

2000 Census of Population and Housing

Northern Province Analytical Report

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Preface

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

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

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

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



Dr. Buleti G. Nsemukila
Director of Census and Statistics

August, 2004

Table of Contents

List of Tables	vi
List of Figures	ix
Abbreviations/Acronyms	xii

EXECUTIVE SUMMARY	xiii
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CHAPTER 1: BACKGROUND

1.1	Geography	1
1.2	Population	2
1.3	Economy	2
1.4	Forestry	2
1.5	Education	2
1.6	Health	2
1.7	HIV/AIDS	3

CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERROR

2.1	Introduction	4
2.2	Concepts and Definitions	4
2.3	Type of Population used in Evaluating the Coverage and Content Errors	5
2.4	Methods of Evaluation	5
2.4.1	Coverage Error	5
2.4.1.1	Age Composition	5
2.4.1.2	Child-Woman Ratio	6
2.4.1.3	Dependency Ratio	6
2.5	Content Error	7
2.5.1	Digit Preference	7
2.5.2	Sex Ratio	11
2.5.3	Age Ratio	14
2.5.4	Survival Ratio	16
2.5.5	Population Pyramids	17
2.6	Summary	20

CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

3.1	Introduction	21
3.2	Concepts and Definitions	21
3.3	Population size and Growth	22
3.4	Population Distribution and Density	24
3.4.1	Population Density	25
3.5	Population Composition	26
3.5.1	Age and sex Composition	26
3.5.2	Age Dependency Ratio	28
3.5.3	Household Headship	30
3.5.4	Marital Status	30
3.5.5	Ethnicity and Citizenship	31

3.5.5.1	Ethnicity.....	31
3.5.5.2	Citizenship.....	32
3.6	Economic Characteristics	33
3.7	Summary	33

CHAPTER 4: LANGUAGE OF COMMUNICATION AND ETHNICITY

4.1	Introduction	34
4.2	Predominant Language of Communication.....	34
4.2.1	Provincial Distribution	34
4.2.2	District Distribution.....	35
4.3	Predominant Language Groups.....	36
4.4	Trends in Language Groups' Distribution, 1980-2000	37
4.5	Second Language of Communication	38
4.6	Ethnicity	39
4.7	Broad Ethnic Groups.....	41
4.8	Summary	41

CHAPTER 5: EDUCATION CHARACTERISTICS

5.1	Introduction	42
5.2	Census undertaking and Education	42
5.3	Concepts and Definitions.....	43
5.4	Literacy Rate	44
5.4.1	Literacy Levels for the Population Aged 5 years and Above.....	45
5.4.2	Literacy Levels for the population aged 15-24 years (Youth Literacy).....	46
5.4.3	Literacy Levels for the population aged 15 years and Above (Adult Literacy Rates)	46
5.5	School Attendance	46
5.6	School Attendance by the Primary School Age Population (7-13 years).....	49
5.7	Gross Primary School Attendance Ratio by Children of All Ages.....	50
5.8	Net Primary School Attendance by Children Aged 7-13 years.....	51
5.9	School Attendance by the Secondary School Age Population	53
5.10	Gross Secondary School Attendance Rates	54
5.11	Net Secondary School Attendance Rates by Children Aged 14-18 Years	55
5.12	Population Distribution by Fields of Study	56
5.13	Certificate and Diploma Holders by Level of Education Completed.....	58
5.14	Summary	59

CHAPTER 6: ECONOMIC CHARACTERISTICS

6.1	Introduction	60
6.2	Concepts and Definitions.....	60
6.3	Working-Age Population.....	61
6.4	The Economically Inactive Population.....	63
6.5	Economically Active Population (Labour force).....	63
6.6	Economic Dependency Ratios	67
6.7	Current Labour Force Participation Rates	68
6.8	Employment Status, Occupation and Industrial Classification	70
6.8.1	Employment Status	70
6.8.2	Working Population by Occupation.....	72

6.8.3 Working Population by Industry..... 73
6.9 Educational Attainment..... 76
6.10 Unemployment..... 81
6.10.1 Marital Status of the Unemployed 83
6.10.2 Youth Unemployment..... 84
6.11 Summary 84

CHAPTER 7: FERTILITY LEVELS, PATTERNS AND TRENDS

7.1	Introduction	85
7.2	Concepts and Definitions.....	85
7.3	Nature and Quality of Fertility Data	85
7.3.1	Data Availability and Limitations	85
7.3.2	Data Evaluation and Adjustment	86
7.4	Fertility Levels, Patterns and Trends, 1980-2000	87
7.5	Fertility Differentials by Background Characteristics of Women Aged 15-49.....	89
7.5.1	Fertility Differentials by Marital Status of Women Aged 15-49.....	89
7.5.2	Fertility Differentials by Economic Status of Women Aged 15-49.....	90
7.5.3	Fertility Differentials by level of Education of Women Aged 15-49	90
7.6	Gross Reproductive Rates (GRR)	91
7.7	Net Reproduction Rate.....	91
7.8	Mean Parity	92
7.9	Other Fertility Indicators	93
7.10	Summary	94

CHAPTER 8: CHILD MORTALITY

8.1	Introduction	95
8.2	Concepts And Definitions.....	95
8.3	Infant Mortality Levels, Trends and Differentials.....	95
8.3.1	Infant Mortality Rate by Residence of the Mother	96
8.3.2	Infant Mortality Rate and Sex.....	97
8.3.3	Infant Mortality Rate by district	97
8.3.4	Infant Mortality Rate by Marital Status of the Mother.....	98
8.3.4	Infant Mortality Rate by Education Level of Mother.....	98
8.3.6	Infant Mortality Rate by Economic Activity of the Mother.....	99
8.4	Child Mortality Levels, Trends and Differentials	99
8.4.1	Child Mortality Rate by Residence	100
8.4.2	Child Mortality Rate by Sex.....	100
8.4.3	Child Mortality Rate by District	101
8.4.4	Child Mortality Rate by Marital Status of the Mother	101
8.4.5	Child Mortality Rate by Education Level of the Mother	102
8.4.6	Child Mortality Rate by Economic Activity of the Mother.....	103
8.5.	Under-Five Mortality Levels, Trends and Differentials	103
8.5.1	Under-Five Mortality Rate by Residence of Mother.....	104
8.5.2	Under-Five Mortality Rate by Sex.....	104
8.5.3	Under-Five Mortality Rate by District	105
8.5.4	Under-Five Mortality Rate by Marital Status of the Mother	105
8.5.5	Under-Five Mortality Rate by Education Level of the Mother	106
8.5.6	Under-Five Mortality Rate by Economic Activity of the Mother	107
8.6	Life Expectancy at Birth: Levels, Trends and Differentials	107
8.6.1	Life Expectancy at Birth by Residence.....	108
6.2	Life Expectancy at Birth by District.....	108
8.6.3	Life Expectancy at Birth by Marital Status of the Mother	109
8.6.4	Life Expectancy at Birth by Education Level of the Mother	109
8.6.5	Life Expectancy at Birth by Economic Activity of the Mother	110
8.7.	Adult Mortality: Life Expectancy, Trends and Differentials.....	110
8.8	Summary	112

CHAPTER 9: DISABILITY

9.1	Introduction	113
9.2	Concepts and Definitions.....	113
9.3	Limitations of Data on Disability.....	114
9.4	Proportion of the Disabled to the Total Population	114
9.5	Types of Disability.....	115
9.6	Age Structure of the Disabled.....	116
9.7	Causes of Disability	117
9.8	Education Levels of the Disabled.....	117
9.9	Economic Activity of the Disabled	118
9.10	Occupation of the Disabled	119
9.11	Employment Status of the Disabled	120
9.12	Summary	120

List of Tables

CHAPTER 1: BACKGROUND

Table 1.1: Populations Distribution District, Area, Density and Annual Growth Rate, 1969, 1980, 1990 and 2000	1
Table 1.2: Agricultural Production by Type of Crop	2
Table 1.3: Number of Health Facilities by District	2
Table 1.4: HIV Prevalence Among Men and Women Aged 15-49 Years by Province	3

CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

Table 2.1: Population Distribution by Broad Age Groups, Northern Province, 1980, 1990, and 2000	5
Table 2.2: Most Preferred Digits, Northern Province, 1980, 1990, and 2000	8
Table 2.3: Sex Ratio by Residence, Northern Province, 1980, 1990 and 2000	13
Table 2.4: Population by Five Year Age Group, Sex, Age Ratio and the Age-Sex, Accuracy Index, Northern Province, 1980	15
Table 2.5: Population by Five Year Age Group, Sex, Age ratio and the Age-Sex Ratio Accuracy Index, Northern Province, 1990	15
Table 2.6: Population by Five Year Age Group, Sex, Age Ratio and Age-Sex Accuracy Index, Northern Province, 2000	16

CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

Table 3.1a: Population Size (De jure) and Percent Distribution by Sex and Residence, Northern Province, 2000	22
Table 3.1b: Population Size (De facto) and Percent Distribution by Sex and Residence, Northern Province, 2000	23
Table 3.2: Population Size (De jure) by Sex, Residence and District, Northern Province, 2000	23
Table 3.3: Population Size and Annual Average Population Growth Rate by District and Residence, Northern Province, 1969-2000	24
Table 3.4: Population Distribution (De jure) by District, 1980, 1990 and 2000	25
Table 3.5: Area and (De jure) Population Density by District, 1969 –2000	26
Table 3.6: Age-Sex Percent Distribution of Population by Residence, 2000	28
Table 3.7: Age Dependency Ratio by Residence and District, 1980-2000	29
Table 3.8: Household Headship by Sex, Marital Status, Residence and District, 2000	30
Table 3.9: Percent Distribution of Population 12 years and above by Age, Sex and Marital Status, 2000	31
Table 3.10: Ethnic Composition of Population by Sex and Residence, 2000	32
Table 3.11: Foreign Population of Northern Province by Citizenship, 1990 and 2000	33
Table 3.12: Summary of Economic Characteristics, Northern Province, 2000	33

CHAPTER 4: LANGUAGE AND ETHNICITY

Table 4.1: Predominant Language of Communication by Residence, Northern Province, 2000	35
Table 4.2: Predominant Language of Communication by District, Northern Province, 2000	36
Table 4.3: Predominant Language Groups by Sex and Residence, Northern Province, 2000	36
Table 4.4: Predominant Language Groups by Census year, Northern Province, 1980 – 2000	38
Table 4.5: Second Language by Residence, Northern Province, 2000	38
Table 4.6: Distribution of Population by Second Language Sex and Residence, Northern Province, 2000	39
Table 4.7: Ethnic Groups by Residence, Northern Province, 2000	40
Table 4.8: Broad Ethnic Groups by Sex and Residence, Northern Province, 2000	41

CHAPTER 5: EDUCATION CHARACTERISTICS

Table 5.1:	Literacy Rate by Age Group, Sex and District, Northern Province, 1990 and 2000.....	45
Table 5.2:	Population age 5 years and above Presently Attending School by Sex and Age Group, Northern Province, 1990 and 2000	47
Table 5.3:	Population age 5 years and above Presently Attending School by Residence and Age Group, 1990 and 2000.....	47
Table 5.4:	Population aged 5 years and above Presently Attending School by Residence and District, Northern Province, 1990 and 2000	48
Table 5.5:	Population aged 7 to 13 years Presently Attending School by Sex and Residence Northern Province, 1990 and 2000	49
Table 5.6:	Gross Primary School Attendance Ratio by Sex, Residence, Northern Province, 1990 and 2000.....	51
Table 5.7:	Net Primary School Attendance Rates by Sex and Residence, Northern Province, 1990 and 2000.....	52
Table 5.8:	Population aged 14 to 18 years Presently Attending School by Sex and Residence Northern Province, 1990 and 2000	53
Table 5.9:	Gross Secondary School Attendance Ratio by Sex and Residence Northern Province, 1990 and 2000	54
Table 5.10:	Population Net Secondary School Attendance Ratio by Sex and Residence, Northern Province, 1990 and 2000	56
Table 5.11:	Population by Sex and Field of Study, Northern Province, 1990 and 2000	57
Table 5.12:	Education level completed by Field of Study (Percent), Northern Province, 2000	58
Table 5.13:	Certificate and Diploma Holders by Level of Education and Sex, 1990-2000.....	59

CHAPTER 6: ECONOMIC CHARACTERISTICS

Table 6.1:	Population 12 years and Over by Broad Age Groups, Residence and Sex, 1990 and 2000.....	62
Table 6.2:	Current Economically Inactive Population By Reason For Inactivity, Residence And Sex, Northern Province, 2000.....	63
Table 6.3:	Trends in the Labour force and the Average Annual Growth Rate of the Labour force by District, Northern Province, 1990 and 2000.....	64
Table 6.4:	Percentage Distribution of the Labour force by District, Northern Province, 2000.....	64
Table 6.5:	Current Economically Active Population 12 Years and Over, Residence and Sex, Northern Province, 1990 and 2000	65
Table 6.6:	Economically Active Population (12 Years and Over) by Age, Sex, and Nature of current Economic Activity, Northern Province, 2000	66
Table 6.7:	Current Economically active Population and Economic Dependency Ratios by Sex and Residence 1990 and 2000	67
Table 6.8:	Trends in Labour force Participation Rates by District and Sex, 1990 and 2000 (Percentage).....	68
Table 6.9:	Current Labour Force Participation Rates by Age, Sex and Residence, Northern Province, 1990 and 2000.....	69
Table 6.10:	Percent Distribution of the Usually Working Population (12 Years and Over) by Employment Status, Sex and Residence, Northern Province, 1990 and 2000	71
Table 6.11:	Percent Distribution of the Usually Working Population By Occupation, Sex and Residence, Northern Province, 1990 and 2000.....	72
Table 6.12:	Percent Distribution of the Usually Working Population (12 Years and Over) by Employment Status and Industry, Northern Province, 1990 and 2000	74
Table 6.13:	Percent Distribution of the Usually Working Population (12 Years and Over)	

	by Employment Status and Industry, Northern Province, 1990 and 2000.....	75
Table 6.14	Percent Distribution of Usually Working Population by Industry, Residence and Sex, Northern Province, 2000	76
Table 6.15	Usually Working Population by Industry, Residence and Sex, Northern Province, 2000.....	76
Table 6.16:	Usually Working Population 12 Years and over by Professional/Vocational Training; Occupation and Sex (Percent), Northern Province, 2000.....	78
Table 6.17:	Usually Working Population 12 Years and over by Professional/Vocational Training; Occupation and Sex (Percent), Northern Province, 1990.....	79
Table 6.18:	Usually Working Population (12 Years and Over) by Field of Training and Professional/vocational Training Completed (percent), Northern Province, 2000.....	80
Table 6.19:	Trends in Unemployment Rates by District and Sex, Northern Province 1990 and 2000	81
Table 6.20:	Unemployment Rates by Sex and Residence, 1990 and 2000.....	82
Table 6.21:	Current Unemployment Rates by Age, Sex and Residence, Northern Province, 2000.....	82
Table 6.22:	Usually Unemployed, by Level of Academic Educational Completed and Age, Northern Province, 2000	83
Table 6.23:	Currently Unemployed by Marital Status, Sex and Residence, (Percent), Northern Province, 2000.....	84
Table 6.24:	Youth Unemployment Rate by Residence and Sex, Northern Province 1990 and 2000	84

CHAPTER 7: FERTILITY LEVELS, PATTERNS AND TRENDS

Table 7.1:	Comparison of TFR obtained from the Gompertz Technique and the Trussel/Brass PF Ratio Technique by Province, Zambia, 2000	87
Table 7.2:	Age Specific Fertility rate (ASFR), Total Fertility Rate (TFR), Northern Province and Rural/Urban 2000	87
Table 7.3:	Fertility Differentials by Marital Status of Women Aged 15-49, Northern Province, 2000.....	89
Table 7.4:	Fertility Differentials by Economic Status of Women Aged 15-49, Northern Province, 2000.....	90
Table 7.5:	Fertility Differentials by Level of Education of Women Aged 15-49, Northern Province, 2000.....	90
Table 7.6	Gross Reproduction Rate (GRR), Northern Province, Rural – Urban, 2000.....	91
Table 7.7:	Net Reproduction Rate (NRR), Northern Province, Rural – Urban, 2000.....	92
Table 7.8:	Trends in Net Reproduction Rate (NRR), Northern Province, 1980 - 2000	92
Table 7.9:	Observed Mean Parity, Northern Province, Rural and Urban, 2000.....	93
Table 7.10:	Observed Mean Parity, Northern Province, 1990-2000	93
Table 7.11:	Summary of Fertility Indicators by District, Northern Province, 2000	94

CHAPTER 8: CHILD AND ADULT MORTALITY

Table 8.1:	Infant Mortality Rate by Residence, Sex and District, Northern Province, 1980-2000.....	96
Table 8.2:	Infant Mortality Rate by Marital Status and Residence, Northern Province, 1980-2000	98
Table 8.3:	Child Mortality Rate by Sex, Residence and District, Northern Province, 1980-2000	100
Table 8.4:	Child Mortality Rate by Marital Status and Residence, Northern Province, 1980-2000.....	102
Table 8.5:	Under five Mortality Rate by Sex and District, Northern Province, 1980-2000	104
Table 8.6:	Under five Mortality Rate by Marital Status and Residence, Northern Province, 1980-2000	106
Table 8.7:	Life Expectancy at Birth by Sex and District, Northern Province, 1980-2000	107
Table 8.8:	Life Expectancy at Birth by Marital Status and Residence, Northern Province, 1980-2000	109

CHAPTER 9: DISABILITY

Table 9.1:	Disability Categories used in Censuses 1969 – 2000	113
Table 9.2:	Proportion of Disabled Persons by Sex and Residence, Northern Province, 1990 and 2000.....	115
Table 9.3:	Percent Distribution of the Disabled Persons by Type of Disability and District, Northern Province, 2000.....	116
Table 9.4:	Percent Distribution of the Disabled by Type of Disability and Age, Northern Province, 2000.....	116
Table 9.5:	Percent Distribution of the Disabled by District and Cause, Northern Province, 2000	117

Table 9.6: Percent Distribution of the Disabled Persons 5 years and Over by Type of Disability and Level of Education, Northern Province, 2000.....	118
Table 9.7: Percent Distribution of the Disabled Persons, 12 years and over by Type of Disability and Economic Activity, Northern Province, 2000.....	118
Table 9.8: Percent Distribution of the Usually Working Disabled by Type of Disability and Occupation Northern Province, 2000.....	119
Table 9.9: Percent Distribution of the Disabled Household Heads by Type of Disability and Employment Status, Northern Province, 2000.....	120

List of Figures

CHAPTER 2: EVALUATION OF COVERAGE AND CONTENT ERRORS

Figure 2.1: Child-Woman Ratio, Northern province, 1980, 1990 and 2000.....	6
Figure 2.2: Dependency Ratio, Northern province, 1980, 1990 and 2000	7
Figure 2.3: Myer's Index by Residence and Sex, Northern province, 1980, 1990 and 2000.....	8
Figure 2.4: Population Distribution in Single Years, Northern province, 1980	9
Figure 2.5: Population Distribution in Single Years, Northern Province, 1990	9
Figure 2.6: Population Distribution in Single Year, Northern province, 2000.....	10
Figure 2.7: Population Distribution by Five-Age Group and Sex, Northern Province, 1980.....	10
Figure 2.8: Population Distribution by Five-Year Age Group and Sex, Northern Province, 1990.....	11
Figure 2.9: Population Distribution by Five-Year Age Group and Sex, Northern Province, 2000.....	11
Figure 2.10: Sex Ratio by Residence, Northern Province, 1980, 1990 and 2000	12
Figure 2.11: Sex Ratio by Five – Year Age Group and Census Year, Northern Province, 1980, 1990 and 2000	13
Figure 2.12: Population Distribution by Age Ratio, Northern province, 2000	14
Figure 2.13: Cohort Survival Rates, Northern Province, 1990 - 2000.....	17
Figure 2.14 Overall Survival Rates, Northern province, 1990 and 2000.....	17
Figure 2.15 Graphical Population Distribution in Single Years by Sex, Northern Province, 2000	18
Figure 2.16 Graphical Population Distribution by Single Years and Sex, Northern Province Rural, 2000.....	18
Figure 2.17 Graphical Population Distribution by Single Years and Sex, Northern Province Urban, 2000	19
Figure 2.18 Reported and Smoothed Population by 5- Year Age Group and Smoothing Technique, Males 2000	19
Figure 2.19 Reported and Smoothed Population by 5- Year Age Group and Smoothing Technique, Female 2000	20

CHAPTER 3: POPULATION SIZE, GROWTH AND COMPOSITION

Figure 3.1: Percentage Distribution of Population by Residence, Northern province, 1980 - 2000.....	24
Figure 3.2: Population Distribution by District, Northern province 2000.....	25
Figure 3.3a: Age , Sex Composition, Northern province,2000.....	27
Figure 3.3b: Age , Sex Composition, Northern province,1990.....	27
Figure 3.4: Population Percent Distribution by Age, Northern province, 1990 and 2000.....	28

CHAPTER 4: LANGUAGE ANMD ETHNICITY

Figure 4.1: Predominant Language Group By Sex, Northern province, 2000.....	37
Figure 4.2: Predominant Language Group by Census Year, Northern province, 1980-2000.....	37
Figure 4.3: Distribution of Second Language of Communication by Sex, Northern province, 2000.....	39
Figure 4.4: Ethnic Groups by Residence, Northern province, 2000.....	40
Figure 4.5: Broad Ethic Groups by Sex, Northern province, 2000.....	41

CHAPTER 5: EDUCATION CHARACTERISTICS

Figure 5.1: Literate Population by age Group (Percent), Northern Province,1990 and 2000.....	46
Figure 5.2: Population Aged 5 Years and Above Attending School, (Percent), Northern Province, 1990 and2000	48
Figure 5.3: Population Aged 7 to 13 years Attending School, (Percent) Northern Province, 1990 and 2000.....	50
Figure 5.4: Gross Primary School Attendance Ratio by Sex and Residence, 1990 and 2000.....	51
Figure 5.5: Net Primary School Attendance Ratio by Sex and Residence, 1990 and 2000.....	53
Figure 5.6: School Attendance Rates by Children Aged 14 to 18 years by Sex and Residence, 1990 and 2000.....	54
Figure 5.7: Gross Secondary School Attendance Ratios by Sex and Residence, 1990 and 2000.....	55

Figure 5.8:	Net Secondary School Attendance Ratios by Sex and Residence, 1990 and 2000.....	56
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CHAPTER 6: ECONOMIC CHARACTERISTICS

Figure 6.1:	Working Age Population 12 years and Over.....	61
Figure 6.2:	Current Economically Active Population (12 Years and Over) Northern province 1990 and 2000.....	62
Figure 6.3:	Economically Active population (12 Years and over) by Age and Sex, Northern province, 2000.....	66
Figure 6.4:	Economic Dependence Ratios by Sex, Northern province, 1990 and 2000.....	67
Figure 6.5:	Current Labour Force Participation Rates by Age and Sex, Northern province, Rural, 2000.....	69
Figure 6.6:	Current Labour Force Participation Rates by Age and Sex, Northern province, Urban, 2000.....	70
Figure 6.7:	Usually Working Population (12 Years and Over) by Employment Status, Sex and Residence, 1990 and 2000.....	71
Figure 6.8:	Usually working Population (12 Years and Over) by Occupation, Northern province 1990 and 2000.....	73
Figure 6.9:	Usually working Population (12 Years and Over) by Industry, Northern province 1990 and 2000.....	74
Figure 6.10:	Usually working Population (12 Years and Over) by Professional Training; Occupation, Northern province, 2000.....	77
Figure 6.11:	Usually Unemployed by Age and Sex, Northern province 1990 and 2000.....	83

CHAPTER 7: FERTILITY

Figure 7.1:	Age Specific Fertility Rate (ASFR), Northern province Rural and Urban, 2000.....	88
Figure 7.2:	Total Fertility Rate (TFR) by Residence, Northern province 1990 and 2000.....	88
Figure 7.3:	Adjusted Total Fertility Rates by districts, Northern Province, 2000.....	89
Figure 7.4:	Fertility Differentials by Educational Attainment of Women Age 15-49 and District, Northern Province, 1980 -2000.....	91
Figure 7.5:	Observed Mean Parity, Northern Province, 1990 and 2000.....	93

CHAPTER 8: MORTALITY

Figure 8.1:	Infant Mortality Rate by Residence, Northern province, 1980-2000.....	96
Figure 8.2:	Infant Mortality Rate by Sex, Northern province, 1980-2000.....	97
Figure 8.3:	Infant Mortality Rate by District, Northern province, 2000.....	97
Figure 8.4:	Infant Mortality Rate, by Marital Status, Northern province, 2000.....	98
Figure 8.5:	Infant Mortality Rate, by Education Level, Northern province, 2000.....	99
Figure 8.6:	Infant Mortality Rate, by Economic Activity, Northern province, 2000.....	99
Figure 8.7:	Child Mortality Rate by Residence, Northern province, 1980-2000.....	100
Figure 8.8:	Child Mortality Rate by Sex, Northern province, 1980-2000.....	101
Figure 8.9:	Child Mortality Rate by District, Northern province, 2000.....	101
Figure 8.10:	Child Mortality Rate by Marital Status, Northern province, 2000.....	102
Figure 8.11:	Child Mortality Rate by Education Level, Northern province, 2000.....	103
Figure 8.12:	Child Mortality Rate by Economic Activity, Northern province, 2000.....	103
Figure 8.13:	Under-Five Mortality Rate by Residence, Northern province,1980-2000.....	104
Figure 8.14:	Under-Five Mortality Rate by Sex, Northern province, 1980-2000.....	105
Figure 8.15:	Under-Five Mortality Rate by District, Northern province, 2000.....	105
Figure 8.16:	Under-five Mortality Rate by Marital Status, Northern province, 2000.....	106
Figure 8.17:	Under-five Mortality Rate by Education Level, Northern province, 2000.....	106
Figure 8.18:	Under-five Mortality Rate by Economic Activity, Northern province, 2000.....	107
Figure 8.19:	Life Expectancy at Birth by Residence, Northern province, 1980-2000.....	108
Figure 8.20:	Life Expectancy at Birth by District, Northern province, 2000.....	108

Figure 8.21:	Life Expectancy at Birth by Marital Status, Northern province, 2000.....	109
Figure 8.22:	Life Expectancy at Birth by Education Level, Northern province, 2000.....	110
Figure 8.23:	Life Expectancy at Birth by Economic Activity, Northern province, 2000.....	110
Figure 8.24:	Adult Life Expectancy Levels (10-70 years) by Sex, Northern province, 1980-2000.....	111
Figure 8.25:	Adult Life Expectancy Levels (10-70 years) by Sex, Rural, Northern province, 1990-2000.....	111
Figure 8.26:	Adult Life Expectancy Levels (10-70 years) by Sex, Urban, Northern province, 1990-2000.....	112

CHAPTER 9: DISABILITY

Figure 9.1:	Proportion of Disabled Persons by Sex Northern province, 1990 and 2000.....	114
Figure 9.2:	Distribution of the Disabled Persons by Type of Disability, Northern province 2000.....	115
Figure 9.3:	Distribution of the Disabled Population, 5 Years and Older by Level of Education, Northern province 2000.....	118
Figure 9.4:	Distribution of the Disabled Persons, 5 Years and Older by Economic Activity, Northern province 2000.....	119
Figure 9.5:	Distribution of the Usually Working Disabled Persons by Occupation, Northern province 2000.....	119
Figure 9.6:	Distribution of the Disabled Household Heads by Employment Status, Northern province 2000.....	120
References.....		121
Key Persons Involved in the Analysis.....		122
2000 Census of Population and Housing Questionnaire.....		123

Abbreviations/Acronyms

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

Executive Summary

Northern province's population recorded as at 16th October 2000 (Census Night), is 1,258,696, comprising 629,976 males and 628,720 females. The majority of the population, 86 percent or 1,081,599 lives in rural areas, while the urban areas have the remaining 16 percent or 177,097.

Of the total population, 46.6 percent are below the age of 15, resulting in a median age of 17 years. Hence Northern Province has continued to have a young population with an in-built potential to grow for many years to come.

Northern Province's population grew at an average annual growth rate of 2.0 percent between 1969-1980, 3.2 percent between 1980-1990, and finally 3.1 percent during the period, 1990-2000. Thus the province's population has continued to grow, though at a declining rate.

The province's average population density stands at 8.5 persons per square kilometer, with the highest population density occurring in Mbala, with 17.9 persons per square kilometer.

Though Household-Headship is still dominated by males, the results from the census show that almost one in five households or 19.7 percent is female headed. There is very little variation by rural or urban residence. Chilubi has the highest percentage of female-headed households at 27 percent.

The census results estimates an Overall dependency ratio of 104.5, with a Child and Aged dependency ratio of 98.3 and 6.2 respectively.

A total of 1,088,565 persons reported their predominant language of communication in the 2000 census, with Bemba being the most spoken language, spoken by 59.6 percent of the population as their predominant language of communication, followed by Namwanga spoken by 8.8 percent, Mambwe is spoken by 8.5 percent, Bisa by 6.6 percent, Lungu by 4.6 percent and Tumbuka by 2.4 percent of the population.

English is used by only 0.2 percent of the population, as their predominant language of communication, despite it being the country's official language.

50.6 percent of the population reported belonging to the Bemba ethnic group, 11.1 percent belonging to the Namwanga ethnic group, 10.6 to the Mambwe ethnic group, 8.2 to the Bisa ethnic group, and 5.6 to the Lungu.

Census results show that 47.0 percent of the provincial population is literate i.e. is able to read and write in any language, with 55.3 of males and 39.3 percent of females able to read and write in any language.

Literacy rates have decreased marginally from the 1990 rate of 47.5 percent. 43.3 of the population in rural areas can read and write in any language compared to 68.7 percent of the population in urban areas.

The proportion of youths who could read and write in any language declined from about 68 percent in 1990 to 62.3 percent by 2000.

However adult literacy rate increased marginally from 59.1 percent to 60.1 percent between 1990 and 2000. The problem of adult illiteracy remained much more marked among females than males.

Teacher training, nursing, accountancy, Mechanics and agricultural related fields, have remained among the most popular fields of study in Northern Province.

The province's labour force population stands at 403,365. However, economic participation rates stand at 66.4 percent for males, and 50.3 percent for females.

The labour force has increased by 49 percent between 1990 and 2000. About 85.6 percent of the labour force is in rural areas, while 14.4 percent is in urban areas. 48.6 percent of the labour force is in the young age group of 12-29 years.

66.1 percent of province's workforce is comprised of unskilled labour.

The employed population increased by 33 percent between 1990 and 2000. The female employed population increased by 31 percent, while the male employed population increased by 35 percent.

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

The number of the unemployed declined by 11.4 percent between 1990 and 2000. The size of the male unemployed population declined by 13.8 percent, while that of females declined by 6.8 percent.

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

Economic activities are still organized around family labour as evidenced by the predominance (93.3 percent) of workers who are classified as either self-employed or unpaid family workers. In contrast, only 6.7 percent were classified as employees or employers. The transformation of the Zambian economy in the 1990's seems to have reduced employment opportunities in the formal sector, thereby forcing a large part of the labour force into the informal sector.

There is a large concentration of workers (85 percent) in the Agricultural and related occupations.

Northern province's fertility has continued to decline although at a slow pace. The drop in urban childbearing is the principle reason for the overall decline in fertility levels in the country. The Total Fertility Rate (TFR) for rural areas estimated at 7.1 is higher than the 5.8 estimated for urban areas. Northern province's TFR at 7.0 is relatively high.

Infant mortality rate has declined by about 5 percent in the period 1990-2000. However, the IMR is still high, with about one in every eight infants dying before reaching their first birthday.

Similarly, Childhood mortality rate has also declined by 6 percent in the period 1990 and 2000, from 108 to 101 deaths per 1000 children.

Under-five mortality, however has recorded an increase of 3 percent in the period 1990 to 2000, with about one in six under-five children dying before their fifth birthday

The decline in the IMR has led to a slight increase in the Life Expectancy at birth from 44 years in 1990 to 46 years in the year 2000.

Adult survivorship levels have significantly deteriorated between 1990-2000, resulting in an adult living 8-14 years less in 2000 compared to 1990 depending on the specific age group. Females have higher chances of surviving than males.

The disabled population forms 3.2 percent of total population of Northern province. The proportion of the disabled is higher in urban than rural areas.

Physical disability is the most common type of disability affecting about 37 percent of the disabled population, while ex-mental is the least common type of disability accounting for five percent of the disabled population.

Disease is the most common cause of disability reported by about 29 percent of the disabled population. Prenatal causes were reported by 17 percent, injury by 17 percent, and other by 10 percent while 20 percent reported that they did not know the cause of their disability. Injury as a cause of disability is more commonly reported by males than females while disease is more common among females than males.

Over two fifths of the disabled have never been to school and more than two fifths have completed primary education. Amongst all categories of disability, the largest proportions of the disabled are self-employed. The least proportion is among the employers. The most common occupation among the disabled is agriculture, which takes up about 85.8 percent.

Chapter 1

BACKGROUND

1.1 Geography

Northern Province is Zambia's largest province. Its surface area is 147,825 square kilometers, representing about one fifth of the country's total area. It has twelve administrative districts namely, Chilubi, Chinsali, Isoka, Kaputa, Kasama, Luwingu, Mbala, Mpika, Mporokoso, Mpulungu, Mungwi and Nakonde. Kasama is the administrative headquarter of the province.

The province is in the high rainfall zone, with average annual rainfall of above 1200 mm. The province has moderate temperatures ranging between 15°C and 35°C. Its soils are considered not to be very fertile due to leaching causes by heavy rains. This leads to acute shortage of potassium and phosphates.

1.2 Population

The population of Northern Province has continued to grow. It rose from 0.5 million in 1969, 0.7 million in 1980, 0.9 million in 1990 and to 1.2 million in 2000 registering a rising growth rate of 2.2 percent during the 1969-1980, 2.4 percent during the 1980-1990 and 3.1 during the 1990-2000 intercensal periods. This is the opposite of what is obtaining at the National Level where population growth rate was decreasing through the succeeding intercensal periods. Northern Province's population is now growing at a faster rate compared to the whole country, which has a growth rate of 2.5 percent (1990-2000).

In terms of population, Northern Province is the third largest accounting for 13 percent of the total population of the country. However, it is sparsely populated with a density of 7.9 in 2000 (this is lower than the population density for the whole country at 13.1 persons per square kilometres). This, nonetheless, is a rise from 3.7 in 1969, to 4.6 in 1980, and to 6.3 persons per square kilometre in 1990.

In 2000, Kasama District, the administrative and commercial capital of the province had the largest population size at 164,408, followed by Mbala with 139,720. Chilubi District has the least number of people at 60,532. Population density at District Level ranges from 30.8 persons per square kilometre for Nakonde District to 3.8 persons per square kilometre for Chilubi District. Kaputa District had the highest population growth rate among all the districts in the country at 5 percent per annum between 1990 and 2000.

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

District	Population				Percentage Distribution				Density (Person per sq. km)				Growth Rate (%)			Area (Sq.Km)
	1969	1980	1990	2000	1969	1980	1990	2000	1969	1980	1990	2000	69-80	80-90	90-00	
Chilubi	-	66,174	44,350	66,338	-	9.8	4.8	5.2	-	7.2	9.5	3.8	-	-4.9	4.1	4,648
Chinsali	58,014	93,999	89,779	128,646	10.6	13.9	9.7	10.1	3.8	4.3	5.8	4.1	4.9	-1.2	3.7	15,395
Isoka	77,700	44,731	82,563	99,319	14.3	6.6	8.9	7.8	5.6	6.8	8.9	5.4	-5.4	10.5	1.9	9,225
Kaputa	-	147,594	53,403	87,233	-	21.9	5.8	7	-	3.4	4.1	6.4	-	-10.3	5	13,004
Kasama	107,817	52,596	125,492	170,929	19.8	7.8	13.6	14	5.2	7.2	11.6	6.5	-6.9	13.7	3.1	10,788
Luwingu	79,164	113,935	72,164	80,758	14.5	16.9	7.8	6.2	8.9	5.9	8.1	13	3.7	-5.2	1.1	8,892
Mbala	95,633	81,291	110,980	149,634	17.5	12.1	12.0	11.9	5.2	6.2	13.3	14.9	-1.6	5.3	3	8,343
Mpika	59,378	41,145	123,099	146,196	10.9	6.1	13.3	11.6	1.4	2	3.0	15.2	-3.6	10.8	1.7	40,935
Mporokoso	67,390	33,285	54,888	73,929	12.4	4.9	5.9	6.1	5.6	3.4	4.6	16.7	-6.8	4.7	3	12,043
Mpulungu	-	-	44,533	67,602	-	-	4.8	5.3	-	-	4.5	16.9	-	-	4.3	9,865
Mungwi	-	-	74,735	112,977	-	-	8.1	9	-	-	7.7	26	-	-	4.2	9,766
Nakonde	-	-	49,879	75,135	-	-	5.4	5.9	-	-	10.8	30.8	-	-	4.2	4,621
Northern Province	545,096	674,750	925,865	1,258,696	100	100	100	100	3.7	4.6	6.3	7.9	2.2	2.4	3.1	147,826
Zambia	4,056,995	5,661,801	7,759,117	9,885,591	100	100	100	100	5.4	7.5	10.3	13.1	3.1	2.7	2.5	752,612

1.3 Economy

The main activities of the people in the region are Farming and Fishing. Northern Province has some of the most important fisheries in the country and contributes a huge number of fish landings each year. Though fishing on the Lakes Bangweulu and Mweru Wa Ntipa is largely artisanal, both large and small scale commercial operations are found on Lake Tanganyika. A large population is involved in fishing, either as traders or fishers. In terms of agriculture, the major crops grown are sorghum, mixed beans, paddy rice and millet. Seed cotton and Virginia Tobacco production are produced as cash crops, see Table 1.2 for details.

Table 1.2 Agricultural Production by Type of Crop

<i>Year</i>	<i>Sorghum(90Kg)</i>	<i>Mixed Beans</i>	<i>Paddy Rice (80Kg)</i>	<i>Millet (90Kg)</i>	<i>Seed Cotton (Kg)</i>	<i>Virginia Tobacco (Kg)</i>
1999	77,440	134,672	84,792	490,340	-	2,381
1998	53,847	95,308	20,685	391,824	-	-
1997	45,494	72,220	70,154	369,541	-	-
1996	24,781	174,335	101,665	302,525	-	-
1995	15,815	200,561	97,976	349,369	-	-
1994	6,415	187,972	32,206	408,202	-	-
1993	23,758	186,412	64,566	205,624	-	2,900
1992	1,376	185,836	42,157	370,047	30,165	-
1991	1,340	115,670	57,560	159,940	7,270	100

Source: MAC 2000 Agricultural Statistics Bulletin

1.4 Forestry

Northern Province has both indigenous and plantation forests. There are a number of wood processing operations in the districts of Kasama, Mpika, Mbala and Mporokoso. Bee keeping is popular in Kasama, Luwingu and Mpika districts.

1.5 Education

Northern Province has a total of 894 educational institutions of which 831 are Basic Schools, 17 High Schools, 42 Community Schools, and 3 schools for Continuing Education and School Teacher Training College (MOE).

1.6 Health

The province has eight hospitals; three of which are General Hospitals one of them is mission run. The province also has 155 health centres mostly owned by the government., refer to Table 1.3 for details.

Table 1.3: Number of Health Facilities by District, Northern Province, 2004

District	Government	Mission	Private	Total	Beds	Cots
Chilubi	7	1	-	8	97	0
Chinsali	10	5	-	15	337	14
Isoka	10	-	-	10	151	5
Kaputa	8	-	-	8	80	0
Kasama	18	3	1	22	600	47
Luwingu	11	-	-	11	121	8
Mbala	15	2	-	17	482	64
Mpika	18	2	3	23	442	61
Mporokoso	11	1	-	12	147	9
Mpulungu	7	-	-	7	90	0
Mungwi	12	1	-	13	233	0
Nakonde	7	-	-	7	99	0
Total	134	15	4	153	2,879	208

Source: Ministry of Health, 2004

1.7 HIV/AIDS

The disease burden in the province has been compounded by HIV/AIDS, which is a major concern in the province like anywhere else in the world. The 2001 Zambia Demographic and Health Survey estimated the HIV/AIDS prevalence rate to be eight percent among adults aged 15- 49 years, see Table 1.4 for details.

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

Province	Men Percent Positive	Women Percent Positive	Total	
			Percent Positive	Number Tested
Central	13.4	16.8	15.3	306
Copperbelt	17.3	22.1	19.9	775
Eastern	11.0	16.1	13.7	471
Luapula	8.6	13.3	11.2	299
Lusaka	18.7	25.0	22.0	559
Northern	6.2	10.0	8.3	517
North-Western	9.5	8.8	9.2	166
Southern	14.6	20.2	17.6	408
Western	8.3	16.9	13.1	306
Zambia	12.9	17.8	15.6	3,807

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

EVALUATION OF COVERAGE AND CONTENT ERRORS

2.1 Introduction

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

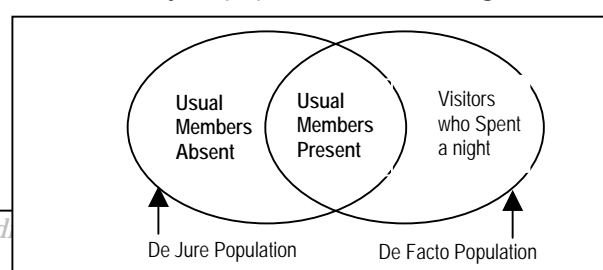
- Sex of members of household
- Age (in completed years) of members of household
- Residential status of household
- Children still living (with household or elsewhere), and
- Children dead

2.2 Concepts and Definitions

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

- **Census of Population:** Complete enumeration of persons during a specified period in a demarcated geographical area.
- **Child-Woman Ratio:** Number of children aged 0-4 years in a population to every 1,000 women aged 15-49 years in the same population.
- **Content Error:** Mistake made in the recorded information in the census questionnaire either by the respondent or by the interviewer.
- **Coverage Error:** Under or over-enumeration in a population census due to either omission or duplication.
 - *De facto Population: This refers to the usual household members present and visitors who spent the census night at any given household. This however excludes:*
 - (a) Foreign diplomatic personnel accredited to Zambia; and
 - (b) Zambian nationals accredited to foreign embassies and their family members who live with them abroad and, Zambian migrant workers and students in foreign countries who were not in the country at the time of the census.
 - *De jure Population: This refers to usual household members present and usual household members temporarily absent at the time of the census. These include institutional populations in places such as hospitals/health centers, prisons and academic institutions (universities, colleges, boarding schools).*

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



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

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

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

Sex Ratio: Number of males per 100 females in a population.

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

In the analysis of the coverage and content errors, the de facto population has been used. This is so because we would like to analyse the information obtained from the people who gave us their details and not those we did not talk to or collect the information from.

2.4 Methods of Evaluation

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

The direct method basically involves the carrying out of what is referred to as a Post Enumeration Survey (PES). In a PES, a sample of households is revisited after the census and data are again collected but on a smaller scale and later compared with that collected during the actual census. The matching process of the two sets of data can then be used to evaluate the quality of the census data. With regard to the 2000 Census of Population and Housing, the PES was carried out between February and March 2001. PES information is, however, only available for use at National Level, and therefore, will not be used to evaluate data quality at the Provincial Level.

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

2.4.1 COVERAGE ERROR

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

2.4.1.1 Age Composition

Table 2.1 shows the age composition of the population of Northern Province for 1980, 1990 and 2000 Censuses.

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

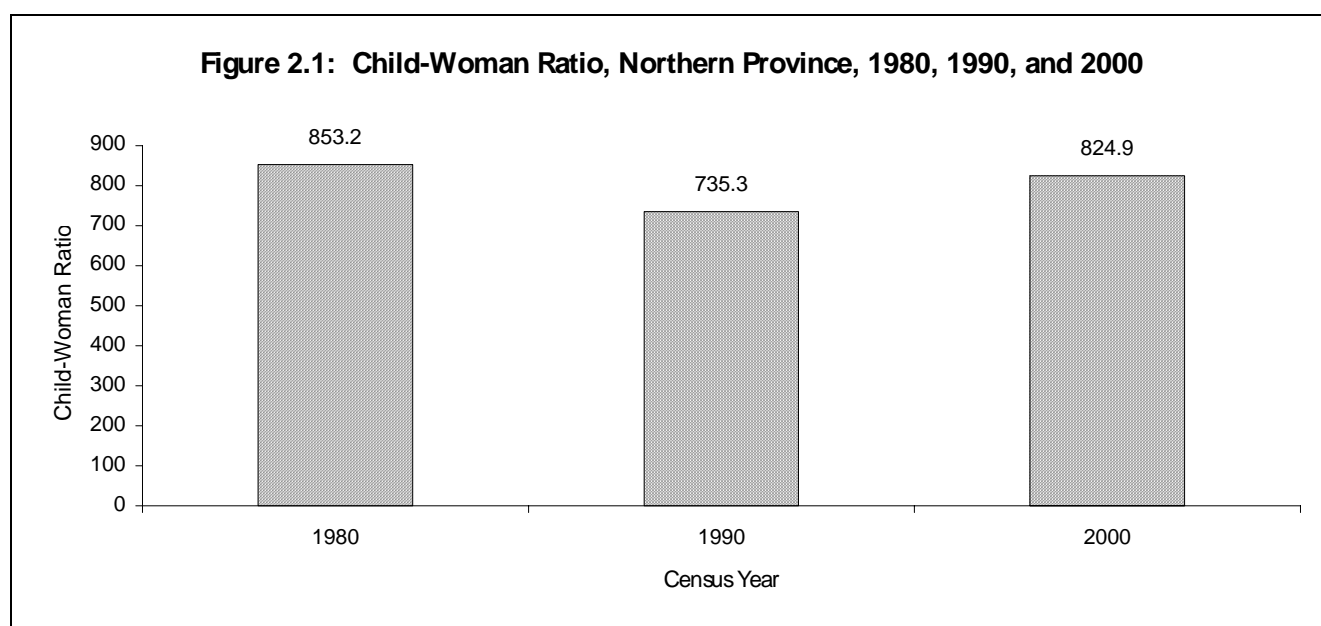
Age Group	Population					
	1980	Percent	1990	Percent	2000	Percent
0-14	348,309	51.6	401,553	47.0	564,366	48.1
15-64	301,537	44.7	427,839	50.0	574,204	48.9
65+	24,904	3.7	25,785	3.0	35,746	3.0
Total	674,750	100.0	855,177	100.0	1,174,316	100.0

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

The proportion of children 0-14 years reduced from 51.6 percent in 1980 to 47.0 percent in 1990 and later increased to 48.1 percent in 2000. The proportion of those aged 65 years or older remained stable at 3 percent in 1990 and 2000. See Table 2.1 for details.

2.4.1.2 Child-Woman Ratio

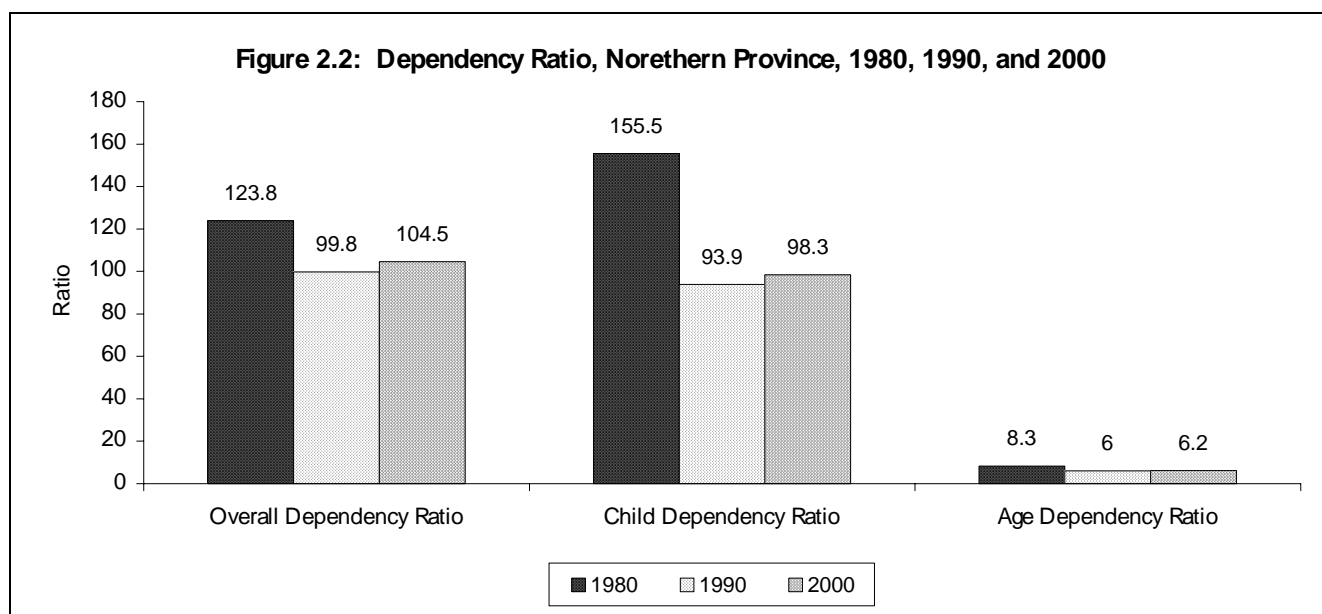
Figure 2.1 shows that the child-woman ratio dropped from 853.2 in 1980 to 735.3 in 1990 but rose to 824.9 per 1,000 women aged 15-49 years in 2000. This is consistent with the decline in the Child Mortality Rate between 1990 and 2000.



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

2.4.1.3 Dependency Ratio

The overall dependency ratio for the population of Northern Province for 1980, 1990 and 2000 Censuses were 123.8, 99.8, and 104.5 respectively per 100 persons in age group 15-64 years. This means that in the year 2000, for every 100 persons in the age range 15-64 years, there were 104.5 persons in the age groups 0-14 and 65 years or older. The age dependency ratio for the population aged 65 years or older to that of 15-64 years (Aged Dependency Ratio) was 6.0 for 1990 and 6.2 in 2000 while that of children increased from 93.9 in 1990 to 98.3 in 2000 (see Figure 2.2.). The increase in dependency ratios could be attributed to the decrease in the proportion of population age 15-64 years as well as the increase in the proportion of the population age 0-14 years.



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

2.5 Content Error

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

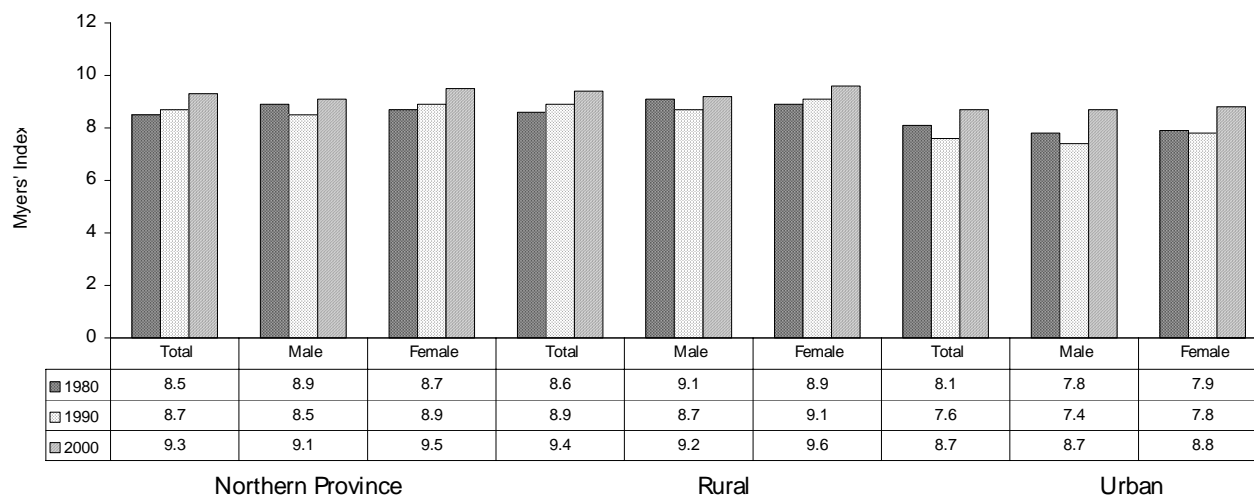
2.5.1 Digit Preference

The tendency of respondents to report ages ending with certain digits in preference to other digits is called "digit preference". Digit preference is most pronounced among population subgroups having a low educational status. The causes and patterns of digit preference vary from one culture to another. Age misreporting, net under-enumeration and non-reporting or misclassification of age contribute to heaping (Shryock, et.al. 1976).

Investigation of age heaping in Northern Province is done through the calculation of the Myers' Index. This index has been calculated for 1980, 1990 and 2000 Censuses data using the United Nations Population Analysis Software (PAS) for single age data (SINGAGE) and is presented in Figure 2.3. A high Myers' Index implies poor age reporting whereas a low Myers' Index indicates good age reporting. The maximum value of Myers' Index is 90 and the minimum value is 0. In Northern Province, in all the three censuses, the index is on the lower side (less than 10), which implies that the age reporting is good.

Figure 2.3 shows that the index for females is higher than that of males in both 1990 and 2000 but the reverse is true for 1980 except for the urban areas where the female index is higher than that for males. The Myers' Index rose from 8.5 in 1980 to 8.7 in 1990 to 9.3 in 2000. In rural areas, the index is from 8.6 in 1980, 8.9 in 1990 and 9.4 in 2000. In urban areas, the index dropped from 8.1 in 1980 to 7.6 in 1990 and rose to 8.7 in 2000. Myers' Index for both males and females for 2000 is higher than that of 1990 (see Figure 2.3). Although the increase in Myers' Index between 1990 and 2000 is marginal, this increase indicates the deterioration of the quality of the age data. Generally, however, the Index shows that age was more accurately reported for males than for females in 1990 and 2000.

Figure 2.3: Myers' Index by Residence, Northern Province, 1980, 1990, and 2000



SOURCE: CSO, 1980, 1990, AND 2000 CENSUSES OF POPULATION AND HOUSING

Table 2.2 shows that there was age heaping in Northern Province. This is confirmed by the most preferred digits in decreasing order of preference for the three censuses given in Table 2.2. The table shows that 0, 2, 5, 6 and 8 were the most preferred digits in the province. In 2000, the preferred digits were 0, 5, and 8 among males and females.

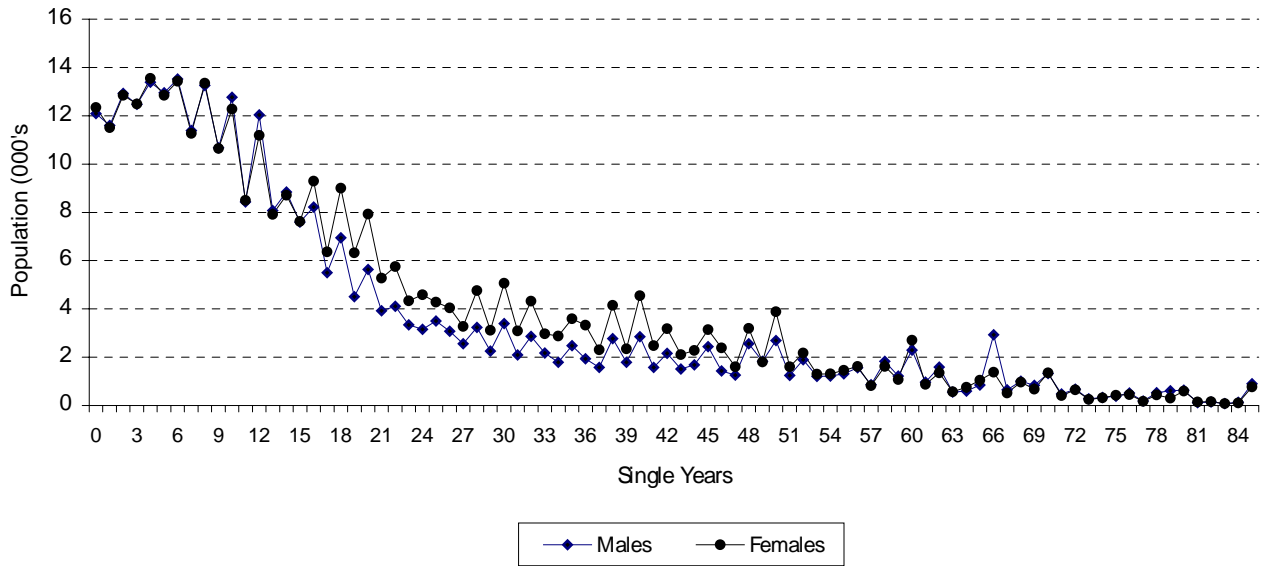
TABLE 2.2: MOST PREFERRED DIGITS, NORTHERN PROVINCE, 1980, 1990, AND 2000

Residence	Sex	Most Preferred Digits and Census Year		
		1980	1990	2000
Northern Province	Both Sexes	0, 8, 2, 6	0, 8, 2	0, 8, 5
	Male	0, 8, 6, 2	0, 8, 2	0, 5, 8
	Female	0, 8, 2	0, 8, 2	0, 8, 5
Rural	Both Sexes	0, 8, 2, 6	0, 8, 2	0, 8, 5
	Male	0, 8, 6, 2	0, 8, 2, 6	0, 5, 8
	Female	0, 8, 2	0, 8, 2	0, 8, 5
Urban	Both Sexes	0, 8, 2	0, 8, 2	0, 8, 5
	Male	0, 8, 2	0, 8	0, 8, 5
	Female	0, 8, 2	0, 8, 2, 6	0, 8, 5

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

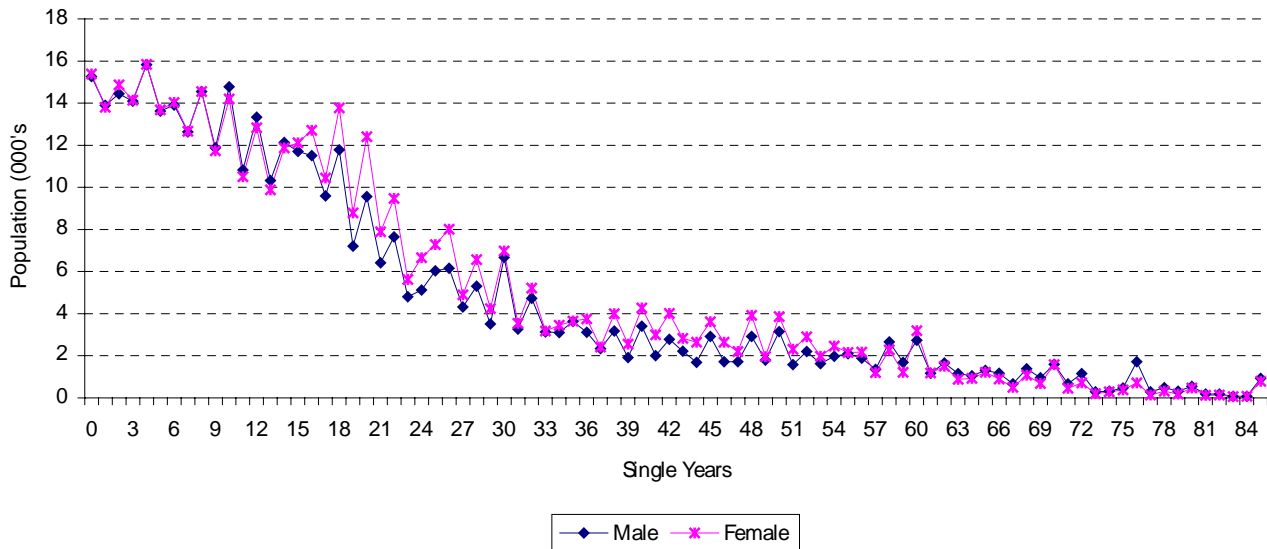
Age misreporting errors are also presented in Figures 2.4 to 2.9. The peaks on the curves indicate the most preferred ages in reporting while the troughs indicate the under reported ages. A comparison of Figures 2.4 to 2.6 shows that the peaks and troughs are higher for ages reported before 60 in 1980, 1990, and in 2000. There is no noticeable difference in the height of the peaks and troughs for ages reported after 60 in 1980, 1990, and 2000 Censuses.

Figure 2.4: Population Distribution in Single Years, Northern Province, 1980



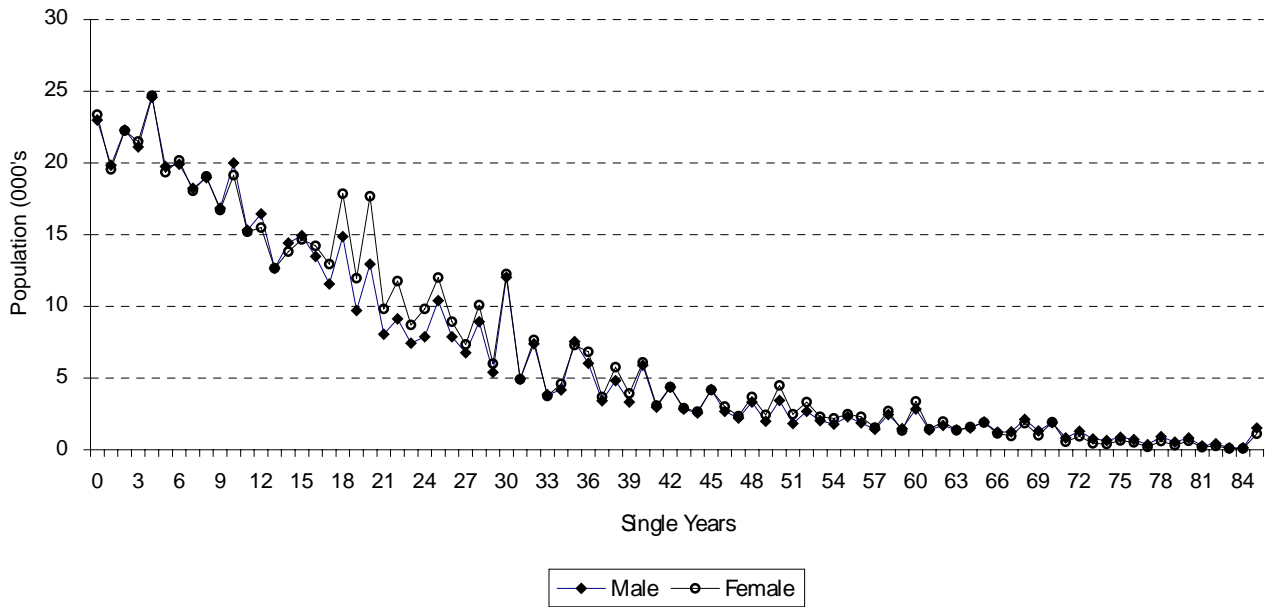
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Figure 2.5: Population Distribution by Single Years, Northern Province, 1990



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

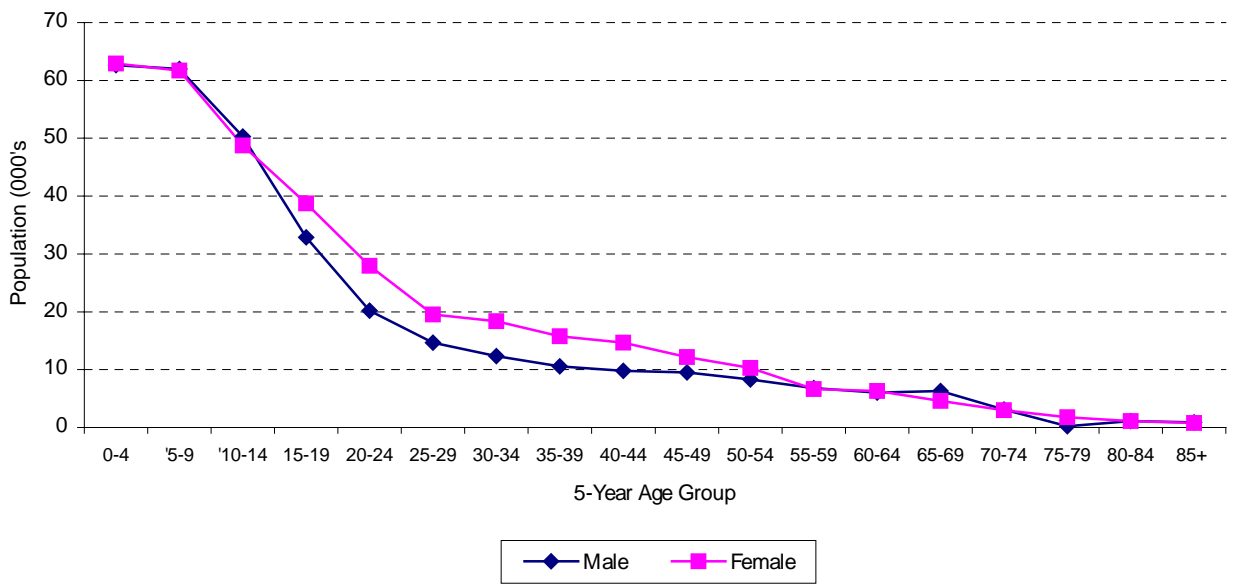
Figure 2.6: Population Distribution by Single Years, Northern Province, 2000



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

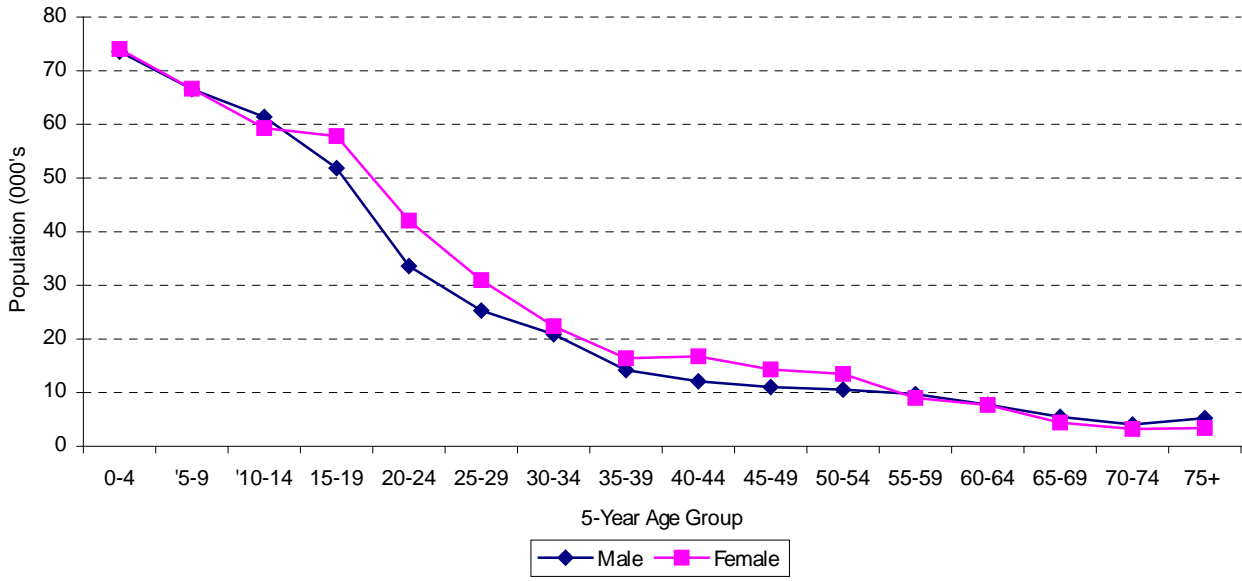
The smoothness of the curves in Figures 2.7, 2.8, and 2.9 show that grouping single year age data into five year age groups improves irregularities in age data arising from age misreporting.

Figure 2.7: Population Distribution by Five-Year Age Group, Northern Province, 1980



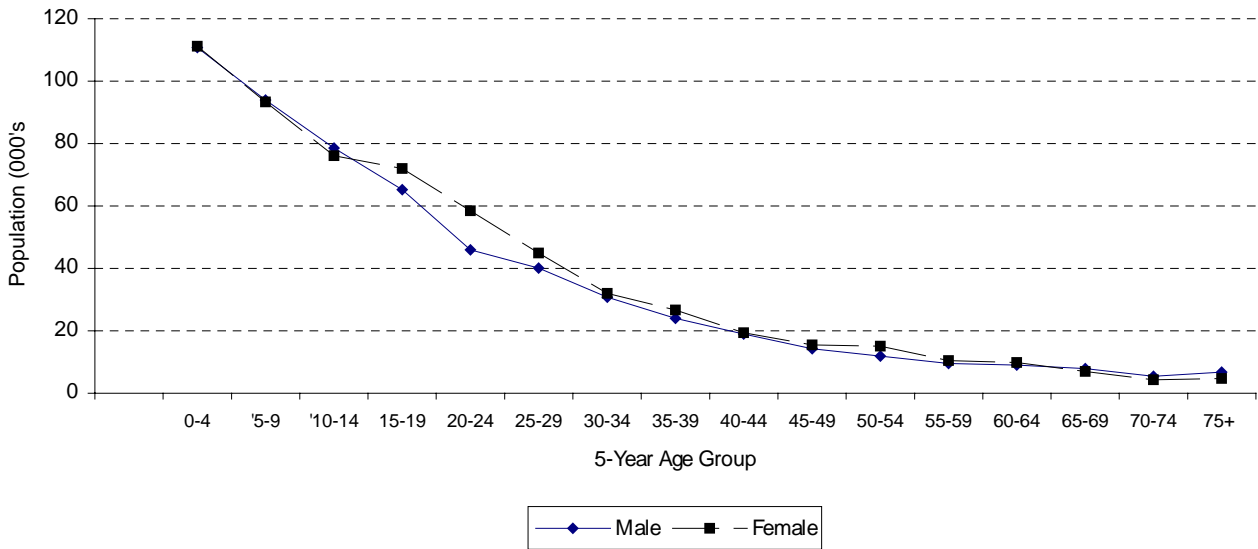
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Figure 2.8: Population Distribution by Five-Year Age Group, Northern Province, 1990



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

Figure 2.9: Population Distribution by Five-Year Age Group, Northern Province, 2000



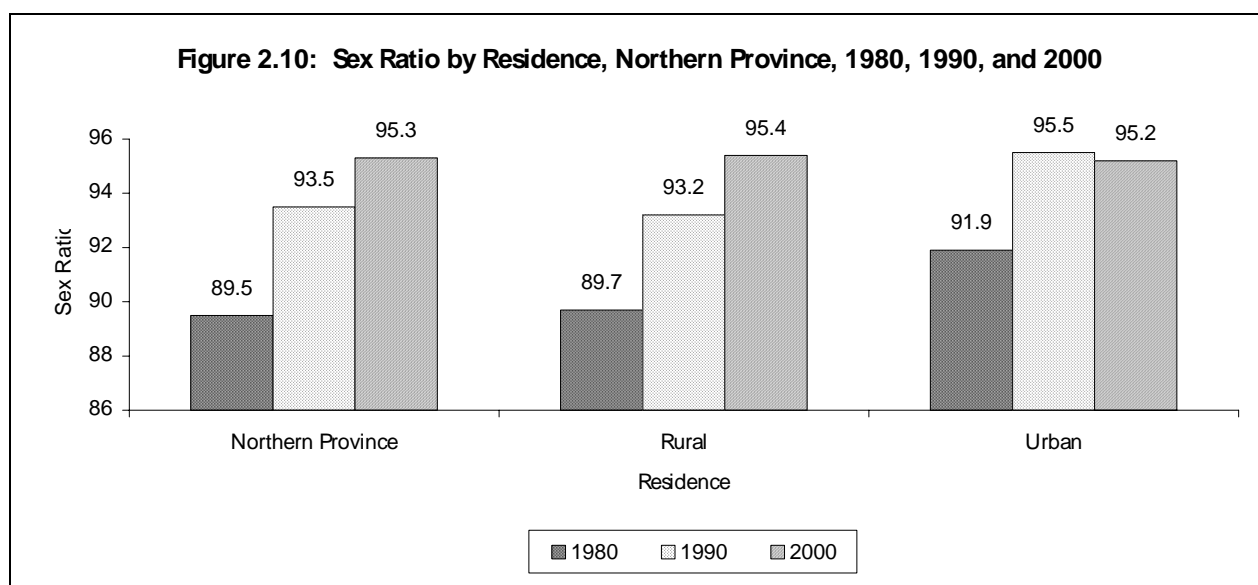
Source: CSO, 1990 and 2000 Censuses of Population and Housing

2.5.2 Sex Ratios

A sex-ratio is the number of males per 100 females. A sex-ratio of more than 100 shows that there are more females than males and a sex-ratio of 100 indicates an equal number of males and females. In the absence of big fluctuations in births, deaths and migration, the sex-ratios are expected to be high at infant ages because the sex-ratio at birth is favourable to males. After early childhood, the ratios are expected to decline continuously to reach very low levels at the highest ages when female mortality is much lower than the male mortality.

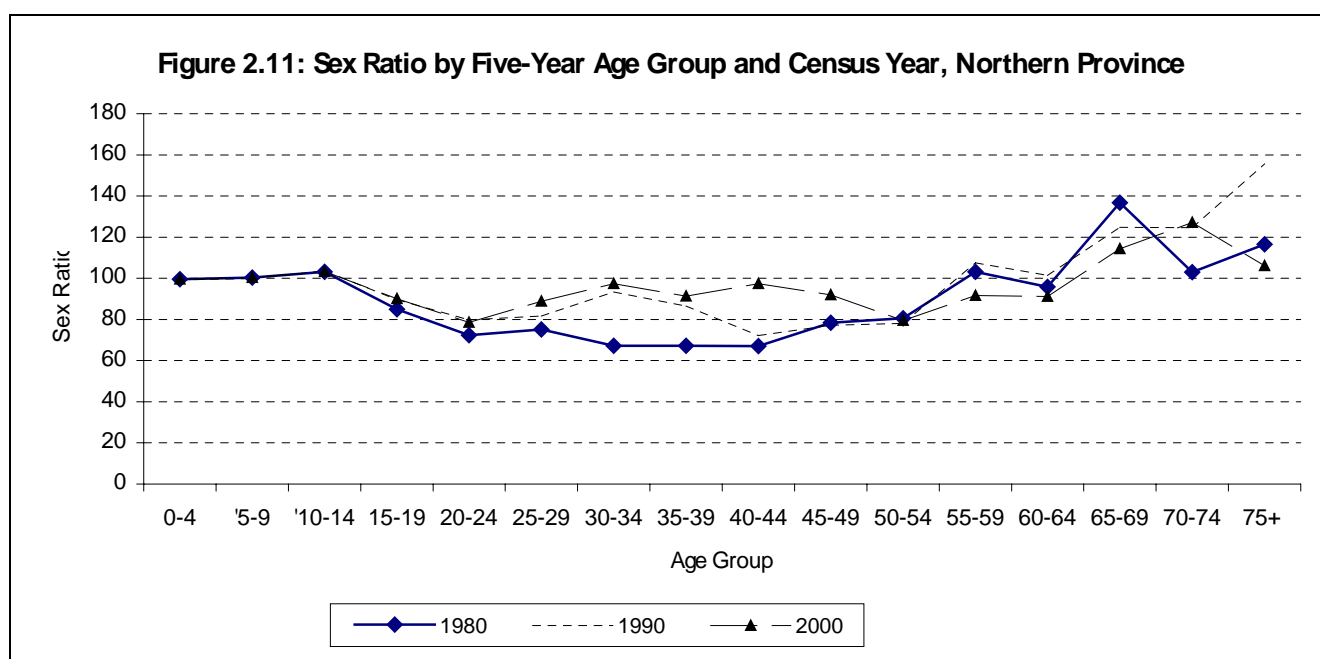
In a natural process where data on population is accurately recorded, the sex-ratios by age group are expected to start from about 102 to 106 at birth depending on the cultural set up being examined and gradually decline progressively until the lowest is recorded in the oldest age group. Although more males than females are born, there is sex difference in mortality as the population grows older such that males die off faster than females and this leads to the reversal of the sex-ratio from above, 102 at birth to below 100 and sometimes even below 90 in older age groups. Departure from this expected norms suggest errors in the data.

Looking at the pattern of sex-ratios in Table 2.3 assesses manifestation of errors or omission and age misreporting. The overall sex-ratio for Northern Province using the 1980, 1990, and 2000 Census data shows an increase from 89.5 to 93.5 and to 95.3 males, respectively, per 100 females (See Figure 2.10). The pattern of sex-ratios cannot only be attributed to errors in the data but also to high mortality which could be due to HIV/AIDS as well as due to the age-sex and selective migration.



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

The pattern of the sex ratio from Table 2.3 and Figure 2.11 suggests the under enumeration of children because the sex ratio is supposed to be high at age groups 0-4 and 5-9.



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

An analysis of age-specific sex ratios for 1980 reveals a deficit of males in age groups 0-4, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, and 60-64 years whereas that for 1990 reveals a deficit of males in age groups 0-4, 5-9, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, and 50-54 years. Ratios for 2000 show a deficit of males in the age groups 0-4, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, and 60-64 (See Table 2.3 for more details). There are many possible factors that may explain this, including high male mortality and internal migration. (A detailed analysis of migration is in the Migration and Urbanization 2000 Census Report available at the Central Statistical Office). The tendency by men to over estimate their age could have shifted men into older ages while the tendency by women to under-state their age could have shifted them into younger ages, hence, causing errors in age and sex data.

TABLE 2.3: SEX RATIO BY RESIDENCE, NORTHERN PROVINCE, 1980, 1990 AND 2000

Age	1980			1990			2000		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
0-4	99.6	99.9	98.4	99.3	99.4	98.8	99.5	99.9	96.8
5-9	100.4	101.2	96.7	99.9	100.3	97.4	100.4	100.6	99.3
10-14	103.2	105.1	94.8	103.6	105.1	95.5	103.3	104.8	94.6
15-19	84.9	84.8	85.2	89.6	89.4	90.9	90.1	89.9	91.1
20-24	72.3	72.9	70.3	79.8	79.9	79.2	78.6	78.0	81.9
25-29	75.1	73.2	81.8	81.7	82.6	76.8	88.8	88.2	92.2
30-34	67.2	61.5	93.0	93.4	93.4	93.6	97.4	96.8	101.2
35-39	67.2	63.3	87.4	86.5	82.5	108.8	91.3	90.9	94.1
40-44	67.1	63.3	88.3	72.2	66.3	119.3	97.4	97.0	100.0
45-49	78.4	74.4	105.3	77.1	72.1	124.0	92.0	89.8	107.7
50-54	80.6	77.1	105.9	78.1	74.5	120.6	79.5	75.8	115.5
55-59	103.1	101.2	117.6	107.5	105.7	128.9	91.7	89.7	112.0
60-64	95.8	95.7	96.7	101.4	100.1	117.8	91.1	90.5	97.0
65-69	136.8	139.8	112.1	124.8	124.6	127.8	114.4	115.4	103.9
70-74	103.0	105.0	87.0	124.6	126.5	99.6	127.1	129.6	101.6
75+	116.6	119.7	92.2	155.5	159.2	106.3	106.1	149.0	97.9

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

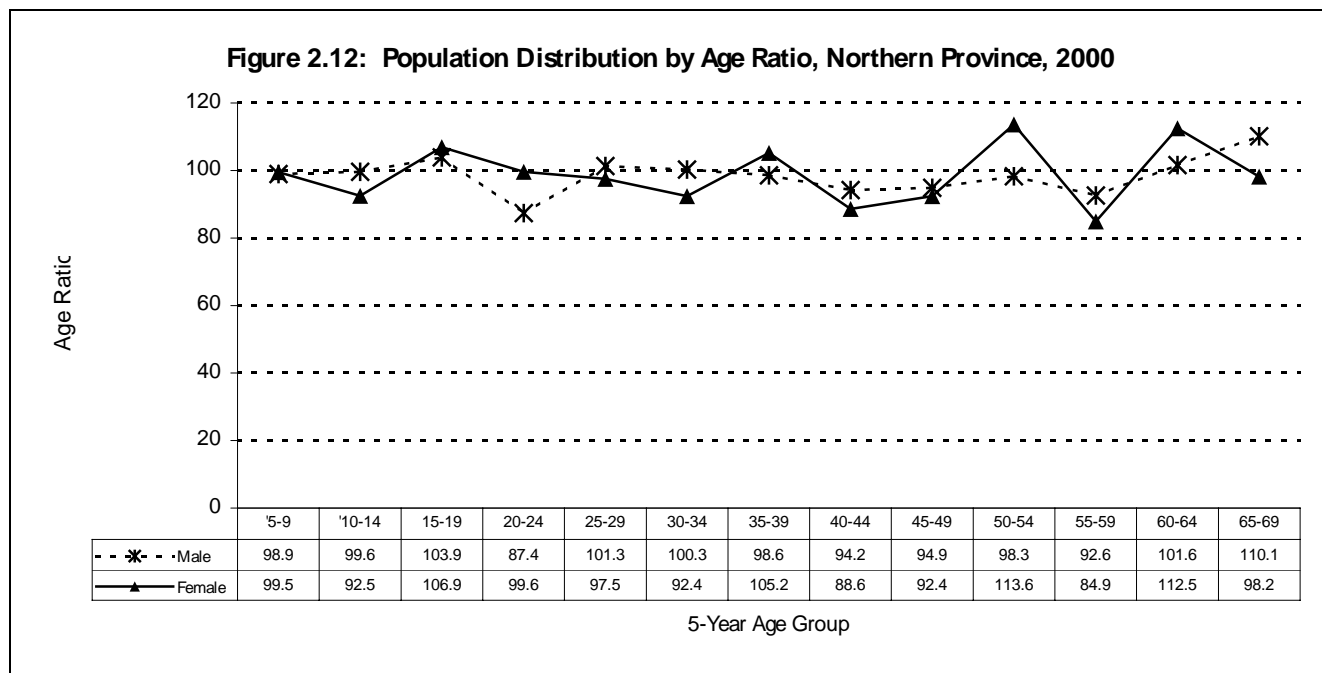
2.5.3 Age Ratios

The quality of age data can also be evaluated by examining age ratios. An age ratio may be defined as the ratio of the population in a given age group to one-third of the sum of the populations in the age group itself, the preceding and the following age groups, times 100 (Shryock et al, 1976). In normal circumstances, when there are no major changes in fertility, mortality or migration, the age ratios do not deviate much from 100, hence, any substantial deviation is explained in terms of age misreporting.

Results from Table 2.4 show that age groups with age ratios less than 100 in 1980 for males were 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 55-59, and 60-64 while for females, the age groups were 10-14, 20-29, 35-39, 45-49, 55-59, and 65-69. In 1990, Table 2.5 shows that the age groups with age ratios less than 100 for males were 5-9, 20-24, 25-29, 35-39, 40-44, 45-49, and 65-69 while for females, the age groups were 10-14, 20-29, 30-34, 35-39, 45-49, 55-59, and 65-69. Results from Table 2.6 show that in 2000, the age groups with ratios less than 100 were 5-9, 10-14, 20-24, 35-39, 40-44, 45-49, 50-54, and 55-59 for males. For females, the age groups were 5-9, 10-14, 20-24, 25-29, 30-34, 40-44, 45-49, 55-59, and 65-69. The substantial deviations of the age ratios are suggestive distortions arising from age misreporting. Results from Tables 2.4, 2.5, and 2.6 suggest that reporting of age is less satisfactory for females than males. Having a higher average age ratio deviation for females than males evidences this.

The Age Accuracy Index reduced from 51.0 in 1980 to 43.2 in 1990 and later to 38.3 in 2000. The United Nations define age data as "accurate, inaccurate and highly inaccurate" if the age accuracy index lies below

20, between 20-40 and 40 and above, respectively. In as far as the United Nations Age-Sex Accuracy Index is concerned, the 1980 and 1990 age data were "highly inaccurate" whereas the 2000 data were "inaccurate". However, the 2000 age data show some improvement over the 1990 age data. Refer to Tables 2.4, 2.5 and 2.6 and Figure 2.12 for details.



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

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

Age Group	Population		Age Ratio		Deviation from 10		Sex ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4							99.6	
5-9	61,787	61,526	109.7	110.5	9.7	10.5	100.4	0.8
10-14	50,141	48,575	106.1	97.0	6.1	-3.0	103.2	2.8
15-19	32,759	38,606	93.2	101.0	-6.8	1.0	84.9	-18.4
20-24	20,160	27,866	85.1	96.0	-14.9	-4.0	72.3	-12.5
25-29	14,621	19,467	90.0	84.3	-10.0	-15.7	75.1	2.8
30-34	12,317	18,318	97.8	104.1	-2.2	4.1	67.2	-7.9
35-39	10,559	15,716	95.5	95.5	-4.5	-4.5	67.2	-0.1
40-44	97,90	14,598	97.6	104.9	-2.4	4.9	67.1	-0.1
45-49	9,511	12,129	105.3	97.6	5.3	-2.4	78.4	11.4
50-54	8,267	10,256	101.4	109.6	1.4	9.6	80.6	2.2
55-59	6,797	6,593	95.2	79.8	-4.8	-20.2	103.1	22.5
60-64	6,012	6,276	92.0	112.3	-8.0	12.3	95.8	-7.3
65-69	6,275	4,587	137.9	98.9	37.9	-1.1	136.8	41.0
70-74	3,088	2,997					103.0	-33.8
75+	4,242	3,639					116.6	
Total	318,806	353,888			114.0*	93.3*		163.4*

Mean					8.8	7.2		11.7
------	--	--	--	--	-----	-----	--	------

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

Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = 3 times mean difference in sex ratios plus mean deviations of male and female age ratios.
= 3 x 11.7 + 8.8 + 7.2
= 51.0

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

Age Group	Population		Age Ratio		Deviation from 10		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	73,547	74,031					99.35	
5-9	66,598	66,666	98.69	100	-1.31	0	99.9	0.55
10-14	61,413	59,298	103.73	95.26	3.73	-4.74	103.57	3.67
15-19	51,813	57,825	109.11	114.12	9.11	14.12	89.6	-13.96
20-24	33,559	42,042	87.02	94.67	-12.98	-5.33	79.82	-9.78
25-29	25,318	30,989	92.98	96.21	-7.02	-3.79	81.7	1.88
30-34	20,899	22,375	105.84	94.46	5.84	-5.54	93.41	11.71
35-39	14,174	16,384	85.92	83.77	-14.08	-16.23	86.51	-6.89
40-44	12,094	16,740	95.87	108.95	-4.13	8.95	72.25	-14.27
45-49	11,057	14,347	97.71	94.89	-2.29	-5.11	77.07	4.82
50-54	10,539	13,499	101.53	115.51	1.53	15.51	78.07	1
55-59	9,703	9,025	105.93	85.24	5.93	-14.76	107.51	29.43
60-64	7,780	7,676	102.51	114.45	2.51	14.45	101.36	-6.15
65-69	5,477	4,389	92.73	80.43	-7.27	-19.57	124.8	23.44
70-74	4,033	3,237			-	-	124.56	-0.24
75+	5,264	3,385					155.49	
Total	413,268	441,909			77.74*	128.08*		127.79*
Mean					5.98	9.85		9.13

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

Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = 3 times mean difference in sex ratios plus mean deviations of male and female age ratios.
= 3 x 9.13 + 5.98 + 9.85
= 43.2

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

Age Group	Population		Age Ratio		Deviation from 10		Sex Ratio	Difference
	Male	Female	Male	Female	Male	Female		
0-4	110,801	111,330					99.5	
5-9	93,735	93,366	98.9	99.5	-1.1	-0.5	100.4	0.9
10-14	78,821	76,313	99.6	92.5	-0.4	-7.5	103.3	2.9
15-19	64,554	71,677	103.9	106.9	3.9	6.9	90.1	-13.2
20-24	45,438	57,783	87.4	99.6	-12.6	-0.4	78.6	-11.4
25-29	39,400	44,359	101.3	97.5	1.3	-2.5	88.8	10.2
30-34	32,346	33,195	100.3	92.4	0.3	-7.6	97.4	8.6
35-39	25,120	27,503	98.6	105.2	-1.4	5.2	91.3	-6.1
40-44	18,623	19,111	94.2	88.6	-5.8	-11.4	97.4	6.1
45-49	14,414	15,660	94.9	92.4	-5.1	-7.6	92	-5.4
50-54	11,766	14,795	98.3	113.6	-1.7	13.6	79.5	-12.5
55-59	9,533	10,393	92.6	84.9	-7.4	-15.1	91.7	12.2
60-64	8,833	9,701	101.6	112.5	1.6	12.5	91.1	-0.7
65-69	7,847	6,859	110.1	98.2	10.1	-1.8	114.4	23.4
70-74	5,423	4,266					127.1	12.7

75+	22,103	20,826					106.1	
Total	588,757	617,137			52.9*	92.6*		126.3*
Mean					4.1	7.1		9

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

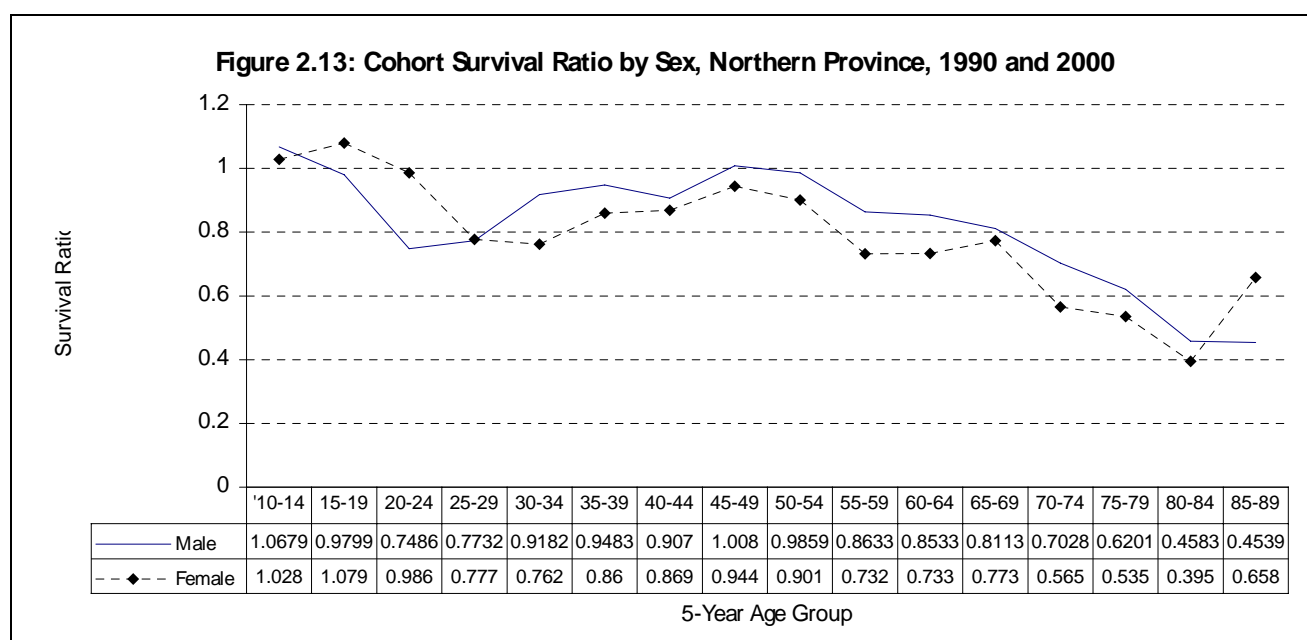
Note: * Shows total irrespective of sign.

Age-Sex Accuracy Index = 3 times mean difference in sex ratios plus mean deviations of male and female age ratios.
= 3 x 9.0+ 4.1+ 7.1
= 38.3

2.5.4 Survival Ratios

Survival ratios represent the probability that individuals of the same birth cohort or group of cohorts will still be alive 10 years later. Evaluation of the quality of age and sex data from two censuses using the survival ratio method can be done only under certain assumptions. The population should be closed to migration. It is also assumed that influence of abnormal mortality through wars, disasters, diseases, etc, over a 10-year period should be absent. Cohort survival ratio refers to the survival ratio of the population in a given age group to the next age whereas overall survival ratio refers to the ratio of the population aged say 10 years and above, who will survive to 15 years and above, and so on.

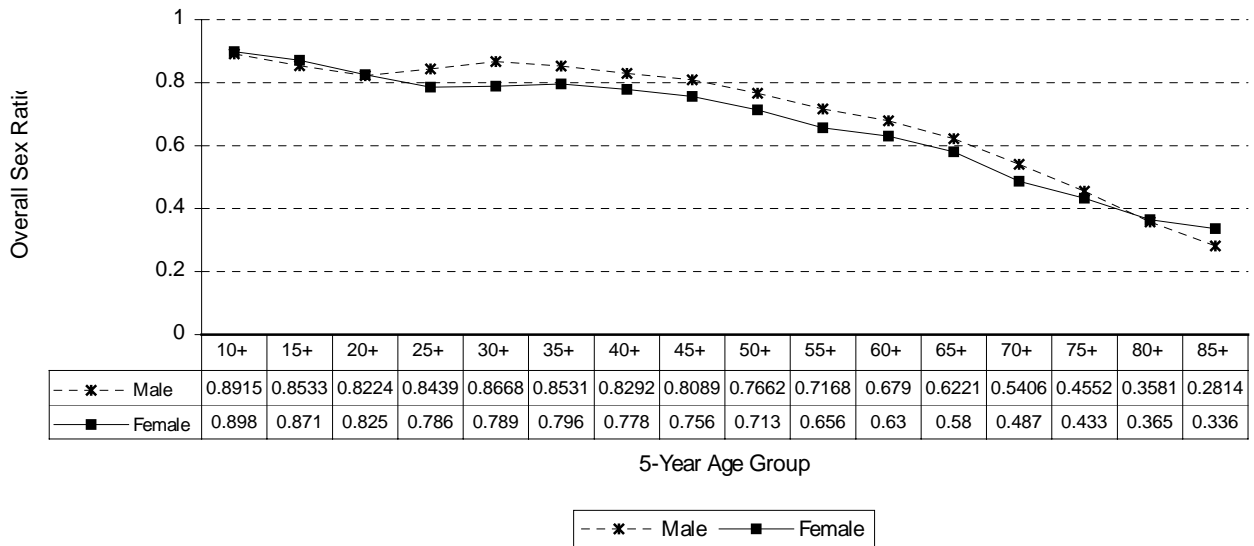
Cohort survival ratios are expected to be highest at age group 10-14 where mortality is assumed to be lowest and then to decline continuously thereafter. Figure 2.13 shows fluctuations rather than the expected pattern. For example, at age group 25-29, the cohort survival ratio is lower than in age group 35-39. Fluctuations in the cohort survival ratios show that there was over-statement or under-statement of ages among males and females.



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

In the absence of abnormal mortality and migration, the overall survival ratios should decline continuously as we go up to the older ages. The female ratios should be higher than the male ratios because of lower mortality of females compared to that of males. The pattern of having higher ratios for females than males is only true at 10+ 15+, 20+, 80+, and at 85+ (see Figure 2.14). This could be an indication of high levels of maternal mortality in the reproductive ages 12-49 years. The effects of the HIV/AIDS pandemic cannot be ruled out.

Figure 2.14: Overall Survival Ratio by Sex, Northern Province, 1990-2000

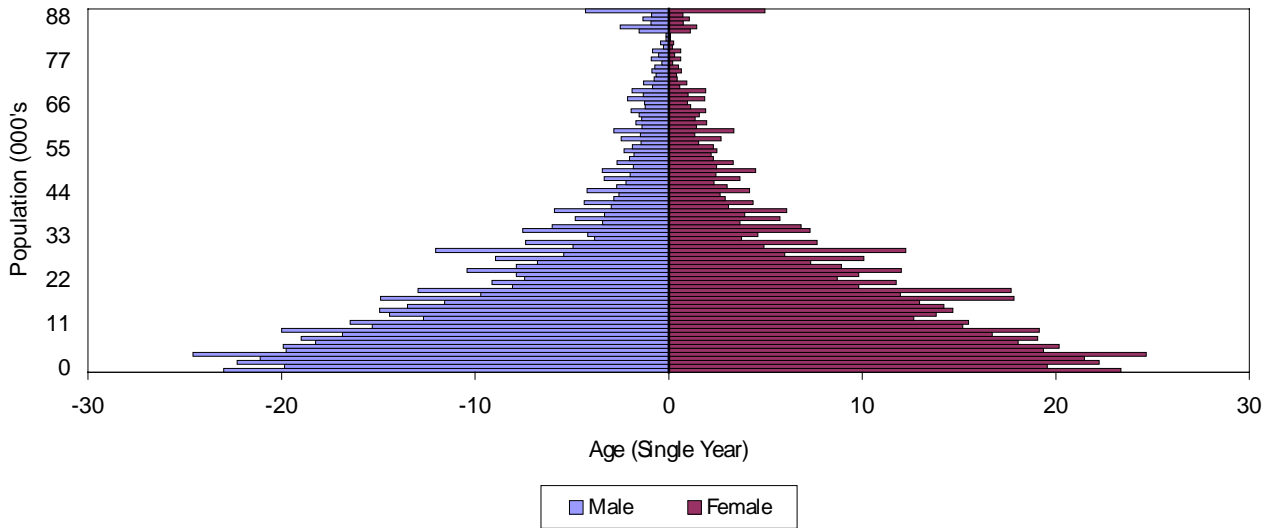


Source: CSO, 1990 and 2000 Censuses of Population and Housing

2.5.5 Population Pyramids

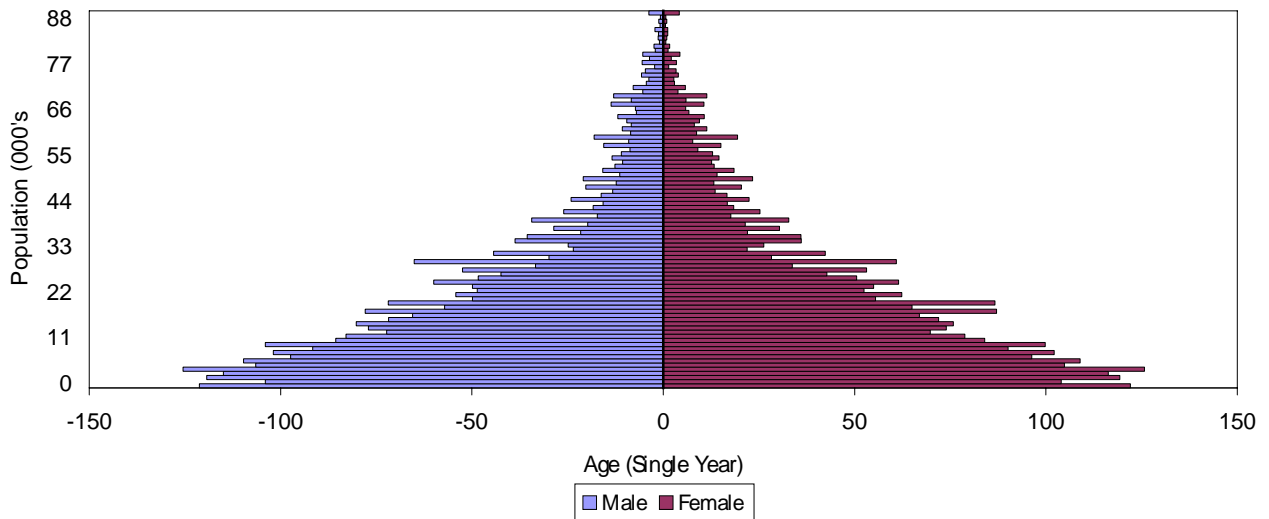
Another way of detecting irregularities in the reported age data of a survey or census is by looking at a Population Pyramid by single years of age. As already observed, when census age data is distributed in single years, one can easily spot out inaccuracies than when it is distributed in five-year age groups. Looking at the population pyramids for the 2000 Census data from Figures 2.15 to 2.17, it can be seen that age misreporting was not severe to warrant the smoothing of data.

Figure 2.15: Graphical Population Distribution by Single Years and Sex, Northern Province Total, 2000



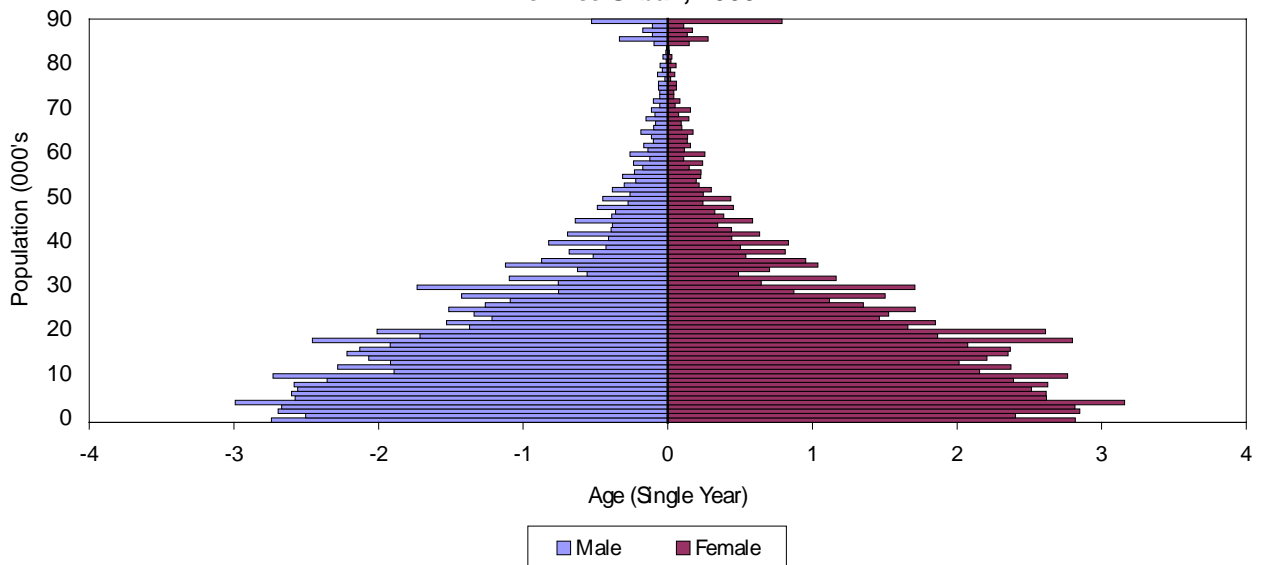
Source: CSO, 1990 and 2000 Censuses of Population and Housing

Figure 2.16: Graphical Population Distribution by Single Years and Sex, Northern Province Rural, 2000



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

Figure 2.17: Graphical Population Distribution by Single Year and Sex, Northern Province Urban, 2000

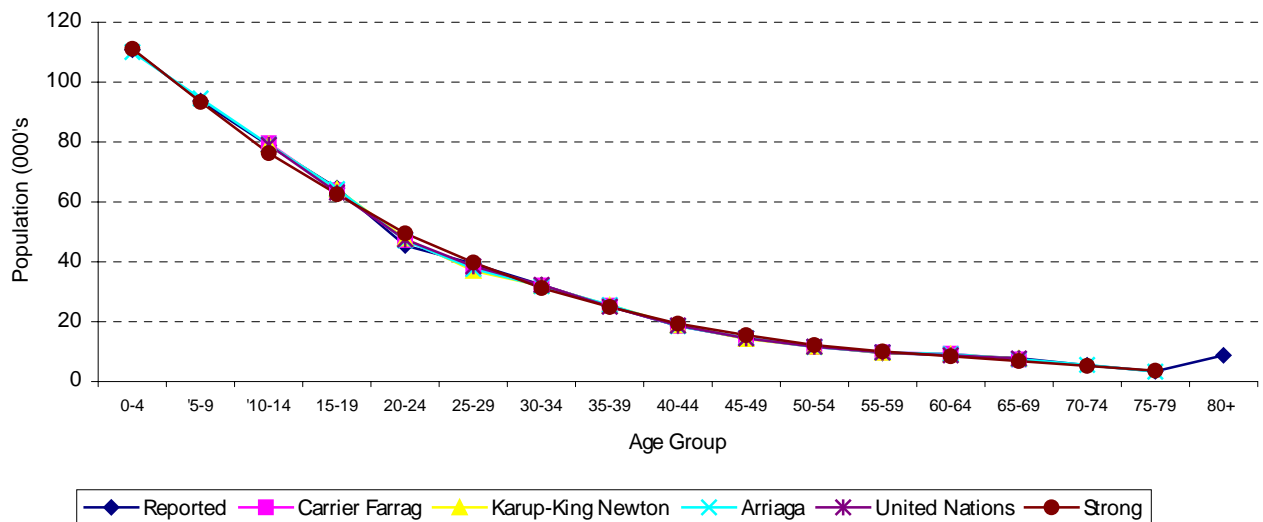


Source: CSO, 1990 and 2000 Censuses of Population and Housing

Smoothing the age data using selected techniques for light smoothing of the population (Edwardo E. Arriaga: November 1994, pages 11-42) shows that the irregularities in the structure are not severe, see Figures 2.18 and 2.19.

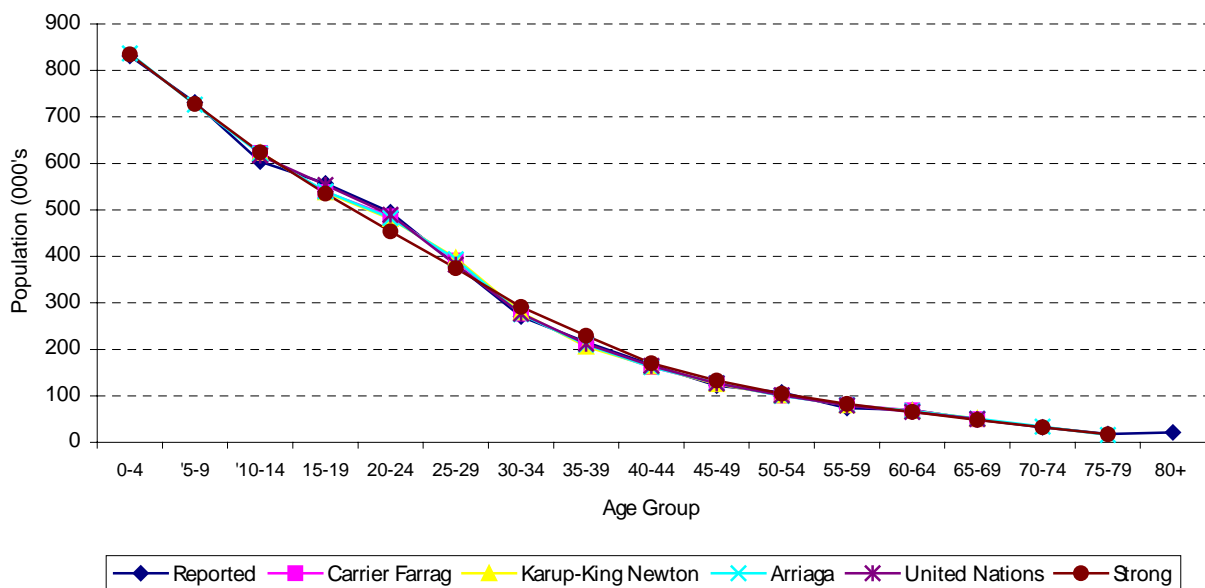
The smoothing of data has been done using AGESMTH software program one of the Population Analysis Spreadsheet (PAS) programs developed by the United Nations. Selected techniques for light smoothing of the population include Carrier Farrag, Karup-King Newton, Arriaga and United Nations. The strong smoothing technique has also been incorporated.

Figure 2.18: Reported and Smoothed Population by 5-Year Age Group and Smoothing Technique, Northern Province Males, 2000



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

Figure 2.19: Reported and Smoothed Population by 5-Year Age Group and Smoothing Technique, Northern Province Females, 2000



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

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

2.6 Summary

In the evaluation of content and coverage errors, the notable observations made were that the pattern of Age Composition, Child Woman Ratio and Dependency Ratio in 2000 is in line with the observed declines in fertility, mortality and significant deterioration of adult survivorship levels. In 2000, there was digit preference during age reporting, and the preferred digits were 0, 5, and 8. Age heaping in the 2000 Census was also observed, just like in the other two previous censuses. However, in spite of the age heaping, the 2000 age-sex

data shows an improvement over the 1990 and 1980 age-sex data as evidenced by the decline in the Age-Sex Accuracy Index from 51.0 in 1980, 43.2 in 1990 to 38.3 in 2000.

Chapter 3

POPULATION SIZE, GROWTH AND COMPOSITION

3.1 Introduction

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

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

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

3.2 Concepts and Definitions

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

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

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

De jure Population: This refers to usual household members present and usual household members temporarily absent at the time of the census. These include institutional populations in places such as hospitals/health centers, prisons and academic institutions (universities, colleges and boarding schools etc).

- **Population Growth Rate**

Refers to the change in the size of the population as a proportion of the total population of an area. Estimated on a yearly basis, it gives us the average annual growth rate for each year of the inter-censal period.

- **Population Composition**

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

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

- *Age*

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

- *Household*

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

- **Head of Household**

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

- **Population Density**

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

- **Age Dependency Ratio**

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

- **Citizenship**

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

- **Age Dependency ratio**

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

3.3 Population size and Growth

The 2000 de jure population for Northern Province is 1,258,696 of which 628,720 are females and 629,976 are males. As observed at national level males have outnumbered females (see Table 3.1a).

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

Residence	Both Sexes		Male		Female	
	Number	Pewrcent	Number	Percent	Number	Percent
Zambia	9,885,591	100	4,946,298	50.0	4,939,293	50.0
Northern	1,258,696	100	629,976	50.0	628,720	50.0
Rural	1,081,599	100	541,821	50.1	539,778	49.9
Urban	177,097	100	88,155	49.8	88,942	50.2

Source: 2000 Census of Population and Housing

In demographic terms, this de jure figure is considered the *true or resident population* of a nation. However, this type of population count does not allow collection of data on various characteristics (social, economic, political etc.) of individuals. The de jure population becomes important as far as the age sex distribution is concerned.

The Northern Province de facto presented in Table 3.1b is 1,174,316 of which 51.2 percent are females. The de facto population allows for detailed analysis of individuals because these are present at the time of count. It can be noted that the de jure population is always larger than the de facto population.

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

Residence	Both Sexes		Male		Female	
	Number	%	Number	%	Number	%
Zambia	9,337,425	100	4,594,290	49.2	4,743,135	50.8
Northern	1,174,316	100	573,347	48.8	600,969	51.2
Rural	1,011,727	100	494,071	48.8	517,656	51.2
Urban	162,589	100	79,276	48.8	83,313	51.2

Source: 2000 Census of Population and Housing

The district population sizes for Northern Province are displayed in Table 3.2. Among the districts Kasama has the largest population of 170,929 followed by Mbala (149,634) and Mpika (146,196). The smallest population is found in Chilubi (66,338). Amongst the districts, Kasama continues to be the most urbanised, given that in comparison to others, it bears the highest number of urban population (74,243) in relation to the total provincial urban population of 177,097 or 42 percent of the total urban population.

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

Province/ District	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Northern	1,258,696	629,976	628,720	1,081,599	541,821	539,778	177,097	88,155	88,942
Chilubi	66,338	32,936	33,402	62,796	31,214	31,582	3,542	1,722	1,820
Chinsali	128,646	64,362	64,284	117,139	58,648	58,491	11,507	5,714	5,793
Isoka	99,319	49,428	49,891	87,831	43,729	44,102	11,488	5,699	5,789
Kaputa	87,233	44,556	42,677	84,882	43,359	41,523	2,351	1,197	1,154
Kasama	170,929	85,070	85,859	96,686	48,223	48,463	74,243	36,847	37,396
Luwingu	80,758	40,612	40,146	75,360	37,908	37,452	5,398	2,704	2,694
Mbala	149,634	75,085	74,549	132,698	66,612	66,086	16,936	8,473	8,463
Mpika	146,196	73,151	73,045	120,340	60,236	60,104	25,856	12,915	12,941
Mporokoso	73,929	36,975	36,954	70,949	35,512	35,437	2,980	1,463	1,517
Mpulungu	67,602	34,292	33,310	60,114	30,516	29,598	7,488	3,776	3,712
Mungwi	112,977	56,200	56,777	107,001	53,239	53,762	5,976	2,961	3,015
Nakonde	75,135	37,309	37,826	65,803	32,625	33,178	9,332	4,684	4,648

Source: 2000 Census of Population and Housing

Note: " * " denotes new districts which were formally part of Kabwe Rural.

The rate at which Northern Province has grown in between censuses of 1969, 1980, 1990 and 2000 are shown in Table 3.3. The table shows that the provincial population has grown from over half a million (674,750) in 1980 to over a million (1,258,696) in 2000. The province has in general experienced a slight drop in annual

growth rate from 3.2 in 1980-90 to 3.1 percent in the last inter-censal period. On average, the population of Northern Province grew the most, at 3.2 percent, during the 1980-1990 inter-censal period. Its annual population growth rate between 1990 and 2000 is higher than the national average of 2.5 percent, presenting a deviation of 0.6 percent. The annual growth rate for both rural and urban areas increased by 0.3 percentage points and 3.2 percentage points respectively.

Table 3.3 Population Size and Annual Average Population Growth Rate, Northern Province, 1969-2000

Residence	Population Size (1969)	Annual Growth Rate (de jure) 1969-1980	Population Size (1980)	Annual Growth Rate (de jure) 1980-1990	Population Size (1990)	Annual Growth Rate (de jure) 1990-2000	Population Size (2000)
Zambia		3.1	5,661,801	2.7	7,759,117	2.5	9,885,591
Northern	545,096	2.0	674,750	3.2	925,865	3.1	1,258,696
Rural	530,890	0.4	556,475	2.8	798,597	3.1	1,081,599
Urban	14,206	21.2	118,275	0.2	127,289	3.4	177,097
District							
Chilubi*	-	-	33,285	2.9	44,350	4.1	66,338
Chinsali	58,014	1.2	66,174	3.1	89,779	3.7	128,646
Isoka	77,700	1.7	93,999	-1.3	82,563	1.9	99,319
Kaputa*	-	-	44,731	1.8	53,403	5.0	87,233
Kasama	107,817	2.9	147,594	-1.6	125,492	3.1	170,929
Luwingu	79,164	-3.6	52,596	3.2	72,164	1.1	80,758
Mbala	95,633	1.6	113,935	-0.3	110,980	3.0	149,634
Mpika	59,378	2.9	81,291	4.2	123,099	1.7	146,196
Mporokoso	67,390	-4.4	41,145	2.9	54,888	3.0	73,929
Mpulungu*	-	-	-	-	44,533	4.3	67,602
Mungwi*	-	-	-	-	74,735	4.2	112,977
Nakonde*	-	-	-	-	49,879	4.2	75,135

Sources: 180, 1990 and 2000 Censuses of Population and Housing

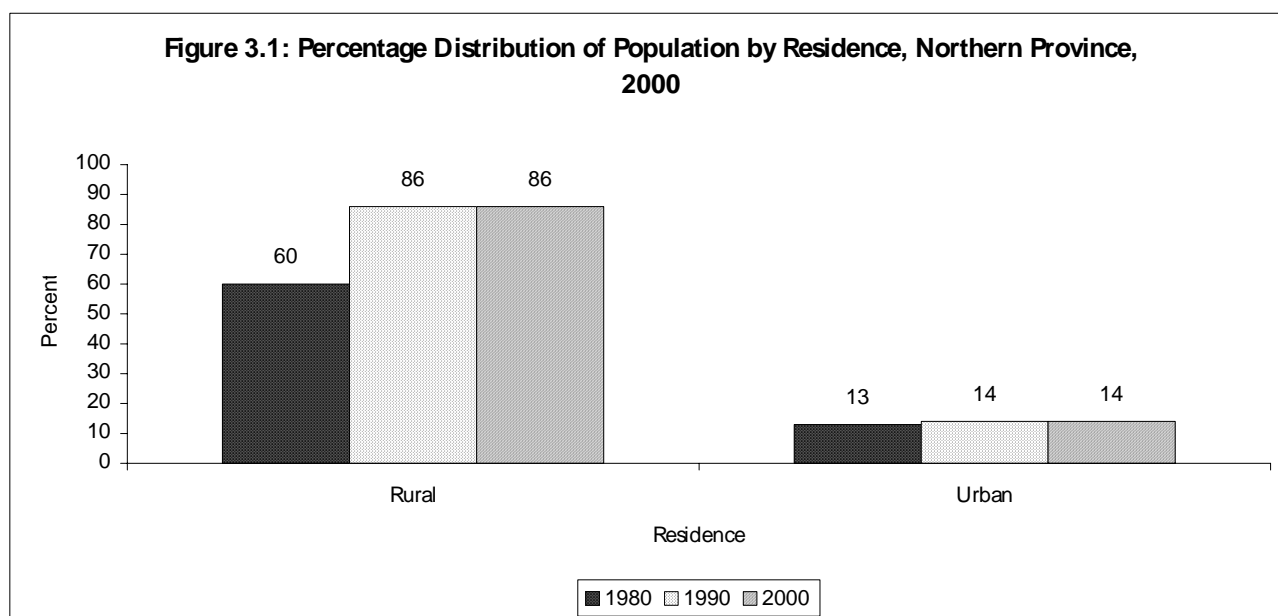
Note: "*" New Districts, "-" Not applicable as they refer to either new or non-existent districts.

At district level, Kaputa (5.0), Chilubi (4.1), Mpulungu (4.3), Mungwi (4.2) and Nakonde (4.2) exhibited high annual growth rates between 1990 and 2000. This can be attributed to the influx of refugees from the Great Lakes Region through Kaputa. Notably, Luwingu and Mpika grew the least during the same period, at a rate of 1.1 and 1.7 percent, respectively.

3.4 Population Distribution and Density

The spatial or geographical distribution of the population in Northern Province from 1980 to 2000 is shown graphically in Figure 3.1, 3.2 and Table 3.4.

Figure 3.1: Percentage Distribution of Population by Residence, Northern Province, 2000



Source: 2000 Census of Population and Housing

Figure 3.1 illustrates that nine in ten persons (86 percent) in Northern Province reside in rural areas. The proportion of rural population initially increased from 60 percent in 1980 to 86 percent in 1990, where it remained until 2000.

The percent distribution of district population from 1980-2000 is shown in Table 3.4 and further illustrated for 2000 in Figure 3.2. Kasama (13.6 percent) had the largest share of the population in Northern Province, followed by Mbala (11.9 percent). Relative to the provincial population, the proportion of people in Chilubi, Isoka, Luwingu, Mbala and Mpika districts reduced over the ten-year period, with Chilubi exhibiting the lowest of 5.3 percent in 2000.

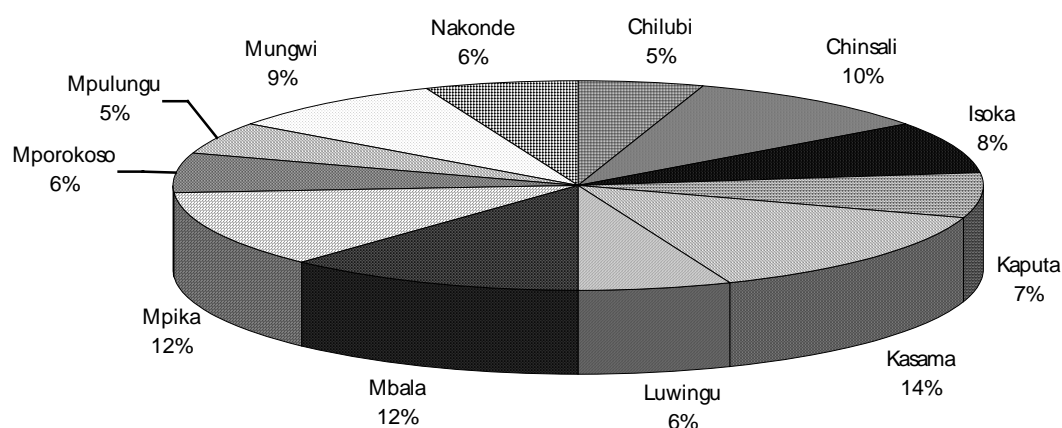
Table 3.4: Population Distribution by District, Northern Province, (De jure), 1990 and 2000

Residence	1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent
Northern	674,750	100	925,865	100	1,258,696	100
District						
Chilubi	33,285	4.9	44,350	4.8	66,338	5.3
Chinsali	66,174	9.8	89,779	9.7	128,646	10.2
Isoka	93,999	13.9	82,563	8.9	99,319	7.9
Kaputa	44,731	6.6	53,403	5.8	87,233	6.9
Kasama	147,594	21.9	125,492	13.6	170,929	13.6
Luwingu	52,596	7.8	72,164	7.8	80,758	6.4
Mbala	113,935	16.9	110,980	12	149,634	11.9
Mpika	81,291	12.0	123,099	13.3	146,196	11.6
Mporokoso	41,145	6.1	54,888	5.9	73,929	5.9
Mpulungu	-	-	44,533	4.8	67,602	5.4
Mungwi	-	-	74,735	8.1	112,977	9.0
Nakonde	-	-	49,879	5.4	75,135	6.0

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

Note: "*" New Districts, "-" Not applicable as they refer to either new or non-existent districts.

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



3.4.1. Population Density

Table 3.5 shows the land area and population density for Northern Province from 1969 to 2000. Generally, with an increasing population in the past decades, the provincial population density has also been increasing, from 3.7 in 1969 to 4.6 and 5.8 in 1980 and 1990, respectively. In 2000, 8.5 persons per square km were recorded. The provincial population density in 2000 is lower than the national population density of 13.1 persons per square kilometer.

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

District	Area (Sq Km)	Population Density/ Census Year (Population per sq. Km)			
		1969	1980	1990	2000
Zambia	752,612	5.4	7.5	10.3	13.1
Northern	7,525	3.7	4.6	5.8	8.5
Chilubi	4,648	0	7.2	8.6	14.5
Chinsali	15,395	3.8	4.3	5.4	8.4
Isoka	9,225	5.6	6.8	8.8	10.8
Kaputa	13,004	0	3.4	3.8	6.7
Kasama	10,788	5.2	7.2	9.2	15.8
Luwingu	8,892	8.9	5.9	7.5	9.0
Mbala	8,343	5.2	6.2	7.3	17.9
Mpika	40,935	1.4	2	2.8	3.6
Mporokoso	12,043	5.6	3.4	4.4	6.1
Mpulungu	9,865	-	-	-	6.9
Mungwi	9,766	-	-	-	11.6
Nakonde	4,621	-	-	-	16.3

Source: 2000 Census of Population and Housing

With a land area of 8,343 square km, Mbala's population density increased the most from 5.2 in 1969 to 6.2 in 1980 to 7.3 in 1990 and finally to 17.9 in 2000. Other districts with high population densities in 2000 are Nakonde (16.3), Kasama (15.8) and Chilubi (14.5).

3.5. Population Composition

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

3.5.1. Age and Sex Composition

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

The age and sex structure of population in Northern Province is illustrated in proportion by way of population pyramids for 1990 and 2000 in Figure 3.3a and 3.3b. Population pyramids are useful in describing the population by age and sex pictorially. Another important feature of population pyramids is their strength in illustrating whether a population is 'young' or 'old'. Similar to the national pattern, Northern Province continues to exhibit a Young population given that it bears a high proportion of persons below the age of 15 years. The broad base of the pyramids is illustrative of this feature. In comparative terms, the 2000 population pyramid (Figure 3.3a) has a smoothed appearance along the ages of 0-4 up to the mid 20s, which otherwise had a bump or near-funnel look in 1990 (Figure 3.3b). By comparison, this signifies population gaps or absences in the above ages. These population gaps could very well be attributed to increased mortality, perhaps given the ravaging effects of HIV/AIDS pandemic coupled with odds of the declining economic situation in the country, particularly in the last decade. Supporting this likelihood of events also is the evidence that fertility has in the same period decreased (*see chapter on Fertility*).

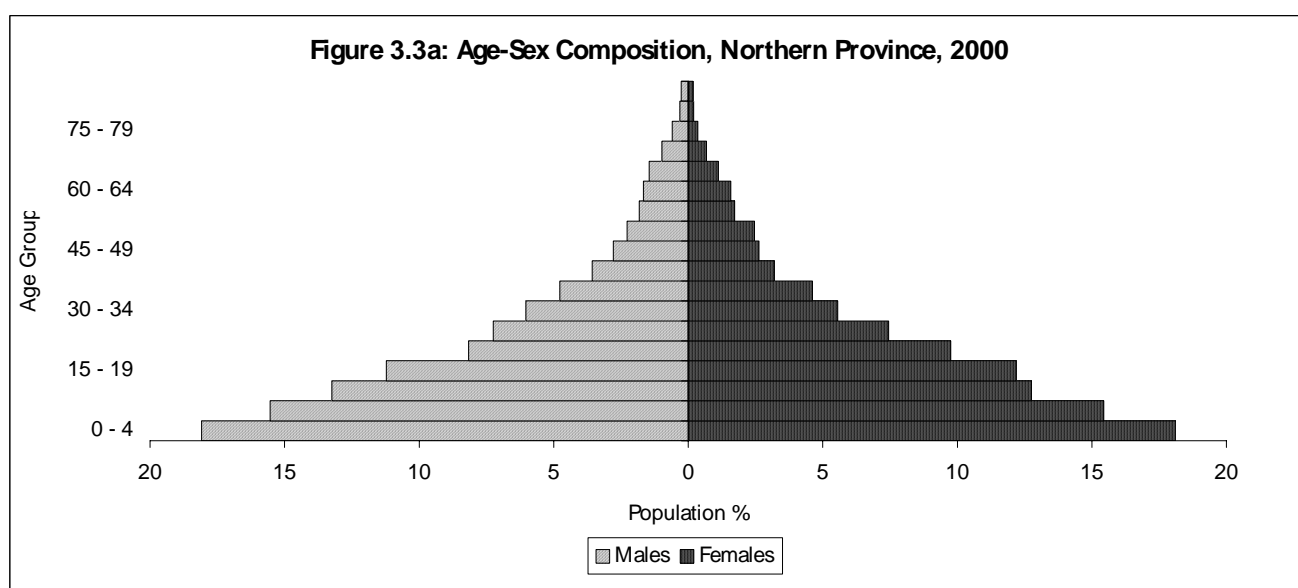


Figure 3.3b: Age-Sex Composition, Northern Province, 1990

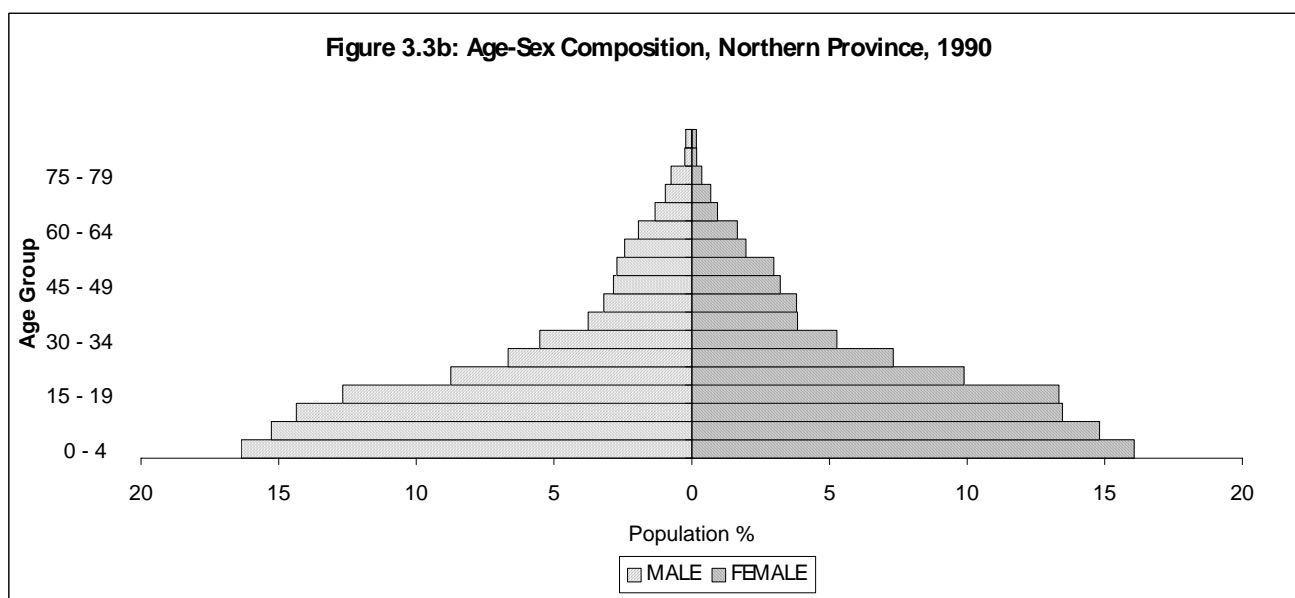


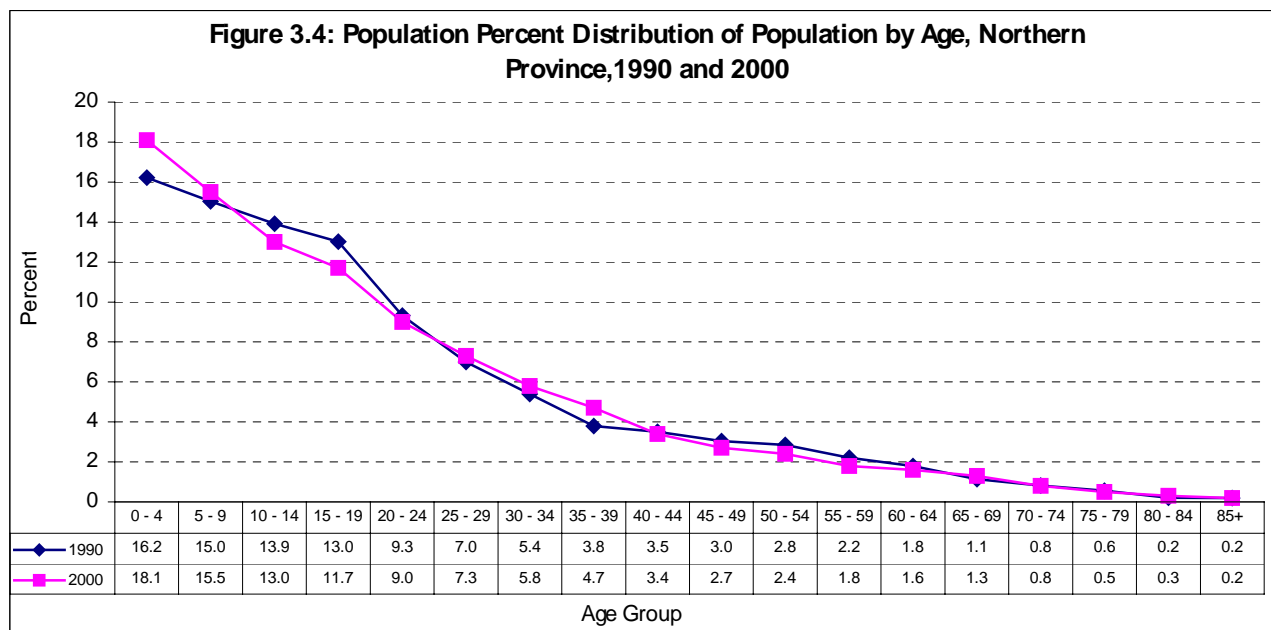
Table 3.6 presents the age-sex population distribution for Central Province, including the rural and urban areas. In 2000, children (0-14 years) constituted 46.6 percent of the total population in Northern Province, which is a 1.1 percentage point increase from 45.1 recorded in 1990. Similarly, rural and urban populations mostly comprise the child population, with the rural proportion being higher (46.8 percent) than that for urban areas (45.2 percent). The proportion for the rest of the population declined, pointing towards a thin aged population (of about one and less percent).

Table 3.6 Age-Sex Percent Distribution of Population by Residence, Northern Province, 2000

Age Group	Northern			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
0-4	18.1	18.1	18.1	18.4	18.4	18.4	16.4	16.2	16.6
5-9	15.5	15.5	15.4	15.5	15.6	15.5	15.3	15.3	15.3
10-14	13.0	13.2	12.8	12.9	13.2	12.6	13.5	13.2	13.8
15-19	11.7	11.2	12.2	11.4	10.9	11.9	13.5	13.0	14.0
20-24	9.0	8.2	9.8	8.7	7.9	9.5	10.4	9.6	11.1
25-29	7.3	7.2	7.4	7.3	7.1	7.4	7.9	7.9	7.9
30-34	5.8	6.0	5.6	5.8	6.0	5.5	6.1	6.4	5.7
35-39	4.7	4.8	4.6	4.7	4.7	4.6	4.8	5.0	4.7
40-44	3.4	3.6	3.2	3.4	3.5	3.2	3.5	3.7	3.3
45-49	2.7	2.8	2.6	2.7	2.8	2.7	2.7	3.0	2.4
50-54	2.4	2.3	2.5	2.4	2.3	2.6	1.9	2.2	1.7
55-59	1.8	1.8	1.7	1.8	1.9	1.8	1.3	1.5	1.1
60-64	1.6	1.7	1.6	1.7	1.8	1.7	1.0	1.0	0.9
65-69	1.3	1.5	1.1	1.4	1.6	1.2	0.7	0.8	0.7
70-74	0.8	1.0	0.7	0.9	1.0	0.7	0.4	0.5	0.4

75-79	0.5	0.6	0.4	0.5	0.6	0.4	0.3	0.3	0.2
80-84	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.1
85+	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2
Total	100	100	100	100	100	100	100	100	100
Total Pop	1,258,696	629,976	628,720	1,087,080	544,453	542,627	171,616	85,523	86,093

Source: 2000 Census of Population and Housing



Source: 1990 and 2000 Censuses of Population and Housing

3.5.2. Age Dependency Ratio

Table 3.7 reveals that the overall dependency ratio for Northern Province in 2000 was 105 per 100 persons in the working group. Its overall dependency ratio is higher than the national ratio of 96 per 100 persons. The table further shows that the burden of dependency on the working age population increased during the 1990s. For instance, *overall* and *child* dependency ratios increased by around 5 persons from 100 and 94 dependants per 100 persons (respectively) in 1990 to 105 and 98 dependants respectively, in 2000.

Table 3.7 also reveals that during the 1990-200 period, persons in productive ages who reside in rural areas continue to bear a heavy burden of dependants compared to their urban counterparts, whose dependency between 1990 and 2000 has actually decreased. In 2000, for every 106 dependants per 100 persons in rural areas, there were 93 dependants for every 100 persons in urban areas.

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

Residence	Ratios	1990	2000
Zambia	Overall Dependency Ratios	95.1	96.2
	Child Dependency Ratios	87.2	90.9
	Aged Dependency Ratios	5.0	5.4
Northern	Overall Dependency Ratios	99.8	104.5
	Child Dependency Ratios	93.9	98.3
	Aged Dependency Ratios	6	6.2
Rural	Overall Dependency Ratios	100.62	106.5
	Child Dependency Ratios	94.02	99.8
	Aged Dependency Ratios	6.59	6.7
Urban	Overall Dependency Ratios	95.55	93.1
	Child Dependency Ratios	92.87	89.7
	Aged Dependency Ratios	2.68	3.4
District Chilubi *	Overall Dependency Ratios	95.67	110.4
	Child Dependency Ratios	89.58	103.9
	Aged Dependency Ratios	6.10	6.5
Chinsali	Overall Dependency Ratios	105.15	107.3
	Child Dependency Ratios	97.77	100.0
	Aged Dependency Ratios	7.39	7.3
Isoka	Overall Dependency Ratios	96.76	104.8
	Child Dependency Ratios	90.97	98.3
	Aged Dependency Ratios	5.80	6.5
Kaputa *	Overall Dependency Ratios	99.95	95.8
	Child Dependency Ratios	96.16	92.0
	Aged Dependency Ratios	3.78	3.8
Kasama	Overall Dependency Ratios	95.21	97.3
	Child Dependency Ratios	88.99	91.5
	Aged Dependency Ratios	6.22	5.8
Luwingu	Overall Dependency Ratios	100.49	106.2
	Child Dependency Ratios	93.74	99.1
	Aged Dependency Ratios	6.76	7.1
Mbala	Overall Dependency Ratios	102.67	106.2
	Child Dependency Ratios	97.28	99.1
	Aged Dependency Ratios	5.39	7.1
Mpika	Overall Dependency Ratios	103.11	103.9
	Child Dependency Ratios	97.56	98.0
	Aged Dependency Ratios	5.56	5.9
Mporokoso	Overall Dependency Ratios	104.76	110.6
	Child Dependency Ratios	97.18	103.1
	Aged Dependency Ratios	7.58	7.5
Mpulungu *	Overall Dependency Ratios	-	102.2
	Child Dependency Ratios	-	97.2
	Aged Dependency Ratios	-	5.0
Nakonde *	Overall Dependency Ratios	-	102.7
	Child Dependency Ratios	-	96.6
	Aged Dependency Ratios	-	6.0
Mungwi *	Overall Dependency Ratios	-	106.8
	Child Dependency Ratios	-	0.6
	Aged Dependency Ratios	-	7.9

Source: 1990 2000 Censuses of Population and Housing

Note: "*" " New Districts, "-" Not applicable as they refer to either new or non-existent districts.

Table 3.7 further shows that between 1990 and 2000, overall and child dependency ratios have increased for all districts except Kaputa and Mpika, where the overall and child dependency ratios decreased. Aged dependency increased in Isoka, Luwingu, Mbala and Mpika, while in the rest of the districts it either reduced or remained static. As stated earlier, dependency on the productive population in urban areas did not vary much between 1990 and 2000.

3.5.3 Household Headship

Household headship by various characteristics is presented in Table 3.8. The table shows that close to one in five households are female headed. The number of female headed households in the province is similar to the number recorded at national level (one in five households). Distinction of household heads by sex is important because it is often associated with aspects of household welfare. For instance, female-headed households are typically poorer than male-headed households (CSO, 1998 & 2003).

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

Residence/Marital Status District	Number of Household Heads	Total Percentage of Household heads	Sex of Head	
			Male	Female
Zambia	1,884,741	100.0	81.1	18.9
Residence				
Northern Province	258887	100.0	80.3	19.7
Rural	224733	100.0	80.5	19.5
Urban	34154	100.0	79.0	21.0
Marital Status				
Married	201334	100.0	95.2	4.8
Separated	9440	100.0	26.4	73.6
Divorced	10163	100.0	19.8	80.2
Widowed	29246	100.0	14.8	85.2
Never Married	8366	100.0	87.4	12.6
Living together/Cohabiting	338	100.0	42.0	58.0
District				
Chilubi	14341	100.0	72.9	27.1
Chinsali	25274	100.0	80.1	19.9
Isoka	19223	100.0	83.1	16.9
Kaputa	18520	100.0	84.4	15.6
Kasama	35020	100.0	77.9	22.1
Luwingu	16877	100.0	78.1	21.9
Mbala	30585	100.0	81.8	18.2
Mpika	30027	100.0	79.0	21.0
Mporokoso	14897	100.0	80.2	19.8
Mpulungu	14467	100.0	84.0	16.0
Mungwi	24351	100.0	80.6	19.4
Nakonde	15305	100.0	83.1	16.9

Source: 2000 Census of Population and Housing

Table 3.8 further shows that, headship of household for a female is more likely to occur when they are separated (73.6 percent), divorced (80.2 percent) and widowed (85.2 percent). Among the married (95.2 percent) and never married (87.4 percent) household heads, the majority are male. Amongst the districts, Chilubi exhibits the highest proportion of female heads of households with 27 percent, while Kaputa has the least at 15.6 percent.

3.5.4 Marital Status

Categorization of marital status in the 2000 Census included married, separated, divorced, widowed, never married and co-habiting which was not available in the 1990 Census. Table 3.9 presents the percentage distribution of marital status of population above 12 years by age, sex, residence and districts. The majority of

young males and females in the young age group 15-19 years have never married. However, over a third of the females (34.7 percent) compared to 4.2 percent of males are married.

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

Age Group	Married		Separated		Divorced		Widowed		Never Married		Cohabiting		Total Number of Cases	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
12-14	1.7	2.0	0.0	0.2	0.0	0.1	0.1	0.2	98.0	97.4	0.2	0.2	43515	41962
15 - 19	4.2	34.7	0.2	1.8	0.1	1.0	0.2	0.5	95.1	72.5	0.2	0.6	64545	71664
20 - 24	38.8	91.2	1.0	5.8	0.5	4.2	0.4	1.8	58.9	23.7	0.4	0.6	45416	57764
25 - 29	75.7	90.4	1.7	5.8	1.1	5.1	0.7	3.6	20.6	7.4	0.2	0.4	39381	44347
30 - 34	87.6	82.6	1.7	5.2	1.3	5.2	1.1	6.4	8.2	3.0	0.2	0.3	32332	33183
35 - 39	89.8	86.6	1.7	5.5	1.4	6.0	1.5	9.3	5.4	2.0	0.1	0.2	25103	27491
40 - 44	91.6	76.7	1.8	4.8	1.6	6.3	2.0	13.6	2.9	1.1	0.1	0.1	18606	19103
45 - 49	92.0	77.8	1.7	4.7	1.6	7.0	2.1	18.0	2.6	0.9	0.1	0.2	14405	15654
50 - 54	89.8	81.5	2.2	5.2	2.3	8.0	3.8	30.3	1.8	0.7	0.1	0.1	11758	14791
55+	86.5	41.1	1.9	3.1	1.9	5.2	8.4	43.6	1.2	0.6	0.1	0.1	38303	35859
Size	175,755	199,450	3,792	12,629	3,060	12,877	5,654	32,356	144,467	103,431	636	1,075		

Source: 2000 Census of Population and Housing

It is a common practice for males to marry later than females. Though not collected in 2000 census, the reported average age at marriage for Northern Province in 1990 was 24.9 years for males and 20.2 years for females (CSO, 1995). Table 3.9 shows that about nine in every ten females in their early 20s are married compared to slightly over a third of males of the same age. This could be due to another common practice is that of males re-marrying more frequently than females, thus their low proportions in the separated, divorced and widowed categories. For instance, Table 3.9 shows that from age 30, widows outnumber widowers by a range of 5 to 35 percentage points. In the oldest age group (55 and above), almost one in ten men compared to about one in two women are widowed.

3.5.5 Ethnicity and Citizenship

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

3.5.5.1 Ethnicity

Table 3.10 shows that the population in Northern Province mostly constitutes persons of African origin, with 98.9 percent. The American, Asian, European and 'Other' ethnic groups make up the remaining 1.1 percent. This is similar to the national with 99.5 percent of the population being persons of African origin. This ethnic composition, dominated by Africans, has reduced slightly from 1990 when the proportion of Africans was 99.9 percent. 'Other' ethnic groups made up the remaining 0.1 percent.

Rural and urban comparison shows a higher presence of non-African ethnic groups in urban than rural areas. It is apparent that there are more males than females of non-African origin.

Table 3.10: Ethnic Composition of the Population of Northern Province, 2000

Residence/Sex		Ethnic Group						Total
		African	American	Asian	European	Other	Not Stated	
Zambia	Male	4,572,026	691	6,272	3,462	11,839	0.0	4,594,290
	Female	4,722,128	507	5,576	2,720	12,204	0.0	4,743,135
	Both sexes	9,294,154	1,198	11,848	6,182	24,043	0.0	9,337,425
Northern	Male	567,360	48	60	70	5,809	0.0	573,347
	Female	594,551	28	61	37	6,292	0.0	600,969
	Both sexes	1,161,911	76	121	107	12,101	0.0	1,174,316
Percent of total population		98.94	0.01	0.01	0.01	1.03	0.0	100
Rural	Male	488,476	48	60	70	5,809	0.0	494,463
	Female	511,613	17	37	17	5,972	0.0	517,656
	Both sexes	1,000,089	45	66	51	11,476	0.0	1,011,727
Percent of total population		98.85	0.00	0.01	0.01	1.13	0.0	100
Urban	Male	78,884	20	31	36	305	0.0	79,276
	Female	82,938	11	24	20	320	0.0	83,313
	Both sexes	161,822	31	55	56	625	0.0	162,589
Percent of total population		99.53	0.02	0.03	0.03	0.38	0.0	100

Source: 2000 Census of Population and Housing

3.5.5.2 Citizenship

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

Table 3.11 presents information on the citizenship of the population in Northern Province. It is most apparent that the majority of foreign citizens in the province hail from the Democratic Republic of Congo (DRC) at 66 percent, followed by those from Malawi (4 percent) and Zimbabwe (2 percent). Amongst those who stated their citizenship in the 1990 Census, the DRC had the highest proportion (8 percent) of citizens in Northern Province. This shows an actual increase in the number of foreign citizens from the DRC between 1990 and 2000. The influx of foreigners from the DRC could be mostly attributed to refugees fleeing from civil strife in these countries.

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

Country/Region	Percent 1990	Population 2000	Percent 2000
Zimbabwe	2	106	1.85
Malawi	3.4	251	4.38
South Africa		43	0.75
Other Southern Africa	0.2	9	0.16
Other Western Africa	1.3	56	0.98
Kenya		10	0.17
Tanzania	11	-	
Uganda		11	0.19
Other Eastern Africa	1.5	24	0.42
Congo		73	1.27
Zaire (Congo DR)	7.7	3812	66.46
Other Central Africa		20	0.35
Northern Africa	0.7	29	0.51
United Kingdom		15	0.26
Germany (East and West)		20	0.35
Other Europe	3.4	35	0.61
United States Of America		16	0.28
Canada		11	0.19
Other Americas	0.4	11	0.19
China		5	0.09
India		22	0.38
Other Asia & Oceania	0.8	10	0.17
Not Stated	67.6	1147	20.00

% Total	100		100
Total foreign Citizens	7,356	5,736	
Percent of Foreign Population	0.9		0.49

Source: 1990 and 2000 Census of Population and Housing

Note: Nationals less than five (5) were grouped under 'Other' totals.

3.6 Economic Characteristics

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

Table 3.12 Summary of Economic Characteristics, Northern Province, 2000

Characteristics	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Total Population (12 Yrs and Above)	695,441	333,513	361,928	595,481	285,131	310,350	99,960	48,382	51,578
Current Labour Force Size	403,365	221,435	181,930	355,720	192,702	163,018	47,645	28,733	18,912
Current Participation Rate	58.0	66.4	50.3	59.7	67.6	52.5	47.7	59.4	17.3
Age Dependency Ratio	104.5	109.9	91.4	106.5	112.0	91.0	93.1	97.7	93.6
Economic Dependency Ratio	72.4	50.6	98.9	67.4	48.0	90.4	109.8	68.4	172.7

Source: 2000 Census of Population and Housing

Table 3.12 also shows that of the total population in Northern Province, 695,441 comprise those over 12 years, commonly referred to as the working age population. Majority of these are found in rural than urban areas (595,481 vs. 99,960) and are mostly women. Despite dominance of females in the working age population, majority of these are considered economically inactive due to their classification as full-time homemakers. In all, fifty eight percent of the total working age population in the province, are economically active or make up the labour force 66.4 percent for males and 50.3 percent for females.

In general, Table 3.11 also shows that age dependency is higher for persons in rural than urban areas while the reverse is true for economic dependency ratios. Notably, females in the productive age, particularly those in urban areas, tend to experience more stress from persons in the non-productive age groups than the male counterparts. The economic dependency ratio for females in urban areas is almost twice that of rural areas, 173 vs. 90.

3.7 Summary

Northern Province's de jure or simply 'true' or resident population recorded in the 2000 census was 1,258,696. However, the de facto population adopted for analytical purposes in this chapter and the rest of the report was 1,174,316 of which 51.2 percent are females. The population has continued to grow from an average annual growth rate of 2.0 percent between 1969-1980 to 3.2 percent between 1980-1990 then at a declining average annual growth rate of 3.1 percent during the last inter-censal period of 1990-2000. The proportion living both in rural and urban areas in the past decade has remained constant.

An Analysis of the age-sex distribution indicates that Northern Province has overtime maintained a Young population. The proportion of those below the age of 15 years has slightly changed between 1990 and 2000, i.e., 45.1 to 46.6 percent. Population pyramids for 1990 and 2000 indicate a change in the age-sex structure, which could be attributed to increased mortality, particularly for adults. This has been observed by population gaps in 2000 for adults in the 20s and 30s who may be more susceptible to terminal illnesses (e.g. AIDS) as well as complications associated with a declining economy.

Headship of households is still dominated by males, with only one in five being female household heads. In absolute terms, there are close to three times as many heads of household in rural than urban areas. The overall dependency ratio as of 2000 Census was 105 per 100 persons in the economically active group (15-64 years). It has been noted that dependency on productive persons increased during the 1990s. Summary economic characteristics of the population give a provincial labour force size of 403,365, most of which is found in rural areas.

In addition, participation rates for males are higher than females, 66 and 50 percent, respectively. Finally, the chapter indicates that in comparison to rural counterparts, the economic burden on productive persons in urban areas is higher.

Chapter 4

LANGUAGE OF COMMUNICATION AND ETHNICITY

4.1 INTRODUCTION

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

There are seven languages or language clusters that are used in Zambia besides English for official purposes such as broadcasting (both on radio and television), literacy campaigns and the official dissemination of information. These are (in alphabetical order), Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga. They represent language clusters around which exist several dialects. Although these languages are taught in schools in some provinces, the official language of instruction in schools is English. The 2000 Census of Population and Housing collected information on the predominant language of communication of an individual in the cluster as well as the second language of communication. The former referred to the language a person uses most frequently in their day-to-day communication. The second language is the next frequently used language of communication. The matter of second language shows the phenomenon of trans-tribe of some languages in that they are spoken by other tribes.

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

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

4.2 Predominant Language of communication

4.2.1 Provincial distribution

The 17 most spoken languages in the Northern Province are displayed in Table 4.1. The predominant language of communication in Northern Province in the year 2000 was Bemba with over half of the population using it.

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

Predominant Language of Communication	Total	Rural	Urban
Bemba	59.6	56.9	11.9
Lala	0.4	0.4	0.1
Bisa	6.6	7.5	0.3
Ushi	0.1	0.1	0.1
Tabwa	2.3	2.6	0.1
Mukulu	0.1	0.1	0
Tonga	0.1	0.1	0.5
Lozi	0.1	0	0
Nyanja	0.2	0.1	3.5
Lungu	4.6	4.9	1.4
Mambwe	8.5	9	3
Namwanga	8.8	9.2	2.6
Wina	0.2	0.2	0
Tambo	0.2	0.2	0
Tumbuka	2.4	2.6	0.6
Yombe	0.1	0.1	0
English	0.2	0.1	16.5
Other Language	5.5	5.9	59.4
Total	100	100	100
Population	1,088,565	936,443	152,122

Source: 2000 Census of Population and Housing

The other most spoken languages in Northern Province in descending order are Namwanga (8.8 percent), Mambwe (8.5 percent), Bisa (6.6 percent), Lungu (4.6) and Tumbuka, which is spoken by 2.4 percent of the population. The proportion of the population speaking these 6 languages (90.5 percent) in 2000 has not changed much since the last census in 1990 when 91.8 percent of the population reported the same languages as their predominant languages of communication.

It is interesting to observe that the aforementioned languages are more spoken in rural than urban areas while English is more spoken in urban areas than in rural areas depicting a higher prevalence of people with formal education in urban areas than in rural areas.

4.2.2 District Distribution

At District Level, Bemba is mostly used in Chinsali, Luwingu, Kasama, Mporokoso and Mungwi as a predominant language of communication. It is worth noting here that the indigenous languages in these districts belong largely to the Bemba language group. In Chilubi, close to three quarters of the people use Bisa as their predominant language of communication while almost two thirds of the population of Mbala speak Mambwe. Furthermore, over half of the people of Mpulungu speak Lungu as the predominant language of communication. Most of the remaining languages are generally spoken by less than 2 percent of the population in each district.

In comparison with other districts, Isoka has a wide range of languages spoken within its confines. Close to one-third of the population speak Namwanga, and another third speak Tumbuka and a little less than a tenth speak Bemba as the main language of communication.

It is worthy to note that whereas other African languages are virtually insignificant as a predominant language of communication throughout Northern Province, Kaputa and Nakonde are exceptions. This is largely because

Kaputa borders with the Democratic Republic of Congo (DRC) while Nakonde also borders with Tanzania. Therefore, Swahili is most likely to be used in these two border towns.

Throughout the Northern Province, less than 0.4 percent of the population use English as their predominant language of communication. Amongst the highest are Kasama (i.e. the Provincial Headquarters) and Mpika with 0.3 percent of the population using English as their predominant language of communication. Table 4.2 gives more information.

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

Predominant Language	Total	Chilubi	Chinsali	Isoka	Kaputa	Kasama	Luwingu	Mbala	Mpika	Mporokoso	Mpulungu	Mungwi	Nakonde
Bemba	59.6	20	90.2	8.7	61.6	93.4	90.2	17.6	68	94.3	20.2	94.3	9.7
Lala	0.4	0	0	0	0	0	0	0.1	3.1	0	0	0	0
Bisa	6.6	74.4	0.2	0	0	0.1	1.8	0	22.8	0	0	0	0
Ushi	0.1	0.2	0	0	0.1	0	0.5	0	0	0	0	0	0
Tabwa	2.3	0	0	0	31	0	0	0	0	0.1	1.4	0	0
Mukulu	0.1	0	0	0	0	0	1.7	0	0	0	0	0	0
Tonga	0.1	0	0.1	0.1	0	0.1	0	0.2	0.2	0	0.1	0	0.3
Lozi	0.1	0	0	0	0	0.1	0.1	0.1	0.1	0	0.1	0	0.1
Nyanja	0.2	0.1	0.1	0.2	0.1	0.4	0.2	0.4	0.3	0.2	0.3	0.1	0.3
Lungu	4.6	0	0	0	0.6	0.1	0	10.9	0	0.6	61.1	0.1	0.1
Mambwe	8.5	0	0.1	0.3	0.3	0.6	0.1	63.9	0.2	0.2	11	0.6	1.6
Namwanga	8.8	0	4.7	38.5	0.1	0.5	0.1	1.7	0.3	0.1	0.9	0.6	81.8
Wina	0.2	0	0	2.1	0	0	0	0	0	0	0	0	0.3
Tambo	0.2	0	0	2.1	0	0	0	0	0	0	0	0	0.1
Tumbuka	2.4	0	0.2	28.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.6
Yombe	0.1	0	0	0.8	0	0	0	0	0	0	0	0	0
English	0.2	0	0.1	0.2	0.1	0.3	0.1	0.2	0.3	0.1	0.1	0.1	0.1
African	0	0	0	0	0.1	0	0	0	0	0	0	0	0.3
Other Language	5.5	5.3	4.3	18.8	5.9	4.2	5	4.7	4.5	4.3	4.7	4.1	4.7
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Population	1,088,565	55,696	110,113	85,566	76,297	153,238	67,086	129,260	126,373	65,716	57,219	97,678	64,323

Source: 2000 Census of Population and Housing

Predominant Language Groups

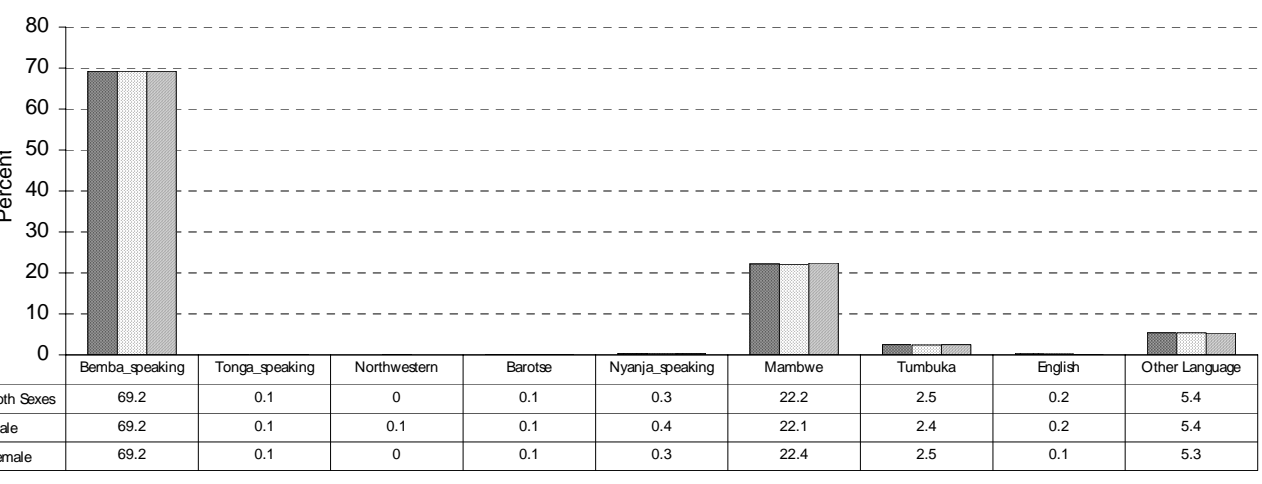
More than two thirds of all languages spoken in Northern Province are in the Bemba language group. This pattern is reflected in the rural area as well. In the urban areas however, only a little more than a tenth of the population speak a language in this group. After Bemba group, the other widely spoken languages are in the Mambwe group (22.2 percent) and Tumbuka group (2.5 percent). Comparatively, languages belonging to the other language groups (North-Western, Barotse, Tonga and English) are more predominant in urban than in rural areas of the province. Also, males tend to speak twice as much of English than females.

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

Predominant Language of communication	Total Both Sexes	Rural			Urban				
		Male	Female	Both Sexes	Male	Female	Both Sexes		
Bemba_speaking	69.2	69.2	69.2	67.8	67.8	67.7	12.6	12.3	12.9
Tonga_speaking	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.5	0.7
Northwestern	0	0.1	0	0	0	0	0.2	0.2	0.2
Barotse	0.1	0.1	0.1	0	0	0	0.3	0.3	0.3
Nyanja_speaking	0.3	0.4	0.3	0.2	0.2	0.2	3.9	3.9	3.9
Mambwe	22.2	22.1	22.4	23.5	23.4	23.6	6.9	6.5	7.3
Tumbuka	2.5	2.4	2.5	2.7	2.7	2.8	0.6	0.6	0.7
English	0.2	0.2	0.1	0.1	0.1	0.1	16.5	20.4	12.9
Other Language	5.4	5.4	5.3	5.6	5.7	5.5	58.4	55.3	61.1
Total	100	100	100	100	100	100	100	100	100
Population	1,088,565	530,518	570,031	936,443	456,486	479,957	152,122	74,032	78,090

Source: 2000 Census of Population and Housing

Figure 4.1 Predominant Language Group by Sex, Northern Province, 2000

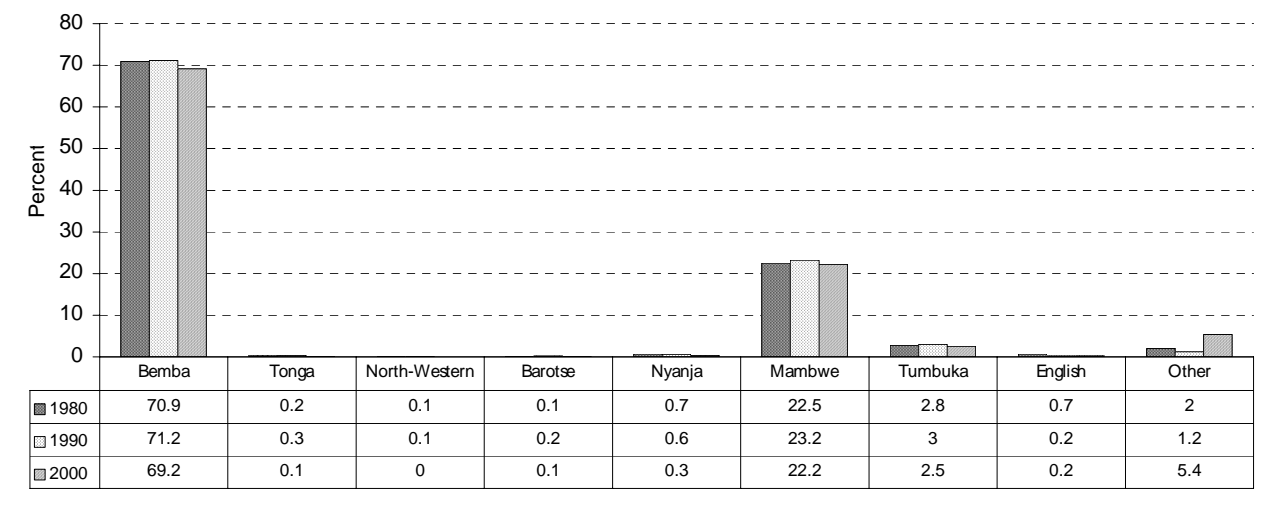


Source: 2000 Census of Population and Housing

Trends in Language Groups' Distribution, 1980 – 2000

Figure 4.2 and Table 4.4 show trends in the percentage share of each language group for the period 1980–2000. The Bemba group has remained predominant throughout the last 20 years followed by Mambwe. The Bemba group though, has shown the largest drop in usage of up to 2 percentage points followed by the Mambwe group, which reduced by 1 percentage point.

Figure 4.2 Predominant Language Group by Census Year, Northern Province, 2000



Source: 2000 Census of Population and Housing

Table 4.4: Predominant Language Groups by Census year, Northern Province, 1980 – 2000.

Language group	Percentage of Total Population		
	1980	1990	2000
Bemba	70.9	71.2	69.2
Tonga	0.2	0.3	0.1
North-Western	0.1	0.1	0.0
Barotse	0.1	0.2	0.1
Nyanja	0.7	0.6	0.3
Mambwe	22.5	23.2	22.2
Tumbuka	2.8	3.0	2.5
English	0.7	0.2	0.2
Other	2.0	1.2	5.4
Total	100	100	100
Population	625,341	807,095	1,088,565

Source: 2000 Census of Population and Housing

4.5 Second Language of Communication

Northern Province has a fairly large proportion of people who speak more than one language. During the 2000 Census of Population and Housing, data was collected on the second language of communication for each individual besides his or her predominant language of communication. From Table 4.5 it must be noted that only about 28 percent (303,835 people) of the total population reported use of a second language.

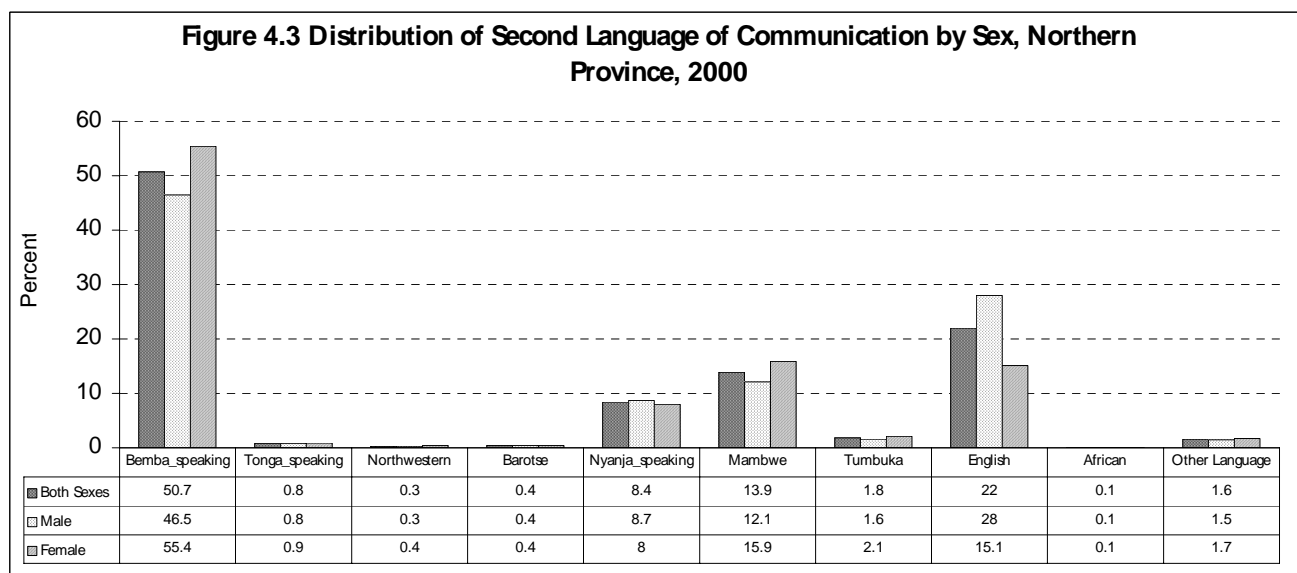
The distribution of the second language of communication follows largely the same pattern as that of the predominant language. The five most second language of communication in descending order are Bemba (46.8 percent), English (22 percent), Nyanja (7.7 percent), Mambwe (5.8 percent) and Namwanga (4.1 percent). The five main languages stated here represent more than four-fifths of the population that reported speaking a second language of communication in the 2000 Census of Population and Housing.

Table 4.5: Second Language by Residence, Northern Province, 2000

Second Language of Communication	Total	Rural	Urban
Bemba	46.8	51.7	28.4
Lala	0.6	0.7	0.3
Bisa	1.9	2.2	0.7
Ushi	0.2	0.2	0.2
Lamba	0.1	0.1	0.2
Tabwa	0.8	1	0.2
Tonga	0.7	0.6	1.2
Kaonde	0.2	0.2	0.3
Lozi	0.4	0.3	0.7
Chewa	0.2	0.2	0.2
Nsenga	0.2	0.2	0.3
Ngoni	0.1	0.1	0.2
Nyanja	7.7	7.5	8.4
Kunda	0.2	0.2	0.1
Lungu	3.7	3.8	3.3
Mambwe	5.8	5.5	7
Namwanga	4.1	3.6	6.1
Tambo	0.2	0.3	0
Tumbuka	1.6	1.7	1.4
Senga	0.1	0.1	0.1
English	22	17.4	39.4
African	0.1	0.1	0.1
Other Languages	2.3	2.3	1.2
Total	100	100	100
Population	303,835	240,006	63,829

Source: 2000 Census of Population and Housing

The distribution of the Second language groups by sex and residence is presented in Figure 4.3 and Table 4.6. The language groups present a picture similar to that of the predominant language groups. There are more than twice as many people that use English as a second language of communication in urban areas than there are in rural areas. This may be attributed to the fact that it is the nation's official language and as such people with formal education are required to use it. Furthermore, results show that more males than females speak English suggesting a disparity in formal education between males and females.



Source: 2000 Census of Population and Housing

Table 4.6: Second Language by Sex and Residence, Northern Province, 2000

Second Language of communication	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bemba-speaking	50.7	46.5	55.4	56.2	51.5	61.6	30	27.3	33
Tonga-speaking	0.8	0.8	0.9	0.7	0.7	0.7	1.4	1.1	1.7
Northwestern	0.3	0.3	0.4	0.3	0.3	0.3	0.5	0.4	0.6
Barotse	0.4	0.4	0.4	0.3	0.3	0.3	0.8	0.7	0.9
Nyanja-speaking	8.4	8.7	8	8.1	8.7	7.4	9.3	8.6	10.1
Mambwe	13.9	12.1	15.9	13.2	11.5	15.2	16.5	14.5	18.6
Tumbuka	1.8	1.6	2.1	1.9	1.7	2.1	1.5	1.4	1.7
English	22	28	15.1	17.4	23.5	10.2	39.4	45.3	32.9
African	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0
Other Language	1.6	1.5	1.7	1.8	1.6	2.1	0.5	0.6	0.5
Total	100	100	100	100	100	100	100	100	100
Population	303,835	162,585	141,250	240,006	129,275	110,731	63,829	33,310	30,519

Source: 2000 Census of Population and Housing

The other language groups showing dominance in magnitude in the rural part of Northern Province are Mambwe, and Nyanja. These two language groups plus the Bemba language group account for more than three quarters of the population speaking a second language. The ethnic groups in the said language groups principally reside adjacent to each other geographically.

4.6 ETHNICITY

In the 2000 Census of Population and Housing, the same classification procedure was used for languages and tribes. As such, seven broad groups of tribes were identified. These are Bemba group, Tonga group, North-Western group,

Barotse group, Nyanja or Eastern Group, Mambwe group and the Tumbuka group. The Bemba group includes all tribes of Luapula Province, some tribes in Central and Copperbelt Provinces and all but those tribes belonging to the Mambwe group in Northern Province. The Tonga group consists of all the tribes of Southern Province in addition to Lenje from Central Province and also the Soli and Gowa tribes from Lusaka Province. The North-Western and Barotse groups consist of all the tribes of the North-Western and Western provinces respectively. The Nyanja group (getting its name from the lingua franca from the languages spoken by the people in its group) consists of some tribes of the Eastern Province including the Chikunda of Lusaka Province. Lungu, Mambwe Namwanga, Wina and Tambo make up the Mambwe group while the Tumbuka group is made up of Tumbuka, Senga and the Yombe on the northern part of Eastern Province.

Table 4.7 and Figure 4.4 show the 22 predominant ethnic groups in Northern Province as reported in the 2000 Census of Population and housing are displayed. In descending order, the 7 largest ethnic groups are Bemba (50.6 percent), Namwanga (11.1 percent), Mambwe (10.6 percent), Bisa (8.3 percent), Lungu (5.6 percent), Tabwa (4.4 percent) and Tumbuka at 3.2 percent of the total population.

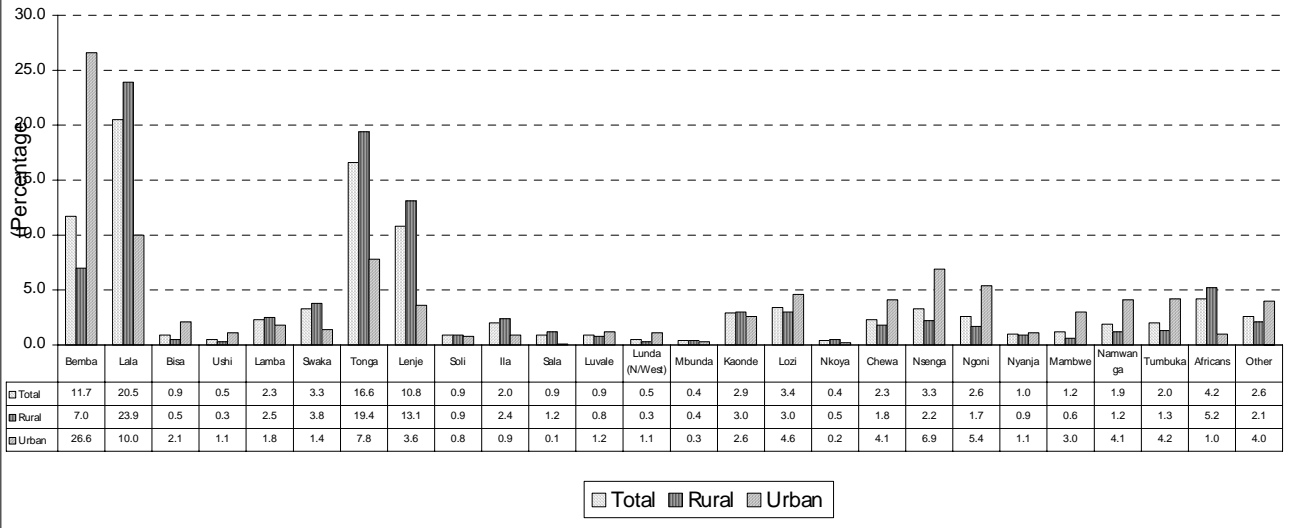
Table 4.7: Ethnic groups by Residence, Northern Province, 2000

Ethnicity	Total	Rural	Urban
Bemba	50.6	50.0	54.2
Lunda (Luapula)	0.2	0.2	0.4
Lala	0.6	0.5	0.9
Bisa	8.3	9.2	2.7
Ushi	0.3	0.2	0.9
Lamba	0.1	0.1	0.4
Tabwa	4.4	5.0	0.8
Mukulu	0.8	0.9	0.0
Tonga	0.4	0.2	1.5
Kaonde	0.1	0.1	0.4
Lozi	0.3	0.1	1.2
Chewa	0.2	0.1	0.9
Nsenga	0.3	0.2	0.9
Ngoni	0.3	0.2	1.1
Nyanja	0.2	0.1	0.4
Lungu	5.6	5.9	4.1
Mambwe	10.6	10.5	11.2
Namwanga	11.1	11.0	11.7
Wina	0.2	0.2	0.1
Tambo	0.2	0.2	0.1
Tumbuka	3.2	3.1	3.6
Africans	0.5	0.5	0.3
Other	0.9	1.2	0.6
Total	100	100	100
Population	1,174,316	1,011,727	162,589

Source: 2000 Census of Population and Housing

It is worth noting here that the largest ethnic groups above are from the Northern and Eastern provinces and represent the majority of ethnic groups in Northern Province. The ethnic groups of these two provinces share a similar history of wars and alliances.

Figure 4.4: Ethnic Groups by Residence, Northern Province, 2000



Source: 2000 Census of Population and Housing

In terms of residence, the three Eastern Province ethnic groups (Chewa, Nsenga, and Ngoni) are more prevalent in urban than in rural areas of the province.

Broad Ethnic Groups

When broad ethnic groups are analyzed by looking at their distribution by sex and residence (see Table 4.8 and Figure 4.5). The Bemba ethnic group accounts for close to two thirds of all the tribes in Northern Province followed by the Mambwe Group with more than a quarter of the whole population. The distribution of the people of the Bemba group by sex shows very little variability from the distribution by residence (see Figure 4.5 for details).

Figure 4.5 Broad Ethnic Groups by Sex, Northern Province, 2000

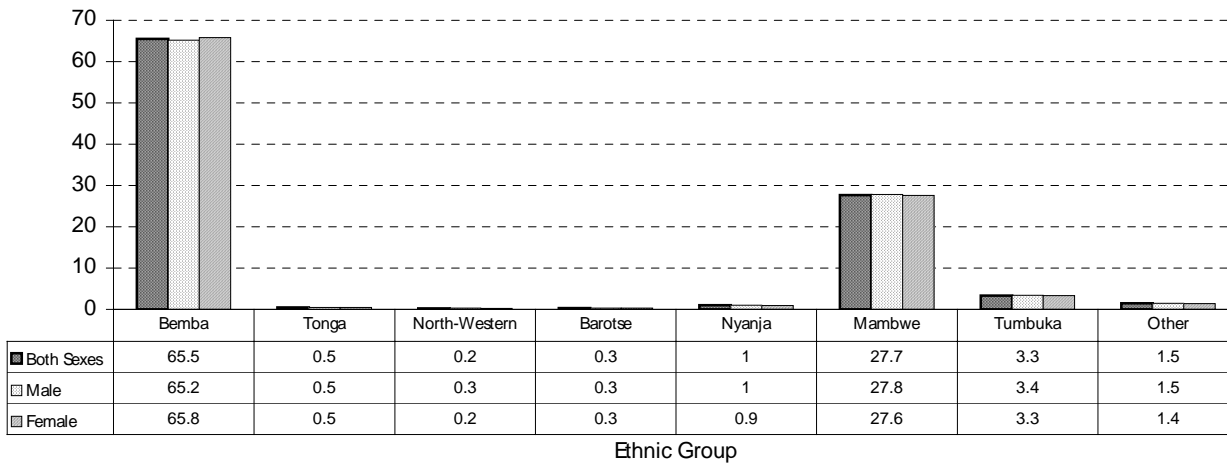


Table 4.8: Broad Ethnic Groups by Sex and Residence, Northern Province, 2000

Ethnicity	Total			Rural			Urban		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Bemba	65.5	65.2	65.8	66.3	66.1	66.5	60.6	59.8	61.4
Tonga	0.5	0.5	0.5	0.2	0.3	0.2	1.9	2.0	1.9
North-Western	0.2	0.3	0.2	0.1	0.1	0.1	1.0	1.0	0.9
Barotse	0.3	0.3	0.3	0.1	0.2	0.1	1.3	1.3	1.2
Nyanja	1.0	1.0	0.9	0.6	0.6	0.5	3.4	3.6	3.2
Mambwe	27.7	27.8	27.6	27.8	27.8	27.7	27.1	27.2	27.0
Tumbuka	3.3	3.4	3.3	3.2	3.2	3.2	3.9	4.1	3.7
Other	1.5	1.5	1.4	1.7	1.7	1.7	0.8	1.0	0.7
Total	100	100	100	100	100	100	100	100	100

Population	1,174,316	573,347	600,969	1,011,727	494,071	517,656	162,589	79,276	83,313
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Source: 2000 Census of Population and Housing

4.8 Summary

In 2000, 1,088,565 persons reported having a predominant language of communication. Bemba is the widely spoken language in Northern Province with over half of the whole population speaking it. Namwanga is the next most widely spoken language at 8.8 percent closely followed by Mambwe at 8.5 percent. More than a quarter of the Population in Northern Province (303,835 persons) reported to speak a second language.

The distribution of languages by residence shows that of the predominant languages of communication, Bemba is more widely used in rural areas as is Namwanga and Mambwe. There are five times as many people that speak Bemba in rural areas than there are in urban areas; 4 times as many people speak Namwanga in rural areas than in urban areas and 3 times as many people speak Mambwe in rural areas than in urban areas; and interestingly 160 times more people speak English in urban areas than in rural areas showing an extremely significant concentration of people with formal education in the urban areas as opposed to the rural areas.

EDUCATION CHARACTERISTICS OF THE POPULATION

5.1 Introduction

Education plays a fundamental role in the overall development of nations. It is for this reason that education has been declared by many countries as a human rights issue as attested to by the 1990 Jomtien declaration on Education For All (EFA2000) and 1990 Convention on the Rights of the Child. As such the Zambian government has recognized the important role of education in grooming morally and intellectually upright individuals with the intentions of using the acquired skills and knowledge for the overall development of the country.

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

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

5.2 Census undertaking and Education

There are four main sources of education statistics in Zambia:

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

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

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

- Literacy, i.e whether an individual can read and write,
- School attendance
- Educational attainment
- Educational qualifications
- Academic qualification, and
- Fields of study.

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

5.3 CONCEPTS AND DEFINITIONS

- **EDUCATIONAL SYSTEM**

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

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

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

In Zambia, formal education is mainly based on a three-tier system, which starts with primary education from grade 1 to 7, followed, by secondary education from grade 8 up to 12. The next level relate to tertiary education, which basically include college and university education. Selective examination of pupils in grades 7, 9 and 12 inhibit universal progression of pupils from one level to another. The primary and secondary cycles last for 7 and 5 years respectively. Alternatively, the duration of tertiary education varies widely depending on the education program load and certification requirements. These three levels constitute what has come to be known as formal education system.

According to the 1996 education policy, the government intends to scrap off grade 7 examination by 2015 so that there is universal progression up to grade 9; hence the concept of basic education which comprises the first 9 grades of formal education in Zambia.

In addition to primary and secondary education, the last two decades saw the mushrooming of community schools and some institutions offering early childhood education mainly in urban areas. Some of these schools actually enroll children in formal grades. This development has made it increasingly difficult to monitor school enrolment and attendance since these schools fall outside the data collection and monitoring system implemented by the Ministry of education. In addition to early childhood institutions, there has been an increase in community schools which mainly cater for school drop-outs and orphans. Some of the major characteristics of community schools are that they are near to homes of learners, they are not demanding in terms of entry requirements and that they are community driven. The enrolment levels in these schools have tremendously increased from less than 10,000 in 1996 to over 50,000 learners by 2000 (ZCSS, 1999).

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

- **SCHOOL ATTENDANCE**

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

- Lower primary (Lower basic) grades 1,2,3 and 4 correspond to pupils aged 7 to 10 years.
- Upper primary (Middle basic) grades 5,6 and 7 correspond to pupils aged 11 to 13 years.
- Junior secondary (Upper basic) grades 8 and 9 correspond to pupils aged 14 and 15 years.
- Senior Secondary (High School) grades 10,11 and 12 correspond to pupils aged 16 to 18 years.
- Students above the age of 18 years are, by expectation, supposed to be in higher institution of learning.

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

- **GROSS SCHOOL ATTENDANCE RATE**

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

- **NET SCHOOL ATTENDANCE RATE**

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

- **ACADEMIC EDUCATION COMPLETED**

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

- **LITERACY**

Literacy refers to the ability to read and write in any language. Members of the population who are able to read and write are said to be Literate. General literacy rate refers to the proportion of the population aged 5 years and above who can read and write. Adult Literacy rate refers to the percentage of the population aged 15 years and over who can read and write. Youth Literacy Rate is in this case defined as the proportion of the population aged 15 to 24 years who are literate.

5.4 Literacy Rate

General Literacy Rate refers to the proportion of the population aged 5 years and above who can read and write. Adult Literacy Rate refers to the percentage of the population aged 15 years and above who can read

and write. Youth Literacy Rate is in this case defined as the proportion of the population aged 15 to 24 years who are literate.

5.4.1 Literacy Levels for the Population Aged 5 years and above

A literate nation is more likely to develop than an illiterate one since the former is well informed. Table 5.1 shows that in the year 2000 the literacy rate for the population aged 5 years and above was low at 47.0 percent for the whole Northern Province. This is not much different to the 1990 level of 47.5 percent. The literacy rate for the province in 2000 is below the national literacy rate of 55.3 percent for the population aged 5 years and above. Results also show that the problem of illiteracy is still more common among the female than their male counterpart for both censuses. The table reveals the literacy rates for the female population is about 5 percentage points lower than that for the male population.

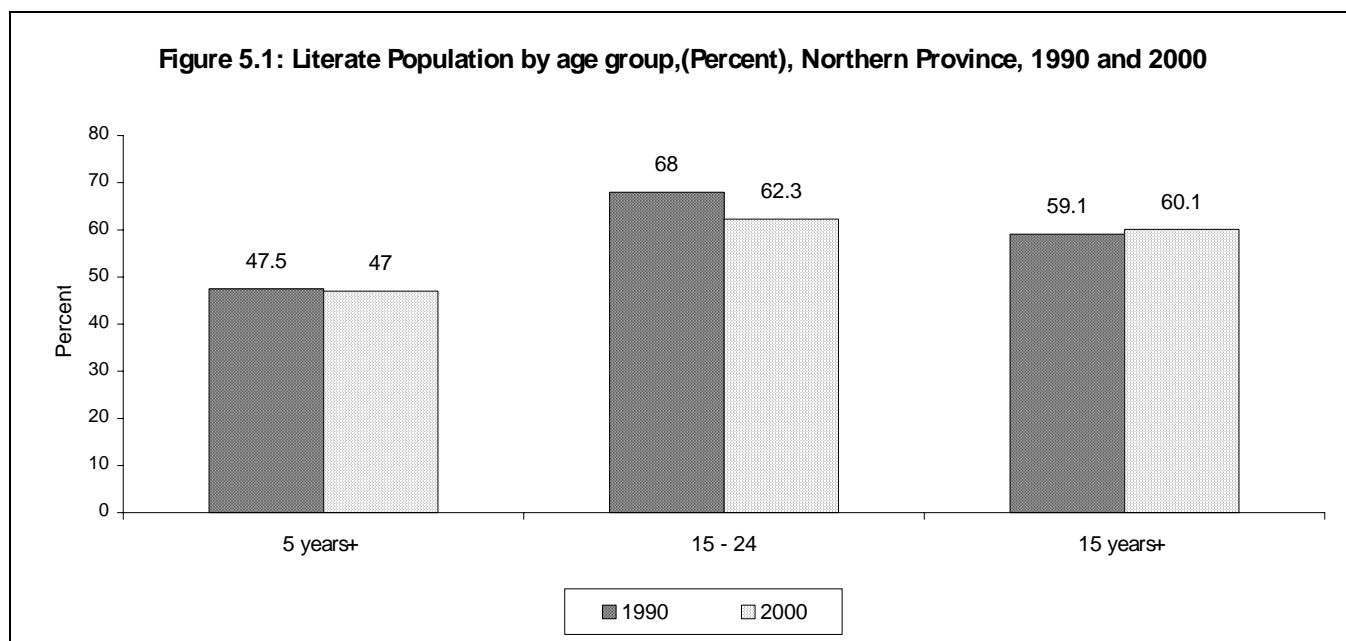
The difference in literacy levels is even higher between the rural and urban populations. While around two-thirds (68.7%) of the urban population was literate, just over two-fifths (43.3%) of the rural population were literate in 2000. There is not much difference in the levels of literacy between 1990 and 2000.

Table 5.1: Literacy Rates by age group, sex and district, Northern Province, 1990 – 2000

Sex, Residence and District	5+	15 - 24	15+	Population
Zambia (1990)	55.3	74.9	66.0	6,181,285
Northern Province (1990)				
Both Sexes	47.5	68.0	59.1	707,421
Male	55.5	74.7	72.5	339,597
Female	40.1	62.2	47.3	367,824
Rural	44.2	64.5	55.5	606,753
Urban	67.3	87.0	80.7	100,668
Zambia (2000)	55.3	70.1	67.2	7,680,705
Northern Province (2000)				
Both Sexes	47.0	62.3	60.1	962,185
Male	55.3	71.7	73.4	462,546
Female	39.3	54.3	48.1	489,639
Rural	43.3	58.0	56.4	812,643
Urban	68.7	84.0	81.9	139,542
District (2000)				
Chilubi	58.8	47.4	46.2	46,989
Chinsali	47.1	66.7	65.4	96,542
Isoka	49.5	67.8	61.9	74,723
Kaputa	48.5	54.0	54.5	66,514
Kasama	42.4	72.1	69.5	135,732
Luwingu	56.6	59.8	57.1	59,325
Mbala	45.0	54.4	53.8	112,697
Mpika	41.6	65.7	62.8	110,597
Mporokoso	49.5	72.8	70.3	57,553
Mpulungu	54.0	50.8	53.4	49,762
Mungwi	40.8	55.7	53.8	85,606
Nakonde	41.8	64.7	60.0	56,145

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

Figure 5.1: Literate Population by age group,(Percent), Northern Province, 1990 and 2000



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

Comparison of literate rates for districts in Northern Province reveals that Chilubi District had the highest literacy rate, in the province, of 58.8 percent, followed by Luwingu (56.6 percent), and Mpulungu with 54.0 percent of persons over 5 years old literate. Districts with the lowest literacy rates include Mungwi District (40.8 percent), Mpika (41.6 percent) and Nakonde with 41.8 percent of persons literate.

5.4.2 Literacy Levels for the population aged 15 – 24 years (Youth Literacy)

Youth literacy rate had declined from 68 percent in 1990 to 62.3 percent in 2000 (Figure 5.1). The drop in the proportion of the population aged 15 to 24 years was more drastic among female (from 62.2 to 54.2 percent) than the males (from 74.7 to 71.7 percent). The youth literacy rate for the province in 2000 is below the national youth literacy rate of 70.1 percent.

The problem of youth illiteracy is still more of a rural than urban phenomena. By the year 2000, 58 percent of the youths in rural areas compared to 84 percent in urban areas were literate. The youth literacy rate in rural areas dropped from 64.5 percent to 58.0 percent between 1990 and 2000. The rate also dropped in urban areas by 3-percentage points between 1990 and 2000.

Chilubi District had the lowest youth literacy rate followed by Mpulungu, Kaputa and Mbala District. The districts with the highest proportion of literate youths are Mporokoso and Kasama districts.

5.4.3 Literacy Levels for the Population Aged 15 Years and above (Adult literacy rates)

Adult literacy rate had slightly increased from 59.1 percent to 60.1 percent between 1990 and 2000. The proportion of female adults who were literate increased from 47.3 percent to 48.1 percent while the male rate marginally increased by about 1 percentage point. In rural areas, the rate increased by 1 percentage point over the 1990 level (55.5 percent). Mporokoso and Kasama districts had the highest rates of adult literacy while Chilubi followed by Mpulungu, Mungwi and Mbala districts had the lowest rates of 46.2, 53.4 and 53.8 percent by 2000, respectively.

5.5 School Attendance

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

Table 5.2 shows the population aged 5 years and above presently attending school in Northern Province. Overall, The proportion of the population presently attending school slightly increased from 23 percent in 1990 to 24.8 percent in 2000. The provincial proportion of the population attending school in 2000 is below the national average of 26.7 percent. Since 1990, there have been proportionately more males attending school than females. The percentage of both males and females attending school marginally increased between 1990 and 2000 from 26.5 and 19.6 percent to 28.2 and 21.5 percent, respectively.

During the same period under review, there was an increase in the proportion of children aged 5 to 19 years and adults over 45 years of age, presently attending school between 1990 and 2000. This 5 to 19 year-old population cohort almost befits the official primary and secondary school age populations. Declines were recorded for the tertiary school age population (20 – 44 years). This decline for this age group could be attributed to lack of both financial and physical access to higher education. Whilst there have been a lot of activities regarding expansion of basic education through BESSIP, little has been done to increase access to higher levels of education.

Table 5.2: Population age 5 years and above Presently Attending School by sex and age group, (Percent), Northern Province, 1990 – 2000

Age	1990				2000			
	Total	Male	Female	Population	Total	Male	Female	Population
Northern Province	23	26.5	19.6	707,421	24.8	28.2	21.5	952,185
5 – 9	22.4	22.1	22.8	133,240	27.5	27.4	27.6	187,101
10 – 14	58	59.9	56.1	120,687	67.8	70.3	65.2	155,134
15 – 19	41.8	53.7	31.1	109,602	44.6	57.3	33.1	136,231
20 – 24	12.6	19.6	7.1	75,544	9.7	15.3	5.3	103,221
25 – 29	4.4	5.6	3.4	56,275	3.0	3.8	2.3	83,759
30 – 44	3.1	4.1	2.3	102,610	2.6	3.4	1.8	155,898
45+	1.3	1.8	0.8	109,463	1.7	2.3	1.0	130,841

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

Table 5.3, shows school attendance rates by residence and age group in Northern Province. Results reveal that, in 2000, just over 1 in every 5 persons in rural areas of Zambia was attending school, as opposed to around 1 in every 3 in urban parts of the country. However, there was some increase in the proportion of the rural population attending school from 21 percent in 1990 to 22.9 percent by 2000. In urban areas, school attendance increased by one percentage point between the two years.

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

Age	1990				2000			
	Total	Rural	Urban	Population	Total	Rural	Urban	Population
Northern	23	21	34.6	707,424	24.8	22.9	35.7	952,185
5 – 9	22.4	19.7	38.8	133,240	27.5	24.4	46.2	187,101
10 – 14	58	54.2	79.6	120,687	67.8	65.0	83.6	155,134
15 – 19	41.8	38.8	58.1	109,602	44.6	41.3	61.0	136,231
20 – 24	12.6	11.7	17.7	75,544	9.7	8.3	16.7	103,221
25 – 29	4.4	4.3	5.2	56,275	3.0	2.8	4.1	83,759
30 – 44	3.1	3.1	3	102,610	2.6	2.5	3.2	155,898
45+	1.3	1.3	1.4	109,466	1.7	1.6	1.9	130,841

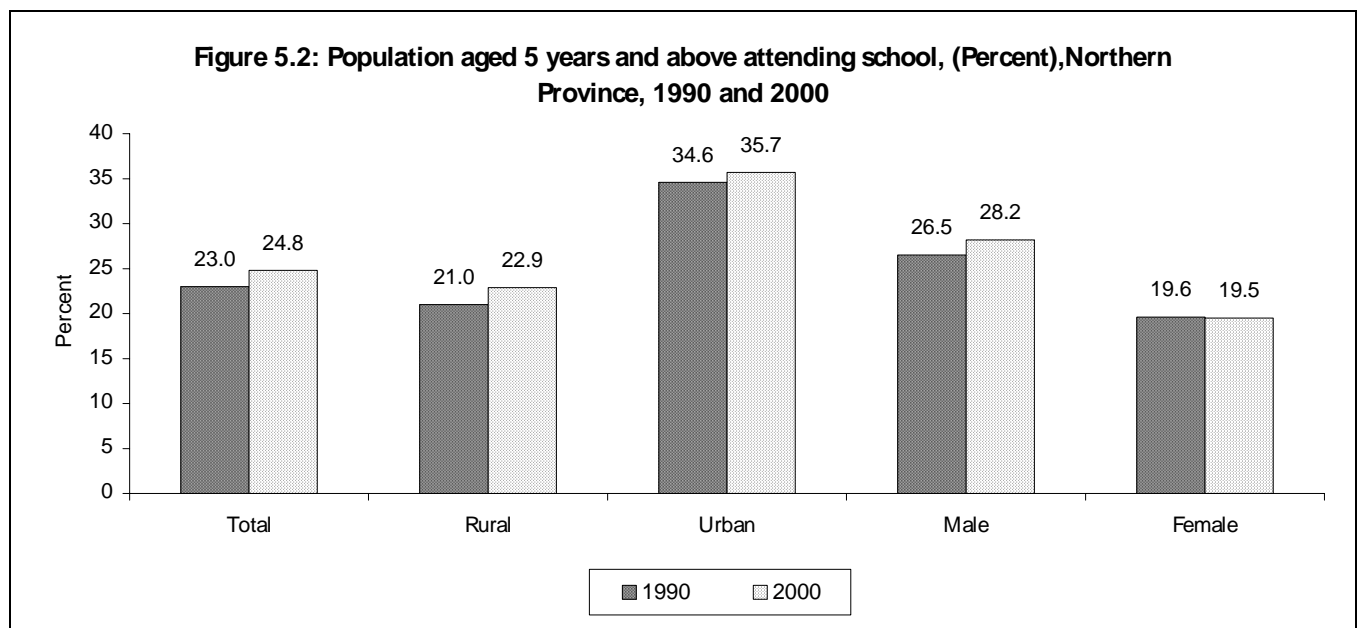
Source: CSO, 1990, and 2000 Census of Population and Housing

Table 5.4 reveals that females are less likely to be attending school than their male counterparts. Variations in the proportion of the population presently attending school in the districts of Northern Province have also been observed. Table 5.4 shows that there were 29 percent in Kasama District compared to 17.2 percent in Mpulungu District population aged 5 and above presently attending school.

Table 5.4: Population age 5 years and above Presently Attending School by Residence, (Percent) Northern Province, 1990 -2000

Province and Residence	Percent population attending school			
	Total	Male	Female	Population
Zambia (1990)	25.8	28.1	23.6	6,181,285
Northern Province (1990)	23.0	26.5	19.6	707,421
Rural	21.0	24.8	17.5	606,753
Urban	34.6	36.9	32.4	100,668
-				
Zambia (2000)	26.7	28.7	24.9	7,680,705
Northern Province (2000)	24.8	28.2	21.5	962,185
Rural	22.9	26.5	19.5	812,643
Urban	35.7	38.1	33.4	139,542
District (2000)				
Chilubi	18.2	22.5	14.4	46,989
Chinsali	27.2	30.8	23.7	96,542
Isoka	26.6	31.0	22.6	74,723
Kaputa	19.7	23.0	16.6	66,514
Kasama	29.1	31.9	26.5	135,732
Luwingu	24.4	28.0	20.9	59,325
Mbala	22.2	25.5	19.1	112,697
Mpika	27.3	30.7	24.1	110,597
Mporokoso	28.2	31.6	25.0	57,553
Mpulungu	17.2	20.0	14.6	49,762
Mungwi	22.6	26.4	19.1	85,606
Nakonde	26.4	29.8	23.3	56,145

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



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

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

Analysis of school attendance becomes more meaningful when the data relates to some official school age population. In Zambia the official primary school age range is 7 to 13 years. This population cohort constitutes the target population for offering primary education. However, some of the members of this cohort may not be attending exactly primary grades (Grades 1 to 7). Table 5.5 shows that school attendance by the population aged 7 to 13 years had increased from 46.9 percent in 1990 to 55.6 percent in 2000. In 2000, the proportion of the primary school age population attending school in the province is below the national average of 62.2 percent. Both the male and female attendance rates increased by more than 6 percentage points over the 1990 levels. For this age cohort, males were more likely to be attending school than their female counterpart (Refer to figure 4).

Out of the total 200,518 rural children aged 7 to 13 years, only 52.2 percent were attending school, compared to 75.8 percent of the 34,284 urban children in 2000. The school attendance rates were an increase from 42.9 and 69.6 for the rural and urban areas in 1990, respectively. School attendance among rural girls rose by nearly 9 percentage points from about 42 percent in 1990 to 50.7 percent by 2000. In urban areas, female school attendance rate increased by 6 percent from 70.1 percent to 76.1 percent between 1990 and 2000. The same pattern was observed for the rural and urban boys of primary school age. Despite the high rate of increase in rural areas, these results clearly indicate the continued disparities in education participation between the rural and urban children of primary school age. Urban children are more likely to be attending school than their rural counterpart.

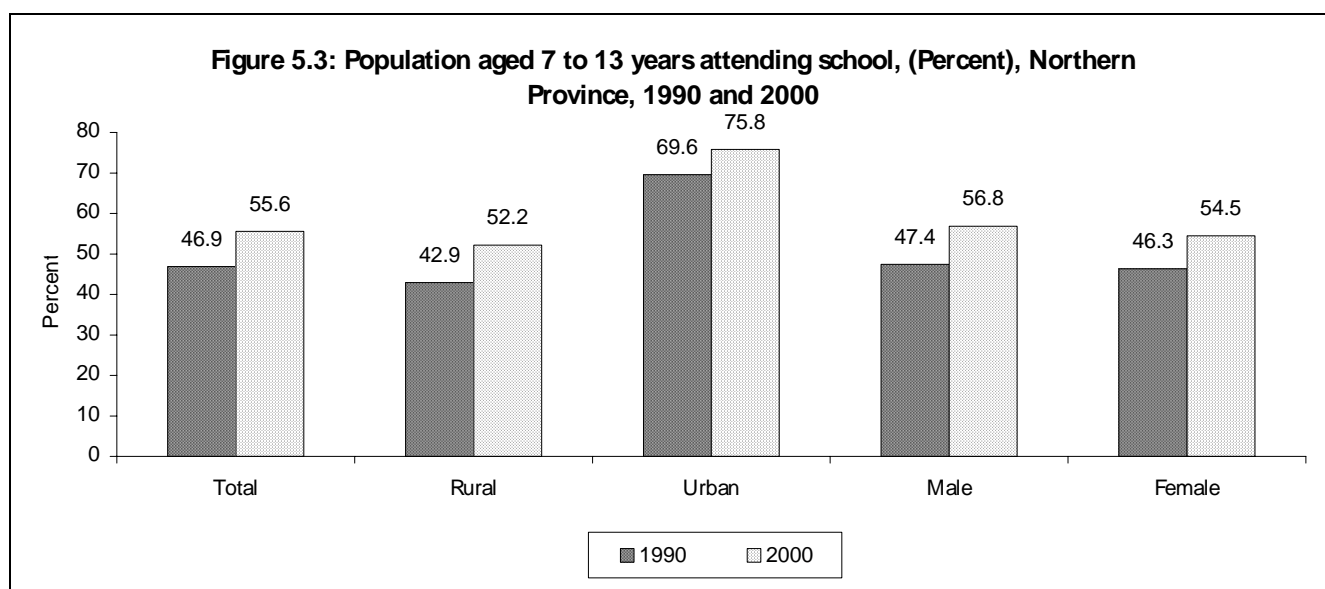
Table 5.5 reveals that in 2000, Chilubi District (40.5 percent) followed by Mpulungu (42.7 percent) recorded the lowest rates of school attendance while Mporokoso and Kasama districts had the highest rates of 65.3 and 64.0 percent respectively.

Table 5.5: Population aged 7 to 13 years Presently Attending School by sex and residence, (Percent) Northern Province, 1990 – 2000

Province /Residence/District	Percent population 7-13 years attending school			
	Total	Male	Female	Population
Zambia – 1990	55.8	55.4	56.2	1,486,062
Northern Province -1990	46.9	47.4	46.3	174,679
Rural	42.9	43.8	42.0	148,749
Urban	69.6	69.1	70.1	25,930
-				
Zambia	62.2	61.8	62.6	1,826,590
Northern Province -2000	55.6	56.8	54.5	234,802
Rural	52.2	53.6	50.7	200,518
Urban	75.8	75.6	76.1	34,284
District				
Chilubi	40.5	42.6	38.3	11,434
Chinsali	59.2	59.9	58.5	24,025
Isoka	60.6	62.2	59.0	18,334
Kaputa	46.2	48.3	44.1	15,365
Kasama	64.0	64.6	63.4	32,793
Luwingu	52.9	54.4	51.2	14,570
Mbala	49.6	50.8	48.5	29,372
Mpika	59.7	60.0	59.5	27,364
Mporokoso	65.3	66.1	64.5	14,575
Mpulungu	42.7	44.2	41.3	12,130
Mungwi	52.1	53.5	50.7	21,211
Nakonde	60.1	61.5	58.6	13,629

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

Figure 5.3: Population aged 7 to 13 years attending school, (Percent), Northern Province, 1990 and 2000



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

5.7 Gross Primary School Attendance Ratio by Children of all Ages

Gross school attendance rate at primary level shows the ratio of children of all ages attending exactly primary grades to the school age population. Due to the school attendance of under-age and over-age children in primary schools, the ratio is sometimes more than 100 percent. Table 5.6 shows an increase in gross primary school attendance ratio from 63.6 percent in 1990 to 75.1 percent by the year 2000. The provincial gross school attendance rate in 2000 is below the national average of 79.1 percent. The gross rate for males drastically increased from 68.7 percent to 80.1 percent while that of females also had a significant increase between 1990 and 2000, 58.4 percent compared to 70 percent. In both 1990 and 2000, the ratio of males was much higher than that of females. The inequality in terms of participation of girls and boys in primary education was about the same.

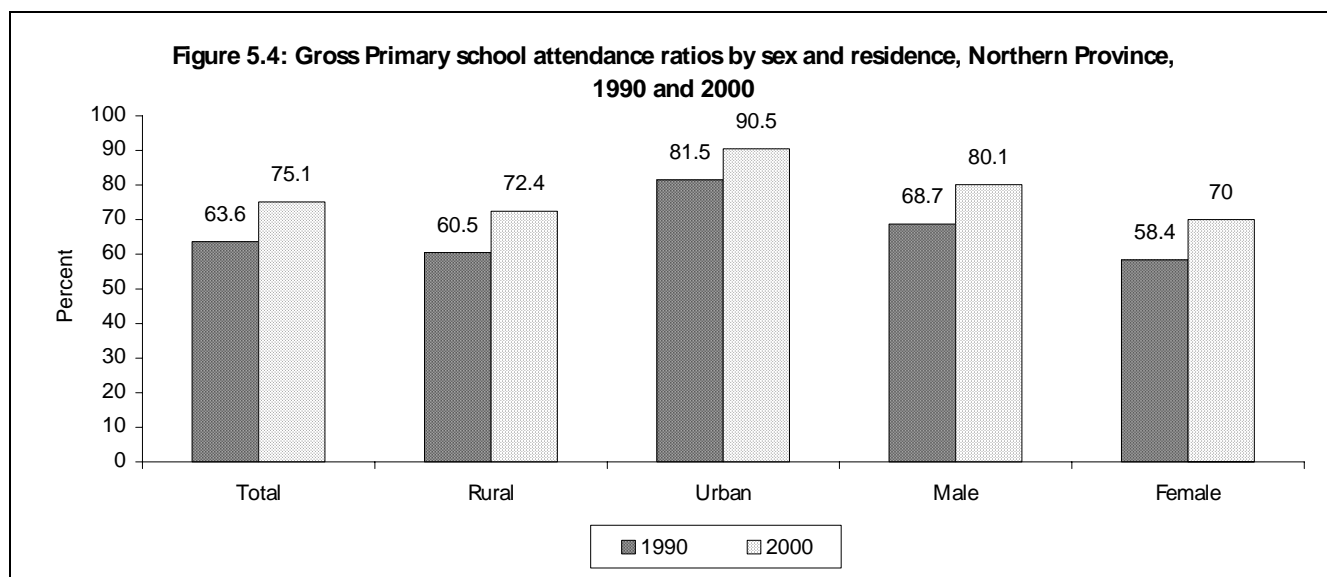
By the year 2000, the Gross Primary Attendance ratios for urban population remained above those obtaining in rural areas. Gross school attendance in rural areas increased from 60.5 percent to 72.4 percent, while in urban areas it increased from 81.5 percent to 90.5 percent between 1990 and 2000. In terms of percentage point increments, the change in gross attendance was much robust in rural than urban areas, 12 as compared to 9 percent correspondingly. Gender equality in terms of education participation is within reach in urban areas than in rural areas.

Mpulungu and Chilubi districts had the lowest ratio of 57.2 and 58.5 percent, in 2000, respectively. On the other hand, Mporokoso District had the highest ratio of 85.5 percent followed by Isoka with a ratio of 82.6 percent. Results showed more attendance among boys than girls in all the districts. In general, the gross ratios remained high among urbanized provinces.

Table 5.6: Gross Primary School Attendance Ratio by sex, Residence and Districts, Northern Province, 1990 – 2000

Province/Residence/District	Gross primary attendance rate			
	Total	Male	Female	Population
Zambia (1990)	82.3	85.7	78.9	1,486,062
Northern Province (1990)	63.6	68.7	58.4	174,679
Rural	60.5	66.1	54.7	148,749
Urban	81.5	84.2	79.0	25,930
-				
Zambia (2000)	79.1	81.4	76.8	1,826,590
Northern Province (2000)	75.1	80.1	70.0	234,802
Rural	72.4	78.1	66.6	200,518
Urban	90.5	91.9	89.1	34,284
District (2000)				
Chilubi	58.5	64.4	52.4	11,434
Chinsali	81.9	86.8	76.8	24,025
Isoka	82.6	88.9	76.1	18,334
Kaputa	67.3	73.8	60.7	15,365
Kasama	80.0	83.0	76.9	32,793
Luwingu	72.4	78.2	66.5	14,570
Mbala	67.9	73.5	62.3	29,372
Mpika	79.8	83.5	75.9	27,364
Mporokoso	85.5	89.9	81.1	14,575
Mpulungu	57.2	62.2	52.3	12,130
Mungwi	72.3	78.4	66.0	21,211
Nakonde	81.8	86.9	76.7	13,629

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



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

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

Net school attendance rate at primary level shows the percentage of the primary school age population currently attending exact primary grades (Grades 1 to 7). Table 5.7 shows an increase in the proportion of the primary school age population attending primary education, from 40.2 percent in 1990 to 54.3 percent by the year 2000. An increase in the proportion of the primary school age population attending primary education was also observed at national level from 55 percent in 1990 to 60 percent, however the provincial proportion is below the national average. In 1990, the attendance of boy of primary school age was slightly higher than

that of girls. By the year 2000, the near equality in primary education participation by both boys and girls of the official age continued. The 2000 census results indicate that nearly 46 percent of children of the official primary school age were out of the school system.

Since 1990, net primary school attendance rates have been higher in urban than in rural areas, clearly indicating a higher likelihood of urban children to be in school. In 1990, almost two thirds of the rural children aged 7 to 13 years were out of primary education compared to 40% of their urban counterpart. By 2000, the proportion of children attending school in rural areas drastically increased by 14 percentage points, from 36.8 percent to about 51.3 percent. In urban areas, net school attendance increased by 12 percentage points, from about 60.1 percent in 1990 to about 72.1 percent in 2000. Results of the 2000 census show that over a quarter of urban children were out of primary school compared to almost half of the rural children. No major sex differences were noticed since 1990, an indication of near gender parity in net attendance at primary level.

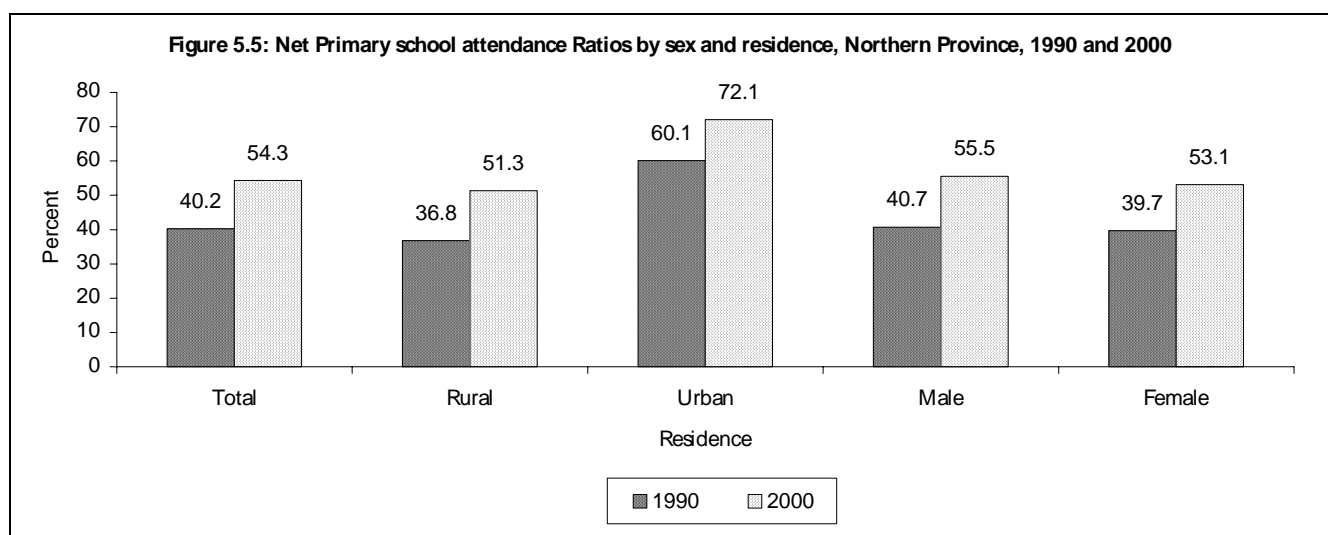
The urban – rural differences are mainly as a result of existing disparities in resource allocation and availability of accessible amenities such as schools, health facilities, recreational facilities and pre-schools. The Living Conditions Monitoring Surveys have shown that long distance to schools inhibits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

Analysis of net primary school attendance rates in districts reveals differences in school participation by the eligible children aged 7 to 13 years. In 2000, school attendance for the primary school age children ranged from 63.9 and 61.5 percent in Mporokoso and Kasama districts to as low as 39.8 and 41.9 percent in Chilubi and Mpulungu districts. In all districts, girls were less likely to be attending school than boys, though the sex differences were insignificant.

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

Residence and District	Net primary attendance rate			Population
	Total	Male	Female	
Zambia (1990)	55.0	54.6	55.3	1,486,062
Northern Province (1990)	40.2	40.7	39.7	174,679
Rural	36.8	37.4	36.0	148,749
Urban	60.1	59.8	60.3	25,930
-				
Zambia (2000)	60.0	59.8	60.2	1,826,590
Northern Province (2000)	54.3	55.5	53.1	234,802
Rural	51.3	52.7	49.8	200,518
Urban	72.1	72.1	72.1	34,284
District (2000)				
Chilubi	39.8	41.8	37.7	11,434
Chinsali	58.0	58.8	57.3	24,025
Isoka	59.4	61.0	57.8	18,334
Kaputa	45.5	47.5	43.5	15,365
Kasama	61.5	62.1	60.9	32,793
Luingu	51.5	53.1	49.9	14,570
Mbala	48.8	50.0	47.6	29,372
Mpika	58.0	58.3	57.7	27,364
Mporokoso	63.9	64.6	63.1	14,575
Mpulungu	41.9	43.6	40.3	12,130
Mungwi	51.2	52.6	49.8	21,211
Nakonde	58.6	60.2	56.9	13,629

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



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

5.9 School Attendance by the Secondary School Age Population

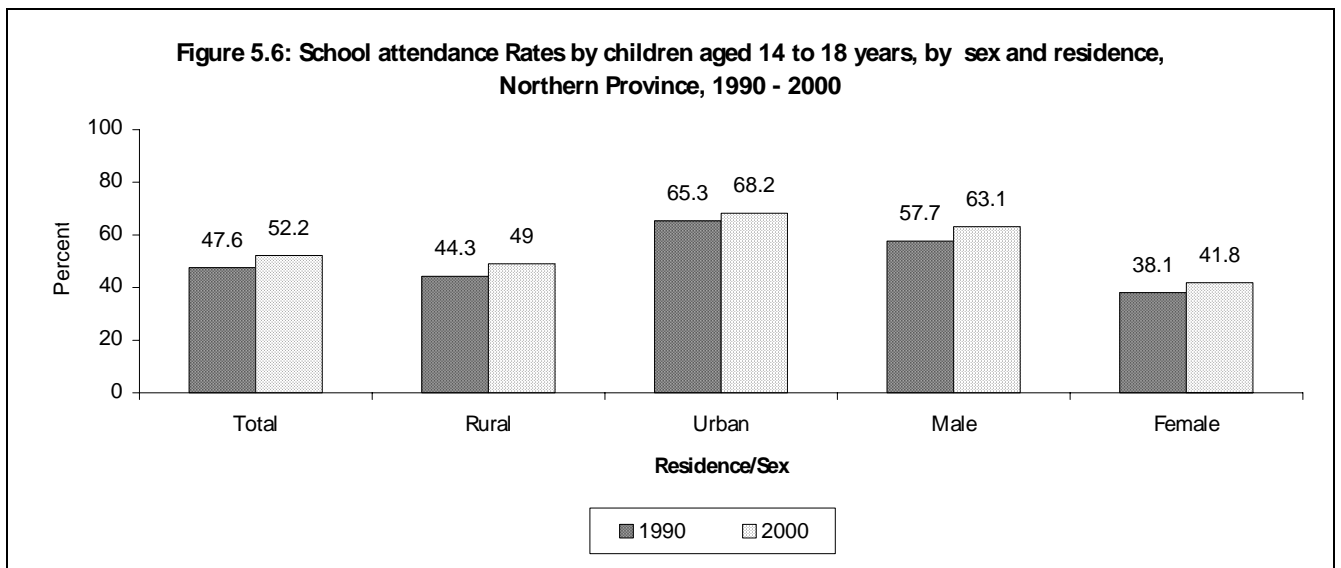
Table 5.8 shows the proportion of children aged 14 to 18 attending school. Overall, the percentage of children attending school slightly increased from 47.6 percent to 52.2 percent between 1990 and 2000. The population rate is below the national average of 54 percent. Since 1990, there were proportionately more boys (57.7 percent) than girls (38.1 percent) attending school. An increase of about 5 percentage points was observed in the rate of attendance in rural areas from about 44.3 to 49 percent, whereas in urban areas the rate rose from 65.3 to 68.2 percent by 2000. Once again, the proportion of boys attending school was much higher in both rural and urban areas than for girls. These results clearly indicate that the problem of the girl child is more associated to older (14 to 18 years) than younger children (7 to 13 years). At primary level there is normally near equality in terms of school attendance by boys and girls.

Differences across districts in school attendance by eligible secondary school age population range from 35.5 percent in Mpulungu to 60.3 percent in Kasama District.

Table 5.8: Population aged 14 to 18 years Presently Attending School by Sex, Residence and district, (Percent), Northern Province, 1990 – 2000

Province and Residence	Percent population 14-18 years attending school			
	Total	Male	Female	Population
Zambia (1990)	53.9	61.1	47.1	996,450
Northern Province (1990)	47.6	57.7	38.1	117,626
Rural	44.3	55.1	34.3	99,546
Urban	65.3	72.3	59.0	18,080
-				
Zambia (2000)	53.9	61.3	47.0	1,105,484
Northern Province (2000)	52.2	63.1	41.8	142,785
Rural	49.0	60.8	37.9	119,331
Urban	68.2	75.1	61.8	23,454
District (2000)				
Chilubi	42.0	53.5	31.0	6,495
Chinsali	59.2	70.6	48.1	14,443
Isoka	55.5	66.3	45.0	11,509
Kaputa	42.1	54.2	31.0	9,869
Kasama	60.3	68.8	52.5	21,485
Luwingu	50.6	62.5	39.0	8,635
Mbala	42.9	54.6	32.1	17,052
Mpika	56.0	66.0	46.2	16,761
Mporokoso	58.0	69.5	47.0	8,685
Mpulungu	35.5	47.0	25.4	7,190
Mungwi	50.4	63.2	38.3	12,356
Nakonde	58.5	68.2	49.7	8,305

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



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

5.10 Gross Secondary School Attendance Rates by the Children aged 14 to 18 Years

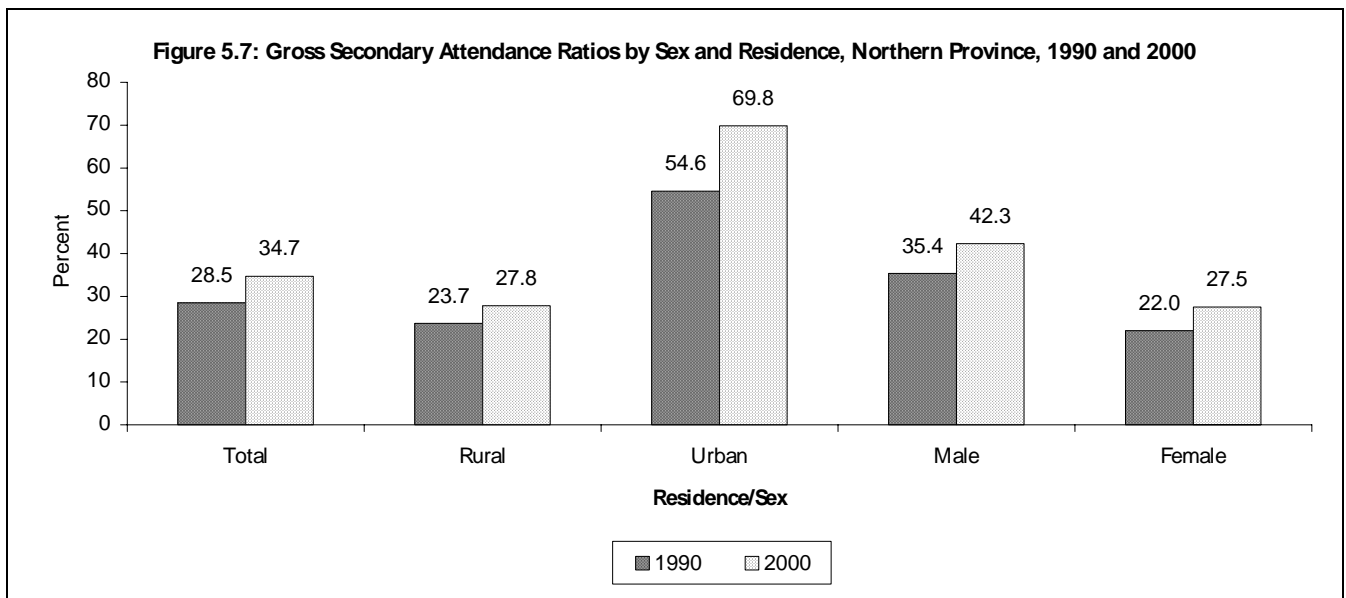
Results in table 5.9 reveal that a sizeable proportion of secondary school age population have no access to secondary education. At national level, the proportion of children attending secondary education expressed as a percentage of the eligible secondary school age population increased from 28.5 percent in 1990 to 34.7 percent by 2000. In comparison to the national the gross attendance ratios, which increased from 34.6 to 44.5 percent, the provincial rate is below the national average in both 1990 and 2000. The gross ratios have remained higher in urban than in rural areas. The increase in the ratios between 1990 and 2000 was nearly the same in urban, from 54.6 percent to 69.8 percent, and in rural areas, from 23.7 percent to 27.8 percent.

Like with other education indicators, the 2000 ratio of learners at secondary level to eligible children for that level was lowest in Mpulungu District which recorded a rate of 18.7 percent.

Table 5.9: Gross Secondary School Attendance Ratio by sex, Residence and District, Northern Province, 1990 – 2000

Residence and District	Gross secondary attendance rate			
	Total	Male	Female	Population
Zambia (1990)	34.6	40.4	29.0	996,450
Northern Province (1990)	28.5	35.4	22.0	117,626
Rural	23.7	30.5	17.3	99,546
Urban	54.6	62.4	47.5	18,080
Zambia (2000)	44.5	50.2	39.1	1,105,484
Northern Province (2000)	34.7	42.3	27.5	142,785
Rural	27.8	35.2	20.8	119,331
Urban	69.8	79.3	61.1	23,454
District (2000)				
Chilubi	20.7	27.6	14.1	6,495
Chinsali	37.6	45.9	29.5	14,443
Isoka	37.1	45.0	29.5	11,509
Kaputa	21.8	29.3	14.8	9,869
Kasama	52.7	61.2	44.8	21,485
Luwingu	33.4	41.0	26.0	8,635
Mbala	23.0	29.0	17.5	17,052
Mpika	41.4	49.4	33.5	16,761
Mporokoso	39.2	49.2	29.7	8,685
Mpulungu	18.7	24.9	13.3	7,190
Mungwi	27.6	35.0	20.6	12,356
Nakonde	37.3	43.2	31.9	8,305

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



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

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

Results in Table 5.10 indicate that a significant proportion of the secondary school age population has no access to education in Northern Province. In 1990, only 16.7 percent of the children aged 14 to 18 years were attending secondary education. This proportion increased to approximately 23.9 percent in 2000. Since 1990 there were proportionately more boys than girls attending secondary school. The provincial rate is slightly below the national average of 30.9 percent.

Big differences in net secondary school attendance rates between the sexes have existed since 1990.

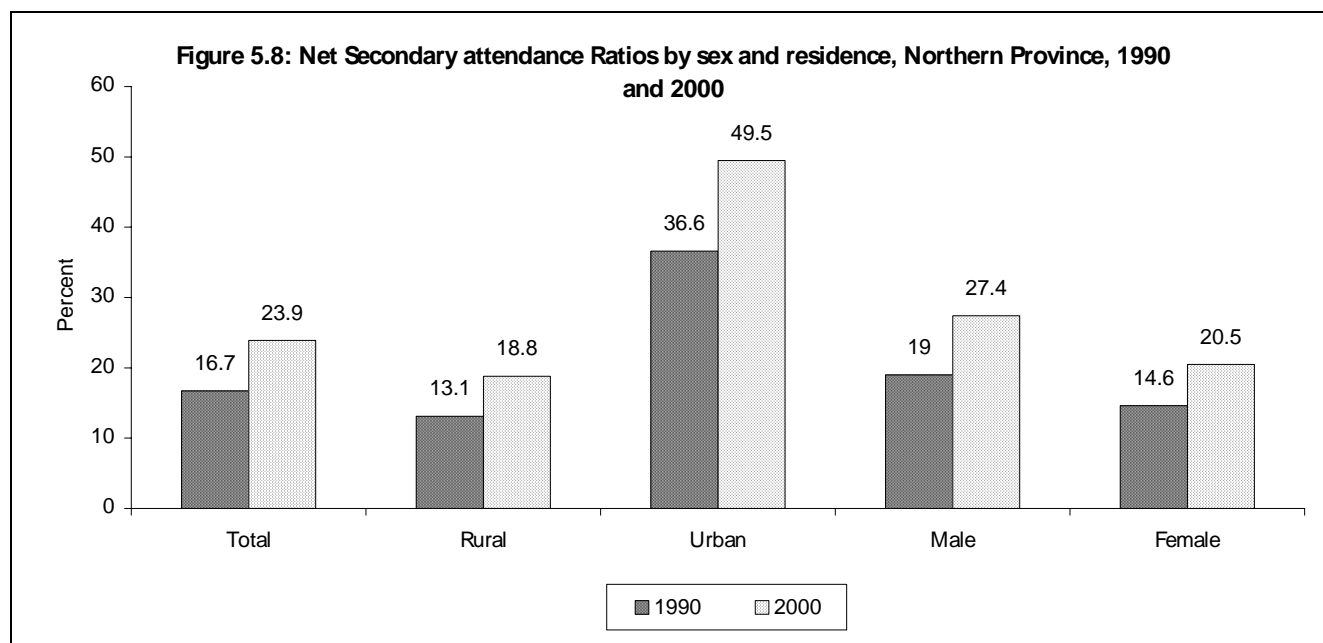
The proportion of urban eligible children attending secondary education (36.6 percent) was much higher than that of their rural counterpart (13.1 percent) in 1990. The net secondary school attendance rate for both rural and urban areas increased to 18.8 percent and 49.5 percent, respectively, in 2000.

Analysis of 2000 census results by districts, show that Mpulungu District had the least net secondary rate of 13.2 percent, followed by Isoka (14 percent). In the same year Kasama District recorded the highest rate of 37.4 percent.

Table 5.10: Net Secondary School Attendance Ratio by Sex, and Residence, Northern Province, 1990 – 2000

Residence and District	Net Secondary School Attendance Rates			Population (14 – 18 Yrs)
	Total	Male	Female	
Zambia (1990)	21.4	22.8	20.0	996,450
Northern Province (1990)	16.7	19.0	14.6	117,626
Rural	13.1	15.4	11.0	99,546
Urban	36.6	39.0	34.5	18,080
-				
Zambia (2000)	30.9	33.3	28.7	1,105,484
Northern Province (2000)	23.9	27.4	20.5	142,785
Rural	18.8	22.4	15.5	119,331
Urban	49.5	53.6	45.8	23,454
District (2000)				
Chilubi	14.1	18.0	10.3	6,495
Chinsali	25.5	29.2	22.0	14,443
Isoka	25.2	28.2	22.4	11,509
Kaputa	14.0	17.9	10.5	9,869
Kasama	37.4	41.1	34.1	21,485
Luwingu	21.7	25.6	18.0	8,635
Mbala	15.8	18.9	13.0	17,052
Mpika	28.2	31.6	24.9	16,761
Mporokoso	27.2	31.6	23.0	8,685
Mpulungu	13.2	17.0	9.9	7,190
Mungwi	19.1	22.7	15.6	12,356
Nakonde	26.5	29.1	24.2	8,305

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



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

5.12 Population Distribution by Fields of Study

Table 5.11 shows the population aged 5 years and over by some selected field of study and sex. The table reveals that the most popular fields of study since 1990 have been Teacher training, Agriculture/forestry/fisheries, Mechanics/mechanical engineering, and Nursing.

There was an increase in the number of persons undertaking most of the selected fields of study between 1990 and 2000. The most significant increases were recorded in Nursing, Teacher training, Wood working and

Secretarial Training. There was a decline in a number of persons specializing in some fields, particularly Industrial Engineering, Natural Sciences.

By 2000, the most popular fields of study for males were Teacher training (4125), followed by Nursing (3755), Mechanical Engineering/Mechanics, Agriculture/Forestry/Fisheries (793), and Accountancy (722). More male (over 90 percent) take up engineering and natural science courses than female.

The results also clearly indicate that males have a wider variety of fields of specialization than their female counterpart. Further examination of the results in table 5.11 highlights the fact that very few females have been attempting more technically oriented fields of study such as engineering and other technical programmes since 1990.

Table 5.11: Population by Sex and Field of Study, Northern Province, (1990 – 2000)

Field of Study	1990			2000		
	Total	Male	Female	Total	Male	Female
Natural Science	189	78.8	21.2	85	87.1	12.9
Civil Engineering	169	94.1	5.9	133	99.2	0.8
Electronic Engineering	253	95.7	4.3	397	97.0	3.0
Mechanic Engineering	636	97.3	2.7	793	97.2	2.8
Mining Engineering	225	93.8	6.2	234	99.1	0.9
Industrial Engineering	488	60.2	39.8	85	85.9	14.1
Architecture	187	69.5	30.5	63	96.8	3.2
Medicine/Surgery	195	85.6	14.4	112	93.8	6.3
Pharmacy	263	76.8	23.2	96	89.6	10.4
Nursing	559	18.4	81.6	3,755	71.1	28.9
Medical Technology	186	90.9	9.1	205	91.7	8.3
Computer Science	12	91.7	8.3	67	73.1	26.9
Economics	114	41.2	58.8	118	54.2	45.8
Accountancy	523	90.6	9.4	722	86.3	13.7
Teacher Training	4,009	71.4	28.6	4,125	67.8	32.2
Law/Jurisprudence	222	95.5	4.5	156	91.0	9.0
Fine arts	60	95.0	5.0	91	85.7	14.3
Social Welfare	139	66.9	33.1	118	77.1	22.9
Criminology	310	96.1	3.9	308	94.2	5.8
Business Administration	358	83.5	16.5	385	86.0	14.0
Secretarial Training	171	24.0	76.0	274	20.4	79.6
Office Machine	135	89.6	10.4	80	85.0	15.0
Service Trade	167	50.9	49.1	179	43.6	56.4
Agriculture/Forestry/Fisheries	736	91.6	8.4	709	88.2	11.8
Wood Working	578	96.4	3.6	602	97.8	2.2
Textile Trade	144	54.9	45.1	218	33.0	67.0

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

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

Table 5.12: Education level completed by Field of Study (Percent), Northern Province, 2000

Field of Study	Size	Total	Education of Level Completed				
			1-7	8-9	10-12	'A' Level	Degree
Northern Province							
Natural Science	85	100	7.1	3.5	62.4	3.5	23.5
Civil Engineering	133	100	23.3	9.8	53.4	.	13.5
Electronics/Engineering	397	100	12.8	9.3	64	0.5	13.4
Mechanics/Engineering	793	100	15	9.5	67.2	0.3	8.1
Chemical Engineering	27	100	11.1	3.7	74.1	3.7	7.4
Mining Engineering	234	100	39.7	15	33.8	.	11.5
Industrial Engineering	85	100	27.1	28.2	31.8	.	12.9
Metallurgical Engineering	30	100	20	3.3	46.7	3.3	26.7
Architecture	63	100	22.2	20.6	46	.	11.1
Other Engineering	121	100	22.3	7.4	56.2	0.8	13.2
Medicine/Surgery	112	100	7.1	5.4	65.2	1.8	20.5
Pharmacy	96	100	9.4	4.2	74	.	12.5
Dentistry	82	100	8.5	8.5	64.6	2.4	15.9
Nursing	3,754	100	14.7	10.8	60.9	0.5	13.2
Medical Technology	205	100	3.4	3.9	67.8	2.4	22.4
Veterinary	80	100	8.8	6.3	71.3	.	13.8
Computer Science	67	100	1.5	6	82.1	.	10.4
Economics	118	100	20.3	13.6	56.8	.	9.3
Accountancy	722	100	3.9	5.7	74.4	0.8	15.2
Teacher Training	4,125	100	6	6.2	67.2	0.7	19.9
Law/jurisprudence	154	100	11	9.7	64.9	0.6	13.6
Journalism	35	100	5.7	.	74.3	2.9	17.1
Fine arts	91	100	27.5	14.3	48.4	1.1	8.8
Social Welfare	118	100	18.6	7.6	55.9	.	17.8
Criminology	308	100	10.1	8.4	76	0.6	4.9
Business Administration	385	100	5.5	4.9	74.5	0.3	14.8
Secretarial Training	274	100	4	7.7	77.4	.	10.9
Shorthand Typing	190	100	4.2	19.5	65.3	.	11.1
Clerical typing	245	100	7.3	17.1	67.3	.	8.2
Office Machine	80	100	23.8	8.8	53.8	.	13.8
Service Trade	179	100	36.9	16.2	39.1	.	7.8
Agriculture/Forestry/Fisheries	709	100	13.5	8.3	60.1	1.3	16.8
Food/Drink Production	38	100	18.4	23.7	39.5	.	18.4
Wood Working	602	100	37	18.1	35.7	0.8	8.3
Textile Trade	218	100	21.6	32.1	36.7	0.5	9.2

Source: 2000 Census of Population and Housing

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

5.13 Certificate and Diploma Holders by Level of Education Completed

Table 5.13 shows the education level completed by certificate and diploma holders. In Northern Province, the certificate referred to here only relate to the one obtained after grades school. The proportion of persons with certificates who had attained grades 1 to 7 declined from 35.4 percent in 1990 to 17.8 percent in 2000, whilst the proportions attaining higher grades increased. These findings demonstrate how difficult it has become to get certification with limited education background. On the other hand, proportion of diploma holders with primary level of education was low. (Refer to table 5.13).

Table 5.13 Certificates and Diplomas by level of Education and Sex, 1990-2000

Certificates	Size	Education Level Completed				
		1-7	8-9	10-12	'A' Level	Total
Certificates						
Northern 1990						
Total	16,174	35.4	13.9	50.4	0.3	100
Male	12,061	37.1	13.2	49.3	0.3	100
Female	4,113	30.4	15.9	53.5	0.2	100
Northern 2000						
Total	12,464	17.8	13.4	68.2	0.5	100
Male	9,150	19.3	12.7	67.4	0.6	100
Female	3,314	13.9	15.2	70.6	0.3	100
Diploma						
Northern 1990						
Total	1,933	8.8	4.9	81.1	5.2	100
Male	1,693	9.2	4.7	81.0	5.0	100
Female	240	6.3	5.8	81.7	6.3	100
Northern 2000						
Total	1769	4.9	2.9	90.7	1.5	100
Male	1536	5.1	2.5	91.0	1.4	100
Female	233	3.4	5.6	89.3	1.7	100

Source: 2000 Census of Population and Housing

5.14 Summary

In Northern Province literacy rates did not improve between 1990 and 2000, they remained low at about 47 percent. Thus more than half of all persons 5 years and above were illiterate. Literacy rates for males and urban are much higher than those for females and rural areas respectively. The youth (15-24) and adults (15 years +) recorded better overall rates of 62 percent and 60 percent respectively, in 2000. Comparison of literate rates for districts reveals that Chilubi District had the highest literacy rate in the province (58.8 percent) closely followed by Luwingu (56.6 percent). Nakonde district had the lowest literate rate of 41.8 percent.

In 2000, 25 percent of the 5 years and above were in school an increase of only 2 percentage points from the 1990 level. The males had a higher percentage of 28 attending compared to 22 percent for females.

Gender disparities in enrollments are significant at secondary level of education and beyond. There are no disparities at primary education level.

Children coming from the following groups are disadvantaged: rural, female. Rural and female children are less likely to enroll and progress beyond primary level.

The most popular fields of study are teacher training, agriculture, wood working and nursing. This is a typical rural province with limited institutions of higher learning.

ECONOMIC CHARACTERISTICS

6.1 Introduction

Individuals engage in economic activities in order to attain and sustain a certain acceptable level of consumption of goods and services. Engagement in these activities not only ensures a person's livelihood but also equips an individual with the means of acquiring and sustaining the basic needs of life such as food, clothing and shelter.

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

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

- Labour force participation
- Economic Dependency
- Employment and unemployment
- Employment status
- Occupation
- Industry and
- Educational attainment

6.2 Concepts and Definitions

- **Working Age Population:** The employed population includes all persons who: work for remuneration in the form of wages, salaries, commissions or pay in kind; operate their own businesses without employing others, and; work in a family business or farm without pay or profit.
 - **Economically Inactive Population:** This category includes all persons who are full time housewives/home-makers, full time students and those who are not available for work aged 12 years and over.
- **Economically Active Population (Labourforce):** The economically active population or the Labour force is defined as all persons aged 12 years and above whose main economic activity status is to supply their labour force to the production of economic goods and services. It is composed of the employed and unemployed. It includes all those who are working, those who are unemployed but seeking work and those not seeking work but available for work. Included also are those unpaid on family business.
- **Economic Dependency Ratio:** Economic dependency measures the extent to which the economically inactive population is dependent on the economically active population. Therefore, the economic dependency ratio is the ratio of the economically inactive population divided by the economically active population.
- **Labourforce Participation Rates:** The Labour force participation rate is defined as the proportion of persons of a particular age- group who were in the labour force. It measures the extent to which a particular age and/or sex group is involved in economic activities.

- **Employment Status:** Employment status refers to whether a worker is an employer, employee, self-employed or an unpaid family worker. An employer is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires one or more employees. An employee is a person who works for a public or private employer and receives remuneration in wages, salary, commission, tips, piece rates, or pay in kind. A self-employed worker is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires no employees. Finally, an unpaid family worker is a person who works without pay in an economic enterprise operated by a related member of the same household (including peasant farmers).
- **Occupation:** Occupation is a concept, which identifies a set of characteristics of a job and a group of specific tasks that are performed by a person.
- **Industry:** Industry or economic sector defines the type of product or service produced at a workplace.
- **Unemployment:** The unemployed population consists of all persons 12 years and over who are actively seeking work or are available for work during reference period, i.e. the last seven days before the enumeration day.

6.3 Working-Age Population

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

Figure 6.1: Working Age Population 12 Years and Over

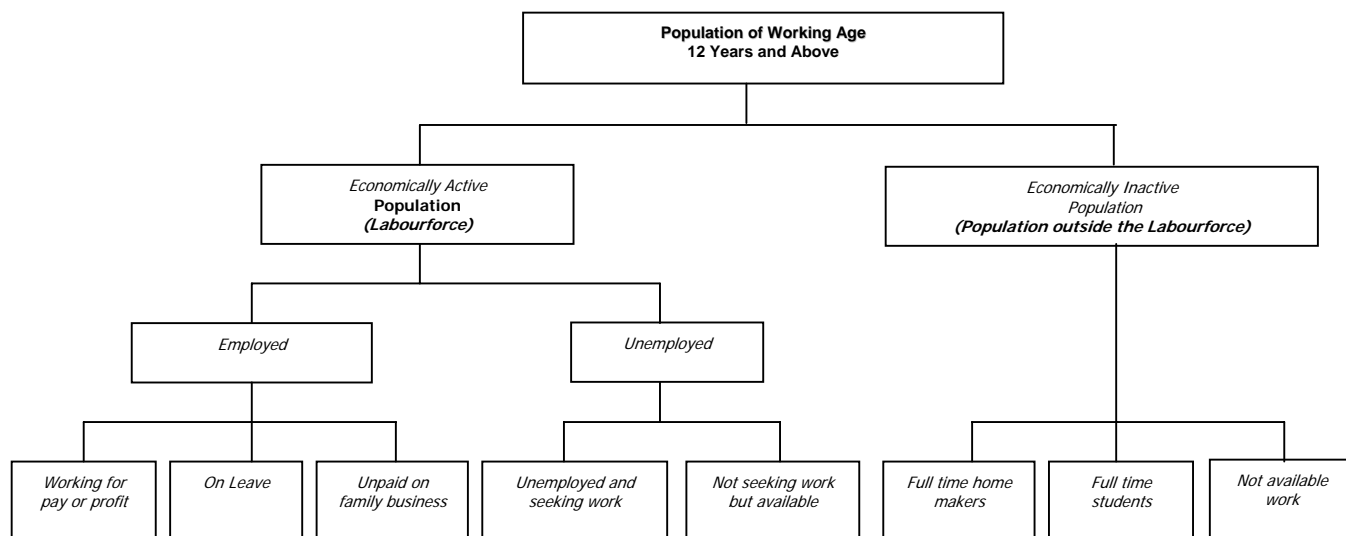
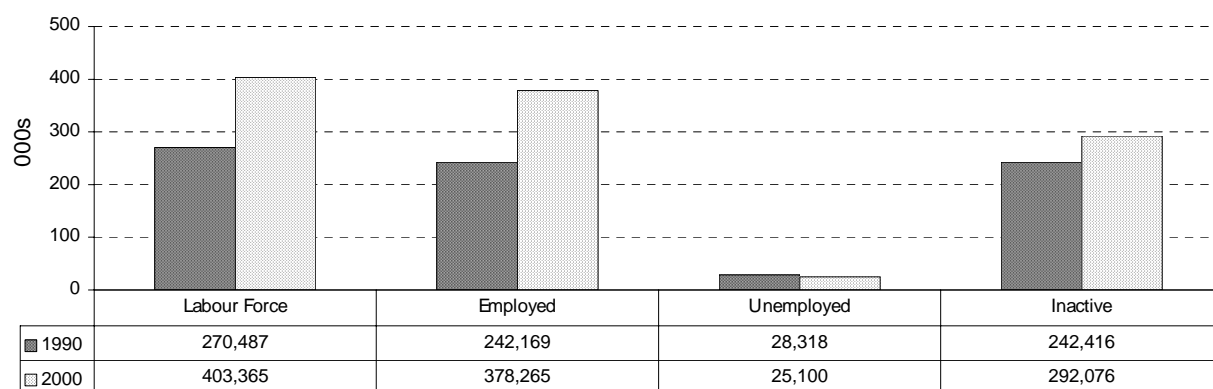


Table 6.1: Population 12 years and Over by Broad Age Groups-Residence and Sex, Northern Province, 1990 and 2000

Residence and Sex	Year	Size	Total	12-19'	20-24	25-29	30-59	60+	Not Stated
Total	1990	524,072	100	34.3	14.4	10.7	32.6	7.9	0.0
	2000	695,441	100	31.9	14.8	12.0	33.4	7.8	-
Percent increase		32.7							
Male									
Male	1990	247,549	100	35.4	13.6	10.2	31.7	9.1	0.0
	2000	333,513	100	32.4	13.6	11.8	33.5	8.6	-
Percent increase		34.7							
Female									
Female	1990	276,523	100	33.4	15.2	11.2	33.4	6.8	0.0
	2000	361,928	100	31.4	16.0	12.3	33.3	7.0	-
Percent increase		30.9							
Rural									
Total	1990	449,657	100	33.8	14.3	10.6	32.7	8.5	0.0
	2000	595,481	100	31.4	14.5	11.9	33.7	8.4	-
Percent increase		32.4							
Male									
Male	1990	211,501	100	35.1	13.5	10.2	31.2	10.0	0.0
	2000	285,131	100	32.0	13.3	11.7	33.6	9.3	-
Percent increase		34.8							
Female									
Female	1990	238,156	100	32.7	15.0	11.0	34.0	7.3	0.0
	2000	310,350	100	30.8	15.7	12.2	33.8	7.5	-
Percent increase		30.3							
Urban									
Total	1990	74,415	100	37.5	15.3	11.5	31.9	3.8	0.1
	2000	99,960	100	34.8	16.6	12.6	31.6	4.5	-
Percent increase		34.3							
Male									
Male	1990	36,048	100	37.1	13.9	10.3	34.5	4.2	0.1
	2000	48,382	100	34.5	15.4	12.5	32.9	4.6	-
Percent increase		34.2							
Female									
Female	1990	38,367	100	37.9	16.5	12.6	29.6	3.4	0.1
	2000	51,578	100	35.0	17.7	12.7	30.3	4.3	-
Percent increase		34.4							

Sources: 1990 and 2000 Censuses of Population and Housing

Figure 6.2 Current Economic Activity Population (12 Years and Over), Northern Province, 1990 and 2000



Sources: 1990 and 2000 Censuses of Population and Housing

6.4 The Economically Inactive Population

This category comprises full time housewives/home-makers, full time students and those who are not available for work, aged 12 years and over.

Table 6.2 shows the current economically inactive population by reason of activity, residence and sex in 2000. Almost two thirds (61.6 percent) of the inactive population are female, while over a third (38.4 percent) are males. About 82 percent are in rural areas and 18 percent are in urban areas. The major reason given for inactivity was studying (44.9 percent) is the most important reason for inactivity which accounted for 45 percent, followed by homemaking, which accounted for 33 percent while other reasons accounted for 22 percent. Groups of people included in the category of those who are economically inactive for "other reasons" include pensioners, those that are too old to work, prisoners, invalids, beggars and the disabled. In both rural and urban areas, the reasons for inactivity are in an order similar to the one for the whole province. However, it can be that there are slightly more home makers in the rural areas (34 percent) than in the urban areas (31 percent); more students in the urban areas (52 percent) than in the rural areas (43 percent); there are more economically inactive people for other reasons in rural areas (23 percent) compared to urban areas (17 percent).

In 2000, males are economically inactive mainly because of studying (68 percent) while females are inactive primarily because of home making (51 percent).

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

Residence and Sex	Reason For Inactivity				
	Total Number	Total	Home Maker	Student	Other
Northern Province					
Total	292,076	100	33.3	44.9	21.9
Rural	239,761	100	33.7	43.3	23.0
Urban	52,315	100	31.3	52.0	16.6
Sex					
Male	112,078	100	4.7	68.2	27.1
Female	179,998	100	51.1	30.3	18.6

Sources: 1990 and 2000 Census of population and Housing

6.5 Economically Active Population (Labourforce)

Figure 6.1 gives an illustration of the economically active population and economically inactive population. The economically active population by residence and sex are given in Table 6.3. According to this table, the

labour force increased by 49.1 percent, from 270,487 in 1990 to 403,365 in 2000 in absolute terms. However, the average annual growth rate was 4.1 percent. Its average annual growth rate in labour force between 1990 and 2000 was lower than the national average of 3.8 percent, presenting a deviation of 0.3 percent. The increase of 72 percent in the female labour force was more than the increase of 34 percent in the male labour force. A big proportion of the labour force (89 percent in 1990 and 90 percent in 2000) was in rural areas, as compared to the labour force in urban areas (11 percent in 1990 and 10 percent in 2000).

Table 6.3: Trends in the Labor force and the average annual growth rate of the Labor force 1990 and 2000

Residence	1990	2000	Growth rate
Zambia	2,162,487	3,165,151	3.9
Northern	270,487	403,365	4.08
Chilubi	12,599	20,596	5.04
Chinsali	25,009	40,152	4.85
Isoka	34,219	35,978	0.5
Kaputa	12,258	28,257	8.71
Kasama	63,169	58,107	-0.83
Luwingu	22,143	19,749	-1.14
Mbala	40,212	42,284	0.5
Mpika	44,613	42,493	-0.49
Mporokoso	16,265	27,056	5.22
Mpulungu	-	21,528	-
Mungwi	-	40,452	-
Nakonde	-	26,713	-

Sources: 1990 and 2000 Census of population and Housing

* (-) District not there in 1990

In terms of percentage distribution of the labourforce in 2000, Kasama District had the highest (14.4 percent), followed by Mbala and Mpika districts both with 10.5 percent. Luwingu, Chilubi and Mpulungu districts had the least with 4.9 percent, 5.1 percent and 5.3 percent respectively.

Kaputa, Mporokoso and Chilubi recorded the highest average annual growth rates in the Labourforce between 1990 and 2000 of 8.7 percent, 5.2 percent and 5.0 percent respectively. Whereas, Luwingu, Kasama and Mpika districts recorded negative growth rates of -1.1, -0.8 and -0.5 percent, respectively.

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

Residence	Total	Males	Females
Northern	100	100	100
Chilubi	5.1	4.8	5.4
Chinsali	10.0	9.8	10.1
Isoka	8.9	8.0	10.0
Kaputa	7.0	8.0	5.8
Kasama	14.4	14.3	14.5
Luwingu	4.9	5.7	3.9
Mbala	10.5	11.5	9.2
Mpika	10.5	10.7	10.3
Mporokoso	6.7	6.2	7.3
Mpulungu	5.3	5.5	5.1

Mungwi	10.0	9.2		11.1
Nakonde	6.6		6.2	7.1

Sources: 2000 Census of population and Housing

The employed population includes all persons who: work for remuneration in the form of wages, salaries, commissions or pay in kind; operate their own businesses without employing others, and; work in a family business or farm without pay or profit. Of the 403,365 total labour force in Northern Province in 2000, 378,265 or 94 percent are employed. The employed population increased by 56 percent from 242,169 in 1990 to 378,265 in 2000. The proportion of the employed population residing in rural areas has increased from 88.9 percent in 1990 to 89.6 percent in 2000 while the proportion of the employed labour force residing in urban areas has decreased from 11.1 percent in 1990 to 10.4 percent in 2000.

The unemployed population is composed of those who are unemployed and seeking work and those who are not seeking work but available for work.

The unemployed population has decreased by 11 percent from 28,318 in 1990 to 25,100 in 2000. The male unemployed population has decreased by a percentage double than the percentage decrease in the female one (7 percent).

In 1990 there were more unemployed people in the rural areas (85.3 percent for total; 86.4 percent for males and 83.2 percent for females) than in the urban areas (14.7 percent for total; 13.6 percent for males and 16.8 percent for females). In 2000, the same situation prevails, there are more unemployed persons residing in rural area (66.2 percent for total, 67.7 percent for males and 63.7 percent for females) compared to urban areas (33.8 percent for total, 32.3 percent for males and 36.3 percent for females). However, the proportion of the unemployed residing in urban areas increase in 2000.

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

Activity and Sex	Residence							
	1990				2000			
	Total Number	Total	Rural	Urban	Total Number	Total	Rural	Urban
Population								
Total	524,072	100	85.8	14.2	695,441	100	85.6	14.4
Male	247,549	100	85.4	14.6	333,513	100	85.5	14.5
Female	276,523	100	86.1	13.9	361,928	100	85.7	14.3
Labour Force								
Total	270,487	100	88.6	11.4	403,365	100	88.2	11.8
Male	164,673	100	87.5	12.5	221,435	100	87.0	13.0
Female	105,814	100	90.2	9.8	181,930	100	89.6	10.4
Employed								
Total	242,169	100	88.9	11.1	378,265	100	89.6	10.4
Male	146,185	100	87.6	12.4	205,494	100	88.5	11.5
Female	95,984	100	90.9	9.1	172,771	100	91.0	9.0
Unemployed								
Total	28,318	100	85.3	14.7	25,100	100	66.2	33.8
Male	18,488	100	86.4	13.6	15,941	100	67.7	32.3
Female	9,830	100	83.2	16.8	9,159	100	63.7	36.3
Inactive								
Total	242,416	100	83	17	292,076	100	82.1	17.9
Male	77,263	100	81.6	18.4	112,078	100	82.5	17.5
Female	165,153	100	83.7	16.3	179,998	100	81.9	18.1
Not Stated								
Total	11,169	100	79.8	20.2	0	0	0	0
Male	5,613	100	78.5	21.5	0	0	0	0
Female	5,556	100	81.1	18.9	0	0	0	0

Sources: 1990 and 2000 Census of population and Housing

The economically inactive population comprises all persons 12 years and over who are classified neither as employed nor as unemployed during the reference period; i.e. the part of the population that is considered to be outside the labour force. This category includes all persons who are full time housewives/homemakers, full time students and those who are not available for work aged 12 years and over.

Of the total working population of 695,441, 292,076 were classified as being economically inactive. The economically inactive population has increased slightly by 20 percent from 242,416 in 1990 to 292,076 in 2000. Economic inactivity in males has increased by 45 percent from 77,263 in 1990 to 112,078 in 2000. Female economic inactivity has increased by 9 percent from 165,153 in 1990 to 179,998 in 2000. In 2000 there are more economically inactive persons in the rural areas than in the urban areas. The same situation pertained for 1990.

Table 6.5 shows the economically active and economically inactive population by age, sex and nature of current economic activity. For the labourforce and the employed, the peak age group is 35-54 years (27.4 percent for total; 28.4 percent for males and 26.1 percent for females and 28.3 percent for total; 29.3 percent for males and 27.0 percent for females respectively).

For the unemployed population, the peak is in the age groups 12-19 (27.0 percent for total, 25.1 percent for males and 43.4 percent for females) and 20-24 (26.4 percent for total, 26.8 percent for males and 25.7 percent for females).

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

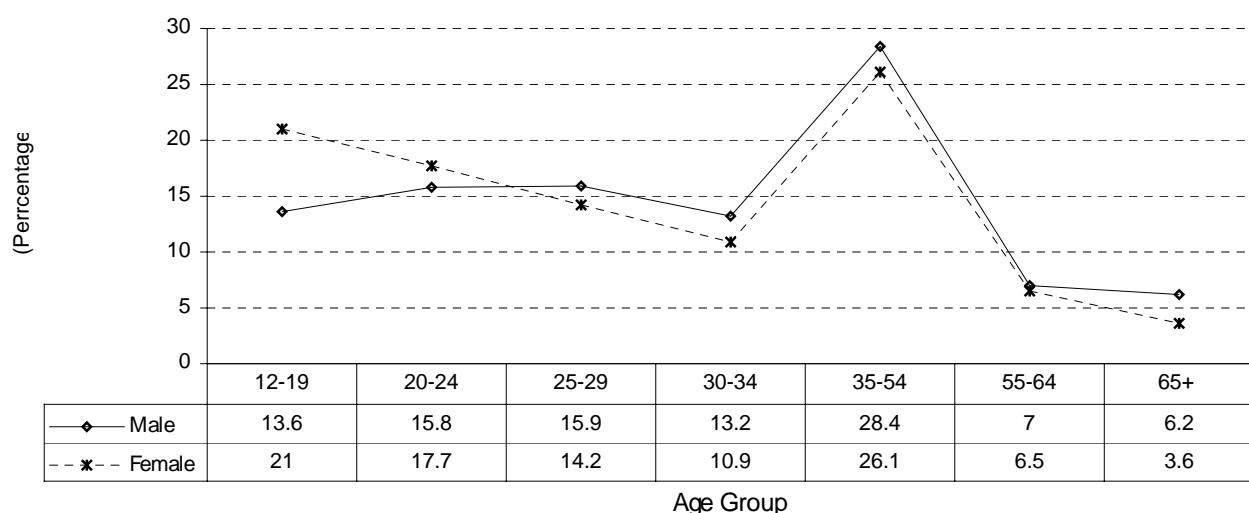
Figure 6.3 shows a diagrammatic presentation by age and sex of the economically active population in 2000. The peak is in the age-range 35-54.

Table 6.6: Economically Active Population (12 Years and older) by Age, Sex, and Economic Inactivity, Northern Province 2000

Activity And Sex	Total	Total	Age Group							
	Number		12-19	20-24	25-29	30-34	35-54	55-64	65+	Not Stated
Labour Force										
Total	403,365	100	16.9	16.6	15.1	12.1	27.4	6.8	5.0	0
Male	221,435	100	13.6	15.8	15.9	13.2	28.4	7.0	6.2	0
Female	181,930	100	21.0	17.7	14.2	10.9	26.1	6.5	3.6	0
EMPLOYED										
Total	378,265	100	15.9	16.0	15.1	12.4	28.3	7.1	5.2	0
Male	205,494	100	12.7	14.9	15.8	13.4	29.3	7.4	6.5	0
Female	172,771	100	19.8	17.3	14.3	11.1	27.0	6.8	3.8	0
UNEMPLOYED										
Total	25,100	100	27.0	26.4	15.5	8.6	13.7	2.4	1.5	0
Male	15,941	100	25.1	26.8	17.4	10.1	16.2	2.8	1.7	0
Female	9,159	100	43.4	25.7	12.3	5.9	9.5	1.8	1.3	0
INACTIVE										
Total	292,076	100	52.5	12.4	7.8	5.7	12.5	3.8	5.3	0
Male	112,078	100	69.6	9.4	3.7	2.8	6.3	2.5	5.7	0
Female	179,998	100	41.9	14.2	10.3	7.5	16.4	4.6	5.1	0

Sources: 1990 and 2000 Census of population and Housing

Figure 6.3: Economically Active population (12 Years and Over) by Age and Sex Northern Province, 2000



Sources: 1990 and 2000 Census of population and Housing

6.6 Economic Dependency Ratios

Economic dependency measures the extent to which the economically inactive population is dependent on the economically active population. Therefore the economic dependency ratio is the ratio of the economically inactive population divided by the economically active population.

Table 6.7 shows the current economically active population and economic dependency ratios by sex and residence. The table shows that apart from males, the ratios have decreased for all other categories. The decreases are mostly for the females (156.1 percent in 1990 to 98.9 percent in 2000) and in urban areas (133.2 percent in 1990 to 109.8 percent in 2000).

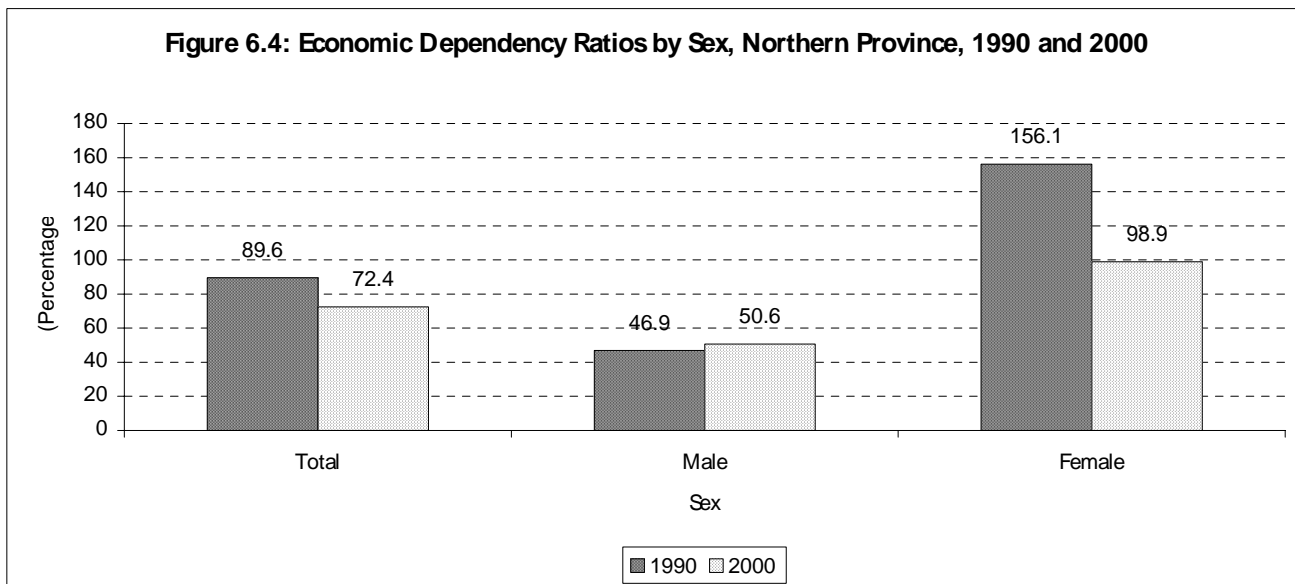
The decline in the economic dependency ratio at national level between 1990 and 2000 was significantly more than the decline of the ratio in the province (114 in 1990 to 79 in 2000 at national level versus 90 in 1990 to 72 in 2000 at provincial level). The economic dependency ratio for the province was lower than the national economic dependency ratio, in 2000

Table 6.7: Current Economically active Population and Economic Dependency Ratios by Sex and Residence, Northern Province, 1990 and 2000

Labourforce	1990	2000
Total Zambia	2,162,487	3,165,151
Northern Province	270,487	403,365
Male	164,673	221,435
Female	105,814	181,930
Rural	449,657	355,720
Urban	74,415	47,645
Economic dependency ratios (Percentage)		
Total Zambia	114	79
Northern Province	89.6	72.4
Male	46.9	50.6
Female	156.1	98.9
Rural	84	67.4
Urban	133.2	109.8

Sources: 1990 and 2000 Census of population and Housing

Figure 6.4: Economic Dependency Ratios by Sex, Northern Province, 1990 and 2000



Sources: 1990 and 2000 Census of population and Housing

6.7 Current Labour Force Participation Rates

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

There has been an increase in the working-age population involved in economic activities between the two censuses. The labour force participation rates increased from 52 percent in 1990 to 58 percent in 2000. This is similar with the trend for the national average, where the participation rates increased from 46.6 percent in 1990 to 56.0 in 2000. The labour force participation rate for females increased from 38 percent to 50 whereas for males it remained relatively stable between 1990 and 2000 at 66 percent.

The increase in labour force participation rates is greater for females than for males in rural as opposed to urban areas. In the rural areas, the female participation rate has increased from 40 percent in 1990 to 53 percent in 2000, while the male participation rate has decreased marginally by 0.5 of a percentage point from 1990 to 2000. In the urban areas, the female labour force participation rate has decreased from 27 percent in 1990 to 17 percent in 2000, while the participation rate of males has increased from 57 percent in 1990 to 59 percent in 2000.

Table 6.8: Trends in Labour force Participation Rates by District and Sex, 1990 and 2000 (Percentage)

Province	1990			2000		
	Total	Males	Females	Total	Males	Females
Zambia	46.6	62.2	31.9	56.0	67.0	45.0
Northern	51.6	66.5	38.3	58.0	66.4	50.3
Chilubi	50.6	67.6	37.5	59.4	68	52.3
Chinsali	49.1	64.6	35.1	57	63.8	50.6
Isoka	45.4	60.9	31.7	65.8	69.1	62.8
Kaputa	41.3	64.4	20.1	57.3	73.0	42.3
Kasama	53.2	65.8	41.5	57.7	64.9	50.9
Luwingu	53.8	67.9	41.3	46.4	61.2	32.5
Mbala	49.5	67.0	33.8	52.6	66.2	40.1

Mpika	63.9	76.5	52.6	52.7	60.6	45.2
Mporokoso	50.5	61.9	40.4	64.8	68.0	61.8
Mpulungu	-	-	-	59.3	70.8	48.8
Mungwi	-	-	-	64.7	68.7	61.1
Nakonde	-	-	-	64.7	70.3	59.8

Sources: 1990 and 2000 Censuses of Population and Housing

*A dash (-) denotes that the district did not exist at that time

The increase in the rural labour force participation rate (from 53 percent to 60 percent) is slightly higher than the increase in the urban areas (from 42 percent in 1990 to 48 percent in 2000).

Looking at the distribution of the labour force participation rates by age groups, the information shows that the participatory rate were lowest in the age group 12-19 rose with the increase in ages to reach a peak of 77 percent for the age-group 40-44 years, and then started to decline until it reaches 57 percent for the oldest age-group 65 years and over. The pattern of the distribution of the labour force participation rates by age in rural and urban areas are similar to the pattern described above for the total population. The patterns are also the same for both sexes except for the pattern for females in urban areas where the peak is reached in the age group 45-49.

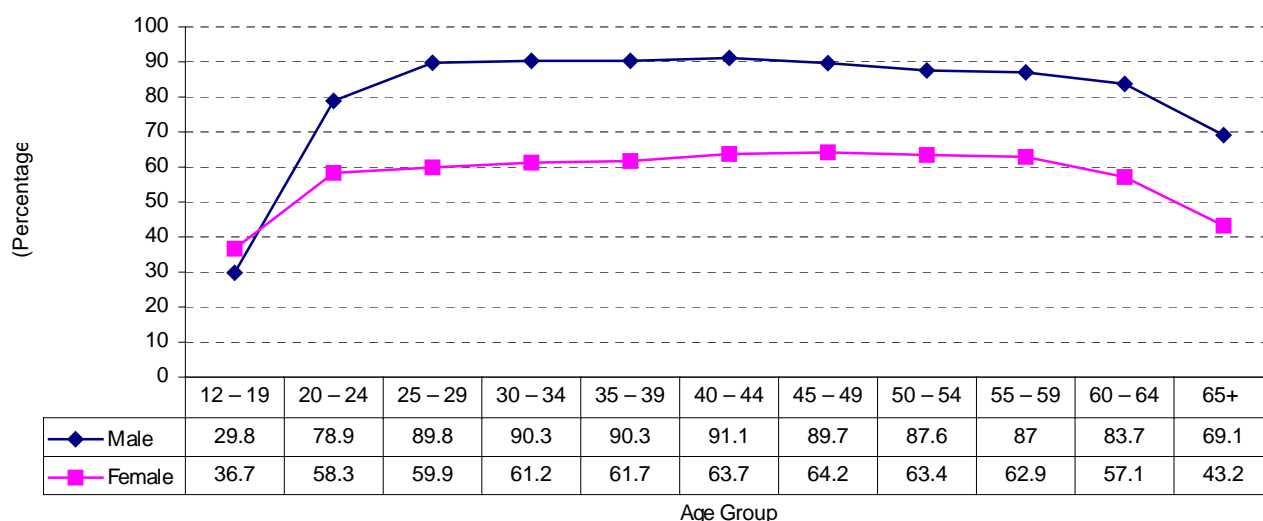
The male labour force participation rates are higher than those for females at every age group except 12-19. In urban areas however, male labour force participation rates are higher than the female throughout all the age groups.

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

Age-Group	Current Participation Rates								
	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
1990	51.6	66.5	38.3	53.3	68.1	40.1	41.6	57.1	27.0
2000	58.0	66.4	50.3	59.7	67.6	52.5	47.7	59.4	17.3
2000 Census Age Group									
12 – 19	30.8	27.8	33.6	33.3	29.8	36.7	17.2	17.2	7.1
20 – 24	65.0	76.9	55.7	67.3	78.9	58.3	53.1	67.0	41.7
25 – 29	72.9	89.4	58.1	73.9	89.8	59.9	66.9	87.5	47.9
30 – 34	74.7	90.1	59.6	75.5	90.3	61.2	69.6	89.3	49.8
35 – 39	74.7	90.4	60.3	75.3	90.3	61.7	70.5	90.6	51.5
40 – 44	76.5	91.1	62.2	77.2	91.1	63.7	72.2	91.3	53.1
45 – 49	75.7	89.6	62.9	76.3	89.7	64.2	72.1	89.2	53.7
50 – 54	73.5	87.3	62.5	73.8	87.6	63.4	70.7	85.4	53.8
55 – 59	73.5	86.3	61.8	74.3	87.0	62.9	66.8	80.2	51.8
60 – 64	68.7	82.9	55.8	69.7	83.7	57.1	57.8	73.9	42.2
65+	56.6	68.2	42.0	57.8	69.1	43.2	43.6	57.4	29.7
Not stated	-	-	-	-	-	-	-	-	-

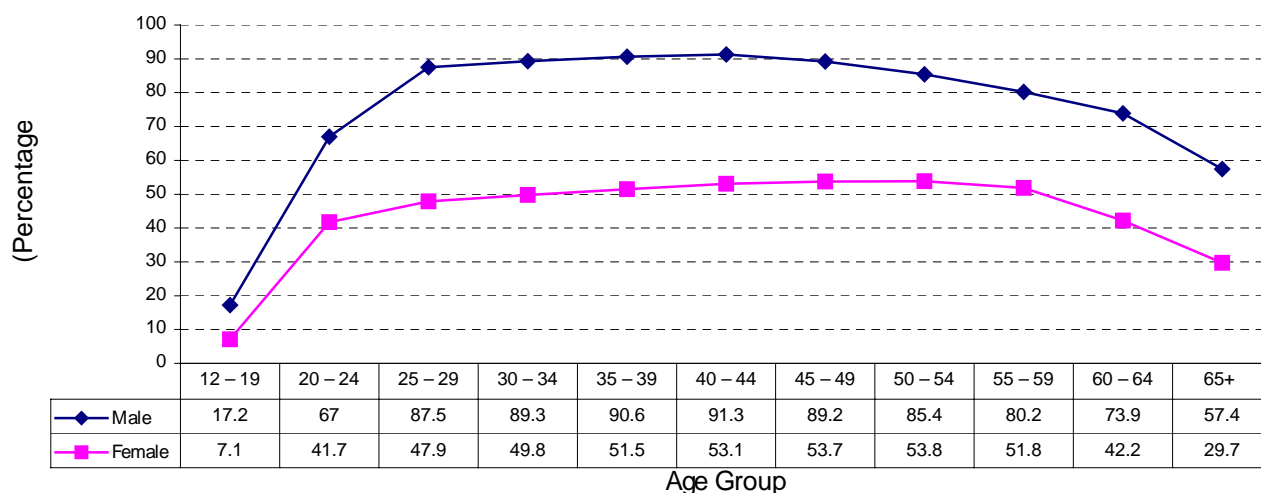
Sources: 1990 and 2000 Census of population and Housing

Figure 6.5 Current Labour Force Participation Rates by age and Sex, Northern Province, 2000-Rural



Sources: 1990 and 2000 Census of population and Housing

Figure 6.6 Current Labour Force Participation Rate by age and sex, Northern Province, 2000-Urban



Sources: 1990 and 2000 Census of population and Housing

6.8 Employment Status, Occupation And Industrial Classification

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

6.8.1 Employment status

Employment status refers to whether a worker is an employer, employee, self-employed or an unpaid family worker. An employer is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires one or more employees. An employee is a person who works for a public or private employer and receives remuneration in wages, salary, commission, tips, piece rates, or pay in kind. A self-employed worker is a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires no employees. Finally, an unpaid family worker is a person who works

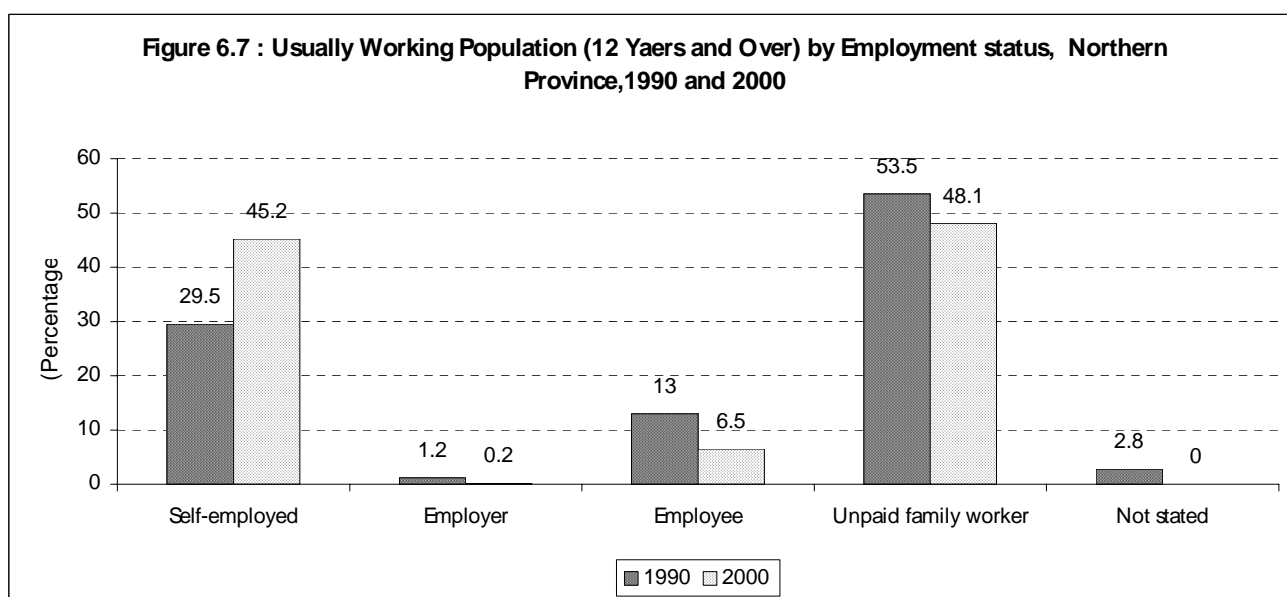
without pay in an economic enterprise operated by a related member of the same household (including peasant farmers).

Table 6.10 shows that the usually working population increased by 89 percent between 1990 and 2000, from 207,479 to 392,258. In terms of employment status, the total self-employed persons as a proportion of the total usually working population increased from 30 percent in 1990 to 45 percent in 2000. The ratio of the self-employed persons by sex has also increased between the two periods. However, the increase in the male self-employed persons (from 33 percent in 1990 to 60 percent in 2000) is more than the increase in the female self-employed persons (from 24 percent in 1990 to 29 percent in 2000). With regard to residence, a similar pattern is observed where the proportion of the male self-employed population has increased by a bigger percentage (from 35 percent in 1990 to 62 percent for the rural areas and from 24 percent to 47 percent for the urban areas) than the female self-employed population increased from 23 percent in 1990 to 28 percent in 2000 for the rural areas and from 35 percent in 1990 to 42 percent in 2000, for urban areas.

There has been a decrease in the proportion of the workforce classified as employers. From a proportion of 1.2 percent in 1990 the proportion dropped to only 0.2 percent in 2000. A similar trend by sex and residence is observed.

The proportion of the population classified as employees has decreased from 13 percent in 1990 to 6 percent in 2000. The decrease in the male employees (from 18 percent in 1990 to 10 percent in 2000) is more than the decrease in the female employees (from 5 percent in 1990 to 2 percent in 2000).

The proportion of the unpaid family workers has decreased in general from 54 percent in 1990 to 48 percent in 2000. A similar trend was observed in rural areas, the unpaid family workers decreased from 98 in 1990 to 51 in 2000. In contrast, the proportion of the unpaid family worker increased in urban areas from 15 percent in 1990 to 26 percent in 2000.



Sources: 1990 and 2000 Census of population and Housing

Table 6.10: Percent Distribution of the Usually Working Population 12 Years and Over by Employment Status, Sex and Residence, Northern Province 1990 and 2000

Employment status and sex	Residence and Year					
	Total		Rural		Urban	
	1990	2000	1990	2000	1990	2000
Total number						
Total	207,479	392,258	184,782	351,204	22,697	41,054
Male	127,040	203,711	111,072	180,441	15,968	23,270
Female	80,439	188,547	73,710	170,763	6,729	17,784
Total percentage						

Total	100	100	100	100	100	100
Male	100	100	100	100	100	100
Female	100	100	100	100	100	100
Self-employed						
Total	29.5	45.2	29.8	45.3	26.8	44.6
Male	33.3	60.1	34.6	61.9	23.5	46.5
Female	23.6	29.0	22.6	27.7	34.6	42.1
Employer						
Total	1.2	0.2	0.9	0.1	3.2	0.6
Male	1.6	0.3	1.3	0.2	3.8	0.9
Female	0.5	0.1	0.4	0.1	1.8	0.3
Employee						
Total	13.0	6.5	8.2	4.0	52.0	28.5
Male	18.0	10.4	11.9	6.8	60.5	38.2
Female	5.0	2.4	2.6	1.0	32.0	15.7
Unpaid family worker						
Total	53.5	48.1	58.3	50.6	14.6	26.3
Male	44.6	29.2	49.7	31.1	9.4	14.4
Female	67.6	68.5	71.3	71.3	26.7	41.9
Not stated						
Total	2.8	0.0	2.8	0.0	3.4	0.0
Male	2.5	0.0	2.5	0.0	2.8	0.0
Female	3.3	0.0	3.1	0.0	4.9	0.0

Sources: 1990 and 2000 Census of population and Housing

6.8.2 Working population by occupation

Occupation is a concept, which identifies a set of characteristics of a job and a group of specific tasks that are performed by a person. Table 6.11 shows the usually working population classified by occupation, sex and residence.

The distribution of male and female workers among occupations showed some similarities. The three most popular occupations for males are Agriculture (62 percent in 1990 and 84 percent in 2000), Sales workers (3 percent in 1990 and 5 percent in 2000), and Service workers (2 percent in 1990 and 1 percent in 2000).

The three most popular occupations for females are Agriculture (68 percent in 1990 and 90 percent in 2000), Sales workers (4 percent in 1990 and 5 percent in 2000) and Professional and Technical (2.7 in 1990 and 1.1 percent in 2000).

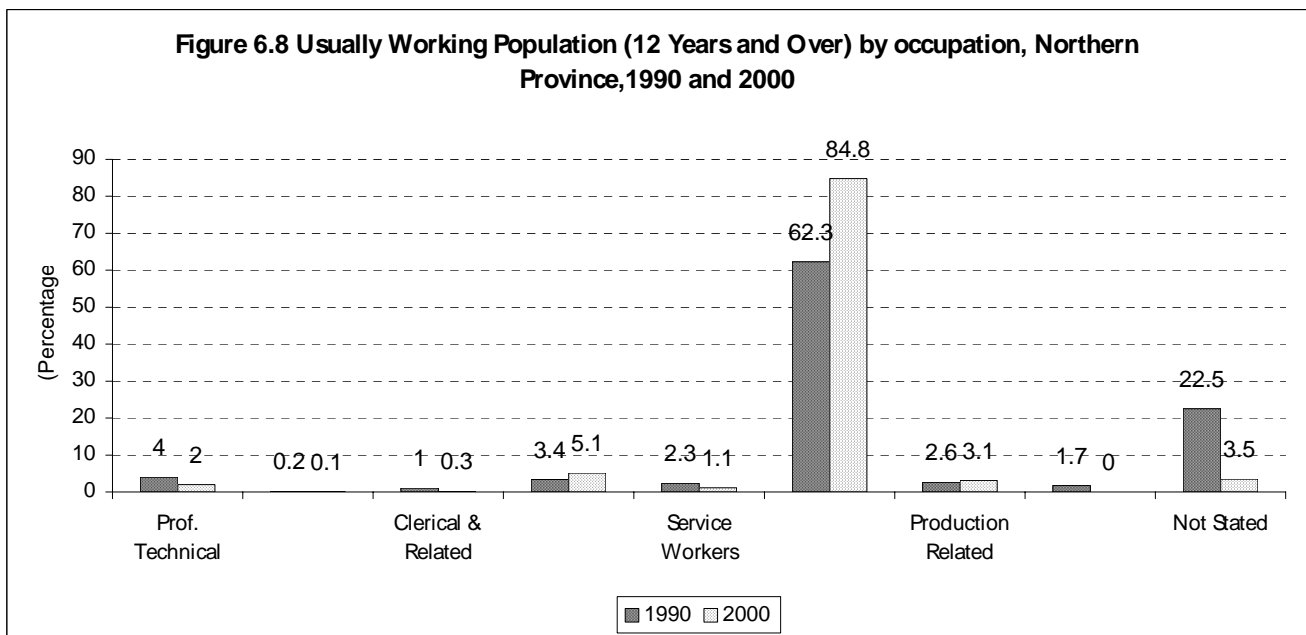
In rural areas, the distribution of workers among the various occupations is similar to the one for the whole nation. The differences between the distributions of male and female workers over the various occupations in rural areas are not so significant. The distribution of workers over occupations in urban areas is different from both that of the total and that of the rural areas. In urban areas, workers are more widely distributed over many occupations, and not concentrated in few occupations. The four most popular occupations in urban areas are Agriculture (39 percent in 2000), Sales workers (25 percent in 2000), Professional (9 percent in 2000) and Production (13 percent in 2000).

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

Occupation	Percentage of Working Population									
	Year	Total			Rural			Urban		
		Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
<i>Total Number of Workers</i>	1990	207,479	127,040	80,439	184,782	111,072	73,710	22,697	15,968	6,729
	2000	392,258	203,711	188,547	351,204	180,441	170,763	41,054	23,270	17,784
Total Percent	1990	100	100	100	100	100	100	100	100	100
	2000	100	100	100	100	100	100	100	100	100
Prof. Technical	1990	4.0	4.9	2.7	2.6	3.2	1.6	15.9	16.3	14.9
	2000	2.0	2.8	1.1	1.1	1.8	0.5	9.2	10.8	7.0
Administrative & Managerial	1990	0.2	0.3	0.0	0.1	0.1	0.0	1.1	1.4	0.4

	2000	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.5	0.1
Clerical & Related	1990	1.0	1.0	0.8	0.4	0.5	0.2	5.9	5.2	7.5
	2000	0.3	0.5	0.2	0.1	0.2	0.0	2.4	2.7	2.0
Sales Workers	1990	3.4	3.1	3.9	1.8	1.7	2.0	16.3	13.0	24.1
	2000	5.1	5.2	5.1	2.7	2.7	2.7	25.5	23.9	27.6
Service Workers	1990	2.3	2.9	1.4	1.3	1.5	1.0	10.1	12.4	4.8
	2000	1.1	1.4	0.7	0.5	0.6	0.4	6.1	7.7	4.0
Agric. Husbandry	1990	62.3	63.5	60.2	68.3	70.8	64.7	13.1	13.6	11.8
	2000	84.8	82.5	87.2	90.1	88.9	91.3	39.3	32.4	48.4
Production Related	1990	2.6	3.1	1.9	1.9	2.1	1.5	8.8	9.8	6.4
	2000	3.1	4.3	1.9	2.0	2.6	1.4	13.0	17.6	7.0
Unclassified	1990	1.7	1.6	1.9	1.5	1.4	1.7	3.0	2.8	3.6
	2000	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Not Stated	1990	22.5	19.6	27.2	22.1	18.7	27.3	25.8	25.5	26.5
	2000	3.5	3.3	3.7	3.5	3.2	3.7	3.9	4.1	3.7

Sources: 1990 and 2000 Census of population and Housing



Sources: 1990 and 2000 Census of population and Housing

6.8.3 Working population by Industry

Industry or economic sector defines the type of product or service produced at one's workplace. The distribution of the usually working population 12 years and over by industry and employment status for 1990 and 2000 is shown in Table 6.12.

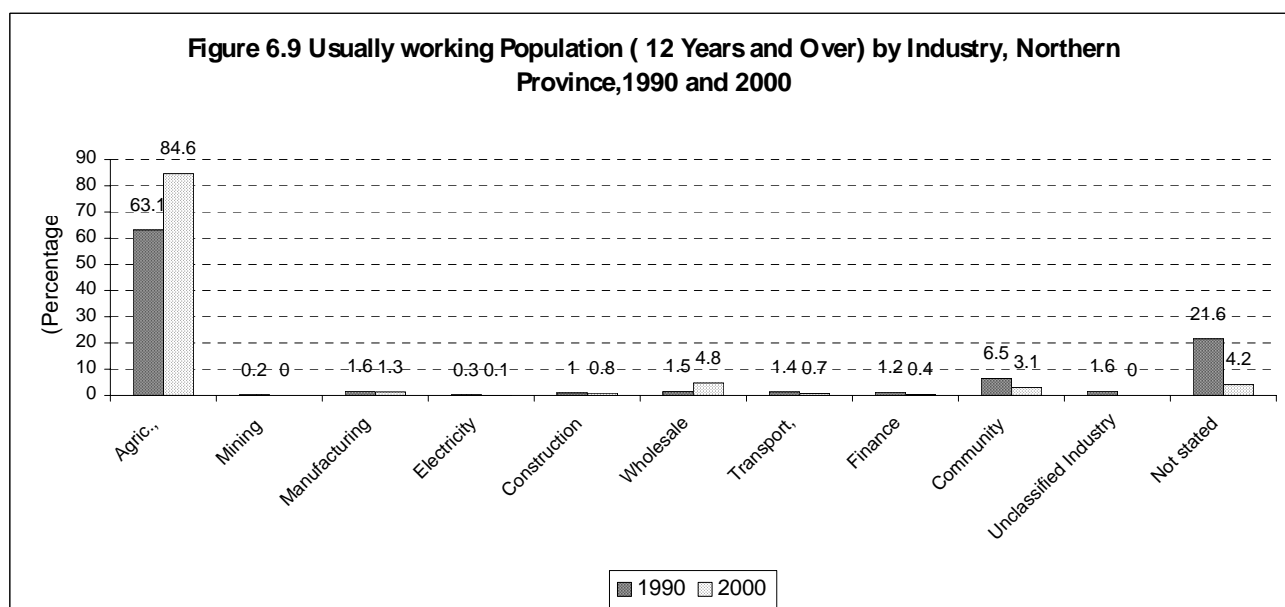
The industrial structure in Northern Province continues to be dominated by the Agriculture industry. In 2000 the Agriculture sector employed 85 percent of the workers while trading accounted for the second largest employees accounting for 5 percent. In comparison to 1990, the agriculture and trade industries are the only industries that had an increase in the 2000. The rest of the sectors have shown a decline. The most significant was Community and Personal services that registered a decline from 7 percent in 1990 to 3 percent in 2000. A study of the mobility of workers from one industry to another shows that all non-agricultural industries have experienced manpower losses during the 1990's, while the Agricultural and Trade were the only recipients of manpower from other sectors. The industrial distribution of workers by employment status revealed that the unpaid family workers (68 percent in 1990 and 92 percent in 2000) and the self-employed (76 percent in 1990 and 85 percent in 2000) are mostly in the Agricultural sector. Employees are more widely distributed over the industries than any other employment status. Employers were more prominent in agriculture (36.1 percent in 1990 and 46.9 percent in 2000) and commodity personal services (23.7 percent and 19.5 percent in 2000).

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

Industrial category	Year	Total Number Working	<i>Self Employed</i>	Employee	Employer	Unpaid family worker	Not stated
Total Number	1990	207,479	61,209	26,971	2,438	111,009	5,852
	2000	392,258	177,272	25,608	703	188,675	0
Northern Province	1990	100	100	100	100	100	100
	2000	100	100	100	100	100	100
Agric.,	1990	63.1	75.9	21.7	36.1	68.4	31.5
	2000	84.6	84.7	28.6	46.9	92.2	0.0
Mining	1990	0.2	0.0	0.9	0.9	0.0	0.2
	2000	0.0	0.0	0.2	0.0	0.0	0.0
Manufacturing	1990	1.6	2.4	4.5	4.6	0.4	1.2
	2000	1.3	1.9	2.6	2.8	0.5	0.0
Electricity	1990	0.3	0.1	1.6	1.1	0.0	0.2
	2000	0.1	0.0	1.7	0.1	0.0	0.0
Construction	1990	1.0	0.8	4.7	3.3	0.3	0.6
	2000	0.8	0.8	6.0	3.6	0.1	0.0
Wholesale	1990	1.5	2.9	3.3	3.2	0.3	0.8
	2000	4.8	7.1	8.1	8.4	2.2	0.0
Transport,	1990	1.4	0.2	9.7	4.9	0.0	0.8
	2000	0.7	0.1	8.7	7.5	0.0	0.0
Finance	1990	1.2	2.0	3.3	3.8	0.2	1.0
	2000	0.4	0.4	2.4	2.1	0.1	0.0
Community	1990	6.5	3.9	32.1	23.7	1.4	4.6
	2000	3.1	1.3	34.5	19.5	0.5	0.0
Unclassified Industry	1990	1.6	1.0	2.1	1.5	1.7	4.1
	2000	0.0	0.0	0.0	0.0	0.0	0.0
Not stated	1990	21.6	10.8	16.1	16.9	27.3	55.0
	2000	4.2	3.6	7.3	9.0	4.3	0.0

Sources: 1990 and 2000 Census of population and Housing

Figure 6.9 Usually working Population (12 Years and Over) by Industry, Northern Province, 1990 and 2000



Sources: 1990 and 2000 Census of population and Housing

The distribution of the usually working population by employment status in each industry is shown in Table 6.13. Unpaid family workers (53.5 percent in 1990 and 48.1 percent in 2000) are the most predominant statuses for all industries. The Employees are important in all industries, except in Agriculture and Trade in both 1990 and 2000. The employment status of employer is not very important in any industry in both Censuses. Self-employed is prominent in the Trading and Manufacturing industries in 2000 (66.7 percent in trade and 66.9 percent in Manufacturing). Unpaid family workers are dominant in the Agricultural industry in both Censuses.

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

<i>Industry</i>	<i>Year</i>	Total Number working	Total	Self Employed	<i>Employee</i>	Employer	Unpaid family worker	Not stated
Total	1990	207,479	100	29.5	13	1.2	53.5	2.8
	2000	392,258	100	45.2	6.5	0.2	48.1	
Agriculture	1990	130,924	100	35.4	4.5	0.7	58	1.4
	2000	331,819	100	45.3	2.2	0.1	52.4	
Mining	1990	311	100	6.4	76.9	1.7	6.1	3.5
	2000	86	100	45.3	52.3		2.3	
Manufacturing	1990	3,359	100	44.5	36	3.3	14.1	2.1
	2000	4992	100	66.9	13.4	0.4	19.3	
Electricity	1990	527	100	6.7	84.4	4.9	2.1	1.9
	2000	509	100	13.2	84.3	0.2	2.4	
Construction	1990	2,105	100	22	60	3.8	12.4	1.89
	2000	3089	100	43.5	49.4	0.8	6.2	
Trade	1990	3,146	100	56.2	28.6	2.5	11.3	1.4
	2000	18,954	100	66.7	10.9	0.3	22.1	
Transport	1990	2,946	100	4.3	88.8	4.1	1.3	1.5
	2000	2611	100	10.1	84.9	2.0	2.9	
Finance	1990	2,549	100	48.7	35	3.6	10.2	2.4
	2000	1490	100	47.4	41.1	1.0	10.4	
Community	1990	13,447	100	17.9	64.3	4.3	11.5	2
	2000	12132	100	18.5	72.8	1.1	7.6	
Other	1990	3,277	100	18.5	17.1	1.1	56	73
	2000		100					
Not Stated	1990	44,888	100	14.7	9.7	0.9	67.5	7.2
	2000	16,576	100	39.0	11.3	0.4	49.3	

Sources: 1990 and 2000 Census of population and Housing

Table 6.14 and table 6.15 show the distribution of the usually working population by industry, sex and residence for the year 2000. The majority of the labor force is employed in the Agricultural sector (85 percent) followed by Trade, Restaurants and Hotels with 5 percent. By residence, the rural areas employ 90 percent in the Agricultural industry, whereas in urban areas agriculture, Community and the Personal Services and the Trade, Restaurants and Hotels account for 40 percent, 16 percent and 24 percent, respectively.

Disaggregated by sex, 87 percent of the total usually working population of females are in the Agricultural sector while 5 percent are in Trade, Restaurants and Hotels.

For males 82 percent are in Agricultural sector while 5 percent are in Trade, Restaurants and Hotels.

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

<i>Industry</i>	Total Number	Rural	Urban	Males	Females
Total Number	392,258	351,204	41,054	203,711	188,547
Total Percent	100	100	100	100	100
Agriculture, Hunting Forestry and Fishing	85	90	40	82	87
Mining and Quarrying	0	0	0	0	0
Manufacturing	1	1	4	1	1
Elect., Gas and Water	0	0	1	0	0
Construction	1	1	3	1	0
Trade, Restaurants and Hotels	5	3	24	5	5
Transport and Communication	1	0	4	1	0
Finance and Real Estates	0	0	2	1	0
Community and Personal Services	3	2	16	4	2
Not stated	4	4	6	4	4

Sources: 1990 and 2000 Census of population and Housing

Table 6.15 Usually Working Population by industry, Residence and Sex, Northern Province, 2000

Northern Province	Total Number	Total Percent	Male	Female	Rural Number	Total Percent	Male	Female	Urban Number	Total Percent	Male	Female
Total	392,258	100	52	48	351,204	100	51	49	41,054	100	57	43
Agriculture	331,819	100	51	49	315,560	100	51	49	16,259	100	47	53
Mining and Quarrying	86	100	99	1	51	100	100	-	35	100	97	3
Manufacturing	4,992	100	48	52	3,374	100	44	56	1,618	100	55	45
Elect., Gas and Water	509	100	92	8	148	100	94	6	361	100	91	9
Construction	3,089	100	98	2	1,803	100	98	2	1,286	100	98	2
Trade, Restaurants and Hotels	18,954	100	52	48	9,177	100	50	50	9,777	100	53	47
Transport and Communication	2,611	100	95	5	796	100	98	2	1,815	100	94	6
Finance and Real Estates	1,490	100	69	31	568	100	73	27	922	100	68	32
Community and Personal Services	12,132	100	66	34	5,756	100	69	31	6,376	100	63	37
Not stated	16,576	100	53	47	13,971	100	52	48	2,605	100	60	40

For the total working population by industry sex and residence, 52 percent were male and 48 were females. The Mining, Electricity, Construction and Transport account for the majority of the male working population with 99 percent, 92 percent, 98 percent, and 96 percent respectively. The distribution by rural-urban does not differ much from the total distribution.

6.9 Educational Attainment

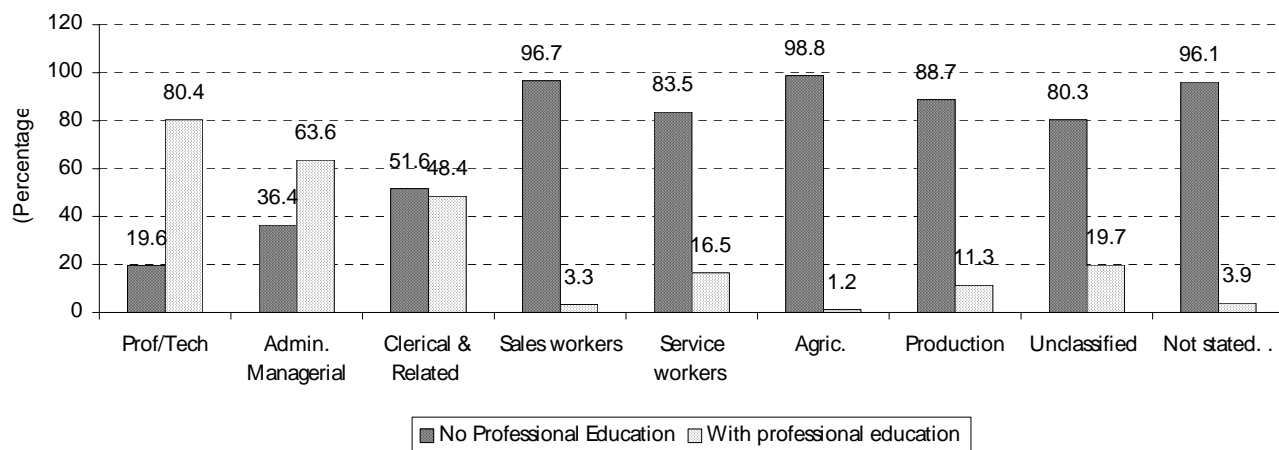
The main objective of human resource development is to secure the optimal number of people with the right qualifications for the right jobs at the right time.

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

Table 6.16 shows the distribution of the usually working population 12 years and over by professional/vocational training and occupation in 2000. The data shows that, 96 percent of the province's workforce have absolutely no professional /vocational education while only 4 percent have such education. The distribution among the various occupations, shows that about four fifths of those in the Professional, Technical and related occupations have professional education, while a fifth do not have. Almost two thirds of persons employed in the Administrative and Managerial occupations have professional education as are 48 percent of those in Clerical and related occupations. Over four fifths of the sales, service, Agriculture and production workers do not have professional education.

An examination of the levels of training of those who reported to have had professional education shows that 83 percent were trained at Certificate level while 14 percent were trained up to Diploma level and 3 percent were trained up to Degree level. With the exception of the Administrative and Managerial workers, the proportion that were been trained up to Degree level is still very low by 2000. About 46 percent of employees in the Administrative and Managerial occupations attained Diploma level training as have 18 percent of those in Sales occupations and 14 percent in the Clerical and related occupations.

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



Sources: 1990 and 2000 Census of population and Housing

Table 6.16: Usually Working population 12 years and over by professional/vocational training, occupation and sex, Northern Province 2000.

<i>Occupation/Sex</i>	Usually working Population	Working Population			Working Population With Professional Education				
		Total	No Professional Education	With professional education	Number Having Professional Education	Total	Certificate	Diploma	Degree
<i>Both Sexes</i>									
Total	392,258	100.0	96.3	3.7	14,338	100.0	83.0	13.8	3.3
Prof/Tech	7,749	100.0	19.6	80.4	6,229	100.0	76.5	18.9	4.5
Admin. Managerial	217	100.0	36.4	63.6	138	100.0	32.6	46.4	21.0
Clerical & Related	1,342	100.0	51.6	48.4	650	100.0	83.5	14.3	2.2
Sales workers	20,101	100.0	96.7	3.3	656	100.0	79.4	18.4	2.1
Service workers	4,197	100.0	83.5	16.5	691	100.0	91.3	7.1	1.6
Agric.	332,441	100.0	98.8	1.2	4,020	100.0	90.4	7.9	1.7
Production	12,355	100.0	88.7	11.3	1,398	100.0	93.8	5.3	0.9
Unclassified	137	100.0	80.3	19.7	27	100.0	77.8	7.4	14.8
Not stated. .	13,719	100.0	96.1	3.9	529	100.0	79.2	14.4	6.4
Males									
Total	203,711	100.0	94.5	5.5	11,161	100.0	80.8	15.4	3.9
Prof/Tech	5,674	100.0	20.7	79.3	4,499	100.0	72.0	22.2	5.8
Admin. Manager	182	100.0	31.3	68.7	125	100.0	29.6	48.8	21.6
Clerical & Related	918	100.0	59.4	40.6	373	100.0	75.9	20.6	3.5
Sales workers	10,506	100.0	95.5	4.5	475	100.0	74.7	22.5	2.7
Service workers	2,806	100.0	78.3	21.7	608	100.0	90.6	7.6	1.8
Agric.	167,987	100.0	98.0	2.0	3,412	100.0	89.5	8.7	1.8
Production	8,760	100.0	85.8	14.2	1,248	100.0	93.6	5.4	1.0
Unclassified	92	100.0	77.2	22.8	21	100.0	76.2	9.5	14.3
Not stated. .	6,786	100.0	94.1	5.9	400	100.0	77.8	14.8	7.5
Females									
Total	188,547	100.0	98.3	1.7	3,177	100.0	90.7	8.1	1.2
Prof/Tech	2,075	100.0	16.6	83.4	1,730	100.0	88.4	10.3	1.3
Admin. Managerial	35	100.0	62.9	37.1	13	100.0	61.5	23.1	15.4
Clerical & Related	424	100.0	34.7	65.3	277	100.0	93.9	5.8	0.4
Sales workers	9,595	100.0	98.1	1.9	181	100.0	91.7	7.7	0.6
Service workers	1,391	100.0	94.0	6.0	83	100.0	96.4	3.6	0.0
Agric.	164,454	100.0	99.6	0.4	608	100.0	95.9	3.1	1.0
Production	3,595	100.0	95.8	4.2	150	100.0	96.0	4.0	0.0
Unclassified	45	100.0	86.7	13.3	6	100.0	83.3	0.0	16.7
Not stated. .	6,933	100.0	98.1	1.9	129	100.0	83.7	13.2	3.1

Sources: 2000 Census of population and Housing

Table 6.17 shows the usual working population 12 years and over by professional/vocational training, occupation and sex in 1990. Inter-censal comparisons of training in human resources shows that the proportion of those having professional education declined from 7 percent in 1990 to 4 percent in 2000 while those having no professional qualification have increased from 93 percent in 1990 to 96 percent in 2000.

The comparison of those educational levels reached by those having professional/vocational training shows that the proportion of those who are trained at the level Certificate have declined from 88 percent in 1990 to 83 percent in 2000. In contrast, the proportion of individuals that attained the level of Diploma training increased from 12 percent to 14 percent over the same period as did the proportion of those trained at degree from 1 percent to 3 percent. There were remarkable increases in the proportion of those trained at Degree level working in the Administrative and Managerial occupations from 1 percent in 1990 to 21 percent in 2000, while the proportion of those employed in the Professional and Technical occupations increased from 2 percent in 1990 to 5 percent in 2000.

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

<i>Occupation/Sex</i>	Usually working Population	Working Population			Working Population With Professional Education				
		Total	No Professional Education	With professional education	Number with Professional Education	Total	Certificate	Diploma	Degree
Both Sexes									
Total	207,479	100.0	92.6	7.4	15,377	100	87.6	11.7	0.7
Prof/Tech	8,396	100.0	30.9	69.1	5,799	100	80.3	18.2	1.5
Admin. Managerial	376	100.0	36.5	63.5	239	100	56.5	42.6	0.9
Clerical & Related	1,970	100.0	56.8	43.2	851	100	89.4	10.6	0.0
Sales workers	7081	100.0	93.1	6.9	487	100	86.0	14.0	0.0
Service workers	4,758	100.0	81.1	18.9	899	100	93.0	6.9	0.1
Agric.	129,193	100.0	96.8	3.2	4,161	100	93.7	6.1	0.2
Production	5,443	100.0	87.3	12.7	690	100	94.6	5.4	0.0
Unclassified	3,495	100.0	95.0	5.0	176	100	85.6	13.8	0.6
Not stated. .	46,767	100.0	95.4	4.6	2131	100	94.3	5.5	0.2
Males									
Total	127040	100.0	90.2	9.8	12,471	100	86.5	12.8	0.7
Prof/Tech	6,209	100.0	30.3	69.7	4,325	100	77.0	21.4	1.6
Admin. Managerial	346	100.0	36.8	63.2	219	100	55.9	43.1	0.9
Clerical & Related	1,344	100.0	64.8	35.2	473	100	86.1	13.9	0.0
Sales workers	3,976	100.0	91.0	9.0	357	100	83.6	16.4	0.0
Service workers	3,668	100.0	78.0	22.0	808	100	92.4	7.4	0.1
Agric.	80,731	100.0	95.4	4.6	3,741	100	93.4	6.4	0.2
Production	3,894	100.0	84.6	15.4	601	100	94.3	5.7	0.0
Unclassified	1,984	100.0	92.5	7.5	149	100	85.0	14.3	0.7
Not stated. .	24,888	100.0	92.6	7.4	1,838	100	94.0	5.7	0.2
Females									
Total	80439	100.0	96.4	3.6	2914	100	92.3	7.1	0.7
Prof/Tech	2,187	100.0	32.6	67.4	1,474	100	90.0	8.8	1.2
Admin. Managerial	30	100.0	32.1	67.9	20	100	63.2	36.8	0.0
Clerical & Related	626	100.0	39.7	60.3	378	100	93.5	6.5	0.0
Sales workers	3,105	100.0	95.8	4.2	131	100	92.3	7.7	0.0
Service workers	1,090	100.0	91.8	8.2	90	100	97.7	2.3	0.0
Agric.	48,462	100.0	99.1	0.9	423	100	96.4	3.6	0.0
Production	1,549	100.0	94.3	5.7	89	100	96.6	3.4	0.0
Unclassified	1,511	100.0	98.2	1.8	27	100	88.9	11.1	0.0
Not stated. .	21,879	100.0	98.7	1.3	295	100	95.5	4.1	0.3

Sources: 1990 Census of population and Housing

Table 6.18 shows the usually working population 12 years and over by field of training and professional/vocational training level completed by 2000. The biggest proportion of the province's workforce of 66.1 percent had not received training at any level by 2000. There is more concentration of training in the Social sciences and arts than in the natural sciences. The following are the five most common fields of training for those who received professional/vocational training in 2000: Teacher training (26 percent); Nursing (21 percent); Mechanical Engineering (5 percent); Agriculture (4.3 percent) and Accountancy (4 percent).

A comparison of fields of training by level of training completed shows patterns, which were similar to the one, described for the total workers who had received professional training by 2000.

Table 6.18: Usually Working Population (12 Years and Over) by Field of Training and Professional/vocational Training Completed (percent, Northern Province 2000.

Field of Training	Total usually Working Population	No Professional Education	Professional/vocational training			
			Total	Certificate	Diploma	Degree
Total Working Number	392,258	377920	14,338	11,896	1,973	469
Total	100	100	100	100	100	100
Natural science	0.0	0.0	0.5	0.2	0.9	5.3
Civil engineering	0.0	0.0	0.8	0.6	1.0	3.6
Elec. & Electronic Engineering.	0.1	0.0	2.4	2.4	2.6	2.1
Mechanical Engineering	0.2	0.0	4.9	5.2	3.5	1.9
Chemical Engineering	0.0	0.0	0.2	0.2	0.2	0.2
Mining Engineering	0.0	0.0	1.3	1.4	0.9	1.1
Industrial Engineering	0.0	0.0	0.0	0.0	0.0	0.0
Metallurgical Engineering	0.0	0.0	0.2	0.1	0.4	0.0
Architectural& T/Planning	0.0	0.0	0.3	0.3	0.3	0.9
Other Engineering	0.0	0.0	0.7	0.7	1.0	0.9
Medicine and Surgery	0.0	0.0	0.7	0.3	2.3	2.6
Pharmacy	0.0	0.0	0.5	0.5	0.5	0.2
Dentistry	0.0	0.0	0.5	0.5	0.6	0.2
Nursing	0.8	0.0	21.4	22.7	17.9	2.6
Medical Technology	0.0	0.0	1.3	0.5	4.1	9.8
X-RAY Technology	0.0	0.0	0.2	0.0	0.3	3.2
Veterinary	0.0	0.0	0.5	0.5	0.3	1.1
Statistics.	0.0	0.0	0.2	0.2	0.3	0.4
Mathematics	0.0	0.0	0.2	0.1	0.3	1.3
Computer Science	0.0	0.0	0.4	0.3	1.0	0.0
Economics	0.0	0.0	0.6	0.4	0.9	4.1
Accountancy	0.1	0.0	4.1	3.3	8.5	6.0
Teacher Training.	0.9	0.0	25.7	25.6	27.6	21.7
Law and Jurisprudence	0.0	0.0	1.0	0.9	1.2	1.5
Journalism	0.0	0.0	0.2	0.1	0.6	0.0
Fine Arts	0.0	0.0	0.5	0.5	0.4	1.1
Physical Education	0.0	0.0	0.2	0.1	0.5	1.9
Library Science	0.0	0.0	0.1	0.1	0.2	0.2
Social Welfare	0.0	0.0	0.7	0.6	1.2	0.6
Criminology	0.1	0.0	1.9	2.2	0.7	0.2
Business Administration	0.1	0.0	2.2	1.7	5.1	2.8
Secretarial Training	0.1	0.0	1.5	1.7	0.4	0.2
Shorthand Typing	0.0	0.0	0.9	1.1	0.2	0.0
Clerical Typing	0.0	0.0	1.2	1.4	0.4	0.4
Operating of Off. Machine	0.0	0.0	0.5	0.6	0.2	0.0
Service Trade	0.0	0.0	0.9	1.1	0.3	0.2
Radio & TV Broadcasting	0.0	0.0	0.1	0.1	0.2	0.2
Fire Protection & Fire Fighting	0.0	0.0	0.1	0.2	0.1	0.0
Agric., Forestry & Fish	0.2	0.0	4.3	4.1	4.4	10.0
Food and drink Processing	0.0	0.0	0.2	0.2	0.5	0.0
Wood working	0.1	0.0	3.7	4.3	0.8	0.4
Textile Trades.	0.0	0.0	1.1	1.3	0.3	0.0
Leather Trades.	0.0	0.0	0.0	0.1	0.0	0.0
Other Programmes	0.4	0.0	10.8	11.4	7.2	10.4
No Training	66.1	68.6	0.0	0.0	0.0	0.0
Not stated	30.2	31.4	0.3	0.3	0.5	0.6

Sources: 2000 Census of population and Housing

6.10 Unemployment

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

Table 6.19 shows unemployment rates by sex and residence for 1990 and 2000. The information shows that there was a decline in the overall unemployment rate from 11 percent in 1990 to 6 percent in 2000. The male unemployment rate declined from 11 percent in 1990 to 6 percent in 2000 while the female unemployment rate declined from 9 percent to 5 percent.

In the rural areas the total unemployment rate declined from 10 percent in 1990 to 5 percent in 2000. However unemployment rates have increased in the urban areas. The total unemployment rate increased from 14 percent in 1990 to 18 percent in 2000. The increase in the male urban unemployment rate from 12 percent in 1990 to 18 percent in 2000 is more than the 2 percentage points increase in the female unemployment rate.

The total unemployment rate for the province is much lower than the national unemployment rate in 2000 (6 percent compared with the national rates of 12.9 percent). The pattern was the same in 1990; the national unemployment rate was higher than that of the province (10.5 percent against 15.0 percent for the province and national average respectively).

The unemployment rate increased in Mpika district from 5.4 percent in 1990 to 11.5 percent in 2000. The rest of the districts recorded a decline in the unemployment rate. Isoka district registered the biggest decline from 13.2 in 1990 to 2.5 percent in 2000. Disaggregated by sex, the unemployment rates for both males and females decreased most in Isoka district (14.7 percent in 1990 to 2.9 percent in 2000 and 10.8 percent in 1990 to 2.1 percent in 2000).

Table 6.19: Trends in Unemployment rates by District and Sex for 1990 and 2000

District	1990			2000		
	Total	Male	Female	Total	Male	Female
Zambia	15.0	14.1	16.7	12.9	14.1	11.3
Northern	10.5	11.2	9.3	6.2	7.2	5.0
Chilubi	8.1	7.3	9.3	3.1	3.5	2.7
Chinsali	9.6	10.5	8.2	4.7	6.1	3.1
Isoka	13.2	14.7	10.8	2.5	2.9	2.1
Kaputa	12.1	10.7	16.4	5.9	5.3	6.9
Kasama	11.4	12.6	9.6	8.7	9.7	7.6
Luwingu	11.7	12.3	10.7	9.6	10.7	7.8
Mbala	11.7	11.8	11.6	6.9	8.0	5.2
Mpika	5.4	6.1	4.6	11.5	12.8	9.9
Mporokoso	11.9	13.2	10.1	2.4	3.2	1.7
Mpulungu	-	-	-	9.0	10.3	7.4
Mungwi	-	-	-	3.5	4.6	2.3
Nakonde	-	-	-	4.6	5.0	4.1

Sources: 1990 and 2000 Census of population and Housing

Table 6.20: Unemployment Rates by Sex and residence, Northern Province, 1990 and 2000

<i>Residence</i>	Sex	1990	2000
Northern Province	Total	10.5	6.2
	Male	11.2	7.2
	Female	9.3	5.0
Rural	Total	10.1	4.7
	Male	11.1	5.6
	Female	8.6	3.6
Urban	Total	13.4	17.8
	Male	12.2	17.9
	Female	15.9	17.6

Sources: 1990 and 2000 Census of population and Housing

Current unemployment rates by age, sex and residence in 2000 are shown in Table 6.21. This data shows that unemployment is a more serious problem in the young age groups 12-14 (13 percent), 15-19 (11 percent) and 20-24 (10 percent).

Comparatively, urban unemployment rates were higher than the rural rates for the age groups 20-24 and 25-29. The unemployment rates for the rural areas for the age group 20-24 was 6.6 percent while that for the urban areas was 31 percent.

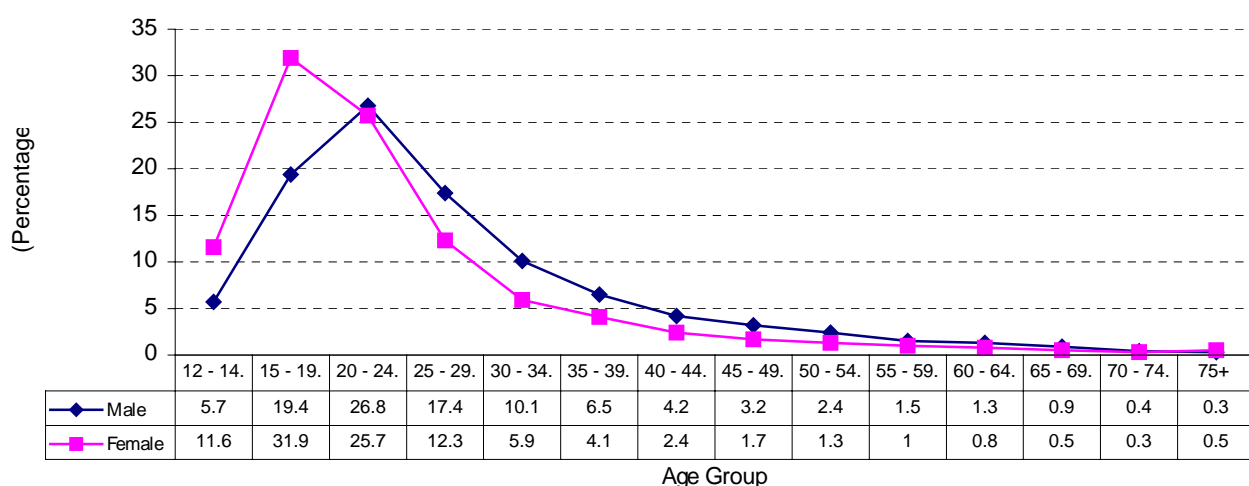
The overall unemployment rate of 7.2 percent for males was more than that of females of 5 percent. A comparison of the rates by age between the two sexes shows that apart from the age group 12-14 and the older age groups (70+), the male unemployment rates were higher than the female unemployment rate at all ages.

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

<i>Age Groups</i>	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total	6.2	7.2	5.0	4.7	5.6	3.6	17.8	17.9	17.6
12 - 14.	12.7	12.5	12.9	11.1	10.8	11.4	38.7	39.6	37.9
15 - 19.	11.4	13.5	9.7	8.5	10.4	7.0	38.6	39.4	37.9
20 - 24.	9.9	12.2	7.3	6.6	8.8	4.4	31.4	33.0	29.4
25 - 29.	6.4	7.9	4.4	4.6	5.9	2.9	17.4	18.7	15.1
30 - 34.	4.4	5.5	2.7	3.5	4.6	1.9	10.4	11.2	9.0
35 - 39.	3.6	4.5	2.2	2.9	3.8	1.7	8.1	9.1	6.5
40 - 44.	3.1	3.9	1.9	2.5	3.2	1.4	6.9	8.0	5.1
45 - 49.	2.9	3.9	1.6	2.4	3.3	1.3	6.4	7.5	4.4
50 - 54.	2.5	3.7	1.3	2.1	3.0	1.1	6.2	7.6	3.6
55 - 59.	2.3	2.9	1.4	1.9	2.4	1.2	6.3	7.5	4.0
60 - 64.	2.1	2.7	1.3	1.8	2.4	1.0	6.3	6.8	5.6
65 - 69.	1.9	2.3	1.3	1.6	1.8	1.2	6.3	8.0	3.1
70 - 74.	1.8	1.7	1.9	1.5	1.6	1.4	5.4	3.5	9.5
75+.	2.1	1.6	3.4	1.9	1.4	3.1	5.2	4.6	6.2

Sources: 1990 and 2000 Census of population and Housing

Figure 6.11 Usually Unemployed by Age and Sex, Northern Province, 2000



Sources: 1990 and 2000 Census of population and Housing

Table 6.22 shows the usually unemployed population by level of education completed and age in 2000. A fifth of the unemployed population in the province had no education at all, while 55 percent had attained primary school education. Nineteen percent of the unemployed population had secondary school education of grade 8 to 12. Those who had 'A' level education were negligible while 2 percent had Degrees. The distribution of the unemployed population by age shows that the proportion of those without education increases with the increase in age, while the proportion of those with grade 1-7 and 8-12 decrease with the increase in age.

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

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

Age Group	Total Number Unemployed	Total	None	1-7	8-12	A Level	Degree
Total	303,183	100	23.7	54.8	19.4	0.2	1.9
12 - 19	164,172	100	12.1	70.0	17.8	0.1	0.0
20 - 24	40,474	100	24.1	37.8	36.6	0.6	1.0
25 - 29	23,741	100	31.2	39.6	25.1	0.3	3.8
30 - 34	16,585	100	33.0	40.1	19.2	0.2	7.6
35 - 39	12,768	100	35.1	40.9	15.7	0.2	8.0
40 - 44	8,522	100	38.1	39.8	14.6	0.3	7.1
45 - 49	6,840	100	43.2	37.3	12.8	0.2	6.5
50 - 54	6,302	100	53.2	32.7	8.2	0.3	5.6
55 - 59	4,690	100	56.8	31.3	6.9	0.4	4.6
60 - 64	5,015	100	63.3	28.3	3.9	0.3	4.1
65 - 69	4,168	100	64.7	27.8	3.6	0.3	3.7
70 - 74	3,770	100	67.0	27.0	3.5	0.2	2.3
75+	6136	100	68.5	26.7	2.8	0.1	1.9

Sources: 1990 and 2000 Census of population and Housing

6.10.1 Marital Status of the Unemployed

Table 6.23 shows the distribution of the currently unemployed population by marital status, sex and residence. According to the data, the majority (57 percent) of the unemployed population had never been married, 34 percent were married and 3 percent were widowed or separated. The proportion of the female who had never married was higher than the male never married population with the former accounting for 60 percent compared with 55 percent for the latter.

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

Residence and Sex	Total Number <i>Unemployed</i>	Marital Status						
		Total	Never Married	Married	Widowed	Divorced	Separated	Living together/ cohabiting
Total								
Both Sexes	25,100	100	56.8	34.1	3.0	2.6	3.2	0.4
Male	15,941	100	54.8	41.3	1.1	1.0	1.5	0.2
Female	9,159	100	60.3	21.4	6.2	5.2	6.0	0.8
<i>Rural</i>								
Both Sexes	16,627	100	53.0	37.9	3.0	2.7	3.1	0.4
Male	10,791	100	50.6	45.4	1.2	1.1	1.5	0.3
Female	5,836	100	57.4	24.0	6.3	5.6	6.0	0.7
<i>Urban</i>								
Both Sexes	8,473	100	64.3	26.5	3.0	2.3	3.3	0.5
Male	5,150	100	63.6	32.8	1.0	0.9	1.6	0.2
Female	3,323	100	65.3	16.9	6.1	4.6	6.0	1.0

Sources: 1990 and 2000 Census of population and Housing

6.10.2 Youth Unemployment

Table 6.23 shows the youth unemployment rate by age residence and sex in 2000. The majority of unemployed youth are in age group 15-19 (11 percent). There are considerably more unemployed youth in urban areas (18 percent) than rural areas (5 percent). There were significantly small discrepancy in urban areas between male and female unemployment (17.9; males and 17.6; females) as opposed to rural areas (5.6; males and 3.6; females).

Table 6.24: Youth Unemployment Rate, Northern Province, 2000

Age Group	Total			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	<i>Male</i>	Female
Total	6.2	7.2	5.0	4.7	5.6	3.6	17.8	17.9	17.6
15 - 19 . .	11.4	13.5	9.7	8.5	10.4	7.0	38.6	39.4	37.9
20 - 24 . .	9.9	12.2	7.3	6.6	8.8	4.4	31.4	33.0	29.4

Sources: 2000 Census of population and Housing

6.11 Summary

The size of the working-age population in Northern has increased by 33 percent between 1990 and 2000. The distribution of this population by age shows that it declines with the increase in age, just as the total population.

The Labour force has increased by 49 percent between 1990 and 2000. In 2000, 88 percent of the Labour force is in rural areas. About half of the Labour force is in the young age group of 12-29 years.

The employed population has increased by 56 percent. The female employed population has increased by an impressive 80.0 percent, while male employed Labour force increased by 41 percent.

The number of the unemployed has in declined by 11 percent between 1990 and 2000. The size of the male unemployed population has declined by 14 percent, while that of females has in declined by 7 percent. There are more unemployed persons in the rural than in the urban areas for both males and females. In 2000, unemployment is a more serious problem for the young age group of 12-29 years than for the adult age group of 30 years and over.

The economically inactive population has increased by 20 percent against an increase of 49 percent in the Labour force between 1990 and 2000. The Labour force participation rate has increased from 52 percent in

1990 to 58 percent in 2000. Similarly the overall unemployment rate has reduced from 11 percent in 1990 to 6 percent in 2000.

Economic activities in Northern province are still organized around family Labour as evidenced by the predominance (48 %) of workers who are classified as unpaid family workers. In contrast, only 7 percent are classified as employees.

There is a large concentration of workers (85 %) were in the Agricultural and related occupations because of the ease with which it is easy to enter the sector even with very low educational attainment.

Chapter 7

FERTILITY LEVELS, PATTERNS AND TRENDS

7.1. Introduction

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

7.2. Concepts and Definitions:

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

7.3. Nature and Quality of Fertility Data

7.3.1. Data Availability and Limitations

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

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

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

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

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

7.3.2. Data Evaluation and Adjustment

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

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

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

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

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

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

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

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

Source: CSO, 2000 Census of Population and Housing

7.4. Fertility Levels, Patterns and Trends

Table 7.2 shows observed and adjusted Age Specific Fertility Rates (ASFR) and Total Fertility Rates (TFR) for Northern province, rural and urban estimated from the 2000 Census. Fertility is still very high in the province at 7.0. Rural women (with a TFR of 7.1) have one child more than their counterparts in urban areas with a TFR of 5.8. The provincial TFR exceeds the national average of 6.0 by one child.

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

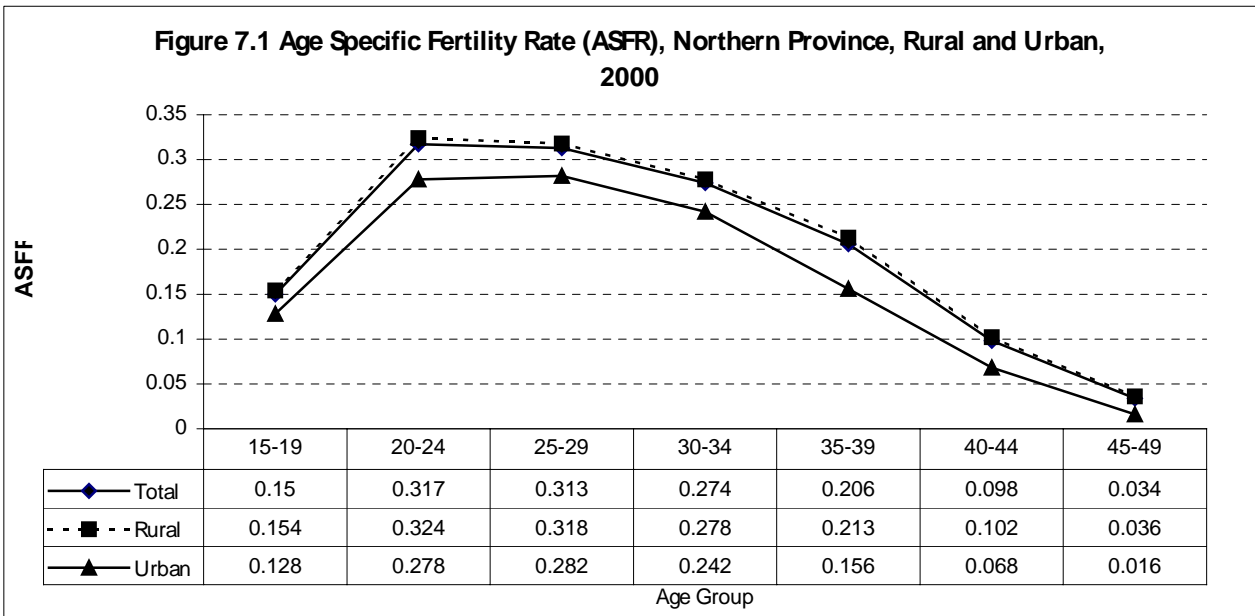
The ASFR provides a measure of fertility variation by age of women and helps in the calculation of Total Fertility Rate (TFR). In this chapter ASFR refers to the prevailing fertility patterns for women aged 15-49 when plotted on a graph, the ASFR shows a characteristic pattern with an initial rise from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

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

Age Group	Total				Rural				Urban			
	Total Women	Births	Observed ASFR	Adjusted ASFR	Total Women	Births	Observed ASFR	Adjusted ASFR	Total Women	Births	Observed ASFR	Adjusted ASFR
15-19	71,677	7,163	0.100	0.150	60,219	6,316	0.105	0.154	11,458	847	0.074	0.128
20-24	57,783	14,181	0.245	0.317	48,667	12,489	0.257	0.324	9,116	1,692	0.186	0.278
25-29	44,359	11,074	0.250	0.313	37,805	9,796	0.259	0.318	6,554	1,278	0.195	0.282
30-34	33,195	7,357	0.222	0.274	28,482	6,550	0.230	0.278	4,713	807	0.171	0.242
35-39	27,503	4,687	0.170	0.206	23,653	4,252	0.180	0.213	3,850	435	0.113	0.156
40-44	19,111	1,624	0.085	0.098	16,412	1,484	0.090	0.102	2,699	140	0.052	0.068
45-49	15,660	524	0.033	0.034	13,665	496	0.036	0.036	1,995	28	0.014	0.016
Observed TFR			5.5				5.8				4.0	
Adjusted TFR				7.0				7.1				5.8

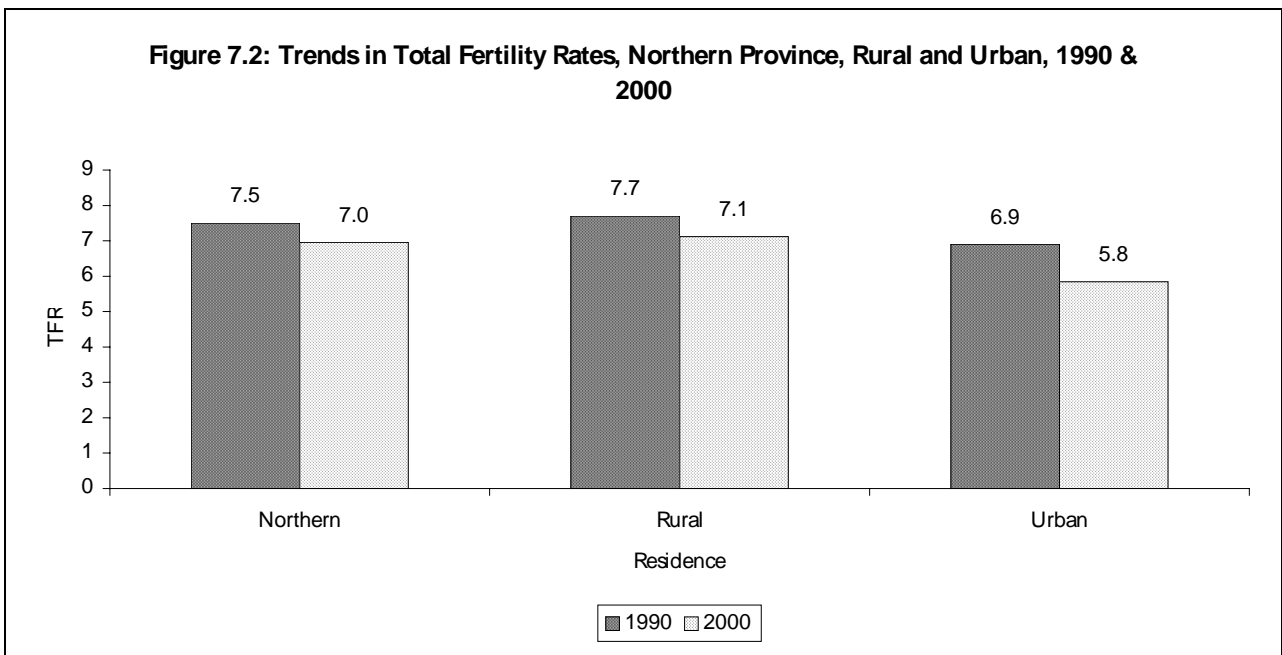
Source: CSO, 2000 Census of Population and Housing

The table as well as Figure 7.1 show that urban women have lower ASFR at all ages compared to women in rural areas. The peak of childbearing for urban women (25-29) occurs later than that for rural women (20-24).



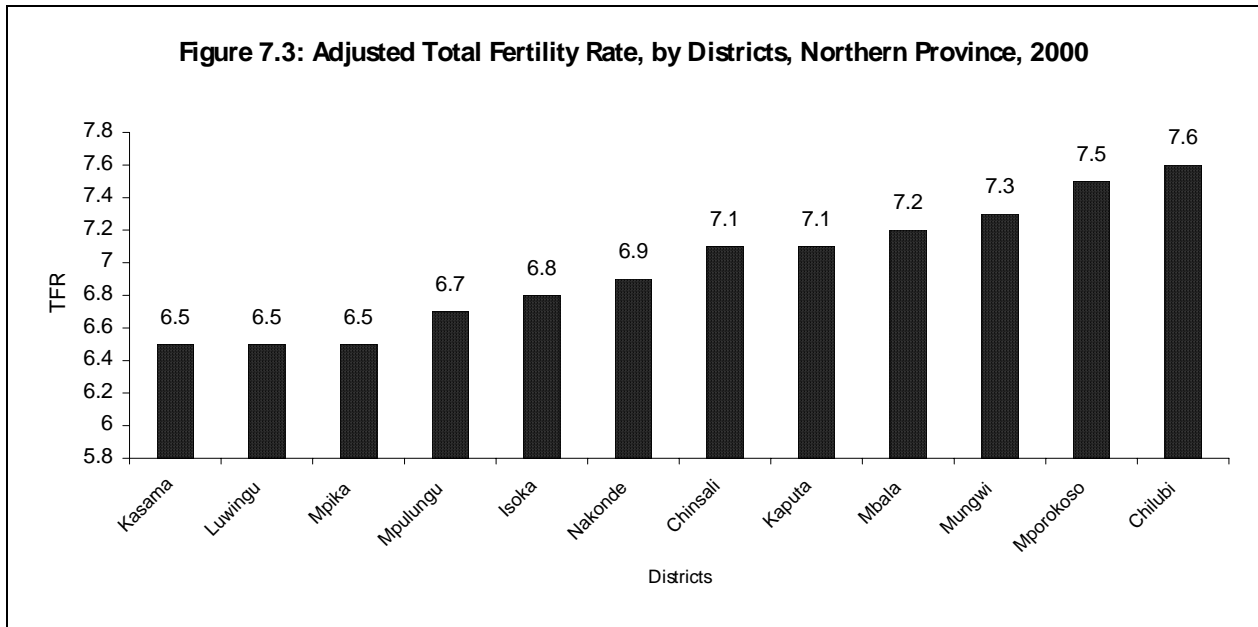
Source: CSO, 2000 Census of Population and Housing

Figure 7.2 shows that fertility has remained high in Northern province declining only by half a child from 7.5 in 1990 to 7.0 in 2000. There has been a larger decline in urban areas compared to rural areas. The decline in fertility in the urban areas could point to the fact that urban areas may have the socio-economic conditions necessary for fertility decline such as access to reproductive health services, better and enhanced access to education by both girls and boys etc as opposed to the conditions prevailing in rural areas.



Source: 1990 and 2000 Census of Population and Housing

The TRFs for the districts of Northern Province are in Figure 7.3. Total Fertility Rate ranges from 6.5 in Kasama to 7.6 in Chilubi.



Source: CSO, 2000 Census of Population and Housing

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

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

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

Marital status has a bearing on the fertility levels of women because of the amount of exposure to the risk of pregnancy that married women have compared to the unmarried. Table 7.3 shows that TFR is highest among the married (7.1) and least among the never married (1.9)

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

District	Marital status						
	Total	Married	Separated	Divorced	Widowed	Never Married	Living Together
Chilubi	7.6	7.8	4.9	5.4	5.3	1.5	2.1
Chinsali	7.1	7.1	5.4	5.6	4.2	2.3	3.2
Isoka	6.8	7.0	4.8	3.9	4.6	1.3	3.4
Kaputa	7.1	7.2	5.0	4.4	5.5	2.5	2.9
Kasama	6.5	6.8	4.8	4.6	4.2	1.4	5.7
Luwingu	6.5	6.7	5.2	4.9	4.0	1.7	5.4
Mbala	7.2	7.3	5.1	5.0	5.1	1.9	4.7
Mpika	6.5	6.7	4.9	4.5	5.6	1.1	3.5
Mporokoso	7.5	7.6	5.3	4.8	4.3	1.4	5.5
Mpulungu	6.7	6.8	4.3	4.1	4.2	1.4	4.4
Mungwi	7.3	7.4	5.2	4.4	4.9	1.4	5.3
Nakonde	6.9	7.1	5.0	4.9	4.4	2.7	3.4
Northern Total	7.0	7.1	5.3	5.2	5.4	1.9	5.3

Source: CSO, 2000 Census of Population and Housing

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

Table 7.4 shows the fertility levels of working and non working women. Detailed definitions of working are shown in Chapter 6 of this report. Women classified as working have a slightly lower

fertility rate of 6.7 than those classified otherwise (7.0). Most of the districts have a similar pattern. Exceptions are Isoka, Kaputa, Mpulungu and Mungwi.

Table 7.4: Fertility Differentials by Economic Status of Women Aged 15-49, Northern Province, 2000

District	Economic status		
	Total	Working	Not Working
Chilubi	7.6	7.4	7.5
Chinsali	7.1	6.7	7.0
Isoka	6.8	6.5	6.3
Kaputa	7.1	7.1	7.0
Kasama	6.5	6.1	6.5
Luwingu	6.5	6.1	6.7
Mbala	7.2	7.0	7.3
Mpika	6.5	6.3	6.5
Mporokoso	7.5	7.0	7.9
Mpulungu	6.7	6.6	6.6
Mungwi	7.3	7.1	6.8
Nakonde	6.9	6.6	6.7
Northern	7.0	6.7	7.0

Source: CSO, 2000 Census of Population and Housing

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

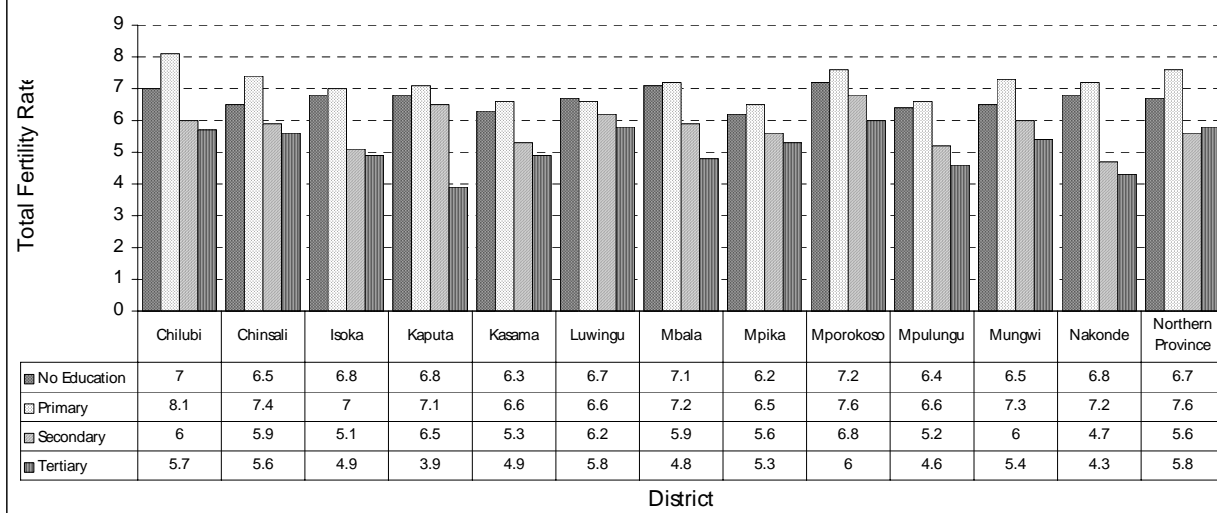
Table 7.5 shows the fertility levels according to women's levels of education in Northern Province. Women with tertiary education have lower fertility than women in other education categories. For instance, women with tertiary education had a TFR of 5.8 compared with TFR of 6.7 for women without any schooling.

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

District	Level of education				
	Total	No Education	Primary	Secondary	Tertiary
Chilubi	7.6	7.0	8.1	6.0	5.7
Chinsali	7.1	6.5	7.4	5.9	5.6
Isoka	6.8	6.8	7.0	5.1	4.9
Kaputa	7.1	6.8	7.1	6.5	3.9
Kasama	6.5	6.3	6.6	5.3	4.9
Luwingu	6.5	6.7	6.6	6.2	5.8
Mbala	7.2	7.1	7.2	5.9	4.8
Mpika	6.5	6.2	6.5	5.6	5.3
Mporokoso	7.5	7.2	7.6	6.8	6.0
Mpulungu	6.7	6.4	6.6	5.2	4.6
Mungwi	7.3	6.5	7.3	6.0	5.4
Nakonde	6.9	6.8	7.2	4.7	4.3
Northern Province Total	7.0	6.7	7.6	5.6	5.8

Source: CSO, 2000 Census of Population and Housing

Figure 7.4: Fertility Differentials by Educational Attainment of Women Age 15-49 and District, Northern Province, 2000



Source: CSO, 2000 Census of Population and Housing

7.6. Gross Reproduction Rate (GRR)

The Gross Reproduction Rate (GRR) is 2.7 for Northern province implying that almost three daughters will replace a woman experiencing the fertility pattern prevailing at the time of the census by the time she reaches the end of her reproductive period. The GRR for rural areas (2.8) is higher than that of the urban areas (1.9). The provincial GRR is above the national average of 2.3.

Table 7.6: Gross Reproduction Rate (GRR), Northern Province, Rural/ Urban, 2000

Age Group	Total			Rural			Urban		
	Total Women	Female Births	ASFR (f)	Total Women	Female Births	ASFR (f)	Total Women	Female Births	ASFR (f)
15-19	71,677	3,529	0.049	60,219	3,131	0.052	11,458	398	0.035
20-24	57,783	6,979	0.121	48,667	6,122	0.126	9,116	857	0.094
25-29	44,359	5,483	0.124	37,805	4,859	0.129	6,554	624	0.095
30-34	33,195	3,484	0.105	28,482	3,103	0.109	4,713	381	0.081
35-39	27,503	2,251	0.082	23,653	2,049	0.087	3,850	202	0.052
40-44	19,111	765	0.040	16,412	706	0.043	2,699	59	0.022
45-49	15,660	257	0.016	13,665	240	0.018	1,995	17	0.009
GRR			2.7			2.8			1.9

Source: CSO, 2000 Census of Population and Housing

7.7. Net Reproduction Rate

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

An NRR equal to 1.0 is referred to as the “replacement level fertility” because it indicates that on average each woman will be replaced by exactly one daughter after a generation. A higher value indicates a growing population and a lower value shows a declining population. Table 7.7 shows that the NRR for women in Northern province is 1.8 implying of the three daughters born to women, two will survive to the end of their reproductive age given the prevailing mortality and fertility patterns.

Table 7.7: Net Reproduction Rate (NRR), Northern, Rural and Urban, 2000

Age Group	Northern Total			Northern Rural			Northern Urban		
	ASFR (f)	Survival Ratios	*ASFR (f)	ASFR (f)	Survival Ratios	*ASFR (f)	ASFR (f)	Survival Ratios	*ASFR (f)
15-19	0.049	0.7184	0.0352	0.052	0.7206	0.0375	0.035	0.7249	0.0254
20-24	0.121	0.6980	0.0845	0.126	0.7002	0.0882	0.094	0.7048	0.0662
25-29	0.124	0.6748	0.0837	0.129	0.6772	0.0874	0.095	0.6819	0.0648
30-34	0.105	0.6489	0.0681	0.109	0.6514	0.0710	0.081	0.6564	0.0532
35-35	0.082	0.6202	0.0509	0.087	0.6228	0.0542	0.052	0.6280	0.0327
40-44	0.040	0.5893	0.0236	0.043	0.5920	0.0255	0.022	0.5975	0.0131
45-49	0.016	0.5572	0.0089	0.018	0.5600	0.0101	0.009	0.5656	0.0051
NRR			1.8			1.9			1.3

Note: ASFR at prevailing rates of mortality

Source: CSO, 2000 Census of Population and Housing

Table 7.8 shows that the NRR has been declining steadily over the last 20 years. This implies that population will continue to grow but at a declining rate.

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

Residence	Year of Census		
	1980	1990	2000
Total	2.9	2.4	1.8
Rural	2.9	2.5	1.9
Urban	2.8	2.2	1.3

Note: 1980 NRR for rural and urban not available

Source: CSO, 2000 Census of Population and Housing

7.8. Mean Parity

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

Table 7.9 shows that the Completed Family Size (CFS) or mean parity for women in Northern Province is 7.3 children per woman, with rural women having a higher CFS of 7.3 compared with their urban counterparts with 7.2 children per woman. The mean parity for the province is higher than the national average of 6.8 children per woman.

A comparison of the TFR with the mean parity also shows trends in fertility. While TFR is a measure of current fertility, mean parity measures completed fertility. Women age 45-49 have given birth to an average of 7.3 children. The TFR (7.0) is lower than the CFS and this can be attributed to the observed fertility decline overtime .

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

Age Group	Total	Rural	Urban
15-19	0.3	0.3	.2
20-24	1.5	1.6	1.3
25-29	3.1	3.2	2.7
30-34	4.6	4.6	4.1
35-39	5.9	6.0	5.4
40-44	6.9	6.9	6.6
45-49	7.3	7.3	7.2

Source: CSO, 2000 Census of Population and Housing

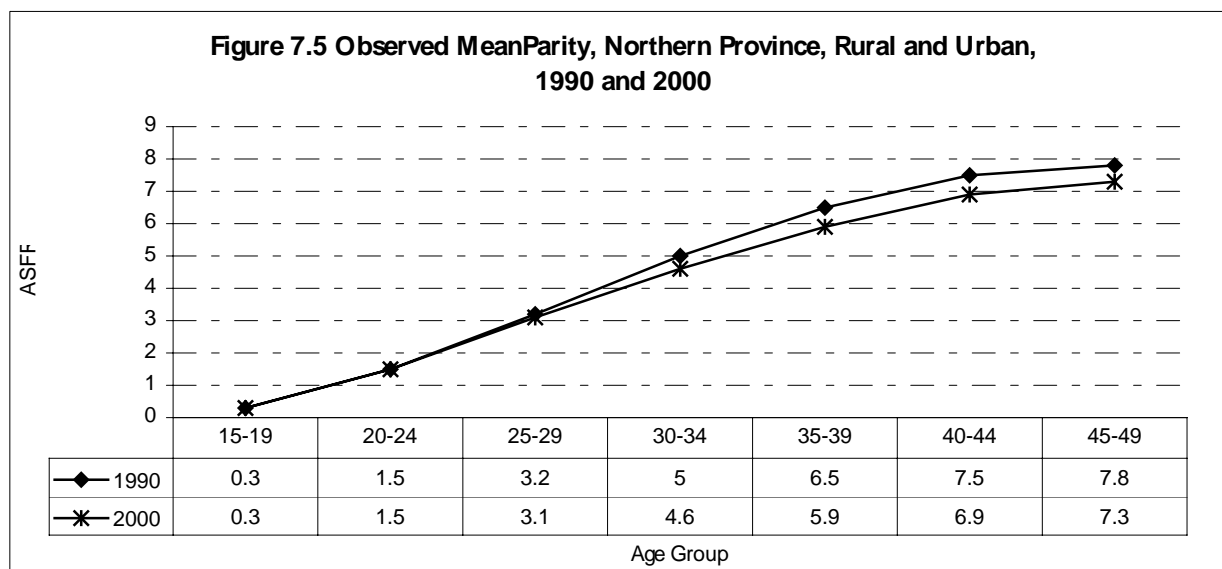
Table 7.10 and Figure 7.4 show that Mean Parity for the age group 45-49) has declined slightly from 7.8 children per woman in 1990 to 7.3 children per woman in 2000. The figure clearly shows that the decline in mean parity has occurred in older women 25-49.

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

Age Group	Mean Parity (1990)*	Mean Parity (2000)
15-19	0.3	0.3
20-24	1.5	1.5
25-29	3.2	3.1
30-34	5.0	4.6
35-39	6.5	5.9
40-44	7.5	6.9
45-49	7.8	7.3

Note: 1990 estimates extracted from Analytical Report Vol. 6 of the 1990 Census of Population, Housing and Agriculture, CSO 1995.

Source: CSO, 2000 Census of Population and Housing



Source: CSO, 2000 Census of Population and Housing

7.9. Other Fertility Indicators

Table 7.11 shows a summary of fertility indicators for districts of Northern Province. The table shows that the Crude Birth Rate (CBR) range from 35.9 in Kasama to 44.7 in Chilubi. Generally, the fertility rates are high in Chilubi and low in Kasama.

Table 7.11: Summary of Fertility Indicators by District, Northern Province, 2000

District	Adjusted Total Fertility Rate	Crude Birth Rate	General Fertility Rate	Child Woman Ratio	Mean Parity	Gross Reproduction Rate
Chilubi	7.6	44.7	193.3	871	7.2	3.0
Chinsali	7.1	40.6	183.6	826	7.6	2.8
Isoka	6.8	40.0	174.5	789	7.3	2.7
Kaputa	7.1	44.6	185.6	796	7.4	2.9
Kasama	6.5	35.9	152.4	727	7.1	2.3
Luwingu	6.5	39.9	179.2	829	7	2.7
Mbala	7.2	41.5	184.3	824	7.4	2.8
Mpika	6.5	37.2	162.8	792	7.5	2.5
Mporokoso	7.5	40.2	184.4	841	7.6	3.0
Mpulungu	6.7	38.1	99.0	788	6.7	2.3
Mungwi	7.3	41.2	182.5	798	7.2	2.9
Nakonde	6.9	39.4	166.9	764	7.3	2.5

Source: CSO, 2000 Census of Population and Housing

7.10. Summary

Fertility levels for Northern Province have declined over the period 1990-2000, from 7.5 to 7.0. This decline has been attributed to the decline in urban areas in which the TFR dropped from 6.9 in 1990 to 5.8 in 2000 while that of the rural areas has decreased at a lower pace from 7.7 to 7.1 over the period.

Child bearing is at its peak in the age group 20-24 years after which it declines steadily. Chilubi has the largest TFR (7.6) among the districts while Kasama, Luwingu and Mpika have the least (6.5).

Generally, fertility rates are highest in Chilubi and lowest in Kasama. These include Crude Birth Rate, General Fertility Rate, Child Woman Ratio and Gross Reproduction Rate.

CHILD AND ADULT MORTALITY

8.1 Introduction

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

Indirect demographic methods are used to derive both child and adult mortality indicators. Information on child mortality estimation was based on the reports of the mothers, aged 15-49 years, of the survival of their children by sex. This gives information on children surviving and not surviving out of the total children ever born per woman (mother) in the reproductive age group (15-49 years). The United Nations Mortality measurement package, Mortpak-Lite as well as Q-5 was used to compute child mortality indicators, namely, infant mortality rate (IMR), child mortality rate (CMR), under-five mortality rate (UMR) and life expectancy at birth (e_0) based on the Coale-Demeny North Model. It is worth noting that these child mortality indicators are based on life tables that were developed on mortality data in the pre-AIDS era. WHO (2002:13) notes that if deaths from HIV/AIDS were to be excluded, life expectancy at birth in some countries in Southern Africa including Zambia would be 15 to 20 years higher.

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

8.2 Concepts and Definitions

- *Mortality* refers to the occurrence of deaths in a population.
- *Infant mortality rate (IMR) (1q0)* refers to the number of deaths among infants aged below one year per thousand (1,000) live births per year
- *Child mortality rate (CMR) (5q1)* refers to the number of deaths among children aged between exact age one and five years per thousand (1,000) live births per year
- *Under-five mortality rate (UMR) (5q0)* refers to the number of deaths among children aged below five years per thousand (1,000) live births per year. UMR, therefore, constitutes both the infant and child mortality.

- *Life expectancy at birth* (e_0) refers to the average number of years a newly born child is expected to live, if the current existing mortality conditions were to prevail for a long time.
- *Life expectancy at exact age* (e_x) refers to the average number of years a person aged X years is expected to live, if the current existing mortality conditions were to prevail for a long time and;
- *Adult mortality* ($60q_{15}$) refers to the number of deaths that occur to persons in the age range 15 to 60 years.

8.3 Infant Mortality Levels, Trends and Differentials

Table 8.1 shows that Infant Mortality Rate increased from 104 in 1980 to 152 in 1990, then decreased to 130 in 2000. This trend is similar to the National pattern in the sense that Infant Mortality at national level is lower in 1980 than in 1990 or 2000.

Table 8.1: Infant Mortality Indicators by Residence, Sex and District, Northern Province, 1980-2000

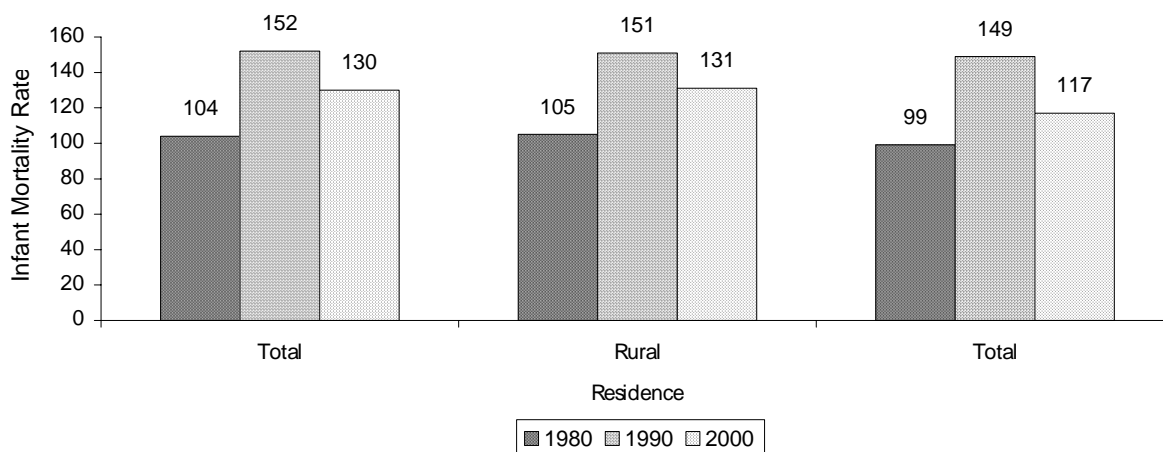
Background Characteristics	Infant Mortality Rate (per '000)		
	1980	1990	2000
Zambia	99	124	110
Northern	104	152	130
Residence			
Rural	105	151	131
Urban	99	149	117
Sex of Child			
Male	108	161	138
Female	98	142	122
Districts (2000)	Total (2000)	Rural (2000)	Urban (2000)
Chilubi	201	203	50
Chinsali	136	136	127
Isoka	120	120	118
Kaputa	171	170	299
Kasama	116	119	114
Luwingu	123	124	
Mbala	118	116	141
Mpika	104	110	80
Mporokoso	91	92	83
Mpulungu	150	147	171
Mungwi	125	124	153
Nakonde	151	149	174

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

8.3.1 Infant Mortality Rate by Residence

IMR declined between 1990 and 2000 in both rural and urban areas, from 151 to 131 deaths per 1000 live births in the former and from 149 to 117 deaths per 1000 live births in the latter. About 1 in 8 infants in rural areas and 1 in 9 infants in urban areas die before celebrating their first birthday. This result shows that infants in rural areas of Northern Province experience a higher risk of dying before age one than urban infants (Figure 8.1).

Figure 8.1 Infant Mortality Rate by Residence, Northern Province, 1980 - 2000



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

8.3.2 Infant Mortality Rate by Sex

Figure 8.2 shows the sex differentials of IMR. Male infants have a higher risk of dying before reaching age 1 than female infants, (138 for males and 122 for females per 1000 live births). A similar pattern is also observed in 1980 and 1990. In 1980, 108 male and 98 female infants died before reaching age one; and, in 1990, 161 male infants and 142 for females infants died before reaching age one out of 1000 live births.

Figure 8.2 Infant Mortality Rate by Sex, Northern Province, 1980 - 2000



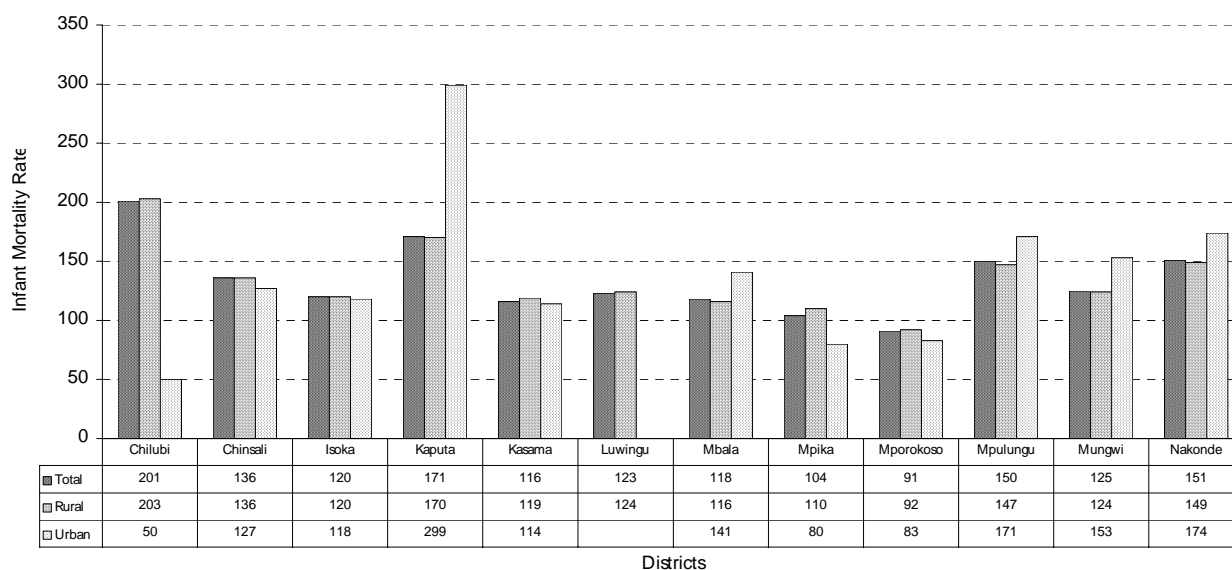
Sources: 1980, 1990 and 2000 Censuses of Population and Housing

8.3.3 Infant Mortality Rate by District

Figure 8.3 shows the district differentials of IMR. IMR is highest in Chilubi (201), followed by Kaputa (171) and Mpulungu (150) districts and lowest in Mporokoso (91) and Mpika (104).

In rural areas of Kaputa, Mbala, Mpulungu, Mungwi and Nakonde, IMR is lower than that of urban areas. In the rest of the districts, but Luwingu, the opposite holds true. It is important to note that Luwingu district is entirely rural

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

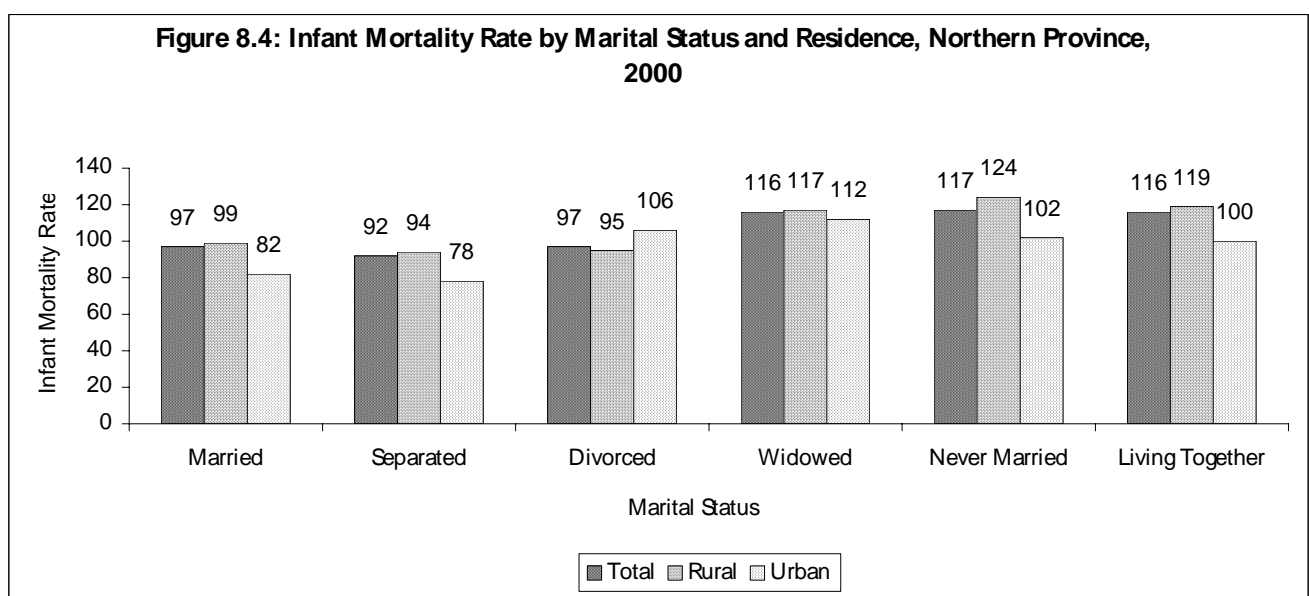


Source: 2000 Censuses of Population and Housing

8.3.4 Infant Mortality Rate by Marital Status of the Mother

Figure 8.4 shows that children born to never married mothers have the highest IMR (117) closely followed by children of widowed and cohabiting mothers (116). Children born to

separated mothers have the lowest IMR of 92 deaths per 1 000 live births.



Sources: CSO, 2000 Census of Population and Housing

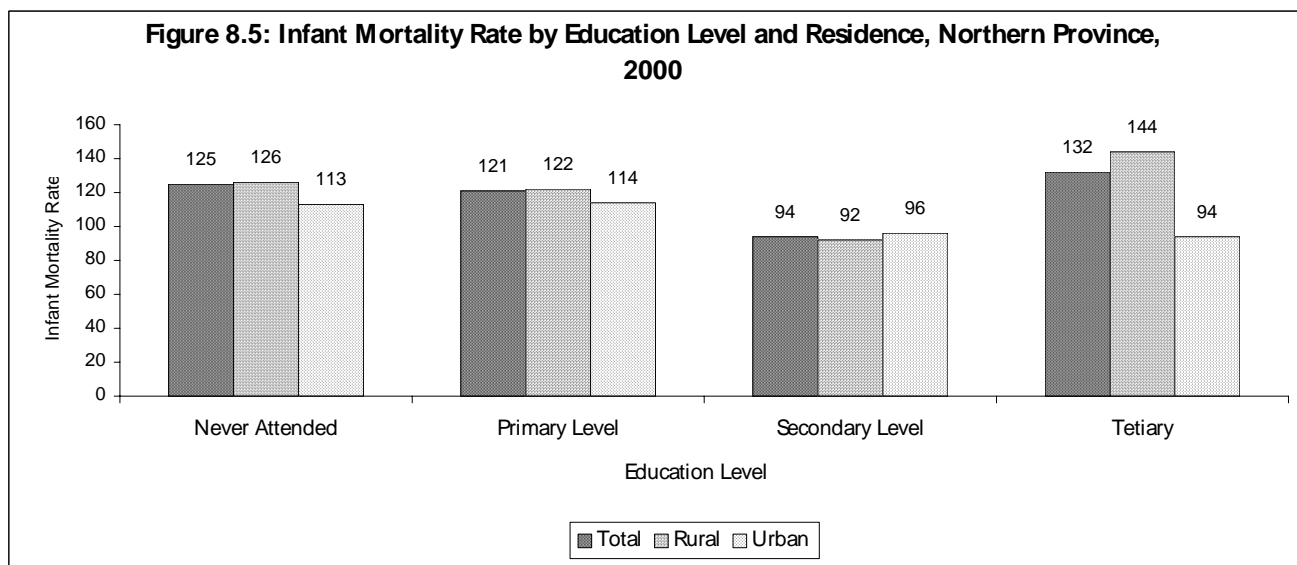
Table 8.2 Infant Mortality Rate at Birth by Marital Status and Residence, Northern Province, 2000

Marital Status	Infant Mortality Rate (per '000)		
	Total	Rural	Urban
Married	97	99	82
Separated	92	94	78
Divorced	97	95	106
Widowed	116	117	112
Never Married	117	124	102
Living Together	116	119	100

Sources: CSO, 2000 Census of Population and Housing

8.3.5 Infant Mortality Rate by Education Level of the Mother

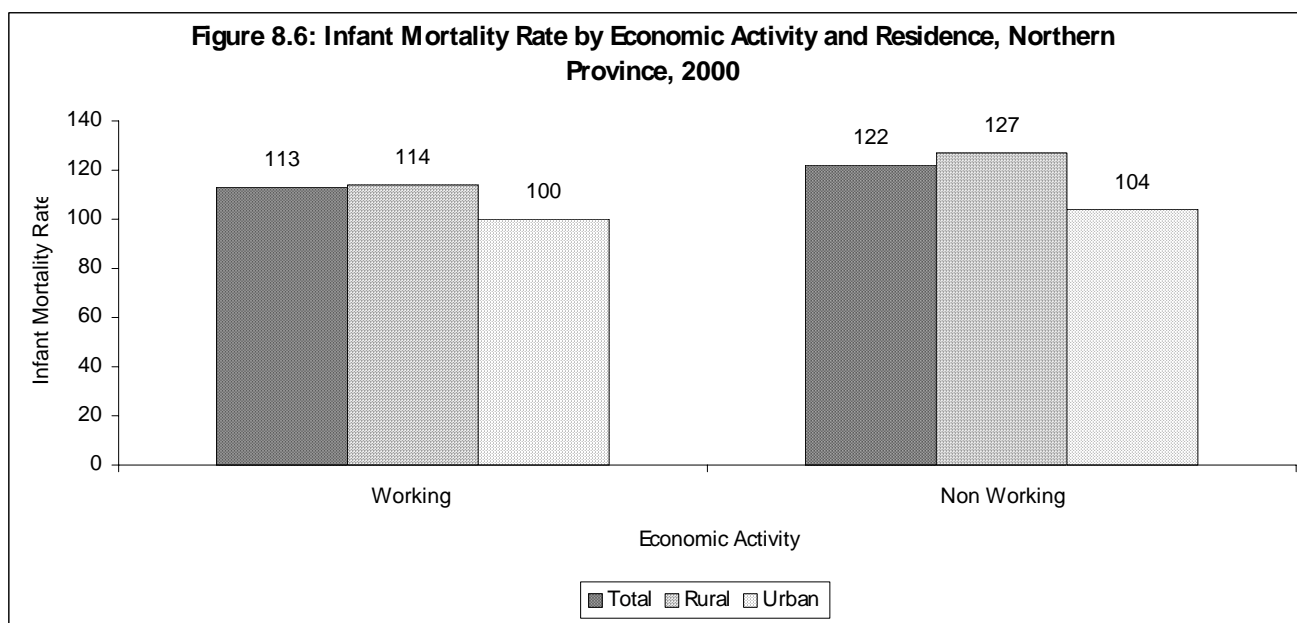
Figure 8.5 shows that IMR varies with level of education of mother. IMR is higher for children born to mothers with no formal education (125) than those born to mothers with Primary school education (121) and secondary school education (94) respectively but is highest for those born to mothers with tertiary education (132).



Sources: CSO, 2000 Census of Population and Housing

8.3.6 Infant Mortality by Economic Activity of the Mother

Infant Mortality Rate also varies with economic activity of the mother. Figure 8.6 shows children born to working mothers have higher chances of reaching age one than those born to non-working mothers (113 versus 122 deaths per 1000 live births, respectively). In both rural and urban areas, IMR is higher among non working mothers than among working mothers.



Sources: CSO, 2000 Census of Population and Housing

8.4 Child Mortality Levels, Trends and Differentials

Table 8.4 shows that Child Mortality Rate (CMR) has increased from 75 in 1980 to 123 in 1990 then decreased to 103 in 2000.

In comparison with the national average, Northern Province has a significantly higher child mortality rate for all the three census years. CMR for Zambia was 82 deaths per 1000 live births compared to 103 for the province.

Table 8.3: Child Mortality Indicators by Residence, Sex and District, Northern Province, 1980-2000

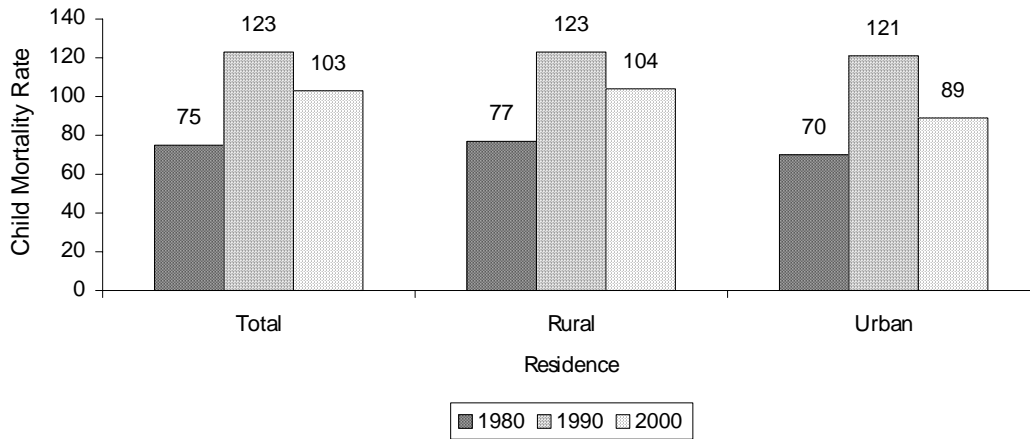
Background Characteristics	Child Mortality rate (per'000)		
	1980	1990	2000
Zambia	71	96	82
Northern	75	123	103
Residence			
Rural	77	123	104
Urban	70	121	89
Sex of Child			
Male	80	124	103
Female	70	123	104
Districts (2000)	Total (2000)	Rural (2000)	Urban (2000)
Chilubi	169	171	25
Chinsali	108	108	100
Isoka	92	92	91
Kaputa	141	140	260
Kasama	89	91	86
Luwingu	96	97	
Mbala	90	88	113
Mpika	75	81	52
Mporokoso	62	63	54
Mpulungu	121	118	141
Mungwi	98	97	124
Nakonde	123	121	144

Sources: CSO, 2000 Census of Population and Housing

8.4.1 Child Mortality Rate by Residence

Figure 8.7 shows that children born to mothers residing in rural areas have higher risks of dying between age one and five than in those in urban areas (104 compared to 89 deaths per 1000 children). This pattern is similar to that of 1980 and 1990.

Figure 8.7: Child Mortality Rates by Residence, Northern Province, 1980 - 2000

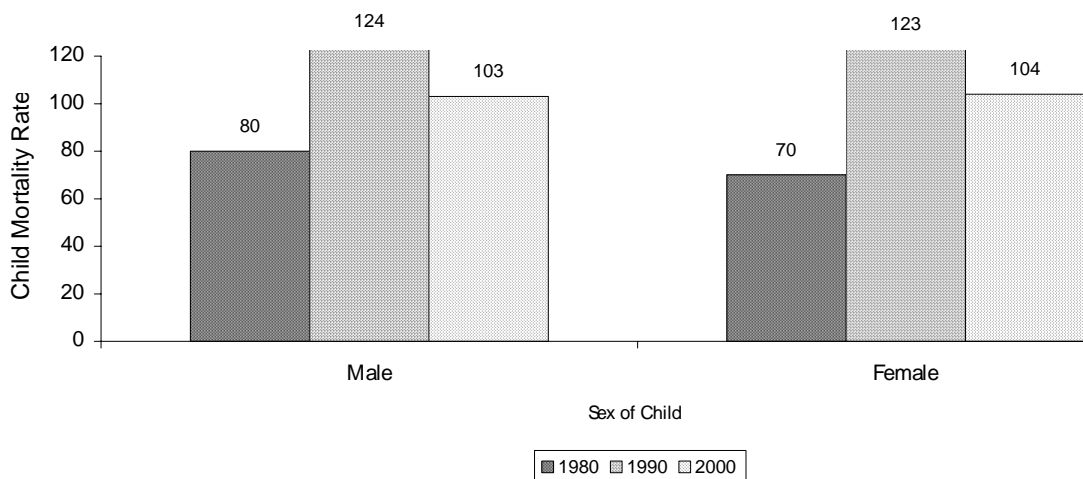


Sources: CSO, 2000 Census of Population and Housing

8.4.2 Child Mortality Rate by Sex

CMR also varies with sex. Figure 8.8 shows that CMR among male children (103 deaths per 1000 children) is lower than that of females at (104 deaths per 1000 children). In 1980 and 1990, on the other hand, CMR was higher among males than females.

Figure 8.8: Child Mortality Rate by Sex, Northern Province, 1980 - 2000

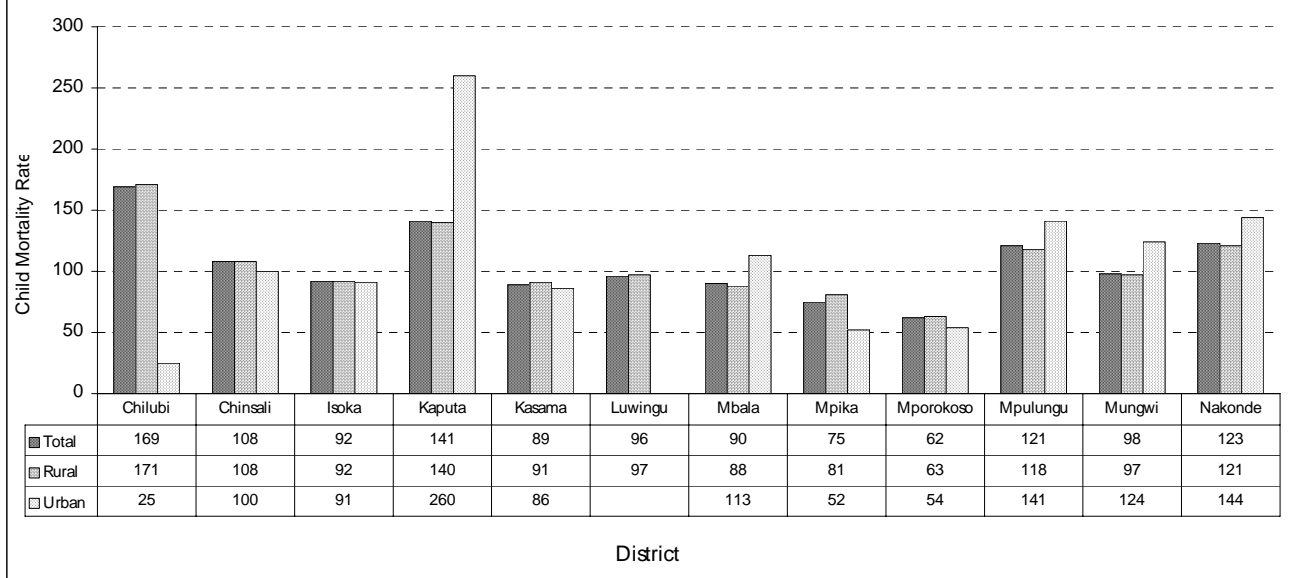


Sources: CSO, 2000 Census of Population and Housing

8.4.3 Child Mortality Rate by District

A district comparison of CMR is shown in Figure 8.9. CMR is highest in Chilubi (169), followed by Kaputa (141) and Mpulungu (121) and lowest in Mporokoso (62) followed by Mpika (75). In Kaputa, Mbala, Mpulungu, Mungwi and Nakonde CMR is higher in urban than rural areas. In the rest of the districts (except Luwingu which is entirely rural) the opposite holds true.

Figure 8.9 Child Mortality for Northern Province by District and Residence, 2000



Sources: CSO, 2000 Census of Population and Housing

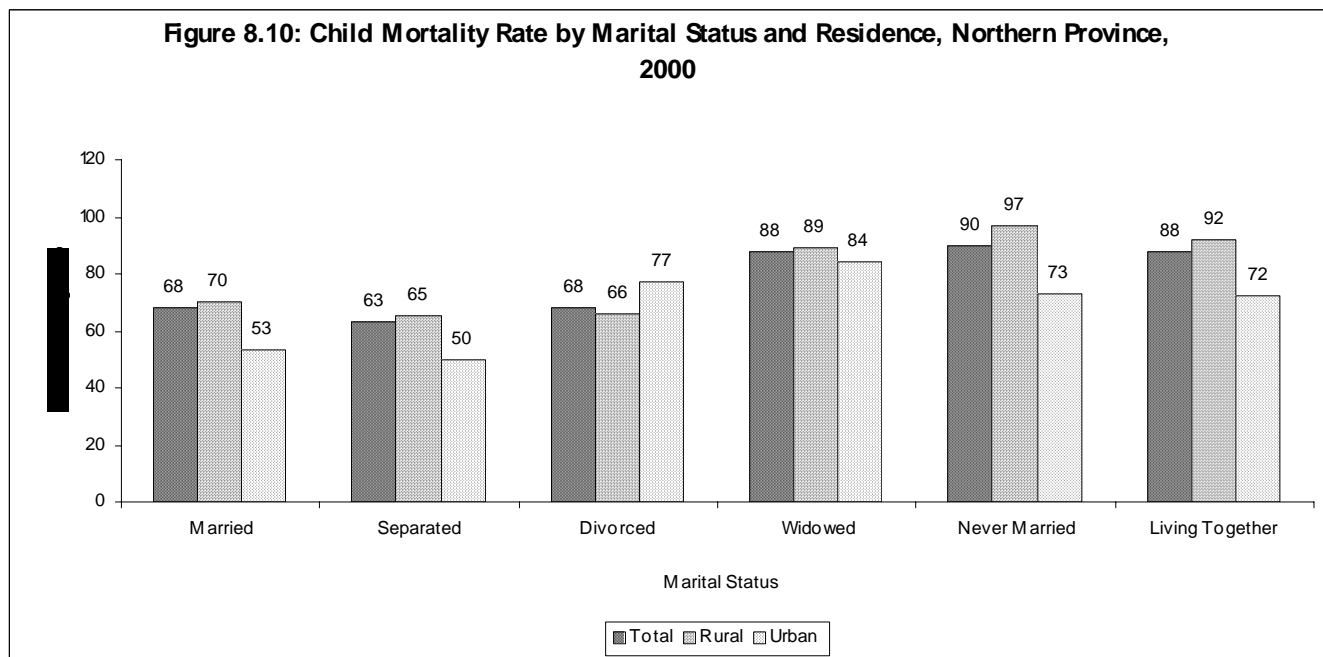
8.4.4 Child Mortality by Marital Status of the Mother

CMR differentials by marital status of mother show that children born to

never married mothers have the highest CMR of (90), while children born to separated mothers have the lowest rates of 63. (Figure 8.10 and Table 8.4) In rural areas, CMR is

highest among
never married
mothers while in
urban areas, it is
highest among the
widowed mothers.
In both rural and
urban areas, CMR is
lowest among the
separated mothers.

Figure 8.10: Child Mortality Rate by Marital Status and Residence, Northern Province, 2000



Sources: CSO, 2000 Census of Population and Housing

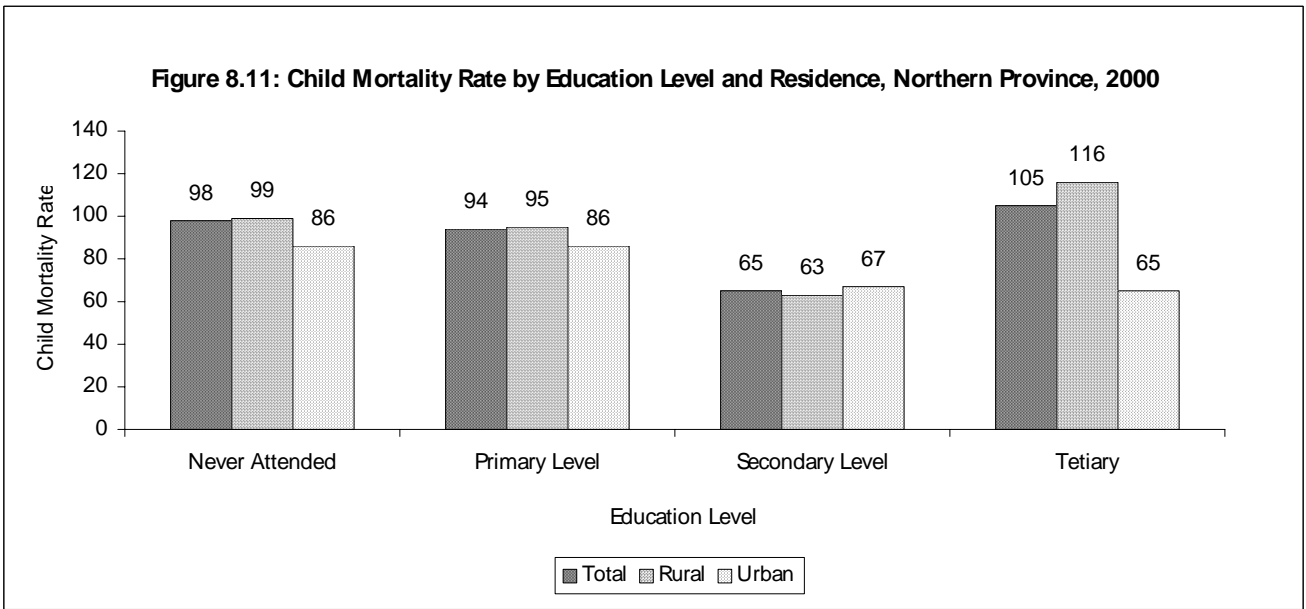
Table 8.4 Child Mortality Rate at Birth by Marital Status and Residence, Northern Province, 2000

Marital Status	Child Mortality rate (per '000)		
	Total	Rural	Urban
Married	68	70	53
Separated	63	65	50
Divorced	68	66	77
Widowed	88	89	84
Never Married	90	97	73
Living Together	88	92	72

Sources: CSO, 2000 Census of Population and Housing

8.4.5 Child Mortality Rate by Education Level of Mother

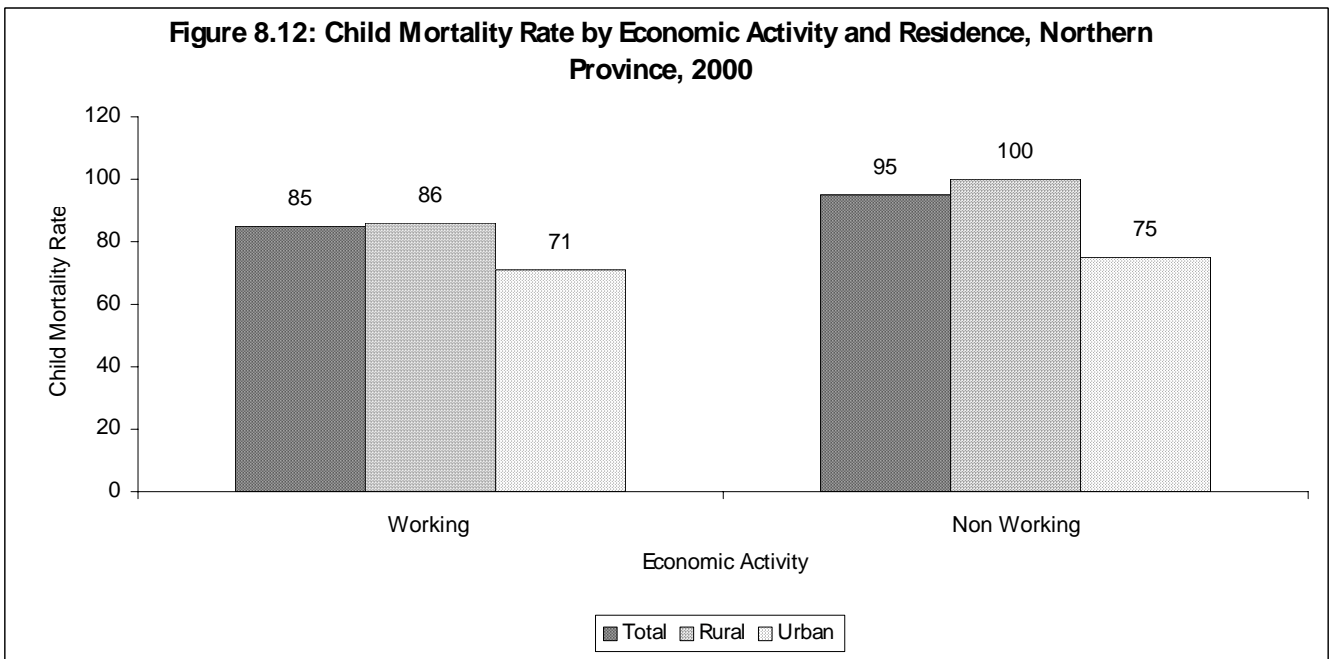
Figure 8.11 shows the differentials by level of education. Child Mortality Rate is higher for children born to mothers with no formal education (98) than those born to mothers with primary education (94) and those born to mothers with secondary education (65), but is highest for children born to mothers with tertiary education (105). This pattern is similar in both rural and urban areas.



Sources: CSO, 2000 Census of Population and Housing

8.4.6 Child Mortality by Economic Activity of Mother

Figure 8.12 shows that children born to working mothers have higher chances of surviving between age one and five than those born to non-working mothers. The differences are relatively significant (85 versus 95 deaths per 1000 children, respectively), representing about 12 percent higher deaths among the non-working mothers.



Sources: CSO, 2000 Census of Population and Housing

8.5 Under Five Mortality Levels, Trends and Differentials

Table 8.5 shows that Under-five Mortality Rates (UMRs) in Northern Province increased from 126 in 1980 to 256 in 1990 then decreased to 220 in 2000.

The UMR for Northern province is significantly higher than the national average (180 compared to 220 deaths per 1000 children).

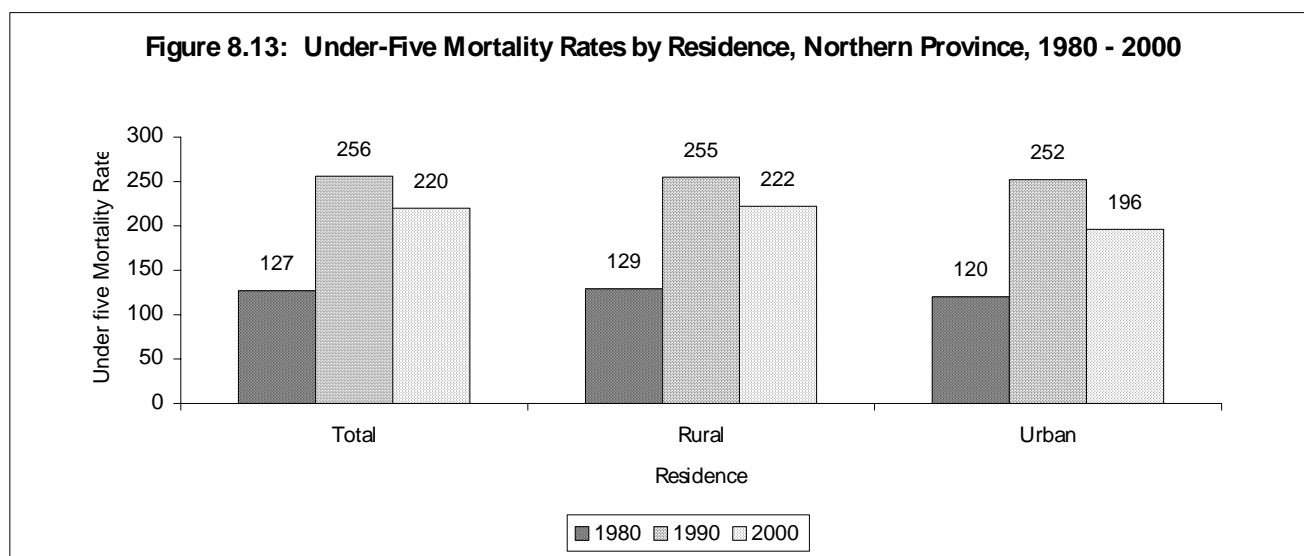
Table 8.5: Under Five Mortality Indicators by Residence, Sex and District, Northern Province, 1980-2000

Background Characteristics	Under Five Mortality Rate (per '000)		
	1980	1990	2000
Zambia	121	208	183
Northern	127	256	220
Residence			
Rural	129	255	222
Urban	120	252	196
Sex of Child			
Male	134	265	227
Female	119	247	213
Districts (2000)	Total (2000)	Rural (2000)	Urban (2000)
Chilubi	336	339	74
Chinsali	229	229	214
Isoka	201	201	119
Kaputa	288	286	481
Kasama	195	199	190
Luwingu	208	208	
Mbala	198	194	238
Mpika	172	182	127
Mporokoso	148	149	132
Mpulungu	253	248	288
Mungwi	211	210	258
Nakonde	256	252	293

Sources: CSO, 2000 Census of Population and Housing

8.5.1 Under Five Mortality Rate by Residence of the Mother

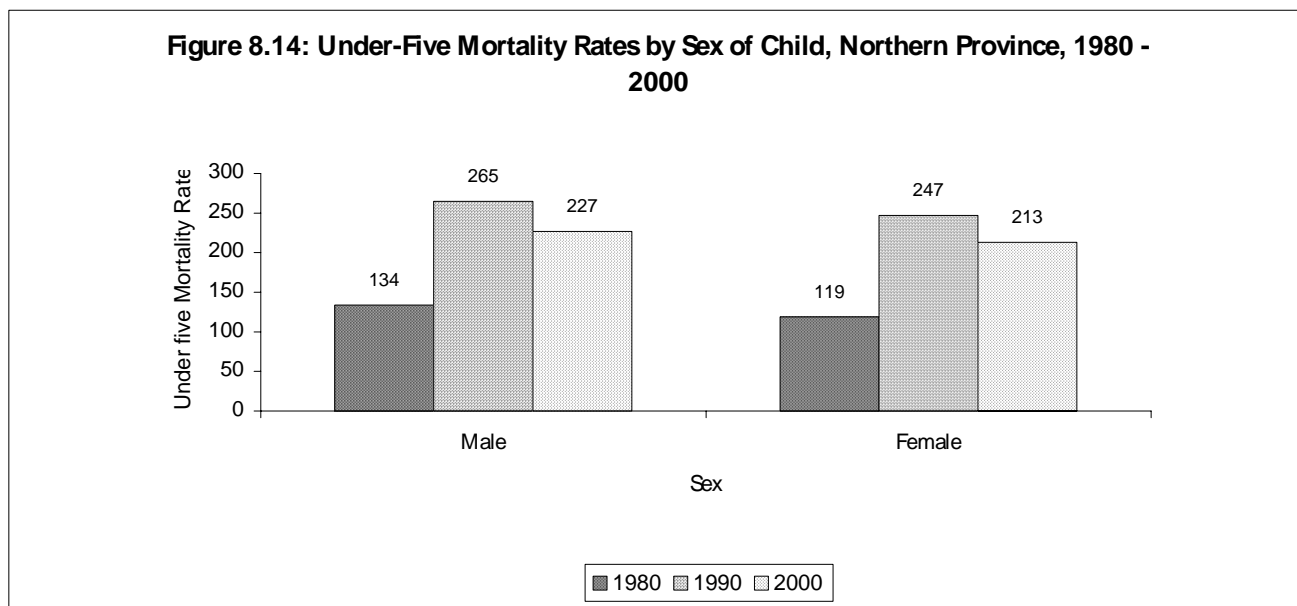
Figure 8.13 shows that UMR stood at 129 deaths per 1000 children in 1980. It increased significantly by about 98 percent in 1990 (255) then declined to 222 deaths per 1000 children in 2000. In urban areas, UMR increased from 120 in 1980 to 252 in 1990 then declined to 196 deaths per 1000 children. Overall, children born to mothers residing in rural areas have higher risks of dying between birth and age five than in urban areas (222 compared to 196 deaths per 1000 children).



Sources: CSO, 2000 Census of Population and Housing

8.5.2 Under Five Mortality Rate by Sex

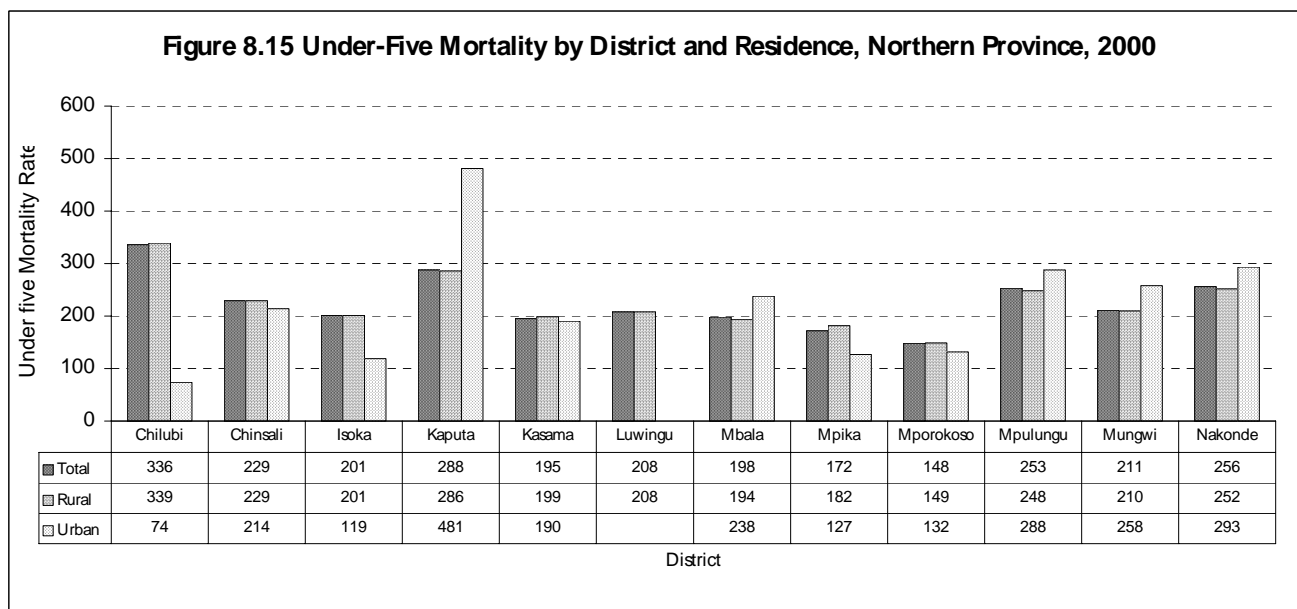
Figure 8.14 shows that males have a higher UMR than females since 1980. The UMR has been 134, 265 and 227 for males, compared to 119, 247 and 213 for females in 1980, 1990 and 2000, respectively.



Sources: CSO, 2000 Census of Population and Housing

8.5.3 Under Five Mortality by District

A district comparison of UMR is shown in Figure 8.15. UMR is highest in Chilubi (336) followed by and Kaputa (288) districts and lowest in Kasama (195) followed by Mpika (172) and Mporokoso (148). As was the case with regard to IMR, UMR in rural areas is very close to that of the provincial average. That of urban areas is much lower than in rural areas of Chilubi, Isoka, and Mpika

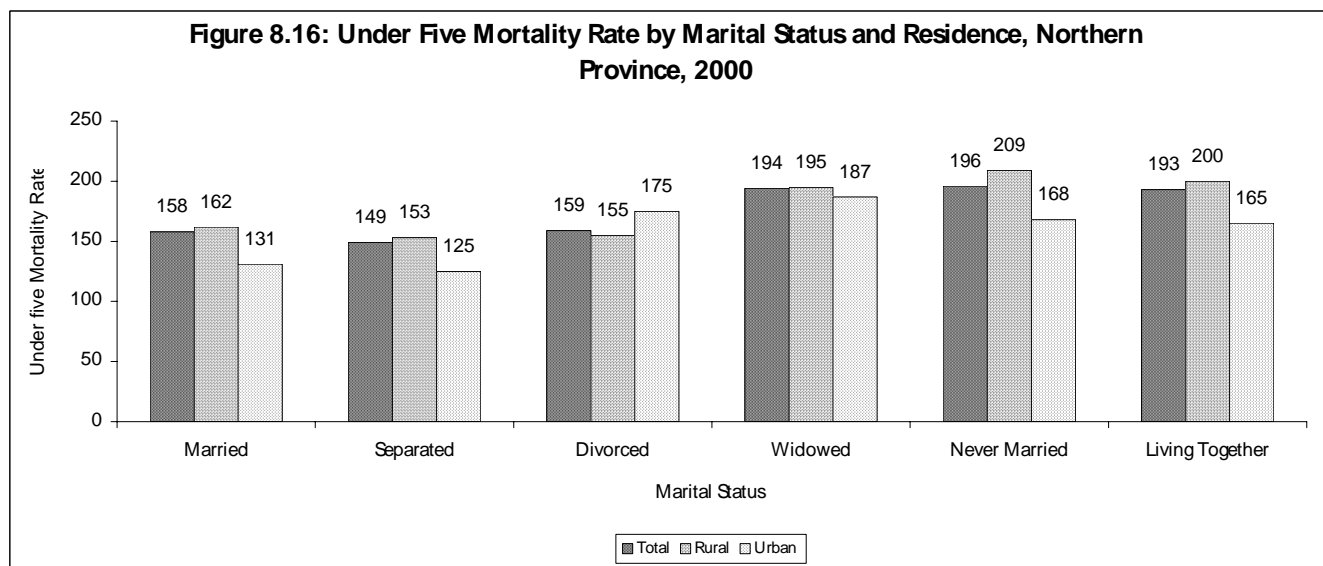


Sources: CSO, 2000 Census of Population and Housing

8.5.4 Under Five Mortality Rate by Marital Status of Mother

Table 8.6 and Figure 8.4 show that children born to mothers who are separated have the lowest UMR (149) whereas those born to mothers who have never been

married have the highest UMR of 196.



Sources: CSO, 2000 Census of Population and Housing

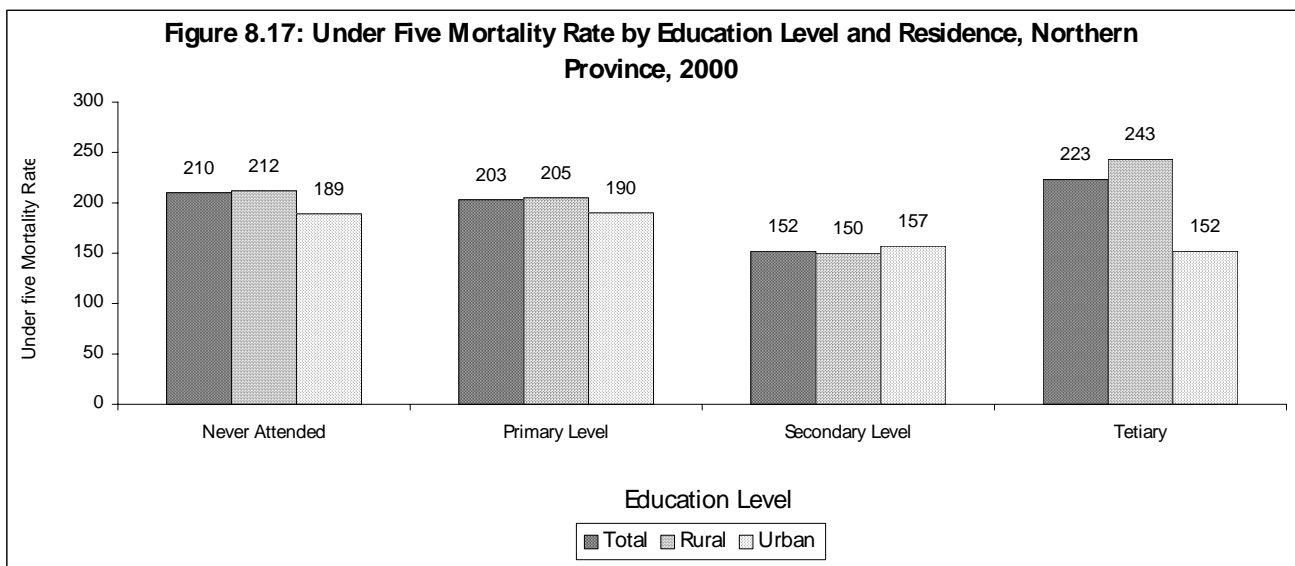
Table 8.6 Under Five-Mortality Rate at Birth by Marital Status and Residence, Northern Province, 2000

Marital Status	Under Five Mortality Rate (per '000)		
	Total	Rural	Urban
Married	158	162	131
Separated	149	153	125
Divorced	159	155	175
Widowed	194	195	187
Never Married	196	209	168
Living Together	193	200	165

Sources: CSO, 2000 Census of Population and Housing

8.5.5 Under Five Mortality by Education Level of Mother

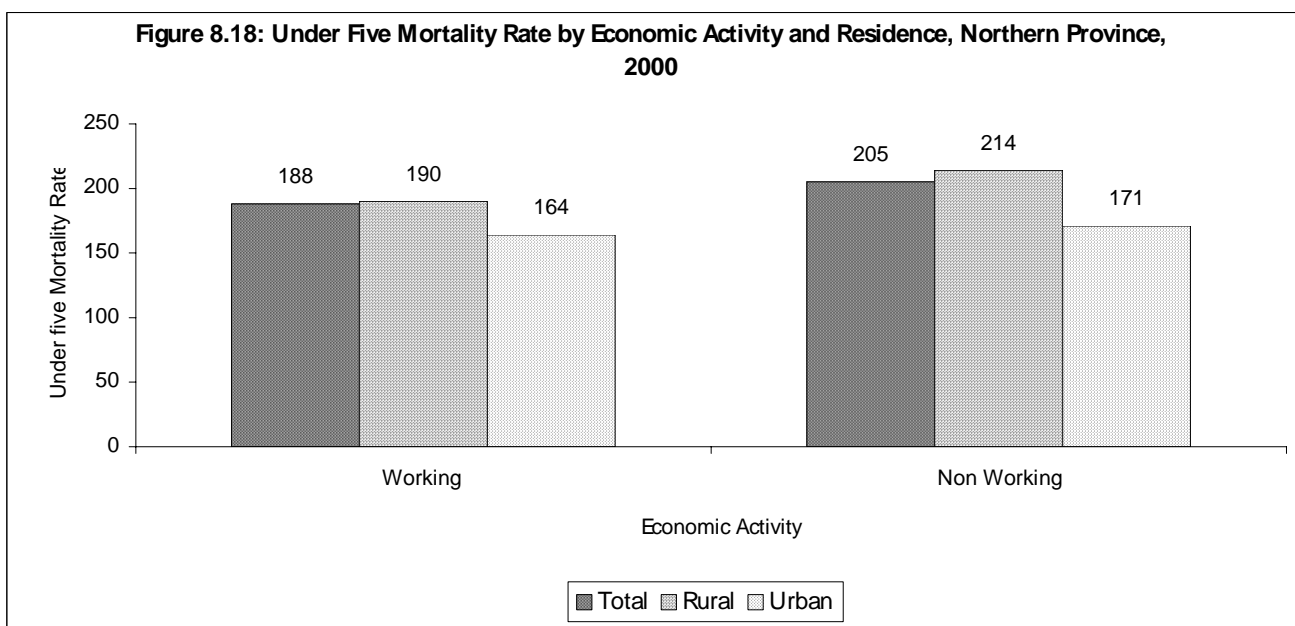
Figure 8.17 shows that the Under Five Mortality Rate is higher for children born to mothers with no formal education (210) than those born to mothers with primary education (203) and those born to mothers with secondary education (152) respectively, but is highest for children born to mothers with tertiary education (223).



Sources: CSO, 2000 Census of Population and Housing

8.5.6 Under Five Mortality Rate by Economic Activity of Mother

There are variations in UMR by economic activity of mother. Figure 8.18 shows that children born to non-working mothers are at greater risks of dying before age five than those born to working mothers. This pattern is similar in both rural and urban areas.



Sources: CSO, 2000 Census of Population and Housing

8.6 LIFE EXPECTANCY AT BIRTH: LEVELS, TRENDS AND DIFFERENTIALS

Table 8.6 shows life expectancy in Northern Province decreased from 51 in 1980 to 41 in 1990 then increased to 45 in 2000. Life expectancy also varies by sex. Female infants have a higher life expectancy at birth at 52, 43 and 47 years than males with life expectancies of 50, 40 and 44 years in 1980, 1990 and 2000, respectively.

The life expectancy at birth for Northern province is lower than that of the national average of 50 in 2000.

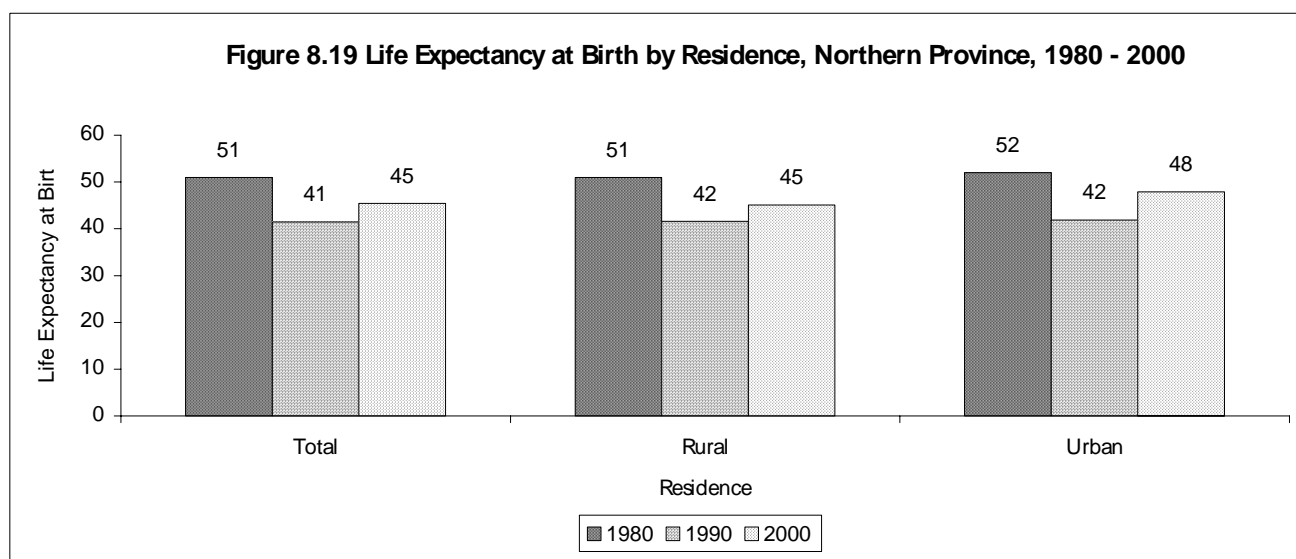
Table 8.7: Life Expectancy by Residence, Sex and District, Northern Province, 1980-2000

Background Characteristics	Life Expectancy at Birth (Years)		
	1980	1990	2000
Zambia	52	47	50
Northern	51	41	45
Residence			
Rural	51	42	45
Urban	52	42	48
Sex of Child			
Male	50	40	44
Female	52	43	47
Districts (2000)	Total (2000)	Rural (2000)	Urban (2000)
Chilubi	34	34	56
Chinsali	44	44	46
Isoka	48	47	48
Kaputa	38	39	37
Kasama	48	48	48
Luwingu	47	47	
Mbala	48	48	44
Mpika	51	50	56
Mporokoso	54	55	57
Mpulungu	42	43	40
Mungwi	46	46	33
Nakonde	41	42	36

Sources: CSO, 2000 Census of Population and Housing

8.6.1 Life Expectancy at Birth by Residence

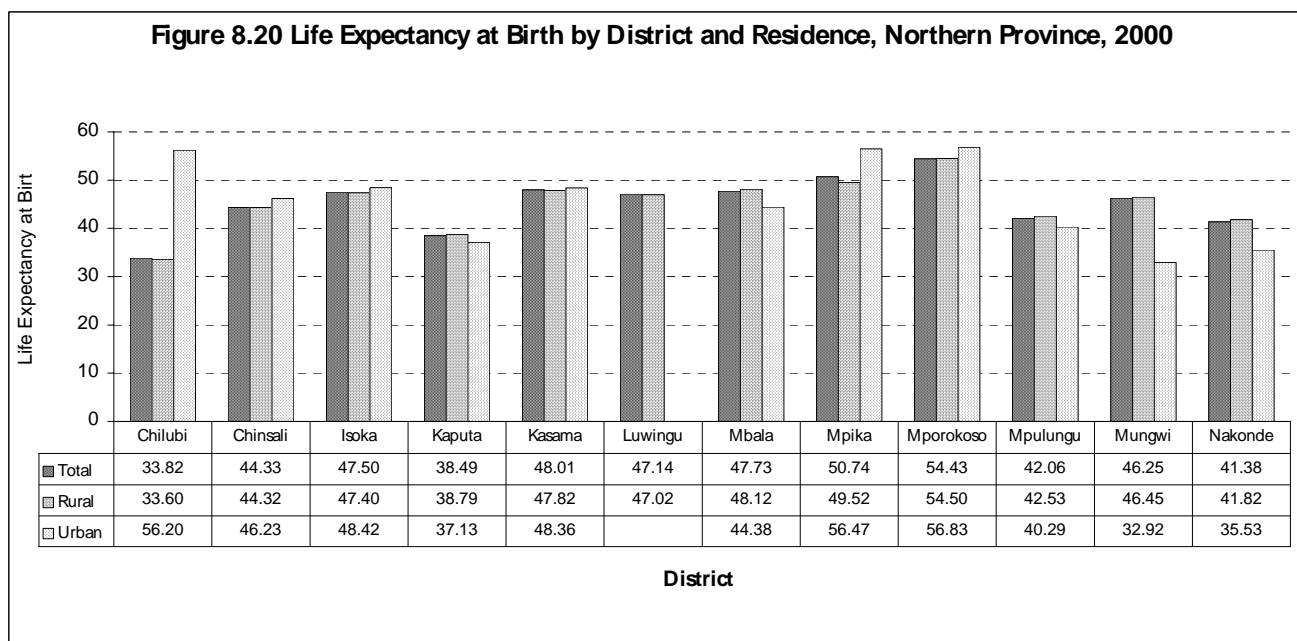
Figure 8.19 shows the rural-urban differentials of life expectancy. Life expectancy is higher in urban than rural areas. In the urban life expectancy was 52, 42 and 48 while the rural areas it was 51, 42 and 45 in 1980, 1990 and 2000 respectively.



Sources: CSO, 2000 Census of Population and Housing

8.6.2 Life Expectancy at Birth by District

A comparison of districts with regards to life expectancy is shown in Figure 8.20. Life expectancy at birth is lowest in Chilubi (34) and highest in Mporokoso (54), followed by and Mpika (51). Life expectancy is higher in the urban areas of Chilubi, Chinsali, Isoka, Kasama, Mpika and Mporokoso, while in the rest of the districts, it is higher in the rural than urban areas.



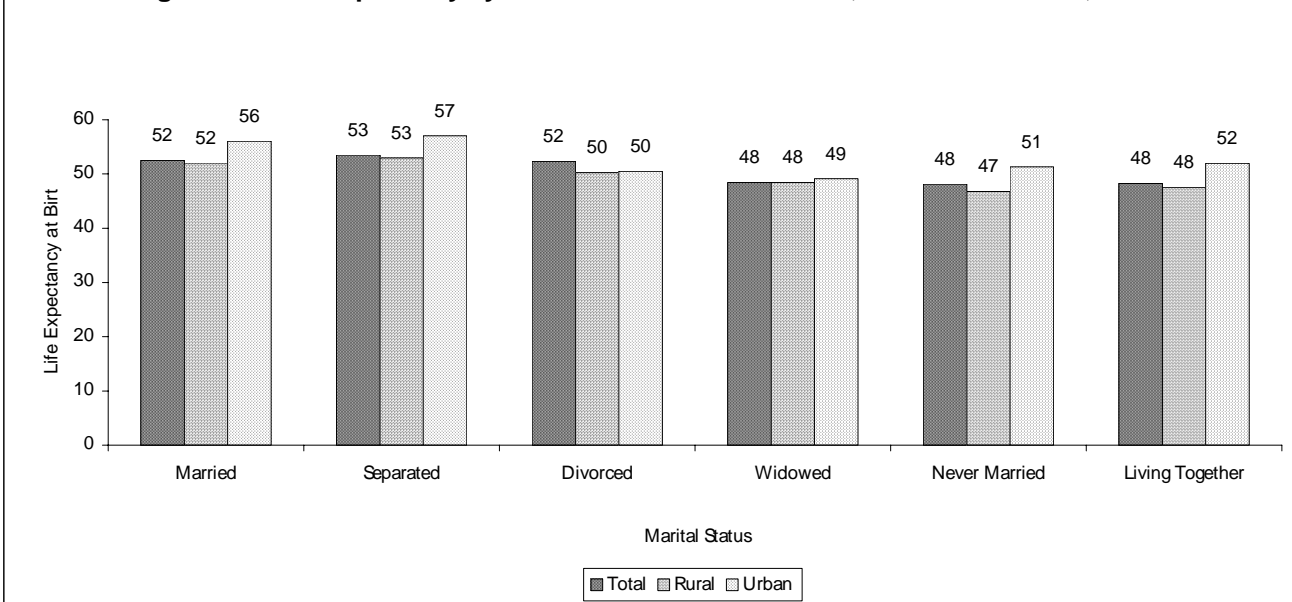
Sources: CSO, 2000 Census of Population and Housing

8.6.3 Life Expectancy at Birth by Marital Status of the Mother

Life Expectancy at Birth also differs with marital status of the mother. Figure 8.21 and Table 8.8 show that babies born to mothers who are separated have highest life

**Expectancy at Birth
at 53 years while
those born to
widowed, living
together and never
married mothers
have the lowest life
expectancy at birth
at 48 years.**

Figure 8.21: Life Expectancy by Marital Status and Residence, Northern Province, 2000



Sources: CSO, 2000 Census of Population and Housing

In both rural and urban areas, life expectancy is highest among the separated mothers. In rural areas, life expectancy is lowest among the never married mothers while in urban areas, it is highest among the never married and divorced mothers.

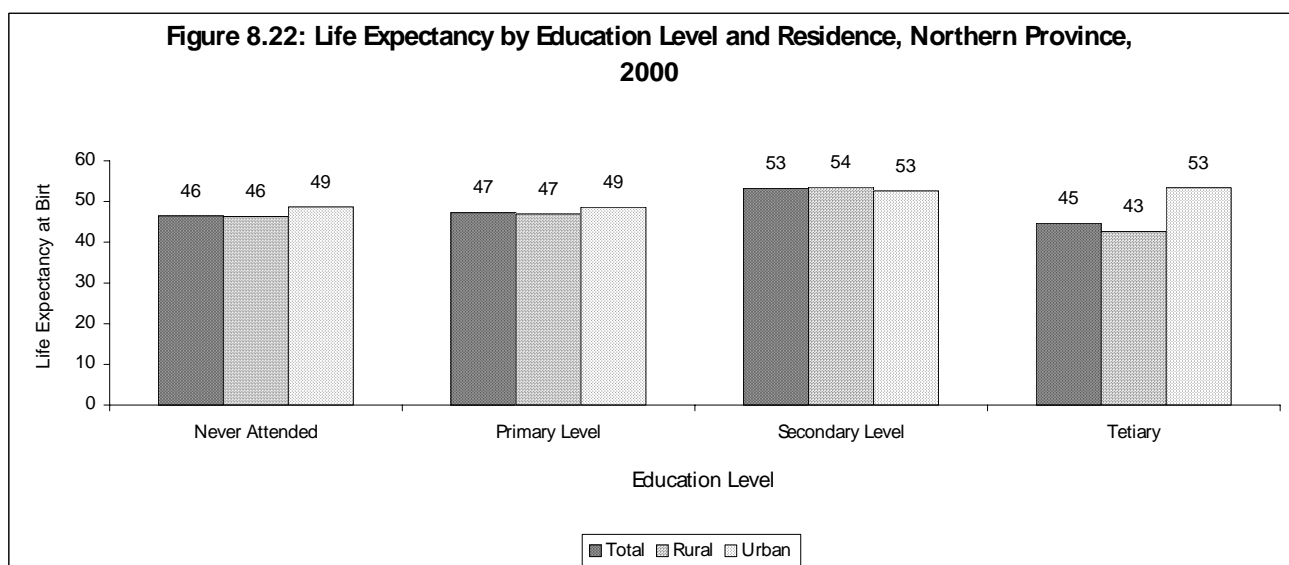
Table 8.8: Life Expectancy at Birth by Marital Status and Residence, Northern Province, 2000

Marital Status	Life Expectancy at Birth (Years)		
	Total	Rural	Urban
Married	53	52	56
Separated	54	53	57
Divorced	52	50	51
Widowed	48	48	49
Never Married	48	47	51
Living Together	48	48	52

8.6.4 Life Expectancy at birth by Education Level of Mother

Figure 8.22 shows the variation in life expectancy with education. Life Expectancy at Birth is lower for children born to mothers with no formal education (46 years) than those born to mothers with primary education (47 years) and secondary education (53 years) respectively, but is lowest for those born to mothers with tertiary education (45 years).

Figure 8.22: Life Expectancy by Education Level and Residence, Northern Province, 2000

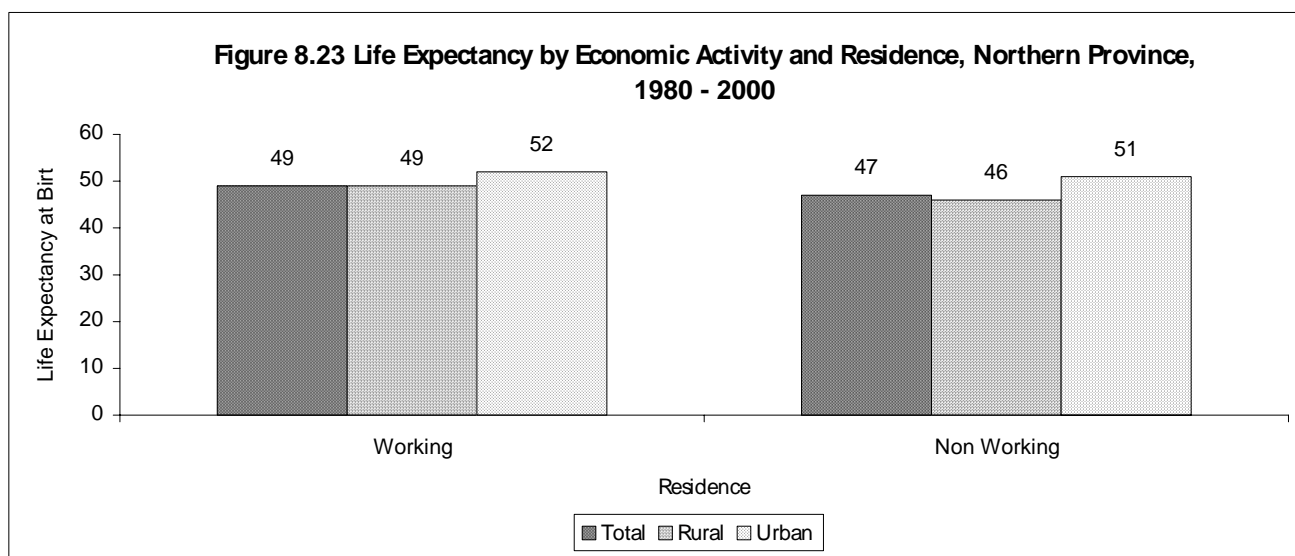


Sources: CSO, 2000 Census of Population and Housing

8.6.5 Life Expectancy at birth by Economic Activity of Mother

Children born to working mothers have a higher expectation of life at birth than those born to non-working mothers. The difference, however, is not so significant (49 years versus 47 years, respectively). Both rural and urban areas portray a similar picture. (See Figure 8.23).

Figure 8.23 Life Expectancy by Economic Activity and Residence, Northern Province, 1980 - 2000



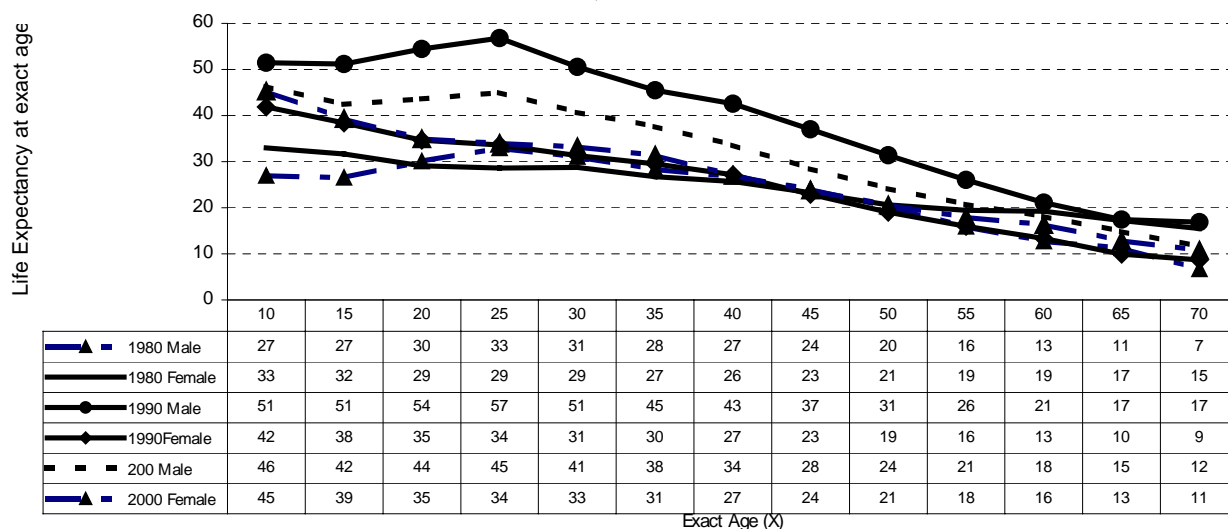
Sources: CSO, 2000 Census of Population and Housing

8.7 Adult Mortality: Life Expectancy Levels, Trends and Differentials

Results in Figure 8.24 show that adult life expectancy levels in Northern Province increased between 1980 and 1990, then decreased in 2000. The decrease may be attributed to the HIV/AIDS pandemic.

The highest life expectancy levels for both male and female adults were in the intercensal period before the HIV/AIDS could really manifest its impact (1980-1990). However, the AIDS pandemic emerged in the late 1980s and by the 1990's its impact was becoming apparent. Consequently adult life expectancy levels declined between 1990 and 2000, especially in the 25-50 years age group. In 1980, male adults had a higher life expectancy than female adults, between age 20 and 50. In 1990 and 2000, this situation persisted. Males had higher life expectancy levels than females at all adult ages (10-70), with a wider gap between ages 20 and 50.

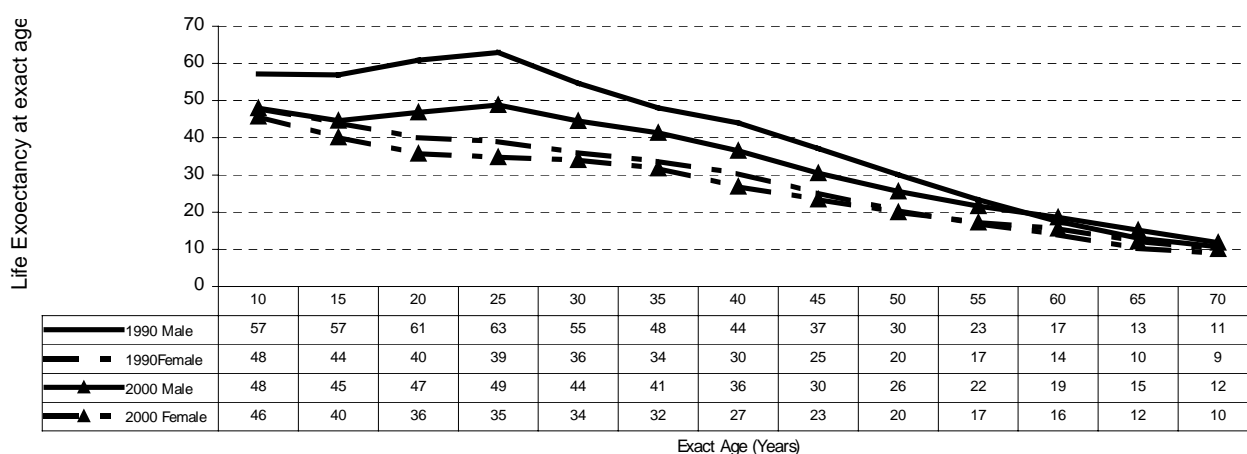
Figure 8.24: Adult Life Expectancy levels (at exact ages 10-70 years) by Sex, Northern Province, 1980-2000



Sources: CSO, 2000 Census of Population and Housing

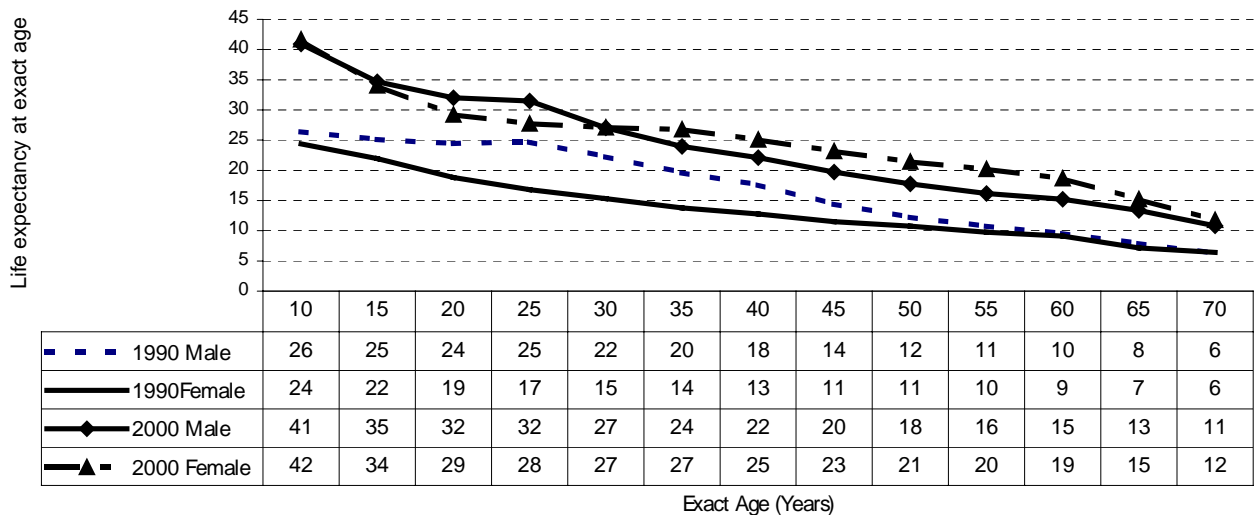
Differentials by residence in Figures 8.25 and 8.26 show that adults in rural areas have higher chances of surviving to older ages than in urban areas. In rural areas in both 1990 and 2000, males live longer than females at all ages (10-70). The gap is even wider between age 10 and 50 years for 1990 and 20-40 for 2000. In urban areas on the contrary, males had a higher life expectancy than females at all ages in 1990 while in 2000, life expectancy for males was higher than that of females between ages 10 and 25. At older ages, females had a higher expectation of life than males.

Figure 8.25: Adult Life Expectancy levels (at exact ages 10-70 years) by Sex, Rural Northern Province, 1990-2000



Sources: CSO, 2000 Census of Population and Housing

Figure 8.26: Adult Life Expectancy levels (at exact ages 10-70 years) by Sex, Urban Northern Province, 1990-2000



Sources: CSO, 2000 Census of Population and Housing

The figures also show that there has been a decline in life expectancy in rural areas while in urban areas, there has been an increase, between 1990 and 2000. Thus, it is the decline in the rural areas that has contributed to the overall decline in life expectancy in the province as a whole.

8.8. Summary

Overall, infant mortality rate has declined in Northern Province by about 5 percent. Despite the decline, Currently, 1 in 8 infants die before their first birthday compared to 1 in 7 in 1980. The decline in infant mortality has had no major impact on reduction of under-five mortality. At district level, Chilubi registered the highest IMR and Mporokoso the least. In Chilubi district 1 in 5 infants do not survive to their first birthday compared to 1 in 11 in Mporokoso district. Higher Infant mortality risks are associated with mothers who live in a rural area, has less education, currently not married and not working.

There was a 6 percent decline in Child Mortality Rate (CMR) between 1990 and 2000, from 108 to 101. However, the 2000 level is still above the 1980 one (75 deaths per 1000). At the district level CMR was highest in Chilubi (171) and lowest in Mporokoso (64). Higher incidents of dying among children aged between exact age 1 and 5 were observed in those born to rural mothers, never married mothers, mothers with Tertiary education, non-working.

The Under five Mortality Rate has increased in Northern Province between 1990 and 2000 by about 10 percent. Currently, 1 in 5 under-five children die before their fifth birthday compared to 1 in 8 in 1980. At the district level, Mporokoso district recorded the least UMR and Chilubi district recorded the highest. Children in Chilubi district are twice less likely to die than those in Mporokoso district. About one in seven under-five children in Mporokoso die before reaching age five. Greater numbers of children dying before their fifth birthday were associated with mothers from rural areas, with no education. It was also surprising to find relatively high Under-Five Mortality Rates among working women as opposed to non-working and among mothers with tertiary education as opposed to those with secondary education.

Life expectancy at birth in Northern Province improved by two years in 2000 compared to 1990, rising from 44 to 46 years. At district level the highest Life Expectancy at Birth was in Mporokoso (53 years) and the lowest was in Chilubi (26 years). Low Life Expectancy at Birth is also associated with babies born to rural mothers, never married mothers, mothers with Tertiary education.

Adult life expectancy levels have deteriorated between 1990-2000 compared to the period 1980-1990. In urban areas, however, there has been an increase in life expectancy of the adults at all ages. Males have higher chances of surviving than females.

Chapter 9

DISABILITY

9.1 INTRODUCTION

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

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

Table 9.1: Disability Categories used in Censuses 1969 - 2000

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

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

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

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

9.2. CONCEPTS AND DEFINITIONS

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

Types of Disability

- Blind (Visually Impaired)- complete loss of sight
- Partially sighted- loss of one eye or poor sight but not complete blindness
- Deaf/Dumb (speech impaired)- complete loss of sense of hearing/speech
- Hard of Hearing- Partial loss of sense of hearing but not complete loss
- Mentally ill- A disorder related to the individuals mental state or state of mind

- Ex-mental- a person that suffered from mental disorder before but is now rehabilitated or undergoing rehabilitation
- Mentally retarded- a person that is very slow to learn or has deficiency of mental intellect
- Physically handicapped (Physically disabled)- A person with a physical impairment relating to the loss of bodily stature

CAUSES OF DISABILITY

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

9.3. Limitations of Data on Disability

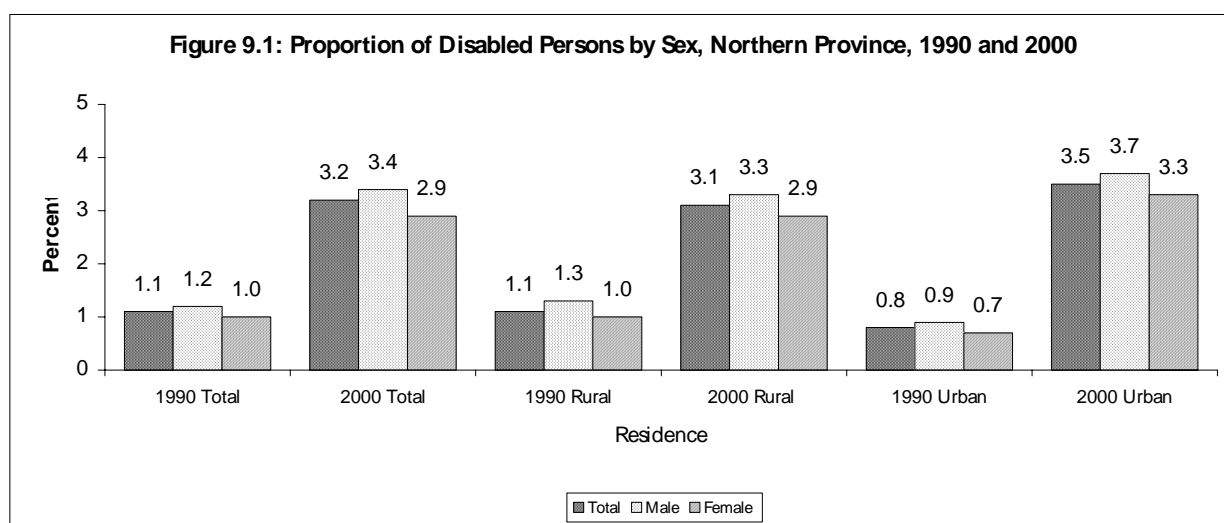
Policy makers and planners require data on disabled persons. Information needs are more than just basic counts of the number of people with disabilities but also on the quality of life of people living with disabilities.

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

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

9.4 Proportion of the disabled to the total population

Out of a total population of 1,174,316 million persons in Northern province; 37,008 are reported to be disabled; a proportion of 3.2 persons of the total population. This proportion was an increase over 1990 census when only 1.1 percent of the total population reported to be disabled. Compared to the national average, the proportion of the disabled for the province was slightly higher in both 1990 and 2000 (1.1 percent against 0.9 percent in 1990 and 3.2 percent against 2.7 percent for Northern province and the national average respectively). Unlike the national average the highest proportions of the disabled are in urban. An examination of the proportions of the disabled between the two censuses may indicate that there has been an increase in the prevalence of disability between 1990 and 2000. While this may be true, the observed increase was largely caused by the increase in the categories of the disabled (see Figure 9.1 and Table 9.2).



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

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

Sex and year	Total Population			Proportions Of The Disabled		
	Total	Rural	Urban	Total	Rural	Urban
<i>1990</i>						
Zambia Total	7,383,097	4,477,814	2,905,283	0.9	1.1	0.7
Northern	855,177	734,255	20,922	1.1	1.1	0.8
Male	413,268	354,184	59,084	1.2	1.3	0.9
Female	441,909	380,071	61,838	1	1	0.7
<i>2000</i>						
Zambia Total	9,337,425	5,990,356	3,347,069	2.7	3.2	0.2
Northern	1,174,316	1,011,727	162,589	3.2	3.1	3.5
Male	573,347	494,071	79,276	3.4	3.3	3.7
Female	600,969	517,656	83,313	2.9	2.9	3.3

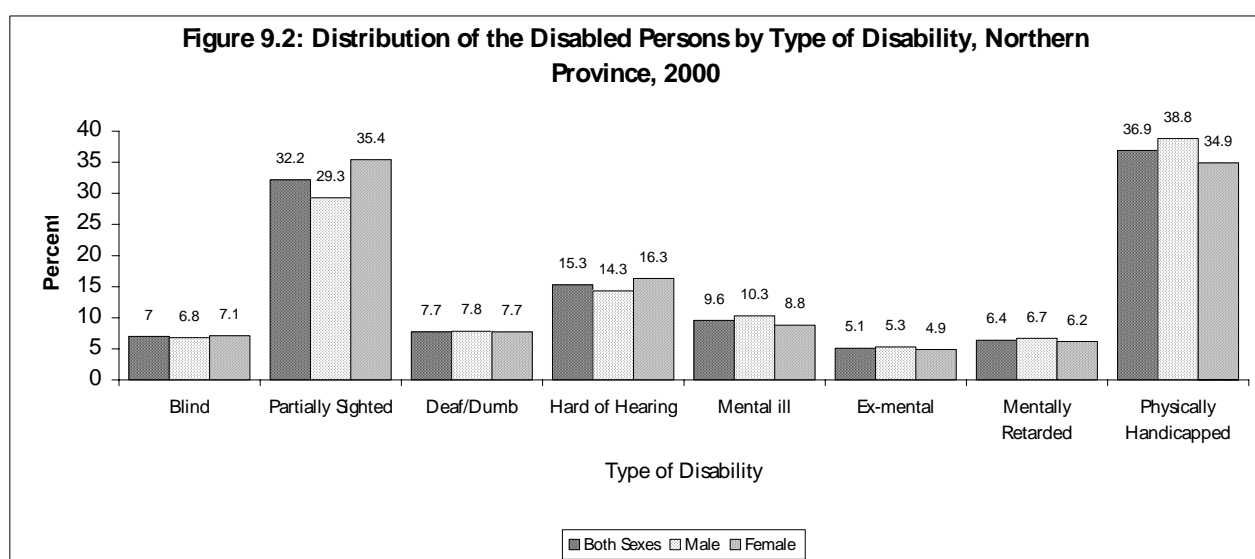
Source: CSO, 1990 and 2000 Censuses of Population and Housing

9.5. Types of Disability

The distribution of disabled persons by type of disability in Northern province shows that out of a total of 37,008 disabled persons, 52 percent are male and 48 percent are female.

As mentioned earlier, the types of disability include the blind, partially sighted, deaf/dumb, hard of hearing, mentally ill, ex-mental, mentally retarded and the physically handicapped. Table 9.3 shows that the physically handicapped form the largest proportion of the disabled persons. These form 36.9 percent of the disabled persons. The second most common disability is partial sight, which was reported by 32.2 percent. This scenario is the same as that of the national average, though for both the physically handicapped and the partially sighted the provincial proportions are higher than the national ones. Some disability categories such as blindness (7.0 percent), ex-mental (5.1 percent), mental retardation (6.4 percent) and deaf/dumbness (7.7 percent) are less common.

The pattern of the distribution of disabled persons is similar for both males and females, as well as across districts. Among the districts, Mpika has the largest number of disabled persons (5,188) while Mpulungu has the least (1,300).



Source: CSO, 2000 Census of Population and Housing

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

Type of Disability	Zambia									Mporo-	Mpu-
	Total	Northern	Chilubi	Chinsali	Isoka	Kaputa	Kasama	Luwingu	Mbala	Mpika	koso
Total disabled	256,690	37,008	2,895	3,582	2,163	2,625	4,624	2,562	4,010	5,188	1,866
Blind	5.3	7	4.2	4.9	5.5	6.9	4.8	12.3	4.9	14.9	7
Partially sighted	30.2	32.2	32.3	29.1	27.1	32.7	32.1	33.8	28.5	34.2	28.3
Deaf/dumb	6.2	7.7	5.5	5.7	6.1	6.4	4.6	15.8	5.5	17.6	6.3
Hard of hearing	12.4	15.3	12.9	11	15.6	10.3	12.2	22.3	12.1	25.6	13.2
Mentally ill	8.1	9.6	6.6	8.1	11.7	4.8	6	16.7	6.9	19.7	9.4
Ex-mental	3.6	5.1	3	3	4.2	3.5	2.9	8.9	2.8	13.9	5.6
Mentally retarded	5.4	6.4	5.9	6.1	5.5	3.4	4.6	8.6	5.6	13.3	5.3
Physically handicapped	38.8	36.9	40.3	39.7	39.7	39.2	38.9	28.7	34.1	39.1	38
Male	135,613	19,422	1,383	1,916	1,134	1,373	2,489	1,370	2,105	2,769	1,000
Blind	5	6.8	4.2	5.1	5.4	6.1	4.4	11.6	5.4	14.7	6.9
Partially sighted	27.7	29.3	27.4	24.5	23.6	31.1	28.7	31.8	26.6	32.2	25.8
Deaf/dumb	6.2	7.8	5.6	5.8	5.6	6.6	5	15.3	5.1	18	6.9
Hard of hearing	11.5	14.3	11.8	9.3	14.8	9.8	11.8	21.3	12	24.6	11.8
Mentally ill	8.8	10.3	8.2	9.2	11.7	4.2	7.2	16.8	8	20	10.4
Ex-mental	3.7	5.3	3.3	3.4	4.4	3.8	3	8.3	2.4	13.7	6.4
Mentally retarded	5.6	6.7	5.8	6.5	5.7	3.6	5.1	8.4	6.4	13.3	6.1
Physically handicapped	40.7	38.8	43	42.1	42	41.7	40.4	31.5	34.5	41	38.5
Female	121,077	17,586	1,512	1,666	1,029	1,252	2,135	1,192	1,905	2,419	866
Blind	5.6	7.1	4.3	4.7	5.7	7.7	5.2	13.2	4.4	15.2	7.2
Partially sighted	33	35.4	36.8	34.3	31	34.4	36	36.2	30.6	36.5	31.3
Deaf/dumb	6.2	7.7	5.3	5.6	6.6	6.1	4.1	16.4	5.9	17.2	5.7
Hard of hearing	13.3	16.3	14	13	16.5	10.9	12.7	23.4	12.2	26.6	14.8
Mentally ill	7.3	8.8	5.2	6.8	11.8	5.5	4.6	16.7	5.7	19.3	8.2
Ex-mental	3.6	4.9	2.8	2.5	4	3.3	2.9	9.5	3.1	14.2	4.7
Mentally retarded	5.3	6.2	6	5.6	5.2	3.1	4	8.8	4.7	13.4	4.3
Physically handicapped	36.7	34.9	38	36.9	37.2	36.4	37.2	25.5	33.7	37	37.4

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

Source: CSO, 2000 Census of Population and Housing

9.6. AGE STRUCTURE OF THE DISABLED

The age structure of the disabled is shown in Table 9.4. Data shows that the number of the disabled increases with increasing age up to age group 10-14 at which it reaches the peak and then it starts declining up to age group 55-59. After this age group, the numbers fluctuate. Across age groups 0-4 to 40-44, the largest proportion of the disabled are physically handicapped closely followed by the partially sighted. For the older age groups, the largest proportion is partially sighted closely followed by the physically handicapped.

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

Age group	Type of Disability								
	Total Number	Blind	Partially Sighted	Deaf/Dumb	Hard of Hearing	Mentally ill	Ex Mental	Mentally Retarded	Physically Handicapped
0 - 4	2,386	9.5	26.9	17.2	20.4	14.2	9.9	9.3	37.4
5-9	2,767	7.3	24.2	15.5	20.2	12.1	7.4	8.0	34.5
10-14	2,852	7.1	24.5	14.6	20.0	13.7	8.7	9.4	35.6
15 - 19	2,802	6.8	24.4	12.1	17.0	13.7	7.5	10.4	37.2
20 - 24	2,623	7.0	23.4	9.1	14.2	13.3	6.3	10.5	39.7
25 - 29	2,497	5.1	23.9	7.4	13.0	14.4	6.1	8.5	38.8
30 - 34	2,740	5.5	27.1	6.7	11.5	12.4	5.8	6.5	40.1
35 - 39	2,462	6.3	28.7	6.1	11.9	10.2	4.7	6.6	38.5
40 - 44	2,137	4.9	31.7	4.4	9.7	8.3	4.7	4.9	39.4
45 - 49	2,030	5.7	37.9	3.6	11.1	7.3	3.6	4.9	37.3
50 - 54	2,067	5.5	37.7	3.6	12.0	6.7	3.5	5.2	37.3

55 - 59	1,765	5.4	40.6	3.2	11.4	4.4	2.7	3.4	36.8
60 - 64	2,012	7.0	43.3	2.9	12.7	4.6	2.1	3.0	35.6
65 - 69	1,812	7.8	42.3	2.5	14.7	3.5	1.0	2.1	37.9
70 - 74	1,552	8.5	47.3	2.6	17.7	2.8	1.3	2.1	35.4
75+	2,504	11.9	49.6	3.0	23.0	2.3	0.9	2.0	29.4
Total	37,008	7.0	32.2	7.7	15.3	9.6	5.1	6.4	36.9

Source: CSO, 2000 Census of Population and Housing

9.7 Causes of Disability

The various causes of disability were categorized as prenatal, disease, injury, other and unknown. Of these, the most common cause is disease, which was reported by 38.8 percent of the disabled population. This is in line with what is depicted on the national level where more than three-thirds (38.9 percent) were disabled due to disease / illness. The pattern is also the same for both males and females in both cases. Prenatal causes were reported by 16.8 percent, injury by 17.1 percent, and other by 10 percent while 19.9 percent reported that they did not know the cause of their disability.

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

Among all the districts, the most common cause of disability reported is disease/illness. The highest percentage citing disease/illness is Chilubi District 45.9 percent and Kaputa 43.9 percent. Prenatal causes were reported highest by Mpika (18.7) percent, injury in Luwingu (21.3 percent), and 'other' by 15.6 percent in Luwingu.

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

Causes	Zambia Total	Total	Chilubi	Chinsali	Isoka	Kaputa	Kasama	Luwingu	Mbala	Mpika	Mporokoso	Mpu-lungu	Mungwi	Nakonde
Total Disabled	256,690	37,008	2,895	3,582	2,163	2,625	4,624	2,562	4,010	5,188	1,866	1,300	4,135	2,058
Congenital/pre-natal	13.7	16.8	16.2	16	13.1	15.9	17.7	18.4	18.4	18.7	15.6	16.2	17.5	12.7
Disease/illness	38.9	38.8	45.9	37.9	38.7	43.9	37.8	34.6	39.2	32.7	38.5	39.9	41.6	40.7
Injury/accident/trauma	17.2	17.1	13.6	16.9	17	14.5	16.6	21.3	18.5	21.4	17	13.3	14.1	17.3
Other	9.3	10	5.7	10.2	10.5	7.1	8.9	15.6	10.9	13.5	11	7.8	8.3	8.2
Unknown	20.2	19.9	18.8	19.4	23.1	17.1	16.4	22.4	20.7	23.2	18.2	17.5	19.6	20.5
Male	135,613	19,422	1,383	1,916	1,134	1,373	2,489	1,370	2,105	2,769	1,000	718	2,088	1,077
Congenital/pre-natal	13.7	17	17.9	16.3	13.3	17	18.8	18.2	18.1	18.5	15.9	15.5	17.3	11.2
Disease/illness	36.3	35.9	42	32.9	35.3	42.7	34.9	32	36.2	31.3	36.2	35.9	38.5	38.3
Injury/accident/trauma	20.7	20.5	17.1	21.6	20.2	17.6	20.3	23.6	21.6	23.8	20.8	17.4	17.1	21.6
Other	8.9	9.5	5.5	9.6	10.5	6.5	8.2	13.9	10.8	12.3	10.3	9.2	8.3	7.5
Unknown	19.4	19.1	17.5	19.2	22.1	16.1	15.6	21	20.4	21.6	17.1	17.3	19.5	19.6
Female	121,077	17,586	1,512	1,666	1,029	1,252	2,135	1,192	1,905	2,419	866	582	2,047	981
Congenital/pre-natal	13.7	16.6	14.6	15.7	12.9	14.7	16.4	18.6	18.7	19.1	15.2	17	17.7	14.4
Disease/illness	41.9	42.1	49.5	43.6	42.6	45.3	41.2	37.7	42.6	34.2	41.1	44.8	44.8	43.3
Injury/accident/traum.	13.2	13.4	10.4	11.6	13.4	11.1	12.3	18.6	15.2	18.6	12.6	8.2	10.9	12.5
Other	9.7	10.5	5.9	10.8	10.5	7.8	9.7	17.5	10.9	14.8	11.9	6	8.3	8.9
Unknown	21	20.8	20	19.7	24.2	18.1	17.4	23.9	21.1	25	19.5	17.9	19.7	21.4

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

Source: CSO, 2000 Census of Population and Housing

Education Levels of the Disabled

Completed level of education for the disabled is shown in Table 9.6 and Figure 9.3. The largest proportion (43.5 percent) of the disabled persons age 5 years and above have completed primary education while 42.6 percent have had no schooling. Among the blind, deaf/dumb, mentally ill and mentally retarded, the largest proportion have had no schooling while in the rest of disability categories, the majority have completed primary education.

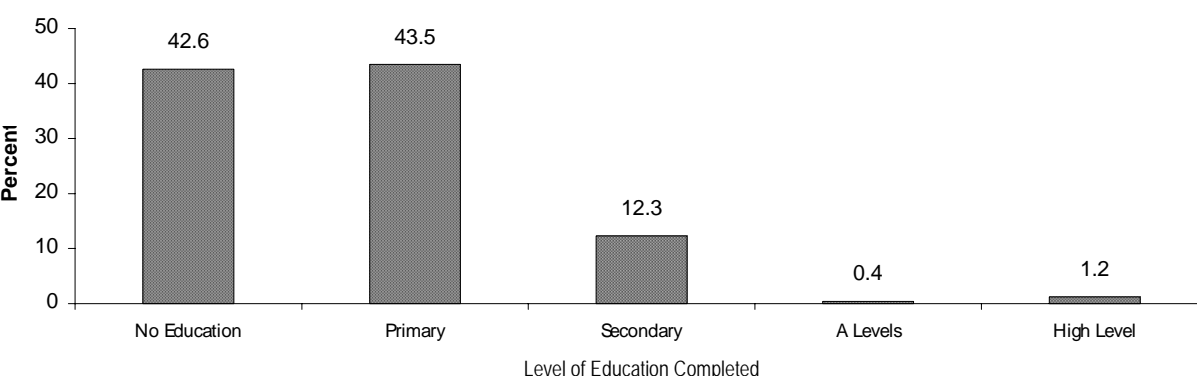
The proportion of those who have never attended school is highest in among the deaf/dumb 50.8. The highest proportion of those who completed higher education was among the blind.

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

Type of Disability	Level of Education Completed						
	Total Number	Percent Total	No Education	Primary	Secondary	A Levels	Higher Level
Blind	2,354	100.0	47.6	38.7	11.4	0.4	1.9
Partially Sighted	11,268	100.0	40.5	46.2	11.6	0.4	1.3
Deaf/Dumb	2,457	100.0	50.8	37.6	9.9	0.2	1.5
Hard of Hearing	5,164	100.0	44.0	44.5	9.5	0.4	1.6
Mentally Ill	3,207	100.0	44.2	38.5	15.4	0.5	1.4
Ex-Mental	1,654	100.0	32.0	48.6	17.4	0.3	1.6
Mentally Retarded	2,161	100.0	49.5	38.3	10.7	0.1	1.4
Physically Handicapped	12,781	100.0	37.6	46.9	13.8	0.4	1.3
Total	34,622	100.0	42.6	43.5	12.3	0.4	1.2

Source: CSO, 2000 Census of Population and Housing

Figure 9.3: Distribution of the Disabled Population, 5 years and Older by Level of Education, Northern Province, 2000



Source: CSO, 2000 Census of Population and Housing

Economic Activity of the Disabled

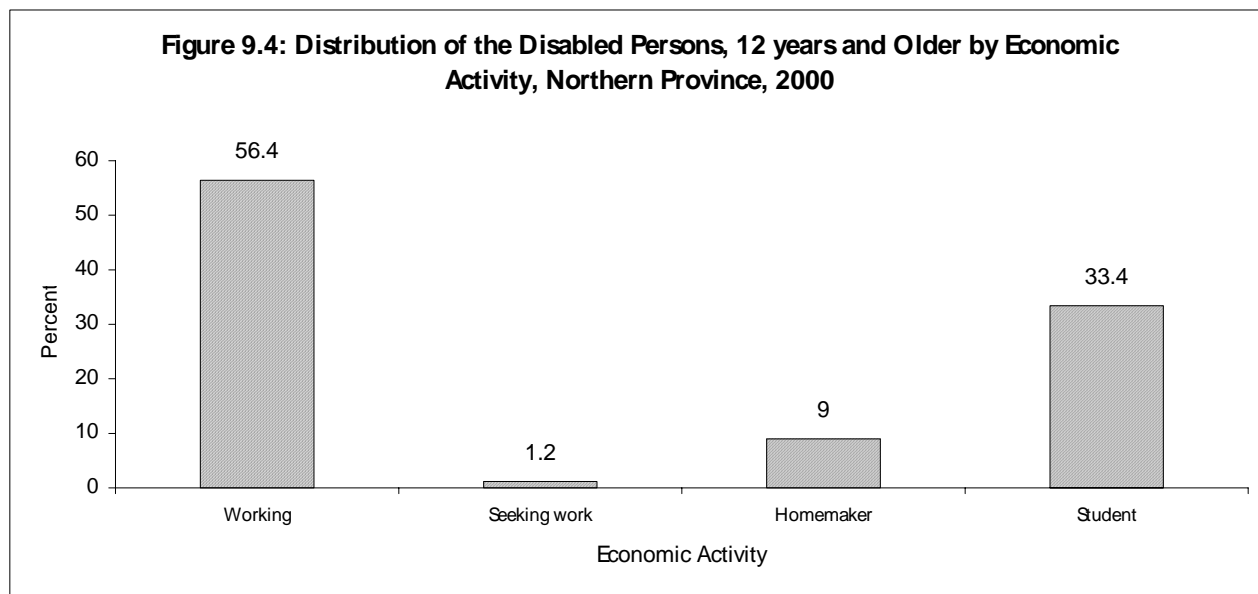
Table 9.7 and Figure 9.4 show the economic activities of the disabled persons. Over half of the disabled persons are working and one third are students. The percentages of the disabled who are working and those who are students are higher than those of the national average (56.4 percent against 55.5 percent for the working and 33.4 percent against 33.1 percent for students). It is worth noting that none of the disabled persons falls in the categories "not available for work" and "available for work" but not seeking work. Details on the economic activities are given in Chapter 6.

Among the blind, mentally ill and mentally retarded, the majority are students while in the rest of the disability categories, the majority are working followed by students.

Table 9.7: Percent Distribution of the Disabled Persons, 12 Years and Older, by Type of Disability and Economic Activity, Northern Province, 2000

Usual Economic Activity	Zambia Total	Northern Total	Type Of Disability							
			Blind	Partially Sighted	Deaf/Dumb	Hard of Hearing	Mentally ill	Ex Mental	Mentally Retarded	Physically Handicapped
Working	55.5	56.4	30.9	64.8	47.8	55.7	30.5	47.5	40	57.1
Seeking work	2.6	1.2	1.1	1.1	1.8	1	1.1	2	1.6	1.2
Homemaker	8.8	9	12.1	8.3	19.2	15	13.5	20.9	13.1	9.2
Student	33.1	33.4	55.9	25.8	31.1	28.3	54.9	29.6	45.3	32.5
Percent Total	100	100	100	100	100	100	100	100	100	100
Total Number	194,039	27,837	1,842	9,247	1,626	3,871	2,466	1,175	1,663	10,391

Source: CSO, 2000 Census of Population and Housing



Source: CSO, 2000 Census of Population and Housing

9.10 Occupation of the Disabled

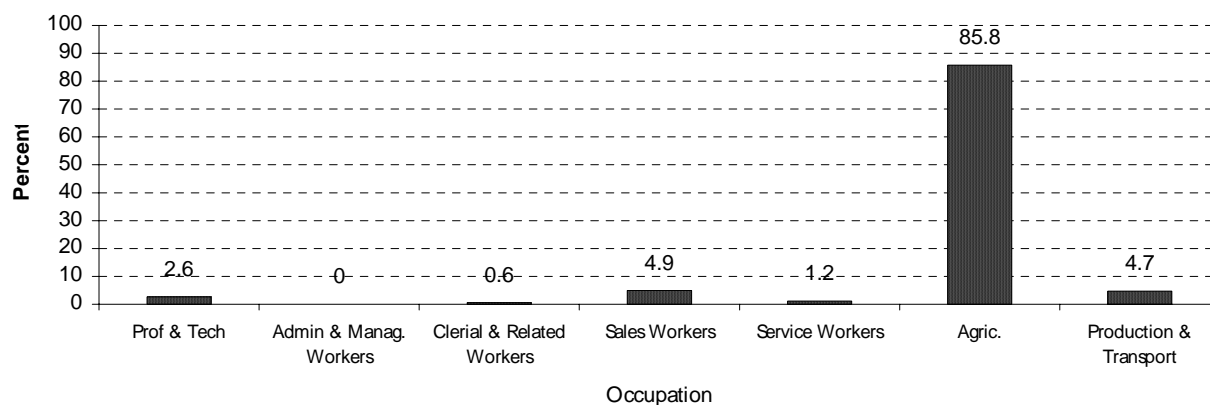
Information on occupation of the disabled persons was also collected during the 2000 census. Table 9.8 and Figure 9.5 show that the most common occupation among the disabled is agriculture (85.8 percent). Sales, production/transportation and professional/technical are also fairly common occupations.

Table 9.8: Percent Distribution of the Usually Working Disabled Persons by Type of Disability and Occupation, Northern Province, 2000

Type of Disability	Total Number	Percent Total	Prof & Tech	Admin & manag. Workers	Clerical & Related Workers	Sales Workers	Service Workers	Agric.	Production and Transport
Blind	2,580	100.0	3.7	0.2	3.7	8.0	2.0	74.9	7.4
Partially Sighted	11,909	100.0	2.8	0.0	0.4	3.6	0.9	88.5	3.7
Deaf/Dumb	2,868	100.0	2.4	0.0	0.8	6.8	2.0	81.0	6.9
Hard Hearing	5,651	100.0	1.8	0.0	0.5	4.8	0.9	87.5	4.5
Mentally ill	3,545	100.0	2.6	0.0	1.1	7.9	1.8	79.8	6.5
Ex Mental	1,890	100.0	3.9	0.0	1.3	7.4	2.8	78.3	6.1
Mentally Retarded	2,383	100.0	1.9	0.0	1.1	4.4	1.9	85.7	5.1
Physically Handicapped	13,673	100.0	2.7	0.0	0.4	5.3	1.1	85.6	4.9
Total	44,499	100.0	2.6	0.0	0.6	4.9	1.2	85.8	4.7

Source: CSO, 2000 Census of Population and Housing

Figure 9.5: Distribution of the Usually Working Disabled Persons by Occupation, Northern Province, 2000



Source: CSO, 2000 Census of Population and Housing

1 Employment Status of the Disabled

Figure 9.9 and Figure 9.6 show the percent distribution of the disabled household heads by type of disability and employment status. Amongst all categories of disability, the largest proportions of the disabled are self-employed. The least proportion is among the employers.

Table 9.9: Percent Distribution of the disabled household heads by type of disability and employment status, Northern Province, 2000

Type of Disability	Employment status					
	Total Number	Percent Total	Employer	Employee	Self Employed	Family Worker
Blind	911	100	0.4	9.4	75.3	14.9
Partially Sighted	5,555	100	0.4	4.2	74.0	21.4
Deaf/Dumb	465	100	1.0	14.0	64.1	20.9
Hard of Hearing	1,337	100	0.2	5.9	75.3	18.5
Mentally Ill	497	100	0.0	4.1	79.3	16.7
Ex-Mental	594	100	0.0	4.1	79.3	16.7
Mentally Retarded	690	100	0.5	9.0	71.7	18.8
Physically Handicapped	5,141	100	0.4	8.6	74.4	16.6
Total	15,276	100	0.4	7.9	74.9	16.8

Source: CSO, 2000 Census of Population and Housing

Figure 9.6: Distribution of the Disabled Household Heads by Employment Status, Northern Province, 2000



Source: CSO, 2000 Census of Population and Housing

9.12 Summary

Out of the total population of Northern province, 3.2 percent is disabled. The proportion of the disabled is higher in urban than rural areas. There are more disabled male (52 percent) than female (48 percent).

Physical disability is the most common type of disability affecting 36.9 percent of the disabled population while the ex mental form the smallest proportion of 5.1 percent.

Disease is the most common cause of disability reported by 38.8 percent of the disabled population while other causes were reported by 10 percent. Injury is more commonly reported by males than females while disease is more common among females than males. Among the districts, Chilubi (45.9 percent) reported the largest proportion of the disabled citing disease as a cause of their disability while Mpika has the least with 32.7 percent.

About two fifths of the disabled have never been to school and another two fifths have completed primary education. Amongst all categories of disability, the largest proportions of the disabled are self-employed while the least proportion is among the employers. The most common of the stated occupations among the disabled is agriculture, which takes up about 85.8 percent.

REFERENCES

Arriaga, E. A (1994); Population Analysis with Microcomputers, Volume 1: Presentation Techniques. Bucen, Washington DC, USA.

Central Statistical Office (1995); 1990 Census of Population, Housing and Agriculture: Central Province Analytical Report, Vol. 1, Government Printers, Lusaka, Zambia.

Central Statistical Office (1995); 1990 Census of Population, Housing and Agriculture: Central Province Descriptive Tables Report, Vol. 1, Government Printers, Lusaka, Zambia.

Central Statistical Office (1995); 1990 Census of Population, Housing and Agriculture: Zambia Analytical Report, Vol. 10, Government Printers, Lusaka, Zambia.

Central Statistical Office (1998); Living Conditions Monitoring Survey in Zambia, 1998. CSO, Lusaka.

Central Statistical Office [Zambia], Central Board of Health [Zambia], and ORC Macro. (2003); Zambia Demographic and Health Survey, 2001-2002. Calverton, Maryland, USA: CSO, CBoH and ORC Macro.

Central Statistical Office [2003], MCDSS, National Disability Policy

Henry Shyrock Jacob S. Siegel, and Associates (1972); The Methods and Materials of Demography. Condensed Edition by Edward Stockwell, Academic Press, New York, USA.

Hinde, Andrew (1998); Demographic Methods. MPG Books, Great Britain.

Pressant, Roland (1985); The Dictionary of Demography, Dotesios Printers Ltd, Trowbridge, Wiltshire.

Pressat, Roland (1988); The Dictionary of Demography. Basil Blackwell Ltd, United Kingdom.

Shryock Henry S. et al (1976); The Methods and Materials of Demography. Academic Press INC, London.

United Nations (1983); Manual X: Indirect Techniques for Demographic Estimation. UN, New York, USA.

United Nations (1996); Manual for the Development of Statistical Information for Disability Programmes and Policies, New York, USA.

United Nations (2001); Guideline and Principles for the Development of Disability Statistics, New York.

United Nations (1996); Manual for the development of Statistical information for disability programs and policies, New York., 1996

World Health Organisation (2002); World Mortality in 2000: Life Tables for 191 Countries. World Health Organisation (WHO), Geneva.

Appendix A

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