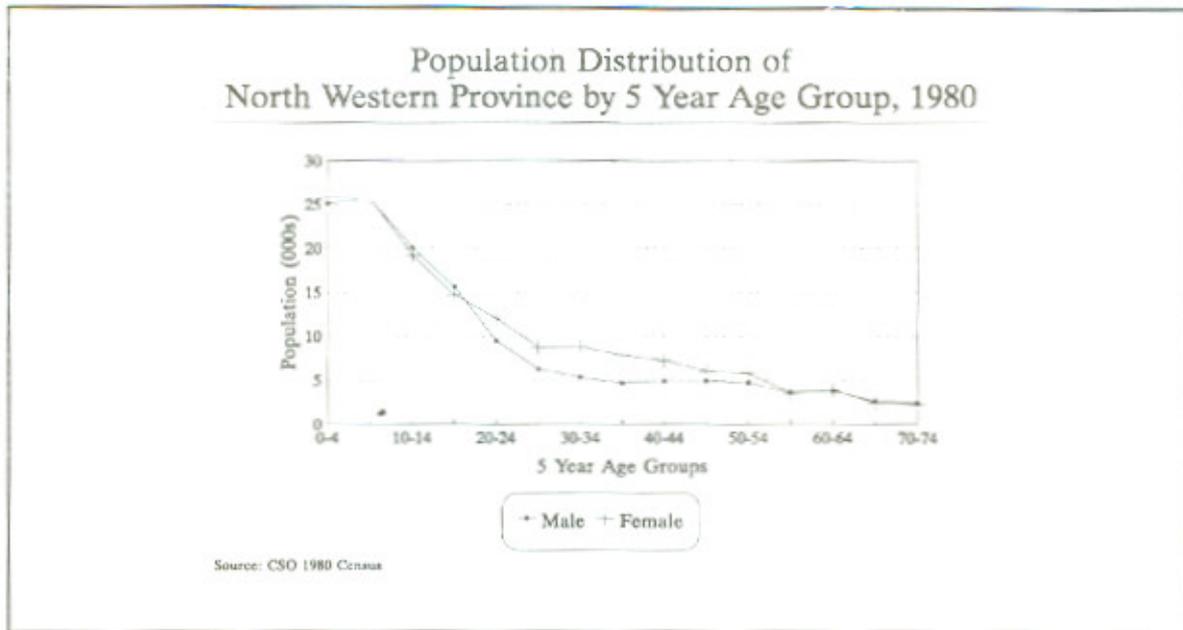
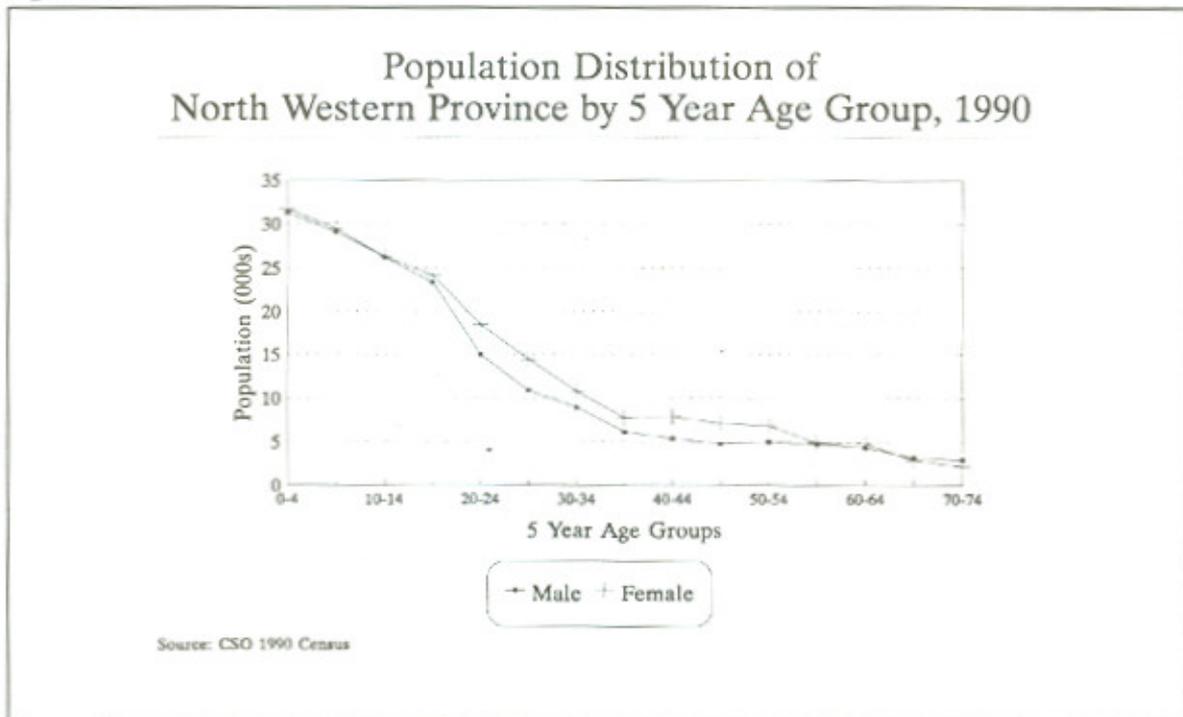


Figure 2.5



### **Sex Ratios**

Sex ratios help in detecting the presence of errors such as errors of omission, age misreporting and in or out-migration. A sex ratio is the number of males per 100 females. A sex ratio of more than 100 indicates an excess of males whereas a sex ratio of less than 100 shows a deficit of males while that of 100, shows an equal number of males and females. Information on sex ratio is given in Tables 2.6, 2.7, and Figure 2.6. Results from Table 2.6 show that the sex ratios for North-Western Province have slightly risen between 1980 and 1990. For example, the overall sex ratio rose from 90.9 in 1980 to 91.4 males per 100 females in 1990. Results from Table 2.6 show that North-Western Province has more females than males. This could be attributed to either out-migration of the economically active males or high mortality among males.

Table 2.6

Sex Ratios for North-Western Province, 1980 and 1990

North-Western Province	1980	1990
Total	90.9	91.4
Rural	90.5	91.0
Urban	93.4	93.6

Analysis of age specific sex ratios for North-Western Province during 1980 and 1990 Censuses has been done and the results are given in Tables 2.7 and 2.8. Results from Table 2.7 show that in 1980, the age groups which had more females than males or the age group which had a sex ratio of less than 100 were, 0-4, 5-9, from 20-24 to 50-54 and 60-64 years. However, in 1990, Table 2.8 shows that the age groups with a sex ratio of less than 100 were from 0-4 to 60-64 years. Results from Tables 2.7 and 2.8 render support to the notion that there is high out-migration among the adult males to other provinces. High male mortality could be another possibility of having low sex ratios in some age groups. Results from Tables 2.7 and 2.8 further reveal that there are more old men than women in North-Western Province as can be seen by the sex ratio of more than 100 at the age of 65 years and above.

### **Age Ratios**

The quality of age data can also be evaluated by looking at age ratios. The calculation of the age ratios has been done and the results are presented according to sex in Tables 2.7 and 2.8. In normal circumstances, the age ratios do not deviate from 100 when there are no major changes in fertility, mortality or migration. Therefore, any substantial deviation is attributed to age misreporting. Results from Table 2.8 show that in 1990, the age groups with low age ratios, that is below 100, are 20-29, 35-49 and 65-69 for males and 10-14, 20-39, 45-49, 55-59 and 65-69 for females. The average age ratio deviation for males declined from 6.7 in 1980 to 5.0 in 1990. That of females declined from 8.1 in 1980 to 6.2 in 1990. The average sex ratio difference rose from 7.9 in 1980 to 10.0 in 1990. The Age-Sex Accuracy Index rose from 38.5 in 1980 to 41.2 in 1990 indicating that reporting about age and sex was better in 1980. The United Nations defines age-Sex data as "Accurate, Inaccurate, and Highly inaccurate" if the Age-Sex Accuracy Index is less than 20, from 20-40 and above 40, respectively. Therefore, in as far as the United Nations is concerned, the 1980 age sex data were inaccurate whereas the 1990 age sex data were highly inaccurate.

Table 2.7

Population by Five Year Age Group, Sex, Age Ratio and the Age-Sex Accuracy Index, North-Western Province, 1980

Age Group	Population		Age Ratio		Deviation		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	25,111	25,755	-	-	-	-	97.5	-
5-9	25,569	25,635	108.4	108.9	8.4	8.9	99.7	-2.2
10-14	20,051	19,210	98.2	96.7	-1.8	-3.3	104.4	-4.7
15-19	15,610	14,734	103.8	96.2	3.8	-3.8	105.9	-1.5
20-24	9,450	12,019	90.4	101.6	-9.6	1.6	78.6	27.3
25-29	6,300*	8,729	89.7	88.8	-10.3	-11.2	72.2	6.4
30-34	5,319	8,737	98.0	103.6	-2.0	3.6	60.9	11.3
35-39	4,663	7,830	94.1	98.7	-5.9	-1.3	59.6	1.3
40-44	4,892	7,240	101.3	102.9	1.3	2.9	67.6	-8.0
45-49	4,930	6,034	101.9	95.1	1.9	-4.9	81.7	-14.1
50-54	4,695	5,761	106.4	112.5	6.4	12.5	81.5	0.2
55-59	3,612	3,571	89.4	81.0	-10.6	-19.0	101.1	-19.6
60-64	3,816	3,892	113.9	117.9	13.9	17.9	98.0	3.1
65-69	2,619	2,439	88.8	85.0	-11.2	-15.0	107.4	-9.4
70-74	2,411	2,276	-	-	-	-	105.9	1.5
Total	139,048	153,862			87.1*	105.9*	90.4	110.6*
Mean					6.7	8.1		7.9

Note \* Denotes Total irrespective of sign.

Age-Sex Accuracy Index = 3 x Mean Difference in Sex Ratio + Mean Deviations of Male and Female Age Ratios  
 = (3 x 7.9) + 6.7 + 8.1  
 = 23.7 + 6.7 + 8.1  
 = 38.5

Figure 2.6

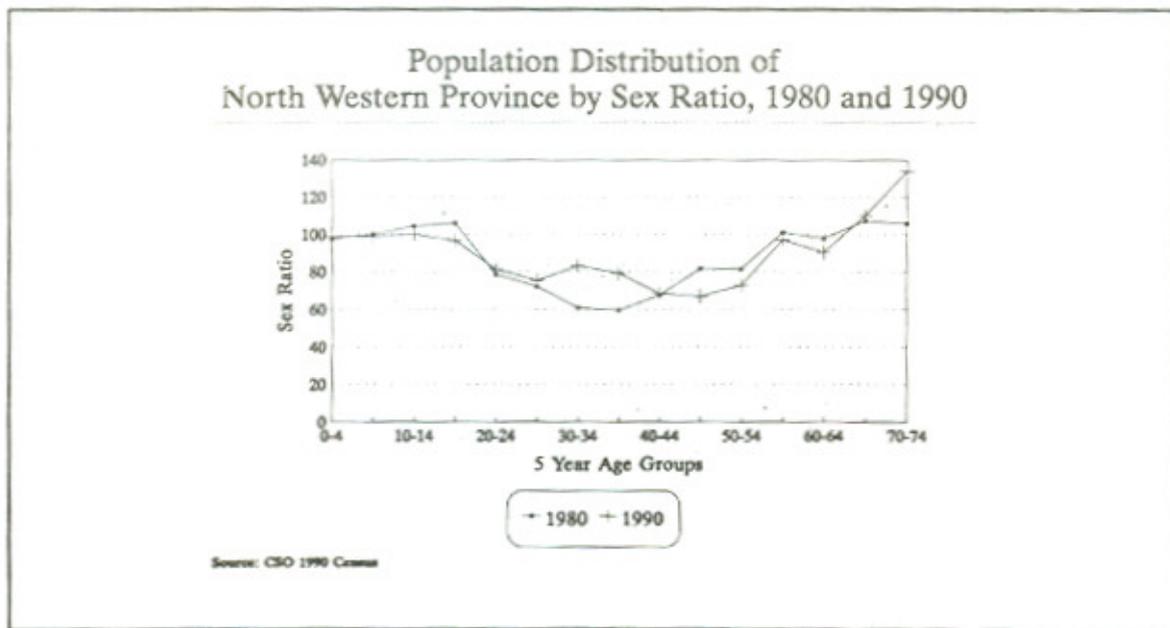


Table 2.8

Population by Five Year Age Group, Sex, Age and the Age-Sex Accuracy Index,  
North-Western Province, 1990

Age Group	Population		Age Ratio		Deviation		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	31,251	31,651	-	-	-	-	98.7	-
5-9	29,069	29,462	100.7	101.1	0.7	1.1	98.7	0
10-14	26,253	26,278	100.1	98.6	0.1	-1.4	99.9	-1.2
15-19	23,366	24,200	108.5	105.3	8.5	5.3	96.6	3.3
20-24	14,971	18,442	91.3	97.0	-8.7	-3.0	81.2	15.4
25-29	10,853	14,416	93.7	99.2	-6.3	-0.8	75.3	5.9
30-34	8,932	10,749	103.5	98.1	3.5	-1.9	83.1	-7.8
35-39	6,102	7,702	89.7	87.9	-10.3	-12.1	79.2	3.9
40-44	5,370	7,843	99.3	103.9	-0.7	3.9	68.5	10.7
45-49	4,759	7,091	94.4	97.6	-5.6	-2.4	67.1	1.4
50-54	4,989	6,851	103.5	109.3	3.5	9.3	72.8	-5.7
55-59	4,719	4,859	100.9	88.4	0.9	-11.6	97.1	-24.3
60-64	4,325	4,787	106.4	114.9	6.4	14.9	90.3	6.8
65-69	3,148	2,851	90.8	87.0	-9.2	-13.0	110.4	-20.1
70-74	2,932	2,188	-	-	-	-	134.0	-23.6
Total	181,039	199,370			64.4*	80.7*	90.8	130.1*
Mean					5.0	6.2		10.0

Note \* Denotes Total irrespective of sign.

$$\begin{aligned}
 \text{Age-Sex Accuracy Index} &= 3 \times \text{Mean Difference in Sex Ratio} + \text{Mean Deviations of Male and Female Age Ratios} \\
 &= (3 \times 10.0) + 5.0 + 6.2 \\
 &= 30.0 + 5.0 + 6.2 \\
 &= 41.2
 \end{aligned}$$

### Survival Ratios

Survival ratios represent the probability that individuals of the same birth cohort or group of cohorts will still be alive 10 years later. Survival ratios can be used to evaluate age and sex data. Evaluation of age and sex data using data from two censuses is achieved only under certain assumptions. The population should be closed to migration. Influence of abnormal mortality through wars, disasters, diseases, etc., over a 10 year period should be absent. The more erratic the census survival ratios are, the more inconsistency the age data is.

Tables 2.9 and 2.10 show the survival ratios in North-Western Province during the 1980 and 1990 intercensal period. Table 2.9 and Figure 2.7 show the cohort survival ratios while Table 2.10 and Figure 2.8 show the overall Survival ratios according to Sex in 5 year age groups. Cohort survival ratio refers to the probability of surviving from a given age group to the next age group whereas the overall survival ratio refers to the probability of the population in an open age group aged say 10 years and above or 20 years and above surviving open age group, say 40 years and above to the next age.

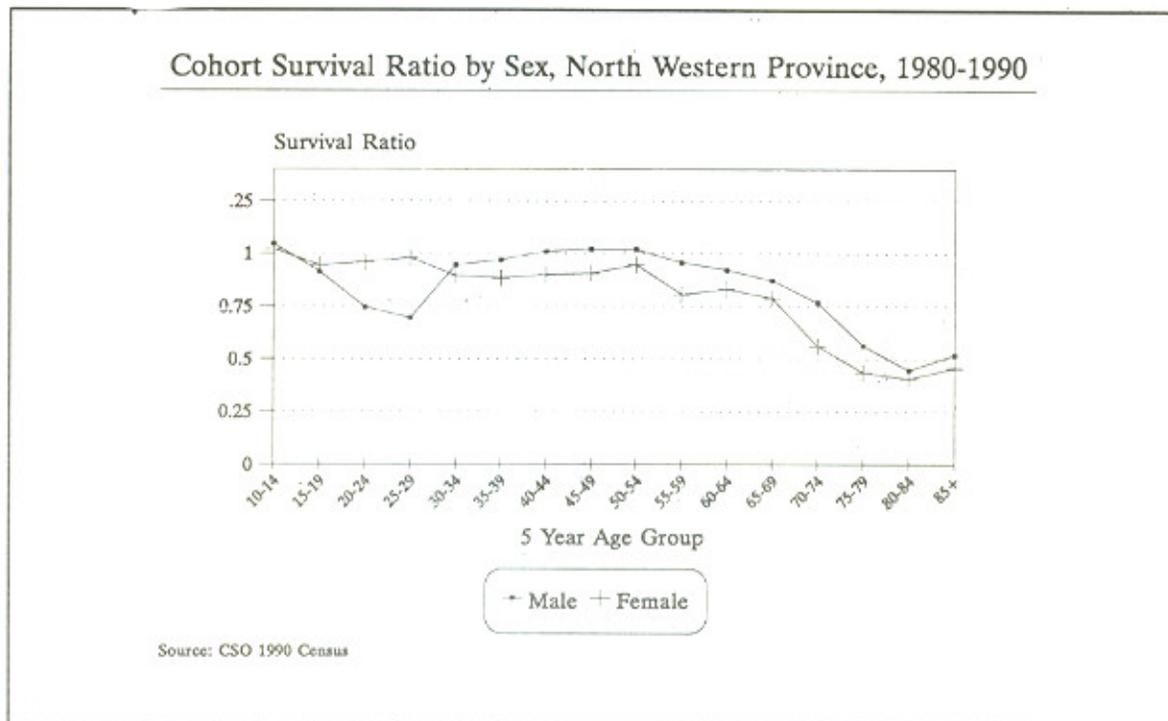
Cohort survival ratios are expected to be high at age group 10-14 where mortality is assumed to be lowest and then to decline continuously, thereafter. In other words, the cohort survival ratios are expected to decline with the increase in age. Results from Table 2.9 and Figure 2.7 show that this is not the case in North-Western Province.

Table 2.9

Cohort Survival Ratios By Sex, North-Western Province, 1980-1990

Age Group	Male	Female
10-14	1.0455	1.0203
15-19	0.9138	0.9440
20-24	0.7466	0.9600
25-29	0.6953	0.9784
30-34	0.9452	0.8943
35-39	0.9686	0.8823
40-44	1.0096	0.8977
45-49	1.0206	0.9056
50-54	1.0198	0.9463
55-59	0.9572	0.8053
60-64	0.9212	0.8309
65-69	0.8715	0.7883
70-74	0.7683	0.5622
75-79	0.5647	0.4358
80-84	0.4479	0.4077
85+	0.5192	0.4574

Figure 2.7



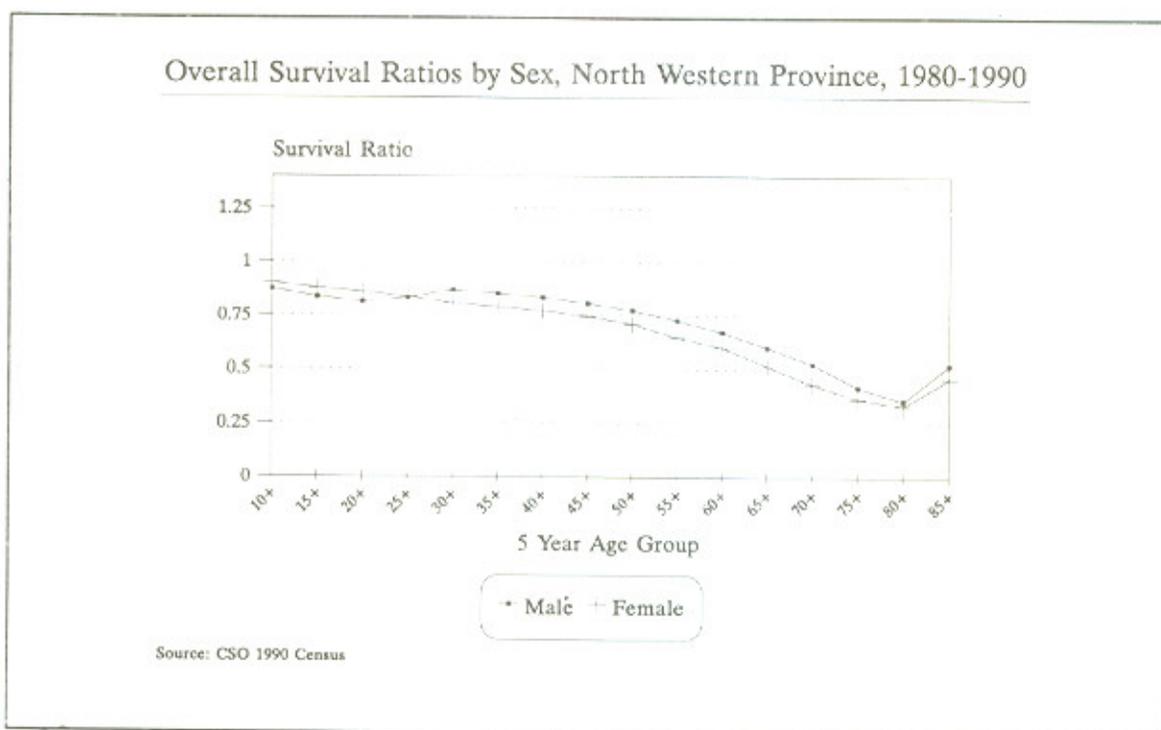
The overall survival ratios are expected to decline continuously as we go up to older ages. Female ratios should be higher than the male ratios because females usually have lower mortality than males. Results from Table 2.10 and Figure 2.8 show that this is not the case.

Table 2.10

Overall Survival Ratios, North-Western Province, 1980-1990

Age Group	Male	Female
10+	0.8709	0.8986
15+	0.8337	0.8748
20+	0.8115	0.8579
25+	0.8295	0.8352
30+	0.8666	0.8058
35+	0.8508	0.7880
40+	0.8326	0.7718
45+	0.8060	0.7457
50+	0.7735	0.7092
55+	0.7269	0.6459
60+	0.6727	0.6003
65+	0.6009	0.5135
70+	0.5235	0.4298
75+	0.4176	0.3641
80+	0.3555	0.3318
85+	0.5192	0.4574

Figure 2.8



The observed irregularities in both the cohort and the overall survival ratios suggest that there was age misreporting and under or over-enumeration at some age groups. Migration can also be another contributing factor to the observed irregularities. It is possible that out migration took place between 1980 and 1990 in North-Western Province especially among the economically active men aged between 20 and 50 thus affecting the survival ratios.

## 2.4 SUMMARY

In 1980, there were 302, 668 persons in North-Western Province. Of these, 2,838 which is 0.9 percent, did not state their age. However, in 1990, there was an improvement in the number and the proportion of the people who did not state their age. Out of 387,552 persons enumerated in 1990, 640 did not state their age. The proportion of persons aged 0-14 also declined from 46.7 in 1980 to 44.9 percent in 1990. This decline in the proportion of children aged 0-14 could be due to a decline in fertility levels coupled with an increase in mortality levels and or an under count of children especially those aged 0-4 years in 1990. Among other notable observations made is that the overall dependency ratio declined from 111.4 in 1980 to 98.1 in 1990. There was age heaping in North-Western Province. The digits 0, 2 and 8 were most preferred in 1990.

Analysis of age-sex data using Myers' Index has shown that age reporting among males was better than females in 1990. In 1990, Myers' Index was 7.0 for males and 7.8 for females. This observation is also supported by the age-ratio method of age data analysis. In 1990, the average age ratio deviation for males was 5.0 while that of females was 6.2. This shows that age reporting was better among males than females. Further analysis of the 1990 Census data using sex ratios shows that mortality is not favourable for male infants. The sex ratios further suggest that out-migration took place in North-Western Province especially among the active men between 1980 and 1990. The sex ratio for North-Western Province shows that there are more females than males. The sex ratios also suggest that men have a tendency to over state their age. This is shown by high sex ratios in the old age groups. Analysis of census data using the Age-Sex Accuracy Index (ASAI) shows that reporting of age and sex data were better in 1980 than the 1990 census data. The ASAI in 1980 was 38.5 and rose to 41.2 in 1990.

## CHAPTER 3

# POPULATION SIZE, GROWTH AND COMPOSITION

### 3.1 INTRODUCTION

Information on the size, growth and composition of a population of a country is used for effective socio-economic development planning.

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. There are three main characteristics of population composition. These are:-

- Demographic characteristics such as age and sex,
- Social characteristics such as ethnicity and citizenship,
- Economic characteristics such as crude activity ratio and labour force participation ratio.

### 3.2 POPULATION SIZE AND GROWTH

The 1990 Population census recorded 387,552 persons in North-Western Province. Of these, 185,038 are males and 202,514 are females. More details are given in Table 3.1.

Table 3.1

Population Size by Sex, Residence and District, North-Western Province, 1990

District	Total			Rural		Urban	
	Both Sexes	Male	Female	Male	Female	Male	Female
Mufumbwe	22,979	11,091	11,888	8,066	8,625	3,025	3,263
Kabompo	53,195	25,142	28,053	22,528	25,294	2,614	2,759
Kasempa	36,893	17,665	19,228	15,649	17,093	2,016	2,135
Mwinilunga	81,496	38,893	42,603	35,814	39,340	3,079	3,263
Solwezi	124,624	60,082	64,524	46,685	50,237	13,397	14,305
Zambezi	68,365	32,165	36,200	29,176	32,958	2,989	3,242
Total	387,552	185,038	202,514	157,918	173,547	27,120	28,967

Population change is mostly spoken of as "population growth". However, an increase or decrease is possible. The annual population growth rates shown in Table 3.2 have been computed using the Geometric Growth Rate (Annual compounding).

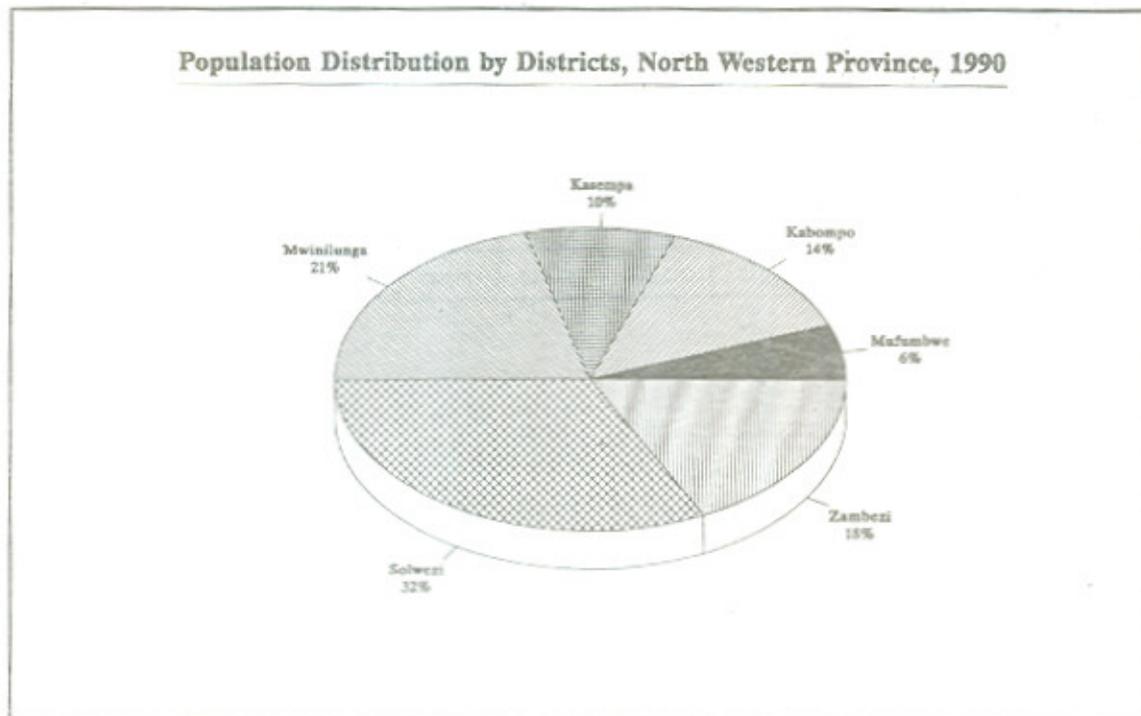
**Table 3.2**

Population Size and Growth Rates, North-Western Province, 1969, 1980 and 1990

Province/District	1969	Annual Growth Rate 1969-80	1980	Annual Growth Rate 1980-90	1990
<b>North-Western Province</b>					
- Total -	231,733	2.5	302,668	2.5	387,554
- Rural	231,733	1.1	261,819	2.4	331,465
- Urban	-	-	40,849	3.2	56,087
<b>Districts</b>					
Mufumbwe	-	-	9,286	9.5	22,979
Kabompo	33,376	1.7	40,347	2.8	53,195
Kasempa	32,656	-0.6	30,606	1.9	36,893
Mwinilunga	51,398	2.7	68,845	1.7	81,496
Solwezi	52,979	5.2	92,773	3.0	124,624
Zambezi	61,324	-0.1	60,811	1.2	68,365

The annual population growth rate in the two intercensal periods 1969-80 and 1980-90 was constant at 2.5 percent. However, among the districts, there were changes in the rate of population growth. Kasempa and Zambezi districts recorded negative annual population growth rates in the 1969-80 intercensal period. This may be attributed to out-migration from these districts. In the 1980-90 intercensal period, the growth rates were positive.

**Figure 3.1**



Another way of showing population growth is by observing population density over time. This information is presented in Table 3.3.

**Table 3.3**

**Area and Population Density by District and Population Census Year, North-Western Province, 1969, 1980 and 1990**

District	Area (Sq Km)	Population Density/Census Year (Population Per sq.km)		
		1969	1980	1990
North-Western Total	125,826	1.8	2.4	3.1
Mufumbwe	20,856	-	0.5	1.1
Kabompo	14,532	2.3	2.8	3.7
Kasempa	20,821	1.6	1.5	1.8
Mwinilunga	21,116	2.4	3.3	3.9
Solwezi	30,261	1.8	3.1	4.1
Zambezi	18,240	3.3	3.2	3.7

The table shows that North-Western Province is sparsely populated at 3.1 persons per square kilometre. However, the population of the province has grown over the years as indicated by the increasing density. The pattern shown by Kasempa and Zambezi districts on annual population growth rates is also apparent on population density. The population suggest that the two districts have experienced net out-migration in the 1969-80 intercensal period.

### 3.3 POPULATION COMPOSITION

#### *Age Composition*

Age is an important factor in demographic analysis as it has a bearing on other demographic and social processes. For example, the number of births depends on the number of child-bearing women aged 15-49 years. Migration is also age-selective, while the school-going population and labour force are persons concentrated in specific age groups.

Age in the 1990 population census was defined as "the number of completed years (as at last birthday) before the census date". The median age is often used as 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. In 1990 the median age for North-Western Province is 17.0 years, meaning that the population of the province is young. There was no significant rise from the median age of 16.4 years recorded from the 1980 population census data. Figures 3.2 and 3.3 also show that the majority of the population is less than 15 years is given by Figures 3.2 and 3.3.

Figure 3.2

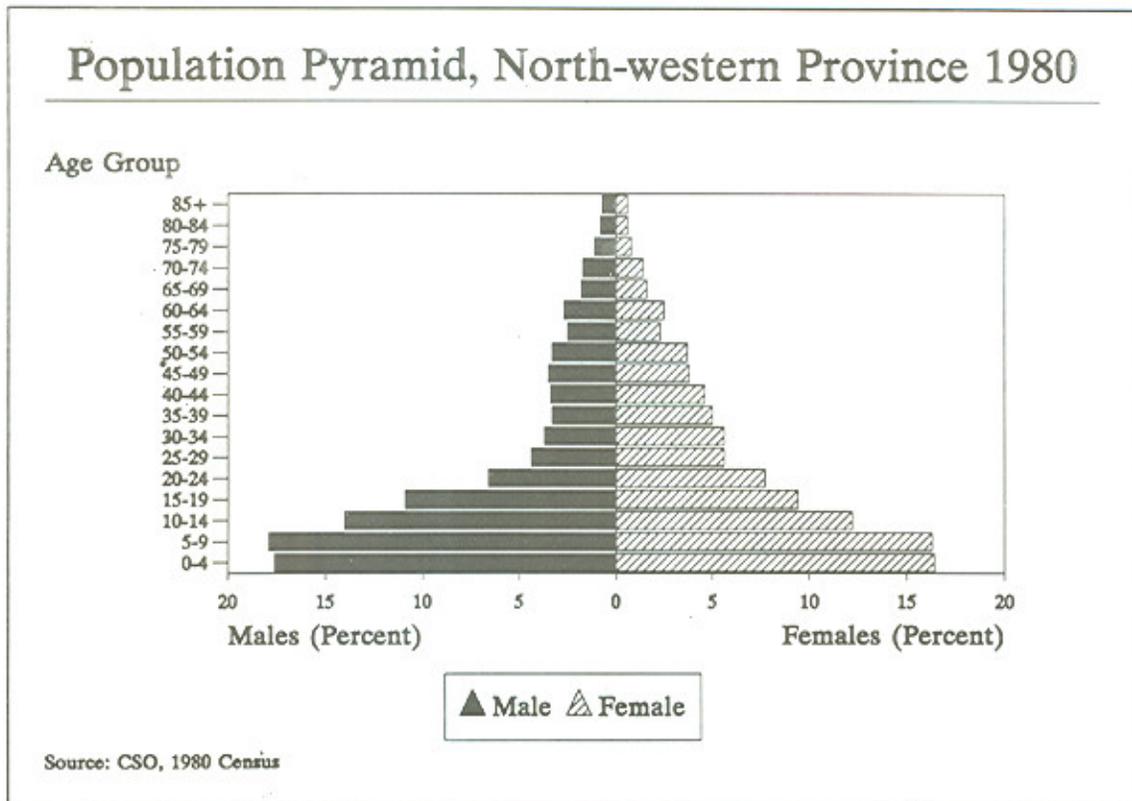
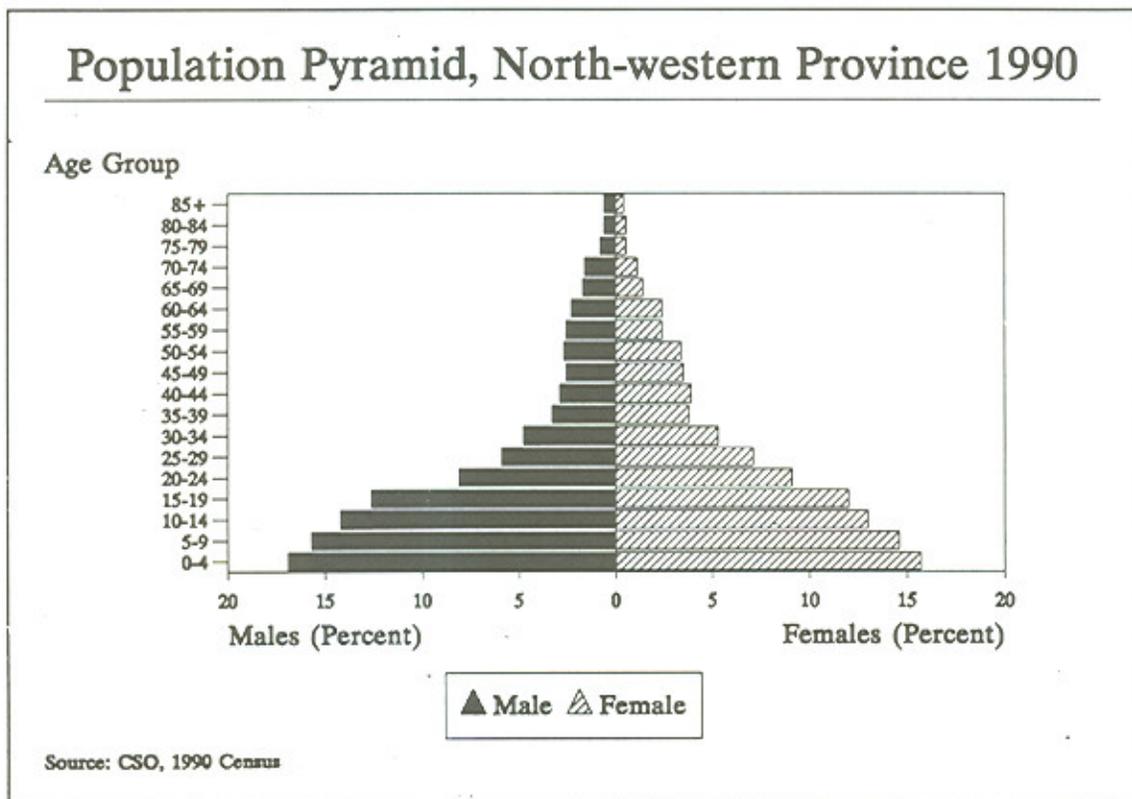


Figure 3.3



The broad bases of the population age pyramids imply that the child population in the province is large. This has implications for future population growth. The population of the province will continue growing as the child population enters the reproductive ages, put at 15-49 years for females.

Table 3.3 gives additional details on the age-sex population distribution of North-Western Province.

Table 3.4

Age-distribution of Population by Rural, Urban and Districts, (Percent), North-Western Province, 1990

Age Group	North-western			Rural		Urban		Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
	Both Sexes	Male	Female	Male	Female	Male	Female	Both Sexes					
0 - 4	16.2	16.9	15.6	16.9	15.6	16.7	15.9	17.5	15.5	16.3	17.5	15.7	15.8
5 - 9	15.1	15.7	14.5	15.8	14.4	15.1	15.3	16.0	14.2	15.3	15.8	15.2	14.4
10 - 14	13.5	14.2	13.0	14.2	12.6	14.1	14.9	14.1	12.7	14.8	13.6	14.2	12.1
15 - 19	12.3	12.6	11.9	12.4	11.6	14.0	14.1	12.5	12.2	13.5	11.9	12.8	11.2
20 - 24	8.6	8.1	9.1	8.0	8.8	8.8	10.8	8.7	9.0	8.9	7.9	9.0	8.4
25 - 29	6.5	5.9	7.1	5.6	6.9	7.1	8.5	6.1	6.3	6.3	6.6	6.9	6.2
30 - 34	5.1	4.8	5.3	4.6	5.1	6.4	6.4	4.8	4.7	4.9	5.1	5.6	4.7
35 - 39	3.6	3.3	3.8	3.1	3.8	4.6	4.0	3.2	3.4	3.4	3.4	3.9	3.4
40 - 44	3.4	2.9	3.9	2.7	4.0	4.0	2.9	3.1	3.2	3.5	3.5	3.6	3.2
45 - 49	3.1	2.6	3.5	2.6	3.7	2.6	2.1	3.0	3.2	2.9	2.9	3.0	3.3
50 - 54	3.1	2.7	3.4	2.8	3.6	2.2	1.8	2.9	3.2	2.8	2.9	3.1	3.3
55 - 59	2.5	2.6	2.4	2.7	2.6	1.5	1.1	2.2	2.9	2.5	2.3	2.2	3.0
60 - 64	2.4	2.3	2.4	2.6	2.6	1.1	0.8	2.0	3.2	1.8	2.1	1.9	3.1
65 - 69	1.5	1.7	1.4	1.9	1.5	0.6	0.5	1.4	2.3	1.1	1.4	1.2	2.2
70 - 74	1.3	1.6	1.1	1.8	1.2	0.5	0.3	1.1	1.9	0.9	1.2	0.9	2.0
75 - 79	0.6	0.8	0.5	0.9	0.6	0.2	0.2	0.5	0.8	0.4	0.6	0.4	1.2
80 - 84	0.5	0.6	0.5	0.7	0.5	0.1	0.1	0.3	0.6	0.3	0.6	0.2	1.2
85+	0.5	0.6	0.4	0.7	0.5	0.1	0.1	0.2	0.5	0.2	0.7	0.2	1.2
N/Statd	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.2
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 P	387,552	185,038	202,514	157,918	173,547	27,120	28,967	22,979	53,195	36,893	81,496	124,624	68,365

In demographic analysis the population in age group 0-14 years is taken to be the child population. About 45 percent of the population of the province constitutes children. The male child population is 46.8 percent while that of females is 43.1 percent of the population of the respective sexes. A large child population has social and economic implications for a province. Instead of investing resources into the productive sectors of the economy, these would go towards building more schools, health institutions and feeding the ever increasing population of young ones.

#### *Ethnicity and Citizenship*

Ethnicity refers to the ethnic group of a person for persons who belong to Zambian ethnic groups. Ethnicity refers to the continent of origin for persons who don't belong to Zambian groups. Table 3.5 gives information on the ethnic composition of the population of North-Western Province. In the table the population of Zambian ethnic groups has been classified under Africans.

The population of North-Western Province is predominantly African. Africans constitute 99.46 percent of the population. Other ethnic groups constitute only a negligible 0.14 percent.

Table 3.5

## Ethnic Composition of the Population of North-Western Province, 1990

Sex	Ethnic Group						Total
	African	American	Asians	European	Other	Not Stated	
Male	183,980	39	25	145	78	771	185,038
Female	201,474	37	24	124	58	797	202,514
Total	385,454	76	49	269	136	1,568	387,552
% of Total Population	99.46	0.02	0.01	0.07	0.04	0.40	100.0

Among the citizens of North-Western Province, 4.2 percent (16,271) of the persons are non-Zambian. Table 3.6 gives more details on this subject.

Table 3.6

## Foreign Population of North-Western Province by Citizenship, 1990 and Percentage Foreign Citizens, 1980

Country/Region	Population 1990	Percent 1990	Percent 1980
Zaire	686	4.2	20.5
Other (Central Africa)	15	0.1	0.0
Tanzania	24	0.1	0.2
Other (East Africa)	27	0.2	0.1
Northern Africa	17	0.1	3.5
Angola	13,952	85.7	40.8
Botswana	19	0.1	5.4
Malawi	40	0.2	0.3
Namibia	18	0.1	0.4
Zimbabwe	44	0.3	10.3
Other (Southern Africa)	13	0.1	0.1
West Africa	30	0.2	0.2
America	77	0.5	1.7
Asia and Oceanic	42	0.3	0.5
Europe	213	1.3	3.0
Not Stated	1,054	6.5	13.0
% Total		100.0	100.0
Total Foreign Citizens	16,271		17,198
% Foreign Population		4.2	5.7

In 1990, the highest number of foreign citizens were from Angola (85.7 percent). The second in multitude were Zaireans (4.2 percent). Citizens of other countries comprised only negligible proportions. The situation obtaining at the time of the 1980 population census was more or less the same. In descending order citizens of Angola comprised (40.8 percent), Zaire (20.5 percent) and Zimbabwe (10.3 percent). The position of Angola and Zaire may be explained by two factors. Firstly, the two countries share boundaries with North-Western Province and thus within easy reach; and secondly, both countries have been facing civil strife for a long time, such that most of their citizens may be refuge seekers in the Province.

Overall, foreign citizens in the province have marginally fallen from a percentage share of 5.7 percent in 1980 to 4.2 percent in 1990. This may be attributed to Zimbabwe, Botswana and North African citizens, who having formed a sizeable proportion in 1980, may have migrated out of the province in the 1980-90 intercensal period.

#### *Economic Characteristics*

Detailed analysis describing persons who are economically active is presented exhaustively in the chapter on economic characteristics. In this present chapter, only introductory information on Crude Activity Ratio (CAR) and labour force participation rates are presented. Table 3.7 presents Crude Activity Ratios.

**Table 3.7**

#### **Crude Activity Ratio, North-Western Province, 1990**

Province/Residence		Crude Activity Ratio (%)
North-western Province	- Total	28.2
	- Rural	28.8
	- Urban	24.4

The CARs presented in Table 3.7 are low implying that few economically active persons support a large economically inactive population. For every 100 persons in the Province there are only 28 economically active persons to support them. The situation in the urban areas is relatively worse off at 24.4 percent.

Table 3.8 gives information on a much more refined index of economic activity called Age-Sex Specific Activity Ratio (ASSAR).

Table 3.8

Age - Sex Specific Activity Ratio (ASSAR), North-Western Province, 1990

Age-Specific Activity Ratio (%)						
Age Group	North-Western		Rural		Urban	
	Male	Female	Male	Female	Male	Female
Total	56.6	34.3	57.1	35.7	54.0	25.1
12-14	19.8	21.3	21.7	23.7	8.9	10.1
15-19	28.7	31.3	31.1	34.0	16.2	17.9
20-24	59.8	37.1	60.9	38.7	54.1	43.6
25-29	78.4	37.6	77.7	38.7	81.6	32.1
30-34	81.8	37.7	80.5	38.8	87.0	32.8
35-39	83.0	38.0	81.0	38.3	90.6	36.1
40-44	82.6	37.3	80.8	37.9	90.0	31.8
45-49	80.2	38.4	79.3	39.0	85.4	31.4
50-54	78.0	38.9	77.5	39.8	81.3	28.2
55-59	75.9	39.4	76.1	40.2	74.0	28.0
60-64	70.7	38.1	71.1	38.8	65.4	24.6
65-69	71.0	36.1	71.4	36.3	63.8	31.3
70-74	60.8	31.2	61.4	32.1	50.0	11.5
75+	52.5	27.7	53.0	28.3	36.6	12.8
N/S	36.8	21.2	35.4	21.8	46.3	16.1

In relative terms, labour force participation rates for age groups 12-14 and 15-19 years are lower than those for older age groups. This may be attributed to the fact that these are school-going ages. Most of the persons in these age groups may still be attending school. The other observable feature is that labour force participation rates for females are consistently lower than those for males; see Figures 3.4 and 3.5. This indicates that males are mostly the bread winners in households while.

Figure 3.4

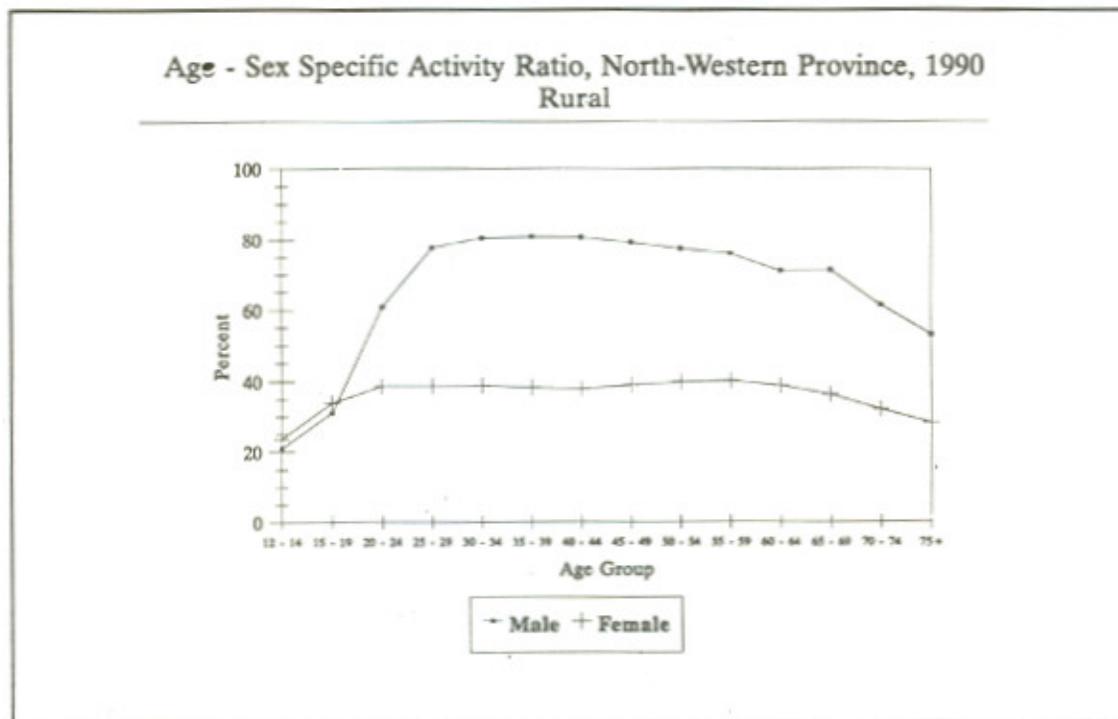
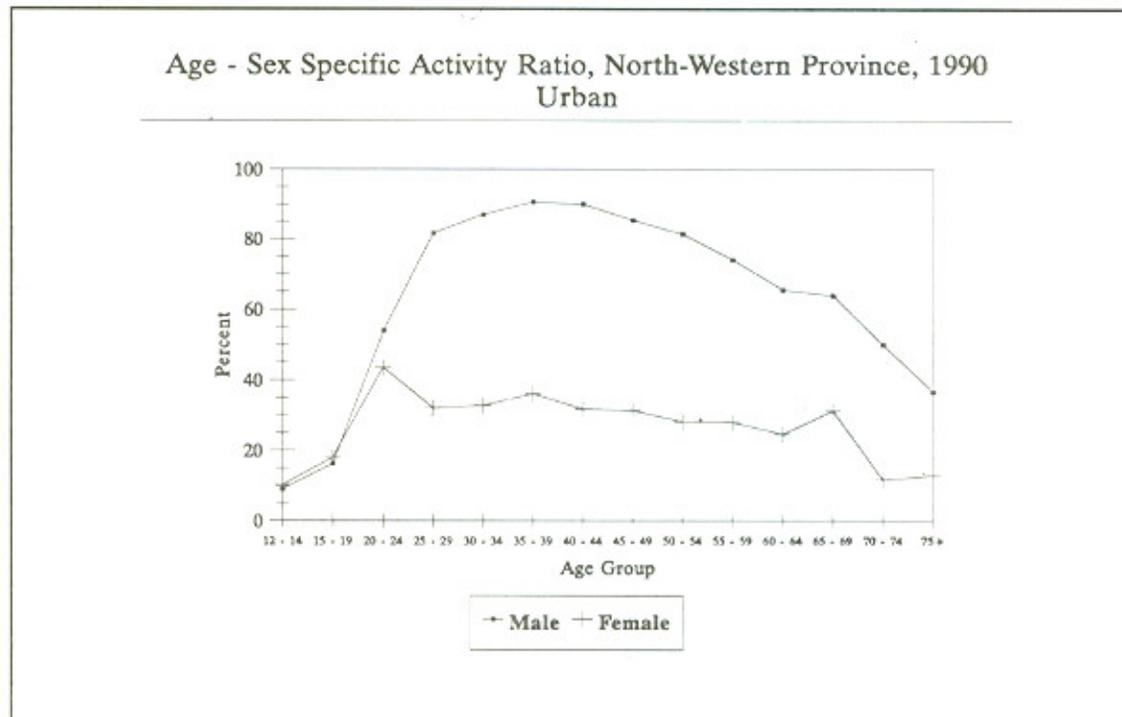


Figure 3.5



### 3.4 SUMMARY

The North-Western Province population as recorded in the three post-independence census has been shown to have grown from 231,733 in 1969, to 302,688 in 1980 and to 387,522 in 1990. Correspondingly, the annual population growth rate has been a constant 2.5 percent for both the 1969-80 and 1980-90 intercensal periods.

The median age of the population has been calculated to be 17.0 years. The population is that which may be termed as "young", considering that the child population (0-14 years) forms almost half the population of the province.

The population of the province is predominantly African and foreign citizens form 4.2 percent of the population. Labour force participation rates for females are consistently lower than those for males.



## 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 and dialect. However, there are seven major languages. These are Bemba, Nyanja, Tonga, Lozi, Kaonde, Lunda and Luvale. They are widely spoken and taught in schools. English is the official language in the country, used in all government functions. It is a compulsory subject at primary and secondary levels of education and every pupil has to pass it to be awarded a certificate.

During the 1990 Census of Zambia, information on one's predominant and second language of communication was collected. A predominant language of communication was defined as the language most frequently used for a person's day-to-day communication with others in the community. The second language of communication was conceived to be the next most used language of communication.

In this chapter, languages have been classified in seven broad language groups, namely the Bemba, Tonga, North-Western, Barotse, Nyanja, Mambwe and Tumbuka. The category "other" shown in the given tables include languages not commonly spoken in the province. It is worth noting that the seven language groups have been formed for convenience in presenting the data as they may contain other equally important languages. For example, in the North-Western group, Kaonde, Luvale and Lunda are distinct languages with their own dialects and the Barotse language group comprises languages such as Lozi, Nkoya, Subiya and nyengo.

The 1990 census results have been presented in this chapter, with respect to languages of communication in North-Western province. These results are presented for each language with a sizeable number of persons speaking the language. In some cases all individual languages have been grouped into their respective language groups to facilitate analysis.

Out of the provincial population of 387,552 enumerated, 371,496 persons spoke at least a language. The remaining population comprised 13,107 persons all aged between 0-4 years in the "not applicable" category and 2,949 persons who did not state any language. The "and" and "not stated" (the dumb and very young not yet able to talk) and "not stated" cases have been excluded from all subsequent tables.

### 4.2 PREDOMINANT LANGUAGE OF COMMUNICATION

The major ethnic groups in North-Western Province are Luvale, the North-Western Lunda, Mbunda, Luchazi, Ndembu, Mbowe Chokwe and Kaonde. The most spoken languages in the province, therefore are those spoken by these ethnic groups. However, due to internal movements of people, other languages in the province are also spoken. Table 4.1 presents data on the most spoken 14 languages in the province and its the districts.

Table 4.1

Predominant Language of Communication by District, (Percent),  
North-Western Province, 1990

Major Language	Province	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Bemba	2.7	1.7	1.5	2.3	1.1	5.6	1.0
Lamba	2.6	0.2	0.1	0.2	0.1	7.9	0.0
Tonga	0.3	0.2	0.3	0.2	0.1	0.5	0.2
Luvale	18.4	7.9	31.2	1.0	1.7	7.1	61.8
Lunda (N-West)	32.0	9.8	26.0	1.2	81.1	17.6	28.7
Mbunda	1.7	0.6	4.4	0.2	0.1	2.7	0.9
Luchazi	3.8	2.0	22.4	0.3	0.0	0.8	1.9
Ndembu	2.7	0.0	0.0	0.0	12.5	0.0	0.5
Chokwe	3.3	14.7	7.6	0.1	0.1	3.0	2.0
Kaonde	29.2	60.9	1.2	92.2	1.1	50.7	0.6
Lozi	0.7	0.7	0.8	0.5	0.4	0.8	1.1
Nkoya	0.5	0.3	3.0	0.3	0.0	0.1	0.1
Nyanja	0.3	0.3	0.3	0.2	0.1	0.6	0.2
English	0.7	0.2	0.6	0.8	0.6	0.9	0.7
Other	1.0	0.5	0.8	0.5	0.8	4.6	0.5
Percentage Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Size	371,496	22,049	50,974	35,503	78,062	119,439	65,469

The majority of the people (32 percent) in North-Western province speak Lunda as a first language. This is followed by Kaonde which is spoken as a first language by about 29 percent of the population. The two languages together account for slightly over 60 percent of the people in North-Western province, speaking them as first languages. The Luvale language is the third most spoken as a predominant language accounting for 18.4 percent of the population. Other languages include Luchazi, Chokwe, Bemba, Ndembu, and Lamba languages together are spoken by about 15 percent of the population. The remaining 6 languages are spoken by the rest of the population of about 6.5 percent.

The Kaonde language is the most common language used in Mufumbwe, Solwezi and is almost a universal language in Kasempa district. Lunda of North-Western is spoken as a predominant language by over 80 percent of the population of Mwinilunga district and Luvale is spoken by over 60 percent of the Zambezi district population. Three languages namely, Luvale (31.2 percent), Lunda of North-Western (26.0 percent) and Luchazi (22.4 percent) are the major predominant languages spoken in Kabompo district. English, the official language in Zambia is spoken by less than one percent of the population in all the districts.

#### 4.3 PREDOMINANT LANGUAGE GROUP

The languages spoken in North-Western Province have been grouped according to their respective language groups described in Section 4.1 and the results are presented by sex in Table 4.2 for rural and urban areas of the province.

Table 4.2

Predominant Language Groups by Sex and Rural/Urban, (Percent), North-Western Province, 1990.

Language Group	North-Western Province - Total			North-Western Province Rural			North-Western Province Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba	5.5	5.6	5.3	4.1	4.2	4.1	13.2	13.7	12.7
Toŋga	0.4	0.4	0.4	0.2	0.2	0.2	1.4	1.4	1.5
N/Western	91.2	90.5	91.8	93.6	93.1	94.0	76.9	75.1	78.5
Barotse	1.3	1.4	1.2	1.0	1.1	1.0	2.7	2.9	2.6
Nyanja	0.6	0.6	0.5	0.2	0.3	0.2	2.6	2.6	2.6
Mambwe	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Tumbuka	0.1	0.1	0.1	0.0	0.1	0.0	0.4	0.4	0.4
English	0.7	1.0	0.4	0.4	0.6	0.3	2.3	3.3	1.2
Other	0.3	0.3	0.3	0.2	0.3	0.2	0.4	0.4	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Size	371,496	177,025	194,471	317,933	151,166	166,767	53,563	25,859	27,704

Note: Size does not include "Not Stated" and "Not Applicable" cases.

In rural areas of the province, languages in the North-Western group are spoken by over 90 percent of the population followed by the languages in the Bemba group spoken by about 4 percent of the population. Very small proportions of the population speak languages in the other language groups. The Mambwe and Tumbuka language groups are hardly spoken in rural North-Western Province.

About 77 percent of the urban population speak languages belonging to the North-Western group of languages. About 13 percent of the people in urban areas speak languages in the Bemba group. The sex differences in the use of languages is minimal, however, English is spoken more by males than females.

Table 4.3 below shows changes in the percentage share of the given language groups in North-Western province during the intercensal period, 1980-1990. Over the period, the number of persons speaking languages from the North-Western group has increased by almost 3 percent, whereas a decrease in the number of persons speaking languages in all other language groups has been observed. The number of persons who speak English language, for example dropped from 2.4 percent in 1980 to 0.7 percent in 1990.

Table 4.3

Predominant Language Groups by Year, (Percent), North-Western Province, 1980 and 1990.

Language Group	Percentage of Total Population	
	1980	1990
Bemba	5.8	5.5
Tonga	0.5	0.4
North-Western	87.4	91.2
Barotse	1.5	1.3
Nyanja	0.7	0.6
Mambwe	0.1	0.0
Tumbuka	0.1	0.1
English	2.4	0.7
Other	1.6	0.3
Total	100.0	100.0
Size	282,936	371,496

#### 4.4 SECOND LANGUAGE OF COMMUNICATION

During the 1990 Census, information as regards a person's second language besides the predominant language of communication was also collected. Of the 387,552 persons enumerated in North-Western province 114,159 or 29 percent responded that they had a second language of communication.

Table 4.4 presents results on second languages spoken in the province and districts as at the time of the census. The Luvale language is spoken by the majority (20 percent) of the population as a second language followed by Bemba which is spoken by 19 percent of the population. Bemba is mostly used as a second language of communication by 41 percent of the people in Kasempa. It is spoken in Mwinilunga as a second language by about 27 percent and in Solwezi 23 percent of the population speak Bemba as a second language of communication.

**Table 4.4**

**Second Language of Communication by District, (Percent), North-Western Province, 1990**

Second Language	Total	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Bemba	19.0	12.1	3.8	41.0	27.4	23.0	10.5
Lamba	3.7	1.2	0.4	3.3	0.6	8.6	0.1
Tonga	0.6	0.3	0.3	0.9	0.6	0.8	0.4
Luvale	20.0	20.4	47.2	3.8	11.6	7.0	34.8
Lunda (N-West)	14.6	9.9	15.4	6.2	12.2	13.1	23.2
Mbunda	1.7	1.0	3.3	0.9	0.6	1.1	1.8
Luchazi	3.0	2.5	11.6	0.9	0.6	1.0	2.6
Ndembu	0.3	0.2	0.2	0.0	2.4	0.2	0.4
Chokwe	3.0	8.2	5.6	0.9	0.6	1.9	3.0
Kaonde	17.5	32.8	1.8	16.6	16.0	29.0	2.2
Lozi	2.0	1.6	1.3	1.4	2.2	1.1	4.9
Nkoya	0.7	0.6	1.8	2.8	0.2	0.1	0.4
Nyanja	2.0	1.6	0.8	3.8	3.1	1.9	2.2
English	8.5	6.0	3.5	15.6	17.7	5.6	12.4
Other	3.4	1.6	1.0	1.9	4.2	5.6	1.1
Total	100.0	100.0	99.7	100.0	100.0	100.0	100.0
Size	114,159	7,196	21,058	7,788	13,319	46,587	18,225

The sex distribution of second language groups for rural and urban areas in North-Western Province is presented in Table 4.5 below. The North-Western language group is the most spoken as a second language group just as it is as a predominant language followed by the Bemba language group. Small proportions of people speak languages in the other language groups. Sex differences are minimal for most of the language groups though female proportions are generally higher than males, however, small proportions of females speak English as a second language as compared to males.

Table 4.5

## Second Language Groups by Sex and Rural/Urban, (Percent), North-Western Province.

Language Group	North-Western Province Total			North-Western Province Rural			North-Western Province Urban		
	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
Bemba	23.2	22.6	23.8	22.3	21.8	22.8	25.8	24.8	26.7
Tonga	0.8	0.8	0.8	0.6	0.6	0.6	1.6	1.5	1.7
North-Western	60.2	57.3	63.2	62.7	59.6	65.9	52.7	50.3	55.0
Barotse	2.7	2.7	2.7	2.8	2.9	2.8	2.3	2.3	2.4
Nyanja	2.5	2.6	2.4	1.8	2.0	1.7	4.7	4.8	4.5
Mambwe	0.2	0.2	0.2	0.1	0.1	0.1	0.4	0.4	0.5
Tumbuka	0.2	0.2	0.2	0.8	0.1	0.1	0.3	0.3	0.3
English	8.5	11.8	4.9	7.7	11.1	4.2	10.4	14.0	6.9
Other	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.6	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Size	114,159	57,663	56,496	85,653	43,429	42,224	28,506	14,234	14,272

Table 4.6 shows the percent distribution of the second language groups of communication for the years 1980 and 1990. Notable changes are observed in the Bemba, North-Western groups and English. During the intercensal period, the percentage of the people speaking languages in the North-Western language group decreased, whereas an increase was observed in the proportion speaking languages belonging to the Bemba group and English during the same period.

Table 4.6

## Second Language Groups, (Percent), North-Western Province, 1980 and 1990.

Language Group	Percentage of Total Population	
	1980	1990
Bemba	19.2	23.2
Tonga	1.2	0.8
North-Western	47.0	60.2
Barotse	3.3	2.7
Nyanja	3.5	2.5
Mambwe	0.1	0.2
Tumbuka	0.3	0.2
English	20.5	8.5
Other	4.8	1.8
Total		100.0
Size		114,159

In conclusion, Table 4.7 presents rank order of the predominant and second languages for the first five most used languages. The ranking is such that the language on top of each cell is the predominant language of communication. The language below is the second language of communication. Where a cell has only one language, it signifies that the language has the same indicated rank order for both predominant and second languages. The results of rank ordering for each district are summarised in Table 4.7.

Table 4.7

**Rank Order of Predominant and Second Language of Communication by District, North-Western Province 1990.**

Rank Order	North-Western Province	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
1	Lunda Luvale	Kaonde	Luvale	Kaonde Bemba	Lunda Bemba	Kaonde	Luvale
2	Kaonde Bemba	Chokwe Luvale	Lunda	Bemba Kaonde	Ndembu English	Lunda Bemba	Lunda
3	Luchazi Kaonde	Lunda Bemba	Luchazi	Lunda English	Luvale Kaonde	Lamba Lunda	Chokwe English
4	Chokwe Lunda	Luvale Lunda	Chokwe Bemba	Luvale Lunda	Kaonde Lunda	Luvale Lamba	Luchazi Bemba
5	Ndembu English	Luchazi Chokwe	Nkoya Chokwe	English Luvale	Bemba Luvale	Bemba Luvale	Lozi

**SUMMARY**

The major predominant languages spoken in North-Western province are indigeneous to the province. About 14 languages have been identified as major ones in the province. However, the most spoken languages are Lunda, Kaonde and Luvale. Lunda is spoken by 32 percent of the people, nearly 30 percent speak Kaonde and 18 percent speak Luvale as a predominant language of communication. English is spoken mainly as a second language of communication.

## 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 geared to certificates, diplomas, degrees, or other formal credentials. Subsequently, it is relatively easy to define formal education as well as to measure its costs and identify its outputs. Similarly, the collection and documentation of statistical information related to formal education is easy. Such information includes number, size and geographical distribution of schools, age, sex and number of pupils in each class and spatial location; age sex and number of teachers by qualification per school, as well as the financial cost of building and of running each school.

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. In addition, the costs, inputs and outputs of non-formal education cannot be readily measured. However, 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 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 primary school cycle starts at age seven and is completed after 7 years. The progression from primary to junior secondary and from junior secondary to senior secondary is restricted through examinations. After junior secondary education which lasts 2 years those not selected to proceed to senior secondary school can apply to attend vocational training in colleges and other centres offering training in skills. Those who complete both junior and senior secondary school (senior secondary school lasts three years) can apply 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 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*

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

### *Academic Education*

This is the highest level of formal education that an individual has attended or completed regardless of duration in school. Educational qualifications attained such as certificate, diploma and degree are obtained after completing academic education.

### *Professional/Vocational Education completed*

This is higher qualification attained after studying a specified of study after formal school (grade 1-12) either at college or university.

## **5.3 LITERACY STATUS**

Table 5.1 provides information on literate population by age group, sex and residence in North-Western Province in 1990. The percentage of Literate population in North-Western province is 42.8 percent. Males and females make up 50.9 and 35.5 percent of the literate population respectively. The literate population is concentrated in age groups 10 to 44 years. More than 50 percent of population in each age group in the 15-44 age range are able to read and write, except in the age range 45 years and over in which less than 30 percent are able to read and write. In all the age groups, proportions of males are higher than those of females. Urban areas have high literate proportions in all age groups as compared to rural areas. In urban areas, 67.3 percent of the population are able to read and write while in rural areas only 38.6 percent are literate. The trend for the rural and urban areas by sex is shown clearly in Figures 5.1 and 5.2.

Districts of North-Western province that have high percentages of literate population are Mufumbwe (50.9 percent), Kasempa (47.7 percent), Solwezi (46.7 percent) and Kabompo (44.5). Mwinilunga district has the lowest proportions of both males and females who are literate followed by Zambezi district.

Table 5.1

## Literate Population by Age Group, Sex and Residence, (Percent), North-western Province, 1990

Residence/Sex	Total	Age Group							Not Stated
		5-9	10-14	15-19	20-24	25-29	30-44	45+	
<b>North-western Province</b>									
- Total	42.8	12.3	48.5	66.1	63.3	60.8	51.8	22.7	19.0
- 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
<b>Residence</b>									
<b>Rural</b>									
- Total	38.6	10.3	44.0	62.1	59.1	56.2	46.3	20.9	16.6
- Male	47.1	10.1	44.4	67.4	70.5	71.0	67.9	36.9	24.1
- Female	31.1	10.4	43.5	56.9	49.7	45.1	30.5	6.7	10.2
<b>Urban</b>									
- Total	67.3	24.6	73.3	86.6	84.8	83.1	78.8	44.5	41.2
- Male	73.0	23.6	73.2	89.3	89.4	91.2	92.5	66.4	48.5
- Female	61.9	25.5	73.4	84.0	81.4	76.7	64.4	18.5	27.8
<b>Districts</b>									
<b>Mufumbwe</b>									
- Total	50.9	17.3	59.5	78.0	76.1	71.9	58.6	25.1	8.8
- Male	58.1	16.4	59.1	82.2	84.2	83.5	80.1	43.7	17.9
- Female	44.3	18.2	59.9	74.0	69.9	62.8	40.7	6.9	0.0
<b>Kahompo</b>									
- Total	44.5	13.5	53.5	70.6	67.7	66.3	55.4	19.9	13.9
- Male	52.8	13.0	52.3	74.6	78.2	76.4	76.9	36.5	25.0
- Female	37.3	14.0	54.7	66.6	58.6	58.8	40.0	6.5	5.7
<b>Kasempa</b>									
- Total	47.7	12.9	51.2	71.9	68.9	65.9	55.0	29.7	39.0
- Male	55.2	12.4	52.0	76.0	77.0	78.5	75.8	48.5	52.4
- Female	41.0	13.4	50.4	68.2	62.2	56.3	39.3	10.5	25.0
<b>Mwinilunga</b>									
- Total	34.9	7.5	37.4	57.4	53.8	50.4	43.1	19.5	7.4
- Male	44.3	7.7	38.4	63.7	68.2	68.7	67.4	36.0	8.5
- Female	26.4	7.3	36.4	51.4	42.0	36.5	25.3	5.4	6.7
<b>Solwezi</b>									
- Total	46.7	13.7	51.6	67.6	66.0	63.5	55.8	27.5	24.7
- Male	54.6	13.3	51.8	73.0	75.4	77.3	75.4	44.5	34.2
- Female	39.3	14.2	51.3	62.4	58.3	53.2	39.0	9.8	15.9
<b>Zambezi</b>									
- Total	38.2	13.0	46.8	61.9	57.7	57.8	47.3	18.7	17.8
- Male	45.5	12.7	46.4	65.3	66.0	69.9	65.9	33.1	22.2
- Female	31.8	13.2	47.2	58.8	51.0	48.7	34.4	6.6	12.7

Figure 5.1

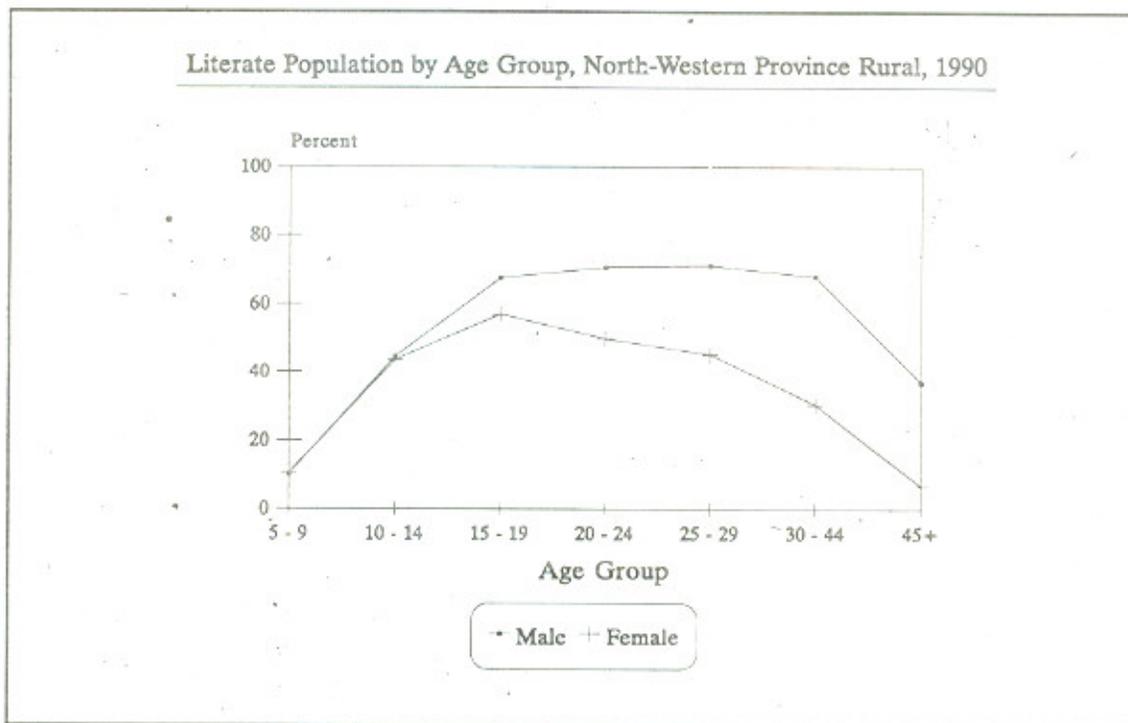
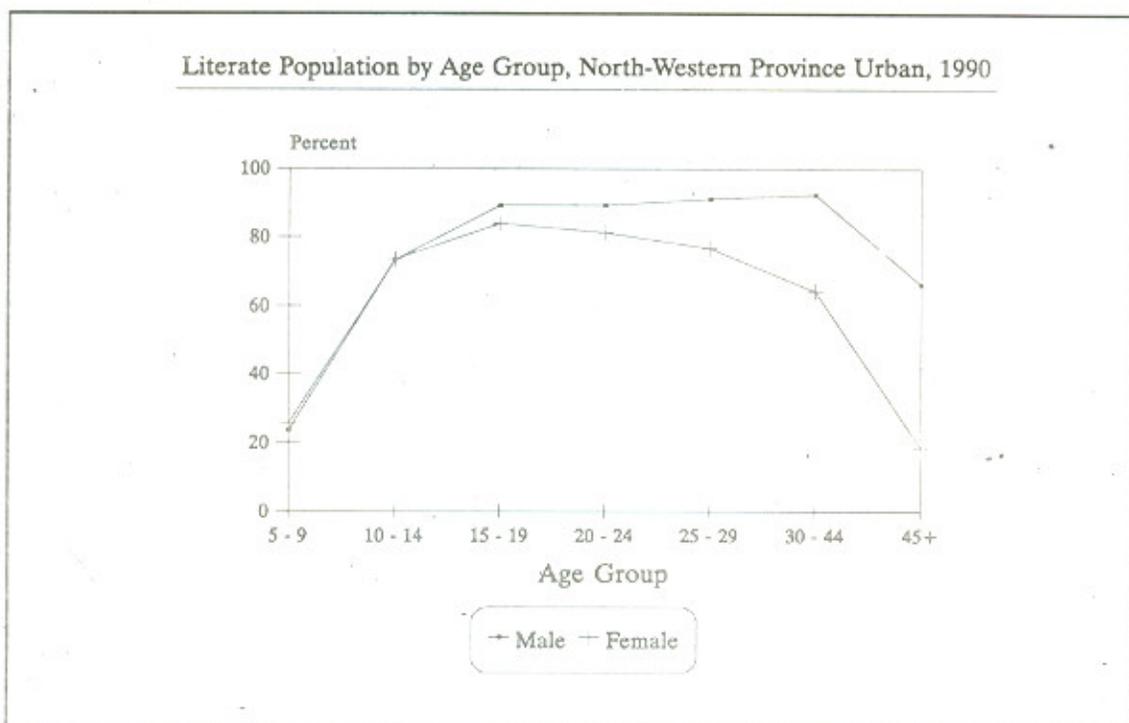


Figure 5.2



#### 5.4 SCHOOL ATTENDANCE

Tables 5.2 and 5.3 show percentages of the population who were recorded as presently attending school in 1980 and 1990 by sex and residence. In 1990, 30 percent of the total population in North-Western province was recorded as currently attending school whereas in 1980, about 20 percent of the population was attending school at the time of the census. Between the intercensal period, 1980-1990, increases in the population presently attending school in the province were observed in all age groups and by sex. The overall proportions of males and females increased by 11.2 and 8.6 percent respectively. Percentages of presently attending school population during the 1990 census are 36.3 and 24.8 percent for males and females, respectively.

Table 5.2 shows high proportions of those presently attending school in ages 5-24 years. In rural areas, the overall percentage of the presently attending school population increased from 19 percent in 1980 to about 27 percent in 1990. The increase in urban areas was from nearly 30 percent in 1980 to 54 percent in 1990. Analysis of information with regard to sex, reveal a similar pattern for both rural and urban areas.

Figures 5.3 and 5.4 show low proportions of currently attending school population in rural areas as compared to urban areas. Similarly, higher proportions of the currently attending school in age range 25 years and over were recorded in urban areas than rural areas.

Table 5.2

Population Presently Attending School by Sex, Age and Residence, (Percent). North-western Province, 1990

Residence/Sex	Age Group						Not Stated	Total
	5-9	10-14	15-19	20-24	25-29	30+		
<b>North-western Province</b>								
- Total	24.4	61.3	59.6	26.3	7.5	1.8	5.5	30.0
- Male	23.4	61.8	68.1	42.1	13.7	3.1	6.2	36.3
- Female	25.4	60.8	50.1	14.2	4.6	1.1	4.9	24.8
<b>Residence</b>								
<b>Rural</b>								
- Total	21.5	57.4	55.3	23.6	6.7	1.6	5.4	26.6
- Male	20.8	58.1	64.5	39.0	12.2	2.8	6.4	33.0
- Female	22.2	56.6	45.1	12.1	4.1	1.0	4.6	21.5
<b>Urban</b>								
- Total	41.6	82.6	81.8	48.6	15.3	4.6	6.0	54.1
- Male	39.4	83.3	86.4	64.8	27.4	8.9	4.2	60.1
- Female	43.8	82.0	76.4	33.7	9.7	2.5	7.7	49.0
<b>Districts</b>								
<b>Mufumbwe</b>								
- Total	33.3	74.5	73.8	29.6	7.9	2.1	2.9	39.5
- Male	31.3	74.0	81.9	50.7	13.3	3.9	1.8	46.0
- Female	35.3	75.0	63.2	14.4	5.7	0.4	1.2	49.4
<b>Kabompo</b>								
- Total	25.9	67.7	64.6	29.9	8.1	1.3	6.8	30.9
- male	24.2	67.9	72.3	47.7	14.8	1.9	2.9	37.9
- Female	27.7	67.4	55.4	14.4	4.7	1.0	1.4	25.2
<b>Kasempa</b>								
- Total	27.0	67.1	67.7	31.8	8.6	1.8	4.9	36.6
- Male	25.3	67.2	75.3	45.0	13.1	3.0	0.0	42.8
- Female	28.6	67.0	59.0	21.7	6.7	1.2	8.3	31.6
<b>Mwinilunga</b>								
- Total	18.7	52.6	50.8	20.1	6.3	2.1	1.8	24.5
- Male	18.3	54.4	61.0	37.5	12.7	4.1	0.0	31.4
- Female	19.2	50.8	39.5	8.4	3.6	1.0	3.2	19.1
<b>Solwezi</b>								
- Total	26.8	62.5	60.3	29.1	9.1	2.3	7.1	33.0
- Male	26.0	63.2	69.1	44.0	17.2	4.1	8.2	39.4
- Female	27.6	61.9	50.6	17.5	5.5	1.3	6.3	27.8
<b>Zambezi</b>								
- Total	21.1	55.9	55.1	22.7	4.9	1.1	4.4	24.1
- Male	20.4	55.5	61.3	36.5	8.6	1.7	3.0	29.2
- Female	21.8	56.4	48.5	11.7	3.1	0.8	5.9	20.1

The district having a large population that was reported as presently attending school is Mufumbwe with about 40 percent. This is followed by Kasempa with about 36.6 percent, Solwezi with 33 percent and Kabompo with about 31 percent. The remaining two districts Mwinilunga and Zambezi have each a population of between 20 and 25 percent presently attending school.

Figure 5.3

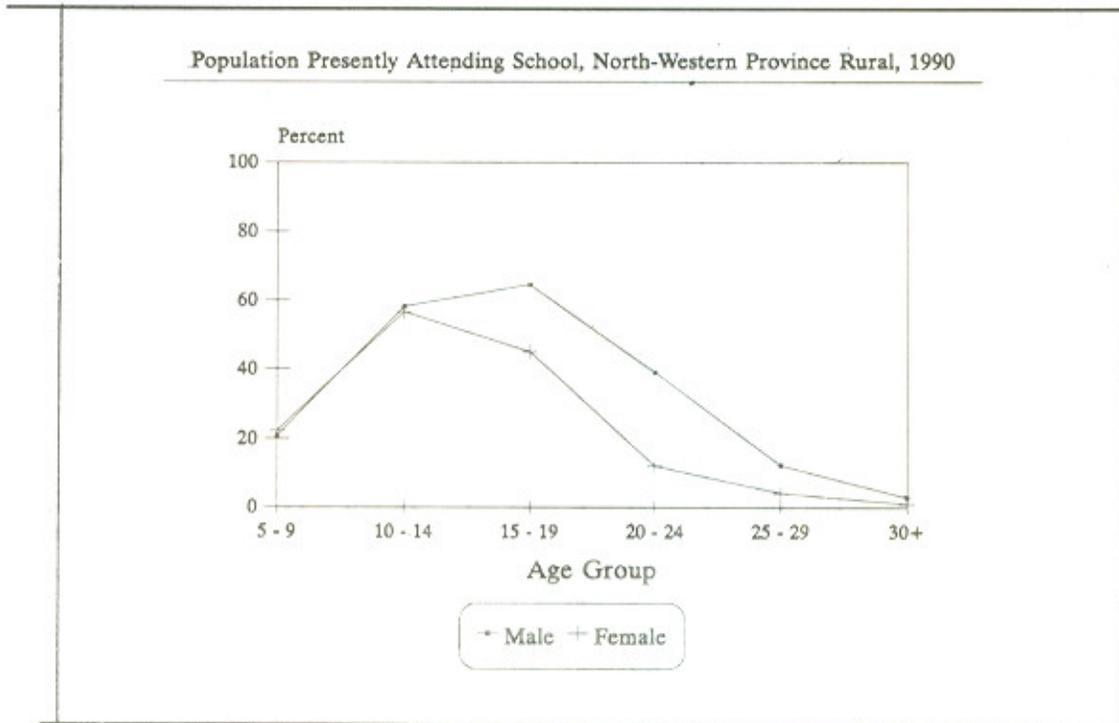


Figure 5.4

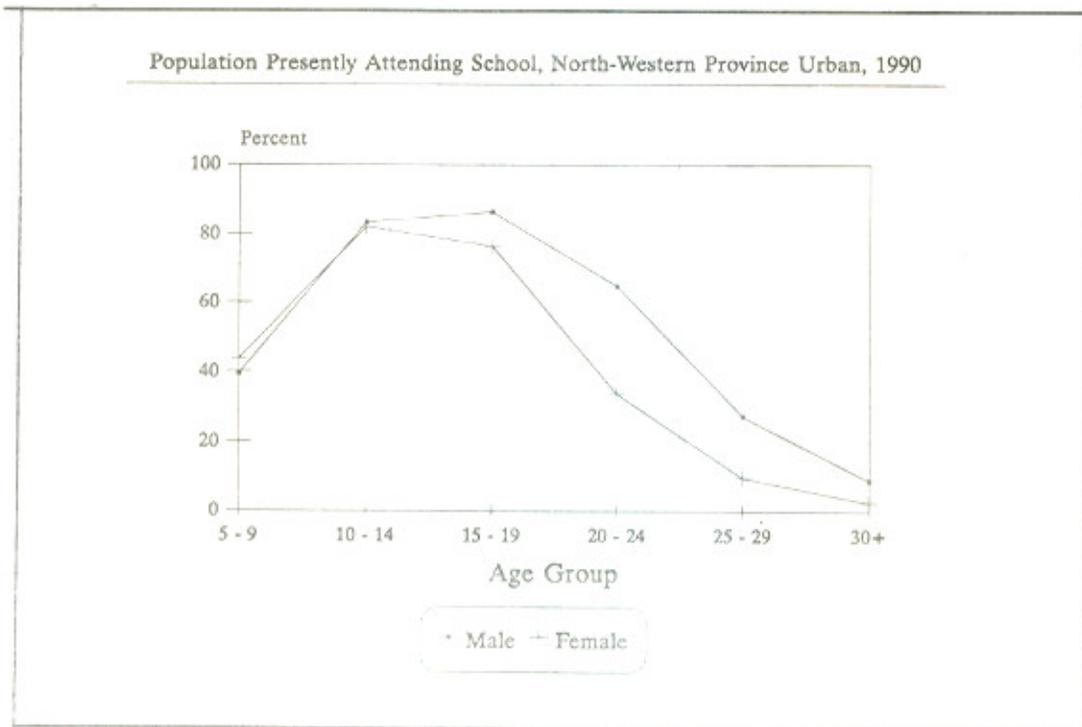


Table 5.3

## Population Presently Attended School by Sex, Age and Residence, (Percent), North-western Province 1980

Residence/Sex	Age Group						Total
	5-9	10-14	15-19	20-24	25+	Not Stated	
<b>North-western Province</b>							
- Total	21.1	62.4	42.7	9.4	0.9	3.2	20.4
- Male	20.8	65.3	58.5	17.3	1.4	4.9	25.1
- Female	21.5	59.6	26.2	3.2	0.4	1.9	16.2
<b>Residence</b>							
<b>Rural</b>							
- Total	19.1	59.6	41.6	9.6	0.7	3.0	19.1
- Male	19.1	62.8	57.2	17.9	1.2	4.8	24.2
- Female	19.2	56.2	24.2	3.0	0.4	1.6	14.6
<b>Urban</b>							
- Total	33.3	79.2	50.4	8.6	1.8	3.8	28.9
- Male	31.5	81.2	65.0	14.6	2.4	4.9	30.9
- Female	35.0	77.1	37.4	4.2	1.1	3.3	27.0
<b>Districts</b>							
<b>Mufumbwe</b>							
- Total	30.3	75.0	42.0	5.8	0.2	2.8	25.7
- Male	29.4	77.1	59.8	12.7	0.4	0.0	29.7
- Female	31.1	73.1	25.9	0.6	0.1	4.7	22.2
<b>Kabompo</b>							
- Total	27.0	68.9	44.7	8.1	0.5	3.1	20.8
- Male	26.8	70.1	37.9	15.3	0.8	5.1	25.0
- Female	27.1	67.6	30.7	2.3	0.2	1.9	17.2
<b>Kasempa</b>							
- Total	23.8	66.8	45.4	7.1	0.7	4.7	24.2
- Male	22.4	68.5	61.3	12.9	1.1	7.2	28.2
- Female	25.1	65.0	31.1	3.0	0.4	1.7	20.7
<b>Mwinilunga</b>							
- Total	15.2	52.1	36.4	7.8	1.0	3.0	17.0
- Male	15.6	57.0	51.5	14.4	1.6	4.1	22.0
- Female	14.8	47.0	20.2	2.9	0.5	1.9	12.5
<b>Solwezi</b>							
- Total	20.4	63.3	45.1	11.8	1.2	0.5	22.3
- Male	20.2	67.2	63.2	20.9	1.9	5.4	27.6
- Female	20.7	59.2	24.8	4.0	0.8	1.6	17.3
<b>Zambezi</b>							
- Total	22.6	64.5	43.4	9.5	0.8	2.9	18.3
- Male	21.9	64.7	55.9	17.9	1.2	4.8	22.5
- Female	23.2	64.4	30.1	3.1	0.4	1.8	14.9

The 1990 Census information on the population who were recorded as presently attending school by age, sex and education level completed is presented in Table 5.4. Analysis of the presently attending school population by age, sex and level of education completed in 1990, shows that 49 percent completed grades 1-4 while 31 percent had completed grades 5-7. Slightly more than 10.0 percent of the presently attending school population completed secondary school, grades 8-12. The population who completed at least one level of education is concentrated in the age range between 5 and 19 years. A larger proportion (52.4 percent) of females recorded as presently attending school have completed grades 1-4 than that of males (46.8 percent). However, as the pupils progress to upper primary school, more female pupils than males drop out of school due to various reasons. The proportion of male pupils attending school and have completed grades 5-7 is 32.2 percent while that of females is 29.2 percent. Similar observations are noticed in all age groups. Table 5.4 who are presently attending provides information on proportions for both male and females in rural and urban areas who are presently attending school. In rural areas 54.9 and 28.8 percent females have completed grades 1-4 and 5-7 respectively.

Table 5.4

Population (5 Years and Older) Presently Attending School by Age, Sex, Level of Education Completed and Residence, (Percent), North-western Province, 1990

Residence and Age Group		Education Level Completed							Total	Size
		1-4	5-7	8-9	10-12	A Level	Degree	Not Stated		
North-western Province										
Both Sexes										
	Total	49.3	31.0	7.9	3.0	0.0	0.0	8.7	100	73,266
	5-9	74.0	-	-	-	-	-	26.0	100	14,108
	10-14	67.5	25.9	0.8	-	-	-	5.8	100	30,717
	15-19	18.9	56.3	18.2	3.9	0.0	-	2.6	100	21,925
	20-24	8.4	37.0	30.5	21.4	0.1	0.0	2.7	100	4,389
	25-29	16.3	40.4	14.2	25.0	0.1	-	4.0	100	809
	30+	24.3	33.8	7.4	17.7	0.1	-	16.7	100	1,287
	Not Stated	58.1	19.4	6.5	9.7	-	-	6.5	100	31
Male										
	Total	46.8	32.4	8.8	3.7	0.0	0.0	8.2	100	39,813
	5-9	73.0	-	-	-	-	-	27.0	100	6,720
	10-14	68.1	25.0	0.8	-	-	-	6.1	100	15,550
	15-19	20.0	56.4	17.3	3.7	0.0	-	2.6	100	13,224
	20-24	7.2	37.5	31.3	21.6	0.1	0.0	2.3	100	3,044
	25-29	12.8	36.7	16.2	30.7	0.2	-	3.4	100	469
	30+	23.0	33.8	8.7	23.8	-	-	10.6	100	790
	Not Stated	75.0	12.5	-	6.3	-	-	6.2	100	16
Female										
	Total	52.4	29.2	6.8	2.2	0.0	-	9.3	100	33,458
	5-9	74.9	-	-	-	-	-	25.1	100	7,383
	10-14	66.8	26.8	0.9	-	-	-	5.5	100	15,167
	15-19	17.3	56.3	19.6	4.1	-	-	2.7	100	8,701
	20-24	11.1	35.8	28.5	21.0	0.1	-	3.5	100	1,345
	25-29	21.2	45.6	11.5	17.1	-	-	4.7	100	340
	30+	26.4	33.8	5.2	8.0	0.2	-	26.4	100	497
	Not Stated	40.0	26.7	13.3	13.3	-	-	6.7	-	15
Rural										
Male										
	Total	48.6	32.6	7.4	3.0	0.0	0.0	8.3	100	31,639
	5-9	72.4	-	-	-	-	-	27.6	100	5,134
	10-14	70.6	22.4	0.6	-	-	-	6.4	100	12,483
	15-19	23.0	58.2	13.6	2.6	0.0	-	2.6	100	10,489
	20-24	7.8	41.5	29.3	18.8	0.0	0.0	2.5	100	2,479
	25-29	14.3	40.9	17.2	24.2	-	-	3.4	100	384
	30+	27.0	36.6	7.9	16.8	-	-	11.6	100	655
	Not Stated	73.3	13.3	-	6.7	-	-	6.7	100	15
Female										
	Total	54.9	28.8	5.4	1.7	0.0	-	9.3	100	25,654
	5-9	74.9	-	-	-	-	-	25.1	100	5,492
	10-14	70.3	23.6	0.6	-	-	-	5.5	100	11,825
	15-19	20.1	58.9	15.1	3.1	0.0	-	2.8	100	6,602
	20-24	13.3	41.4	25.2	16.4	-	-	3.7	100	1,029
	25-29	21.1	48.7	11.3	13.8	-	-	5.1	100	275
	30+	28.9	32.5	4.1	5.0	-	-	29.4	100	418
	Not Stated	38.5	23.1	15.4	15.4	-	-	7.7	100	13
Urban										
Male										
	Total	39.6	31.7	14.3	6.5	0.0	-	7.9	100	8,174
	5-9	74.8	-	-	-	-	-	25.2	100	1,586
	10-14	57.8	35.5	1.7	-	-	-	5.0	100	3,067
	15-19	8.8	49.3	31.4	7.9	-	-	2.6	100	2,735
	20-24	4.4	19.5	40.4	33.6	0.4	-	1.8	100	565
	25-29	5.9	17.6	11.8	60.0	1.2	-	3.5	100	85
	30+	3.7	20.0	12.6	57.8	-	-	5.9	100	135
	Not Stated	100.0	-	-	-	-	-	-	100	1
Female										
	Total	44.4	30.6	11.7	3.9	0.0	-	9.4	100	7,799
	5-9	74.9	-	-	-	-	-	25.1	100	1,896
	10-14	54.7	38.0	1.8	-	-	-	5.5	100	3,342
	15-19	8.3	48.1	33.7	7.3	-	-	2.5	100	2,099
	20-24	3.8	17.7	39.2	36.1	0.3	-	2.8	100	516
	25-29	21.5	32.3	12.3	30.8	-	-	3.1	100	65
	30+	12.7	40.5	11.4	24.1	1.1	-	10.1	100	79
	Not Stated	50.0	50.0	-	-	-	-	-	100	2

Results from the 1980 Census as given in Table 5.5 indicate that 62.2 percent of those who were attending school were in grades 1-4. A percentage of 29.2 completed in grades 5-7. Out of the male pupils, 90.9 percent completed primary school grades, while 92.5 percent of the female pupils completed their primary grades. At secondary school level, 7.4 percent of male pupils completed grades 8-12 as compared to 5.1 percent of female pupils. Most of the males and females who completed grades 1-7 were between 5 and 14 years. The pattern of school attendance by sex in 1980 was the same as that obtained from the 1990 Census.

Table 5.5

Population (5 Years and Older) Presently Attending School by Age Sex, Level of Educational Completed and Residence, (Percent), North-western Province, 1980

Residence and Age Group		Education Level Completed							Total	Size
		1-4	5-7	8-9	10-12	'A' Level	Degree	Not Stated		
<b>North-western Province Both Sexes</b>										
	Total	62.2	29.2	3.4	3.0	0.0	0.0	2.1	100	50,203
	5-9	94.4	0.6	-	-	-	-	4.9	100	10,726
	10-14	70.1	27.8	0.6	0.0	-	-	1.5	100	24,356
	15-19	26.6	56.3	10.0	6.4	0.0	0.0	0.8	100	12,728
	20-24	23.0	28.7	14.9	32.2	0.2	0.1	1.0	100	1,803
	25+	36.4	29.3	7.3	22.2	-	-	4.7	100	508
	Not Stated	54.9	19.5	6.1	7.3	-	-	12.2	100	82
<b>Male</b>	Total	59.6	30.9	3.8	3.6	0.0	0.0	1.9	100	29,097
	5-9	94.3	0.7	-	-	-	-	5.0	100	5,262
	10-14	70.7	27.4	0.4	0.0	-	-	1.4	100	13,010
	15-19	30.1	54.6	8.7	5.7	0.0	0.0	0.7	100	8,971
	20-24	24.2	29.3	15.9	29.6	0.2	0.1	0.8	100	1,497
	25+	29.9	9.9	8.6	27.6	-	-	3.0	100	304
	Not Stated	45.3	22.6	9.4	11.3	-	-	11.3	100	53
<b>Female</b>	Total	65.8	26.7	2.9	2.2	-	0.0	2.4	100	21,106
	5-9	94.6	0.6	-	-	-	-	4.8	100	5,464
	10-14	69.5	28.3	0.7	0.0	-	-	1.6	100	11,346
	15-19	18.0	60.1	12.9	8.1	-	-	0.8	100	3,757
	20-24	17.0	26.1	9.8	44.8	-	0.3	2.0	100	306
	25+	46.1	27.0	5.4	14.2	-	-	7.4	100	204
	Not Stated	72.4	13.8	-	-	-	-	13.8	100	29
<b>Rural Male</b>	Total	61.2	30.2	3.3	3.3	0.0	0.0	2.0	100	24,521
	5-9	93.8	0.6	-	-	-	-	5.5	100	4,210
	10-14	73.5	24.6	0.3	0.0	-	-	1.6	100	10,901
	15-19	33.2	53.9	7.2	4.9	0.0	0.0	0.8	100	7,759
	20-24	26.3	30.6	15.1	26.8	0.2	0.1	0.7	100	1,341
	25+	31.7	31.3	7.8	26.1	-	-	3.0	100	268
	Not Stated	47.6	26.2	7.1	7.1	-	-	11.9	100	42
<b>Rural Female</b>	Total	68.0	25.0	2.3	2.0	-	-	2.6	100	16,710
	5-9	93.9	0.5	-	-	-	-	5.6	100	4,213
	10-14	73.3	24.5	0.5	0.0	-	-	1.7	100	9,060
	15-19	20.9	61.3	10.4	6.5	-	-	0.9	100	2,986
	20-24	18.5	24.7	9.7	44.8	-	-	2.3	100	259
	25+	49.7	24.9	2.9	13.9	-	-	8.7	100	173
	Not Stated	63.2	15.8	-	-	-	-	21.1	100	19
<b>Urban Male</b>	Total	51.1	36.1	6.3	5.2	-	-	1.2	100	4,576
	5-9	96.0	1.0	-	-	-	-	3.0	100	1,052
	10-14	56.2	41.9	1.1	-	-	-	0.8	100	2,109
	15-19	10.4	59.4	18.5	11.4	-	-	0.3	100	1,212
	20-24	5.8	17.3	22.4	53.2	-	-	1.3	100	156
	25+	16.7	27.8	13.9	38.9	-	-	2.8	100	36
	Not Stated	36.4	9.1	18.2	27.3	-	-	9.1	100	11
<b>Urban Female</b>	Total	57.6	33.0	5.1	3.1	-	0.0	1.2	100	4,396
	5-9	96.9	0.8	-	-	-	-	2.3	100	1,251
	10-14	54.4	43.0	1.7	-	-	-	1.0	100	2,286
	15-19	7.1	55.5	22.6	14.4	-	-	0.4	100	771
	20-24	8.5	34.0	10.6	44.7	-	2.1	-	100	47
	25+	25.8	38.7	19.4	16.1	-	-	-	100	31
	Not Stated	90.0	10.0	20.0	-	-	-	-	100	10

## 5.5 PREVIOUSLY ATTENDED SCHOOL

In North-Western Province, 80,092 persons were recorded in the 1990 Census, as having previously attended school. The highest number of persons was recorded in rural areas with 62,666 as compared to 17,426 persons in urban areas.

Table 5.6 reveal that less than 20 percent of the population who previously attended school were aged between 5 and 19 years. A higher percentage of 43.8 percent of those who previously attended school were aged 30 years or over. Percentages of males and females aged 30 years or over who previously attended school in 1990 were 53.5 and 31.8 percent, respectively. A substantial number of those who previously attended school in 1990 were aged between 20 and 24 years.

Analysis of population who were reported as previously attended school in 1990 by district, show that all districts had percentages ranging between 81 and 84 percent for age group 20 years and above. Similarly, in all districts less than 5 percent of the population previously attended school in age group 5-14 years.

Population Previously Attended School by Sex, Age and Residence, North-western Province, 1990

Residence and Sex	Age Group							Total	Size
	5-9	10-14	15-19	20-24	25-29	30+	N/S		
<b>North-western Province</b>									
-Total	0.8	3.0	13.4	20.9	18.0	43.8	0.1	100	80,092
-Male	0.7	2.5	8.9	17.5	16.8	53.5	0.1	100	44,251
-Female	1.0	3.7	19.0	25.0	19.5	31.8	0.1	100	35,841
<b>Residence</b>									
<b>Rural</b>									
-Total	0.8	3.2	14.0	20.8	17.5	43.6	0.1	100	62,666
-Male	0.7	2.7	9.4	17.7	16.5	53.0	0.1	100	35,245
-Female	1.0	3.9	20.0	24.7	18.9	31.4	-	400	27,421
<b>Urban</b>									
-Total	0.9	2.3	11.2	21.3	19.6	44.6	0.1	100	17,426
-Male	0.8	1.7	6.9	16.9	18.0	55.5	0.2	100	9,006
-Female	1.0	3.0	15.7	25.9	21.4	32.9	0.1	100	8,420
<b>Districts</b>									
<b>Mufumbwe</b>									
-Total	0.7	2.8	15.3	24.2	17.9	39.0	0.1	100	5,467
-Male	0.7	1.9	9.5	20.2	17.0	50.5	0.1	100	2,576
-Female	0.8	3.8	21.9	28.6	19.0	26.0	-	100	2,576
<b>Kabompo</b>									
-Total	0.7	3.1	14.4	21.9	18.0	41.8	0.1	100	11,529
-Male	0.7	2.5	10.2	19.1	16.4	51.1	0.1	100	6,175
-Female	0.7	3.9	19.1	25.2	19.9	31.2	-	100	5,354
<b>Kasempa</b>									
- Total	0.9	2.8	13.5	21.5	17.3	43.8	0.2	100	8,284
- Male	0.7	8.1	17.4	16.7	13.9	54.5	0.2	100	4,431
- Female	0.2	3.4	19.7	26.3	18.0	31.4	0.1	100	3,853
<b>Mwinilunga</b>									
- Total	0.8	3.7	14.7	19.8	17.9	43.1	0.0	100	14,118
- Male	0.6	3.4	9.7	17.2	17.3	51.8	0.0	100	8,321
- Female	1.0	4.3	21.9	23.6	18.6	30.5	0.0	100	5,797
<b>Solwezi</b>									
- Total	0.9	2.7	12.4	20.4	18.3	45.1	0.1	100	27,752
- Male	0.7	2.1	8.2	17.0	16.7	55.2	0.1	100	15,353
- Female	1.2	3.5	17.6	24.7	20.4	32.6	0.0	100	12,399
<b>Zambezi</b>									
- Total	0.8	3.0	12.5	20.2	17.9	45.4	0.1	100	12,942
- Male	0.8	2.7	8.7	16.6	16.7	54.4	0.2	100	7,080
- Female	0.9	3.5	17.1	24.5	19.4	34.5	0.1	100	5,862

Table 5.7 shows the population who had previously attended school by sex, age and residence at the time of 1980 Census. The previously attended school population was concentrated in the age range 20 years and above. Overall, 75.8 percent of the population aged 20 years and above had previously attended school in North-Western province at the time of the 1980 Census. Percentages were, 74.2 and 81.2 percent for rural and urban areas, respectively for the population aged 20 years and above. In both rural and urban areas, proportions of males who previously attended school were high compared to females. Of the population of males in urban areas aged 20 years and above, 87.2 percent previously attended school. Out of the female population in the same age range, 74 percent previously attended school in 1980. In rural areas, 80 percent of male and 64.8 percent of female aged 20 and above had previously attended school.

Table 5.7

## Population Previously Attended School by Sex, Age and Residence, North-western Province, 1980

Residence and Sex	Age Group						Total	Size
	5-9	10-14	15-19	20-24	25+	Not Strted		
<b>North-western Province</b>								
- Total	0.6	4.8	18.8	23.0	52.2	0.6	100	55,010
- Male	0.5	3.8	12.9	19.5	62.6	0.7	100	30,745
- Female	0.6	5.9	26.4	27.6	39.1	0.4	100	24,201
<b>Residence</b>								
<b>Rural</b>								
-Total	0.6	5.2	20.0	22.8	50.9	0.5	100	43,939
-Male	0.5	4.3	13.8	19.7	61.1	0.5	100	24,775
-Female	0.6	6.3	27.9	26.9	37.9	0.4	100	19,119
<b>Urban</b>								
-Total	0.5	2.9	14.5	23.8	57.4	1.0	100	11,032
-Male	0.4	2.0	9.1	18.6	68.6	1.4	100	5,968
-Female	0.5	4.2	20.8	29.9	44.1	0.6	100	5,065
<b>Districts</b>								
<b>Mufumbwe</b>								
-Total	0.3	4.0	21.9	22.7	50.6	0.6	100	1,781
-Male	0.3	2.8	14.2	20.4	61.4	0.8	100	980
-Female	0.3	5.3	31.8	25.6	37.2	0.3	100	298
<b>Kabompo</b>								
-Total	0.6	5.2	19.7	23.2	50.6	0.7	100	7,179
-Male	0.6	4.4	14.1	19.9	60.2	0.8	100	3,955
-Female	0.8	6.1	26.6	27.3	38.7	0.5	100	3,220
<b>Kasempa</b>								
- Total	0.2	5.7	19.8	23.5	50.3	0.5	100	6,089
- Male	0.2	5.2	12.5	19.5	61.9	0.8	100	3,210
- Female	0.3	6.1	27.9	28.0	37.4	0.2	100	2,883
<b>Mwinilunga</b>								
- Total	0.5	5.3	18.4	22.3	53.1	0.4	100	11,099
- Male	0.5	4.3	13.2	19.0	62.6	0.5	100	6,543
- Female	0.8	6.8	25.8	26.9	39.5	0.3	100	4,558
<b>Solwezi</b>								
- Total	0.5	4.0	18.4	24.4	52.3	0.3	100	18,713
- Male	0.4	3.2	11.6	20.8	63.5	0.4	100	10,662
- Female	0.5	5.2	27.3	29.2	37.5	0.2	100	8,055
<b>Zambezi</b>								
- Total	0.8	4.9	18.4	20.9	53.8	1.2	100	10,095
- Male	0.9	3.8	14.1	16.9	63.0	1.4	100	5,411
- Female	0.7	6.1	23.4	25.6	43.3	1.0	100	4,690

Analysis by district, indicates that the percentage of those who previously attended school ranged from 73 to 77 percent for the age group 20 years and above. Solwezi recorded the highest percentage of nearly 77 percent followed by Mwinilunga and Zambezi with 75.4 and 74.7 percent respectively. Mufumbwe, Kabompo and Kasempa districts all recorded a percentage of over 73 percent.

### 5.6 HIGHEST LEVEL OF EDUCATION COMPLETED

Educational achievements are quantified by analysing the highest levels of education completed for the population aged 15 years and older. It is assumed that the population has completed at least grade 7. Table 5.8 shows the percent distribution of population aged 15 years and older by highest level of education completed. Overall, in 1990, 50.2 percent of the population 15 years and older never attended formal school. The highest proportion is that of females which is 60.5 percent compared to that of the males,

which is only 38.1 percent. Only 12.2 percent completed secondary education (grades 8-12) in 1990. A small proportion (0.1 percent) completed 'A' level/degree education.

The trend of 1980 and 1990 Census results as regards the ever attended school population is shown in Figure 5.5 and Figure 5.6 and similar. of patterns of attendance are shown. It is apparent that proportionately, more males had previously attended school than females at the time of 1980 and 1990 Census.

**Table 5.8**

**Population (15 Years and Above) by Highest Level of Education Completed, Sex and Age Group, (Percent), North-western Province, 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	
15+	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
15-19	Both	47,269	30.9	15.3	39.2	10.9	2.1	0.0	1.6	100
	Male	23,229	26.1	16.6	41.5	11.6	2.4	0.0	1.8	100
	Female	24,040	35.5	14.0	36.9	10.2	1.8	0.0	1.4	100
20-24	Both	31,147	36.3	8.8	32.8	12.9	7.3	0.3	1.0	100
	Male	14,846	27.3	8.0	35.2	18.7	9.6	0.1	1.1	100
	Female	18,301	43.6	9.4	30.8	8.2	5.3	0.4	0.9	100
25-29	Both	25,095	39.3	9.2	31.6	6.4	12.5	0.0	0.9	100
	Male	10,780	26.7	8.3	35.0	9.9	19.0	0.1	0.8	100
	Female	14,315	48.8	9.8	29.1	3.8	7.5	0.0	0.9	100
30-44	Both	46,358	49.0	10.7	23.8	4.5	10.8	0.2	1.0	100
	Male	20,227	29.6	10.8	32.0	6.6	19.6	0.3	1.0	100
	Female	26,131	64.0	10.6	17.5	2.8	4.0	0.1	0.9	100
45+	Both	59,663	78.7	11.1	7.4	1.0	0.8	0.0	0.9	100
	male	28,384	63.9	18.5	13.0	1.8	1.5	0.0	1.2	100
	Female	31,279	92.1	4.3	2.3	0.2	0.2	0.0	0.7	100

Figure 5.5

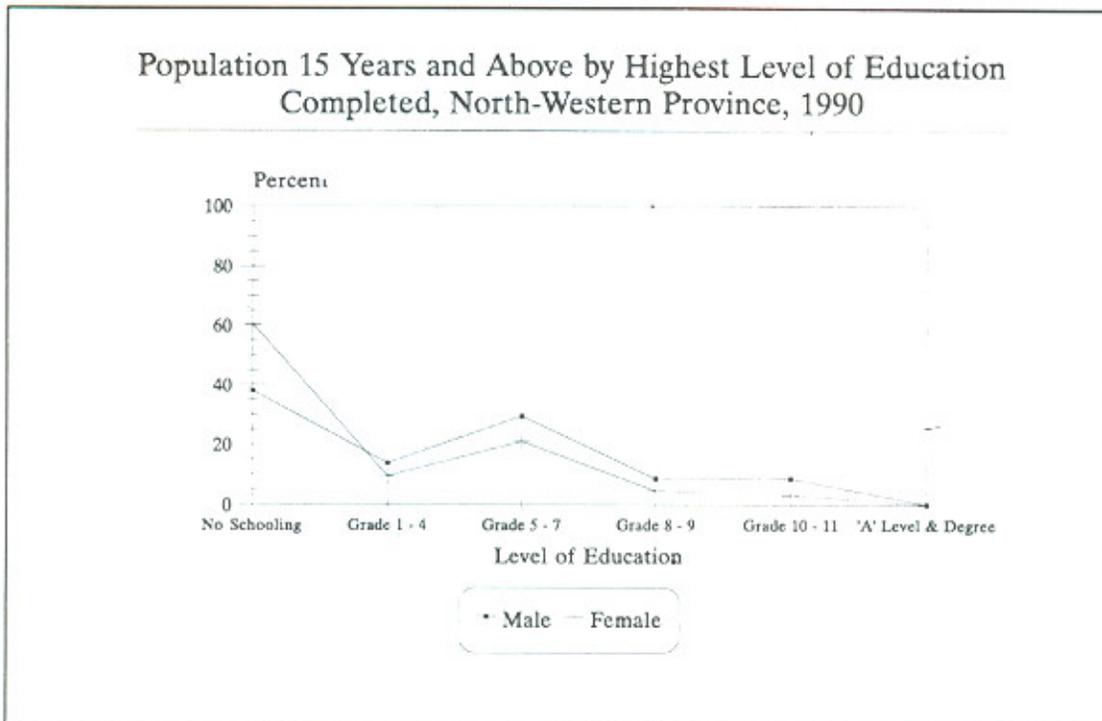
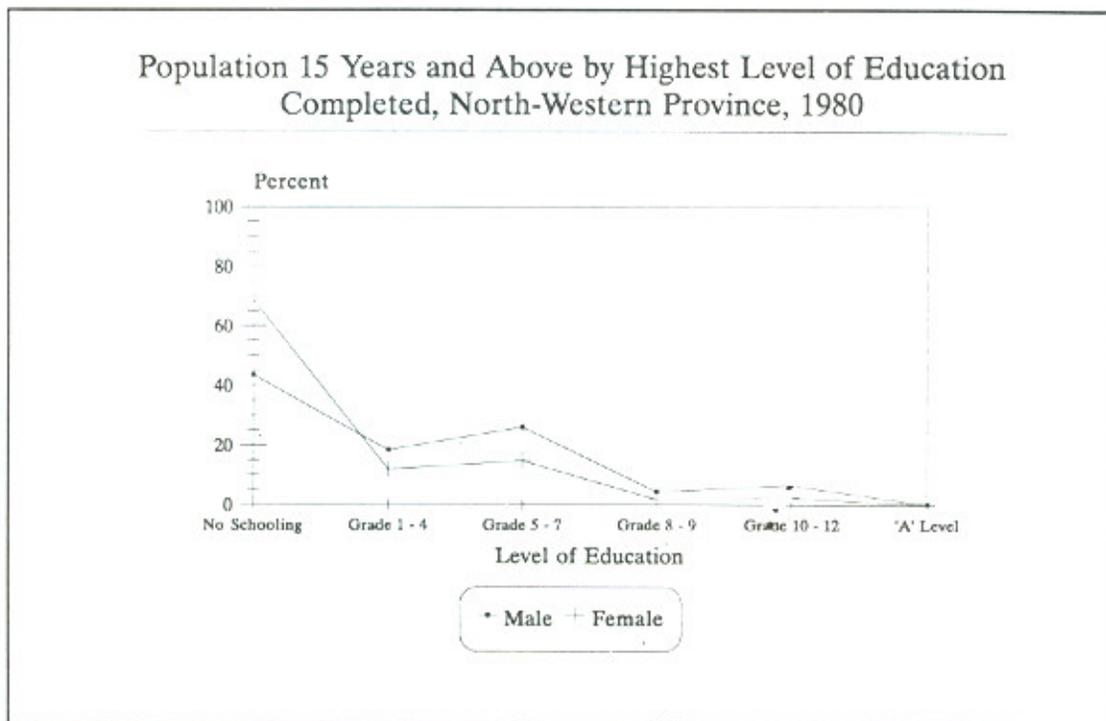


Figure 5.6



It is shown from results of 1990 Census that, at age groups 45 years and older, 78.7 percent had never attended formal school. In this same age group, 63.9 percent of males and 92.1 percent of females never attended formal school. Those without formal school increased from 30.9 in age group 15-19 to 49.9 percent in age group 30-44 years. Fluctuations in the proportions do exist in all age groups at both primary and secondary school levels. However, a general decreasing trend in the proportion from age group 15-19

which is only 38.1 percent. Only 12.2 percent completed secondary education (grades 8-12) in 1990. A small proportion (0.1 percent) completed 'A' level/degree education.

The trend of 1980 and 1990 Census results as regards the ever attended school population is shown in Figure 5.5 and Figure 5.6 and similar, of patterns of attendance are shown. It is apparent that proportionately, more males had previously attended school than females at the time of 1980 and 1990 Census.

**Table 5.8**

**Population (15 Years and Above) by Highest Level of Education Completed, Sex and Age Group, (Percent), North-western Province, 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	
15+	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
15-19	Both	47,269	30.9	15.3	39.2	10.9	2.1	0.0	1.6	100
	Male	23,229	26.1	16.6	41.5	11.6	2.4	0.0	1.8	100
	Female	24,040	35.5	14.0	36.9	10.2	1.8	0.0	1.4	100
20-24	Both	31,147	36.3	8.8	32.8	12.9	7.3	0.3	1.0	100
	Male	14,846	27.3	8.0	35.2	18.7	9.6	0.1	1.1	100
	Female	18,301	43.6	9.4	30.8	8.2	5.3	0.4	0.9	100
25-29	Both	25,095	39.3	9.2	31.6	6.4	12.5	0.0	0.9	100
	Male	10,780	26.7	8.3	35.0	9.9	19.0	0.1	0.8	100
	Female	14,315	48.8	9.8	29.1	3.8	7.5	0.0	0.9	100
30-44	Both	46,358	49.0	10.7	23.8	4.5	10.8	0.2	1.0	100
	Male	20,227	29.6	10.8	32.0	6.6	19.6	0.3	1.0	100
	Female	26,131	64.0	10.6	17.5	2.8	4.0	0.1	0.9	100
45+	Both	59,663	78.7	11.1	7.4	1.0	0.8	0.0	0.9	100
	male	28,384	63.9	18.5	13.0	1.8	1.5	0.0	1.2	100
	Female	31,279	92.1	4.3	2.3	0.2	0.2	0.0	0.7	100

Figure 5.5

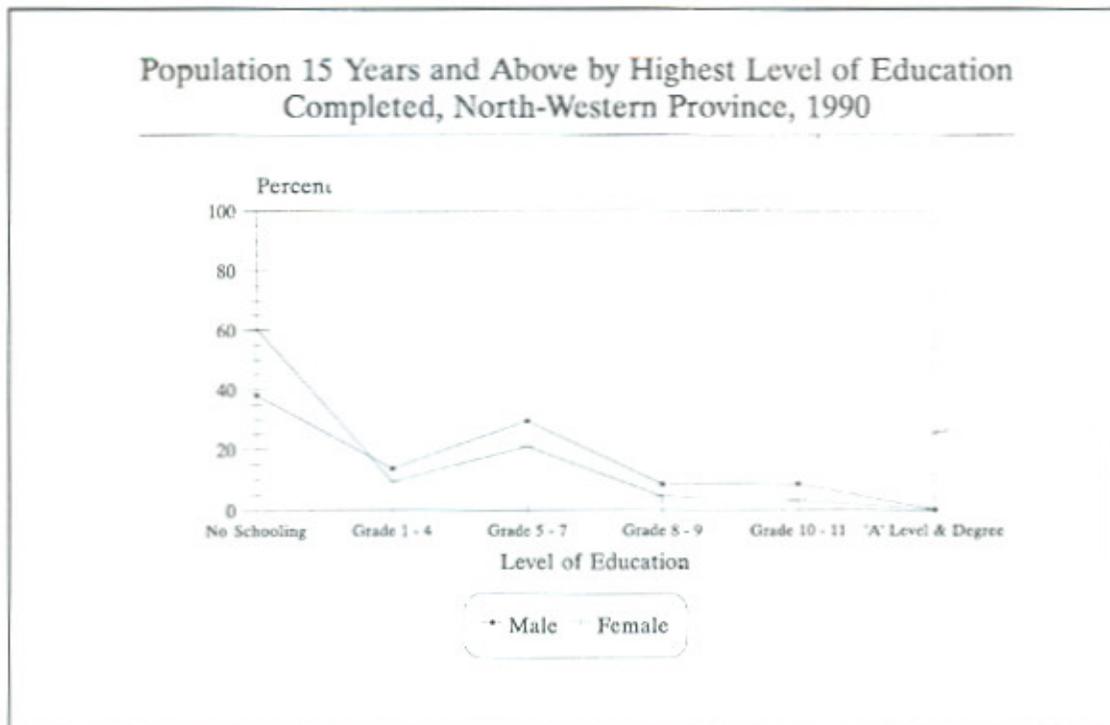
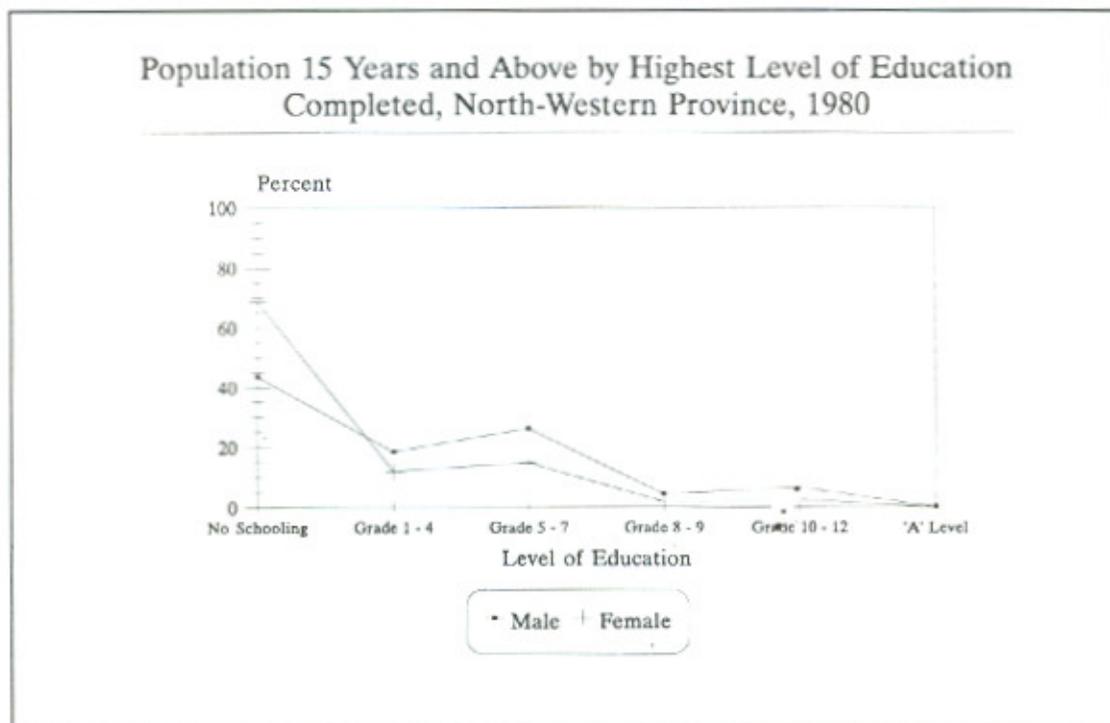


Figure 5.6



It is shown from results of 1990 Census that, at age groups 45 years and older, 78.7 percent had never attended formal school. In this same age group, 63.9 percent of males and 92.1 percent of females never attended formal school. Those without formal school increased from 30.9 in age group 15-19 to 49.9 percent in age group 30-44 years. Fluctuations in the proportions do exist in all age groups at both primary and secondary school levels. However, a general decreasing trend in the proportion from age group 15-19

to 30-44 years is evident for both males and females.

Data from the 1980 Census showed similar patterns to those of the 1990 Census. At age groups 45 years and above, 85.8 percent of the population in North-Western province had never attended formal school. In the same age group, 75.4 percent of the males and 95.7 of the females had never attended formal school in 1980. A general declining trend in proportions of population at both primary and secondary levels who completed grades 1-7 and 8-12 , was observed. This information is provided in Table 5.9.

Table 5.9

Population (15 Years and Above) by Highest Level of Education Completed by Sex and Age Group, (Percent), North-western Province, 1980

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	Not Stated	
15+	Both	158,499	57.3	14.8	19.9	3.0	4.3	0.1	0.6	100
	Male	72,109	43.6	18.3	26.1	4.4	6.6	0.2	0.7	100
	Female	86,390	68.6	11.8	14.8	1.8	2.4	0.1	0.5	100
15-19	Both	30,344	23.1	23.6	42.9	5.2	4.5	0.0	0.7	100
	Male	15,610	16.1	26.3	46.3	5.9	4.6	0.0	0.7	100
	Female	14,734	30.4	20.8	39.3	4.5	4.4	0.0	0.7	100
20-24	Both	21,469	31.5	16.2	34.7	4.3	12.3	0.1	0.8	100
	Male	9,450	19.1	14.9	40.6	6.1	18.3	0.1	0.9	100
	Female	12,019	41.3	17.3	30.1	2.9	7.7	0.1	0.8	100
25-44	Both	53,710	58.8	15.3	16.4	3.6	5.0	0.1	0.7	100
	Male	21,174	36.1	18.7	26.9	6.5	10.4	0.2	1.0	100
	Female	32,536	73.5	13.1	9.5	1.7	1.5	0.1	0.1	100
45+	Both	52,976	85.8	8.5	4.4	0.6	0.3	0.0	0.4	100
	Male	25,875	75.4	14.4	8.0	1.2	0.5	0.0	0.5	100
	Female	27,101	95.7	2.8	1.0	0.1	0.1	0.0	0.3	100

An overall percent of 57.3 of the population aged 15 years and above, in North-Western province never attended formal school in 1980. Of the population of male and that of female, 43.6 and 68.6 percent respectively never attended school. The proportion who completed primary level grades, constituted nearly 35 percent. At secondary level, only 7.3 percent completed grades 8-10. A marginal proportion reported as completing 'A' and degree levels. In general, there was an improvement in the level of education completed between the intercensal period 1980 and 1990.

#### 5.7 SELECTED FIELDS OF STUDY

The results of 1990 Census show that 3,110 males and 1142 females trained in various courses of specialisation. The selected fields of study considered in the 1990 Census are listed in Table 5.10. The major fields of study include various courses of engineering, medicine, nursing, accountancy, teacher training, law, business administration, secretarial, agriculture, etc.

Of the male population who had undergone professional training, in any of the given fields, 20.2 percent completed primary levels, grades 1-7 while 75.3 percent completed secondary level. Only 2.4 percent completed higher levels. As for the female population 11.7 percent completed grades 1-7 and 82.5 percent had completed grades 8-12. A small proportion of 3.8 percent had completed higher education.

## CHAPTER 6

# ECONOMIC CHARACTERISTICS

### 6.1 INTRODUCTION

Information on economic characteristics is used to plan, monitor, evaluate and formulate policies and programmes in order to promote the development of human resources. The same information is also used to study the observed level and distribution of income among individuals and households.

During the 1990 Census, information was collected from all persons who were 12 years and over, on the following economic characteristics:-

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

### 6.2 WORKING-AGE POPULATION

In the 1990 Census, the working-age population is defined as all persons 12 years and over. Table 6.1 shows the working-age population in North-Western Province in 1980 and 1990. This population has increased by 33.6 percent between the two censuses. The male working-age population has increased by 34.9 percent, while the female population increased by 32.5 percent. The rural areas have registered a lower increase (31.4 percent) in the working-age population than that which has been registered in the urban areas (48.3 percent). In rural areas, the increase of 32.9 percent for the male working-age population is more than that of the female working-age population of 30.2 percent. In urban areas, on the other hand, the increase of 47.7 percent in the male working-age population is less than the increase of 48.9 percent for the female working-age population.

A study of the distribution of the working - age population by age reveals that this population declines with an increase in age. This pattern is observed in the age structure of both the male and female working-age population, at regional level, as well as in both rural and urban areas.

The proportion of the working-age population residing in rural areas is much more than that residing in urban areas in both 1980 and 1990. In 1990, 87.0 percent of the working-age population lived in rural areas in 1980 and 85.6 percent in 1990. On the other hand, only 13.0 percent of the working-age population were in urban areas in 1980, while 14.4 percent are in urban areas in 1990. The male and female working-age population are distributed in similar proportions between rural and urban areas in both censuses.

Table 6.1

Population 12 Years and Over by Broad Age Groups, Residence and Sex, (Percent), North-Western Province, 1980 and 1990

Residence, Sex and Year		Size	Total	12-19	20-24	25-29	30-59	60+	Not Stated
<b>North-western Province</b>									
- Total	1980	182,739	100.0	29.1	11.8	8.2	36.6	12.8	1.5
	1990	244,195	100.0	32.0	13.7	10.3	32.7	11.0	0.3
- Male	1980	84,275	100.0	32.4	11.2	7.4	33.2	14.4	1.4
	1990	113,717	100.0	33.9	13.2	9.5	30.7	12.4	0.3
- Female	1980	98,646	100.0	26.2	12.4	8.9	39.5	11.4	1.6
	1990	130,478	100.0	30.3	14.1	11.0	34.6	9.7	0.3
<b>Residence</b>									
<b>Rural</b> - Total	1980	159,011	100.0	28.7	11.3	7.6	37.0	14.0	1.4
	1990	209,011	100.0	31.3	13.3	10.0	32.9	12.2	0.3
- Male	1980	72,815	100.0	32.7	10.9	6.8	32.6	15.7	1.3
	1990	96,785	100.0	33.6	13.0	9.2	30.1	13.8	0.3
- Female	1980	86,203	100.0	25.3	11.7	8.4	40.7	12.4	1.5
	1990	112,226	100.0	29.7	13.7	10.7	35.4	10.7	0.3
<b>Urban</b> - Total	1980	23,72	100.0	31.7	15.0	12.1	34.0	4.9	2.3
	1990	35,184	100.0	36.3	15.7	12.5	31.6	3.7	0.2
- Male	1980	11,460	100.0	31.2	13.1	11.3	36.7	5.6	2.1
	1990	16,932	100.0	35.8	14.1	11.4	34.2	4.3	0.2
- Female	1980	12,261	100.0	32.2	16.8	12.7	31.5	4.3	2.5
	1990	18,252	100.0	36.8	17.1	13.5	29.1	3.3	0.2

### 6.3 ECONOMICALLY ACTIVE POPULATION

The economically active population includes all persons 12 years and over who are classified either as employed or unemployed. Together, the employed and unemployed are sometimes known as the labour force. The economically active population provides the total number of persons who are actually available to perform the work of producing goods and services in the province.

The population who are economically active in 1980 and 1990 are presented in Table 6.2. According to this table, the labour force increased by only 1.3 percent between 1980 and 1990. The male labour force has an increase of 2.3 percent, while the female labour force has stagnated at 0.2 percent. More than half of the labour force in both 1980 and 1990 are male, while less than half are female.

A person is considered to be employed in the censuses if he or she does any work for pay or profit or family gain during the reference period. Payment may be in the form of money, goods, service or a combination of these.

Activity and Sex		Residence and Year						
		1980			1990			
Total Number		Total	Rural	Urban	Total Number	Total	Rural	Urban
Population	- Total	182,739	87.0	13.0	244,195	100.0	85.6	14.4
	- Male	84,275	100.0	86.4	113,717	100.0	85.1	14.9
- Female	98,464	100.0	87.5	12.5	130,478	100.0	86.0	14.0
Labour Force	- Total	107,673	100.0	87.9	109,106	100.0	87.4	12.6
	- Male	62,982	100.0	86.5	64,406	100.0	85.8	14.2
- Female	44,691	100.0	89.7	10.3	44,700	100.0	89.8	10.2
Employed	- Total	44,388	100.0	86.6	94,026	100.0	88.1	11.9
	- Male	30,739	100.0	84.5	54,687	100.0	86.0	14.0
- Female	13,649	100.0	91.8	8.2	39,339	100.0	91.0	9.0
Unemployed	- Total	63,285	100.0	88.8	15,380	100.0	83.1	16.9
	- Male	32,243	100.0	88.7	9,719	100.0	84.5	15.5
- Female	31,042	100.0	88.8	11.2	5,361	100.0	80.6	19.4
Inactive	- Total	74,847	100.0	85.8	132,474	100.0	84.2	15.8
	- Male	21,143	100.0	86.0	47,977	100.0	84.4	15.6
- Female	53,704	100.0	85.7	14.3	84,497	100.0	84.1	15.9
Not Stated	- Total	219	100.0	89.0	2,615	100.0	78.9	21.1
	- Male	150	100.0	85.3	1,334	100.0	77.4	22.6
- Female	69	100.0	97.1	2.9	1,281	100.0	80.5	19.5

Table 6.2 Economically Active Population 12 Years and Over by Residence and Sex, (Percent), North-western Province, 1980 and 1990

Of the 1990 labour force of 109,106 in 1990 86.2 percent are employed. In 1980, only 41.2 percent of the labour force are employed. The employed population has increased by 111.8 percent between the two censuses. The increase in the female employed population of 188.2 percent is much more than the increase of 77.9 percent for the male employed population.

The unemployed population has decreased by 76.2 percent between 1980 and 1990. The proportion of the unemployed population in rural areas was 88.8 percent in 1980 while in 1990 it decreased to 83.1 percent. Corollarily, 11.2 percent of the unemployed population in 1980 was in urban areas while in 1990 it was 16.9 percent.

The proportion of the inactive population in 1990 is 54.3 percent while 74,847 or 41.0 percent are inactive in 1980. Almost an equal proportion of male and females are inactive in rural areas in 1990, 84.4 percent and 84.1 percent, respectively. Similarly, 86.0 percent of the male inactive and 85.7 percent of the female inactive are in rural areas in 1980. About 16 percent of the inactive are in urban areas for both males and females in 1990, while in 1980 about 14 percent of both sexes are inactive in urban areas.

Figure 6.1

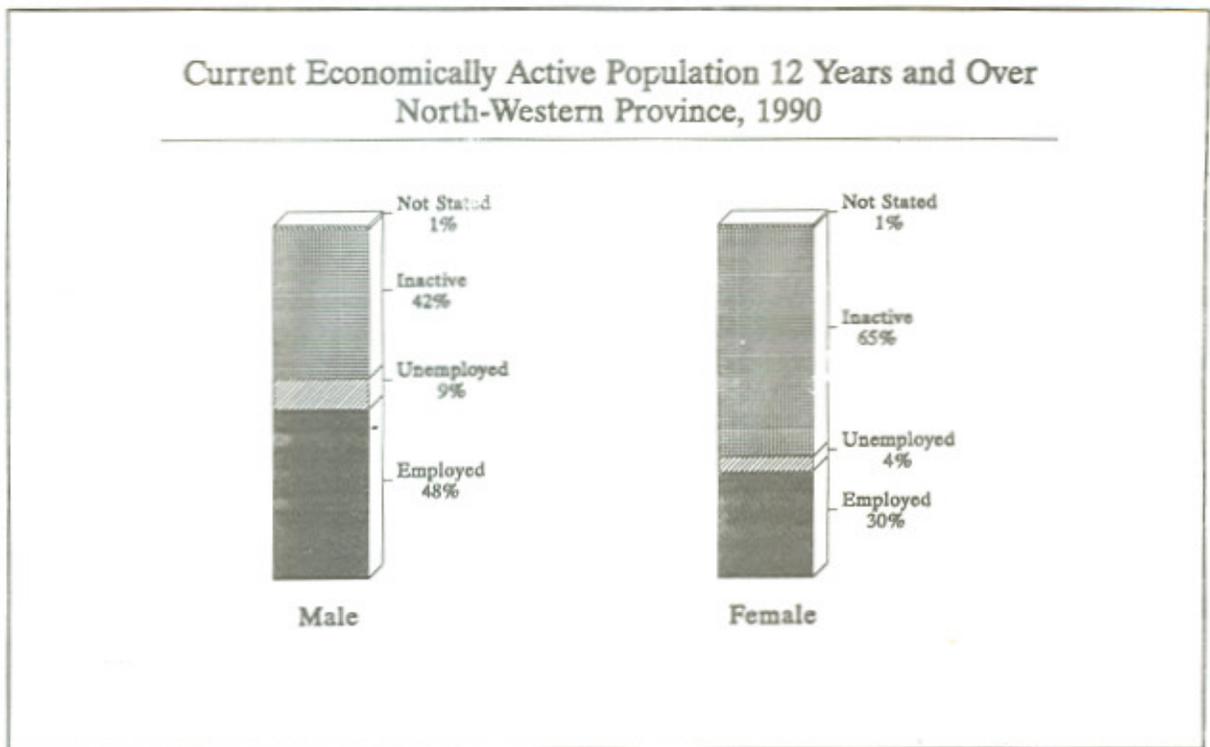


Figure 6.2

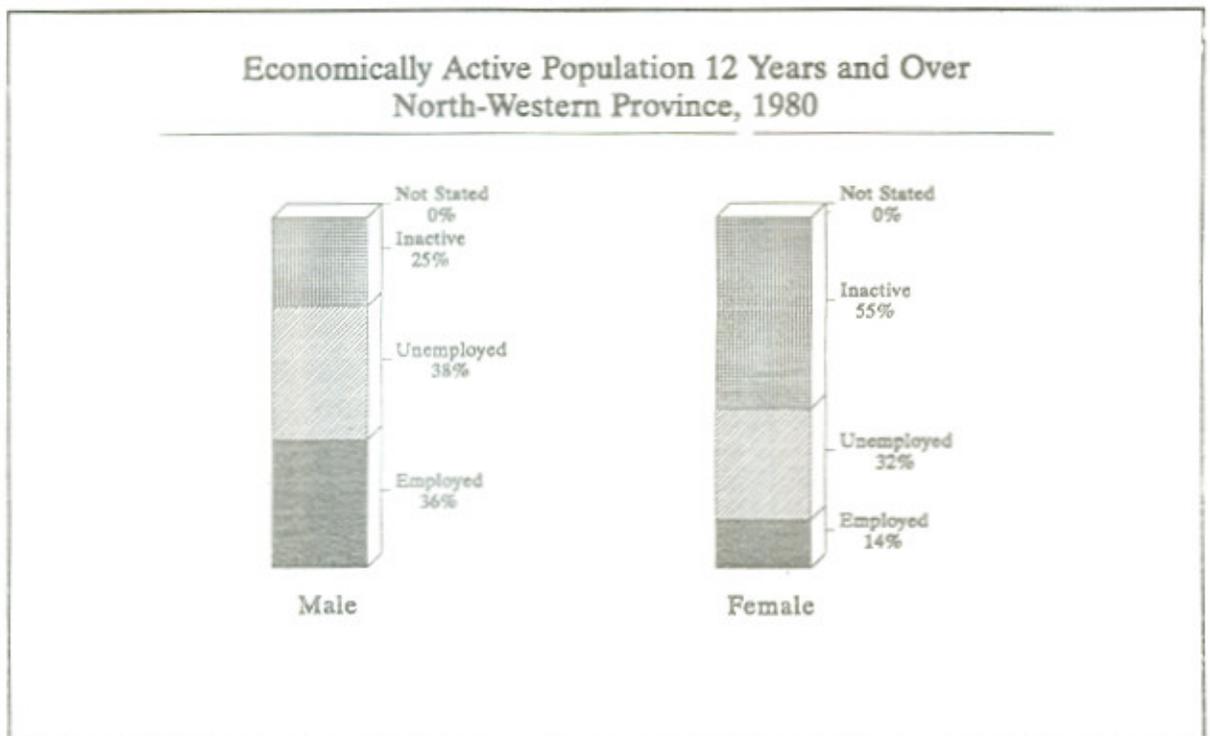


Table 6.3 shows percent distribution of the current economically active population by age and sex in 1990. The percent of the labour force in the young age group of 12-29 years is 46.1 percent, 10.4 percent in the age group of 30-34, 26.1 percent in the age group of 35-54, 9.5 percent in the age group of 55-64 years and 7.7 percent in the age group of 65 years and over. The age structure of both the male and female labour force show patterns which are similar to those of the total labour force.

The age structure of the employed population shows a pattern which is similar to the one discussed above for the labour force.

The age distribution of the unemployed population, however, is different from those of both the employed population and the total labour force. Two thirds of the unemployed are in the age group of 12-29 years, 8.2 percent in the age group of 30-34 years, 15.9 percent in the age group of 35-54 years and 8.7 percent in the age group of 55 years and over.

The percent distribution by age of the current economically inactive population shows that 63.9 percent have ages of 12-29 years, 6.2 percent have ages of 30-34 years, 16.6 percent have ages of 35-54 years and 13.0 percent have ages of 55 years and over. The male inactive population is more (75.7 percent) in the young age group of 12-29 years, as compared to females who are only 57.2 percent in this age group.

Table 6.3

## Current Economically Active Population 12 Years and Over by Age and Sex, (Percent), North-western Province 1990

Activity and Sex	Total Number	Total	Age Group							Not Stated
			12-19	20-24	25-29	30-34	35-54	55-64	65+	
<b>Labour Force</b>										
- Total	109,106	100.0	18.8	14.5	12.8	10.4	26.1	9.5	7.7	0.2
- Male	64,406	100.0	15.1	13.9	13.2	11.4	26.7	10.3	9.2	0.2
- Female	44,700	100.0	30.3	14.1	11.1	8.2	22.6	7.4	6.0	0.3
<b>Employed</b>										
- Total	94,026	100.0	16.8	13.3	12.7	10.8	27.7	10.2	8.4	0.1
- Male	54,687	100.0	13.2	12.4	13.0	11.7	28.3	11.1	10.1	0.2
- Female	39,339	100.0	21.7	14.6	12.2	9.5	26.9	9.1	5.9	0.1
<b>Unemployed</b>										
- Total	15,080	100.0	31.8	21.7	13.4	8.2	15.9	5.0	3.7	0.3
- Male	9,719	100.0	25.8	22.0	14.4	9.5	17.9	5.9	4.2	0.3
- Female	5,361	100.0	42.8	21.0	11.5	6.0	12.4	3.3	2.8	0.2
<b>Inactive</b>										
- Total	132,474	100.0	42.6	12.9	8.4	6.2	16.6	6.2	6.8	0.3
- Male	47,977	100.0	59.0	12.0	4.7	3.2	8.0	4.9	7.8	0.4
- Female	84,497	100.0	33.3	13.4	10.5	7.9	21.4	6.9	6.3	0.3
<b>Not Stated</b>										
- Total	2,615	100.0	44.3	18.2	8.4	5.1	12.5	4.3	5.0	2.2
- Male	1,334	100.0	45.0	17.8	7.8	5.8	12.2	4.7	4.4	2.3
- Female	1,281	100.0	43.5	18.5	9.1	4.5	12.8	4.0	5.7	1.9

## 6.4 ECONOMICALLY INACTIVE POPULATION

The population considered as economically inactive comprises all persons 12 years and over classified neither as employed nor unemployed during the period of reference. The economically inactive include full-time homemakers, full-time students, prisoners, beggars/vagrants and those pensioners who live solely on retirement benefits. Also included are disabled and invalid persons who are unable to work due to their disability and severe sickness respectively.

Homemakers are persons of either sex who are economically inactive due to their full engagement in household duties in their own homes. Students are persons of either sex who are inactive owing to their engagement in full-time studies. Other inactive persons are those listed in the remaining categories, whose reasons for inactivity are as implied by their names.

Table 6.4 presents the economically inactive population by reason for inactivity. Of the 132,474 inactive persons, 35.2 percent are homemakers, 27.7 percent are students and 37.1 percent are inactive for other reasons. Thus, other reasons (37.1 percent) are more important for inactivity in North-Western province, followed by homemaking (35.2 percent); studying (27.7 percent) is the least important reason for economic inactivity in the region.

In the rural areas, the order of importance of the reasons for economic inactivity are similar to those at regional level. In urban areas, however, studying (40.3 percent) is the most important reason for inactivity, followed by homemaking (30.2 percent); other reasons (29.5 percent) are least in importance for economic inactivity.

The main reasons for male economic inactivity are other reasons (49.5 percent), followed by studying (43.7 percent); homemaking (6.8 percent) is the least important reason for male economic inactivity in the region. Females, on the other hand, are inactive primarily because of homemaking (51.3 percent), followed in importance by other reasons (30.1 percent); studying (18.6 percent) is the least important reason for female economic inactivity.

Table 6.4

Economically Inactive Population by Reason for Inactivity, Residence and Sex, (Percent), North-western Province, 1990

Residence and Sex	Reason for Inactivity				
	Total Number	Total	Home maker	Student	Other
<b>Residence</b>					
- Total	132,474	100.0	35.2	27.7	37.1
- Rural	111,553	100.0	36.2	25.3	38.5
- Urban	20,921	100.0	30.2	40.3	29.5
<b>Sex</b>					
- Male	47,977	100.0	6.8	43.7	49.5
- Female	84,497	100.0	51.3	18.6	30.1

Table 6.5 gives the percentage distribution of the inactive population by residence and reason for inactivity. Of the 132,474 inactive population, 84.2 percent reside in rural areas in 1990, while 15.8 percent reside in urban areas.

The majority of homemakers, 86.5 percent of the 46,647 homemakers in the province reside in rural areas, while 13.5 percent reside in urban areas in 1990.

Of the 36,669 who are inactive due to full-time studies, about three quarters live in rural areas and one quarter live in urban areas.

Of the 49,158 who are inactive due to other reasons, 87.4 percent reside in rural areas, while 12.6 percent reside in urban areas in 1990.

Table 6.5

Current Economically Inactive Population by Reason for Inactivity, Residence and Sex, (Percent), North-western Province, 1990

Residence and Sex	Reason for Inactivity			
	Total	Home maker	Student	Other
<b>North-western Province</b>				
- Total Number	132,474	46,647	36,669	49,158
- Total	100.0	100.0	100.0	100.0
- Rural	84.2	86.5	77.0	87.4
- Urban	15.8	13.5	23.0	12.6

## 6.5 LABOUR FORCE PARTICIPATION RATES

The labour force participation rate is defined as the proportion of persons of a particular age-group in the labour force expressed as a percentage. This rate measures the extent to which a particular age and/or sex group is involved in economic activities. Table 6.6 shows labour force participation rates by age, sex and residence.

There has been a decline in the extent to which the working-age population participated in economic activities between 1980 and 1990, as shown by the decline in the labour force participation rate from 58.9 percent in 1980 to 44.7 percent in 1990. The fall in the male labour force participation rate from 74.7 percent to 56.6 percent, is more than the fall in the female labour force participation rate, from 45.4 percent in 1980 to 34.3 percent in 1990.

The decline in the urban labour force participation rate (from 55.1 percent in 1980 to 39.0 percent in 1990) is more than the decline in the rural labour force participation rate (from 59.5 percent in 1980 to 45.6 percent in 1990).

The decline in labour force participation rates is more for males than it is for females in both rural and urban areas. In rural areas, the male participation rate has declined from 74.9 percent in 1980 to 57.1 percent in 1990, while the female participation rate has declined from 46.5 percent in 1980 to 35.7 percent in 1990.

In urban areas, the male participation rate has declined from 74.0 percent in 1980 to 54.0 percent in 1990, while the female participation rate has declined from 37.4 percent in 1980 to 25.1 percent in 1990.

A study of labour force participation rates by age shows that they are lowest (26.3 percent) for the youngest age group of 12-19 years, rise with the increase in ages to reach a peak of 57.8 percent for the age group of 35-39 years, before declining to 47.9 percent for the age group of 65 years and over. The pattern of distribution of participation rates by age in rural and urban areas are similar to the above pattern; they are also the same for both sexes.

Male labour force participation rates were higher than those of females at every age group, except the age group 12-19 years, when they were lesser. The above pattern was maintained between the sexes in both rural and urban areas. See Figures 6.3 and 6.4.

**Table 6.6**

**Current Labour Force Participation Rates by Age, Sex and Residence, North-western Province, 1980 and 1990**

Age-Group	Current Participation Rates								
	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
1980	58.9	74.7	45.4	59.5	74.9	46.5	55.1	74.0	37.4
1990	44.7	56.6	34.3	45.6	57.1	35.7	39.0	54.0	25.1
1990 Census Age Groups									
12-19	26.3	25.2	27.4	28.7	27.4	30.0	14.2	13.5	14.8
20-24	47.3	59.8	37.1	48.7	60.9	38.7	40.2	54.1	29.6
25-29	55.1	78.4	37.6	55.4	77.7	38.7	53.8	81.6	32.1
30-34	57.7	81.8	37.7	57.5	80.5	38.8	58.9	87.0	32.8
35-39	57.8	83.0	38.0	56.5	81.0	38.3	64.4	90.6	36.1
40-44	55.7	82.6	37.3	54.2	80.8	37.9	64.7	90.0	31.8
45-49	55.2	80.2	38.4	54.5	79.3	39.0	60.6	85.4	31.4
50-54	55.3	78.0	38.9	55.3	77.5	39.7	56.2	81.3	28.2
55-59	57.4	75.9	39.4	57.6	76.1	40.2	54.4	74.0	28.0
60-64	53.6	70.7	38.1	54.0	71.1	38.8	47.3	65.4	24.6
65+	47.9	61.0	31.7	48.4	61.4	32.2	36.9	51.3	20.0
Not Stated	28.9	36.8	21.2	28.3	35.4	21.8	33.3	46.3	16.1

Figure 6.3

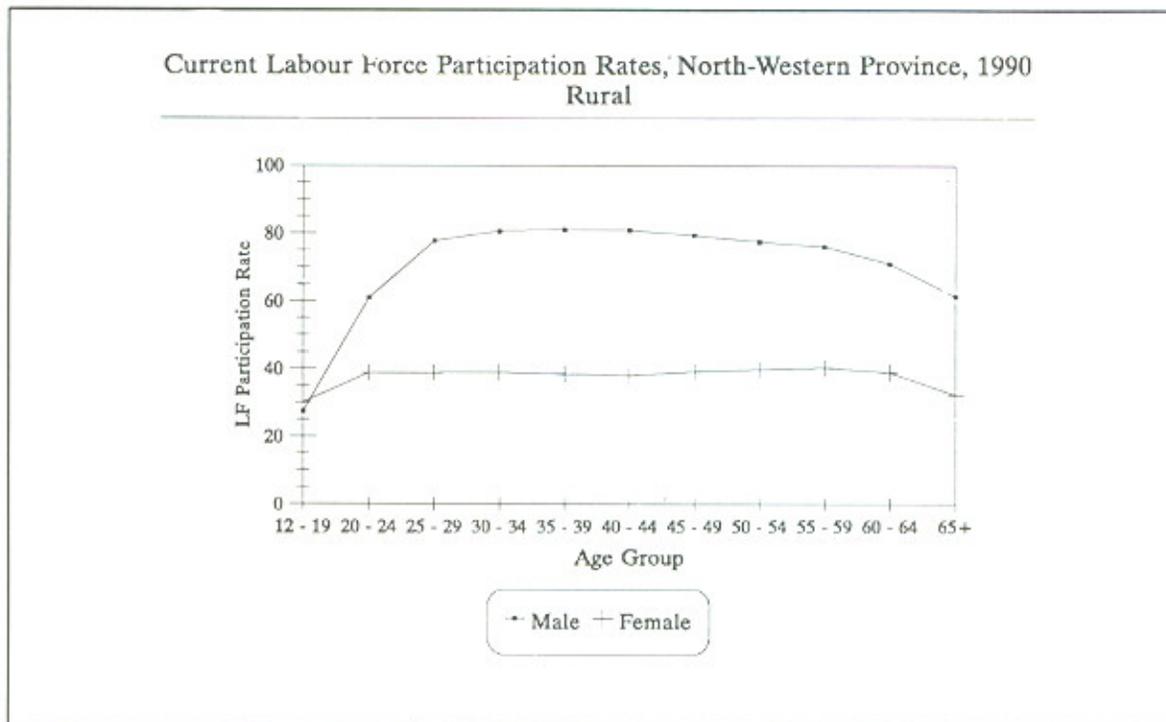
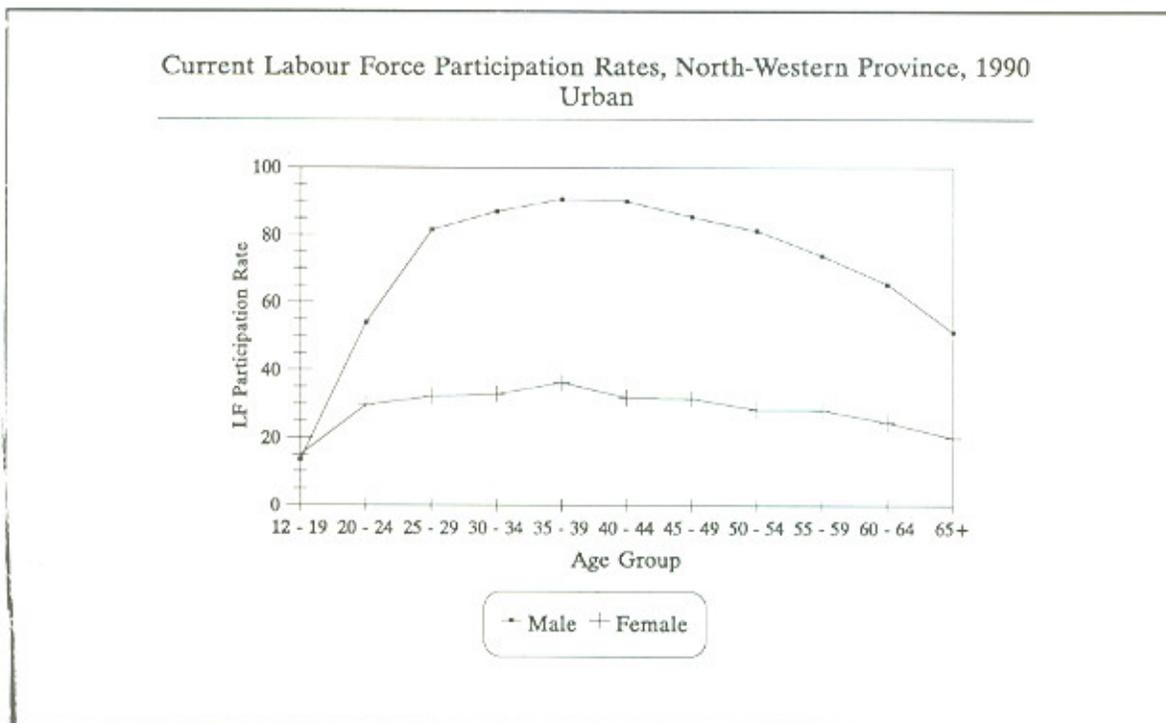


Figure 6.4



## EMPLOYMENT STATUS, OCCUPATIONAL AND INDUSTRIAL CLASSIFICATION

The occupational and industrial structure and the status in employment of a region's employed population are indicative of the level of its economic development and the general efficiency with which its resources are used. Sustained economic progress is usually accompanied by the increased division and specialisation of the work-force. It is characteristic of a backward economy that: it has most of its work-force engaged in its primary industries; the majority of its workers are in self-employment, and; it has a large part of its work-force involved in agricultural and other occupations characterized by low skill requirement.

### 6.6 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 person belonging to the same household.

There has not been significant progress for the region to industrialize as indicated by its continued reliance on family labour, instead of relying on employers and employees, who are typical of regions undergoing economic advancement. Instead of reducing, self employment has actually expanded, while employers and employees have correspondingly declined between the two censuses. In 1980, 64.0 percent of the work-force in the province classified either as self employed or unpaid family worker, while 35.0 percent were classified either as employees or employers. In 1990, the proportion of the work-force classified as self employed and unpaid family worker has risen to 82.1 percent, while that of employers and employees has fallen to 16.3 percent, see Table 6.7.

North-Western province has registered big shifts of workers from one employment status to another. Employees have declined from 34.8 percent to 15.1 percent between 1980 and 1990 although employers have increased slightly from 0.2 percent to 1.2 percent. While the self-employed have declined from 53.2 percent to 29.0 percent, unpaid family workers have increased from 10.8 percent to 53.1 percent. The continued adverse effects of the economic recession of most of the 1980's have caused manpower losses and a contraction in employment opportunities in the formal sector. As a result, a large part of the labour force are forced into the self employment of the informal sector economic activities.

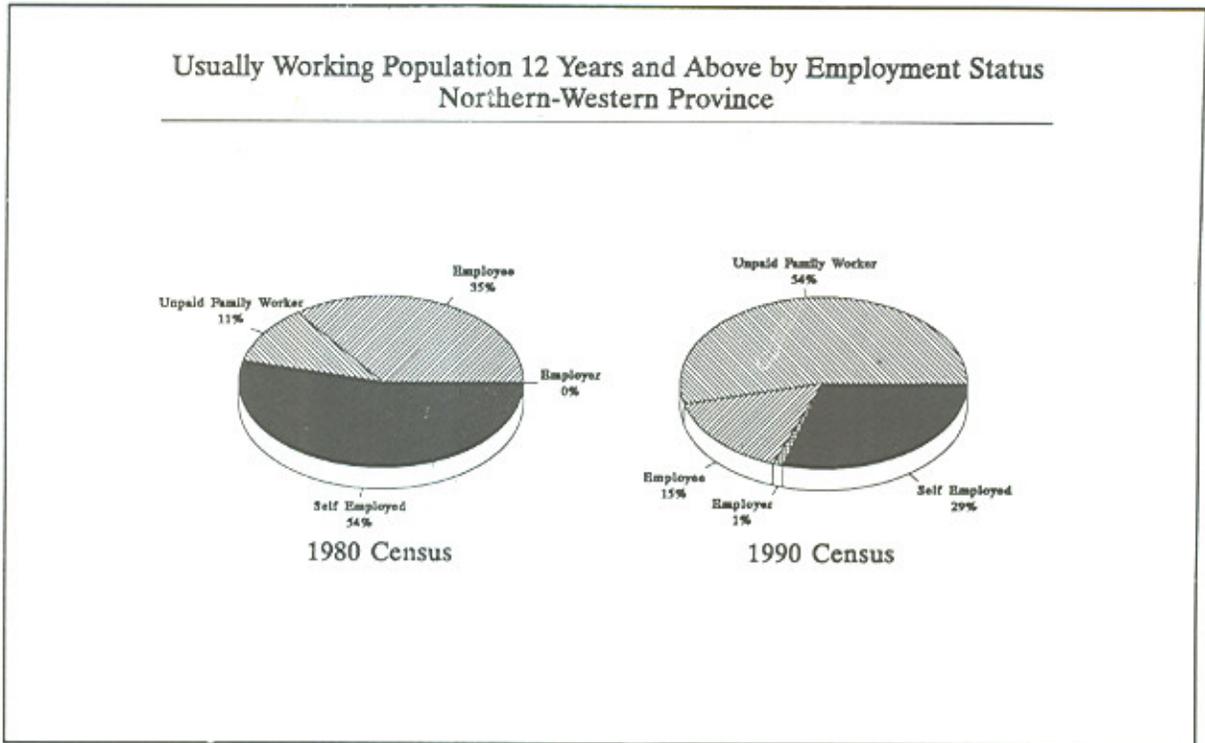
In 1980, self employed workers (59.3 percent) were dominant in the rural areas, while employee (84.6 percent) were dominant in urban areas. In 1990, unpaid family worker (58.1 percent) is the most important occupation category in rural areas, while employee (59.4 percent) is dominant in urban areas.

Table 6.7

Usually Working Population 12 Years and Over by Employment Status, Sex and Residence, (Percent), North-Western Province, 1980 and 1990

Employment Status and Sex	Residence and Year					
	Total		Rural		Urban	
	1980	1990	1980	1990	1980	1990
<b>Total Number</b>						
- Total	44,388	87,524	38,425	76,928	5,963	10,596
- Male	30,739	51,136	25,893	43,768	4,846	7,368
- Female	13,649	36,388	12,532	33,160	1,117	3,228
<b>Total</b>						
- 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
<b>Self-Employed</b>						
- Total	53.2	29.0	59.3	30.5	13.7	18.3
- Male	52.1	30.4	59.6	32.8	11.7	16.1
- Female	55.8	27.0	58.8	27.3	22.2	23.3
<b>Employee</b>						
- Total	34.8	15.1	27.1	9.0	84.6	59.4
- Male	42.9	21.7	34.6	13.7	86.9	68.8
- Female	16.7	5.9	11.5	2.8	74.6	37.9
<b>Employer</b>						
- Total	0.2	1.2	0.2	0.9	0.7	3.0
- Male	0.3	1.6	0.2	1.3	0.7	3.5
- Female	0.1	0.5	0.0	0.4	0.4	1.9
<b>Unpaid-Family Worker</b>						
- Total	10.8	53.1	12.3	58.1	0.6	16.9
- Male	3.8	44.7	4.5	50.6	0.4	9.7
- Female	26.4	65.0	28.6	68.0	1.8	33.4
<b>Not Stated</b>						
- Total	1.0	1.6	1.1	1.5	0.4	2.4
- Male	0.9	1.6	1.1	1.6	0.3	1.9
- Female	1.0	1.6	1.1	1.5	1.0	3.5

Figure 6.5



### 6.7 WORKING POPULATION BY OCCUPATION

Occupation is the title which identifies a set of characteristics of a job and a group of specific tasks to be performed by a person.

That the primary activities of agriculture are dominant in North-Western province is shown by the dominance of agricultural and related occupations. In order of importance, the four most significant occupations in 1990 are: agriculture and related occupations have 71.3 percent; professional, technical and related occupations have 4.8 percent; production and related occupations have 2.9 percent, and; service workers have 2.5 percent. The distribution of male and female workers among occupations does not show any significant differences, and are similar to the distribution for the provincial total.

In rural areas, the percent distribution of workers among the various occupations are akin to the total for the province. In urban areas, however, the percent distribution of the work-force by occupation shows unique features; the workers are more widely spread over all the occupations.

Table 6.8 shows the usual working population by occupation, sex and residence for 1980. In 1980, workers were distributed over occupations in a pattern which is similar to the way they are distributed for 1990. However, an inter-censal comparison of percentage shares in various occupations shows that all non-agricultural occupations have registered manpower losses, while the agriculture and related occupations have gained manpower.

Table 6.8

Usually Working Population By Occupation, Sex and Residence, (Percent), North-western Province, 1980 and 1990

Occupation	Percentage of Working Population								
	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
<b>1980</b>									
Total Number of Workers	44,388	30,739	13,649	38,425	25,893	12,532	5,963	4,846	1,117
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Technical	7.9	8.2	7.3	6.6	7.2	5.3	16.3	13.2	29.6
Administrative and Manag.	0.9	1.3	0.1	0.6	0.9	-	3.2	3.7	1.2
Clerical and Related	2.3	2.2	2.5	0.9	0.8	1.0	11.3	9.3	20.1
Sales Workers	3.6	3.7	3.3	2.7	3.2	1.8	9.3	6.8	20.2
Service Workers	9.3	12.0	3.2	7.2	9.7	2.2	22.5	24.4	14.0
Agriculture, Animal Hus.	57.3	51.0	71.2	64.9	59.1	76.9	8.1	8.3	7.4
Production and Related	11.7	13.9	6.8	10.4	12.0	7.0	20.1	23.8	4.1
Unclassified	1.2	1.4	0.7	1.2	1.4	0.7	1.4	1.5	0.6
Not Stated	5.8	6.2	4.9	5.5	5.7	5.1	7.8	9.0	2.8
<b>1990</b>									
Total Number of Workers	87,524	51,136	36,388	76,928	43,768	33,160	10,596	7,368	3,228
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Technical	4.8	5.9	3.3	3.3	4.3	1.9	15.8	15.4	16.7
Administrative and Manag.	0.3	0.4	0.0	0.1	0.1	0.0	1.5	2.0	0.3
Clerical and Related	1.2	1.5	0.9	0.3	0.5	0.1	7.8	7.4	8.5
Sales Workers	2.2	2.2	2.1	1.1	1.3	0.9	10.0	7.9	14.9
Service Workers	2.5	3.8	0.8	1.2	1.9	0.4	11.6	14.5	5.1
Agriculture, Animal Hus.	71.3	65.3	79.7	78.3	73.6	84.5	20.7	16.1	31.0
Production and Related	2.9	4.3	0.8	1.9	2.8	0.6	10.0	13.0	3.0
Unclassified	1.6	2.0	1.1	1.2	1.7	0.6	4.7	4.4	5.6
Not Stated	13.2	14.6	11.3	12.6	13.8	11.0	17.9	19.3	14.9

## 6.8 WORKING POPULATION BY INDUSTRY

Industry identifies the type of product or service produced at one's workplace. Table 6.9 gives the distribution of usually working population 12 years and over by industry and employment status in 1980 and 1990.

In 1990, the agriculture industry employed 72.3 percent, the mining industry employed 0.3 percent, the secondary industries employed 3.3 percent, while the tertiary industries employed 10.7 percent of the working population. The agriculture industry is hence the most important employer in the province in 1990. The self-employed (83.6 percent) and unpaid family workers (84.3 percent) are mostly to be found in the agriculture industry. Employees are mostly in social, community and personal services (42.4 percent), agriculture (16.4 percent), construction (6.6 percent), and so on. Employers are mostly in agriculture (32.1 percent), social, community and personal services (30.0 percent), manufacturing (4.2 percent), trade (4.2 percent), and so on.

In 1980, the industrial distribution of the work-force over the various employment statuses have, by and large, similar patterns to those of 1990, as reviewed above.

Table 6.10 presents the percentage distribution of usual workers by employment status in each industry in 1980 and 1990. For all industries, unpaid family worker (53.1 percent) is the most important employment status in 1990, while self-employed (53.2 percent) is the most important status in 1980. In 1990, the self-employed are an important status in the industry of manufacturing (43.2 percent). Employee is important in 1990 in the industries of mining (92.4 percent), electricity (91.5 percent), construction (72.9 percent), trade (45.7 percent) transport (89.6 percent), finance (40.5 percent), and community, social and personal services (82.5 percent). Employer is not important in any industry. Unpaid family worker is important in the industry of agriculture (61.9 percent).

In 1980, self employed (53.2 percent) is the most important employment status in the province; it is also important in agriculture (71.7 percent), manufacturing (78.5 percent) and trade (63.5 percent). Employee is an important status in the same industries as indicated for 1990. Employer is not significant in any industry in 1980, too. Unpaid family worker in 1980 is important only in agriculture (61.9 percent).

Table 6.9

Usually Working Population 12 Years and Over by Employment Status and Industry, (Percent), North-western Province, 1980 and 1990

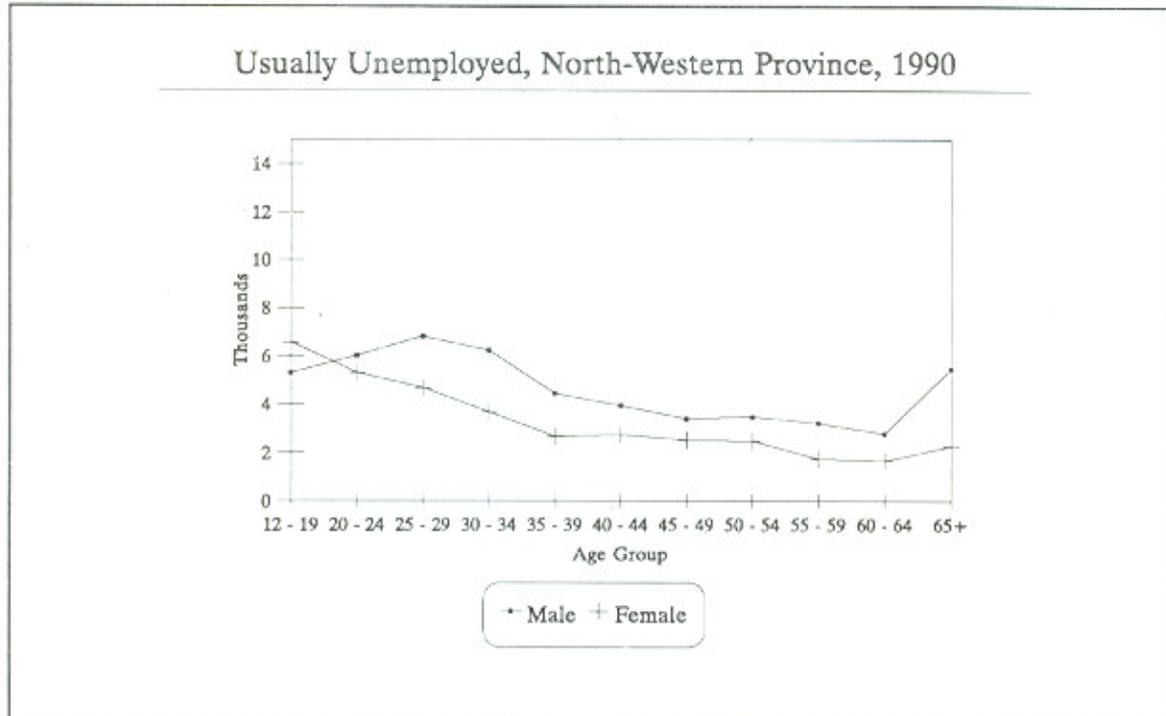
Industrial and Year	Total Number Working	Self Employed	Employee	Employer	Unpaid Family Worker	Not Stated
Total Number - 1980	44,388	23,614	15,452	107	4,779	436
- 1990	87,524	25,358	13,217	1,027	46,486	1,436
N/Western Province - 1980	100.0	100.0	100.0	100.0	100.0	100.0
- 1990	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture - 1980	60.0	80.8	19.5	28.1	89.8	50.9
- 1990	72.3	83.6	16.4	32.1	84.3	29.6
Mining - 1980	0.8	0.1	2.3	5.6	0.1	-
- 1990	0.3	0.0	1.6	0.7	0.0	-
Manufacturing - 1980	3.7	5.4	1.5	0.9	1.3	13.8
- 1990	1.6	2.5	4.3	4.2	0.4	1.1
Electricity - 1980	0.4	0.0	1.0	2.8	0.0	-
- 1990	0.3	0.0	1.9	1.5	-	0.3
Construction - 1980	2.8	1.5	5.3	18.7	0.1	8.0
- 1990	1.4	0.8	6.6	3.2	0.2	1.0
Trade - 1980	2.7	3.2	2.2	13.1	1.0	6.9
- 1990	1.3	1.7	3.8	4.2	0.2	0.9
Transport - 1980	1.4	0.1	3.7	4.7	0.4	-
- 1990	0.8	0.1	4.6	2.8	0.0	0.5
Finance - 1980	0.9	0.5	1.9	2.8	-	0.5
- 1990	0.8	1.0	2.2	1.3	0.3	0.8
Community - 1980	18.9	1.6	51.5	22.4	0.4	0.9
- 1990	7.8	2.2	42.4	30.0	0.6	5.5
Other - 1990	1.6	1.1	3.9	2.1	1.2	3.1
Not Stated - 1980	8.4	6.8	11.1	0.9	6.9	19.0
- 1990	11.8	7.0	12.3	17.9	12.8	57.2

Table 6.10

Usually Working Population 12 years and Over by Industry and Employment Status, (Percent), North-western Province, 1980 and 1990

Industrial and Year	Total Number Working	Total	Self Employed	Employee	Employer	Unpaid Family Worker	Not Stated
Total Number, - 1980	44,388	100.0	53.2	34.8	0.2	10.8	1.0
- 1990	87,524	100.0	29.0	15.1	1.2	53.1	1.6
Agriculture - 1980	26,643	100.0	71.7	11.3	0.1	16.1	0.8
- 1990	63,295	100.0	33.5	3.4	0.5	61.9	0.7
Mining - 1980	383	100.0	6.0	91.4	1.6	1.0	-
- 1990	237	100.0	1.3	92.4	2.9	3.4	-
Manufacturing - 1980	1,638	100.0	78.5	14.1	0.0	3.7	3.7
- 1990	1,444	100.0	43.2	39.1	3.0	13.6	1.1
Electricity - 1980	162	100.0	1.8	95.7	1.9	0.6	-
- 1990	270	100.0	1.5	91.5	5.5	-	1.5
Construction - 1980	1,230	100.0	28.3	66.8	1.6	0.5	2.8
- 1990	1,197	100.0	17.3	72.9	2.8	5.8	1.2
Trade - 1980	1,184	100.0	63.5	28.6	1.2	4.2	2.5
- 1990	1,101	100.0	39.1	45.7	3.9	10.1	1.2
Transport - 1980	609	100.0	3.3	92.8	0.8	3.1	-
- 1990	674	100.0	3.4	89.6	4.3	1.6	1.1
Finance - 1980	416	100.0	28.4	70.4	0.7	-	0.5
- 1990	731	100.0	35.6	40.5	1.8	20.6	1.5
Community - 1980	8,386	100.0	4.6	94.9	0.3	0.2	-
- 1990	6,791	100.0	8.0	82.5	4.5	3.8	1.2
Other - 1990	1,441	100.0	20.0	35.9	1.5	39.4	3.2
Not Stated - 1980	3,737	100.0	42.7	46.2	0.0	8.9	2.2
- 1990	10,343	100.0	17.2	15.7	1.8	57.4	7.9

Figure 6.6



## 6.9 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. Unemployment arises whenever the supply of labour is greater than the demand for it. Poor economic conditions are the chief cause of unemployment, although demographic trends do affect the growth and composition of the labour force. A high unemployment rate implies that many people are out of work due to a shortage in employment opportunities. To compute the unemployment rate, the number of unemployed persons is measured against the labour force.

Table 6.11 presents current unemployment rates by sex and residence for 1980 and 1990. There is a big drop in the rate of unemployment from 58.8 percent in 1980 to 13.8 percent in 1990. The decline in female unemployment, from 69.5 percent in 1980 to 12.0 percent in 1990, is more than the decline in the male unemployment from 52.2 percent in 1980 to 15.1 percent in 1990. The rural areas have registered bigger drop in unemployment (from 59.4 percent in 1980 to 13.1 percent in 1990) than urban areas (from 54.4 percent in 1980 to 18.6 percent in 1990). Females have experienced a much higher decline in unemployment in both the rural and urban areas. In rural areas, female unemployment has declined from 62.7 percent in 1980 to 10.8 percent in 1990, while male unemployment has declined from 52.5 percent in 1980 to 14.9 percent in 1990. In urban areas, female unemployment has declined from 75.7 percent in 1980 to 22.7 percent in 1990, while the unemployment of males has declined from 42.8 percent in 1980 to 16.5 percent in 1990.

The distribution of unemployment rates by district for 1990 shows that they range from 8.9 percent in Mufumbwe district to 20.3 percent in Kasempa district.

Table 6.11

Current Unemployment Rates by Sex and Residence, (Percent),  
North-Western Province, 1980 and 1990

Employment Status, Sex and Residence	1980	1990
<b>North-western Province</b>		
-Total	58.8	13.8
-Male	51.2	15.1
-Female	67.5	12.0
<b>Residence</b>		
<b>Rural</b>		
-Total	59.4	13.1
-Male	52.5	14.9
-Female	62.7	10.8
<b>Urban</b>		
-Total	54.4	18.6
-Male	42.8	16.5
-Female	75.7	22.7
<b>Districts</b>		
-Mufumbwe		8.9
-Kabompo		9.9
-Kasempa		20.3
-Mwinilunga		10.2
-Solwezi		15.8
-Zambezi		17.2

Table 6.12 shows current unemployment rates by age, sex and residence in 1990. According to this table, unemployment is a more serious problem among the young age group of 12-34 years than in the older age group of 35 years and older. This pattern is the same for male and female, as well as for rural and urban areas. In rural areas, the unemployment rates of males are higher than those of females in every age group. The opposite is true in urban areas: female unemployment rates are higher than those of males in every age group, except the age groups of 12-19 years and 65 years and over, when they are lesser than the unemployment rates of males.

Table 6.12

Current Unemployment Rates by Age, Sex and Residence, (Percent), North-western Province, 1990

Current Unemployment Rates									
Age Group	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total	13.8	15.1	12.0	13.1	14.9	10.8	18.6	16.5	22.7
12-19	23.3	25.8	21.1	21.6	24.1	19.4	40.8	43.8	38.3
20-24	20.7	23.9	16.4	18.8	22.6	13.8	32.2	14.6	33.0
25-29	14.5	16.5	11.4	14.3	16.9	10.5	15.4	9.1	16.9
30-34	10.9	12.6	7.9	11.3	13.5	7.6	9.3	7.9	9.8
35-39	9.8	11.1	7.5	10.1	12.1	7.1	8.5	7.7	10.0
40-44	8.1	9.8	5.5	8.0	10.4	4.8	8.6	7.8	12.1
45-49	8.3	10.2	5.8	7.8	10.1	4.9	12.0	9.0	16.7
50-54	7.3	8.9	4.9	7.0	8.9	4.3	10.3	9.0	14.2
55-59	7.6	9.0	5.0	7.4	8.9	4.6	11.0	10.6	12.5
60-64	6.8	8.2	4.5	6.2	7.5	4.0	18.7	18.6	19.0
65+	6.6	6.8	5.9	6.4	6.6	5.8	11.7	11.9	11.1
Not Stated	20.5	23.3	15.9	21.1	24.7	15.6	16.7	15.8	20.0

The percentage distribution of the usual unemployed population by level of education completed and age in 1990 are presented in Table 6.13. According to this table, half of the unemployed population has absolutely no education, more than one third has only a rudimentary educational attainment level of grade 1-7, 11.8 percent has a secondary education of grades 8-12 while those who attained "A" level and degree are negligible.

Table 6.13

Usually Unemployed Population by Level of Education Completed and Age, (Percent), North-western Province, 1990

Age Group	Total Number Unemployed	Total	None	Grade 1-7	Grade 8-12	"A" Level	Degree	Not Stated
Total	18,799	100.0	50.0	37.0	11.8	0.0	-	1.2
12-19	5,845	100.0	58.0	35.4	5.2	-	-	1.4
20-24	4,055	100.0	33.7	43.4	21.8	0.0	-	1.1
25-29	2,481	100.0	35.7	43.4	20.1	-	-	0.8
30-34	1,564	100.0	37.8	43.0	18.1	-	-	1.1
35-39	973	100.0	46.8	39.0	13.5	-	-	0.7
40-44	774	100.0	58.8	31.1	8.4	-	-	1.7
45-49	690	100.0	63.2	31.0	3.8	-	-	2.0
50-54	656	100.0	68.9	27.6	2.0	-	-	1.5
55-59	554	100.0	70.4	27.4	0.9	-	-	1.3
60-64	423	100.0	71.6	26.5	1.0	-	-	0.9
65+	746	100.0	87.3	11.8	0.4	-	-	0.5
Not Stated	38	100.0	71.0	21.1	-	-	-	7.9

#### MARITAL STATUS OF THE UNEMPLOYED

The distribution of the currently unemployed population by marital status, sex and residence are shown in Table 6.14. According to this table, more than half of the unemployed have never been married, 37.1 percent are married, while 9.0 percent are either widowed, divorced or separated. This suggests that unemployment hinders affected persons from marrying.

Table 6.14

Currently Unemployed by Marital Status, Sex and Rural/Urban, (Percent), North-western Province, 1990

Residence and Sex	Total Number Unemployed	Marital Status						
		Total	Never Married	Married	Widowed	Divorced	Separated	Not Stated
<b>Total</b>								
Both Sexes	15,080	100.0	51.5	37.1	2.1	5.0	1.9	2.4
Male	9,719	100.0	48.0	46.3	0.5	1.9	0.9	2.4
Female	5,361	100.0	58.0	20.3	4.9	10.7	3.7	2.4
<b>Rural</b>								
Both Sexes	12,535	100.0	50.7	37.7	2.2	5.2	1.9	2.3
Male	8,214	100.0	47.1	47.2	0.5	2.0	1.0	2.2
Female	4,321	100.0	57.6	19.6	5.4	11.2	3.8	2.4
<b>Urban</b>								
Both Sexes	2,545	100.0	55.4	33.8	1.3	4.4	1.9	3.2
Male	1,505	100.0	52.5	41.3	0.2	1.7	0.8	3.5
Female	1,040	100.0	59.7	23.0	2.8	8.4	3.4	2.7

Figure 6.7

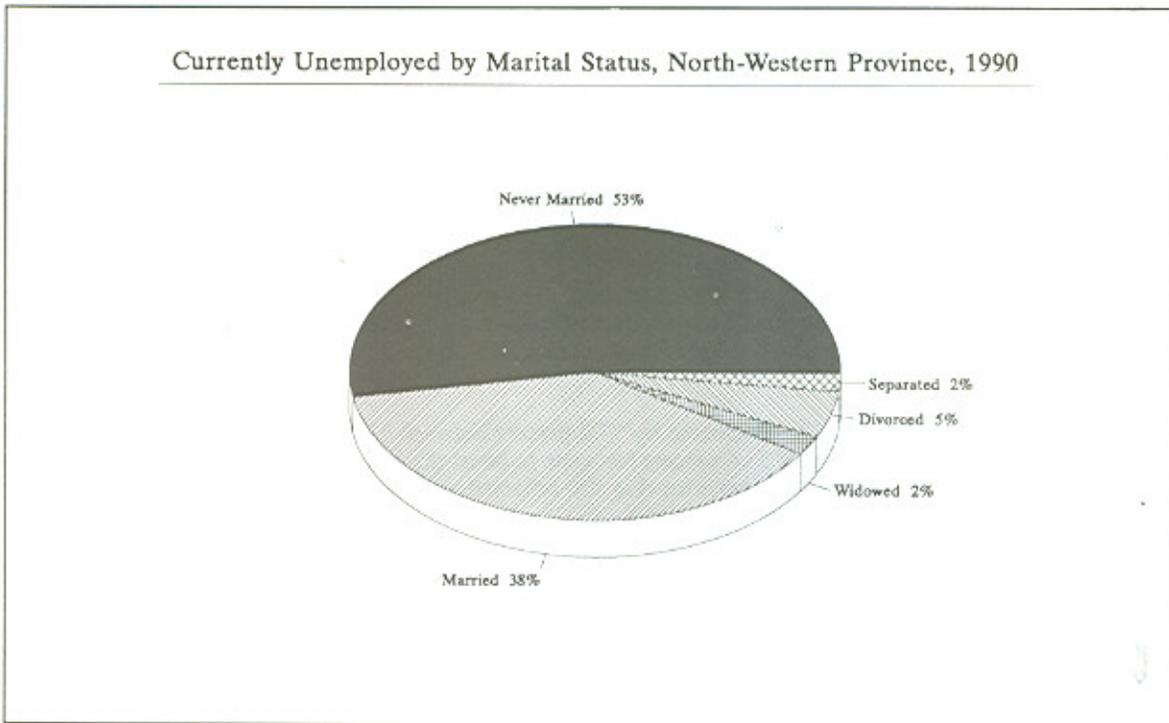
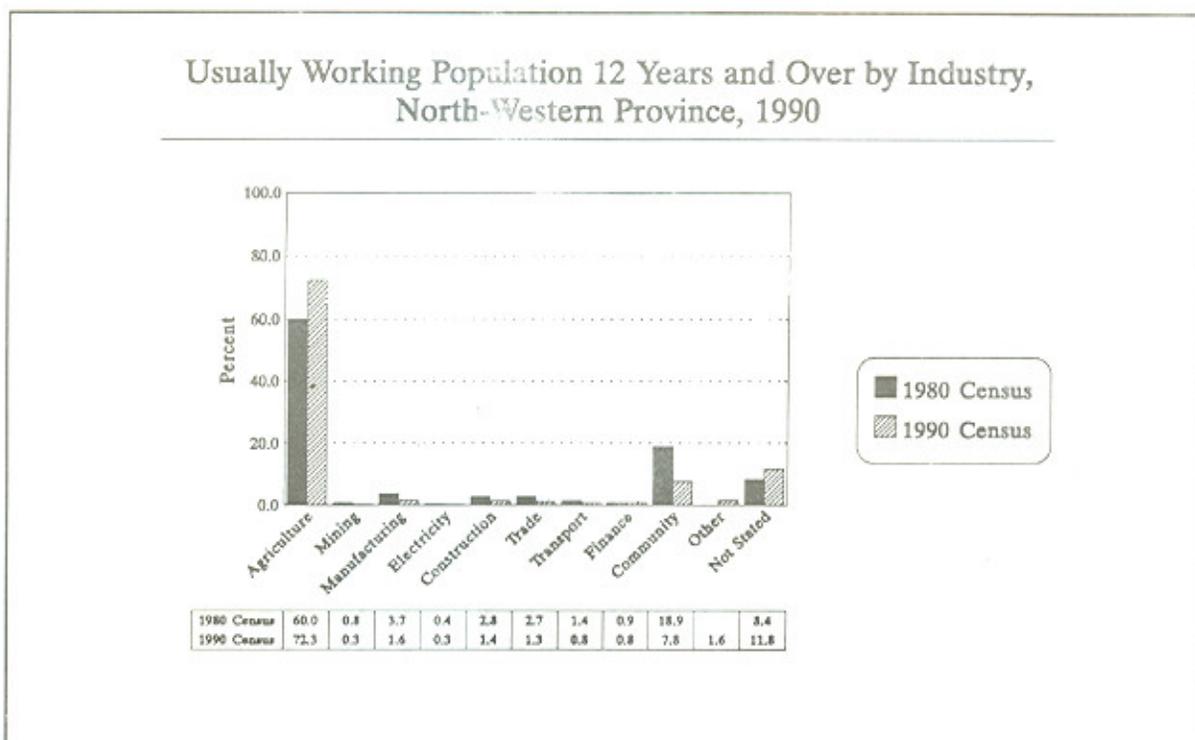


Figure 6.8



## 6.10 SUMMARY

The working age population has increased by 33.6 percent between 1980 and 1990; the male working-age population has increased by 34.9 percent, while the female working-age population has increased by 32.5 percent.

The labour force increased by 1.3 percent between 1980 and 1990. Most of the labour force 87.9 percent, is in rural areas, while 12.1 percent is in urban areas.

The proportion of the labour force employed is 86.2 percent. The employed population has increased by 111.8 percent between the two censuses. The female employed population has increased by 188.2 percent, while that of males has increased by 77.9 percent. The unemployed population has declined by 76.2 percent between the two censuses.

The economically inactive population has increased by 77.0 percent between 1980 and 1990. Thus, most of the increase in the working-age population of 33.6 percent has gone to boost the inactive population, since the labour force only increased by 1.3 percent. This adverse trend is also reflected in decline in the labour force participation rates from 58.9 percent in 1980 to 44.7 percent in 1990.

In 1990, 82.1 percent of the work-force are either self-employed or unpaid family workers, while 72.3 percent are engaged in the agricultural industry.

Most of the unemployed 87.0 percent have either no education or have a low educational attainment level of grades 1-7. More than half of the unemployed have never been married, while 37.1 percent are married.

## 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. 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:-

- Population 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 the age group of 0-14 years), whereas a youth is a person within age group 15-24 years.

### 7.2 POPULATION CHANGE, COMPOSITION AND DISTRIBUTION OF CHILDREN AND YOUTH.

#### *Population Change*

Population change refers to the increase or decrease in population size, hence, population change can either be negative or positive. Table 7.1 reveals that the population of children increased from 141 331 in 1980 to 173 963 in 1990 at an annual growth rate of 2.1 percent. The population of the youth has grown at a rate which is about twice that of the children (4.6 percent). It can be observed that whereas the number of children in both rural and urban areas has been growing at about the same rate, the population of the youth has been growing much faster in urban than rural areas.

Table 7.1

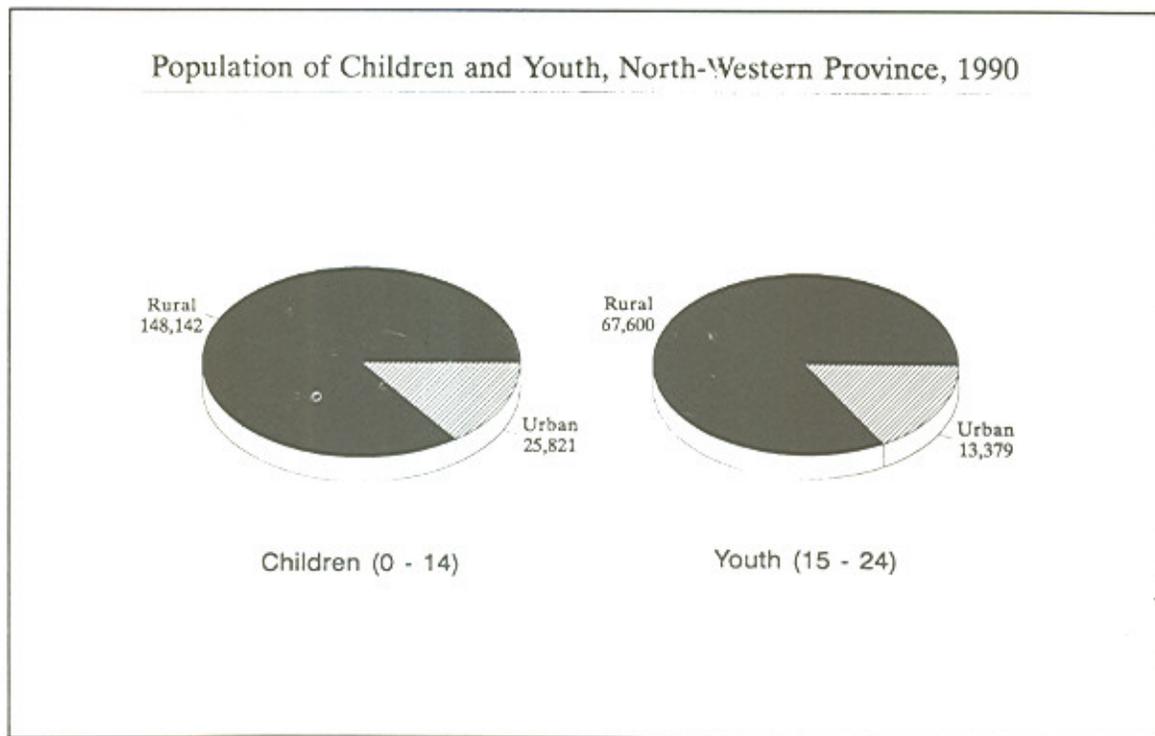
Population Size and Growth Rate of Children and Youth by Broad Age Group, North-Western Province, 1980 and 1990

	Age Group	Residence	Total Population		Average Annual Growth Rate (%) 1980-1990
			1980	1990	
Children	0 - 14	Total	141,331	173,963	2.1
		Rural	120,835	148,142	2.1
		Urban	20,496	25,821	2.3
Youth	15 - 24	Total	51,813	80,979	4.6
		Rural	44,013	67,600	4.4
		Urban	7,800	13,379	5.5

*Population Composition and Distribution*

The population of North-Western Province is 387 552, with 185,038 and 202,514 being male and female, respectively. The children in the province make up 45 percent while the youth make up 21 percent of the total population. Together they make up about two thirds of the total population. Thus, the population of North-Western Province can be said to be young or youthful. Figure 7.1 shows that there are more children and youth who live in rural than urban areas of the province.

Figure 7.1



A young population has an in-built momentum for growth. This is due to a large number of people entering the reproductive ages (15-49 years). Further, a young population has economic implications as well. For instance, large amounts of resources have to be diverted to social services such as health and education, leaving little resources for future investment and savings.

Table 7.2

Population Under 25 Years as a Proportion of Total Population by Sex and Broad Age Group, North-Western Province, 1990

Age Group	Sex	Number	Proportion of Total Population
0-14	Both Sexes	173,963	44.9
	Male	86,573	46.8
	Female	87,390	43.2
15-24	Both Sexes	80,979	20.9
	Male	38,337	20.7
	Female	42,642	21.1

The sex ratios in Table 7.3 show that there are 99 and 90 male children and youth, respectively, per 100 females. This means that female children and youth outnumber their male counterparts. Generally, in all districts except for Mwinilunga and Zambezi, the sex-ratios indicate that females are in excess of males.

Throughout the province, the sex ratio of youth is much lower than that of the children implying that there are fewer male youth than female youth as opposed to the number of boys against the girls. This may be attributed to out-migration of young men from North-Western Province to other parts of the country in search of employment opportunities and other social services such as advanced learning.

Table 7.3

Population Distribution and Sex Ratio of Children and Youth by District, North-Western Province, 1990

District	Population	Total	Male	Female	Sex Ratio
North-Western Province	Children	173,963	86,573	87,390	99.1
	Youth	80,979	38,337	42,642	89.9
Mufumbwe	Children	10,941	5,424	5,517	98.3
	Youth	4,875	2,296	2,579	89.0
Kabompo	Children	22,557	11,203	11,354	98.7
	Youth	11,261	5,490	5,771	95.1
Kasempa	Children	17,135	8,518	8,617	98.9
	Youth	8,257	3,826	4,431	86.3
Mwinilunga	Children	38,162	19,204	18,958	101.3
	Youth	16,138	7,680	8,458	90.8
Solwezi	Children	56,255	27,771	28,484	97.5
	Youth	27,064	12,784	14,280	89.5
Zambezi	Children	28,913	14,453	14,460	100.0
	Youth	13,384	6,261	7,123	87.9

### 7.3 SOCIAL AND ECONOMIC CHARACTERISTICS OF THE YOUTH

The population of North-Western Province can be described as youthful. Unfortunately, the participation of the youth in the development of the province is low. A large proportion of the youth population in the province has attained low levels of education, are untrained and to a large extent unemployed. In this section marital status, fertility, literacy, education of children and youth and their economic activities are discussed.

#### *Marital Status of the Youth*

Table 7.5 shows the percentage distribution of youth by their marital status. In the age group of 15-19 years, the proportion of male youth who have never married is 93 compared to 74 percent of female youth. In the same age group, over a fifth (22 percent) of the female youth are married compared to only 2 percent of male youth. In age group 20-24 years, the majority of male youth have never married while the majority of their female counterparts are married. It is generally viewed that women marry much earlier than men. In North-Western Province the average age at marriage for women is 21 years and 25 years for men.

Table 7.4

Youth by Age, Sex, Marital Status and Residence, (Percent), North-Western Province, 1990

Residence	Age Group	Sex	Total		Marital Status					
			Number	Percentage	Never Married	Married	Widowed	Divorced	Separated	Not Stated
North-Western Province	15-19	Male	23,366	100.0	93.3	1.8	0.1	0.1	0.1	4.6
		Female	24,200	100.0	73.6	21.8	0.1	1.2	0.8	2.5
	20-24	Male	14,971	100.0	64.5	29.9	0.1	0.7	0.5	4.3
		Female	18,442	100.0	29.9	59.8	0.6	5.2	2.3	2.2
Rural	15-19	Male	19,581	100.0	93.4	1.9	0.1	0.1	0.1	4.4
		Female	20,121	100.0	71.8	23.5	0.2	1.2	0.8	2.5
	20-24	Male	12,579	100.0	62.9	31.8	0.1	0.8	0.5	3.9
		Female	15,319	100.0	28.6	60.7	0.7	5.5	2.4	2.1
Urban	15-19	Male	3,785	100.0	92.9	1.2	0.0	0.1	0.2	5.6
		Female	4,079	100.0	82.4	13.5	0.1	0.8	0.5	2.7
	20-24	Male	2,392	100.0	72.6	20.2	0.1	0.4	0.4	6.3
		Female	3,123	100.0	36.3	55.3	0.2	3.9	2.0	2.3

In rural and urban areas also, more female youth than male youth are married, while the opposite is true for those who have never married, see Table 7.5. However, it should be noted that the proportion of married male and female youth in rural areas is higher than in urban areas. For instance, in age group 20-24 years, 32 and 61 percent of rural male and female youth, respectively, are married compared to 20 and 55 percent male and female youth, respectively in urban areas. A contributing factor to this difference may be the low levels of education completed by the youth in rural areas. This may be supported by the notion that the longer one stays in school, the less the chances of one marrying early, especially in the case of girls.

### *Fertility of Female Youth*

Table 7.5 shows the proportion of female youth in North-Western Province who have had a birth. Of the total number of female teenagers (15-19 years), 17 percent have had a birth. Generally, the proportion of female youth who have had a birth is higher in rural than urban areas. This may in part be attributed to the higher number of married female youth in rural than in urban areas. However, it should be noted that other than increasing the chances and frequency of one having a birth, not all births take place within marital union. Another reason may be that more youth in rural than urban areas drop out of school early due to various reasons and then they start families early.

Table 7.5

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

Age Group/Residence	Total Females	Females who have had a Birth	Proportion of Females who have had a Birth
<b>North-Western Province</b>			
15-19	24,200	4,010	16.6
20-24	18,442	11,384	61.7
<b>Rural</b>			
15-19	20,121	3,509	17.4
20-24	15,319	9,567	62.5
<b>Urban</b>			
15-19	4,079	501	12.3
20-24	3,123	1,817	58.2

### *Children and Youth who can Read and Write*

The proportion of children and youth who are literate (i.e. able to read and write) in North-Western Province is presented Table 7.6. Less than half (48 percent) of children aged 10-14 years are literate. Between boys and girls, the difference in the proportion of those who are able to read and write is very minimal.

Two thirds of teenagers, regardless of sex are literate. Amongst the youth, more males than females are able to read and write. The gap showing the difference is widest in age group 20-24 years, where 73 percent of young men compared to 55 percent of young women are literate.

Table 7.6

Proportion of Children and Youth who can Read and Write by Age and Sex, North-Western Province, 1990

Age Group	Sex	Total Population	Persons who can Read and Write	Proportion of Persons who can Read and Write
15-9	Both Sexes	58,531	7,080	12.1
	Male	29,069	3,418	11.8
	Female	29,462	3,662	12.4
10-14	Both Sexes	52,531	25,312	48.2
	Male	26,253	12,671	48.3
	Female	26,278	12,641	48.1
15-19	Both Sexes	47,566	31,260	65.7
	Male	23,366	16,471	70.5
	Female	24,200	14,789	61.1
20-24	Both Sexes	33,413	20,975	62.8
	Male	14,971	10,908	72.9
	Female	18,442	10,067	54.6

*Education level Compared by Age Group of Youth*

Table 7.7 shows the percentage of youth by their highest level of education completed. The majority of both males and females (15-19 years) in the province have only completed primary school. The proportion of male youth completing this level of education is most pronounced in age group 20-24 years. Almost an equal proportion of males who have completed primary school are females who have had no schooling at all. Also, the proportion of males who have at least completed secondary education is twice that of females.

Table 7.7

Population (15-24 Years) by Highest Level of Education Completed, Age and Sex, (Percent), North-Western Province, 1990

Age Group	Sex	Total		Level of Education Completed			
		Population	Percentage	No Schooling	Primary	Secondary	Not Stated
15-19	Both Sexes	47,269	100.0	30.9	54.5	13.0	1.6
	Male	23,229	100.0	26.1	58.1	14.0	1.8
	Female	24,040	100.0	35.5	50.9	12.0	1.6
20-24	Both Sexes	31,147	100.0	36.3	41.6	20.5	1.6
	Male	14,846	100.0	27.3	43.2	28.4	1.1
	Female	18,301	100.0	43.6	40.2	13.9	2.3

*Economic Activity of Children and Youth*

Table 7.8 shows that in North-Western Province, the majority of both male and female children are economically inactive. Most of the children are full-time students, with the proportion of boys being higher than the girls. Figure 7.2 shows that although the majority of both male and female youth in age group 15-19 years are students, the proportion of males (46 percent) is much higher than that of females (29 percent). As for the youth in age group 20-24 years, the majority of males are employed with a proportion of 46 percent while the majority of the females (about 40 percent) are full-time housewives, see figure 7.3.

Table 7.9

Children and Youth (12-24 Years) by Age, Sex, Nature of Usual Economic Activity and Residence, (Percent), North-Western Province, 1990

Residence	Age Group	Sex	Total		Economically Active		Economically Inactive			Not Stated
			Population	Percentage	Employed	Unemployed	Full-time Housewife/Homemaker	Full-time Student	Others	
N-Western Province	12-14	Male	15,252	100.0	15.1	4.7	1.2	50.7	26.4	1.9
		Female	15,354	100.0	16.8	4.5	2.3	48.5	26.1	1.8
	15-19	Male	23,366	100.0	21.0	7.7	1.6	45.6	22.8	1.3
		Female	24,200	100.0	24.7	6.6	15.2	29.3	23.0	1.2
	20-24	Male	14,971	100.0	45.5	14.3	2.7	15.2	20.7	1.6
		Female	18,442	100.0	31.0	6.1	39.8	5.1	16.7	1.3
Rural	12-14	Male	12,982	100.0	16.8	4.9	1.3	47.3	27.7	2.0
		Female	12,706	100.0	18.9	4.8	2.6	44.7	27.2	1.8
	15-19	Male	19,581	100.0	23.4	7.7	1.7	42.5	23.5	1.2
		Female	20,121	100.0	27.5	6.4	15.9	26.0	23.1	1.1
	20-24	Male	12,579	100.0	47.1	13.8	2.9	14.3	20.6	1.3
		Female	15,319	100.0	33.3	5.4	39.0	4.3	16.8	1.2
Urban	12-14	Male	2,270	100.0	5.5	3.5	0.5	69.9	19.2	1.4
		Female	2,648	100.0	7.0	3.1	0.9	66.8	20.6	1.6
	15-19	Male	3,785	100.0	8.8	7.4	1.1	61.7	19.3	1.7
		Female	4,079	100.0	10.6	7.3	12.2	45.7	22.7	1.5
	20-24	Male	2,392	100.0	37.0	17.1	1.2	20.2	21.6	2.9
		Female	3,123	100.0	19.9	9.8	43.4	8.8	16.4	1.7

The rural and urban distribution depicts a pattern similar to the one described at the provincial level. However, there are some differences between rural and urban areas. One difference is that there are proportionately more male and female youth who are economically active in rural than urban areas. For instance, in age group 20-24 years, there are altogether 61 and 39 percent of male and female youth respectively, who are economically active in rural areas compared to 54 and 30 of their counterparts in urban areas. Another difference is that the proportion of the urban youth who are economically inactive as full-time students is higher in urban than in rural areas.

Figure 7.2

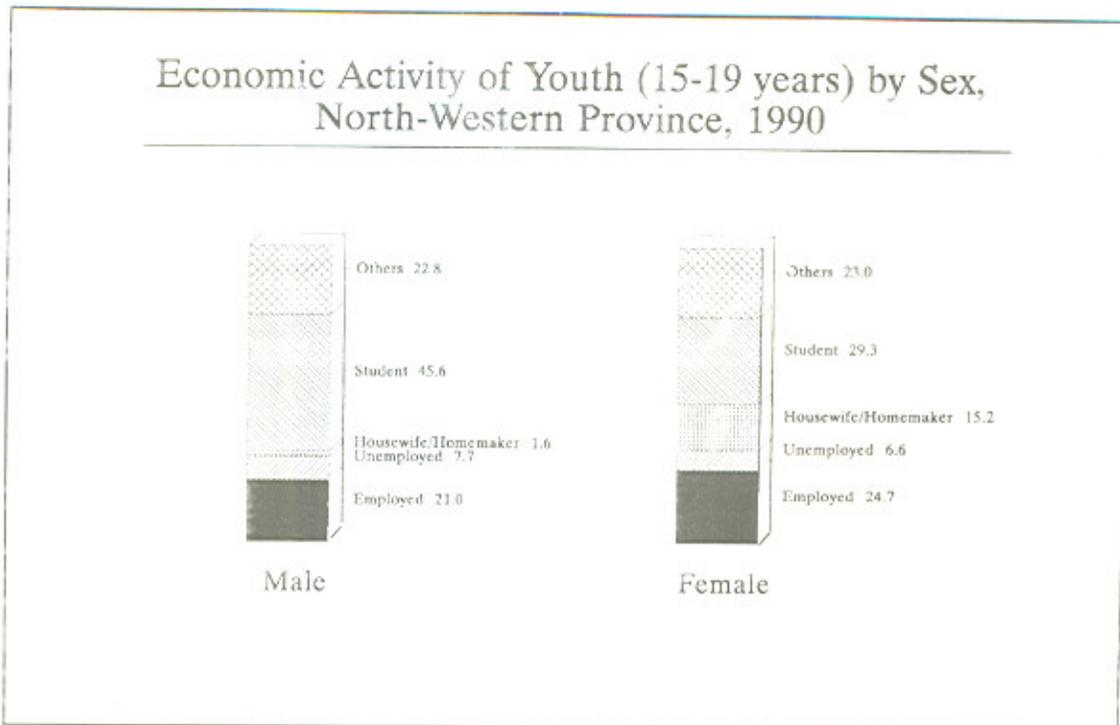
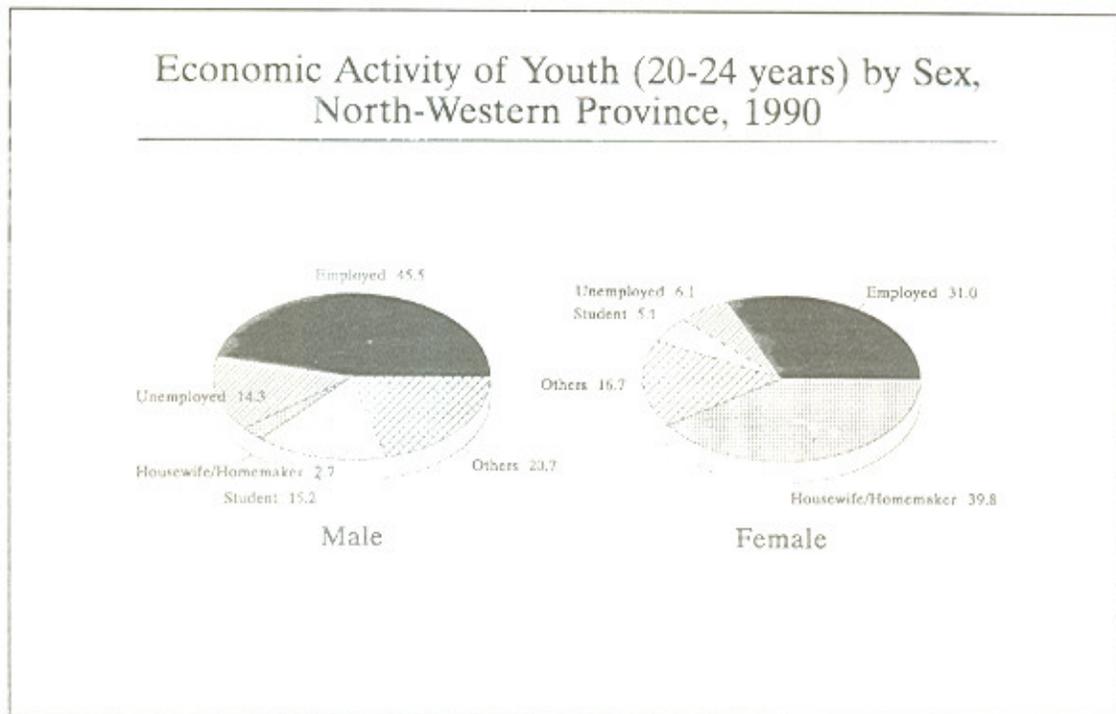


Figure 7.3



### *Youth Unemployment*

The number of unemployed persons (15-24 years) in North-Western Province measured against its total labour force by age (i.e unemployment rate) is shown in Table 7.9.

A third of teenagers (15-19 years) in the province are unemployed. Proportionately, youth in urban areas exhibit substantially higher unemployment rates than those in rural areas. For instance, in age group 15-19 years, the unemployment rate for youth in rural areas is 30 percent and 58 percent for those in urban areas.

Table 7.9

Unemployment Rate of Youth by Age, Sex and Residence, North-Western Province, 1990

Age Group/Residence	Sex	Total Labour Force	Unemployed Population	Unemployment Rate (%)
North-Western 15-19	Both Sexes	12,611	4,107	32.6
	Male	5,815	2,131	36.6
	Female	6,796	1,976	29.1
20-24	Both Sexes	15,377	4,055	26.4
	Male	8,679	2,659	30.6
	Female	6,698	1,396	20.8
Rural 15-19	Both Sexes	11,472	3,449	30.1
	Male	5,312	1,823	34.3
	Female	6,161	1,626	26.4
20-24	Both Sexes	13,198	3,265	24.7
	Male	7,398	2,195	29.7
	Female	5,800	1,070	18.4
Urban 15-19	Both Sexes	1,139	658	57.8
	Male	503	308	61.2
	Female	636	350	55.0
24-24	Both Sexes	2,179	790	36.3
	Male	1,281	464	36.2
	Female	898	326	36.3

## 7.4 SOCIAL AND ECONOMIC CHARACTERISTICS OF WOMEN

Generally, the contribution of women in the development of an economy is usually undervalued by both policy makers and planners. It is often said that not enough effort is made to quantify women's economic activities or to value the output of their work. The majority of women do not fully participate in decision-making in the various economic sectors. It is therefore 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 heads of households and women in general, are discussed.

### *Female Household Heads*

In North-Western Province, there are 73 383 households of which 18 percent are headed by women. This indicates that headship of households is dominated by men. This is true for both rural and urban areas, where the proportion of female heads of households is 18 percent in both areas.

### *Marital Status of Female Household Heads*

Table 7.10 shows the proportion of female heads of households in relation to the total household heads in the Province and its districts by their marital status. Throughout the province, high proportions of widowed, divorced and separated female heads of households are observed. These range from 73 to 86 percent. Very low proportions of female heads of households are married, with a proportion of about 3 percent. This means that women mostly become heads of households after losing a spouse through death and divorced.

Table 7.10

Female Household Heads as a Proportion of Total Household Heads by Residence and Marital Status, Residence and District (Percent), North-Western Province, 1990

Residence/District	Total	Never Married	Married	Widowed	Divorced	Separated	Not Stated
<b>North-Western Province</b>							
Total	18.2	44.2	2.8	86.4	81.9	73.3	5.6
Rural	18.2	45.5	2.7	86.3	82.0	73.7	4.8
Urban	18.0	41.1	3.3	88.3	81.6	70.6	11.3
<b>District</b>							
Mufumbwe	17.1	36.4	2.4	86.3	80.5	65.9	6.5
Kabompo	18.0	48.7	2.2	81.6	75.5	68.9	4.5
Kasempa	19.3	51.9	3.9	86.4	84.5	73.4	9.0
Mwinilunga	18.3	51.8	2.3	92.0	85.6	79.3	4.3
Solwezi	18.0	34.5	3.3	86.7	82.9	74.5	7.6
Zambezi	18.5	50.5	2.5	82.1	81.4	70.0	3.5

In Kasempa, Mwinilunga and Zambezi districts, over half of the never married heads of households are female. Mwinilunga has the highest proportion of female heads of households who are widowed, divorced and separated.

#### *Educational Status of Women*

The percentage of women and men in the province by their highest level of education completed is shown in Table 7.11. Well over half (60 percent) of women have had no schooling in their lives compared to 38 percent of men. The proportion of men have completed primary school is 43 percent. The proportion of men who have completed secondary school is about twice that of women. It can be observed that an equal, but negligible proportion, of both women and men in the province, have completed higher education.

Table 7.11

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

Sex	Total		Level of Education Completed				
	Population	Percentage	No Schooling	Primary	Secondary	Higher Education	Not Stated
Male	97,466	100.0	38.1	43.2	17.3	0.1	1.3
Female	114,066	100.0	60.5	30.4	7.8	0.1	1.2

Table 7.12 shows the highest level of education completed by female heads of households in the province. Throughout the province, over three quarters (78 percent) of women heading households have never attended any formal education. Of those who have been to school, the majority have only attained primary level of education. Over 80 percent of the female heads in rural areas compared to less than half (47 percent) of those in urban areas have never attended any formal schooling.

Also, although the majority of female heads of households who have been to school have only completed primary level of education, the proportion is much higher in urban than rural areas. The proportions are 28 and 13 percent, respectively. While only 3 percent of female heads of households in rural areas have completed secondary school, 23 percent of those in urban areas have done so.

Table 7.12

Female Household Heads by Highest Level of Education Completed and Residence (Percent), North-Western 1990

Level of Education	Total	Rural	Urban
Never Attended	78.2	82.9	47.2
Primary	14.9	12.8	28.5
Secondary	5.9	3.3	23.2
Higher Education	0.1	0.1	0.2
Not Stated	0.9	0.9	0.9
Total Percentage	100.0	100.0	100.0
Total Female Heads	13,366	11,599	1,767
Total Household Heads	73,383	63,583	9,800

#### *Employment Status of Women*

Table 7.13 shows the employment status of the working females in relation to the total workers in North-Western Province. All in all, women make up 42 percent of the working population in the province. The proportion of working women in urban areas as compared to those in rural areas is low. Slightly over half of the working population who are unpaid family workers are female. These constitute a proportion of 51 percent. The rest, the lowest proportion of working women are either employers or employees.

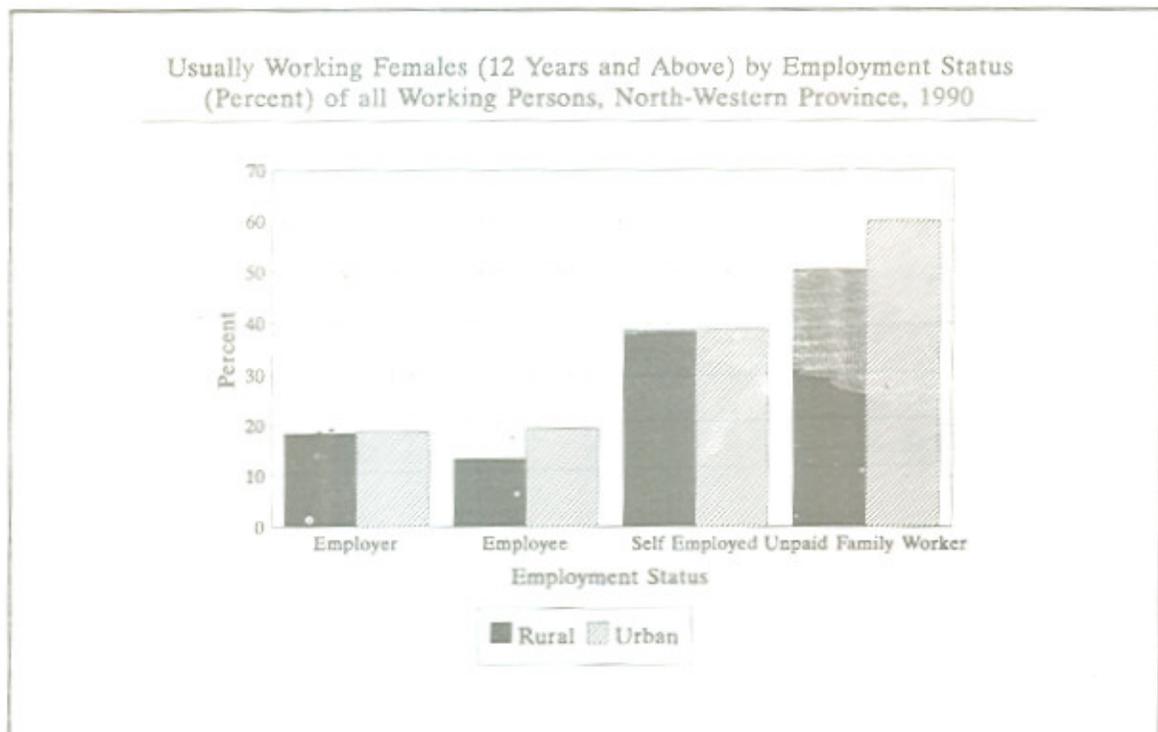
Table 7.13

Usually Working Females (12 Years and Older) as a Proportion of Total Usually Working Population by Employment Status and Residence, (Percent), North-Western Province, 1990

Employment Status	Total	Rural	Urban
Total	41.6	43.1	30.5
Employer	18.5	18.4	18.8
Employee	16.3	13.4	19.4
Self-Employed	38.7	38.7	38.9
Unpaid Family Workers	50.8	50.5	60.1
Not Stated	41.9	41.2	45.4

Further the proportion of unpaid female family workers is higher in urban than rural areas. The respective proportions are 60 and 50 percent. However, there is an equal proportion of females who are self-employed in rural and urban areas, see figure 7.4.

Figure 7.4



The proportions of working females by their employment and occupation status in respect of the total working population are shown in Table 7.14. Amongst all occupations, the proportion of female workers is highest in Agriculture, Husbandry, Forestry and Fishery. In this occupation, they constitute a 46 percent. Another high proportion of female workers is observed in the of Sales occupation. Here they make up 40 percent of the total sales workers. In these two occupations, most of the female workers are either self-employed or unpaid family workers.

A low proportion of female workers is recorded in the Administrative and Managerial category. This may be attributed to the fact that most women have never been to school or if they have, most have only completed primary school. Thus, their choice and chance of being in such occupations is limited because they do not have favourable or acceptable educational qualifications.

Table 7.14

**Usually Working Females (12 Years and Older) as a Proportion of Total Usually Working Population by Occupation and Employment Status, (Percent), North-Western Province, 1990**

Occupation	Total	Employment Status				
		Employer	Employee	Self Employed	Unpaid Family Worker	Not Stated
Total	41.6	18.5	16.3	38.7	50.8	41.9
Professional/Technical and Related Workers	28.4	21.6	28.3	25.5	42.9	40.0
Admin. Managerial Workers	5.8	6.3	6.0	-	-	-
Clerical and related workers	29.7	29.2	30.1	28.6	16.7	-
Sales Workers	40.0	27.0	34.1	39.8	49.7	46.7
Service workers	12.8	14.0	10.6	19.7	54.8	17.1
Agriculture, Husbandry, Forestry and Fishery	46.5	26.0	8.0	40.3	51.6	41.5
Production, Transport and Labourers	12.0	7.7	4.9	22.1	31.7	8.7
Unclassified Occupations	27.1	13.3	11.5	24.6	40.5	52.3
Not Stated	35.7	8.6	7.2	31.5	47.8	44.1

The proportion of working females in relation to total workers in the province by their employment and industrial category are displayed in Table 7.15. The table shows that 46 and 38.4 percent of the working population within the industries of Agriculture, Hunting, Forestry and Fishery; and Finance, Insurance and Real Estates are female. In the industry of Finance, Insurance and Real Estates, the majority of all unpaid family workers are female, with a proportion of 59 percent.

Table 7.15

Usually Working Females (12 Years and Older) as a Proportion of Total Usually Working Population by Industrial Category and Employment Status, (Percent), North-Western Province, 1990

Industry	Total	Employment Status				
		Employer	Employee	Self-Employed	Unpaid Family Worker	Not Stated
Total	41.6	18.5	16.3	38.7	50.8	41.9
Agric., Hunting, Forestry and Fishery	46.0	23.9	8.8	40.1	51.6	39.5
Mining and Quarrying	2.5	-	2.3	33.3	-	-
Manufacturing	14.8	14.0	11.3	15.2	24.5	6.3
Electricity, Gas and Water	4.1	-	4.5	-	-	-
Construction and Allied Repairs	2.1	6.1	1.3	3.9	5.8	-
Wholesale and Retail Trade,	26.0	32.6	33.2	33.6	47.7	53.8
Restaurants and Hotels	2.8	-	3.0	4.3	-	-
Transport, Storage and Communication	38.4	15.4	23.3	45.4	58.9	27.3
Finance, Insurance and Real Estates	24.8	21.1	23.6	29.0	44.7	30.4
Community, Social and Personal Services	29.1	9.1	12.5	33.0	41.9	44.4
Unclassified Industry	40.6	10.9	13.9	39.1	48.6	46.2
Not Stated						

Low proportions of females are observed in industries like Mining and Quarrying; Electricity, Gas and Water; Construction and Allied Repairs; and Transport, Storage and Communication. Here, they constitute of proportions ranging from 2 to 4 percent. The low proportion of female workers in these industries may be attributed to the custom and belief that women are not suited to factory work. Also, discriminatory legislation could contribute to low proportions of working women in factory occupations. For instance, the Employment of Women, Young Persons and Children Act, Chapter 505 of the Laws of Zambia, bars women from working underground in the mines. The same act also discriminates against women in other forms of industrial employment by prohibiting them from working at night. Thus, it is possible that women are discouraged to take up careers in these sectors.

## 7.5 SUMMARY

During the intercensal period of 1980-90, the population of children increased at an annual growth rate of 2.1 percent which is lower than that of youth (4.6 percent). However, the proportion of children as a percentage of total population is much higher than that of the youth. Children make up 45 percent of the population while the youth account for 21 percent.

Information available on marital status of the youth shows that generally, female youth tend to marry earlier than male youth. It is observed that at ages between 15 and 19 years, 22 and a mere 2 percent of female and male youth, respectively, are married.

Less than half the children aged 10-14 years are literate (ie. able to read and write). These constitute a proportion of 48 percent. As for the youth, those who are able to read and write range from 63 to 66 percent. The proportion of female youth who are literate is much less than that of male youth.

About a third of youth (aged 15-19 years) in the province are unemployed. In age group 20-24 years, the unemployment rate of youth is 26 percent. Urban areas show substantially higher youth unemployment rates than rural areas, though in actual fact, more youth in rural than urban areas are unemployed.

Working females, constitute 42 percent of the total working population. Slightly over half of working women are unpaid family workers. They are mainly found in the Agricultural and Finance, Insurance and

Real Estates industries. Low proportions of women are recorded in industries like Mining and Quarrying; and Construction and Allied repairs (percentage range from 2 to 4 percent). This is attributed to the notion that these are industries which are most suitable to men. Also, discriminatory legislation like the Employment of Women, Young Persons and Children Act, Chapter 505 of the Laws of Zambia bars women from either working underground in the mines or working at night in factories. Thus, it is possible that women are discouraged to take up careers in these sectors.

## CHAPTER 8

# NUPTIALITY AND FERTILITY

### 8.1 INTRODUCTION

Fertility is a complex process responsible for the biological maintainance of society and as such fertility issues have been addressed in Zambia at many levels. For instance the formulation of Zambia's population policy by government was done using the 1980 Census data.

In the 1990 Population Census, nuptiality and fertility topics were adequately addressed and the following data items were collected on all persons aged 12 years and above:-

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

For females aged 12 years and above, the following additional data items were collected:-

- 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 collect separately for births in 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.

#### *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 life-cycle.

#### *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 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 and assuming that all females would survive through their reproductive period.

#### *Net Reproduction Rate (NRR)*

The average number of daughters a woman would have or give birth to if the prevailing fertility patterns persist and allowance is made for females who would not survive through their reproductive ages. This provides a measure of the way in which a generation of females replaces itself with daughters.

#### *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

This section discusses marital status characteristics and mean age at marriage among the population of North-Western Province. In an analysis meant to explore the possible influence on fertility levels of a population, the knowledge of their marital characteristics is important.

#### *Marital Status*

In the study of population dynamics, marital status is an important factor. Marital status does not only affect fertility, it also affects mortality and migration to a lesser extent. The categories for which data for marital status was collected in the Census are never married, married, widowed, separated and divorced. Table 8.1 presents data on the marital characteristics of the population of North-Western Province.

**Table 8.1**

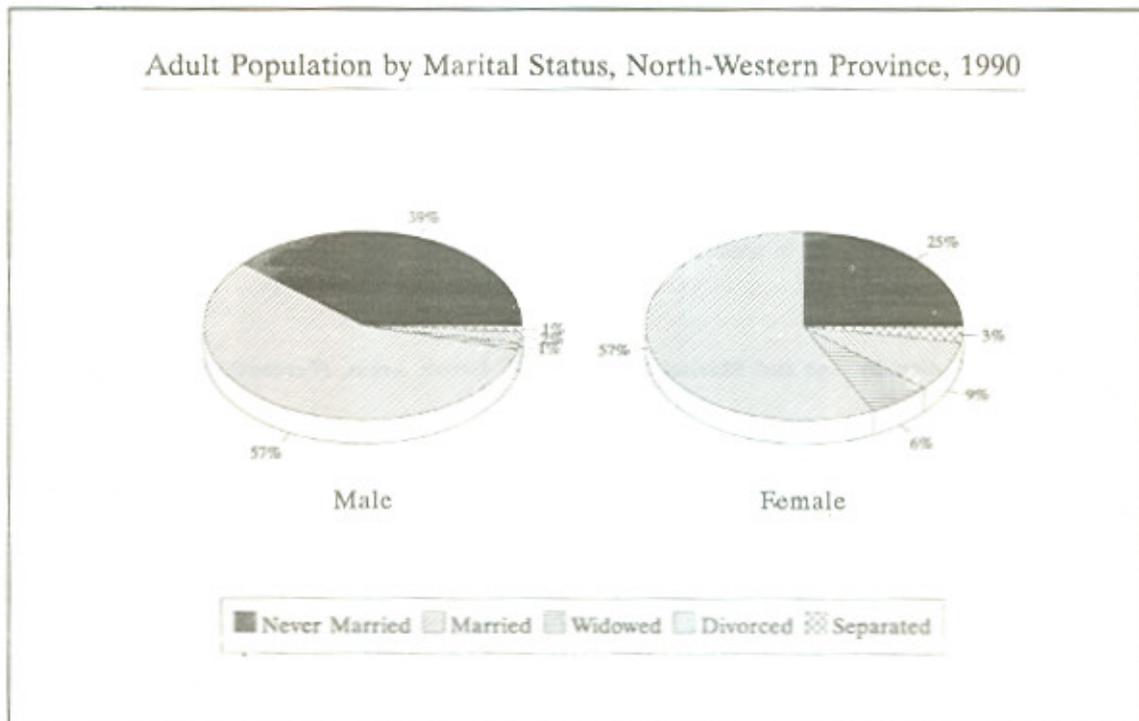
Adult Population Classified by Age, Sex and Marital Status, (Percent), North-Western Province, 1990

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	97.8	75.5	1.9	22.4	0.0	0.1	0.1	1.2	0.1	0.8	22,288	23,598
20 - 24	67.4	30.6	31.3	61.1	0.1	0.6	0.8	5.4	0.5	2.4	14,331	18,044
25 - 29	27.5	13.1	69.1	74.3	0.2	1.2	2.1	8.5	1.0	2.9	10,540	14,221
30 - 34	12.1	7.3	84.0	78.1	0.4	2.0	2.3	9.6	1.1	3.0	8,715	10,624
35 - 39	6.7	5.1	89.3	78.8	0.5	2.9	2.3	10.1	1.2	3.1	5,977	7,635
40 - 44	4.4	3.8	90.9	76.6	0.7	5.3	3.0	11.1	1.1	3.2	5,284	7,761
45 - 49	3.7	3.2	91.7	73.8	0.7	7.8	3.0	12.3	0.9	2.9	4,668	7,081
50 - 54	2.5	3.4	91.8	67.2	1.6	12.1	2.9	14.0	1.2	3.2	4,894	6,769
55+	2.7	6.5	87.2	44.9	4.2	27.9	4.0	16.5	1.9	4.3	18,466	17,205
Total	38.7	25.0	57.3	57.2	1.1	6.5	2.0	8.7	0.9	2.7		
Size	36,842	28,225	54,524	64,580	1,049	7,314	1,867	9,764	881	2,992	95,163	112,875

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

Table 8.1 shows that by age 45-49 years, only 3.7 percent of males and 3.2 percent of females had never been married. In this age group, the currently married males are 91.7 percent and 73.8 percent of females. The peak for marriage in 1990 for males is in age group 50-54 and for females in age group 35-39. The peak for widowhood is in age group 55+ years for both males and females. The percentage for widowed females is higher than that for males and this may indicate higher mortality levels for males than females.

**Figure 8.1**



The peaks for divorced and separated categories are also in the age group 55+ years. The percentages for both divorced and separated females are higher than those for males.

### Differentials by Residence

In fertility analysis, the study of rural - urban variation is widely used. Table 8.2 and 8.3 show rural-urban differentials in marriage patterns for North-Western Province. The proportions for never married males are higher in urban areas than in rural areas in the age groups 15-29 and 55+ years. The age group in which more males are married in rural areas is 50-54 years and in urban areas this occurs in the 40-44 years age group. There are more divorced and separated males for both rural and urban areas in North-Western Province in the 55+ years age group.

Table 8.2

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

Age Group	Never Married		Married		Widowed		Divorced		Separated		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
15 - 19	97.7	98.4	2.0	1.3	0.0	0.1	0.1	0.1	0.1	0.2	18,715	3,573
20 - 24	65.5	77.5	33.1	21.5	0.1	0.1	0.8	0.4	0.5	0.5	12,090	2,241
25 - 29	26.5	32.4	70.2	64.2	0.2	0.2	2.1	2.0	0.9	1.1	8,703	1,837
30 - 34	12.3	11.3	81.7	85.3	0.5	0.1	2.3	2.3	1.2	1.0	7,048	1,667
35 - 39	7.3	4.2	88.5	92.5	2.6	0.1	2.3	2.2	1.3	1.0	4,766	1,211
40 - 44	4.8	3.0	90.4	93.0	0.8	0.4	2.9	3.1	1.2	0.5	4,232	1,052
45 - 49	3.7	3.6	91.6	92.1	0.7	0.9	3.1	2.7	1.0	0.7	3,971	697
50 - 54	2.5	2.0	91.7	92.7	1.7	0.9	2.8	3.4	1.3	1.1	4,333	561
55+	2.6	4.2	87.3	85.4	4.3	3.8	3.9	4.6	1.9	2.0	17,382	1,084
Total	37.7	44.6	58.1	52.5	1.2	0.5	2.0	1.7	1.0	0.7		
Size	30,639	6,203	47,210	7,314	982	67	1,632	235	777	104	81,240	13,923

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

Table 8.3 shows that the proportions for never married females are higher in urban areas than rural areas for all the age groups. The age group in which more females are married in rural areas is 35-39 years and in urban areas the age group is 30-34 years. The peak for widowed and separated females in North-Western Province is in age group 55+ years. The peak for divorced females in rural areas is in age group 55+ years and in urban areas it is in the 50-54 years age group.

Table 8.3

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

Age Group	Never Married		Married		Widowed		Divorced		Separated		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
15 - 19	73.7	84.7	24.1	13.9	0.2	0.1	1.2	0.8	0.9	0.6	19,628	3,970
20 - 24	29.2	37.2	62.0	56.6	0.6	0.2	5.6	4.0	2.5	2.0	14,994	3,050
25 - 29	12.7	14.6	74.5	73.7	1.2	1.4	8.6	8.2	3.1	2.1	11,792	2,429
30 - 34	7.3	7.4	78.0	78.6	2.2	1.2	9.5	10.3	3.0	2.6	8,772	1,852
35 - 39	5.1	5.7	79.0	77.8	2.9	2.6	9.9	11.1	3.1	2.8	6,495	1,140
40 - 44	3.6	5.1	77.3	71.0	5.2	5.8	10.7	14.6	3.1	3.5	6,944	817
45 - 49	3.2	3.7	74.3	68.3	7.6	10.0	12.1	14.3	2.8	3.7	6,425	589
50 - 54	3.3	4.9	68.0	57.5	11.9	14.8	13.6	20.0	3.2	2.8	6,263	506
55+	6.3	10.1	45.3	36.6	27.6	33.5	16.5	16.3	4.4	3.5	16,330	875
Total	23.5	34.3	57.9	52.5	6.9	3.7	8.9	7.3	2.7	2.0		
Size	22,995	5,230	56,579	8,001	6,745	569	8,647	8,117	2,681	311	97,647	15,228

Table 8.4 shows the distribution by age and marital status of the population of North-Western Province and its districts. The results from the table show that in North-Western Province, more females than males are married, but the difference is small and may be deemed insignificant. As regards districts, Mwinilunga has the highest proportions of married males and females. The least proportions are in Kasempa for males and Kabompo for females.

Table 8.4

Total Adult Population (15 years and over) by Sex and Marital Status, Rural/Urban and Districts, (Percent), North-western Province, 1990

Province/District	Never Married		Married		Widowed		Divorced		Separated	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>North-Western Province</b>										
Total	38.7	25.0	57.3	57.2	1.1	6.5	2.0	8.7	0.9	2.7
Rural	37.7	23.5	58.1	57.9	1.2	6.9	2.0	8.9	1.0	2.7
Urban	44.6	34.3	52.5	52.5	0.5	3.7	1.7	7.3	0.7	2.0
<b>Districts</b>										
Mufumbwe	38.9	24.6	56.9	57.7	1.0	6.8	1.7	7.8	1.3	3.2
Kabompo	39.8	25.7	54.9	53.9	1.3	7.1	3.1	11.5	0.9	2.3
Kasempa	42.4	29.1	53.9	54.9	1.0	5.5	1.5	7.3	1.1	3.1
Mwinilunga	37.5	22.4	59.2	59.5	0.8	7.3	1.7	8.2	0.8	2.6
Solwezi	39.8	26.3	56.7	58.1	1.0	5.8	1.6	7.1	0.9	2.7
Zambezi	35.1	35.1	60.0	60.0	1.5	1.5	2.3	2.3	1.0	1.0

*Singulate Mean Age at Marriage (SMAM).*

There are two particular characteristics of African marriages which have an important bearing on fertility, and these are: marriage is very widespread and the age at marriage, particularly for females is early. This is mainly prevalent in the largely subsistence agricultural economy of the country. Age at marriage plays an important role in influencing the level of fertility. That is, the lower the age at marriage, the higher the expected fertility level and vice versa. Table 8.5 presents the SMAM data for North-Western Province and its districts.

Table 8.5

Singulate Mean Age at Marriage Classified by Sex and Residence, North-western Province, 1990

Province and Districts	S M A M		
	Males	Females	Difference
<b>North-western Province</b>			
- Total	25.3	21.0	4.3
- Rural	25.2	20.9	4.3
- Urban	25.9	21.7	4.2
<b>Districts</b>			
Mufumbwe	24.7	20.5	4.2
Kabompo	25.7	21.1	4.6
Kasempa	25.8	21.6	4.2
Mwinilunga	24.9	20.5	4.4
Solwezi	25.5	21.2	4.3
Zambezi	25.2	21.3	3.9

Males and females of North-Western Province marry at mean ages of 25.3 and 21.0 years, respectively. The information given in the table agrees with the general pattern of males marrying females who are on average younger than themselves. Males in the province marry females who are about 4 years younger than themselves. The mean ages at marriage for rural areas are 25.2 and 20.9 years for males and females, respectively.

Mufumbwe district has the lowest SMAM for males and Kasempa has the highest. As for females Mufumbwe and Mwinilunga have the lowest SMAM whereas Kasempa has the highest.

#### *Singulate Mean Age at Marriage by Education*

The level of education has an influence on one's age at marriage. It is generally believed that the longer one stays in school, the longer it takes for one to marry. Therefore, the SMAM for this group of persons will tend to be high. Table 8.6 presents SMAM by level of education of females.

**Table 8.6**

**Singulate Mean Age at Marriage by Educational Attainment and Residence, (Females), North-Western Province, 1990**

Residence	All Levels of Education	Level of Education		
		No Schooling	Primary	Secondary+
North-western Province				
- Total	20.9	20.4	20.6	21.4
- Rural	20.4	20.3	20.6	*
- Urban	21.6	21.2	20.2	24.4
Districts				
Mufumbwe	20.4	19.7	20.1	23.7
Kabompo	21.0	20.5	20.6	*
Kasempa	21.4	21.3	20.6	23.4
Mwinilunga	19.4	19.9	20.1	21.1
Solwezi	21.1	20.7	20.5	21.5
Zambezi	21.1	20.4	21.1	24.0

Note: \* Figures suppressed because the cases are few.

The feature which is noticeable in Table 8.6 is that there is no significant difference between SMAM for females with no education and those with only primary education. The SMAM for females with secondary education is high and the reason could be attributed to the fact that these females stay in school longer, thus, marrying much later.

#### **8.4 FERTILITY**

Fertility is one of the dynamics of population that is important in estimating the current and future population sizes, composition and growth. Mortality and migration are the other dynamics of population change.

There are various techniques and indicators used in estimating fertility. In this chapter, indicators of fertility used are crude birth, general fertility, total fertility, gross reproduction and net reproduction rates. Some of the techniques used in estimating fertility are the Brass P/F Ratio method and the Brass Relational Gompertz Model. For further clarifications on the application of these methods, one may 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 has yielded higher fertility estimates because it is not suitable for the 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

Where,

$$F(x) = F - A e^{-Bx}$$

F(x) is the cumulative fertility by age

F is the total fertility rate by the end of the reproductive life

A and B are constants and lie between zero and unity and

The F values can be taken as cumulative fertility 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. The most important error in the reported number of births is the omission of births by older women, especially those births that end 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. The number of births may be inflated 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 shows a number of indicators fertility. The results from the table show that there was a rise in the birth rate in the 1980-90 inter-censal period. The results also show that there was a higher birth rate in urban areas of North-Western Province than in rural areas. Mufumbwe district had the highest birth rate in the province and Kabompo had the lowest. The CBR is affected by age and sex distribution of a population. For instance not every member of the population is at risk of giving birth. It is for this reason that direct comparison of CBRs between sub-populations with different age-sex structures could lead to erroneous conclusions. It is for this reason, that an adjusted measure, such as the TFR, is suitable to establish the fertility level.

Table 8.7

## Summary Fertility Measures, North-Western Province, 1980 and 1990

Residence/District	Crude Birth Rate	Child Woman Ratio	General Fertility Rate	Adjusted Total Fertility Rate	Adjusted Gross Reproduction Rate	Adjusted Net Reproduction Rate
North-western Province						
Total - 1980	28	865	143	6.5*	3.2	2.4
- 1990	44	695	187	6.9	3.4	2.5
Rural - 1980	27	853	140	6.5*	3.2	2.4
- 1990	43	705	188	6.9	3.4	2.5
Urban - 1980	32	940	161	6.5*	3.2	2.5
- 1990	45	646	180	6.8	3.3	2.4
Districts - 1990						
Mufumbwe	49	782	218	8.6	4.2	3.1
Kabompo	40	665	174	6.2	3.1	2.3
Kasempa	47	681	195	6.7	3.3	2.4
Mwinilunga	44	769	191	7.2	3.5	2.6
Solwezi	43	651	177	7.0	3.4	2.5
Zambezi	45	696	197	6.3	3.1	2.3

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

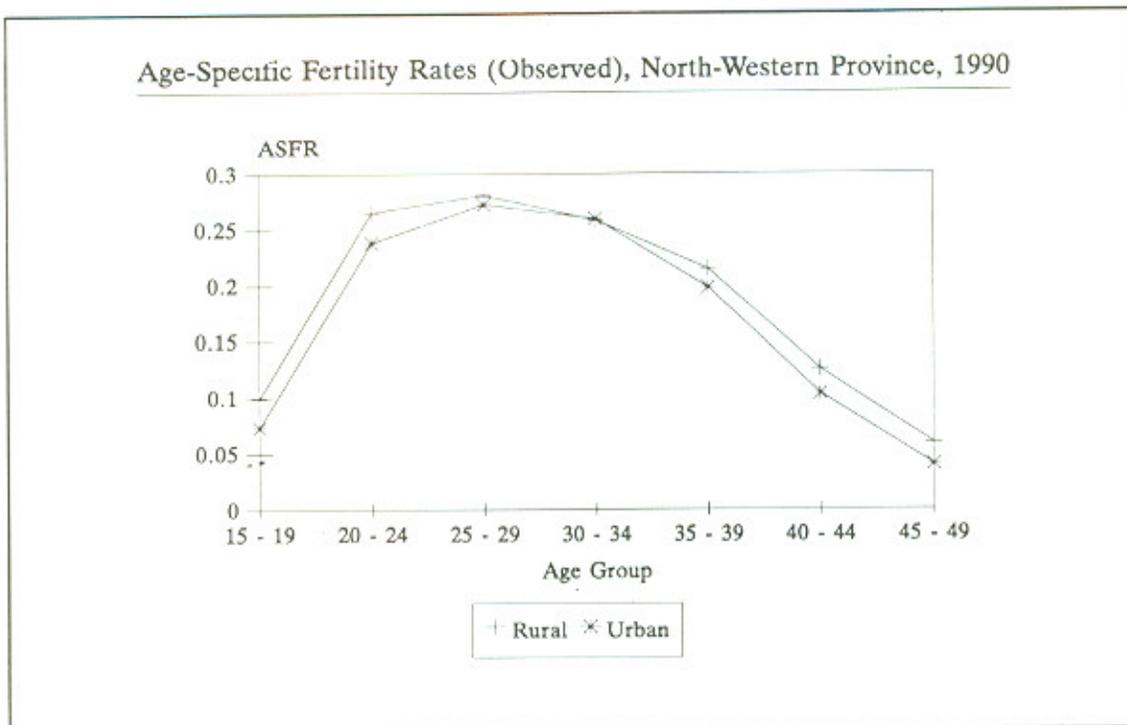
The Age-Specific Fertility Rates (ASFR) help show the variability of female fertility in the different age groups. The rates can be given in either single or five year age groups over the whole reproductive period for women aged 15-49 years. These rates also help in the calculation of TFR. The ASFR for rural and urban areas of the province are graphically presented in Figure 8.2. Fertility in the urban areas is lower than in rural areas of the province.

Table 8.8

## Age-specific Fertility Rates (ASFR), North-Western Province, 1990

Age Group	Total			Rural			Urban		
	Total Women	Births	ASFR	Total Women	Births	ASFR	Total Women	Births	ASFR
15 - 19	24,200	2,290	0.0946	20,121	1,991	0.0990	4,079	299	0.0733
20 - 24	18,442	4,805	0.2605	15,319	4,061	0.2651	3,123	744	0.2382
25 - 29	14,416	4,024	0.2791	11,949	3,353	0.2806	2,467	671	0.2720
30 - 34	10,749	2,776	0.2583	8,882	2,292	0.2580	1,867	484	0.2592
35 - 39	7,702	1,633	0.2120	6,540	1,403	0.2145	1,162	230	0.1979
39 - 44	7,843	963	0.1228	7,010	877	0.1251	833	86	0.1032
45 - 49	7,091	405	0.0571	6,483	381	0.0588	608	24	0.0395
TFR	90,443	16,896	1.2844	76,304	14,358	1.3011	14,139	2,538	1.1833
Observed TFR			6.4			6.5			5.9
Adjusted TFR			6.9			6.9			6.8
Mean age at Childbearing			30.2			30.2			300.1

Figure 8.2



The observed TFRs for North-Western Province total, rural and urban areas are 6.4, 6.5 and 5.9 children per woman, respectively. The observed TFR's have been adjusted. The adjusted TFRs for total, rural and urban areas are 6.9, 6.9 and 6.8 children per woman, respectively. TFR is an adjusted measure since it takes into account the age-sex population structure. For this reason, it is a suitable indicator for comparing fertility levels. There is a very slight rise in fertility between the 1980 and 1990 population censuses.

The Gross Reproduction Rate (GRR) and the Net Reproduction Rate (NRR) show the same fertility pattern as the TFR. Whereas there are slight rises in NRR for the province and the rural areas between 1980 and 1990, there is a slight drop for the urban area of the province. The NRRs are shown in Table 8.9.

Table 8.9

Net Reproduction Rate (NRR), North-Western Province, 1990

Age Group	Total		Rural		Urban	
	Female Births still Alive	ASFR'	Female Births still Alive	ASFR'	Female Births still Alive	ASFR'
15 - 19	1,033	0.0427	887	0.0441	146	0.0358
20 - 24	4,227	0.1208	1,858	0.1213	369	0.1182
25 - 29	1,873	0.1299	1,575	0.1318	298	0.1208
30 - 34	1,284	0.1195	1,051	0.1183	233	0.1248
35 - 39	754	0.0979	653	0.0998	101	0.0869
39 - 44	454	0.0579	417	0.0595	37	0.0444
45 - 49	186	0.0262	178	0.0275	8	0.0132
Total	9,811	0.5949	6,619	0.6023	1,192	0.5441
Observed NRR		3.0		3.0		2.7
Adjusted NRR		2.5		2.5		2.4

N.B: ASFR/4 means Age-Specific Fertility Rates for Female Births.

Another fertility indicator discussed in this Chapter is Children Ever Born (CEB). The "children ever born" is defined as the number of children ever born by a group of women of a given age during their childbearing experience beginning from the onset of reproductive life to their current ages.

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 (Mean CEB). The average parity for the age group 45-49 years is also referred to as Completed Family Size and is mostly likened to Total Fertility Rate under constant fertility, mortality and migration experiences.

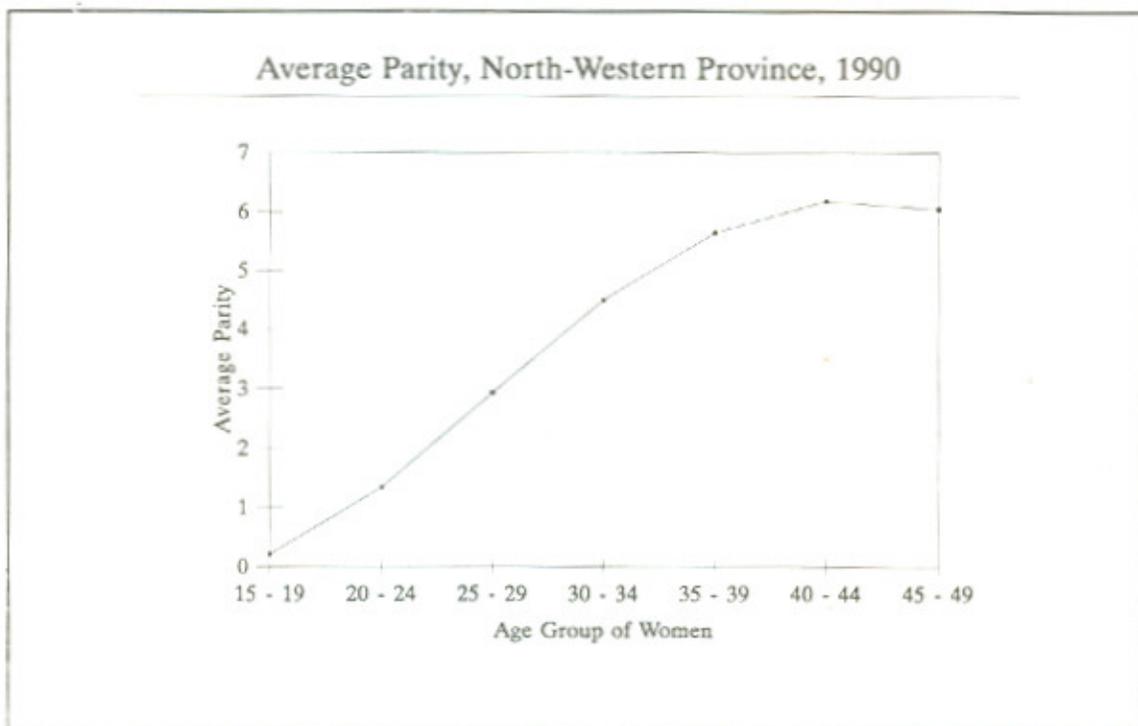
Table 8.10 presents data on CEB and Mean CEB. The Completed Family Size for women aged 45-49 years in the province is 6.1 children per woman. This information is also graphically presented in Figure 8.3.

Table 8.10

Average Parity, (Observed), North-Western Province, 1990

Age Group	Total Women	Children Ever Born	Average Parity Reported
15 - 19	24,200	5,301	0.2190
20 - 24	18,442	24,829	1.3463
25 - 29	14,416	42,226	2.9291
30 - 34	10,749	48,389	4.5017
35 - 39	7,702	43,518	5.6502
40 - 44	7,843	48,483	6.1817
45 - 49	7,091	42,904	6.0505

Figure 8.3



#### Time Trend

In 1980, North-Western Province, together with Western Province, were considered low fertility provinces. However, evidence from the 1990 Population Census has shown that there slight a TFR from 6.5 in 1980 to 6.9 in 1990. The same fertility pattern is shown for both rural and urban areas of the province.

## 8.5 FERTILITY DIFFERENCES

Fertility tends to differ according to socio-economic population groups. The socio-economic factors discussed in this chapter are rural-urban, district and educational differences.

### *Rural-Urban Differences*

No fertility variation between rural and urban areas was noticed in 1980. However, the fertility level is higher in rural than urban areas in 1990, but the difference is small and may therefore be considered insignificant.

### *District Differences*

Fertility variation among the districts in the province range from a high TFR of 8.6 in Mufumbwe to a comparatively low TFR of 6.2 children per woman in Kabompo district. Other districts which may be considered as high fertility ones (with TFR of 7 or mor) are Mwinilunga and Solwezi with TFRs of 7.2 and 7.0 children per woman, respectively.

### *Educational Differences*

Table 8.11 shows the fertility differences by level of education completed by women. It is generally observed that there is an inverse relationship between the level of fertility and the level of education completed by women. The general pattern is that the higher the level of education completed by women, the lower the expected level of fertility. This is mainly attributed to two factors: women who stay long in school marry late thus reducing their reproductive span; and secondly, it is held that women who are highly educated are more receptive to modern contraceptives and may be in a better position to limit the number of children they would give birth to.

In North-Western province, the observation of the inverse relationship of education and fertility holds for women with secondary and higher level of education but not for women with no education. The implication in this case is that females need to complete at least secondary level of education for the fertility to decline. Table 8.11 provides this information.

Table 8.11

Completed Family Size by Level of Education of Women, North-Western Province 1990

Residence	No Education	Primary	Secondary	Higher
Total	6.0	7.1	5.6	2.3
Rural	5.9	7.1	5.1	2.2
Urban	6.1	7.1	6.4	2.7

\* Completed Family Size (CFS) is based on the age group 40-49 years.

## 8.6 SUMMARY

In North-Western province marriage is widespread. For instance, by age 45-49 years, only 3.7 percent of males and 3.2 percent of females had never been married. This is coupled with early age at marriage. The singulate mean age at marriage for males and females of North-Western Province was calculated to be 25.3 and 21.0 years, respectively.

The small rise in Total Fertility Rate from 6.5 in 1980 to 6.9 in 1990 shows that fertility in North-Western province is rising, though slightly. A slight increase in TFR can also be noticed in the rural and urban areas.

An assessment of completed family sizes with reference to the level of education completed has shown that there is an inverse relationship between the level of education completed and level of fertility. It is also important to note that women with no education exhibited lower level of fertility than women with primary level of education. The implication is that females should be encouraged to stay longer in school for fertility decline to take firm root.



## CHAPTER 9

# MORTALITY

### 9.1. INTRODUCTION

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

$$q_{(x)} = D_{(x)} \cdot K_{(x)}$$

where  $q_{(x)}$  = probability of dying between exact age  $x$  and  $x+1$ ,

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

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

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

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

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

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

Information on deaths particularly for young ages usually has many 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. It also refers implicitly to the underlying conditions or causes of death, rather than to specific measures which may be affected by other factors.

#### *Infant Mortality Rate (IMR)*

Refers to the rate at which persons aged below 1 year die.

### **Child Mortality Rate (CMR)**

Refers to the rate at which children 1-4 years die. (Child mortality refers to deaths of children 1-4 years).

### **Under-Five Mortality Rate (UMR)**

The rate at which children below 5 years die. It combines 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 conventionally is expressed per 1000.

### **Expectation of Life at Birth**

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

## **9.3 CRUDE DEATH RATE (CDR)**

The observed crude death rate for North-Western Province that is unrealistically high. The plausible crude death rate has that derived from the Model North Life Tables of the Coale and Demeny Model Life Table System (1966). A sex ratio of 103 males per 100 females is used to obtain the Crude Death Rate for North-Western Province. The adjusted Crude Death Rate for North Western Province increased from 11.5 deaths in 1980 to 14.8 deaths per 1,000 population. Crude death rate for males increased from 11.7 deaths in 1980 to 15.1 deaths per 1,000 male population in 1990. The Crude Death Rate for females in North-Western Province increased from 11.3 deaths in 1980 to 14.5 deaths per 1,000 population in 1990, see to Table 9.1.

Table 9.1

Crude Death Rate (CDR) by Sex, North-Western, Province 1990

Sex	1990 Census Observed		Adjusted CDR <sup>1</sup> Per 1,000	
	Deaths	CDR Per 1,000	1980	1990
<b>North-west Province</b>				
- Total	12,625	32.6	11.5	14.8
- Male	6,575	35.5	11.7	15.1
- Female	6,050	29.9	11.3	14.5

Note: 1. Based Coale and Demeny Model North Life Table levels 14.8 (males) and 14.0 (females) for the 1990 Census. In the case of 1980 Census, levels 17.3 (males) and 16.4 (females) are used.

## **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 in 1980 and 1990 at exact ages 1,2,3,5,15 and 20. Table 9.2 and 9.3 present information on probabilities of dying and surviving together with mortality levels and reference dates from the 1990 and 1980 Censuses.

Generally, it is observed that children born in the later half of the 1980's experienced higher probabilities of dying rates as compared to those born in the early half of 1980's and late 1970's. Results from the 1980 Census presented in Table 9.3 point to the fact that the probability of dying was lower in the 1970s than in the 1980s

at all ages. Probabilities of surviving by sex derived from the 1980 Census data give indications of high survival chances to children born in the later half of the 1970's as compared to children born in the later half of the 1960's and early 1970's.

Table 9.2

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, North-western Province, 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
		$q_{00}$	$l_{00}$	$q_{10}$	$l_{00}$				
15-19	1	.130	.870	.104	.896	12.6	13.1	1988.6	1988.6
20-24	2	.129	.871	.122	.878	14.8	14.0	1987.3	1987.3
25-29	3	.143	.857	.124	.876	14.9	14.9	1985.5	1985.5
30-34	5	.148	.852	.135	.865	15.6	15.3	1983.3	1983.3
35-39	10	.167	.833	.156	.844	15.8	15.4	1980.8	1980.8
40-44	15	.187	.813	.182	.818	15.4	14.8	1978.3	1978.2
45-49	20	.196	.804	.186	.814	15.7	15.2	1975.3	1975.3

Table 9.3

Estimates of Probabilities of Dying and Surviving by Sex, Implied Mortality Levels and Reference Dates, North Model, North-Western Province, 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	.050	.950	.097	.903	19.9	13.8	1978.5	1978.4
20-24	2	.091	.909	.089	.911	17.3	16.4	1977.2	1977.2
25-29	3	.132	.868	.120	.880	15.5	15.1	1975.4	1975.3
30-34	5	.164	.836	.172	.828	14.8	13.5	1973.3	1973.2
35-39	10	.172	.828	.213	.787	15.6	13.0	1971.1	1970.8
40-44	15	.199	.801	.262	.738	15.0	11.7	1968.5	1968.3
45-49	20	.231	.769	.220	.780	14.4	13.9	1965.6	1965.4

Mortality levels, probabilities of dying and surviving have reference dates that range from 1976 to 1989 for the 1990 census. Corresponding reference dates for probability of dying and surviving derived from the 1980 Census range from 1966 to 1979.

### Infant Mortality Rate (IMR)

Recent estimates of infant mortality rate in North Western Province have indicated an increase. It is estimated that infant mortality rate for North-Western Province averaged 103.0 deaths per 1,000 live births in the 0-4 years period prior to the holding of the 1990 Census. Infant mortality rates for males and females are 110.0 deaths and 96.0 deaths in the 0-4 year period prior to the 1990 Census, respectively. Results from the 1980 Census indicate an infant mortality rate of 76.7 deaths per 1,000 live births for the 0-4 year period prior to the 1980 Census. Male and female infant mortality rates were 71.7 deaths and 84.7 deaths per 1,000 live births for the 0-4 years prior to the 1980 Census, respectively (see Table 9.4).

Table 9.4

**Infant and Child Mortality Rates by Five Year Period Preceding the Census, North-Western Province, 1980 and 1990**

Years Preceding Census	Infant Mortality ( $q_0$ )		Child Mortality ( $q_1$ )		Under-Five Mortality ( $q_5$ )	
	1980	1990	1980	1990	1980	1990
<b>North-western Province - Total</b>						
0-4	76.7	103.0	50.0	75.0	94.7	125.7
5-9	101.5	86.5	73.0	58.5	181.0	151.5
10-14	106.5	90.5	78.5	62.5	228.0	191.0
<b>Sex of Child - Male</b>						
0-4	71.7	110.0	45.3	82.0	91.0	134.0
5-9	95.5	90.0	67.0	62.0	168.0	157.5
10-14	100.5	90.5	72.5	62.5	215.0	191.5
<b>- Female</b>						
0-4	84.7	96.0	56.7	68.0	102.0	116.7
5-9	107.5	83.5	79.0	56.0	192.0	140.0
10-14	112.5	87.5	84.5	59.5	241.0	184.0

Infant mortality rate estimates derived from the earlier periods 5-9 and 10-14 years prior to the holding of both the 1980 and 1990 Censuses indicate few important observations. Firstly, there was a general reduction in infant mortality rate from the 1980 Census. Secondly, infant mortality rate showed signs of increasing as evidenced from the rates derived from the 1990 Census data in the 5-9 and 10-14 years prior to the holding of the Census. Thirdly, infant mortality rate for males had remained constant at 90.0 deaths in the periods 5-9 and 10-14 years prior to the 1990 Census. Fourthly, infant mortality rates for female children were higher in 1980 as compared to those of males. However, the opposite happened in 1990 Census, where female infant mortality rates were lower than those of males in the periods 5-9 and 10-14 years prior to the holding of the Census.

#### Child Mortality Rate (CMR)

Generally, child mortality rate is lower than the infant mortality rate due to various factors. The first one is that infant mortality rate is high due to the fact that it is affected by both endogenous (physiological) and exogenous (environmental) factors while the child mortality rate is affected only by the latter. Recent estimates of child mortality rates indicate a general increase over the 1980-1990 intercensal period. Child mortality rate increased from 50.0 deaths in 1980 to 75.0 deaths per 1,000 children. Male rate increased from 45.3 deaths in 1980 to 82.0 deaths per 1,000 children in 1990. The corresponding rate for female children increased from 56.7 deaths in 1980 to 68.0 deaths per 1,000 children in 1990.

In the earlier years, 5-9 and 10-14 years prior to the 1980 and 1990 Censuses, child mortality rate had shown signs of decline from 62.5 deaths (10-14 year period) to 58.5 deaths (5-9 year period) prior to holding the 1990 Census. Male child mortality rate had declined from 62.5 to 62.0 deaths per 1,000 children aged 1-4 years. Female child mortality rate had declined from 59.5 deaths (10-14 year period) to 56.0 deaths (5-9 year period) per 1,000 children aged 1-4 years. Results from the 1980 Census showed a general decline in child mortality from 78.5 deaths (10-14 years period) to 73.0 deaths (5-9 year period) per 1,000 children. Similar declines were recorded in the 5-9 and 10-14 years period prior to holding the 1980 Census for both male and female children aged 1-4 years.

#### Under-five Mortality Rate (UMR)

Estimates of under-five mortality derived from the 1990 Census data, indicate a general declining trend over the 0-4, 5-9 and 10-14 years prior to holding the Census. Under-five mortality rate declined from 191.0 deaths in the period 10-14 years to 125.7 deaths per 1,000 children aged below 5 years in the period 0-4 years prior to the 1990 Census. Substantial declines were observed in the under-five mortality rate for females as compared to males in the period 5-9 and 10-14 years prior to the 1990 Census. Similar declines were observed from the 1980 Census data. Refer to Table 9.4 for further details on the actual declines in under-five mortality rate.

## 9.5 MORTALITY BY SELECTED BACKGROUND CHARACTERISTICS

Evaluation of mortality trends by socio-economic background characteristics is important in the understanding of causal links. However, due to the limited number of variables in the 1990 Census questionnaire only sex of child, residence, education, marital and economic status of mothers are included in the analysis.

### *Infant Mortality Rate (IMR)*

The infant mortality rate increased during the 1980-1990 intercensal period. Overall, North-Western Province experienced an increase in infant mortality rate from 76.7 deaths in 1980 to 103.0 deaths in 1990 representing a percentage increase of 34.3 in the 1980-1990 intercensal period. The percentage increase was 53.4 and 13.3 percent, respectively during the 1980-1990 intercensal period. Infant mortality rates for males and females in 1990 were 110.0 and 96.0 deaths per 1,000 live births. Rural and urban areas recorded infant mortality rates of 105.0 and 95.0 deaths per 1,000 live births, respectively. The highest percentage increase of was higher in rural areas (34.6 percent) as compared to 12.7 percent in urban areas during the 1980-1990 intercensal period. Refer to Table 9.5 for details.

The IMR increased in all the districts in North-Western Province except in Kasempa District where the infant mortality rate was constant 84.0 deaths for 1,000 live births over the 1980-1990 intercensal period. The highest infant mortality rate in 1990 was recorded in Solwezi with 114.3 deaths followed by Mwinilunga District with 112.7 deaths per 1,000 live births.

Mothers who are educated are likely to be aware about the importance of providing nutritious foods, good child care and clean environment to their children. Hence, children born to such mothers are likely to have high survival chances as compared to children born to mothers without education. In 1990, the highest infant mortality rate was recorded to children born to mothers without formal education with a rate of 107.0 deaths per 1,000 live births. Mothers with secondary or higher education bore children who experienced the lowest infant mortality rate of 68.3 deaths per 1,000 live births in 1990. Percentage increase ranged from 24.2 percent for the "secondary or higher" to 24.9 percent for the "primary" education categories. Children born to mothers without formal education experienced a percentage increase of 24.2 during the 1980-1990 period. Infant mortality rates were lower in 1980 for all education categories as compared to 1990 (see Table 9.5 for details)

Marital status of mothers is another equally important socio-economic variable that can explain the disparities in infant mortality rate between children born to such women. Results from the 1990 Census have indicated relatively high infant mortality rates experienced by children born to widowed women with a rate of 104.5 deaths per 1,000 live births. This category of women is followed by the "separated" women with an infant mortality rate of 92.0 deaths per 1,000 live births. Other marital status categories recorded infant mortality rates ranging from 77.0 deaths for the "never married" category to 86.5 deaths for the "divorced" category. All marital status categories recorded positive increases in infant mortality rate except the "never married" category which recorded negative 9.1 percent, over the 1980-1990 period (see Table 9.5 for details)

The 1990 Census showed variations in infant mortality rate by economic status of women. In Table 9.5, children born to women who were "unpaid family workers" "agriculture sector" and for those "not available for work" experienced an equal high infant mortality rate of 103.0 deaths per 1,000 live births. Other economic status categories recorded lower infant mortality rates that were below 100.0 deaths per 1,000 live births. The lowest infant mortality rate is recorded in the category of "full-time housewife" with a rate of 84.5 deaths. Children born to women who are in "non-agricultural sector are more likely to survive during their first years of life as evidenced from the lowest infant mortality rate of 82.5 deaths (see Table 9.5).

Table 9.5.

Infant and Child Mortality Rates for the 5 Year Period Preceding the Census, by Selected Background Characteristics, North-Western Province, 1980 and 1990

Background Characteristic	Infant Mortality Rate (%)			Child Mortality Rate (%)			Under-Five Mortality Rate (%)		
	1980	1990	% Increase	1980	1990	Percent Increase	1980	1990	Percent Increase
North-western Province - Total	76.7	103.0	34.3	50.0	75.0	50.0	94.7	125.7	32.7
Sex of Child									
Male	71.7	110.0	53.4	45.3	82.0	81.0	91.0	134.0	47.3
Female	84.7	96.0	13.3	56.7	68.0	19.9	102.0	116.7	14.4
Residence									
Rural	78.0	105.0	34.6	51.0	77.0	51.0	97.7	128.0	31.0
Urban	84.3	95.0	12.7	57.3	66.7	16.4	99.1	115.0	16.2
District									
Mufumbwe	80.0	89.3	11.6	53.0	61.3	15.7	142.5	108.7	-23.7
Kaboimpo	88.5	102.3	15.6	61.0	74.0	21.3	109.0	125.0	14.7
Kasempa	84.0	84.0	0.0	56.0	56.5	0.9	113.0	111.5	-1.3
Mwinilunga	69.7	112.7	61.7	43.3	84.3	94.7	86.0	136.0	58.1
Solwezi	103.0	114.3	11.0	75.0	86.0	14.7	141.5	140.0	-1.1
Zambezi	68.5	91.3	33.3	42.0	63.7	51.7	90.5	110.3	21.9
Education									
None	86.0	107.0	24.4	58.3	79.0	35.5	108.3	131.3	21.2
Primary	84.3	105.3	24.9	57.0	77.0	35.1	104.0	127.3	22.4
Secondary+	55.0	68.3	24.2	30.0	41.7	39.0	70.5	82.3	16.7
Marital Status									
Never Married	84.7	77.0	-9.1	57.0	49.5	-13.2	103.7	102.5	-1.2
Married	80.5	85.0	5.6	53.0	57.5	8.5	108.5	114.5	5.5
Separated	80.0\$	92.0	15.0	53.0\$	64.0	20.8	108.5\$	125.0	15.2
Divorced	-	86.5	...	-	59.0	...	-	117.5	...
Widowed	81.5	104.5	29.0	54.0	76.5	41.7	115.0	144.0	25.2
Economic Activity									
Working	81.5*	87.0	6.7	55.0*	59.0	7.3	111.5*	106.3	-4.7
Unpaid Family Worker	-	102.7	...	-	74.3	...	-	126.3	...
Unemployed	86.0	99.5	15.7	58.7*	71.0	20.9	102.7	135.5	31.9
Full-Time Housewife	#	84.5	10.4	49.5	56.5	14.1	#	113.0	10.2
Not Available for Work	76.5	103.0	...	-	75.0	...	102.5	127.7	...
-	-	-	-	-	-	-	-	-	-
Sector of Agriculture									
Agricultural Sector	-	103.0	...	-	75.0	...	-	126.7	...
Non-Agricultural Sector	-	82.5	...	-	55.0	...	-	109.0	...

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

All the education categories recorded increases during the intercensal period with the highest in "primary" school category (22.4 percent). Children born to women without formal education recorded an under-five mortality rate of 131.3 deaths in 1990. The "primary" school category recorded an under-five mortality rate of 127.3 deaths per 1,000 children aged below 5 years in 1990. At "secondary

(see Table 9.5)

The under-five mortality rate declined over the 1980-1990 intercensal period in Mufumbwe (-23.7 percent), Kasempa (-1.3) and Solwezi (-1.1 percent). The under-five mortality rate was highest in 1990 in Solwezi (140.0 deaths) followed by Mwinilunga (136.0 deaths) and Kabompo (125.0 deaths).

The under-five mortality rate has increased in the recent past in North-Western Province. Results from the 1990 Census have estimated the under-five mortality rate for North-Western Province to be 125.7 deaths per 1,000 children below 5 years. The rate increased by 32.7 percent in the 1980-1990 period from 94.7 deaths per 1,000 children in 1980. Male and female children experienced under-five mortality rates of 134.0 and 116.7 deaths per 1,000 children in 1990. Under-five mortality rates for rural and urban areas in 1990 are 128.0 and 115.0 deaths. The rates in 1980 were lower than 100.0 deaths per 1,000 children. Refer to Table 9.5 for further details.

#### *Under-five Mortality Rate (UMR)*

Analysis of economic status groups by child mortality rates reveal some disparities. Children born to women in "non-agriculture" sector experienced the lowest 1990 Census child mortality rate of 55.0 deaths followed by those born to "full-time housewives" with a rate of 56.5 deaths per 1,000 children aged 1-4 years. High child mortality rates in 1990 were obtained in the "unemployed", "not available for work" and "unpaid family worker" categories. Generally, all economic status categories recorded the positive increase over the 1980-1990 intercensal period. The "unemployed" category recorded the highest percentage increase of 20.9 percent over the 1980-1990 period.

As it is the case with infant mortality rate, there are variations in child mortality rates by marital status categories. Results from the 1990 census have shown that child mortality rates range from 49.5 deaths for the "never married" category to 76.5 deaths per 1,000 children aged 1-4 years for the "widowed" category. All the marital status categories recorded increases over the 1980-1990 period except "never married" category which recorded a decline by 13.2 percent. The lowest percentage increase was recorded in the category "married" with 8.5 percent. Refer to Table 9.5 for details on the variations in child mortality rates by marital status groups.

There is no significant difference in child mortality rates for the "none" and "primary" education categories. However, a wide margin exist in child mortality rates of children born to women with "primary" and those with "secondary or high" education qualification. The 1990 Census child mortality rates for the "primary" and "secondary or high" categories are 77.0 and 41.7 deaths per 1,000 children aged 1-4 years. Percentage increases range from 35.1 percent for the "primary" to 39.0 percent for the "secondary or high" education categories. For details refer to Table 9.5.

At district level, Kasempa, Mufumbwe and Zambezi districts recorded relatively low child mortality rates as compared to the remaining three districts. Child mortality rates in 1990 ranged from as low as 61.3 deaths in Mufumbwe to as high as 86.0 deaths in Solwezi District. In 1980, Zambezi and Mwinilunga recorded the lowest child mortality rates of between 42.0 and 44.0 deaths per 1,000 children aged 1-4 years. Unfortunately, Mwinilunga District recorded the highest child mortality rate of 94.7 percent over the 1980-1990 period. Kasempa District recorded the lowest percentage increase of 0.9 percent during the same period.

Overall, the child mortality rate increased from 50.0 deaths in 1980 to 75.0 deaths in 1990 with a percentage increase of 50.0 over the 1980-1990 period. Male child mortality rate increased by 81.0 percent from 45.3 deaths in 1980 to 82.0 deaths in 1990. Similarly, female child mortality rate increased by 19.9 percent from a rate of 56.7 deaths in 1980 to 68.0 deaths in 1990. Rural and urban areas recorded percentage increases of 51.0 and 16.4 percent respectively. The 1990 Census child mortality rate for rural and urban areas are 77.0 and 66.7 deaths per 1,000 children aged 1-4 years, respectively (see Table 9.5).

#### *Child Mortality Rate (CMR)*

or higher" level children born to mothers with such education qualifications experienced an under-five mortality rate 82.3 deaths in 1990. Refer to Table 9.5 for further information on differences in under-five mortality rates.

Differences exist in under-five mortality rates for various marital status categories as estimated from both the 1980 and 1990 Census. Among the marital status categories the highest under-five mortality rate from the 1990 Census is obtained in the category of "widowed" with 144.0 deaths per 1,000 children aged below 5 years. The "separated" category recorded an under-five mortality rate of 125.0 deaths in 1990. Children born to widowed and separated mothers experienced the highest percentage increases of 25.2 and 15.2 percent, respectively, in the 1980-1990 intercensal period. The "never married" category recorded decline by 1.2 percent during the 1980-1990 period. Information on under-five mortality rate by economic status of mothers obtained from the 1990 Census reveal some differences in the individual categories. Results from the 1990 Census have shown that children born to mothers who are in the categories of "unemployed", "not available for work" and "unpaid family worker", experienced under-five mortality rates of above 120.0 deaths per 1,000 children aged below 5 years (see Table 9.5). In 1980, estimates of under-five mortality rate were lower in the categories of "unemployed" and "full-time housewife" (102.7 and 102.5 deaths, respectively. The "non-agricultural" sector recorded an under-five mortality rate of 109.0 deaths per 1,000 children as compared to a rate of 126.7 deaths for the "agriculture" sector.

### ***Expectation of Life at Birth***

New born children in North-Western Province are expected to live an average of 51.1 years as estimated from the 1990 Census data. The expectation of life at birth has reduced in the 1980-1990 period from 57.1 years in 1980. Female children in North-Western Province continue to experience a higher expectation of life at birth of 52.7 years as compared to their their male counterparts who experienced an expectation of life at birth of 49.6 years in 1990. The opposite was the case in 1980 where the expectation of life at birth for male children was higher at 58.6 years as compared to 55.3 years for female children (see Table 9.6). Expectation of life at birth for children born to mothers in rural areas is lower at 50.6 years as compared to 52.9 years for children in urban areas. Refer to Table 9.6 for further classifications on expectation of life at birth and mortality levels by selected socio-economic background variables.

Table 9.6

Expectation of Life at Birth for the 5 Year Period Preceding the Census, by Selected Background Characteristics, North-Western Province, 1980 and 1990

Background Characteristics	Expectation of Life at Birth (e <sub>0</sub> )		Mortality Level	
	1980	1990	1980	1990
North-western Province - Total	57.1	51.1	16.5	14.4
Sex of Child				
Male	58.6	49.6	17.3	14.4
Female	55.3	52.7	15.4	14.4
Residence				
Rural	56.7	50.6	16.3	14.2
Urban	55.5	52.9	16.2	15.1
District				
Mufumbv	56.5	54.2	13.2	15.6
Kabompo	61.0	51.3	15.5	14.4
Kasempa	55.5	55.4	15.3	15.3
Mwinilunga	58.9	49.1	17.2	13.7
Solwezi	51.1	48.7	13.4	13.4
Zambezi	59.1	53.7	16.8	15.4
Education				
None	55.0	50.2	15.6	14.0
Primary	55.3	50.7	15.9	4.3
Secondary +	62.8	59.3	18.4	7.5
Marital Status				
Never Married	55.3	57.2	15.9	16.0
Married	56.3	55.2	15.6	15.1
Separated	56.65	53.6	15.65	14.4
Divorced	-	54.7	-	14.9
Widowed	56.1	50.9	15.1	13.2
Economic Activity				
Working	6.2*	54.7	15.4*	15.7
Unpaid Family Worker	-	51.2	-	14.3
Unemployed	55.1#	52.0	15.9#	13.7
Full-Time Housewife	57.2	55.4	16.0	15.3
Not Available for Work	-	51.1	-	14.3
Sector of Agriculture				
Agricultural Sector	-	51.1	-	14.3
Non-Agricultural Sector	-	55.8	-	15.5

Note: \* = Includes female unpaid family workers  
 # = Includes females not seeking work and those not available for work  
 \$ = Includes divorced females

Districts that recorded high expectations of life at birth are Kasempa and Mufumbwe districts with 55.4 and 54.2 years as estimates from the 1990 Census. Solwezi and Mwinilunga districts have children who experience a lower expectation of life at birth of below 50 years. Refer to Table 9.6 for details.

Generally, the expectation of life at birth has reduced by a minimum of 3 years in all the education categories over the 1980-1990 period. As a female progresses in school, she is more likely to give birth to a child that has high survival chances. The expectation of life at birth from the 1990 Census for children born to females with "secondary or higher" education qualification is 59.3 years. Categories of "primary" and "none" recorded expectation of life at birth of 50.7 and 50.2 years, respectively. In 1980, the category of "secondary or higher" had recorded 62.8 years (see Table 9.6).

All the marital status categories recorded expectation of life at birth of above 50 years in 1990. However, the highest expectation of life at birth is recorded for the "never married" category with 57.2 years. The "married" category has continued to record high expectation of life at birth in the 10 year period between 1980 and 1990 (see Table 9.6).

Table 9.6 also shows the expectation of life at birth by economic status. Economic status categories that recorded higher expectation of life at birth are "full-time housewife" (55.4 years) and "working" (54.7 years). In 1980, "working" and "full-time housewife" categories had the highest expectation of life at birth. Equally, the non-agriculture sector recorded the highest expectation of life at birth of 55.8 years while the agriculture sector had 51.1 years (see Table 9.6).

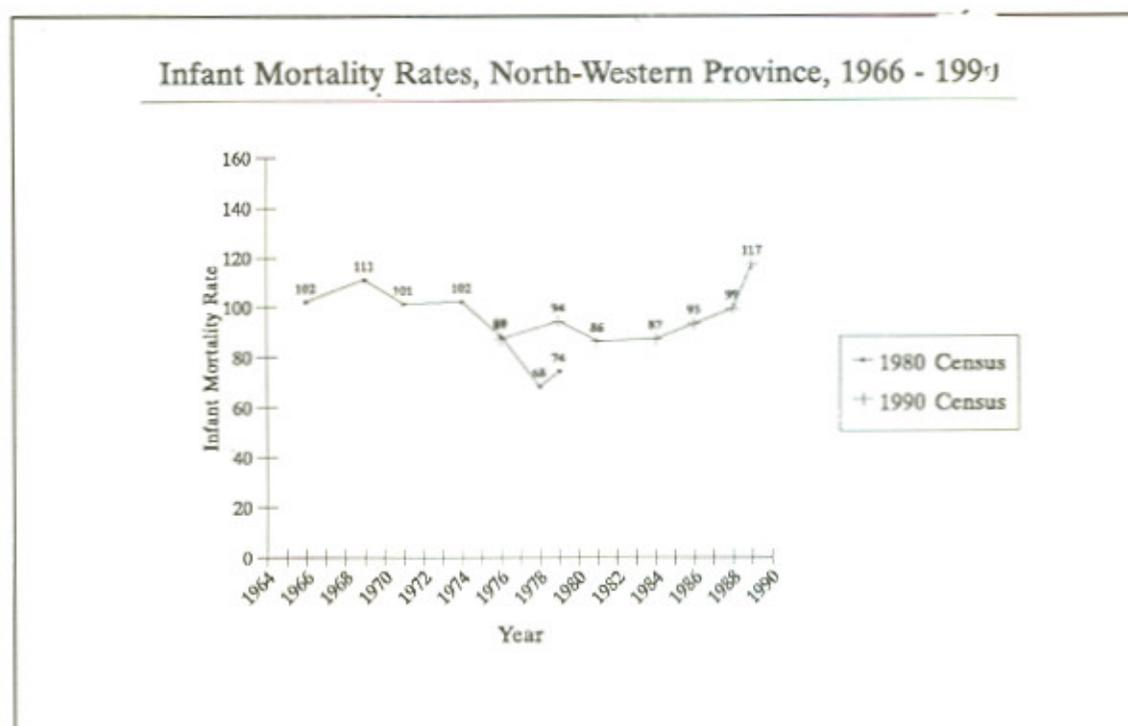
## 9.6 MORTALITY TRENDS

Information on trends of infant, child and under-five mortality rates is presented in Table 9.7 and Table 9.8. Trends of expectation of life at birth are also presented in the same tables. Reference dates for the 1990 Census span from 1976 to 1989. Similarly, the reference dates for the 1980 Census range from 1966 to 1979.

### *Infant Mortality Rate (IMR)*

Estimates of infant mortality rate derived from the 1990 Census have shown an increase since 1981. In 1981, the infant mortality rate was estimated at 86 deaths per 1,000 live births. The rate increased to 93 deaths in 1986 and 99 deaths in 1988. Recent infant mortality rate estimate in 1989 was 117 deaths per 1,000 live births. During the later half of the 1970's, estimates of infants mortality rate from 1990 Census indicated an average of between 85 and 95 deaths per 1,000 live births (see Table 9.7). Figure 9.1 shows the trend established from both the 1980 and 1990 Censuses for infant mortality rate in North-Western Province.

Figure 9.1



The trend of infant mortality rate established from the 1980 Census indicated a declining trend as from 1974 to 1978. Thereafter, there was an increase from 68 deaths in 1978 to 74 deaths per 1,000 live births in 1979. In the early half of 1970's infant mortality rate was estimated to be above 100 deaths per 1,000 live births. Refer to Table 9.8 for further details.

Table 9.7

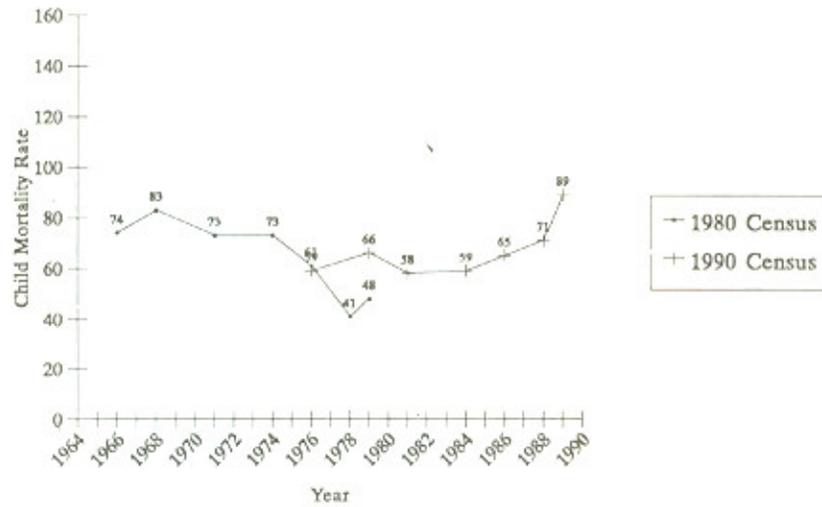
Trends of Infant, Child and Expectation of life at Birth, North-Western Province, 1990

Year	Infant Mortality Rate	Child Mortality Rate	Under-five Mortality Rate	Expectation of life at birth
1989	117	89	117	48.1
1988	99	71	126	51.9
1986	93	65	134	53.2
1984	87	59	141	54.7
1981	86	58	162	54.9
1979	94	66	191	53.1
1976	87	59	191	54.6

**Child Mortality Rate (CMR)**

An increasing trend in child mortality rate existed between 1981 and 1989 as established from the 1990 Census. Child mortality rate estimate in 1981 was 58 deaths and increased to 65 deaths per 1,000 children aged 1-4 years in 1986. In 1989, the child mortality rate was estimated at 89 deaths per 1,000 children aged 1-4 years. Refer to Table 9.7 for the child mortality rate trend established from the 1990 Census. Figure 9.2 shows the trend established from both the 1980 and 1990 Census.

### Child Mortality Rates, North-Western Province, 1966 - 1990



The 1980 census results on child mortality rate showed a declining trend from 1974 when the rate was 73 deaths to 41 deaths per 1,000 children aged 1-4 years in 1978. Thereafter, the child mortality rate increased to 48 deaths per 1,000 children aged 1-4 years. Between 1971 and 1974, the child mortality rate had remained constant at 74.0 deaths per 1,000 children, see Table 9.8.

#### ***Under-five Mortality Rate***

North-Western province experienced a declining trend in under-five mortality rate as from 1979 when the rate was 191 deaths to 117 deaths in 1989. In the later half of the 1970's, under-five mortality rate was constant at 191 deaths per 1,000 children. Refer to Table 9.7 for details on estimates of under-five mortality rate derived from the 1990 Census.

Figure 9.3 shows the trend established trends established from both the 1980 and 1990 Census. Table 9.8 shows that under-five mortality declined substantially from 194 deaths in 1971 to 74 deaths per 1,000 children aged below 5 years in 1979. In the later half of the 1960's, estimates of under-five mortality rate were more than 200 deaths per 1,000. Refer to Table 9.8 and Figure 9.3 for the established trends in under-five mortality rate.

Figure 9.3

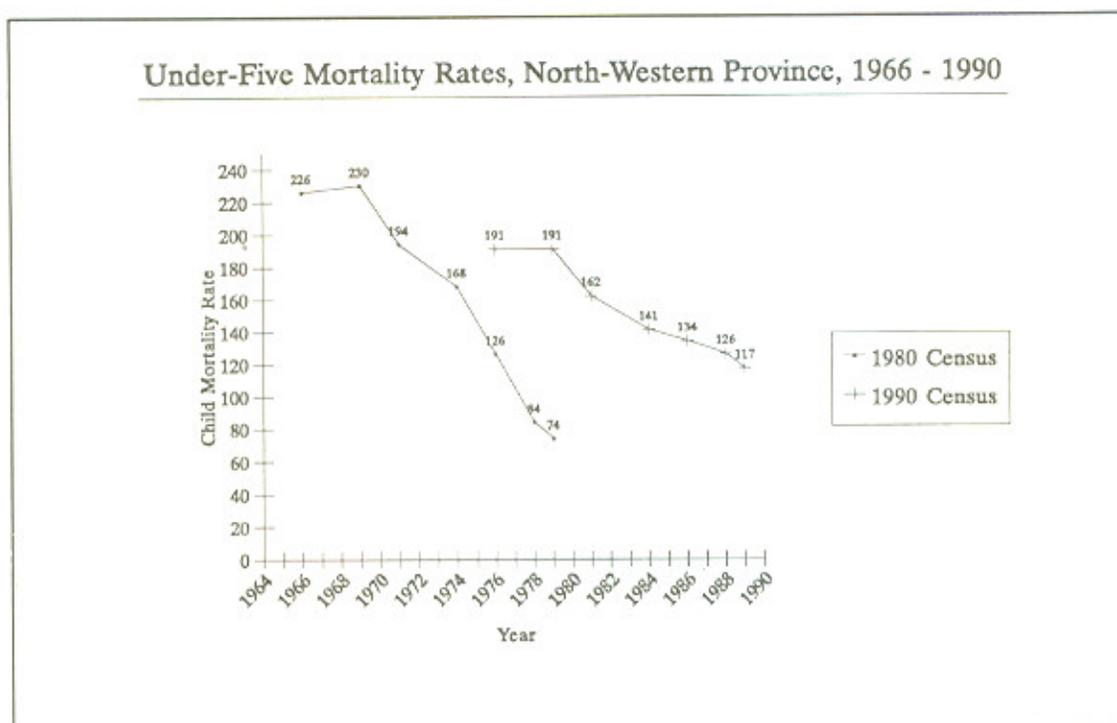


Table 9.8

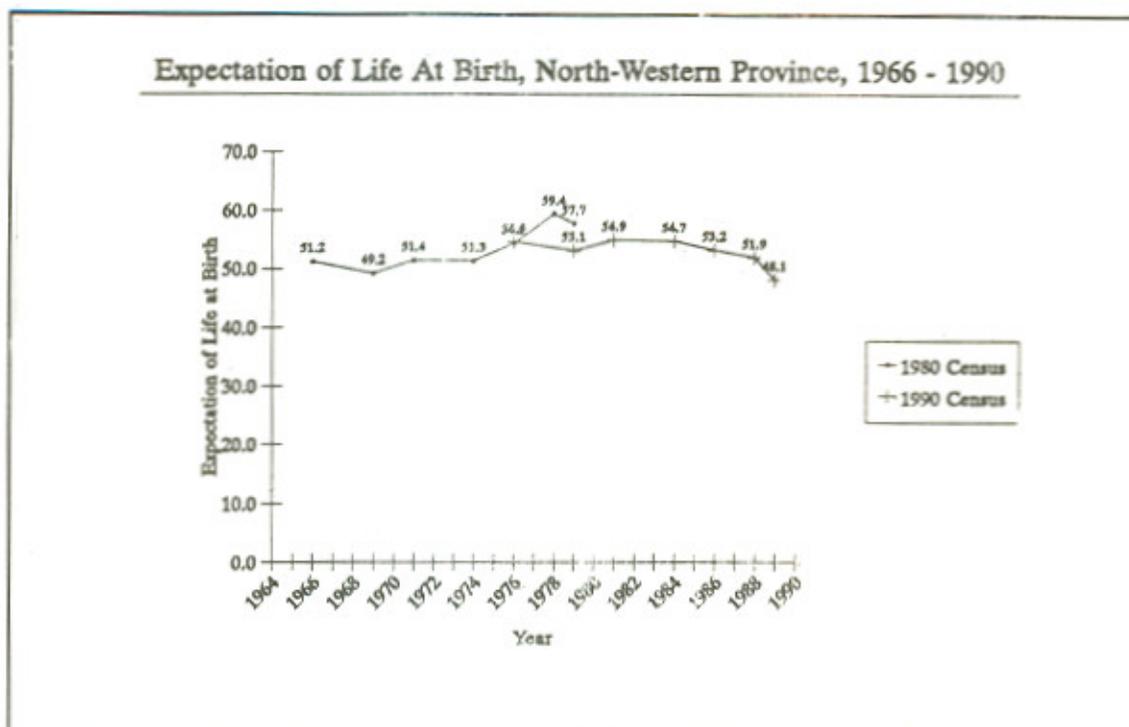
Trends of Infant, Child and Expectation of life at Birth, North-Western Province, 1980

Year	Infant Mortality Rate	Child Mortality Rate	Under-five Mortality Rate	Expectation of life at Birth
1979	74	48	74	57.7
1978	68	41	84	59.4
1976	88	61	126	54.3
1974	102	73	168	51.3
1971	101	73	194	51.4
1969	111	83	230	49.2
1966	102	74	226	51.2

***Expectation of Life at Birth***

The standard of living of people can be gauged by analysing the trends of expectation of life at birth over a period of time. North-Western Province continued to experience relatively high chances of survival for infants, especially in the later half of the 1970's and early 1980's. At the time, values of expectation of life at birth were above 53.0 years. Recent increases in infant and child mortality rates in North-Western Province have reduced expectation of life at birth, especially during 1989 when was 48.1 years. Values of expectation of life at birth derived from the 1990 Census are presented in Table 9.7. The pattern of expectation of life at birth is also shown in Figure 9.4. Figure 9.4 presents two patterns or trends of expectation of life at birth established from both the 1980 and 1990 Censuses.

Figure 9.4



The trend of expectation of life at birth established from the 1980 Census indicate a steady increase between 1977 and 1978. In 1971, the value was 51.4 years and later increased to 54.3 years in 1976. A value of 59.4 years was attained in 1978. Thereafter, the expectation of life at birth reduced to 57.7 years.

## 9.7 ADULT MORTALITY

Detailed analysis of adult mortality is lacking due to scanty information on adult deaths. In the recent 1990 Census, even though information on deaths was collected, other important demographic characteristics pertaining to the deaths were not canvassed. Thus, information on children everborn and surviving has been used to generate mortality levels. Construction of the life tables for both males and females has been made possible with the use of "Mortpack-Lite" computer software package developed by the United Nations in 1988. The input parameter for the construction life tables is the expectation of life at birth ( $I_0$ ) by sex. North Model Life Table system has been systematically chosen for North-Western Province due to the consistency in nature of values obtained for mortality rates. Selection of a Model Life Table system takes into consideration the fertility and mortality patterns of a population over time. Zambia has been using the North Model Life Table system because the mortality indices are moderate. Other model life tables provide very high mortality indices.

The Ministry of Youth, Sport and Child Development defines the adult population to be in the age group 25 years and older. Thus, life table columns for this age bracket are discussed on adult mortality. Expectation of life for males at age 25 years is 40.1 years with a probability of surviving to 30 years pegged at 0.96581. At retirement age of 55 years for males, the expectation of life is 18.2 years with a probability of surviving to 60 years at 0.88287. Age dependency starts at age of 65 years. By 65 years, males are expected to live for an average 11.9 years in North-Western Province with 0.75745 as probability of surviving to 70 years. Older male persons who are aged 70 years or over are expected to live for less than 10 years on average. Refer to Table 9.9 for details on the life table mortality patterns for males. Figure 9.5 shows the expectation of life at exact ages for both males and females. The expectation of life at birth reduces for both males and females 5 years.

Table 9.9

North Model Life Table for North-Western Province - Males, 1990.

Age	$m_{(x)}$	$q_{(x)}$	$l_x$	$D_{(x)}$	$L_{(x)}$	$S_{(x)}$	$T_{(x)}$	$e_x$	$a_{(x)}$	Age
0	.11902	.11023	100000	11023	92615	.86162 /A/	4960000	49.6	0.330	0
1	.01978	.07519	88977	6690	338194	.93935 /B/	4867385	54.7	1.352	1
5	.00668	.03284	82287	2702	404682	.97451	4529192	55.0	2.500	5
10	.00361	.01789	79585	1423	394368	.98044	4124510	51.8	2.500	10
15	.00450	.02225	78162	1739	386656	.97303	3730142	47.7	2.611	15
20	.00644	.03171	76423	2423	376229	.96717	3343486	43.8	2.571	20
25	.00675	.03320	74000	2457	363879	.96581	2967257	40.1	2.510	25
30	.00721	.03543	71543	2535	351427	.96255	2603379	36.4	2.524	30
35	.00817	.03997	69008	2758	338274	.95627	2251942	32.6	2.548	35
40	.00984	.04805	66250	3183	323481	.94723	1913667	28.9	2.560	40
45	.01200	.05830	63066	3677	306412	.93336	1590186	25.2	2.574	45
50	.01583	.07624	59389	4528	285994	.91344	1283774	21.6	2.581	50
55	.02075	.09880	54861	5420	261239	.88287	997779	18.2	2.589	55
60	.02987	.13936	49441	6890	230641	.83308	736540	14.9	2.596	60
65	.04435	.20025	42551	8521	192144	.75745	505899	11.9	2.581	65
70	.06870	.29382	34030	9999	145540	.65043	313755	9.2	2.539	70
75	.10606	.41778	24032	10040	94663	.43725 /C/	168216	7.0	2.461	75
80	.19023	.....	13992	13992	73552	.....	73552	5.3	5.257	80

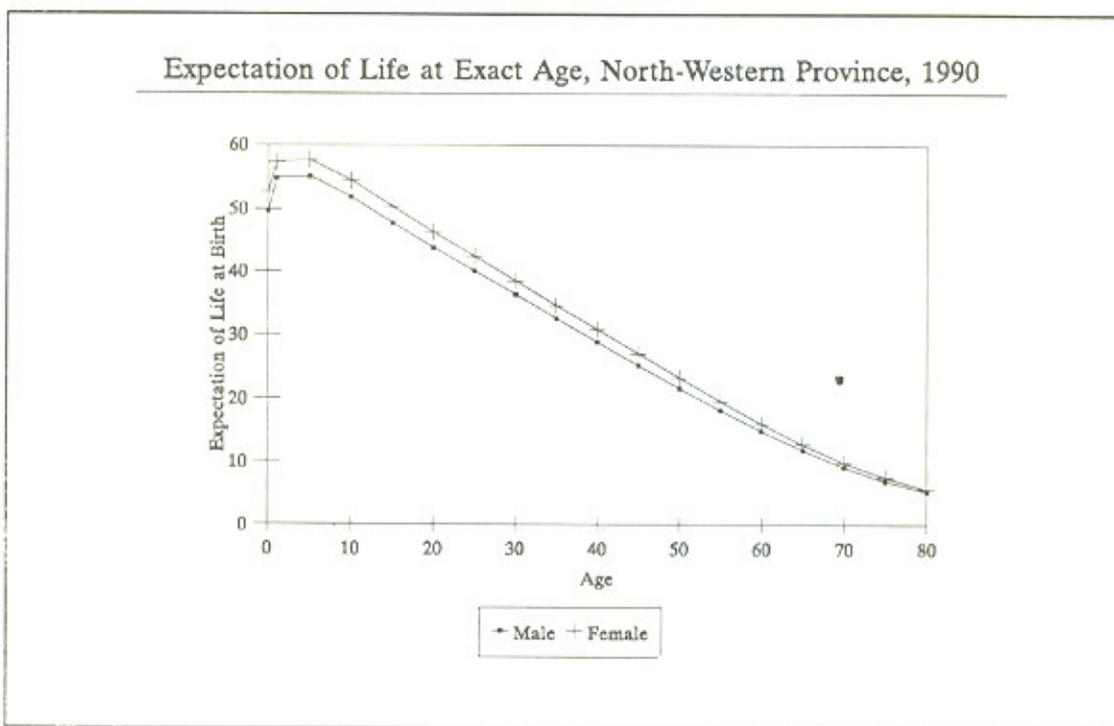
/A/ Value Given is for Survivorship of 5 Cohorts of Birth to Age Group 0-4 =  $L(0,5)/500000$

/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: Used expectation of life at Birth as an infant parameter in the Coale and Demeny Model Life Tables

Figure 9.5



In Table 9.10, female life table values are presented. Females aged 25 years experience high expectation of life as compared to their male counterparts. Life expectancy at age 25 years is 42.3 years for females while that of males is 40.1 years. At retirement age of 55 years, females are expected to live for an average 19.6 years. Life expectancy reduces further to 12.8 years at age of 65 years. Similarly, females are expected to live for less than 10 years at older age group 70 years or over. Probabilities of surviving between 25 and 55 years are nearly 1.00000. Thereafter, probabilities of surviving reduce drastically. Refer to Table 9.10 for further details on other life table columns.

Table 9.10

## North Model Life Table for North-Western Province - Females, 1990.

Age	$m_{x:0}$	$q_{x:0}$	$l_{x:0}$	$D_{x:0}$	$L_{x:0}$	$S_{x:0}$	$T_{x:0}$	$e'_{x:0}$	$u_{x:0}$	Age
0	.10134	.09494	100000	9494.	93685.	876786 /A/	5270008.	52.7	0.335	0
1	.01910	.07275	90506.	6584.	344703.	.94209 /B/	5176323.	57.2	1.370	1
5	.00640	.03149	83921.	5643.	413001.	.97522	4831620.	57.6	2.500	5
10	.00360	.01785	81279.	1451.	402767.	.98133	4418619.	54.4	2.500	10
15	.00403	.01993	79828.	1591.	395246.	.97821	4015852.	50.3	2.552	15
20	.00482	.02383	78237.	1864.	386633.	.97433	3620606.	46.3	2.558	20
25	.00558	.02754	76373.	2104.	376707.	.97046	3233973.	42.4	2.548	25
30	.00642	.03162	74269.	2349.	365579.	.96615	2857266.	38.5	2.544	30
35	.00737	.03620	71921.	2603.	353204.	.96119	2491687.	34.6	2.542	35
40	.00847	.04147	69317.	2875.	339497.	.95645	2138483.	30.9	2.534	40
45	.00945	.04620	66442.	3070.	324711.	.94794	1798985.	27.1	2.557	45
50	.01221	.05930	63373.	3758.	307806.	.93177	1474274.	23.3	2.590	50
55	.01645	.07914	59615.	4718.	286805.	.90429	1166468.	19.6	2.611	55
60	.02456	.11603	54897.	6370.	259355.	.85712	879663.	16.0	2.625	60
65	.03825	.17523	48527.	8503.	222299.	.78444	620308.	12.8	2.608	65
70	.06052	.26370	40024.	10554.	174381.	.68372	398009.	9.9	2.561	70
75	.09403	.38040	29470.	11210.	119227.	.46685 /C/	223628.	7.6	2.491	75
80	.17490	....	18259.	18259.	104401.	....	104401.	5.7	5.718	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: Used expectation of Life at birth (52.7 years) as an infant parameter in the Coale and Demeny Model Life Tables.

## 9.8 SUMMARY

The adjusted crude death rate for North-Western Province is 14.8 deaths per 1,000 population as derived from the 1990 Census data. Male and female crude death rates are 15.1 and 14.5 deaths per 1,000 population, respectively. Overall, North Western Province experienced an increase in crude death rate over the 1980-1990 intercensal period.

Infant and child mortality rates have increased significantly in the 1980-1990 intercensal period. The rate of infant deaths increased from 76.7 in 1980 to 103.0 in 1990. Child mortality rate increased from 50.0 deaths in 1980 to 75.0 deaths in 1990. Mortality rates for male children are generally higher than those of female children. Rural areas of North Western Province experienced high infant and child mortality rates as compared to those obtained in urban areas. Districts that experienced high infant and child mortality rates are Solwezi, Mwinilunga and Kabompo. These districts also recorded lower expectations of life at birth as compared to the other remaining three districts.

Children born to women in "un-educated" or "primary" level of education categories experience high infant and child mortality rates as compared to those born to mothers with secondary or higher levels of education. Marital status categories that recorded high infant and child mortality rates are the "widowed" and "separated". Economic status categories that recorded significantly high infant and child mortality rates are "not available for work", "unpaid family worker" and "unemployed". The agriculture sector recorded equally high infant and child mortality rates as compared to the non-agriculture sector.

## 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 to identify invisible disabilities. The disabled persons were classified as:-

- Totally blind
- Totally deaf/dumb
- Crippled
- 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 though 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 identification 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 North-Western Province.

### 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 deaf/dumb, 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*

Refers to persons who lack the senses of hearing and of speech.

#### *Crippled*

Refers to persons who have lost of one or more limbs or loss of the power to use one or more limbs.

#### *Mentally retarded*

A mentally retarded person is one 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

During the 1990 Census, 3,231 persons were recorded as disabled, out of a population of 387,552 in North-Western Province. Of the 3,231 disabled persons, 1,717 are male and 1,514, female. Solwezi, compared with the other districts of the province, has the largest number of the disabled while Mufumbwe has the least. The two districts have 1,016 and 198 disabled persons, respectively.

The largest proportion of the disabled in the province is of the crippled who make up 36.2 percent. The multiple disabled make up the second largest proportion (19.5 percent), followed by the blind (16.9), then the deaf/dumb (15.8 percent) and least, is that of the mentally retarded (11.6 percent). For both males and females, the crippled make up the largest proportion and the mentally retarded, the least.

Table 10.1

Disabled Persons by Type of Disability, Sex and Residence, (Percent), North-Western Province, 1990

Residence and Sex	Type of Disability						
	Total Number	Total	Blind	Deaf/Dumb	Crippled	Mentally Retarded	Multiple Disabilities
<b>North-Western</b>							
Both sexes	3,231	100.0	16.9	15.8	36.2	11.6	19.5
Male	1,717	100.0	16.1	14.4	39.5	12.6	17.4
Female	1,514	100.0	17.8	17.4	32.5	10.4	21.9
<b>Residence</b>							
<b>Rural</b>							
Both sexes	2,919	100.0	17.6	16.3	35.4	11.6	19.1
Male	1,561	100.0	16.4	15.0	39.6	12.2	16.8
Female	1,358	100.0	19.0	17.8	30.6	10.9	21.7
<b>Urban</b>							
Both sexes	312	100.0	10.3	10.9	43.9	11.2	23.7
Male	156	100.0	12.8	8.3	38.5	16.7	23.7
Female	156	100.0	7.7	13.4	49.4	5.8	23.7
<b>Districts</b>							
<b>Mufumbwe</b>							
Both sexes	198	100.0	12.6	15.7	33.8	12.6	25.3
Male	100	100.0	14.0	12.0	31.0	17.0	26.0
Female	98	100.0	11.2	19.4	36.7	8.2	24.5
<b>Kabompo</b>							
Both sexes	452	100.0	25.9	15.9	31.4	12.0	14.8
Male	242	100.0	23.6	14.9	34.7	12.8	14.0
Female	210	100.0	28.6	17.1	27.6	11.0	15.7
<b>Kasempa</b>							
Both sexes	353	100.0	11.9	11.9	38.3	16.4	21.5
Male	167	100.0	10.2	10.8	42.5	17.4	19.1
Female	186	100.0	13.4	12.9	34.4	15.6	23.7
<b>Mwinulunga</b>							
Both Sexes	595	100.0	16.1	16.0	36.5	10.7	20.7
Male	313	100.0	14.7	14.7	39.3	12.1	19.2
Female	282	100.0	17.7	17.4	33.3	9.2	22.4
<b>Solwezi</b>							
Both Sexes	1,016	100.0	15.1	18.1	39.7	9.9	17.2
Male	561	100.0	14.2	15.9	43.1	10.9	15.9
Female	455	100.0	16.0	20.9	35.4	8.8	18.9
<b>Zambezi</b>							
Both Sexes	617	100.0	18.3	13.9	33.6	11.5	22.7
Male	334	100.0	18.5	13.8	38.0	12.0	17.7
Female	283	100.0	18.0	14.1	28.3	11.0	28.6

In both rural and urban areas, as well as all the districts, the largest proportion of the disabled is that of the crippled. In rural areas the least proportion is of the mentally retarded while in urban areas, it is of the blind.

Table 10.2 shows the disabled as a proportion of total population. It is observed from the table that 0.8 percent of the population of North-Western province comprises the disabled. Out of this proportion, 0.3 percent are crippled, 0.2 percent with multiple disabilities and 0.1 percent blind, deaf/dumb and mentally retarded in each case. A slightly higher proportion of the rural population than that of the urban population is disabled. A comparison of the districts shows that Kasempa has the largest proportion of the disabled within the districts.

Table 10.2

Disabled Persons as a Proportion of Total Population by Residence and Type of Disability, (Percent), North-Western Province, 1990

Residence	Total Population	Type of Disability					
		Total	Blind	Deaf/Dumb	Crippled	Mentally Retarded	Multiple Disabilities
<b>North-Western</b>							
Total	387,552	0.8	0.1	0.1	0.3	0.1	0.2
Rural	331,465	0.9	0.2	0.1	0.3	0.1	0.2
Urban	56,087	0.6	0.1	0.1	0.2	0.1	0.3
<b>Districts</b>							
Mufumbwe	22,979	0.8	0.1	0.1	0.3	0.1	0.2
Kabompo	53,195	0.8	0.2	0.1	0.3	0.1	0.1
Kasempa	36,893	1.0	0.1	0.1	0.4	0.2	0.2
Mwinulunga	81,496	0.7	0.1	0.1	0.3	0.1	0.2
Solwezi	124,624	0.8	0.1	0.2	0.3	0.1	0.1
Zambezi	68,365	0.9	0.2	0.1	0.3	0.1	0.2

## 10.4 CHARACTERISTICS OF DISABLED PERSONS

### Sex Ratios

Sex ratio indicates the number of males per 100 females. Table 10.3 shows the sex ratios of the disabled by type of disability and district. The table shows that there are more disabled males than females in the province. However, for the multiple disabled and deaf/dumb categories, the sex ratios of less than 100 imply that there are less disabled males than females. In urban areas, the number of disabled males is equal to that of females, hence the sex ratio of 100.

Table 10.3

Sex Ratio of Disabled Persons by Residence and Type of Disability, North-Western Province, 1990

Sex Ratio and Residence	Type of Disability					
	Total	Blind	Deaf/Dumb	Crippled	Mentally Retarded	Multiple Disabilities
<b>North-Western</b>						
Total	113.4	102.2	93.9	137.5	137.6	90.6
Rural	114.9	99.2	96.7	148.6	128.4	89.5
Urban	100.0	166.7	61.9	77.9	288.9	100.0
<b>Districts</b>						
Mufumbwe	102.0	127.3	63.2	86.1	212.5	108.3
Kabompo	115.2	95.0	100.0	144.8	134.8	103.0
Kasempa	89.8	68.0	75.0	110.9	100.0	72.7
Mwinulunga	110.0	92.0	93.9	130.9	146.2	95.2
Solwezi	123.3	109.6	93.7	150.3	152.5	103.5
Zambezi	118.0	121.6	115.0	158.8	129.0	72.8

In all the districts except Kasempa, there are more disabled males than females. In Kasempa district, sex ratios are below 100 for all forms of disability except for the crippled.

### Age Structure

Table 10.4 displays the distribution of the disabled in broad age groups.

Table 10.4

Disabled Persons by Type of Disability and Age Group, (Percent), North-Western Province, 1990

Type of Disability	Age Group			
	Total	0 - 14	15 - 59	60+
Blind	16.9	12.0	11.3	33.2
Deaf/Dumb	15.8	16.8	15.9	14.6
Crippled	36.2	27.2	40.4	35.4
Mentally Retarded	11.6	9.6	15.6	4.6
Multiple Disabilities	19.5	34.4	16.8	12.2
Total	100.0	100.0	100.0	100.0
Total Number	3,231*	709	1,703	804

Note: (\*) This total includes even those who did not state their age.

Among the children aged 0-14 years of age, mental retardation is the least common type of disability (9.6 percent) followed by blindness. The largest proportion (34.4 percent) in this age group comprises the multiple disabled. For those aged 15-59, the largest proportion (40.4 percent) are crippled while the least (11.3 percent) are blind. Among those aged 60 years and above, the majority (35.4 percent) are crippled closely followed by the blind who make up 33.2 percent. The mentally retarded comprise 4.6 percent of the disabled in this age group.

#### *Usually Economically Active Disabled Population*

The usual economic activities of disabled persons are displayed in Table 10.6. Detailed definitions of economic activities are given in Chapter 6. The table and Figure 10.1 show that close to half of the disabled age 12 years and older are not available for work, 27.2 percent are working and 2.8 percent are seeking work. Homemakers make up 10.4 percent while students make up 6.1 percent and 3.0 percent comprises those available for work.

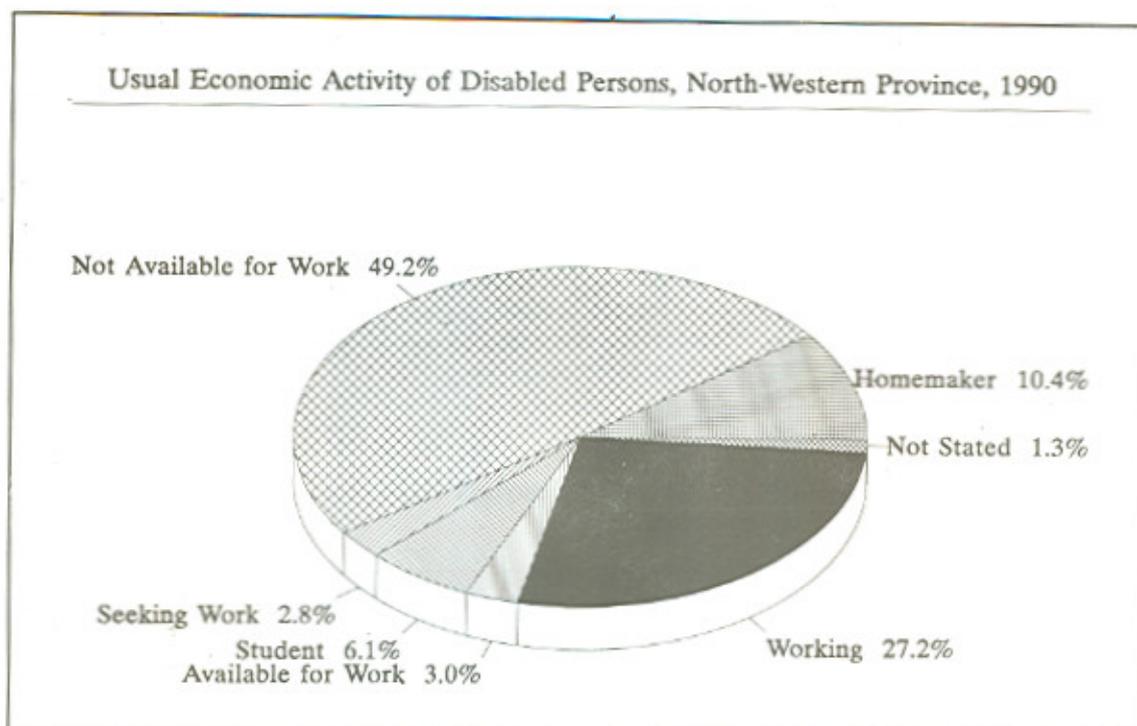
**Table 10.5**

**Disabled Persons (12 Years and Older) by Type of Disability and Usual Economic Activity, (Percent), North-Western Province, 1990**

Usual Economic Activity	Type of Disability					
	Total	Blind	Deaf/Dumb	Crippled	Mentally Retarded	Multiple Disabilities
Working	27.2	25.3	33.4	28.4	22.7	23.6
Seeking work	2.8	2.5	3.1	1.7	5.3	3.6
Available for work	3.0	2.8	3.9	3.0	2.5	3.1
Homemaker	10.4	8.9	12.3	8.3	10.6	15.4
Student	6.1	3.2	3.4	8.5	5.0	6.6
Not available for work	49.2	56.9	42.9	40.1	52.6	44.2
Not Stated	1.3	0.4	1.0	1.0	1.3	3.5
Percentage total	100.0	100.0	100.0	100.0	100.0	100.0
Total Number	2,671	471	413	1,043	321	423

In all types of disability, the majority are not available for work. The second largest proportion in all disability types is that of the working.

Figure 10.1



The employment status of the disabled is shown in Table 10.6. The table shows that out of 141 disabled heads of households that are usually active, 61 percent are employed as family workers, 25.5 percent are self employed and 7.8 percent are employees. Employees make 3.6 percent. Those who did not state their employment status make up 2.1 percent.

Table 10.6

**Disabled Household Heads Usually Active by Disability and Employment Status, (Percent), North-Western Province, 1990**

Type of Disability	Employment Status						
	Total Number	Percentage Total	Employer	Employee	Self Employed	Family Worker	Not Stated
Total	141	100.0	3.6	7.8	25.5	61.0	2.1
Blind	23	100.0	4.4	8.7	13.0	73.9	-
Deaf/Dumb	28	100.0	3.6	10.7	35.7	50.0	-
Crippled	45	100.0	2.2	6.7	26.7	60.0	4.4
Mentally Retarded	18	100.0	5.6	-	5.5	88.9	-
Multiple Disabilities	27	100.0	3.7	11.1	37.0	44.5	3.7

Proportionately, very few usually active disabled heads of households for all disability types are employers. The proportions of family workers range from 44.5 percent for the multiple disabled to 88.9 percent for the mentally retarded while those of employees range from 6.7 percent for the crippled to 11.1 percent for the multiple disabilities.

### *Educational Status of Disabled Population*

The completed levels of education of the disabled aged 5 years and older are shown in Table 10.7. The table shows that out of 3,016 such persons, only 0.1 percent have completed higher levels of education while 72.9 percent have had no education at all. About 21 percent have completed primary level and 4.3 percent have completed secondary level.

**Table 10.7**

**Disabled Persons (5 Years and Older) by Type of Disability and Level of Education Completed, (Percent), North-Western Province, 1990**

Type of Disability	Level of Education						
	Total Number	Percentage Total	No Education	Primary	Secondary	Higher Level	Not Stated
Total	3,016	100.0	72.9	20.8	4.3	0.1	1.9
Blind	519	100.0	79.8	14.3	4.2	0.2	1.5
Deaf/Dumb	478	100.0	83.9	13.2	1.9	-	1.0
Crippled	1,127	100.0	66.4	25.8	5.6	-	2.2
Mentally Retarded	358	100.0	69.5	21.5	6.7	0.3	2.0
Multiple Disabilities	534	100.0	72.7	22.7	2.2	-	2.4

The proportions of those who have no education range from 66.4 percent for the crippled to 83.9 percent for the deaf/dumb category. None of the deaf/dumb, crippled or multiple disabled have completed higher levels of education. The proportions of those who have completed the secondary level are lower than of those who have only completed the primary level for all disability types.

### **10.5 SUMMARY**

Analysis of the disabled shows that the total number of disabled persons (3,231) makes up 0.8 percent of the population in North-Western Province. Of the 3,231 disabled persons, 2,919 were recorded in rural areas and 312 in urban areas. The total sex ratio of the disabled of 113.4 implies that there are more disabled males than females in the province. The majority of the disabled in age groups 15-59 and 60 and over are crippled (40.4 and 35.4 percent respectively) while those with multiple disabilities make the largest proportion (34.4 percent) for those aged below 15 years.

About half of the disabled aged 12 years and older are not available for work. A little over a quarter (27.2 percent) are working and 2.8 percent are seeking work. Out of 141 disabled household heads aged 12 years and older, 61 percent are family workers while 25.5 percent are self employed. Employers and employees make up 3.6 and 7.8 percent respectively. Almost three quarters of the disabled aged 5 years and older have not completed any level of education.



## CHAPTER 11

### HOUSEHOLDS AND HOUSING CHARACTERISTICS

#### 11.1 INTRODUCTION

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.

#### 11.3 HOUSING CHARACTERISTICS

Analysis of housing characteristics helps gauge the standard of living of a community. To avoid the occurrence of diseases, it is important to provide good quality housing. Housing characteristics in this chapter are analysed in terms of number of rooms per housing unit, building materials, toilet facilities, main sources of water and energy for cooking and lighting.

### Number of rooms per housing unit

The number of rooms includes bedrooms and living rooms. Verandas, 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 counted as a room. In rural areas several units belonging to one household are treated as rooms one housing unit.

Table 11.1 shows that out of 73,381 households in North-Western Province, 40.5 percent occupy two roomed housing structures and 21.5 occupy three roomed ones. Small proportions occupy housing units of at least seven rooms. In both rural and urban areas the majority of households occupy two roomed houses. The second largest proportion occupy one roomed houses in rural areas and three roomed ones in urban areas.

In all districts, the largest proportions occupy two-roomed structures. Housing structures with at least seven rooms are not commonly occupied.

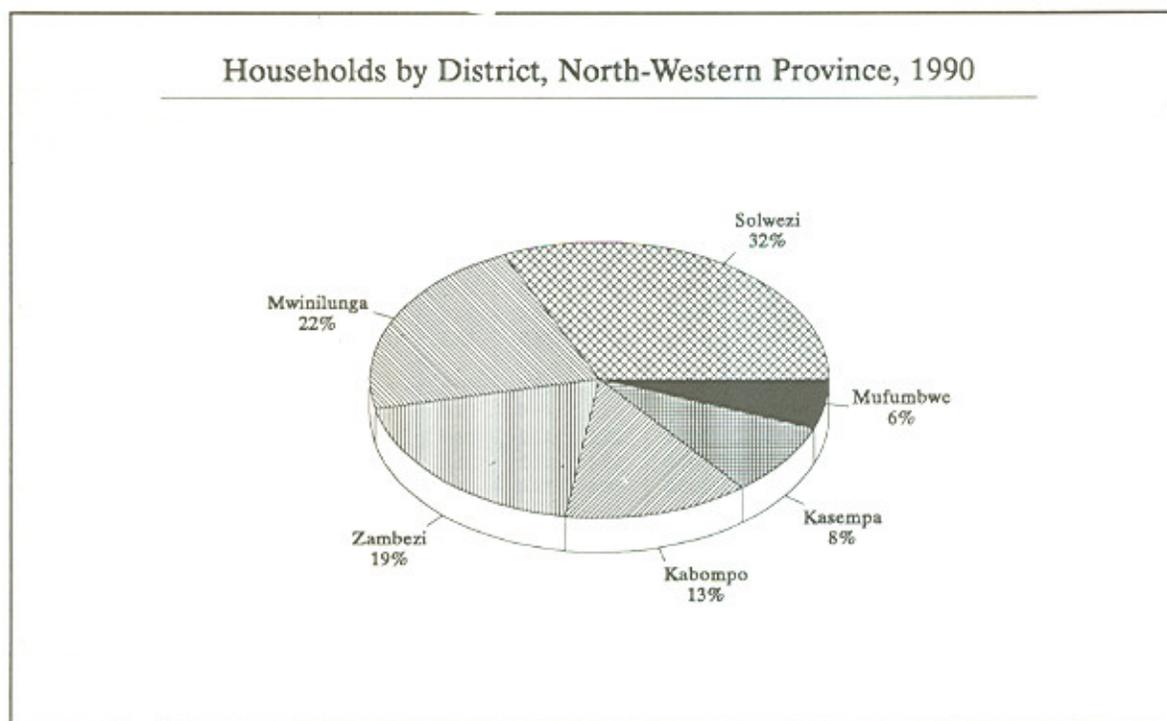
Table 11.1

Households by Number of Rooms, Rural/Urban and Districts, (Percent), North-Western Province, 1990

Residence	Number of Households	Total	Number of Rooms										
			1	2	3	4	5	6	7	8	9	10+	Not Stated
<b>North-Western Province</b>													
Total	73,381	100.0	20.2	40.5	21.5	10.1	3.8	1.6	0.6	0.4	0.2	0.3	0.8
Rural	63,580	100.0	22.2	41.3	20.0	8.9	3.7	1.6	0.7	0.4	0.2	0.2	0.8
Urban	9,801	100.0	6.8	35.4	31.6	17.5	4.4	1.7	0.7	0.3	0.2	0.4	1.0
<b>Districts</b>													
Mufumbwe	4,258	100.0	22.7	37.9	22.5	9.5	4.2	1.7	0.4	0.1	0.1	0.2	0.7
Kabompo	9,624	100.0	21.8	34.5	22.0	10.9	5.0	2.3	1.4	0.7	0.3	0.5	0.6
Kasempa	6,292	100.0	27.6	36.3	20.0	10.3	3.0	1.4	0.6	0.3	0.0	0.1	0.4
Mwinilunga	15,845	100.0	17.6	41.6	21.9	10.9	4.1	2.0	0.7	0.4	0.1	0.2	0.5
Solwezi	23,356	100.0	13.8	45.3	23.1	10.6	3.6	1.2	0.6	0.5	0.1	0.3	1.0
Zambezi	14,006	100.0	28.7	38.1	18.7	7.9	3.2	1.4	0.5	0.3	0.1	0.2	0.9

Figure 11.1 shows that among the districts, Solwezi has the largest proportion of households in North-Western Province (32 percent) followed by Mwinilunga with 22 percent. Mufumbwe has the least with 6 percent. The proportion of households in the districts can be attributed to population distribution.

Figure 11.1



Taking the appropriate number of persons per room as two, the problem of over-crowding, therefore, is in rural areas as opposed to urban areas. The average number of persons per room is 2.1 in rural areas and 1.9 in urban areas. In rural areas, proportions of households occupying one roomed housing units are higher than in urban areas. For households occupying two-roomed housing units proportions are higher in rural than urban areas for larger households. Out of 13,851 rural households with 5 to 6 persons, 42.2 percent occupy two roomed structures, compared to 35.4 percent in urban areas. In rural areas, 33.4 percent of households with at least seven members occupy two-roomed structures compared to 22.0 percent in urban areas.

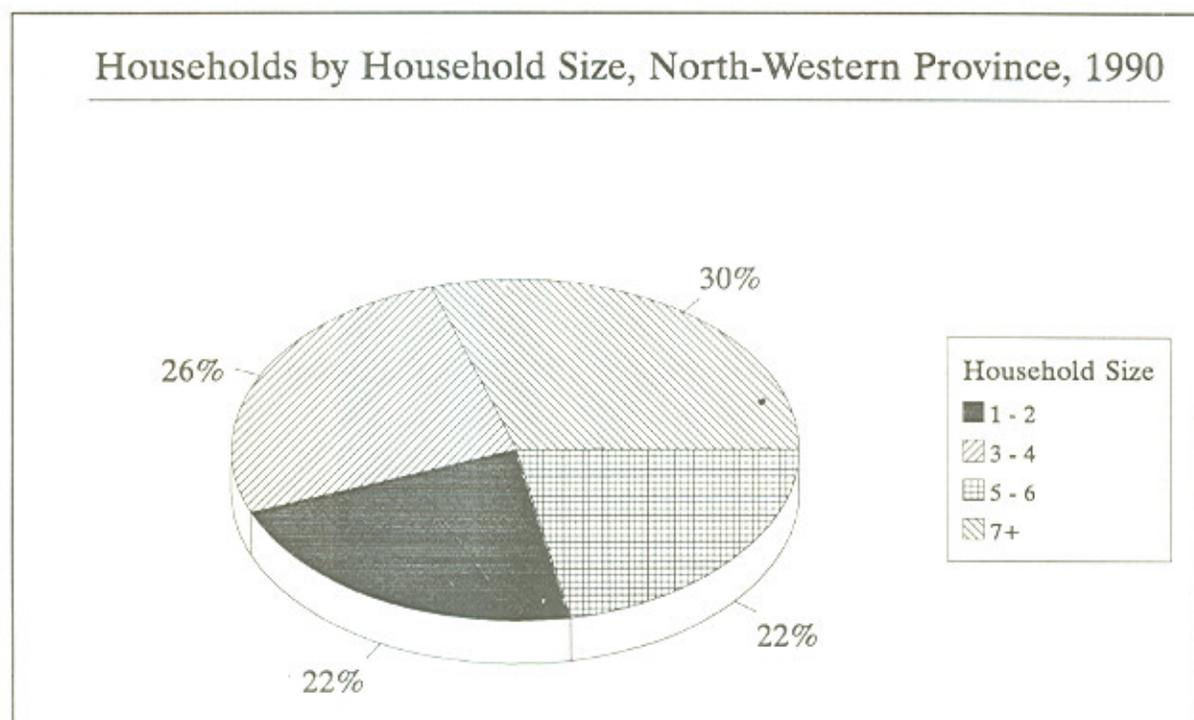
Table 11.2

## Households by Household Size, Number of Rooms and Residence, (Percent), North-Western Province, 1990

Residence and Household Size	Households	Number of Rooms								Average rooms per household	Average persons per room
		Total	1	2	3	4	5	6+	Not Stated		
<b>North-Western Province</b>											
Total	73,381	100.0	20.2	40.5	21.5	10.1	3.8	3.1	0.8	2.5	2.1
1-2	16,247	100.0	31.5	46.2	14.0	4.8	1.5	1.2	0.8	2.0	0.8
3-4	19,132	100.0	23.4	45.3	20.0	6.8	2.1	1.7	0.7	2.2	1.6
5-6	16,102	100.0	17.5	41.2	24.6	10.3	3.4	2.4	0.6	2.5	2.2
7+	21,897	100.0	10.9	31.6	26.3	16.7	7.1	6.4	1.0	3.0	2.9
<b>Rural</b>											
Total	63,580	100.0	22.2	41.3	20.0	8.9	3.7	3.1	0.8	2.4	2.1
1-2	14,474	100.0	33.5	45.9	13.0	4.1	1.5	1.3	0.8	2.0	0.8
3-4	16,856	100.0	25.5	42.2	18.8	6.2	2.0	1.6	0.7	2.2	1.6
5-6	13,851	100.0	19.4	42.2	22.6	9.5	3.3	2.4	0.6	2.4	2.2
7+	18,399	100.0	12.6	33.4	24.6	14.9	7.1	6.6	0.8	3.0	3.0
<b>Urban</b>											
Total	9,801	100.0	6.8	35.4	31.6	17.5	4.4	3.3	1.0	2.9	1.9
1-2	1,773	100.0	15.3	48.0	22.1	10.6	1.6	1.4	1.0	2.4	0.6
3-4	2,276	100.0	8.2	46.1	28.5	11.6	2.8	2.2	0.6	2.6	1.3
5-6	2,251	100.0	5.7	35.4	36.4	15.4	4.0	2.4	0.7	2.9	1.9
7+	3,501	100.0	2.3	22.0	35.3	26.2	7.2	5.5	1.5	3.4	2.7

Figure 11.2 shows that 30 percent of the households in North-Western Province have at least seven persons, 26 percent have 3-4 persons, 22 percent have 1-2 persons and another 22 percent have 5-6 persons.

Figure 11.2



*Construction materials of walls and roofs*

The durability of housing units may be increased by using good quality building materials to build walls, floors and roofs. Tables 11.3 and 11.4 show construction materials of walls and roofs.

**Table 11.3**

**Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), North-Western Province, 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	3,920	100.0	3.0	15.2	61.8	19.2	0.5	0.1	0.2
Unburnt/Mud Bricks	44,263	100.0	0.4	1.3	8.1	89.7	0.1	0.3	0.1
Concrete Blocks/slab	3,770	100.0	2.7	50.9	43.1	3.1	0.0	0.1	0.1
Stone	95	100.0	4.2	10.5	20.0	63.2	1.1	0.0	1.0
Iron Sheets	336	100.0	3.0	1.4	74.4	15.8	3.6	0.6	1.2
Asbestos/Wood/Hardboard	187	100.0	1.6	12.3	12.3	62.6	-	9.6	1.6
Pole and Dagga	16,288	100.0	0.4	0.4	0.9	97.5	0.2	0.5	0.1
Grass	3,442	100.0	0.4	0.4	0.6	92.4	0.6	4.8	0.8
Other	816	100.0	0.6	0.9	2.2	51.6	1.2	25.7	17.8
<b>Total</b>	<b>73,117</b>	<b>100.0</b>	<b>0.7</b>	<b>4.4</b>	<b>11.1</b>	<b>82.4</b>	<b>0.2</b>	<b>0.8</b>	<b>0.4</b>

Table 11.3 shows that the most common roofing material is grass, used in 82.4 percent of housing units. Tiles, asbestos and concrete/cement are not very common roofing materials. Although grass is generally the most commonly used roofing material, it is only used in 3.1 percent of housing units with concrete block/slab walls. The majority of housing units with concrete walls (50 percent) have asbestos roofs, and the second largest proportion (43.1 percent) have iron sheet roofs.

Table 11.4 shows that the largest proportion (60.5 percent) of housing units have unburnt/mud brick walls. The second largest proportion (22.3 percent) comprises those with pole and dagga walls. In housing units with asbestos roofs, 59.8 percent have concrete block/slab walls, 17.9 percent have mud brick walls and 1.9 percent have pole and dagga walls. Stone, iron sheets asbestos, wood and hardboard are uncommon building materials for walls.

Table 11.4

## Occupied Housing Units by Construction Materials of Walls and Roofs, (Percent), North-Western Province, 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	5.4	22.5	18.5	29.8	1.2	15.4	0.7	2.7
Unburnt/Mud Bricks	50.5	36.7	17.9	44.3	65.9	27.9	20.4	19.2
Concrete Blocks/slab	5.2	20.0	59.8	20.0	0.2	0.8	0.3	1.5
Stone	0.1	0.8	0.3	0.2	0.1	0.8	-	0.4
Iron Sheets	0.5	1.9	0.2	3.1	0.1	8.8	0.3	1.5
Asbestos/Wood/Hardboard	0.3	0.6	0.7	0.3	0.2	-	3.0	1.1
Pole and Dagga	22.3	13.6	1.9	1.9	26.3	23.5	13.2	7.7
Grass	4.7	2.9	0.4	0.2	5.3	15.4	27.3	10.3
Other	1.0	1.0	0.3	0.2	0.7	7.4	34.8	55.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	73,117	515	3,207	8,131	60,263	136	604	261
<b>Rural</b>								
Burnt Bricks	4.2	19.4	21.3	29.9	1.2	14.6	0.5	2.1
Unburnt/Mud Bricks	61.3	41.5	30.9	48.1	64.1	26.2	17.8	20.4
Concrete Blocks/slab	2.5	12.8	40.6	17.4	0.2	0.8	0.4	0.4
Stone	0.1	0.8	0.6	0.3	0.1	0.8	-	0.4
Iron Sheets	0.2	0.5	0.3	1.6	0.1	9.2	0.4	0.9
Asbestos/Wood/Hardboard	0.3	0.8	0.5	0.2	0.2	-	2.9	0.4
Pole and Dagga	24.9	18.6	4.5	2.0	27.8	24.6	13.7	8.5
Grass	5.3	4.2	1.0	0.3	5.6	16.2	28.1	11.1
Other	1.2	1.4	0.3	0.2	0.7	7.6	36.2	55.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	63,361	366	1,258	5,191	55,628	130	555	235
<b>Urban</b>								
Burnt Bricks	13.4	30.2	16.6	29.7	1.3	33.3	2.0	7.7
Unburnt/Mud Bricks	55.4	24.8	9.6	37.6	87.3	66.7	49.0	7.7
Concrete Blocks/slab	22.5	37.6	72.2	24.5	0.2	-	-	11.6
Stone	0.1	0.7	0.2	0.1	0.1	-	-	-
Iron Sheets	1.9	5.4	0.1	5.8	0.0	-	-	7.7
Asbestos/Wood/Hardboard	0.4	-	0.8	0.4	0.1	-	4.0	7.7
Pole and Dagga	5.0	1.3	0.2	1.6	9.4	-	8.2	-
Grass	0.9	-	0.1	0.1	1.5	-	18.4	3.8
Other	0.4	-	0.2	0.2	0.1	-	18.4	53.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	9,754	149	1,949	2,940	4,635	6	49	26

In both rural and urban areas, the most common building materials for walls are unburnt/mud bricks. The second largest proportion of material for walls is of pole and dagga in rural areas and concrete block/slab in urban areas. Grass, asbestos, wood, hardboard, iron sheets and stone are not common construction materials for walls in both rural and urban areas.

*Construction materials of Walls and Floors*

Tables 11.5 and 11.6 show construction materials of walls and floors. Table 11.5 shows that the majority (83 percent) of housing units have mud floors. However, only 3.8 percent of housing units with concrete block/slab walls have mud floors. The majority of these units (93.2 percent) have concrete cement floors. Most of the units with burnt brick or iron sheet walls have concrete cement floors. Wood and marble are not common construction materials for walls.

Table 11.5

Occupied Housing Units by Construction Material of Walls and Floors, (Percent), North-Western Province, 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	3,920	100.0	72.0	27.4	0.3	0.1	0.1	0.1
Unburnt/Mud Bricks	44,263	100.0	8.7	90.0	0.2	0.2	0.7	0.2
Concrete Blocks/Slab	3,770	100.0	93.2	3.8	1.4	0.2	0.9	0.5
Stone	95	100.0	16.8	67.4	1.1	1.1	10.4	3.2
Iron Sheets	336	100.0	64.6	32.4	0.3	0.3	2.4	-
Asbestos/Hardboard/Wood	187	100.0	21.9	67.9	4.3	-	4.8	1.1
Pole and Dagga	16,288	100.0	1.0	96.4	0.2	0.2	1.9	0.3
Grass	3,442	100.0	0.8	89.8	0.4	0.4	8.0	0.6
Other	816	100.0	2.8	60.0	1.5	0.2	18.4	17.1
Total	73,117	100.0	14.6	83.0	0.3	0.2	1.5	0.4

Table 11.6 shows that unburnt/mud brick walls are the most common in housing units with floors of any sort. In housing units with concrete/cement floors, concrete block/slab and burnt brick walls are also common.

Table 11.6

Occupied Housing Units by Construction Material of Walls and Floors, (Percent),  
North-Western Province, 1990

Construction Materials of Walls	Total	Construction Material of Floor					
		Concrete/ Cement	Mud	Wood (not Wooden Tile)	Marble	Other	Not Stated
Burnt Bricks	5.3	26.4	1.8	4.9	2.3	0.3	2.0
Unburnt/Mud Bricks	60.5	36.2	65.7	40.2	49.6	27.7	22.0
Concrete Blocks/Slab	5.2	32.9	0.2	23.6	5.9	3.1	5.6
Stone	0.1	0.1	0.1	0.4	0.7	0.9	1.0
Iron Sheets	0.5	2.0	0.2	0.4	0.7	0.7	-
Asbestos/Hardboard/Wood	0.3	0.4	0.2	3.5	-	0.8	0.7
Pole and Dagga	22.3	1.6	25.9	15.7	29.6	27.4	15.1
Grass	4.7	0.2	5.1	6.1	9.7	25.3	7.9
Other	1.1	0.2	0.8	5.2	1.5	13.8	45.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	73,117	10,689	60,672	229	135	1,088	304
<b>Rural</b>							
Burnt Bricks	4.1	28.0	1.8	2.4	1.6	0.3	0.4
Unburnt/Mud Bricks	61.3	43.0	64.1	52.1	49.2	27.8	23.0
Concrete Blocks/Slab	2.5	25.0	0.2	6.1	4.7	0.1	3.3
Stone	0.2	0.2	0.1	0.6	0.8	1.0	1.1
Iron Sheets	0.3	0.9	0.2	-	0.8	0.7	-
Asbestos/Hardboard/Wood	0.2	0.3	0.2	1.2	-	0.9	0.4
Pole and Dagga	24.9	2.0	27.2	21.8	31.2	28.7	16.6
Grass	5.3	0.4	5.4	8.5	10.1	26.3	8.9
Other	1.2	0.2	0.8	7.3	1.6	14.2	46.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	63,363	5,723	56,041	165	128	1,036	270
<b>Urban</b>							
Burnt Bricks	13.4	24.4	1.7	10.9	14.3	-	14.7
Unburnt/Mud Bricks	55.4	28.3	85.8	9.4	57.1	25.0	14.7
Concrete Blocks/Slab	22.5	41.9	0.6	68.8	28.6	63.5	23.5
Stone	0.1	0.1	0.1	-	-	-	-
Iron Sheets	1.9	3.4	0.3	1.5	-	1.9	-
Asbestos/Hardboard/Wood	0.4	0.5	0.1	9.4	-	-	2.9
Pole and Dagga	5.0	1.1	9.4	-	-	-	2.9
Grass	0.9	0.1	1.7	-	-	3.8	-
Other	0.4	0.2	0.3	-	-	3.8	41.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
H/units	9,754	4,966	4,631	64	7	52	34

There are no major variations between rural and urban areas as regards construction materials of walls and roofs. In rural areas however, 6.1 percent of housing units with floors of wood have concrete block/slab walls compared to 68.8 in urban areas. Of the units with marble floors, 28.6 and 4.7 percent have concrete/slab walls in urban and rural areas respectively. In urban areas, no housing unit with a marble floor has a walls of stone, iron sheets, asbestos, wood, hardboard, pole and dagga or grass.

#### *Water Supply and Sanitation*

The availability of clean water supply for households helps to prevent the occurrence of water-borne diseases such as dysentery, cholera, diarrhoea and bilharzia. Piped water and boreholes are among the sources of clean water supply.

The main sources of water supply in North-Western Province are shown in Table 11.7. The proportion of households drawing water from wells or boreholes increased from 57.3 percent in 1980 to 63.1 percent in 1990 while those using piped water altogether declined from 17.2 percent to 11.6 percent. Rivers/streams were used as a source of water by 25.1 percent of households in 1980 and 23.7 percent in 1990.

In rural and urban areas, proportions drawing water from wells or boreholes are 67.5 and 34.5 percent, respectively. Piped water is more common in urban than rural areas. Rivers and streams are more common in rural than urban areas.

Table 11.7

Households by Main Source of Water Supply, (Percent), North-Western Province, 1980 and 1990

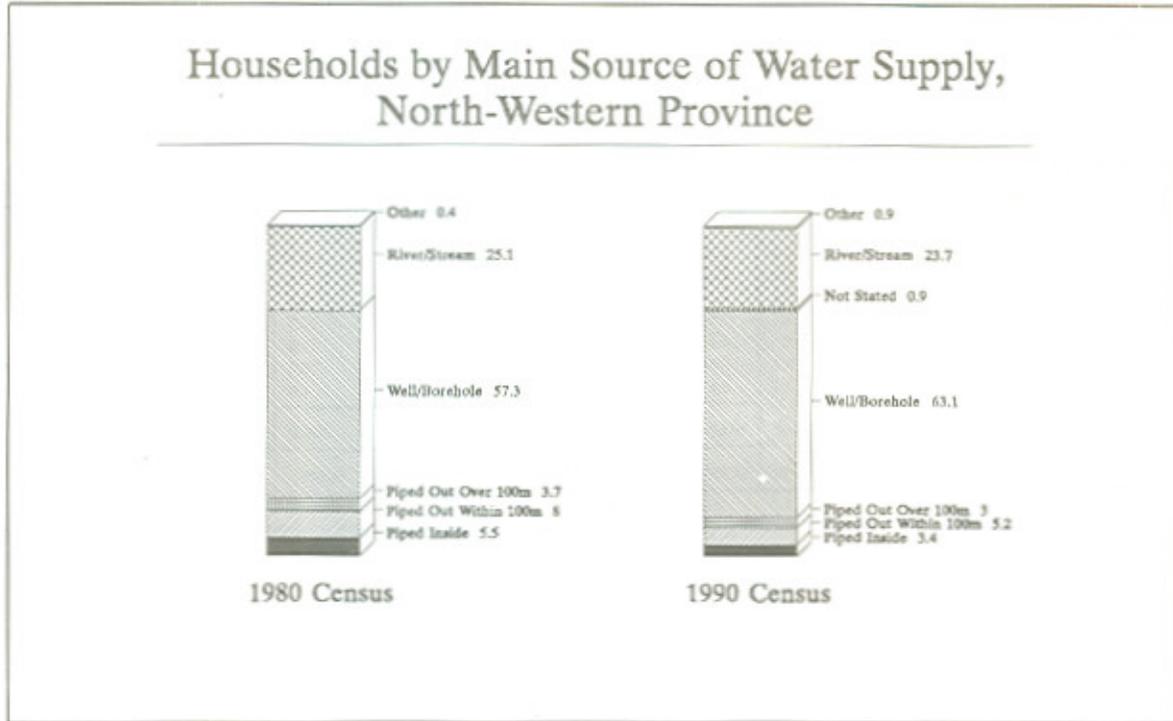
Main source of water supply	1980	Residence - 1990								
		Total	Rural	Urban	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Piped water inside H/unit	5.5	3.4	1.0	19.1	1.2	2.9	4.1	2.3	5.1	2.3
Piped outside H/unit within 100m	8.0	5.2	2.2	25.1	7.8	8.9	6.4	3.6	2.8	7.2
Piped outside Beyond 100m	3.7	3.0	1.2	13.9	4.4	3.1	2.0	2.9	3.0	2.9
Well/borehole	57.3	63.1	67.5	34.5	70.4	55.0	54.6	72.3	59.3	66.1
River/Stream	25.1	23.7	26.4	6.2	14.0	28.7	31.0	17.4	28.0	19.9
Other	0.4	0.7	0.8	0.3	1.6	0.5	1.2	0.5	0.8	0.6
Not Stated	-	0.9	0.9	0.9	0.6	0.9	0.7	1.0	1.0	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Household	65,804	73,381	63,580	9,801	4,258	9,624	6,292	15,845	23,356	14,006

Proportions of households using piped water inside the housing unit range from 1.2 percent in Mufumbwe to 5.1 in Solwezi while those using wells or boreholes range from 54.6 percent in Kasempa to 72.3 percent in Mwinilunga.

Figure 11.3 shows the proportional changes of sources of water supply between 1980 and 1990.

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

Figure 11.3



The types of toilet facility used in North-Western Province are shown in Table 11.8. The table shows that about three-quarters of households use pit latrines and 4.3 percent use flush toilets. The bucket and aqua privy are not common toilet facilities. A higher proportion of urban than rural households use flush toilets. A negligible proportion of urban households uses the aqua privy. Pit latrines are used by a larger proportion in rural than urban areas (75.3 and 68.9 percent respectively).

Table 11.8

Households by type of toilet and residence (Percent), North-Western Province, 1990

Type of Toilet	Residence - 1990								
	Total	Rural	Urban	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Flush	4.3	1.1	24.9	1.4	4.0	4.8	2.9	5.8	4.1
Bucket	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1
Aqua-Privy	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Pit Latrine	74.4	75.3	68.9	74.8	66.2	84.5	77.9	80.8	60.9
Other	19.2	21.7	3.3	22.7	28.3	8.8	17.4	10.6	33.2
Not Stated	1.9	1.7	2.8	0.9	1.4	1.7	1.7	2.6	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Households	73,381	63,580	9,801	4,258	9,624	6,292	15,845	23,358	14,006

The most common toilet facilities in all districts are pit-latrines. Proportions range from 60.9 percent in Zambezi to 84.5 in Kasempa. 'Other' toilet facilities are also relatively common. Proportions of households using flush toilets range from 1.4 percent in Mufumbwe to 5.8 in Solwezi.

### Domestic Energy

The main sources of cooking energy are presented in Table 11.9. The table shows that of the 73,381 households in the province, 87.3 percent use wood for cooking, 8.1 percent use charcoal, 1.8 percent use electricity, and another 1.8 percent use paraffin/kerosene. Gas and coal are not common sources of cooking energy. The largest proportion of rural households (94.6 percent) use wood while charcoal is the most commonly used in urban households (45.6 percent). The second most commonly used source of cooking energy in urban areas is wood used in 40.5 percent.

Table 11.9

Households by Main Source of Energy used for Cooking, (Percent), North-Western Province, 1990

Main source of Energy for cooking	Total	Residence		Districts					
		Rural	Urban	Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Electricity	1.8	0.4	11.0	0.1	1.3	1.8	1.1	3.3	0.9
Gas	0.4	0.4	0.5	0.5	0.3	0.6	0.4	0.4	0.3
Paraffin/kerosene	1.8	1.8	1.7	1.4	1.2	1.6	1.7	2.5	1.1
Wood	87.3	94.6	40.5	93.9	92.0	90.8	92.0	77.5	91.8
Charcoal	8.1	2.3	45.6	3.5	4.4	4.8	4.4	15.6	4.9
Coal	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Other	0.2	0.2	0.0	0.2	0.3	0.2	0.1	0.2	0.4
Not Stated	0.4	0.3	0.6	0.4	0.5	0.2	0.3	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total households	73,381	63,580	9,801	4,258	9,624	6,292	15,845	23,358	14,006

A comparison of the districts shows that Solwezi has the largest proportion using electricity for cooking. Proportions using gas range from 0.3 percent in Kabompo and Zambezi to 0.6 percent in Kasempa, while those using paraffin/kerosene range 1.1 percent in Zambezi to 2.5 in Solwezi. Wood is the most commonly used energy source in all districts and proportions range from 77.5 percent in Solwezi to 93.9 in Mufumbwe.

Table 11.10 shows that in 1980 the proportion using electricity for cooking was 1.7 percent and 1.8 in 1990. Use of gas and kerosene (paraffin) increased from 0.8 in 1980 to 2.2 in 1990. While that of wood, charcoal and coal decreased from 97.1 percent to 95.4 during the 1980-90 intercensal period.

Table 11.10

## Households by Main Source of Energy for Cooking, (Percent), North-Western Province, 1980 and 1990

Energy Source	1980	1990
Electricity	1.7	1.8
Gas and Kerosene	0.8	2.2
Wood, Charcoal, Coal	97.1	95.4
Other	0.4	0.2
Not stated		0.4
Total	100.0	100.0
Households	65,804	73,381

Sources of lighting energy are shown in Table 11.11. The table shows that 71.3 percent of the housing units in the province use paraffin as a source of lighting energy. Electricity is used in 4.5 percent, gas in 0.6, candle in 0.8 and sources other than the stated are used in 22.2 percent. These energy sources in the 'other' category may include wood and batteries. The proportion of housing units using electricity in rural areas is 1.2 percent and 26.6 percent in urban areas. The 'other' sources are used in 25.2 percent in rural areas and 2.2 percent in urban areas.

Table 11.11

## Housing Units by Main Source of Energy Used for Lighting, (Percent), North-Western Province, 1990

Main source of energy for lighting	Total	Rural	Urban	Districts					
				Mufumbwe	Kaobampo	Kasempa	Mwinilunga	Solwezi	Zambezi
Electricity	4.5	1.2	26.6	0.5	4.1	6.6	3.3	6.4	3.6
Gas	0.6	0.6	0.8	0.8	0.6	0.7	0.5	0.7	0.5
Paraffin	71.3	71.7	68.9	64.9	71.8	61.5	76.1	79.3	58.7
Candle	0.8	0.7	0.7	1.7	0.6	1.6	0.6	0.6	0.5
Other	22.2	25.2	2.2	31.3	22.2	29.2	19.0	12.4	36.0
Not Stated	0.6	0.6	0.8	0.8	0.7	0.4	0.5	0.6	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number H/units	73,117	63,363	9,754	4,255	9,601	6,286	15,700	23,316	13,959

There are slight disparities in sources of lighting energy in the districts. In Mufumbwe, 0.5 percent use electricity while 6.6 percent use it in Kasempa. Gas is used in less than 1 percent of the housing units in each district. Proportions using paraffin range from 58.7 percent in Zambezi to 79.3 in Solwezi. Small proportions in all districts have not stated the sources of energy being used.

## 11.4 OWNERSHIP STATUS OF HOUSING UNITS

Table 11.12 shows that 91.7 percent of the housing units in the province are owned by individuals. The central government owns 4.7 percent, district council owns 1.4 percent, parastatal organisations 0.8 and private organisations 0.8 percent. In rural and urban areas, the proportions of housing units owned by individuals are 95.5 and 67.5 percent respectively. The central government, district council, parastatal and private organisations own larger shares within the urban than rural areas.

Table 11.12

Occupied Housing Units by Ownership Status and District, (Percent), North-Western Province, 1990

Ownership Status	Total	Rural	Urban	DISTRICTS					
				Mufumbwe	Kabompo	Kasempa	Mwinilunga	Solwezi	Zambezi
Central Govt.	4.7	2.6	17.9	5.7	3.4	6.6	4.1	5.0	4.4
District Council	1.4	0.2	9.1	0.4	2.9	1.8	0.8	1.3	1.2
Parastatal	0.8	0.3	3.8	0.5	0.6	1.1	0.3	1.3	0.5
Private Org.	0.8	0.8	0.9	1.6	0.5	2.3	0.7	0.5	0.8
Individual	91.7	95.5	67.5	91.2	92.0	86.9	93.6	91.3	92.4
Not Stated	0.6	0.6	0.8	0.6	0.6	1.3	0.5	0.6	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H/units	73,117	63,363	9,754	4,255	9,601	6,286	15,700	23,316	13,959

Proportions of housing units owned by individuals range from 86.9 percent in Kasempa to 93.6 percent in Mwinilunga. The district councils, parastatal and private organisations own small proportions of housing units in all districts. The central government owns between 3.4 and 6.6 percent of housing units in the districts.

Table 11.13 shows the distribution of households that occupy rented housing units by landlord and district. Out of 73,381 households in the province, 4,437 occupy rented housing units. The central government is the largest landlord followed by individuals. These rent out 36.7 and 34.4 percent of the housing units, respectively. Private organisations are the least common landlords, renting out 4.1 percent. In rural areas individuals are the most common landlords while the central government is the largest landlord in urban areas.

Table 11.13

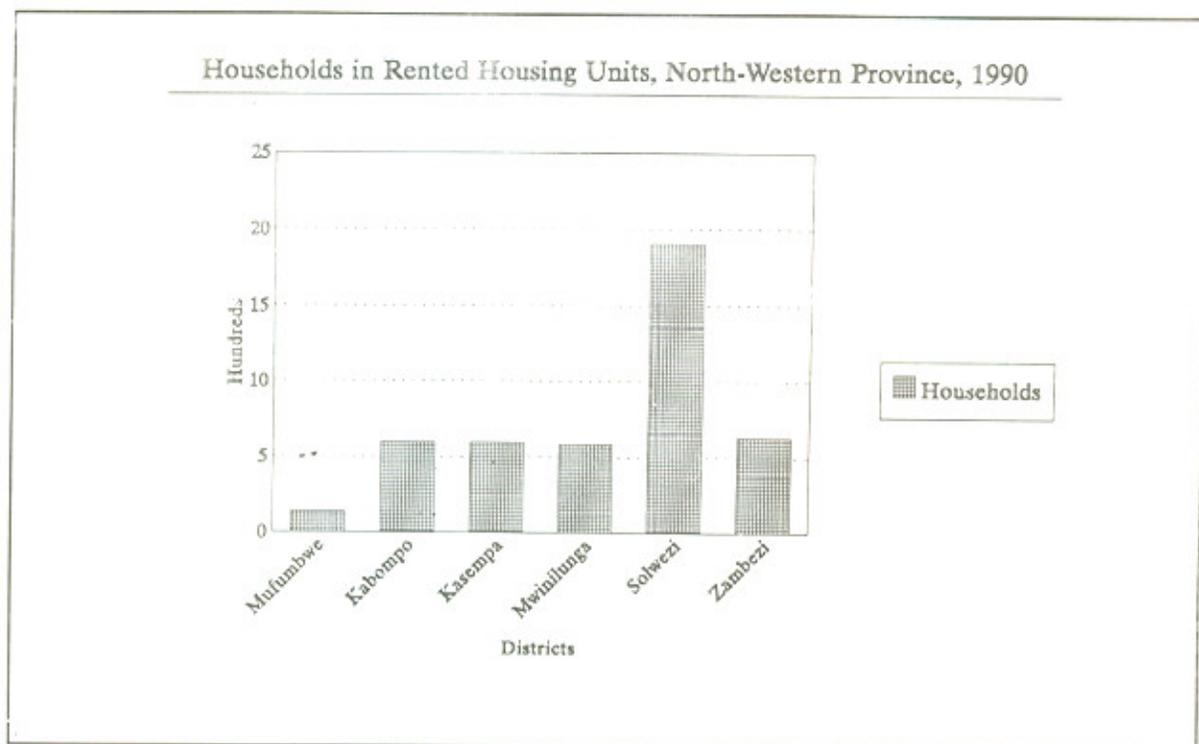
Households in Rented Housing Units by Residence and Ownership, (Percent), North-Western Province, 1990

Residence	Landlord							
	Number of H/holds	Percentage Total	Central Government	District Council	Parastatal Organisation	Private Organisation	Individual	Not Stated
North-Western Province - Total	4,437	100.0	36.7	9.9	7.7	4.1	34.4	7.2
- Rural	2,095	100.0	31.6	3.0	2.8	7.1	45.4	10.1
- Urban	2,342	100.0	41.2	16.1	12.1	1.4	24.6	4.6
Districts Mufumbwe	137	100.0	32.9	0.7	0.7	5.1	51.1	9.5
Kabompo	594	100.0	36.3	23.7	7.6	3.9	24.1	4.4
Kasempa	593	100.0	48.1	7.1	9.1	10.4	10.8	14.5
Mwinilunga	581	100.0	36.6	6.9	2.4	2.6	42.2	9.3
Solwezi	1,903	100.0	27.0	9.3	9.8	1.6	47.2	5.1
Zambezi	629	100.0	56.3	6.0	6.5	7.2	17.0	7.0

In Mufumbwe, Mwinilunga and Solwezi, individuals make up the largest landlords while the central government is the largest in the remaining districts. The district council is a relatively common landlord in Kabompo, while in Mufumbwe, it is an uncommon landlord. Proportions occupying households rented from parastatal organisations range from 0.7 percent in Mufumbwe to 9.8 in Solwezi while those rented from private organisations range from 1.6 percent in Solwezi to 10.4 in Kasempa.

Figure 11.4 shows the households in rented housing units in the districts of North-Western Province. Solwezi has the largest number of households in rented households followed by Zambezi. The least is in Mufumbwe.

Figure 11.4



## 11.5 HOUSEHOLD SIZE AND COMPOSITION

### *Household Size*

Table 11.14 shows data on households by household size and sex of household head. Proportions of male headed households are smaller than female headed ones for households of 5 members or less. The opposite holds true for larger households. Of 60,017 male headed households, 6.6 percent are one member households compared to 22.5 percent for female headed household while 11.6 percent of the male headed households have at least ten members and 5.2 percent of the female headed households have at least ten members.

Table 11.14

## Households by Size and Sex of Head, (Percent), North-Western Province, 1990

Sex of Household Head and District	Number of H/holds	Total	Household Size										
			1	2	3	4	5	6	7	8	9	10+	
<b>North-Western</b>													
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	
<b>Mufumbwe</b>													
Male	3,522	100.0	7.3	12.3	11.6	11.2	12.4	10.8	9.6	6.8	5.8	12.2	
Female	726	100.0	18.0	13.6	15.8	12.3	11.9	8.3	5.8	4.8	2.3	7.2	
<b>Kabompo</b>													
Male	7,891	100.0	7.0	11.7	12.3	12.4	11.2	9.9	8.5	6.9	5.6	14.5	
Female	1,731	100.0	25.3	17.2	12.9	12.2	8.2	6.4	5.1	4.6	2.7	5.4	
<b>Kasempa</b>													
Male	5,076	100.0	5.7	9.5	10.7	11.8	12.2	11.3	10.1	7.9	6.2	14.6	
Female	1,217	100.0	13.2	12.1	12.9	13.6	10.9	9.8	7.6	5.8	4.1	10.0	
<b>Mwinilunga</b>													
Male	12,951	100.0	6.5	10.9	14.0	13.8	12.9	10.7	9.3	6.8	4.9	10.2	
Female	2,895	100.0	23.1	16.5	15.3	12.9	9.9	7.5	5.1	3.5	2.2	4.0	
<b>Solwezi</b>													
Male	19,149	100.0	5.9	11.7	12.7	12.8	12.2	11.0	9.1	7.7	5.6	11.3	
Female	4,208	100.0	18.7	15.4	14.6	13.5	10.4	9.0	6.0	4.2	2.4	5.8	
<b>Zambezi</b>													
Male	11,418	100.0	7.8	14.1	13.5	13.8	12.4	10.4	7.9	6.1	4.0	10.0	
Female	2,589	100.0	31.8	19.0	15.2	11.5	8.3	4.8	3.5	2.1	1.0	2.8	

The average household sizes for the districts of the province are shown in Table 11.15. The average household size for the province increased from 4.6 in 1980 to 5.3 in 1990. That of rural areas increased from 4.5 to 5.2 while in urban areas, it increased from 5.1 to 5.7. The average household sizes for the districts range from 4.9 in Zambezi to 5.9 in Kasempa. The average household sizes for males are larger than those of their female counterparts for 1980 and 1990.

Table 11.15

Average Household Size by Residence and Sex of Head, North-Western Province, 1980 and 1990

Sex of Household Head and Residence	1980	1990
<b>North-Western Province</b>		
Total	4.6	5.3
Male	5.0	5.6
Female	3.7	4.0
Rural	4.5	5.2
Urban	5.1	5.7
<b>Districts</b>		
Mufumbwe	-	5.4
Kabompo	-	5.5
Kasempa	-	5.9
Mwinilunga	-	5.1
Solwezi	-	5.3
Zambezi	-	4.9

Table 11.16 shows the proportional changes in household sizes between 1980 and 1990. The proportion of single member households decreased from 17.6 percent in 1980 to 9.5 in 1990. There was a slight increase in the proportions of households with 2-3 and 4-6 persons. For households with at least seven persons, the proportion increased from 24.5 to 29.8 percent.

Table 11.16

Household Size, (Percent), North-Western Province, 1980 and 1990

Number of Household Members	1980	1990
1	17.6	9.5
2-3	26.4	25.8
4-6	31.5	34.9
7+	24.5	29.8
Total	100.0	100.0
Number of Households	65,804	73,381

#### *Household Composition*

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

#### *Marital Status of Household Heads*

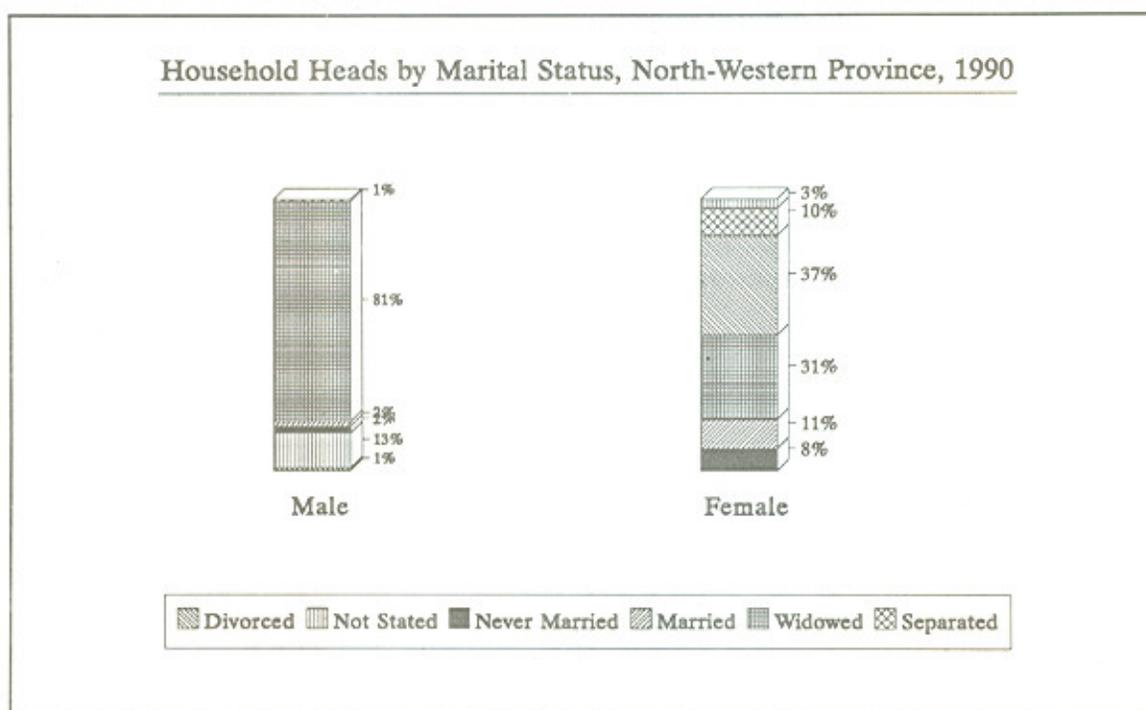
Table 11.17 and Figure 11.5 show the distribution of household heads by marital status. Of the 60,017 male heads of households, 81.1 percent are married. The never married male heads of households make up 2.3 percent, 1.1 percent comprises the widowed, 1.8 comprises the divorced and 0.8 comprises the separated. Those who did not state their marital status make up 12.9 percent. The females are concentrated in widowed and divorced categories (30.9 and 36.7 percent respectively). The proportions of the never married and separated female heads of households are higher than those of their male counterparts.

Table 11.17

Household Heads by Marital Status, Sex and Residence, (Percent), North-Western Province, 1990

Marital Status	North-Western Province		Rural		Urban	
	Male	Female	Male	Female	Male	Female
Never Married	2.3	8.2	1.8	6.8	5.4	17.2
Married	81.1	10.6	81.1	10.3	81.0	12.6
Widowed	1.1	30.9	1.2	33.0	0.5	17.5
Divorced	1.8	36.7	1.8	36.5	1.9	37.9
Separated	0.8	10.2	0.8	10.4	0.8	8.8
Not Stated	12.9	3.4	13.3	3.0	10.4	6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of H/Heads	60,017	13,366	51,984	11,599	8,033	1,767

Figure 11.5



In both rural and urban areas, the majority of male heads of households are married while the majority of their female counterparts are widowed or divorced. Proportions of the never married are higher for females than males.

The age structure by marital status and sex of household heads are shown in Table 11.18. The table shows that in the age group 12-14, largest proportion of male household heads have never been married while all female heads in this age group are in this marital status category. In age group 15-16, 54 percent of the female heads of households have never been married and 18 percent are married. In the same age group, 62 percent of male heads are concentrated in the 'married' category while their female counterparts are concentrated in the 'widowed' and divorced categories.

Table 11.18

## Households Heads by Marital Status, Age and Sex, (Percent), North-Western Province, 1990

Age of Household Head	Marital Status and Sex of Household Head															
	Number of Household 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	18	6	100.0	100.0	50.0	100.0	33.3	-	-	-	-	-	-	-	16.7	-
15-19	327	166	100.0	100.0	30.9	54.2	61.8	18.1	-	1.2	-	13.3	0.3	11.4	7.0	1.8
20-24	4,056	616	100.0	100.0	9.9	37.8	78.9	17.7	0.0	1.6	0.7	27.9	0.3	12.0	10.2	3.0
25-29	7,319	935	100.0	100.0	5.5	20.6	80.8	15.9	0.2	5.5	1.2	40.4	0.5	13.7	11.8	3.9
30-34	7,635	1,098	100.0	100.0	2.2	8.9	83.5	18.0	0.1	8.8	1.3	46.3	0.6	13.8	12.3	4.2
35-39	5,796	902	100.0	100.0	1.0	6.0	83.4	13.4	0.2	13.3	1.3	48.6	0.7	13.5	13.4	5.2
40-44	5,400	1,191	100.0	100.0	0.7	4.0	82.7	12.9	0.5	21.8	1.7	44.3	0.6	12.8	13.8	4.2
45-49	4,924	1,300	100.0	100.0	0.9	3.5	81.2	10.6	0.4	27.1	1.9	43.9	0.6	9.9	15.0	5.0
50-54	5,222	1,554	100.0	100.0	0.5	3.6	81.1	10.5	1.1	34.9	1.9	40.0	0.8	8.7	14.6	2.3
55-59	4,976	1,270	100.0	100.0	0.5	4.2	82.2	8.4	1.1	38.5	1.8	35.6	1.0	9.7	13.4	3.6
60-64	4,541	1,472	100.0	100.0	0.6	4.1	80.0	6.3	1.9	48.7	2.2	30.0	1.1	8.2	14.2	2.7
65+	9,430	2,792	100.0	100.0	0.7	5.3	81.0	5.4	3.9	53.1	3.3	21.3	1.6	7.5	9.5	1.4
Not Stated	373	64	100.0	100.0	0.8	6.2	27.9	4.1	2.1	18.7	0.8	21.9	1.1	1.6	67.3	46.9
Total	60,017	13,366	100.0	100.0	2.3	8.2	81.1	10.6	1.1	30.9	1.8	36.7	0.8	10.2	12.9	3.4

*Educational level of household heads*

Table 11.19 shows the levels of education completed by heads of households. Of the 73,383 heads of households, 55.5 percent have not attended any formal schooling, 30.5 percent have completed primary education, 12.7 percent have completed secondary education while 0.2 have completed higher education and 1.1 have not stated their completed level of education.

Table 11.19

## Household Heads by Level of Education Completed, (Percent), North-Western Province, 1990

Residence	Number of Household Heads	Percentage Total	Level of education				
			No Schooling	Primary	Secondary	Higher	Not Stated
<b>North-Western</b>							
Total	73,383	100.0	55.5	30.5	12.7	0.2	1.1
Rural	63,583	100.0	59.8	30.4	8.6	0.1	1.1
Urban	9,800	100.0	28.0	31.3	38.9	0.6	1.2
<b>Sex of Head</b>							
Male	60,017	100.0	50.5	33.9	14.2	0.2	1.2
Female	13,366	100.0	78.2	14.9	5.9	0.1	0.9
<b>Districts</b>							
Mufumbwe	4,258	100.0	51.1	33.6	13.9	0.1	1.3
Kabompo	9,622	100.0	58.1	28.8	11.7	0.1	1.3
Kasempa	6,293	100.0	49.6	35.0	14.0	0.2	1.2
Mwinilunga	15,846	100.0	60.4	28.7	10.0	0.1	0.8
Solwezi	23,357	100.0	49.4	33.2	15.9	0.2	1.3
Zambezi	14,007	100.0	62.4	26.2	10.3	0.2	0.9

In rural areas, the majority of household heads (59.8 percent) have never attended formal schooling while the largest proportion of their urban counterparts (38.9 percent) have completed secondary education. A larger proportion of urban heads of households have completed higher education than their rural counterparts. About half of male heads of households and over three-quarters of their female counterparts have never attended formal schooling. Larger proportions of male heads of households have completed

primary, secondary and higher levels of education than female heads. In the districts, proportions of household heads who have never attended formal education range from 49.4 percent in Solwezi to 62.4 in Zambezi; those who have completed primary education range from 26.2 percent in Zambezi to 35 percent in Kasempa and those who have completed secondary education range from 10 percent in Mwinilunga to 15.9 in Solwezi.

#### *Usually Economically Active*

Table 11.20 shows that 23.4 percent of the households have no economically active member while 40.8 percent have only one such member and only 2.2 percent have at least six such persons. In 14.8 percent of households with at least seven members, there are no economically active members and 30.3 percent have one economically active member.

Table 11.20

Households by Size and Number of Members Economically Active, (Percent), North-Western Province, 1990

Residence and Household Size	Households	Percentage Total	Members usually economically active						
			0	1	2	3	4	5	6+
<b>North-Western Province</b>									
Total	73,383	100.0	23.4	40.8	20.4	7.7	3.7	1.8	2.2
1-2	16,239	100.0	38.4	48.9	12.7	-	-	-	-
3-4	19,130	100.0	24.3	45.2	23.0	6.3	1.3	-	-
5-6	16,104	100.0	18.8	41.7	24.5	9.4	3.9	1.4	0.3
7+	21,910	100.0	14.8	30.3	21.0	13.5	8.4	5.0	7.0
<b>Rural</b>									
Total	63,583	100.0	24.6	38.9	20.5	7.8	3.9	1.9	2.4
1-2	14,467	100.0	39.7	47.4	12.9	-	-	-	-
3-4	16,854	100.0	25.3	43.4	23.6	6.4	1.3	-	-
5-6	13,851	100.0	19.9	39.3	24.9	9.8	4.3	1.5	0.3
7+	18,411	100.0	15.8	27.7	20.2	13.7	9.2	5.5	7.9
<b>Urban</b>									
Total	9,800	100.0	15.0	53.4	20.2	7.1	2.3	1.0	1.0
1-2	1,772	100.0	27.5	61.3	11.2	-	-	-	-
3-4	2,276	100.0	17.0	58.6	18.3	5.1	1.0	-	-
5-6	2,253	100.0	12.0	56.4	21.9	7.0	1.9	0.7	0.1
7+	3,499	100.0	9.4	44.0	24.9	12.2	4.4	2.3	2.8

Proportions without an economically active member are 24.6 percent in rural areas and 15 percent in urban areas. For households with 5 or 6 members, 19.9 and 12 percent have no economically active members in rural and urban areas, respectively.

#### *Relationship to household head*

Table 11.21 shows the relationship of household heads to household members. The table shows that out of 55,283 household heads with spouses, 95.1 percent are in monogamous unions, 4.4 percent have two spouses, 0.4 and 0.1 percent have three and four spouses, respectively. Negligible proportions have five or more spouses. The majority of households in which there are the heads own sons or daughters, the largest proportion (23.6 percent) have six such persons. Over half of the households with step sons or daughters have only one step child. Proportions with step children decrease with increasing number of such persons.

Table 11.21

## Households by Relationship to Household Head and Number of Persons, (Percent), North-Western Province, 1990

Relationship to Head and Residence	Number of Households	Total	Number of Persons					
			1	2	3	4	5	6+
<b>North-Western Total</b>								
Spouse	55,283	100.0	95.1	4.4	0.4	0.1	0.0	0.0
Own son/daughter	54,973	100.0	19.3	17.8	15.3	13.2	10.8	23.6
Step son/daughter	4,838	100.0	51.0	23.1	12.0	5.7	3.6	4.6
Other relations	31,697	100.0	39.5	21.3	13.9	8.3	5.5	12.4
Unrelated	2,191	100.0	58.1	18.0	7.1	4.5	2.4	9.9
Not stated	148	100.0	56.1	19.6	8.1	5.4	3.4	7.4
<b>Rural</b>								
Spouse	48,243	100.0	94.8	4.6	0.5	0.1	0.0	0.0
Own son/daughter	47,468	100.0	19.5	17.8	15.4	13.2	10.7	23.4
Step son/daughter	4,322	100.0	50.5	23.2	12.0	5.9	3.8	4.6
Other relations	26,662	100.0	39.4	20.7	12.9	8.3	5.5	13.2
Unrelated	1,696	100.0	57.3	18.5	7.5	5.0	2.5	9.2
Not stated	119	100.0	57.1	17.7	8.4	4.2	4.2	8.4
<b>Urban</b>								
Spouse	7,040	100.0	97.2	2.6	0.2	0.0	-	0.0
Own son/daughter	7,505	100.0	18.0	17.5	14.6	13.7	11.0	25.2
Step son/daughter	516	100.0	55.6	22.3	12.0	4.1	1.9	4.1
Other relations	5,035	100.0	39.6	24.3	14.0	8.6	5.0	8.5
Unrelated	495	100.0	60.6	16.4	5.7	2.6	2.2	12.5
Not Stated	29	100.0	51.7	27.6	6.9	10.3		3.5

In rural and urban areas, proportions of household heads in monogamous unions are 94.8 and 97.2 percent, respectively. The pattern in rural and urban areas, as regards the relationship of household members to household heads are similar.

*Children Below 12 years of Age*

Table 11.22 shows that 27.1 percent of male headed households have no member below 12 years of age compared to 43.4 percent of their female counterparts. For households with at least two members of households, proportions are higher for male than female headed households. In both rural and urban areas, as well as all the districts, male headed households tend to have more members below the age of 12 years than female headed ones. Proportions are higher in female headed households for households with none or one member below 12 years of age than male headed households. The opposite holds true for households with two or more members below the age under consideration.

Table 11.22

Households by Sex of Heads and Number of Members Below 12 Years of Age, (Percent), North-Western Province, 1990

Sex of Household Head and Residence	Number of Households	Members below 12 years of age					
		Total	0	1	2	3	4+
<b>North-Western Province</b>							
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
<b>Rural</b>							
Male	51,984	100.0	27.6	17.8	17.5	15.2	21.9
Female	11,599	100.0	44.9	19.2	15.2	10.2	10.5
<b>Urban</b>							
Male	8,033	100.0	24.1	16.3	17.6	16.0	26.0
Female	1,767	100.0	34.1	22.7	17.5	12.9	12.8
<b>Mufumbwe</b>							
Male	3,532	100.0	26.4	16.4	16.1	15.3	25.8
Female	726	100.0	35.0	20.5	15.6	13.9	15.0
<b>Kabompo</b>							
Male	7,891	100.0	28.5	17.9	16.5	14.7	22.4
Female	1,731	100.0	47.1	18.9	13.7	9.1	11.2
<b>Kasempa</b>							
Male	5,076	100.0	23.8	16.2	17.5	15.8	26.7
Female	1,217	100.0	32.9	18.6	17.5	13.8	17.2
<b>Mwinilunga</b>							
Male	12,951	100.0	24.2	18.2	18.5	16.2	22.9
Female	2,895	100.0	43.0	19.9	16.1	11.0	10.0
<b>Solwezi</b>							
Male	19,149	100.0	26.9	17.4	17.8	15.5	22.4
Female	4,208	100.0	41.1	20.6	15.9	11.4	11.0
<b>Zambezi</b>							
Male	11,418	100.0	31.3	18.3	17.1	14.3	19.0
Female	2,589	100.0	52.6	18.9	14.2	7.4	6.9

### SUMMARY

Analysis of households and housing characteristics of North-Western Province shows that the majority of rural households occupy one (22.2 percent) or two (41.3 percent) roomed housing units while the majority of urban households occupy two (35.4 percent) or three-roomed (31.6 percent) housing units. The most common building materials for roofs, walls and floors are grass, mud bricks and mud used in 82.4 percent, 60.5 percent and 83.0 percent of housing units, respectively.

The well/borehole are the most common sources of water supply used by 57 percent of the households. Close to three-quarters of the households in the province use pit latrines as their toilet. The most common sources of cooking and lighting energy are wood and paraffin/kerosene used in 87.3 percent and 71.3 percent, respectively.

The largest proportion of housing units in the province (91.7 percent) are owned by individuals. However, individuals only rent out 34.4 percent of the rented housing units while the central government rents out 36.7 percent.

Male headed households are larger and have more members than female headed households. The majority of male household heads are married (81.1 percent) while their female counterparts are concentrated in the 'widowed' (30.9 percent) and 'divorced' (36.7 percent) categories. Over half of the household heads have had no formal education and 0.2 percent have completed higher levels of education.



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## APPENDIX I

### KEY PERSONS INVOLVED IN THE 1990 CENSUS ANALYSIS

#### SECRETARIATE

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

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Mr. George Namasiku  
Mr. Lackson Mitti  
Mr. Elija Kashona  
Ms. Samantha Mulendema  
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Mr. Emmanuel M. Silanda  
Ms. Nchimunya Nkombo

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Mr. Halvard Skiri

#### DESKTOP SPECIALISTS

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

# 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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## 1990 CENSUS OF POPULATION, HOUSING AND AGRICULTURE

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

FOR ALL PERSONS

GENERAL CHARACTERISTICS

SERIAL NUMBER	NAME (a) What is the name of the head of household? (b) What are the names of persons who spent last night here (other than the head of household)? (c) What are the names of usual household members who didn't spend last night here (other than the head of household)?	MEMBERSHIP STATUS Is..... 1- Usual member present last night? 2- Visitor? 3- Usual member absent? (Enter Code)	RELATIONSHIP What is.....'s relationship to the head of h/hold? 1- Head 2- Spouse 3- Own Son/daughter 4- Step Son/daughter 5- Other relative 6- Unrelated (Enter Code)	SEX What is.....'s sex? 1 - Male 2 - Female	AGE What is.....'s age? (Enter age in completed year or '00' if less than 1 year)	DISABILITY					
						Is.....					
						(a) BLIND ? 1 - Yes 2 - No (Enter Code)	(b) DEAF/DUMB? 1 - Yes 2 - No (Enter Code)	(c) CRIPPLED? 1 - Yes 2 - No (Enter Code)	(d) MENTALLY/RETARDED? 1 - Yes 2 - No (Enter Code)		
P-1	P-2	P-3	P-4	P-5	P-6	P-7					
23	24	25	26	27	28	29	30	31	32	33	34
P	1	<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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	3	<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"/>
	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"/>
	5	<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"/>
	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"/>
	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"/>
	8	<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"/>
	9	<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"/>
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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"/>
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FOR ALL PERSONS						
GENERAL CHARACTERISTICS						
S E R I A L  N U M B E R	MIGRATION					
	Where was ..... born ?			What is ..... 's country of citizenship ?  (For non Zambians write name of country and enter its code; For Zambians just enter code 148)	How long has ..... ..... been continuously living in this district ?  (Enter completed years and months)	
	a. State district if born in Zambia and Country if born outside Zambia  (Refers to usual district/country of residence of member at time of giving birth)  (Enter district name and 3-digit code from list of provinces and districts)		b. Was this part of the district rural or urban at time of birth ?  1 - Rural 2 - Urban  B - Not Applicable (Outside Zambia)  (Enter Code)		Years	Months
P - 8			P - 9	P - 10		
35 - 37			38	39 - 41	42 - 43	44 - 45
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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FOR ALL PERSONS					
GENERAL CHARACTERISTICS					
S E R I A L  N U M B E R	MIGRATION		ETHNICITY AND LANGUAGE		
	Where was ..... staying in August last year ?		What is ..... ethnic group ?	What is ..... LANGUAGE OF COMMUNICATION ?	
	State district if in Zambia and country if outside Zambia  (Enter district name 3-digit code from list of provinces and districts)	Is this part of the district rural or urban ?  1 - Rural 2 - Urban 8 - Not Applicable (Outside Zambia or child less than 1 year) (Enter Code)	(Enter Zambian tribe, if not applicable enter major racial group)  Code  64 - African 65 - American 66 - Asian 67 - European 68 - Other	a. PREDOMINANT  (Write the name of the language and enter the code. If not applicable enter 88)	b. SECOND  (Write the name of the language and enter the code. If not applicable enter 88)
P - 11		P - 12	P - 13		
	46 - 48	49	50 - 51	52 - 53	54 - 54
1	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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1	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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9	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
0	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

FOR PERSONS 5 YEARS AND OVER

EDUCATION

SEX 1 - Male 2 - Female	Can read and write in any language?	Does go to any institution of learning?	Did previously go to any institution of learning?	What highest level of academic education has completed?	What highest professional or vocational education has completed?
	1 - Yes 2 - No	1 - Yes Full time 2 - Yes Part time 3 - Yes Correspondence Go to P-17 4 - No	1 - Yes Full time 2 - Yes Part time 3 - Yes Correspondence 4 - No - Go to P-16		(Write level and field of study, then enter code - 1 - Certificate 2 - Diploma 3 - Degree  In the first box and two digit code from the list of educational programmes)
	P - 14	P - 15	P - 16	P - 17	P - 18
	56	57	58	59 - 60	61 62 - 63
1	<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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FOR PERSONS 12 YEARS AND OVER

UNEMPLOYED PERSONS	ECONOMIC ACTIVITY		EMPLOYMENT STATUS	OCCUPATION	INDUSTRY
	What was ... mainly doing in the last 7 days ?	What has ... mainly been doing since ... 1959 ?	Since ... 1959 ? has ... been mainly ?	What was ...'s main occupation since ... 1959 ? (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
	54	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"/>
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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"/>
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7	<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	MARRITAL STATUS 1. Married? 2. Separated? 3. Divorced? 4. Widowed? 5. Never married? (If female, GO TO F-1, other- wise go to next person on M-1 if last person)  (Give age in completed years only)	AGE AT FIRST MARRIAGE 1. 15-19 2. 20-24 3. 25-29 4. 30-34 5. 35-39 6. 40-44 7. 45-49 8. 50-54 9. 55-59 10. 60-64 11. 65-69 12. 70-74 13. 75-79 14. 80-84 15. 85-89 16. 90-94 17. 95-99 18. 100+	LIVE BIRTH	AGE AT FIRST LIVE BIRTH	How many children born to you are still alive? (If none, enter "00") 00-10 1-40		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?		b. How many are living elsewhere in some other household?		c. How many died?												
					Male	Female	Male	Female	Male	Female	Male	Female											
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"/>	<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"/>
2	<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"/>	<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"/>	<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"/>
5	<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"/>	<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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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"/>	<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"/>
8	<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"/>	<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"/>
9	<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"/>	<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"/>
10	<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"/>	<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"/>

FOR FEMALES 12 YEARS AND OVER								GENERAL COMMENTS
FERTILITY (Own children ever born alive)								
S E R I A L  N U M B E R	Have you had any live birth since..... 1989?  1 - Yes GO TO next person otherwise go to M-1  (Enter Code)	CHILDREN BORN IN LAST 12 months						
		Of the children born to you since ..... 1989 ?						
		a. How many are still living today?  How many of these are male and how many are females ?		b. how many are living elsewhere in some other household?  How many of these are male and how many are female ?		c. How many died ?  How many of these are male and how many are female ?		
		Male	Female	Male	Female	Male	Female	
	F - 5	F - 6						
	93	94	95	96	97	98	99	
1	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	<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"/>	
8	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
0	<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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8	<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

		MORTALITY		HOUSING CHARACTERISTICS		
R E C O R D T Y P E	M-1 Has there been any death in this household since...1989 ?	1 - Yes <input type="checkbox"/> 2 - No - Go to HH-1	24	H-1 Type of housing	1 - Single Structure <input type="checkbox"/> 2 - Several Structures 3 - Part of Structure 4 - Improvised/makeshift 5 - Unintended 6 - Collective 7 - Institutional 8 - Other	45
	M-2 How many died ? How many of these are -	Male ? <input type="checkbox"/> Female ? <input type="checkbox"/>	25 26			
H	HOUSEHOLD CHARACTERISTICS			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
23	HH-1 What is the main source of energy used for lighting by this household ?	1 - Electricity 2 - Gas 3 - Paraffin/kerosene 4 - Candle 5 - Other	27	HH-2 What is the main source of energy used for cooking by this household ?	1 - Electricity 2 - Gas 3 - Paraffin/kerosene 4 - Wood 5 - Charcoal 6 - Coal 7 - Other	28
	HH-3 What type of toilet is used by members of this household ?	1 - Flush 2 - Pit latrine 3 - Aqua privy 4 - Bucket 5 - Other - Go to HH-5	29	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
	HH-4 Is this toilet inside or outside this housing unit ?	1 - Yes 2 - No	30	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
	HH-5 Is this toilet exclusively used by members of this household ?	1 - Yes 2 - No	31	H-6 How many living rooms and bedrooms does this housing unit have ?	Living rooms <input type="checkbox"/> bedrooms <input type="checkbox"/>	51 52 - 53
	HH-6 Is this housing unit owned by any member of this household ?	1 - Yes 2 - No - Go to HH-8	32	H-7 Does this housing unit have a kitchen ?	1 - Yes 2 - No	54
	HH-7 Was this housing unit -	1 - Built by any member of this household? 2 - Bought? 3 - Inherited/given	Go to HH-13 33	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
	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	AGRICULTURAL ACTIVITY		
	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	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
	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	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
	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	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
	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	ENUMERATION - Complete an Agriculture supplement questionnaire for each of the responses 'NO' in A-2 and 'Yes' in A-3.		
	HH-13 a. How many radios does this household/institution have ?	<input type="text"/>	39 - 41			
	b. How many television sets does this household/institution have?	<input type="text"/>	42 - 44			