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FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
OFFICE OF POPULATION AND HOUSING CENSUS COMMISSION
CENTRAL STATISTICAL AUTHORITY

THE 1994 POPULATION AND HOUSING CENSUS OF ETHIOPIA RESULTS FOR TIGRAY REGION

VOLUME II ANALYTICAL REPORT

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FOREWORD

The second National Population and Housing Census of Ethiopia was conducted in October, 1994. The Statistical Reports, which present the detailed tabulations of the results of the census have already been produced. The Statistical Report for Tigray Region was produced in November, 1995.

The 1994 Population and Housing Census of Ethiopia was conducted under the auspices of the Population and Housing Census Commission that was set up under Proclamation No. 32/1992. The Commission was chaired by the Prime Minister and the members of the commission were drawn from various relevant ministries. The Central Statistical Authority served as the Office of the Commission (Secretariat). Hence the processing, evaluation and analyses of the data collected in this census as well as its dissemination are the responsibilities of this office. The office found it necessary to present indepth analysis of the results of the census. Accordingly, the Analytical Report of the results of the census for Tigray Region has been prepared. Thus, the Office of the Population and Housing Census Commission is pleased to present the census report "Population and Housing Census of Ethiopia,1994: Results for Tigray Region, Volume II- Analytical Report" for users.

The 1994 Population and Housing Census was a huge nation wide operation which could not be undertaken by a single organization. Regional, Zonal and Wereda Census Commissions and Kebele Census Committees were establish to enhance and facilitate enumeration activities. In the conduct of the census, full cooperation and assistance of government and non-government organizations, external donor agencies and the public in general was obtained. A number of preparatory activities were also carried-out before the census enumeration was begun. Among the major census preparatory activities was the conduct of the Population and Housing Census Map Work. In the census map work the farmers' associations in rural areas and the urban dwellers associations in urban areas were sub-divided into enumeration areas with 150-200 households in rural areas and 150-200 housing units in urban areas. About 5-6 contiguous enumeration areas were grouped to form one supervision area. In this exercise enumeration area and supervision area maps were also prepared. In the census map work operation a total of 49,978 enumeration areas and 9,845 supervision areas were formed in the settled rural areas and 8,724 enumeration areas and 1,575 supervision areas in the urban areas of the country. In Tigray Region, a total of

3,369 enumeration areas and 677 supervision areas were delineated in the rural areas, and 677 enumeration areas and 131 supervision areas in the urban areas.

During the census enumeration one enumerator was given the map of one enumeration area and was assigned to enumerate all persons and housing units in that enumeration area. And one supervisor was assigned to a supervision area and was responsible for the quality of the information collected in that area.

The Office of the Population and Housing Census Commission would like to thank all government and non-government agencies who participated in the organization of the census, the supervision of the field work, the data collection, and the respondents who participated in providing the necessary information. The government of Ethiopia has given huge financial and unreserved administrative support in undertaking the 1994 National Population and Housing Census from its inception till the dissemination of the results. This indicates the commitment and high priority offered by the government for socio-economic and demographic data collection, processing, evaluation and dissemination of the results to users.

The Office would also like to take this opportunity to express its many thanks to the United Nations Population Fund (UNFPA) to its generous financial assistance and technical support in conducting the census. Moreover, thanks are due to United States Agency for International Development (USAID) for its financial and technical assistance for the census. Further thanks are due to the United Nations Development Program (UNDP) and to the Swedish International Development Authority (SIDA) for their financial assistance. The office hopes that the data presented in this report will be found useful by all data users.

Abdulahi Hasen(Ph.D.)

Member
and
Secretary,
Central Census Commission

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CHAPTER I

INTRODUCTION

This chapter presents an overview of the content of the census report "Population and Housing Census of Ethiopia, 1994: Results for Tigray, Volume II- Analytical Report". It presents indepth analysis of the results of the census for Tigray Region. The Statistical Report of the census results for Tigray, which presented detailed statistical tables, have already been disseminated to users (CSA, 1995). The analysis on this report will be based on tables that have been presented in the Statistical Report and some additional tables that have been produced for this purpose.

Tigray Region consists of four administrative zones, thirty-five weredas and 74 towns. The rural part of the region has 1,008 farmers association areas, while the urban parts has 140 kebeles in the 74 towns.

The 1994 Population and Housing Census was the second national population and housing census ever to be conducted in the country. The first population and housing census that included only the urban part of Tigray Region was conducted in May 1984(CSA,1991). For the region as a whole, the 1994 Population and Housing Census is the only major source of data pertaining to population and housing. The Second Population and Housing Census of Ethiopia was conducted beginning 11 October, 1994 and was completed in most areas within the following ten days. Eleventh of October, 1994 was used as the census day. The questionnaires used for the census were prepared in Amharic. English translations of the questionnaires used in the census are presented at the end of the report. The types of questionnaires used were:

i) Short Questionnaire (Appendix I)
ii) Long Urban Questionnaire (AppendixII)
iii) Long Rural Questionnaire (Appendix III)

The content of the short questionnaire was identical in urban and rural areas. The questionnaires were filled-in by enumerators who moved systematically from one household to

the next in their respective enumeration areas. All members of the household were recorded on the same questionnaire. The short and the long questionnaires differed on the number of variables collected. The data collected in the short questionnaire included basic information on population such as population size, sex, age, language, ethnic group, religion and marital status. In addition to these, the data collected in the long questionnaire included information on disability, education, economic activity, migration, fertility, mortality and housing stocks and conditions.

The type of questionnaire administered to each household was determined by using a systematic sampling selection procedure. During the three days before the census day all households, and housing units were listed in a separate form designed for the purpose. This list was used to identify the type of questionnaire that was to be administered to the households. One out of five households was selected to be interviewed using the long questionnaire, while the other four were interviewed using the short questionnaire. Residents of hotels, hostels and other collective quarters were always interviewed using the long questionnaire. Short questionnaire was also administered on the homeless persons.

Some of the information presented in this report which referred to population sizes, sex and age composition, language, ethnic, religious and marital distributions were collected from all persons covered in the census. However, some other information presented in this report was collected from only a sample of the population. This refers to disability, education, economic activity, migration, fertility, mortality, and housing stocks and conditions. Eventhough the above information was collected from a sample of the population, statistical weights were applied to the information collected, in order to let the data represent the entire population. This means that the figures presented in the tables that refer to education, economic activity,... etc. represent the entire population of Tigray region and not only the sample population.

The fact that the information was collected from a sample of households and not from the entire households does not make the information less reliable. In fact this process increases the quality of the information collected by reducing the work load that would have been faced if all households were covered using the long questionnaire. The reduction of the work load improves the quality of the data because it is expected to facilitate a closer supervision during field work,

enable better data coding and editing, and enable the timely processing of the data collected. Details of the "Sampling Methodology for the Census Long Questionnaire" that includes sample design, evaluation of the data collected in the long questionnaire, estimation procedures of sampling errors, calculation of sampling errors, design factors,...etc will be presented in a separate report. The census was conducted by enumerators who went from house to house filling in the questionnaires designed for the purpose. Homeless persons were enumerated in the place where they were spending the night.

This report contains seven chapters. The first chapter serves as an introduction to the report. Chapter II deals with the population sizes, sex, age, language, ethnic, religious, and marital status distributions of the population. It also presents the disability condition in the region. Chapter III explores the educational characteristics of the population. Chapter IV deals with the economic characteristics of the population in the region. Chapter V presents migration, fertility and mortality conditions. Chapter VI deals with the housing stocks and conditions in Tigray Region while Chapter VII presents population projection of the region.

Homeless persons were enumerated using only the short questionnaire because the enumeration took place at night at the place where they were sleeping, and it was not convenient to apply long questionnaires in these situations. The Homeless were not included in the application of the statistical weights, for this reason slight discrepancies among the data of various tables can be observed.

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CHAPTER I

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The fact that the information was collected from a sample of households and not from the entire households does not make the information less reliable. In fact this process increases the quality of the information collected by reducing the work load that would have been faced if all households were covered using the long questionnaire. The reduction of the work load improves the quality of the data because it is expected to facilitate a closer supervision during field work,

enable better data coding and editing, and enable the timely processing of the data collected. The census was conducted by enumerators who went from house to house filling in the questionnaires designed for the purpose. Homeless persons were enumerated in the place where they were spending the night.

This report contains seven chapters. The first chapter serves as an introduction to the report. Chapter II deals with the population sizes, sex, age, language, ethnic, religious, and marital status distributions of the population. It also presents the disability condition in the region. Chapter III explores the educational characteristics of the population. Chapter IV deals with the economic characteristics of the population in the region. Chapter V presents migration, fertility and mortality conditions. Chapter VI deals with the housing stocks and conditions in Tigray Region while Chapter VII presents population projection of the region. Finally appendix one presents sample design for administering census long questionnaire.

Homeless persons were enumerated using only the short questionnaire because the enumeration took place at night at the place where they were sleeping, and it was not convenient to apply long questionnaires in these situations. The Homeless were not included in the application of the statistical weights, for this reason slight discrepancies among the data of various tables can be observed.

CHAPTER II

POPULATION SIZE AND CHARACTERISTICS

2.1 Introduction

Determining the size of population of a country and its regions has been one of the basic objectives of conducting census or population counts since early time. This is because population size is directly related to the supply and demand for basic human necessities such as food, shelter, health and education facilities... etc.

According to the 1994 Ethiopian Population and Housing Census, as of October 11, the population size of Tigray Region was 3,136,267. The census has counted people on dejure and defacto basis. In this census, the dejure population is taken to represent the actual size. The dejure population comprises all persons who belong to a given area at a given time by virtue of usual residence, while under the defacto approach people were counted as the residents of the place where they were found (Shryock et al., 1976). In the census, a person is said to be a usual resident of a household (and hence an area) if he/she has been residing in the household continuously for at least six months before the census day or intends to reside in the household for six months or longer. Thus, visitors are not included with the usual (dejure) population. Homeless persons were enumerated in the place where they spent the night on the enumeration day. The 1994 census includes foreign nationals who were residing in the region. On the other hand all Ethiopians living abroad were not counted.

2.2 Population Size and Density

The result of the 1994 census shows that Tigray Region had dejure population of 3,136,267 and defacto population of 3,066,052. Out of the dejure population, 1,542,165 were males and 1,594,102 were females, giving a sex ratio of 96.7. The analysis in this and subsequent chapters is based on the dejure population. The population size of Tigray Region and its zones is presented in Table 2.1.

Urban-rural distribution of the population of Tigray Region indicate that the overwhelming majority of the population is living in rural area. About 85 percent of the population reside in the rural areas of the region. The remaining 15 percent of the population is living in urban areas.

Regarding spacial distribution of the population by zones, the 1994 Population and Housing Census result indicates that the population is not evenly distributed over the four zones. As can be observed from Table 2.1, Mehakelegnaw Tigray Zone stood first, constituting about 30 percent of the total population of the region, then follow Debubawi Tigray and Mirabawi Tigray Zones with about 27.9 percent and 23.4 percent, respectively. The census result reveals that Misrakawi Tigray Zone has a relatively less population (about 19 percent).

Table 2.1 Total Population Size of Zones by Sex, Urban and Rural, Tigray Region: 1994

ZONES		URBAN+RURAL			URBAN			RURAL		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
TIGRAY REGION	No.	3,136,267	1,542,165	1,594,102	468,478	214,066	254,412	2,667,789	1,328,099	1,339,690
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MIRABAWI	No.	733,962	371,198	362,764	84,560	39,184	45,376	649,402	332,014	317,388
	%	23.4	24.1	22.8	18.1	18.3	17.8	24.3	25.0	23.7
MEHAKELEGNAW	No.	943,850	464,633	479,217	91,058	41,069	49,989	852,792	423,564	429,228
	%	30.1	30.1	30.1	19.4	19.2	19.7	32.0	31.9	32.0
MISRAKAWI	No.	584,946	280,679	304,267	85,508	38,727	46,781	499,438	241,952	257,486
	%	18.7	18.2	19.1	18.3	18.1	18.4	18.7	18.2	19.2
DEBUBAWI	No.	873,509	425,655	447,854	207,352	95,086	112,266	666,157	330,569	335,588
	%	27.9	27.6	28.1	44.3	44.4	44.1	25.0	24.9	25.1

2.3 Age-sex Composition

Age and sex are among the most important items collected in all demographic enquiries. The age-sex composition is the product of past fertility, mortality and migration trends and in turn influences the trend of the population increase. It also influences the size of the school age population, the labour force and female population in the reproductive ages.

Also, age-sex structure is vital for making component and sectorial projections. Age and sex are not only important by themselves but are also useful for an in-depth analysis of other socio-economic characteristics. Age is also important in using indirect estimation of demographic parameters.

2.3.1 Age Distribution

a) General Pattern

Age distribution of the population of Tigray Region by five year age group is given in Table 2.2a-2.2c and graphically shown in Figures 2.1a-2.1c. The Age structure of Tigray Region which is typical of developing countries is characterized by much higher proportion at young ages and low proportion at old age , reflecting the prevailing higher fertility rate. As can be seen from Table 2.3, the population at young age group (<15 years) make up 44.8 percent of the total and those at old age groups (above 64) constitute 4.0 percent. The proportion of the population aged 15-64 , constitute over half (51.2 percent) of the total population.

Table 2.2a Distribution of Population by Five Year Age Group,Sex and Sex Ratio, Tigray Region - Total: 1994.

AGE GROUP	URBAN+RURAL						
	Total		Male		Female		Sex Ratio
	No.	%	No.	%	No.	%	
All Ages	3,136,267	100	1,542,165	100	1,594,102	100	96.7
Under 1	105,481	3.36	53,547	3.47	51,934	3.26	103.1
1-4	409,163	13.05	208,314	13.51	200,849	12.60	103.7
5-9	472,955	15.08	240,133	15.57	232,822	14.61	103.1
10-14	416,882	13.29	219,045	14.20	197,837	12.41	110.7
15-19	361,279	11.52	173,769	11.27	187,510	11.76	92.7
20-24	233,639	7.45	109,417	7.10	124,222	7.79	88.1
25-29	197,211	6.29	90,319	5.86	106,892	6.71	84.5
30-34	164,968	5.26	68,595	4.45	96,373	6.05	71.2
35-39	141,817	4.52	62,249	4.04	79,568	4.99	78.2
40-44	128,970	4.11	60,576	3.93	68,394	4.29	88.6
45-49	111,237	3.55	58,540	3.80	52,697	3.31	111.1
50-54	111,952	3.57	52,789	3.42	59,163	3.71	89.2
55-59	78,777	2.51	40,640	2.64	38,137	2.39	106.6
60-64	77,419	2.47	36,559	2.37	40,860	2.56	89.5
65-69	48,824	1.56	26,686	1.73	22,138	1.39	120.5
70-74	39,275	1.25	19,746	1.28	19,529	1.23	101.1
75 +	36,418	1.16	21,241	1.38	15,177	0.95	140.0

Table 2.2b Distribution of Population by Five Year Age Group, Sex and Sex Ratio, Tigray Region - Urban: 1994.

AGE GROUP	URBAN						
	Total		Male		Female		Sex Ratio
	No.	%	No.	%	No.	%	
All Ages	468,478	100.00	214,066	100.00	254,412	100	84.1
Under 1	13,449	2.873	6,818	3.18	6,631	2.61	102.8
1-4	51,415	10.97	26,239	12.26	25,176	9.90	104.2
5-9	67,017	14.30	33,222	15.52	33,795	13.28	98.3
10-14	69,178	14.76	33,769	15.78	35,409	13.92	95.4
15-19	57,801	12.34	25,691	12.00	32,110	12.62	80.0
20-24	35,865	7.66	14,683	6.86	21,182	8.33	69.3
25-29	33,207	7.09	14,185	6.63	19,022	7.48	74.6
30-34	27,074	5.78	11,718	5.47	15,356	6.04	76.3
35-39	24,360	5.20	10,080	4.71	14,280	5.61	70.6
40-44	18,301	3.91	8,216	3.84	10,085	3.96	81.5
45-49	15,029	3.21	6,875	3.21	8,154	3.21	84.3
50-54	14,858	3.17	6,079	2.84	8,779	3.45	69.2
55-59	10,753	2.30	4,209	1.97	6,544	2.57	64.3
60-64	11,345	2.42	4,160	1.94	7,185	2.82	57.9
65-69	7,417	1.58	3,047	1.42	4,370	1.72	69.7
70-74	5,787	1.24	2,346	1.10	3,441	1.35	68.2
75+	5,622	1.20	2,729	1.27	2,893	1.14	94.3

Table 2.2c Distribution of Population by Five Year Age Group, Sex and Sex Ratio, Tigray Region - Rural: 1994.

AGE GROUP	RURAL						
	Total		Male		Female		Sex
	No.	%	No.	%	No.	%	Ratio
All Ages	3,667,789	100.0	1,328,099	100.0	1,339,690	100.0	99.1
Under 1	92,032	3.45	46,729	3.52	45,303	3.38	103.1
1-4	357,748	13.41	182,075	13.71	175,673	13.11	103.6
5-9	405,938	15.21	206,911	15.58	199,027	14.86	104.0
10-14	347,704	13.03	185,276	13.95	162,428	12.12	114.1
15-19	303,478	11.38	148,078	11.15	155,400	11.60	95.3
20-24	197,774	7.41	94,734	7.13	103,040	7.69	91.9
25-29	164,004	6.15	76,134	5.73	87,870	6.56	86.6
30-34	137,894	5.17	56,877	4.28	81,017	6.05	70.2
35-39	117,457	4.40	52,169	3.93	65,288	4.87	79.9
40-44	110,669	4.15	52,360	3.94	58,309	4.35	89.8
45-49	96,208	3.61	51,665	3.89	44,543	3.32	116.0
50-54	97,094	3.64	46,710	3.52	50,384	3.76	92.7
55-59	68,024	2.55	36,431	2.74	31,593	2.36	115.3
60-64	66,074	2.48	32,399	2.44	33,675	2.51	96.2
65-69	41,407	1.55	23,639	1.78	17,768	1.33	133.0
70-74	33,488	1.26	17,400	1.31	16,088	1.20	108.2
75+	30,796	1.15	18,512	0.69	12,284	0.92	150.7

Fig 2-1a Age Pyramid of Population of Tigray Region- Uban+Rural : 1994

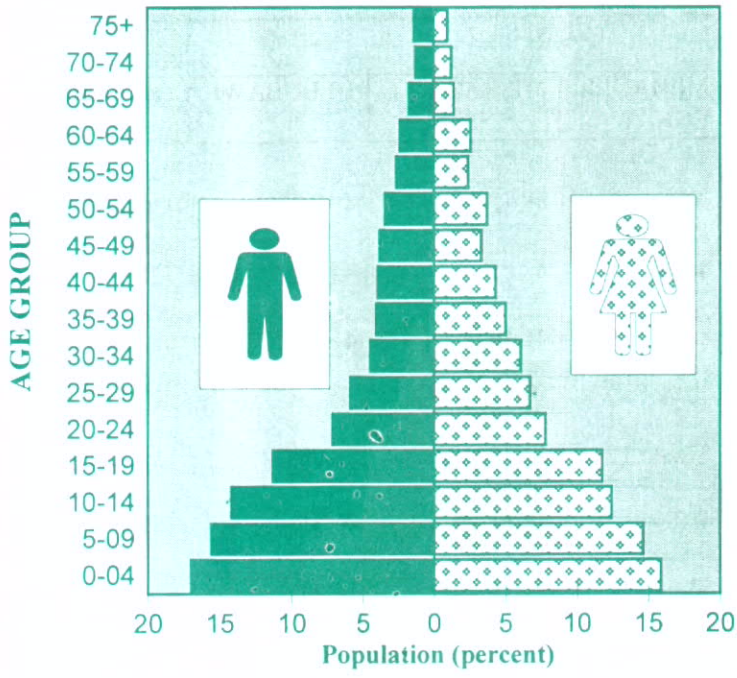


Fig 2.1b Age Pyramid of Population of Tigray Region-Urban: 1994

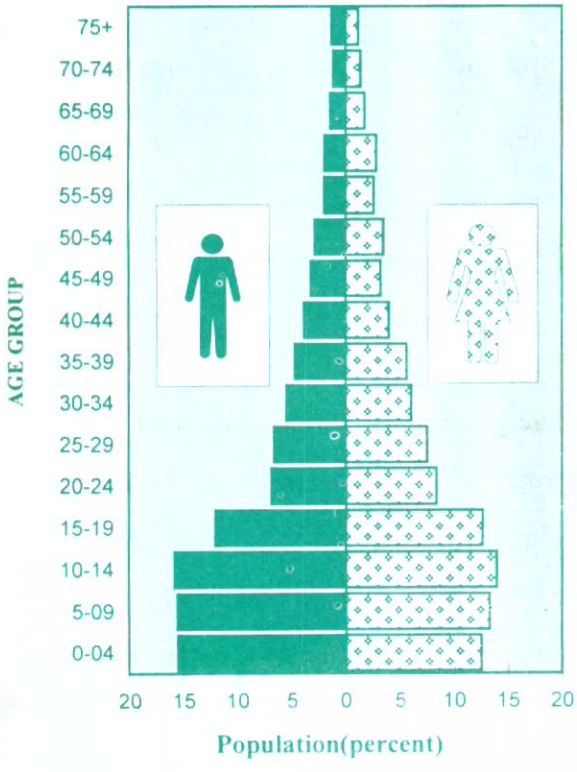


Fig 2.1c Age Pyramid of Population of Tigray Region-Rural: 1994

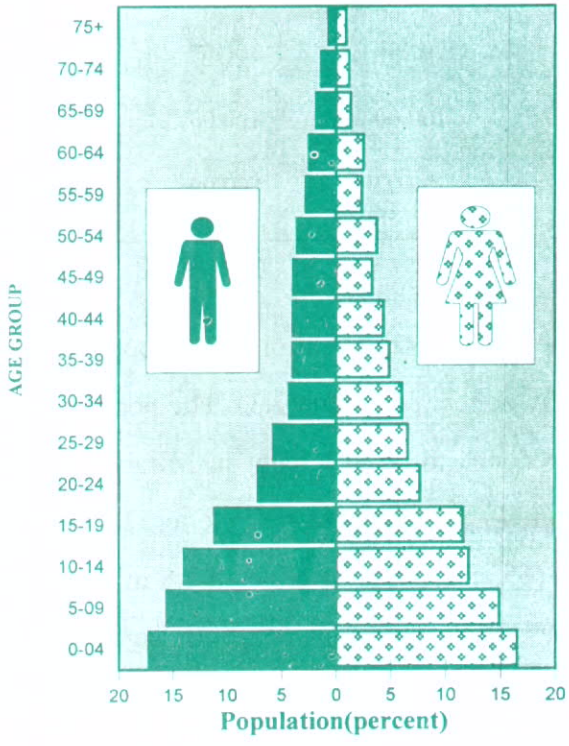


Table 2.3 Percentage Distribution of Population by Broad Age Group, Sex and Zone, Tigray Region: 1994

AGE GROUP AND SEX	ZONES				TOTAL	
	MIRABAWI	MEHAKEL EGNAW	MISRAKAWI	DEBUBAWI	No.	%
0-14						
Total	45.75	44.81	45.12	43.71	1,404,481	44.78
Male	46.67	46.78	48.01	45.97	721,039	46.75
Female	44.82	42.90	42.46	41.55	683,442	42.87
15-64						
Total	51.44	51.24	49.76	52.08	1,607,269	51.25
Male	50.17	48.80	46.22	49.51	753,453	48.86
Female	52.75	53.61	53.03	54.53	853,816	53.56
65+						
Total	2.80	3.95	5.12	4.21	124,517	3.97
Male	3.16	4.42	5.77	4.51	67,673	4.39
Female	2.44	3.49	4.52	3.92	56,844	3.57
All Ages						
Total	99.99	100.00	100.00	100.00	3,136,267	100.00
Male	100.00	100.00	100.00	99.99	1,542,165	100.00
Female	100.01	100.00	100.01	100.00	159,410	100.00

The age-sex composition of the population by functional age groups showed modest variation by zones (see Table 2.3). The population in the age group 0-14 varied from 43.7 in Debubawi Zone to 45.8 percent in Mirabawi Zone, whereas those in the age group 15-64 ranged from 49.8 in Misrakawi Zone to 52.1 percent in Debubawi Zone, and those in the old age group (65 and over) varied from 2.8 in Mirabawi Zone to 5.1 percent in Misrakawi Zone. In all zones, the proportions of youth (aged 0-14) and old (65+) persons among males are higher than that of females. Likewise, the proportion of persons in the age group 15-64 is higher among the females compared to the males in all Zones.

b) Dependency Ratio

All persons in the so-called working ages do not actually participate in economic activities and all persons outside these ages are not also dependents. Inspite of these, the ratio of persons in the dependent age groups to those of the working ages provide a useful approximation to economic dependency burden. The young, old and overall dependency ratios are calculated and given in Table 2.4. Young dependency ratio is defined as the ratio of population in the age group 0-14 to those in the age group 15-64 multiplied by 100. Similarly, old dependency ratio is defined as the ratio of persons aged 65 and above to those in the age group 15-64 multiplied by 100. The sum of young and old dependency ratios will give the overall dependency ratio. The data in Table 2.4 show that the overall dependency ratio of Tigray Region is 95.1 (87.3 for the young and 7.8 for the old). This means, for each 100 persons in the productive age groups there are about 95 young and old dependents to be supported. Dependency burden in rural areas is higher than that of the urban areas.

2.3.2 Sex composition

The sex composition of a population holds a position of prime importance in demographic studies. Moreover, socio-economic development planning, both public and private, such as planning of community institutions and services, particularly health services, and planning of production and sales of goods and services...etc. require data on sex composition of the populatiobn. Sex composition is conveniently described by a series of 'sex ratios' for various categories of a population. The sex ratio is defined as the number of males per 100 females in a given population.

The overall sex ratio and sex ratios by five year age-groups are presented in Table 2.2a-2.2c. Evidences suggest that sex ratio at birth is around 105. However, since mortality rates are greater among males than among females, at higher ages this ratio tends to reduce as age advances.

Table 2.4 Percentage Distribution of Population by Broad Age Group, Dependency Ratio and sex , Urban and Rural,Tigray Region: 1994

Sex		0-14	15-64	65+	All age	DEPENDENCY RATIO		
						Young	Old	Overall
Urban + Rural								
Total	No	1,404,481	1,607,269	124,517	3,136,267	87.3	7.8	95.1
	%	44.8	51.3	4.0	100.0			
Male	No	721,039	753,453	67,673	1,542,165	95.7	9.0	104.7
	%	46.8	48.9	4.4	100.0			
Female	No	683,442	853,816	56,844	1,594,102	80.0	6.7	86.7
	%	42.9	53.6	3.6	100.0			
URBAN								
Total	No	201,059	248,593	18,826	468,478	80.8	7.5	88.3
	%	42.9	53.1	4.0	100.0			
Male	No	100,048	105,896	8,122	214,066	94.3	7.7	102
	%	46.7	49.5	3.8	100.0			
Female	No	101,011	142,697	10,704	254,412	70.8	7.5	78.3
		39.7	56.1	4.2	100.0			
RURAL								
Total	No	1,203,422	1,358,676	105,691	2,667,789	88.6	7.9	96.5
	%	45.1	50.9	4.0	100.0			
Male	No	620,991	647,557	59,551	1,328,099	95.9	9.2	105.1
	%	46.8	48.8	4.5	100.0			
Female	No	582,431	711,119	46,140	1,339,690	81.9	6.4	88.3
		43.5	53.1	3.4	100.0			

As a result, under normal conditions (for instance, where there is no sex selective migration), the overall sex ratio is expected to be around 100. As can be seen from the table, however, the overall sex ratio of Tigray Region is moderately low amounting to 96.7 males per 100 females. Sex ratio for urban Tigray is particularly very low by all standards with about 84 males per 100 females.

As given in Table 2.2, sex ratios decline from high to low value as age advances. The 1994 census data for Tigray Region, however, deviates from this general pattern. The ratio did not follow any definite pattern. The sex ratio for children under 1 (103.1) falls in an acceptable range and remain stable up to the next two age groups (i.e.,1-4 and 5-9). For the 10-14 age group the ratio rises to 110.7 males per 100 females. Thereafter, in general it falls down upto age group 30-34. Beyond this age group the sex ratios fluctuate from one age group to the

age group 30-34. Beyond this age group the sex ratios fluctuate from one age group to the other age group. In urban Tigray, at age group 20-24 there are only 69 males per 100 females and at age group 60-64 there are only 58 males per 100 females. Also surprising is the very high sex ratio in the older age groups for rural areas. For example, in age group 65-69, there are 133 males per 100 females and in the 75+ age group the figure rises to 150.7 males per 100 females. The possible explanation for excess of males over females at the older age groups could be due to exaggeration of age by males.

2.3.3 Quality of Age-Sex Data

Though age is an easy concept to understand, when it comes to measurement, there are several problems. In the 1994 census of Ethiopia, age of respondents was determined by asking 'what is your age in completed years?'. Misreporting of age is a common problem in developing countries. Very few parents keep record of date of birth of their children and celebration of ones birth-day or issuance of birth certificate is uncommon in this part of the world. Ethiopia is not an exception. Ages in most cases are imputed either by the respondents and /or enumerators on the basis of linking the probable age with some presumable known events. It may happen that some people even fail to give clues from which their ages can be estimated. In such a situation, the estimation of age falls in the hands of the enumerators. Age data could also be affected when individuals of a given age have been missed or counted more than once. In view of these considerations, it is necessary first to evaluate the quality of age data before undertaking any analytical work.

a) Age Heaping or Digit Preference

The population distribution of Tigray Region in single year of age as depicted by the 1994 census is graphically represented in Fig. 2.2a-2.2c. As can be seen from the figure, the age distribution in single year is very erratic. Existence of error in the age data is manifested in clustering of ages ending in some digits and deficiencies at ages ending in others. The tendency of respondents and/or enumerators to report certain ages at the expense of others is termed as age heaping, or age preference, or digit preference. Scrutinizing Fig. 2.2a-2.2c reveals that there is serious age misreporting in the region's population at certain ages.This is the usual tendency among population counts taken in developing countries where most people don't know their exact age.

Fig 2-2a Percentage Distribution of the population by Sex and Age in Single Year,Tigray Region-Uban+Rural:1994

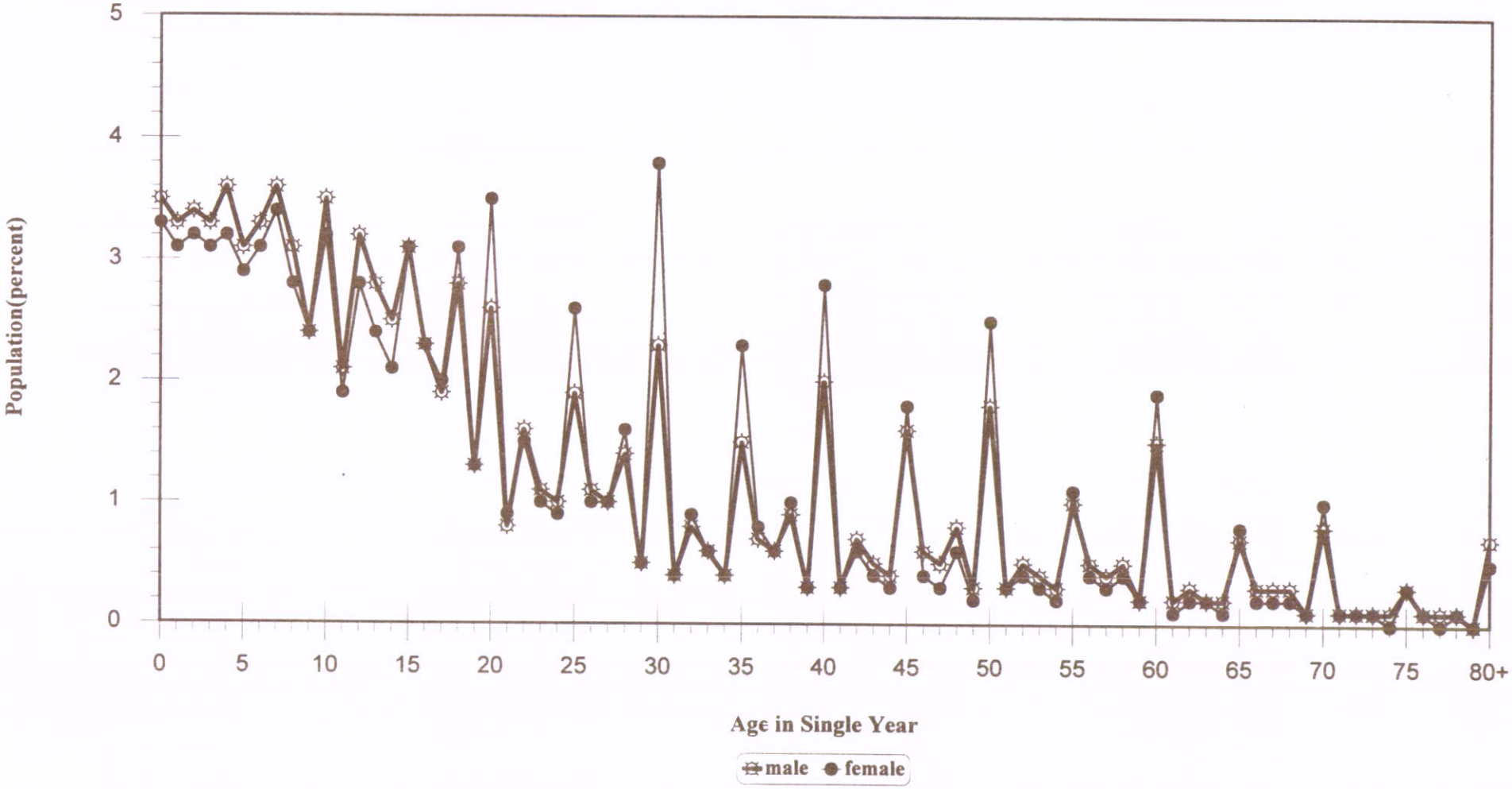


Fig 2-2b Percentage Distribution of the population by Sex and Age in Single Year,Tigray Region-Urban: 1994

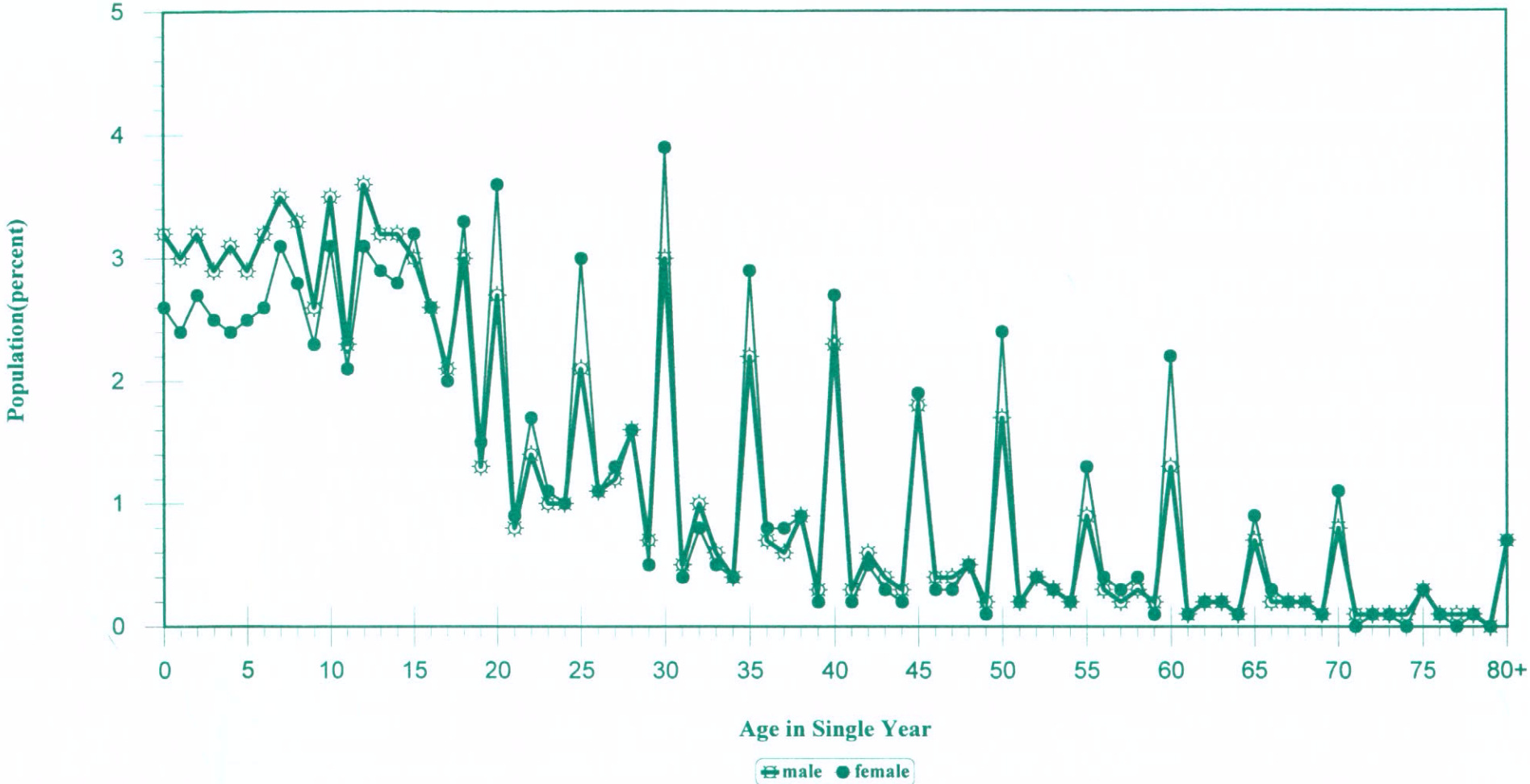
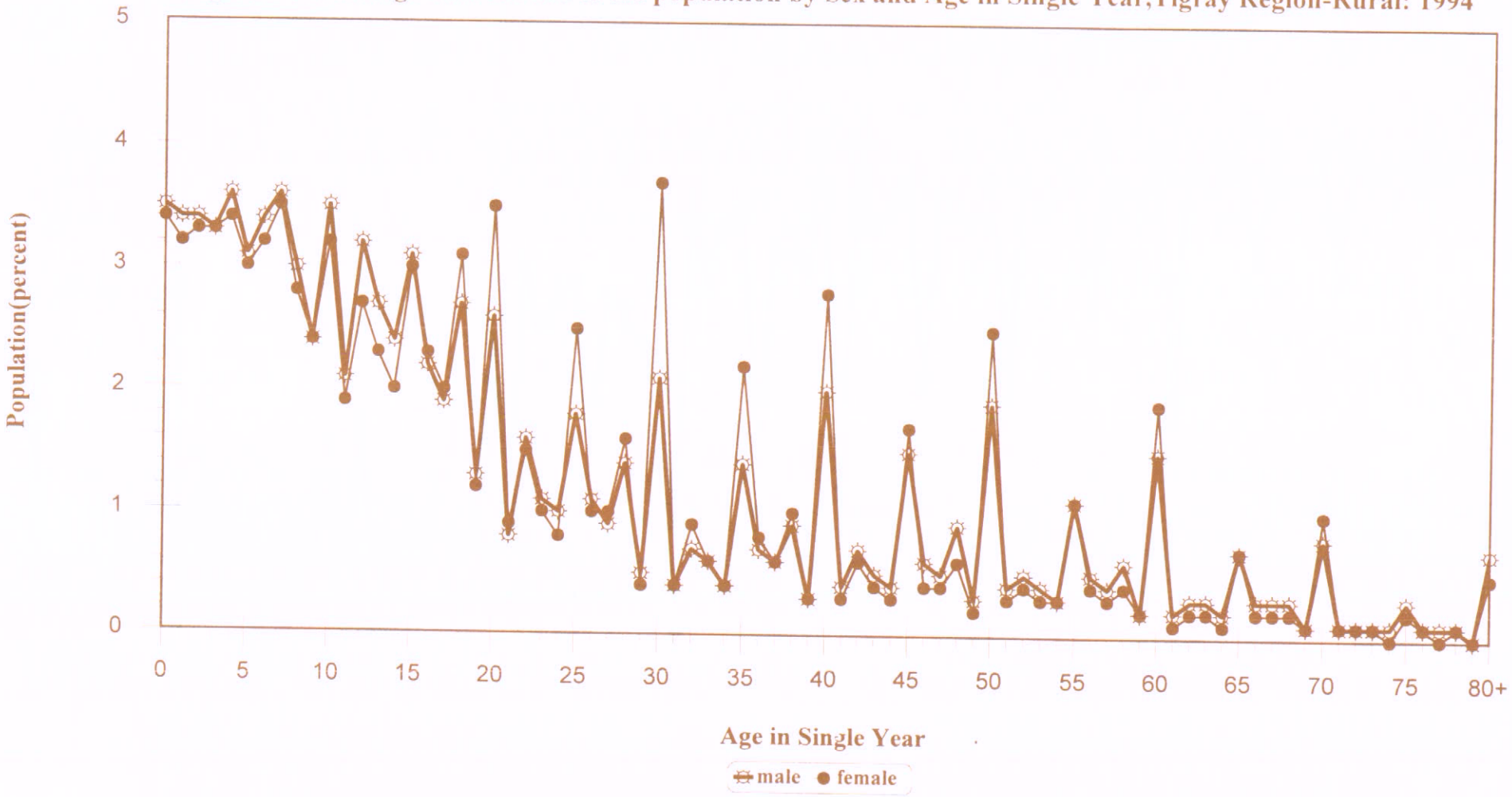


Fig 2-2c Percentage Distribution of the population by Sex and Age in Single Year,Tigray Region-Rural: 1994



Irregularities in reporting single years of age can also be detected using indices. These indices not only provide an overall idea of the extent of age misreporting but also indicate the preference of digits that end with certain numbers. There are several frequently used indices for detecting digit preference in age reporting: Myers, Whipples, Bachi, Carrier, and Ramachandran (as quoted in US Bureau of the Census 1994). In this report, Whipples and Myers indices of digit preference are calculated and presented in Table 2.5.

Whipple's Index is a test usually employed to measure age preferences for terminal digits '0' and '5' as compared to other digits. If age data is accurate, value of Whipple's index is expected to be 100. The rating of the quality of age data for different values of Whipples index is: less than 105 highly accurate data; between 105 and 109.9 fairly accurate data; between 110 and 124.9 approximate data; between 125 and 174.9 rough data; 175 and above very rough data. Accordingly, the 1994 census age data of Tigray Region is very rough with relatively better age reporting in rural area than in urban areas. This could also be due to age-sex selection of migration into urban area. The findings in Table 2.2a-2.2c also show slightly better age reporting for males than females both in urban and rural areas.

Myers' Blended Index is usually used to measure degree of preference for each digit and it provides summary index for all terminal digits. The theoretical value of Myers summary index ranges between 0 and 90; value of 0 represents no age heaping, while value would be 90 if all ages are reported as numbers ending in the same digit. The summary preference indices for Tigray Region are found to be 47.7 for both sexes combined, 39.2 for males and 55.5 for females. The corresponding figures for both sexes combined in urban and rural parts of Tigray Region are 50.6 and 47.2, respectively. This shows, again, that single year age data of the 1994 census for Tigray Region suffered from age heaping, and that the quality is relatively better in rural area than urban areas for both males and females.

Table 2.5 Whipple's and Myer's Digit Preference Indices, by Urban and Rural, Tigray Region: 1994.

Method/Terminal digits.	URBAN + RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Whipples Method Index	239	210	264	259	236	276	235	206	262
Myers Method									
0	14.6	11.2	17.7	15.1	12.4	17.0	14.5	11.0	17.8
1	-5.5	-5.1	-5.8	-5.9	-5.5	-6.2	-5.4	-5.0	-5.7
2	-1.5	-0.9	-2.2	-2.0	-1.4	-2.5	-1.5	-0.8	-2.1
3	-3.3	-2.5	-4.0	-3.6	-3.1	-4.1	-3.2	-2.4	-4.0
4	-4.0	-3.2	-4.7	-4.0	-3.1	-4.6	-4.0	-3.2	-4.7
5	7.4	6.2	8.5	9.1	7.7	10.1	7.1	5.9	8.2
6	-1.6	-1.0	-2.2	-1.9	-1.5	-2.2	-1.5	-0.9	-2.1
7	-2.5	-1.9	-3.0	-2.3	-1.9	-2.7	-2.5	-1.9	-3.1
8	1.9	2.2	1.6	1.2	1.6	0.9	2.0	2.3	1.7
9	-5.5	-5.1	-5.9	-5.6	-5.1	-5.9	-5.5	-5.3	-5.9
Myers Summary Index	47.7	39.2	55.5	50.6	43.3	56.1	47.2	38.5	55.3

Regarding which digits are preferred or avoided, the data in Table 2.5 shows a tendency of both males and females to state their ages in digits ending in '0', '5' and '8' and avoiding ages ending in remaining digits (i.e., '1', '2', '3', '4', '6', '7' and '9'). This finding is in line with previous data sets collected in Ethiopia (CSA, 1991). Put in order of preference, '0' is the highest preferred digit followed by '5' and '8' in that order. On the other hand '1'and'9'are the most avoided digits. The second most avoided digits are '4','3'and'7' in that order. Digit '2' is the least avoided by both males and females. The result obtained concerning degree of preference/avoidance for the total region is replicated in both urban and rural areas, except that digit '9' is the most avoided one in rural areas.

b) Differentials in Age Shifting by Sex.

Another problem in age data is age shifting. Age shifting/misreporting can best be studied from the progression of grouped age data. In this section the age pyramid shown

above is used once again to examine differentials in age shifting by sex. Mathematical tools such as age ratios, sex ratios, and UN age-sex Accuracy Index were also applied.

The distribution of population by five year age group given in Tables 2.2a-2.2c and Figures 2.1a-2.1c display the Age-pyramid of Tigray Region. Errors in single year age reporting was markedly observed,although in five year age group some improvements have been demonstrated, however, there are still some undulations. This pattern applies both for male and female population.

The age ratio index, sex ratio index and United Nations Age-Sex Accuracy Index (Joint score) are given in Table 2.6. The age ratio index is the mean of the absolute deviation of the age ratios from 100 while the sex ratio index is the mean of the absolute successive difference of the sex ratio in each age group. The joint score is obtained as three times the sex ratio score added to the two age ratios.

Table 2.6 Age Ratio Index, Sex Ratio Index and Un Age-Sex Accuracy Indexes, by Urban and Rural,Tigray Region: 1994.

Area	Age Ratio Index		Sex Ratio Index	UN Age-Sex Accuracy Index
	Male	Female		
Urban + Rural	5.9	14.5	13.9	62.0
Urban	8.8	13.3	7.2	43.8
Rural	5.7	16.0	16.2	70.3

The UN Age-Sex Accuracy Index is interpreted as follows. An index of 40 and over is considered as highly inaccurate, while an index between 20 and 40 is labeled as inaccurate and index of less than 20 is considered as accurate. The UN age-sex accuracy index, which is 62.0 for Tigray Region indicates that the age-sex data is in the category of highly inaccurate. The index calculated for urban and rural parts of Tigray are 43.8 and 70.3, respectively, falling in the category of highly inaccurate. As the figures indicate, compared to rural areas, the age data for urban areas seems slightly better.

2.4 Household Characteristics

The previous sections have examined characteristics of population in terms of individual characteristics such as age and sex. However, all human activities and behaviors involve participation in group. The most important human grouping is the family or the household. In this section, attempt will be made to study characteristics of households such as type of residence, household size and headship rate.

2.4.1 Type of Residence

Distribution of population by type of residence and zone is presented in Table 2.7. In the census, type of residence is defined in terms of the type of household in which the person is living. Here type of household is categorized into two major groups, namely, conventional and non-conventional. Respondents who live in the same housing unit or in connected premises and have common cooking arrangements (eat their food together) are said to be residing in conventional households. On the other hand,persons residing in non-conventional households are subdivided into residents of collective quarters which include hotel/hostel and other collective quarters) and the homeless. A collective quarter is a housing unit, a building, or a compound in which a number of mainly unrelated persons reside together and share common facilities. Examples of collective quarter include boarding schools, prisons, hotels, hostels,...etc . Homeless persons are those without any fixed residence.

The 1994 Population and Housing Census result reveals that 99.6 percent of the population of Tigray Region reside in conventional households, while only 0.38 percent live in non-conventional households (0.06 and 0.32 percent, respectively, are residents of hotels/hostels and other collective quarters) and the proportion of homeless persons is very insignificant.

It would be of interest to look into the age-sex distribution of homeless persons. The distribution of homeless persons by age group and sex is presented in Table 2.8. The 1994 census reveals that the majority of the homeless are adolescents or adult males. Almost 79.21 percent of the homeless are males. The homeless persons are concentrated in the age group

Table 2.7 Distribution of Population by Type of Residence, Zone and Sex, Tigray Region:1994

ZONE	SEX	Total Population		Type Of Residence							
				Conventional		Non-Conventional				Homeless	
						Hotel/Hostel		Other Q.C			
		No.	%	No.	%	No.	%	No.	%	No.	%
All Zones	Total	3,136,267	100.0	3,122,423	99.56	1,954	0.06	10,093	0.32	1,797	0.06
	Male	1,542,165	100.0	1,531,327	99.30	821	0.05	8,531	0.55	1,486	0.10
	Female	1,594,102	100.0	1,591,096	99.81	1,133	0.07	1,562	0.10	311	0.02
Mirabawi	Total	733,962	100.0	730,216	99.49	362	0.05	2,689	0.37	695	0.09
	Male	371,198	100.0	368,042	99.15	169	0.05	2,338	0.63	649	0.17
	Female	362,764	100.0	362,174	99.84	193	0.05	351	0.10	46	0.01
Mehakelegnaw	Total	943,850	100.0	941,938	99.80	362	0.04	1,285	0.14	265	0.03
	Male	464,633	100.0	463,168	99.68	144	0.03	1,151	0.25	170	0.04
	Female	479,217	100.0	478,770	99.91	218	0.05	134	0.03	95	0.02
Misrakawi	Total	584,946	100.0	582,293	99.55	527	0.09	1,951	0.33	175	0.03
	Male	280,679	100.0	278,739	99.31	208	0.07	1,613	0.57	119	0.04
	Female	304,267	100.0	303,554	99.77	319	0.10	338	0.11	56	0.02
Debubawi	Total	873,509	100.0	867,976	99.37	703	0.08	4,168	0.48	662	0.08
	Male	425,655	100.0	421,378	99.00	300	0.07	3,429	0.81	548	0.13
	Female	447,854	100.0	446,598	99.72	403	0.09	739	0.17	114	0.03

15-24 (39.6 percent) and 25-49 (55.9 percent). The share of children in the age group 0-9 and 10-14 is 6.4 percent and 8.12 percent of the total homeless persons, respectively. Tigray Region had also homeless persons in the older age groups with 6.62 percent and 3.28 percent for 50-64 and 65 and over age groups, respectively. The distribution of population by type of residence for zones is almost similar to that observed for the region.

Table 2.8 Percentage Distribution of Homeless Population by Broad Age Group, Sex, and by Urban and Rural,Tigray Region:1994.

Urban and Rural	All Ages		0-9	10-14	15-24	25-49	50-64	65+
	No.	%						
URBAN + RURAL								
Total	1,797	99.92	6.40	8.12	39.60	35.90	6.62	3.28
Male	1,486	99.99	4.10	8.21	42.80	36.40	6.12	2.36
Female	311	100.04	17.40	7.72	24.40	33.80	9.00	7.72
URBAN								
Total	1,302	100.04	2.30	8.22	39.50	38.80	7.53	3.69
Male	1,138	99.99	1.58	8.70	41.30	39.10	6.59	2.72
Female	164	100.00	7.32	4.88	26.80	36.60	14.00	10.40
RURAL								
Total	495	100.04	17.20	7.88	40.00	28.50	4.24	2.22
Male	348	100.06	12.40	6.61	47.70	27.60	4.60	1.15
Female	147	100.06	28.60	10.90	21.80	30.60	3.40	4.76

2.4.2 Household Size

Data on the household size and distribution of persons per household can sometimes be used as a proxy measure of crowdedness of a population and has great implication to health and housing problem. The 1994 census results presented in Table 2.9 indicate that, as of October 1994, there were 719,160 conventional households in Tigray Region accommodating 3,122,423 persons. Thus, average household size for Tigray Region would be 4.3 persons per household. Average Household size in urban and rural parts of Tigray are 3.8 and 4.5, respectively.

Regarding the distribution of persons per household, it may be observed from Table 2.9 that single person households comprise 9.9 percent of the total households and accommodate 2.3 percent of the total population. Households with five or fewer members

Table 2.9 Distribution of Households and Population by Number of Persons Per Household, Tigray Region:1994.

Number of Persons Per Household	URBAN + RURAL				URBAN				RURAL			
	Household		Population		Household		Population		Household		Population	
	No	%	No	%	No	%	No	%	No	%	No	%
1	70,939	9.86	70,939	2.27	21,125	17.43	21,125	4.61	49,814	8.33	49,814	1.87
2	96,727	13.45	193,454	6.20	21,075	17.39	42,150	9.20	75,652	12.65	151,304	5.68
3	120,319	16.73	360,957	11.56	21,465	17.71	64,395	14.06	98,854	16.53	296,562	11.13
4	116,841	16.25	467,364	14.97	18,131	14.96	72,524	15.84	98,710	16.51	394,840	14.82
5	102,076	14.19	510,380	16.35	13,820	11.40	69,100	15.09	88,256	14.76	441,280	16.56
6	82,913	11.53	497,478	15.93	9,586	7.91	57,516	12.56	73,327	12.26	439,962	16.51
7	61,173	8.51	428,211	13.71	6,637	5.48	46,459	10.15	54,536	9.12	381,752	14.33
8	37,779	5.25	302,232	9.68	4,360	3.60	34,880	7.62	33,419	5.59	267,352	10.03
9	18,555	2.58	166,995	5.35	2,462	2.03	22,158	4.84	16,093	2.69	144,837	5.44
10+	11,838	1.65	124,413	3.98	2,517	2.08	27,620	6.03	9,321	1.56	96,793	3.63
Total	719,160	100.00	3,122,423	100.00	121,178	100.00	457,927	100.00	597,982	100.00	2,664,496	100.00
Average Household Size		4.3				3.8				4.5		

Fig 2.3a Headship Rate by Sex and Age, Tigray Region-Urban+Rural: 1994

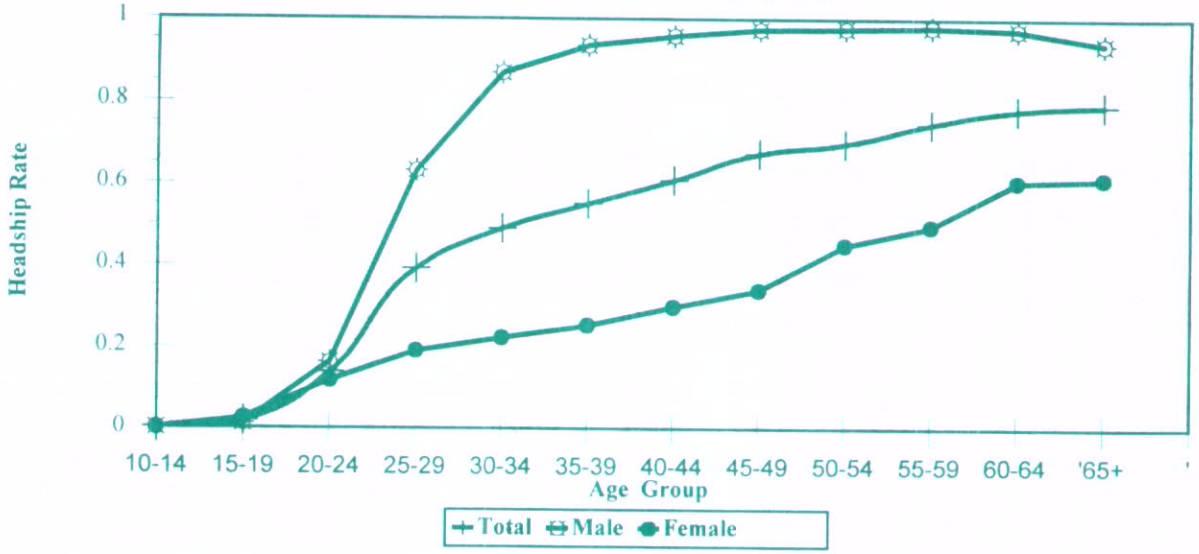


Fig 2.3b Headship Rate by Sex and Age, Tigray Region-Urban: 1994.

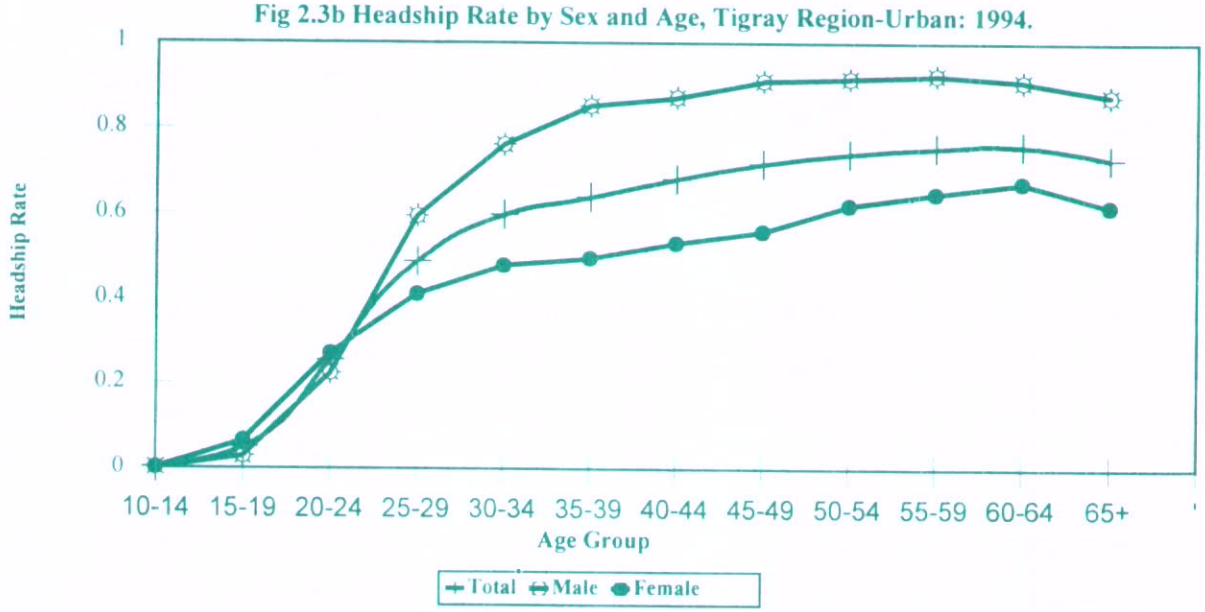
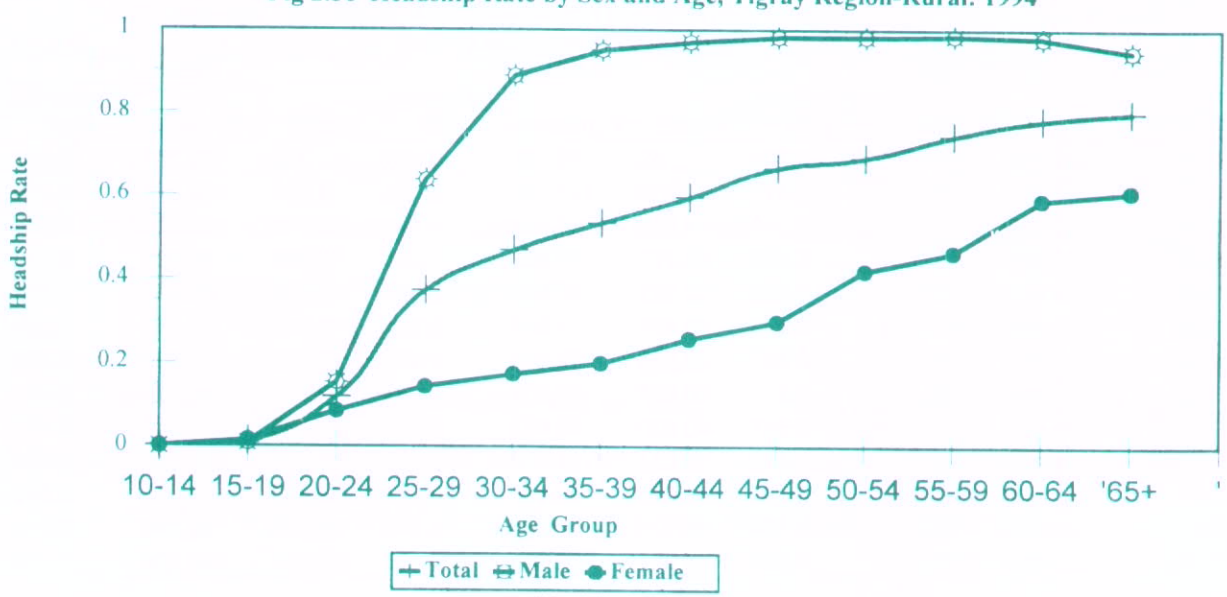


Fig 2.3c Headship Rate by Sex and Age, Tigray Region-Rural: 1994



2.5 Marital Status

This section will review the level and pattern of marital status of population residing in Tigray Region. In countries like Ethiopia, where most of child bearing occur within marriage, and use of modern contraceptive methods is minimal, nuptiality factors are important proximate determinants of fertility. Since family is central to income maintenance, economic status and social adjustment, marriage statistics has economic and social implications. The level and trend in the number of marriage has effect on housing requirement and other community services. Moreover, information on marital instability may give an insight and help to resolve social problems, such as prostitution and increase in number of street children that are partly the outcome of family dissolution due to divorce and death of one or both of the spouses.

2.5.1 Composition and Trend of Marital Status

The distribution of marital status of the population aged ten years and over by age group and sex is presented in Table 2.11a-2.11c. In the census, marital status was categorized into four main groups namely: single, married, divorced, and widowed. A person who had never been married is considered as single. Married persons include couples who are living together bonded by any kind of marital engagement at the time of the census (traditional, religious, or civil marriages). Separated couples are also considered as married unless they had dissolved their marriage agreement. A person who had been married but whose marriage was dissolved before the census day is categorized as divorced.

Figures in Table 2.11a-2.11c revealed that, in 1994, the highest proportion (61.2 percent) of the region's population aged 10 years and over have been engaged in marriage (48.1 percent currently married, 6.9 percent divorced, and 6.2 percent widowed). In the region, 47.2 percent of males and 30.3 percent females are single against 48.3 percent and 47.9 percent currently married males and females, respectively. Also about 13.1 percent of the population have dissolved their marriage by either divorce or widowhood. The incidence of dissolution of marriage is significantly higher among females than males, indicating remarriage to be higher among males than females.

Table 2.11a Percentage Distribution of Population Aged 10 Years and over by Marital Status, Sex and Age Group, Tigray Region-Urban+Rural: 1994

Age Group	All Persons		Marital Status				
	No.	%	Single	Married	Divorced	Widowed	Not Stated
All ages							
Total	2,148,668	100.0	38.48	48.07	6.92	6.20	0.33
Male	1,040,171	100.0	47.20	48.30	2.56	1.60	0.34
Female	1,108,497	100.0	30.29	47.86	11.01	10.52	0.32
10 - 14							
Total	416,882	100.0	97.82	1.69	0.17	0.05	0.27
Male	219,045	100.0	99.12	0.52	0.04	0.04	0.29
Female	197,837	100.0	96.38	3.00	0.32	0.05	0.24
15 - 19							
Total	361,279	100.0	76.56	20.15	2.77	0.19	0.33
Male	173,769	100.0	96.72	2.48	0.37	0.07	0.36
Female	187,510	100.0	57.87	36.54	4.98	0.30	0.31
20 - 24							
Total	233,639	100.0	40.55	49.44	8.66	0.80	0.54
Male	109,417	100.0	67.31	28.56	3.13	0.25	0.76
Female	124,222	100.0	16.98	67.84	13.54	1.29	0.35
25 - 29							
Total	197,211	100.0	13.93	73.18	10.94	1.58	0.38
Male	90,319	100.0	23.39	70.01	5.59	0.48	0.54
Female	106,892	100.0	5.93	75.87	15.46	2.50	0.24
30 - 34							
Total	164,968	100.0	4.94	80.73	11.16	2.93	0.24
Male	68,595	100.0	7.92	86.24	4.79	0.74	0.31
Female	96,373	100.0	2.81	76.81	15.70	4.49	0.19
35 - 39							
Total	141,817	100.0	2.57	82.69	10.30	4.30	0.14
Male	62,249	100.0	3.39	91.66	3.92	0.87	0.15
Female	79,568	100.0	1.93	75.66	15.29	6.99	0.13
40 - 44							
Total	128,970	100.0	1.66	81.25	10.02	6.92	0.15
Male	60,576	100.0	1.78	93.29	3.38	1.39	0.16
Female	68,394	100.0	1.55	70.59	15.89	11.83	0.15
45 - 49							
Total	111,237	100.0	1.20	81.09	9.08	8.47	0.15
Male	58,540	100.0	0.99	94.13	3.02	1.74	0.12
Female	52,697	100.0	1.44	66.61	15.82	15.93	0.19
50 - 54							
Total	111,952	100.0	1.17	72.09	10.91	15.65	0.19
Male	52,789	100.0	0.92	92.63	3.39	2.95	0.12
Female	59,163	100.0	1.38	53.76	17.62	26.98	0.26
55 - 59							
Total	78,777	100.0	1.01	70.84	10.23	17.71	0.21
Male	40,640	100.0	0.78	92.19	3.29	3.62	0.12
Female	38,137	100.0	1.25	48.10	17.62	32.71	0.31
60 - 64							
Total	77,419	100.0	1.29	58.79	11.04	28.38	0.50
Male	36,559	100.0	0.95	89.08	4.06	5.65	0.26
Female	40,860	100.0	1.60	31.69	17.28	48.72	0.71
65 +							
Total	124,517	100.0	1.43	52.82	9.05	35.88	0.82
Male	67,673	100.0	1.02	82.34	4.86	11.39	0.39
Female	56,844	100.0	1.93	17.68	14.03	65.04	1.32

Table 2.11b Percentage Distribution of Population Aged 10 Years and over by Marital Status, Sex and Age Group, Tigray Region- Urban: 1994

	All Persons		Marital Status				
Age Group	No.	%	Single	Married	Divorced	Widowed	Not Stated
All ages							
Total	336,597	100.0	44.79	35.43	12.76	6.63	0.40
Male	147,787	100.0	55.46	38.86	3.91	1.31	0.46
Female	188,810	100.0	36.44	32.74	19.68	10.79	0.36
10 - 14							
Total	69,178	100.0	99.04	0.57	0.14	0.05	0.20
Male	33,769	100.0	99.44	0.26	0.06	0.04	0.20
Female	35,409	100.0	98.66	0.86	0.21	0.07	0.19
15 - 19							
Total	57,801	100.0	84.35	11.08	4.05	0.21	0.31
Male	25,691	100.0	98.36	1.02	0.27	0.06	0.29
Female	32,110	100.0	73.14	19.14	7.08	0.32	0.32
20 - 24							
Total	35,865	100.0	49.27	35.40	13.52	1.16	0.65
Male	14,683	100.0	81.32	15.02	2.53	0.16	0.98
Female	21,182	100.0	27.06	49.52	21.15	1.86	0.42
25 - 29							
Total	33,207	100.0	25.10	54.21	17.74	2.39	0.56
Male	14,185	100.0	44.24	49.24	5.21	0.42	0.90
Female	19,022	100.0	10.82	57.93	27.08	3.85	0.31
30 - 34							
Total	27,074	100.0	12.68	61.98	20.57	4.31	0.45
Male	11,718	100.0	22.21	69.69	6.65	0.80	0.66
Female	15,356	100.0	5.42	56.10	31.19	6.99	0.30
35 - 39							
Total	24,360	100.0	6.42	66.41	20.39	6.54	0.23
Male	10,080	100.0	10.95	80.81	6.88	1.03	0.32
Female	14,280	100.0	3.23	56.25	29.92	10.43	0.17
40 - 44							
Total	18,301	100.0	4.17	66.49	20.77	8.32	0.25
Male	8,216	100.0	5.89	85.61	6.83	1.33	0.34
Female	10,085	100.0	2.78	50.91	32.14	14.01	0.17
45 - 49							
Total	15,029	100.0	2.77	65.89	20.71	10.29	0.33
Male	6,875	100.0	3.29	86.81	7.67	1.95	0.29
Female	8,154	100.0	2.34	48.25	31.71	17.33	0.37
50 - 54							
Total	14,858	100.0	2.62	57.37	23.64	15.98	0.38
Male	6,079	100.0	2.65	86.26	8.06	2.63	0.39
Female	8,779	100.0	2.60	37.36	34.43	25.23	0.38
55 - 59							
Total	10,753	100.0	2.10	53.73	23.40	20.47	0.30
Male	4,209	100.0	2.09	86.08	8.20	3.35	0.29
Female	6,544	100.0	2.11	32.93	33.18	31.48	0.31
60 - 64							
Total	11,345	100.0	2.16	44.08	23.60	29.53	0.63
Male	4,160	100.0	1.95	83.20	9.06	5.36	0.43
Female	7,185	100.0	2.28	21.43	32.01	43.52	0.75
65 +							
Total	18,826	100.0	2.33	39.42	19.12	38.15	0.98
Male	8,122	100.0	1.85	76.90	10.00	10.61	0.64
Female	10,704	100.0	2.70	10.98	26.05	59.04	1.23

Table 2.11c Percentage Distribution of Population Aged 10 Years and over by Marital Status, Sex and Age Group, Tigray Region- Rural: 1994

	All Persons		Marital Status				
Age Group	No.	%	Single	Married	Divorced	Widowed	Not Stated
All ages							
Total	1,812,071	100.0	37.30	50.42	5.83	6.12	0.32
Male	892,384	100.0	45.84	49.86	2.34	1.65	0.32
Female	919,687	100.0	29.03	50.97	9.23	10.47	0.31
10 - 14							
Total	347,704	100.0	97.58	1.92	0.18	0.04	0.28
Male	185,276	100.0	99.06	0.56	0.04	0.04	0.30
Female	162,428	100.0	95.88	3.47	0.35	0.05	0.25
15 - 19							
Total	303,478	100.0	75.07	21.88	2.52	0.18	0.34
Male	148,078	100.0	96.43	2.73	0.39	0.07	0.38
Female	155,400	100.0	54.72	40.13	4.55	0.29	0.30
20 - 24							
Total	197,774	100.0	38.97	51.99	7.78	0.73	0.52
Male	94,734	100.0	65.14	30.66	3.22	0.26	0.72
Female	103,040	100.0	14.91	71.60	11.98	1.17	0.34
25 - 29							
Total	164,004	100.0	11.66	77.02	9.56	1.41	0.34
Male	76,134	100.0	19.51	73.88	5.66	0.49	0.47
Female	87,870	100.0	4.87	79.75	12.94	2.21	0.23
30 - 34							
Total	137,894	100.0	3.42	84.42	9.32	2.65	0.20
Male	56,877	100.0	4.98	89.65	4.40	0.72	0.24
Female	81,017	100.0	2.32	80.74	12.77	4.01	0.17
35 - 39							
Total	117,457	100.0	1.77	86.06	8.20	3.84	0.12
Male	52,169	100.0	1.93	93.76	3.34	0.84	0.12
Female	65,288	100.0	1.65	79.91	12.08	6.24	0.12
40 - 44							
Total	110,669	100.0	1.24	83.69	8.24	6.69	0.14
Male	52,360	100.0	1.13	94.49	2.84	1.40	0.13
Female	58,309	100.0	1.34	73.99	13.08	11.45	0.15
45 - 49							
Total	96,208	100.0	0.96	83.47	7.27	8.18	0.12
Male	51,665	100.0	0.69	95.10	2.40	1.71	0.09
Female	44,543	100.0	1.27	69.98	12.91	15.68	0.16
50 - 54							
Total	97,094	100.0	0.94	74.34	8.96	15.60	0.16
Male	46,710	100.0	0.70	93.46	2.78	2.99	0.08
Female	50,384	100.0	1.17	56.62	14.69	27.28	0.24
55 - 59							
Total	68,024	100.0	0.84	73.55	8.15	17.27	0.20
Male	36,431	100.0	0.63	92.89	2.72	3.66	0.10
Female	31,593	100.0	1.08	51.24	14.40	32.97	0.32
60 - 64							
Total	66,074	100.0	1.14	61.32	8.88	28.19	0.48
Male	32,399	100.0	0.82	89.84	3.42	5.69	0.24
Female	33,675	100.0	1.45	33.88	14.14	49.83	0.71
65 +							
Total	105,691	100.0	1.27	55.21	7.26	35.48	0.79
Male	59,551	100.0	0.91	83.08	4.16	11.49	0.36
Female	46,140	100.0	1.75	19.24	11.25	66.43	1.34

2.5.2 Tempo and Proportion Ultimately Married

The fact that 42.1 percent of the female population at age group 15-19 were ever married indicates that marriage among females starts early in the region. Compared to females, males enter into marriage late. This fact has also been confirmed by the data on Singulate Mean Age at Marriage(SMAM) which is an indirect estimate of mean age at marriage. It is a measure used to estimate the average number of years lived by a cohort of men or women before their first marriage. SMAM for Tigray Region is found to be 21.8 years, that is, an average person in Tigray Region stays in single status for about 22 years. Similarly, SMAM for male and female population of Tigray Region are 24.9 and 19.0 years, respectively. That is age at marriage is at least 5.9 years in favour of the male. On the other hand, at age 45-49, there are only 1.0 percent of males and 1.4 percent of females who remain in single status indicating marriage in Tigray Region is universal. By age 25-29 more than 76.0 percent of males and 94.0 percent of females have already been engaged in marriage.

2.5.3. Age-Sex Pattern in Marital Status

An examination of age-sex pattern of marital status of the population indicate curvilinear relationship between age and proportion currently married. That is, percent of married population increases as age advances, reaching its maximum value at the age group 35-39 to stay high up to age group 45-49 and then begins to decline (see Table 2.11a-2.11c). Percent currently married persons among males is lower than the corresponding figure for females at young and adolescent ages whereas the reverse order takes place for adult and old age groups, i.e., 25-29 and over. The highest percentage of married males was found in the age group 45-49 whereas the proportion married among females is highest in the 30-34 age group. The pattern for rural areas resemble that of the region. In urban areas, however, the highest percentage of married females is found in the age group 35-39. Also proportion married for urban area is less than that of rural areas at all ages. The fact that percent of currently married among males is lower at young and adolescent ages, and higher at adult and old ages in comparison to female figures may be explained by the tendency of males to marry females younger than their ages. The higher chance of remarrying among males than females might also be the reason for the higher percent of currently married males in the adult and old ages.

The proportion of single persons decrease with age for both males and females. The proportion single among males is higher than that of females almost for all age groups. For both sexes, proportion single starts to decline at early age (i.e., 15-19) and continue to do so up to age group 40-44 remaining stable thereafter. Whereas, for males, the decline goes on up to 45-49 age group. The fact that more males than females remain single at ages 15-39 is mostly due to the male greater tendency to marry at later ages.

2.5.4 Marital Status and Headship Rates.

The data on Table 2.12 presents headship rate by sex and marital status of heads of households. All of households in urban areas and the majority of households in rural areas occupied by married persons (couples) are headed by either of the couples. In both urban and rural areas, headship rate for males is substantially higher than that of females. For males, next to currently married, the highest headship rate is registered for widowers followed by divorced and the single. For females the highest rate is among widowed followed by divorcee, married and single, showing the greater tendency of divorced than widowed to go back to their families/relatives. The difference in headship rate between widowers and divorcee is however, narrower in urban areas. Among the single, widowers and divorced males headship rate is lower than that of females in the Region. These facts may partially support the supposition that many women head households either because the husbands are working away, or they are in dissolved marriages.

Table 2.12 Headship Rates by Sex, Marital Status of Household Heads, and by Urban and Rural, Tigray Region: 1994.

Marital Status	URBAN + RURAL			URBAN			RURAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Single	0.02	0.03	0.03	0.08	0.06	0.08	0.01	0.02	0.02
Currently Married	0.91	0.06	0.47	0.90	0.18	0.52	0.91	0.04	0.47
Divorce	0.56	0.69	0.67	0.61	0.78	0.76	0.55	0.65	0.63
Widowed	0.80	0.83	0.83	0.71	0.80	0.80	0.81	0.84	0.84
Not Stated	0.07	0.20	0.14	0.14	0.23	0.19	0.06	0.19	0.13
Total	0.48	0.20	0.34	0.43	0.33	0.37	0.49	0.18	0.33
No. of Heads	495,109	224,079	719,188	60,438	60,747	121,185	434,671	163,332	598,003

2.6 Ethnic Composition.

Ethnic identity of a person is traced through his/her national origin. To assist the enumerators in recording the information, detailed list of the ethnic groups and languages in the country with appropriate codes, was provided in the census enumerator's manual. The list, which was obtained from the then Institute of Nationalities Study, is presented in Annex 2.1 of this chapter.

Distribution of ethnic groups with 500 or more persons by sex is presented in Table 2.13. The result indicate that the Tigraway constituted the overwhelming majority (94.8 percent) of the population of the region. Amara comprised 2.6 percent followed by Saho with 0.7 percent, Agew/Kamyr with 0.4 percent and Affar with 0.2 percent. Note that Eritreans constitute 0.9 percent, a figure higher than the third largest ethnic group in the region. Other foreigners, constitute only 0.03 percent of the total population of the region.

The same five ethnic groups form the largest ethnic groups in both urban and rural areas. The proportion of Amaras in urban area is, however, twice as large as that of in rural areas.

Table 2.13 Distribution of Ethnic Groups with 500 or More Persons by Sex, Tigray Region: 1994.

ETHNIC GROUP	URBAN + RURAL						URBAN						RURAL					
	Total		Male		Female		Total		Male		Female		Total		Male		Female	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
All Persons.	3,136,267	100.0	1,542,165	100.0	1,594,102	100.0	468,478	100.0	214,066	100.0	254,412	100.0	2,667,789	100.0	1,328,099	100.0	1,339,690	100.0
Affar	7,661	0.24	3,808	0.25	3,853	0.24	1,421	0.30	751	0.35	670	0.26	6,240	0.23	3,057	0.23	3,183	0.24
Agew/..... Awingi	1,607	0.05	790	0.05	817	0.05	241	0.05	102	0.05	139	0.05	1,366	0.05	688	0.05	678	0.05
Agew/ . . . . . Kamyr	13,254	0.42	6,355	0.41	6,899	0.43	1,829	0.39	659	0.31	1,170	0.46	11,425	0.43	5,696	0.43	5,729	0.43
Amara	81,297	2.59	40,463	2.62	40,834	2.56	25,623	5.47	12,209	5.70	13,414	5.27	55,674	2.09	28,254	2.13	27,420	2.05
Argoba	608	0.02	273	0.02	335	0.02	106	0.02	46	0.02	60	0.02	502	0.02	227	0.02	275	0.02
Kunama	1,819	0.06	894	0.06	925	0.06	132	0.03	70	0.03	62	0.02	1,687	0.06	824	0.06	863	0.06
Oromo	3,802	0.12	2,026	0.13	1,776	0.11	689	0.15	451	0.21	238	0.09	3,113	0.12	1,575	0.12	1,538	0.11
Saho	22,858	0.73	11,244	0.73	11,614	0.73	1,498	0.32	740	0.35	758	0.30	21,360	0.80	10,504	0.79	10,856	0.81
Tigraway	2,971,738	94.75	1,459,643	94.65	1,512,095	94.86	431,319	92.07	196,021	91.57	235,298	92.49	2,540,419	95.23	1,263,622	95.15	1,276,797	95.31
From Different Parents	515	0.02	269	0.02	246	0.02	162	0.03	81	0.04	81	0.03	353	0.01	188	0.01	165	0.01
Other Eth. National	846	0.03	497	0.03	349	0.02	365	0.08	270	0.13	95	0.04	481	0.02	227	0.02	254	0.02
Eritreans	28,998	0.92	15,111	0.98	13,887	0.87	4,443	0.95	2,220	1.04	2,223	0.87	24,555	0.92	12,891	0.97	11,664	0.87
Other Foreigners	829	0.03	541	0.04	288	0.02	517	0.11	359	0.17	158	0.06	312	0.01	182	0.01	130	0.01
Not Stated	435	0.01	251	0.02	184	0.01	133	0.03	87	0.04	46	0.02	302	0.01	164	0.01	138	0.01

Consistent with that of the total population, females dominate males in number among the Agew/Awingi, Agew/Kamyr, Amhara, Argoba, Kunama, Saho and Tigraways while the opposite is true for the Oromo. It is most likely that among the Amharas more females might have migrated to the region. Regarding the excess of females among the Tigraways, it is most likely that more males might have died during the war that had been going on in the region, and more males might have conscripted into the military force and moved to other parts of the country.

Regarding the distribution of ethnic groups by zone, figures in Table 2.14 show that Tigraway to be the largest ethnic groups in all zones of Tigray Region. Amara is the second largest ethnic group in Debubawi and Mirabawi Zones while Saho stood second in Misrakawi Zone. Debubawi Zone has different ethnic composition, in that Agew/kamir emerges to be the third largest ethnic group.

Table 2.14 Distribution of Major Ethnic Groups by Zone, Tigray Region: 1994.

Ethnic Group	Zones				Total	
	Mirab-awi	Mehake-legnaw	Misra-kawi	Debub-awi	No.	%
Affar	0.02	0.00	0.95	0.22	7,661	0.24
Agew/Awingi	0.04	0.01	0.00	0.14	1,607	0.05
Agew/Kamyr	0.01	0.11	0.00	1.38	13,254	0.42
Amara	4.33	0.10	0.18	5.44	81,297	2.59
Argoba	0.02	0.02	0.02	0.02	608	0.02
Kunama	0.25	0.00	0.00	0.00	1,819	0.06
Oromo	0.01	0.01	0.02	0.41	3,802	0.12
Saho	0.18	0.05	3.57	0.03	22,858	0.73
Tigraway	91.53	99.60	94.92	92.12	2,971,738	94.75
Eritreans	3.41	0.06	0.31	0.14	28,998	0.92
Others and NS	0.16	0.05	0.03	0.09	2,625	0.08
Total	100.0	100.0	100.0	100.0	3,136,267	100.0

2.7 Language

Language is one the of major socio-cultural characteristics of a population. A person may use a language as a mother tongue or speak it as a second language. In the census,"mother tongue" is defined as the language used by a person for communication with his/her family members or guardians during childhood. Whereas, "second language" is additional language used by the respondents. If the respondent uses more than one additional language, the one used more frequently is recorded. List of Languages spoken in the country was obtained from the then Institute of Nationalities Study and is presented in Annex 2.2 of this chapter.

The population distribution by mother tongue and second language spoken by 500 persons or more is presented in Table 2.15. According to the data on Table 2.15, the overwhelming majority (95.4 percent) of the population use Tigrigna language as a mother tongue. Amarigna, used by 3.0 percent of the population, is the second largest language spoken as a mother tongue followed by Sahogna with 0.7 percent. The remaining Ethiopian languages are used by about one percent of the population. Only 0.02 percent of the population use foreign languages as a mother tongue.

Considering the second language spoken, the figure in Table 2.15 indicate that more than 90 percent of the population did not have second language. Amarigna is spoken by the highest proportion (7.1 percent) of the population as second language, followed by Tigrigna with 1.5 percent. The remaining Ethiopian languages are spoken as a second language by only 0.4 percent of the population. Also 0.2 percent of the population of Tigray Region speak foreign languages as a second language while 0.2 percent did not report their second language. In summary, about 97 percent of the population speak Tigrigna either as a mother tongue or as a second language. The corresponding figure for Amarigna language is 10.1 percent.

Attempt was made to study the relationship between mother tongue and ethnic group on the one hand and ethnic group and second language on the other. Tables 2.16 and 2.17, respectively, present the distribution of mother tongues by major ethnic group and the distribution of second languages by major ethnic group. Also, the distribution of second language by major mother tongues is presented in Table 2.18.

Table 2.15 Percentage Distribution of Mother Tongues and Second Languages, Urban and Rural; Tigray Region:1994

		Urban + Rural				Urban				Rural			
		Mother Tongue		Second Language		Mother Tongue		Second Language		Mother Tongue		Second Language	
Languages	Sex	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
All	Total	3,136,267	100	3,136,267	100	468,478	100	468,478	100	2,667,789	100	2,667,789	100
Persons	Male	1,542,165	100	1,542,165	100	214,066	100	214,066	100	1,328,099	100	1,328,099	100
	Female	1,594,102	100	1,594,102	100	254,412	100	254,412	100	1,339,690	100	1,339,690	100
Affarigna	Total	6,919	0.22	2,247	0.07	818	0.17	541	0.12	6,101	0.23	1,706	0.06
	Male	3,446	0.22	1,504	0.10	445	0.21	320	0.15	3,001	0.23	1,184	0.09
	Female	3,473	0.22	743	0.05	373	0.15	221	0.09	3,100	0.23	522	0.04
Agew/	Total	1,589	0.05	813	0.03	173	0.04	90	0.02	1,416	0.05	723	0.03
Awingigna	Male	756	0.05	396	0.03	60	0.03	47	0.02	696	0.05	349	0.03
	Female	833	0.05	417	0.03	113	0.04	43	0.02	720	0.05	374	0.03
Agew/	Total	11,701	0.37	2,790	0.09	1,230	0.26	456	0.10	10,471	0.39	2,334	0.09
Kamyrigna	Male	5,545	0.36	1,283	0.08	413	0.19	154	0.07	5,132	0.39	1,129	0.09
	Female	6,156	0.39	1,507	0.09	817	0.32	302	0.12	5,339	0.40	1,205	0.09
Amarigna	Total	93,258	2.97	223,816	7.14	31,420	6.71	115,494	24.65	61,838	2.32	108,322	4.06
	Male	46,602	3.02	137,172	8.89	15,115	7.06	63,034	29.45	31,487	2.37	74,138	5.58
	Female	46,656	2.93	86,644	5.44	16,305	6.41	52,460	20.62	30,351	2.27	34,184	2.55
Jebela-	Total	146	0.00	553	0.02	140	0.03	408	0.09	6	0.00	145	0.01
wigna	Male	64	0.00	367	0.02	60	0.03	249	0.12	4	0.00	118	0.01
	Female	82	0.01	186	0.01	80	0.03	159	0.06	2	0.00	27	0.00
Kunam-	Total	1,775	0.06	98	0.00	127	0.03	16	0.00	1,648	0.06	82	0.00
igna	Male	878	0.06	56	0.00	69	0.03	11	0.01	809	0.06	45	0.00
	Female	897	0.06	42	0.00	58	0.02	5	0.00	839	0.06	37	0.00

Table2.15 (cont'd)

Languages	Sex	Urban + Rural				Urban				Rural			
		Mother Tongue		Second Language		Mother Tongue		Second Language		Mother Tongue		Second Language	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Oromigna	Total	3,047	0.10	2,129	0.07	455	0.10	413	0.09	2,592	0.10	1,716	0.06
	Male	1,642	0.11	1,197	0.08	326	0.15	300	0.14	1,316	0.10	897	0.07
	Female	1,405	0.09	932	0.06	129	0.05	113	0.04	1,276	0.10	819	0.06
Sahogna	Total	22,495	0.72	3,281	0.10	1,365	0.29	272	0.06	21,130	0.79	3,009	0.11
	Male	11,155	0.72	1,628	0.11	675	0.32	128	0.06	10,480	0.79	1,500	0.11
	Female	11,340	0.71	1,653	0.10	690	0.27	144	0.06	10,650	0.79	1,509	0.11
Tigrigna	Total	2,993,390	95.44	47,305	1.51	431,693	92.15	14,777	3.15	2,561,697	96.02	32,528	1.22
	Male	1,470,873	95.38	23,823	1.54	196,162	91.64	7,252	3.39	1,274,711	95.98	16,571	1.25
	Female	1,522,517	95.51	23,482	1.47	235,531	92.58	7,525	2.96	1,286,986	96.07	15,957	1.19
Other Eth.	Total	847	0.03	1,028	0.03	291	0.06	286	0.06	556	0.02	742	0.03
Languages.	Male	500	0.03	807	0.05	234	0.11	202	0.09	266	0.02	605	0.05
	Female	347	0.02	221	0.01	57	0.02	84	0.03	290	0.02	137	0.01
English	Total	98	0.00	1,612	0.05	69	0.01	1,407	0.30	29	0.00	205	0.01
	Male	60	0.00	1,243	0.08	42	0.02	1,067	0.50	18	0.00	176	0.01
	Female	38	0.00	369	0.02	27	0.01	340	0.13	11	0.00	29	0.00
Other Fore-	Total	648	0.02	4,116	0.13	581	0.12	2,043	0.44	67	0.00	2,073	0.08
Languages	Male	438	0.03	2,971	0.19	387	0.18	1,358	0.63	51	0.00	1,613	0.12
	Female	210	0.01	1,145	0.07	194	0.08	685	0.27	16	0.00	460	0.03
Not Stated	Total	354	0.01	5,311	0.17	116	0.02	1,508	0.32	238	0.01	3,803	0.14
	Male	206	0.01	2,718	0.18	78	0.04	775	0.36	128	0.01	1,943	0.15
	Female	148	0.01	2,593	0.16	38	0.01	733	0.29	110	0.01	1,860	0.14
No Second	Total	XX		2,841,168	90.59	XX		330,767	70.60	XX		2,510,401	94.10
Languages	Male	XX		1,367,000	88.64	XX		139,169	65.01	XX		1,227,831	92.45
	Female	XX		1,474,168	92.48	XX		191,598	75.31	XX		1,282,570	95.74

Table 2.16 Percentage Distribution of Mother Tongue Languages Spoken by 500 Persons or more by Major Ethnic Groups(Size=1000 or more), Tigray Region: 1994.

MOTHER TONGUE		ETHNIC GROUP													
		All Persons.	Affar	Awingi	Kamyr	Amara	Kunama	Oromo	Saho	Tigraway	Other Eth. Nationals	From Diff. Parents	Eritreans	Other Fore-igners	Not Stated
All Persons	No.	3,136,267	7,661	1,607	13,254	81,297	1,819	3,802	22,858	2,971,738	1,454	515	28,998	829	435
	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Affarigna		0.22	83.36	0.12	0.00	0.01	0.00	0.08	0.02	0.02	0.07	0.58	0.00	0.00	0.46
Agew/Awingigna		0.05	0.00	75.42	0.05	0.03	0.00	0.00	0.00	0.01	0.07	0.39	0.00	0.00	0.00
Agew/Kamyrgna		0.37	0.00	1.24	82.80	0.13	0.00	0.00	0.01	0.02	0.34	2.52	0.00	0.00	0.00
Amarigna		2.97	0.38	4.73	5.53	92.95	0.00	13.47	0.09	0.54	7.91	20.00	0.44	1.09	0.92
Kunamigna		0.06	0.00	0.00	0.00	0.00	96.32	0.00	0.00	0.00	0.07	0.00	0.02	0.12	0.00
Oromigna		0.10	0.05	0.06	0.01	0.05	0.00	53.79	0.05	0.03	0.21	0.58	0.00	0.00	0.00
Sahogna		0.72	1.55	0.06	0.01	0.00	0.00	0.13	87.91	0.05	0.76	0.00	2.68	5.79	0.46
Tigrigna		95.44	14.65	18.36	11.58	6.77	3.63	32.40	11.86	99.32	56.53	75.92	96.74	19.30	18.39
Other Eth.Lang		0.03	0.01	0.00	0.02	0.03	0.05	0.11	0.01	0.01	34.04	0.00	0.08	26.18	1.61
English		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	6.88	0.46
Other Foreign Lang.		0.02	0.00	0.00	0.01	0.01	0.00	0.03	0.00	0.01	0.00	0.00	0.02	40.65	0.00
Not Stated		0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	77.70

Table 2.17 Percentage Distribution of Second Languages Spoken by 500 or more Persons by Major Ethnic Groups (Size= 1000 or more), Tigray Region: 1994

SECOND LANGUAGES		ETHNIC GROUP												
		All Persons	Affar	Agew/ Awingi	Agew/ Kamyr	Amara	Kunama	Oromo	Saho	Tigraway	Other Eth. Nationals	From Diff. Parents	Eritreans	Other Foreiners	Not Stated
All Persons	No.	3,136,267	7,661	1,607	13,254	81,297	1,819	3,802	22,858	2,971,738	1,454	767	28,998	577	435
	%	100.0	100.0	100.0	100.0	100.0	98.7	100.0	100.0	100.0	106.9	102.1	99.9	100.0	100.0
No Second Languages		90.59	44.84	28.56	53.63	75.15	58.11	34.46	55.75	91.71	65.75	67.41	92.18	30.85	13.79
Affarigna		0.07	3.02	0.00	0.01	0.09	0.00	0.18	0.05	0.06	0.07	0.00	0.01	0.00	0.00
Agew/Awingigna		0.03	0.00	3.92	0.01	0.06	0.00	0.03	0.00	0.02	0.07	0.26	0.00	0.00	0.00
Agew/Kamyrgna		0.09	0.00	0.00	3.91	0.41	0.00	0.00	0.00	0.06	0.07	2.48	0.00	0.00	0.00
Amarigna		7.14	1.67	7.97	15.78	3.33	0.38	15.54	0.79	7.28	15.61	9.91	4.11	5.89	1.61
Jeblawigna		0.02	0.09	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.07	0.00	0.09	0.00	0.00
Oromigna		0.07	0.21	0.00	0.02	0.34	0.00	7.76	0.01	0.05	0.69	0.00	0.00	0.00	0.00
Sahogna		0.10	0.10	0.00	0.00	0.00	0.00	0.03	4.16	0.08	0.00	0.13	0.18	0.17	0.00
Tigrigna		1.51	48.24	56.75	26.11	19.52	38.32	40.48	38.71	0.38	11.14	8.34	1.83	41.07	2.07
Other Eth. Languages		0.04	0.60	1.62	0.07	0.05	0.05	0.16	0.04	0.03	11.07	2.22	0.04	0.17	0.00
English		0.05	0.00	0.00	0.00	0.33	0.05	0.21	0.00	0.04	0.62	0.65	0.19	6.93	0.00
Other Fore. Languages		0.13	0.12	0.37	0.01	0.22	0.38	0.05	0.05	0.12	0.41	0.91	0.57	4.68	0.00
Not Stated		0.17	1.11	0.81	0.47	0.48	1.37	1.08	0.43	0.13	1.31	9.78	0.75	10.23	82.53

Note: 1) Eth. = Ethiopian, Fore.=Foreigne

2) 'From Diff. Parents' refers to persons born to parents with different ethnic background

It is generally expected that household members use the language or dialect of their own ethnic group for communication during childhood. According to the data in Table 2.16, the above supposition holds true for most of the ethnic groups in Tigray Region. It can be said that all the major ethnic groups, excepting Oromo, use the language of their own ethnic group dominantly. The proportion using the language of own ethnic group varies from 99.3 percent among Tigraways to 53.8 percent among Oromos.

Examining the data in Table 2.17 indicate that most of the ethnic groups in Tigray Region are multi-lingual. Except the Argoba, Tigraway and Amara, with 91.7 percent and 75.2 percent of their population speaking no second language, about half or more of the other major ethnic groups in Tigray Region spoke at least one additional language other than their mother tongue. The Agew/Awingi are found to be the most multi-lingual ethnic group with 56.8 percent speaking Tigrigna, 8.0 percent Amarigna, 3.9 percent Agew/Awingigna, 1.6 percent Other Ethiopian Languages and 0.4 percent other foreign languages. Multi-lingual ethnic groups next to Agew\Awingi are the Oromo, Affar, Agew/Kamyr, Saho and Kunama in that order.

2.8 Religion

Religion is another important socio-cultural characteristics of a population. It is an affiliation with a group having specific religious or spiritual tenet. In the census every member of the household was asked about his/her religious affiliation and classified as one of the following: Orthodox Christian (including the Kibat and Tsega); Protestant Christian (including Seven Day Adventist, Pentecost, Lutheran, Baptist, Anglican, Presbyterian, Meserete Kirstos, Mulu Wengel, Kale Hiywot, etc.); Catholic Christian; Muslim or follower of Traditional religion. Followers of religions other than the above mentioned ones are categorized in the 'others' group. Table 2.19 show the classification of the population of Tigray Region by sex and religion.

According to the census result, the overwhelming majority (95.4 percent) of residents of Tigray Region are Orthodox Christians. Next to Orthodox christians are Muslims with 4.1 percent. Protestants and Catholics comprise insignificant proportion of population of the region. Proportion of followers of Traditional and Other religions are also negligible. The

Table 2.18 Percentage Distribution of Second Languages Spoken by 500 Or more Persons by Major Mother Tongues (Size = 1000 or more), Tigray Region: 1994.

MOTHER TONGUE	SECOND LANGUAGES													
	All Persons	No Second Language	Affarigna	Agew/ Awingigna	Agew/ Kamyrigna	Amarigna	Jeblawigna	Oromigna	Sahogna	Tigrina	Other Eth. Languages	English	Other Fore. Languages	Not Stated
All Persons No.	**3,136,267**	**2,841,168**	**2,247**	**813**	**2,790**	**223,816**	**553**	**2,129**	**3,281**	**47,305**	**542**	**1,612**	**4,116**	**5,311**
%	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Affarigna	**0.22**	**0.10**	**0.00**	**0.00**	**0.00**	**0.03**	**1.27**	**0.85**	**0.00**	**8.43**	**0.00**	**0.00**	**0.17**	**1.22**
Agew/Awingigna	**0.05**	**0.01**	**0.00**	**0.00**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**2.42**	**0.00**	**0.00**	**0.05**	**0.17**
Agew/Kamyrigna	**0.37**	**0.21**	**0.04**	**0.12**	**0.00**	**0.92**	**0.00**	**0.09**	**0.00**	**7.95**	**0.18**	**0.00**	**0.00**	**0.73**
Amarigna	**2.97**	**2.35**	**3.92**	**7.50**	**16.16**	**0.00**	**1.08**	**17.33**	**0.21**	**51.47**	**2.03**	**19.29**	**4.49**	**13.33**
Kunamigna	**0.06**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.50**	**0.00**	**0.06**	**0.07**	**0.36**
Oromigna	**0.10**	**0.01**	**0.18**	**0.00**	**0.00**	**0.24**	**0.00**	**0.00**	**0.00**	**4.85**	**0.00**	**0.12**	**0.05**	**0.30**
Sahogna	**0.72**	**0.42**	**0.45**	**0.00**	**0.00**	**0.04**	**0.18**	**0.05**	**0.00**	**21.91**	**0.00**	**0.19**	**0.19**	**1.86**
Tigrigna	**95.44**	**96.86**	**95.37**	**92.25**	**83.80**	**98.61**	**97.47**	**81.54**	**99.57**	**0.00**	**97.79**	**77.36**	**94.34**	**72.81**
Other Eth. Language	**0.03**	**0.01**	**0.04**	**0.12**	**0.00**	**0.09**	**0.00**	**0.14**	**0.00**	**0.77**	**0.00**	**0.25**	**0.24**	**0.17**
English	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.21**	**0.05**	**0.00**	**0.00**	**0.39**	**0.21**
Other Fore. Languages	**0.02**	**0.01**	**0.00**	**0.00**	**0.04**	**0.01**	**0.00**	**0.00**	**0.00**	**0.64**	**0.00**	**2.73**	**0.00**	**2.50**
Not Stated	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**6.33**

Note: 1) Eth. = Ethiopian, Fore.=Foreigne

2) Jeblawigna includes jeblawigna and Fedashigna.

Table 2.19 Distribution of Population by Religion and Sex, Urban and Rural, Tigray Region: 1994.

RELIGION	Total		Male		Female	
	No.	%	No.	%	No.	%
URBAN + RURAL						
All Persons	3,136,267	100.00	1,542,165	100.00	1,594,102	100.00
Orthodox	2,992,305	95.41	1,471,492	95.42	1,520,813	95.40
Protestant	1,136	0.04	566	0.04	570	0.04
Catholic	12,489	0.40	6,075	0.39	6,414	0.40
Musilim	127,657	4.07	62,632	4.06	65,025	4.08
Others	251	0.01	123	0.01	128	0.01
Taditional	53	0.00	22	0.00	31	0.00
Not Stated	2,376	0.08	1,255	0.08	1,121	0.07
URBAN						
All Persons	468,478	100.00	214,066	100.00	254,412	100.00
Orthodox	409,257	87.36	185,004	86.42	224,253	88.15
Protestant	832	0.18	430	0.20	402	0.16
Catholic	2,427	0.52	1,203	0.56	1,224	0.48
Musilim	55,550	11.86	27,197	12.70	28,353	11.14
Others	89	0.02	53	0.02	36	0.01
Taditional	24	0.01	11	0.01	13	0.01
Not Stated	299	0.06	168	0.08	131	0.05
RURAL						
All Persons	2,667,789	100.00	1,328,099	100.00	1,339,690	100.00
Orthodox	2,583,048	96.82	1,286,488	96.87	1,296,560	96.78
Protestant	304	0.01	136	0.01	168	0.01
Catholic	10,062	0.38	4,872	0.37	5,190	0.39
Musilim	72,107	2.70	35,435	2.67	36,672	2.74
Others	162	0.01	70	0.01	92	0.01
Taditional	29	0.00	11	0.00	18	0.00
Not Stated	2,077	0.08	1,087	0.08	990	0.07

religious composition of population in rural area resembles that of the region. In urban area the proportion of Orthodox christian decreased to 87.4 percent while the proportion of Muslim has increased to about 12.0 percent.

Examination of the data of religious compositions by ethnic groups reveals considerable variation among them (see Table 2.20). The majority (more than 80 percent) of Agew-Awingi, Agew-Kamyr, Amhara, Kunama and Tigraway ethnic group are Orthodox Christians. The Affar, and Oromo are dominantly affiliated with Islam. The Saho are divided into Orthodox (41.5 percent), Catholic (about 43 percent each) and Muslim (15 percent).

The data on Table 2.21 show modest variation in religious composition of the residents by zone. Orthodox christians reside in all the zones with a proportion varying from 92.2 percent in Debubawi Zone to 97.8 percent in Mehakelegnaw Zone. The proportion of Catholics exceeds 1.0 percent in Misrakawi Zone only. The proportion of the Muslims is highest in Debubawi Zone (7.6 percent) and lowest in Mehakelegnaw Zone (2.1 percent).

Table 2.20 Percentage Distribution of Population by Ethnic Group and Religion, Tigray Region: 1994

ETHNIC GROUP	RELIGION								
	Orthodox	Protestant	Catholic	Muslim	Traditional	Others	Not Stated	Total %	Total No
Affar	2.4	0.0	0.0	97.5	0.0	0.0	0.1	100.0	7,661
Agew/ Awingi	98.1	0.1	0.0	1.7	0.0	0.0	0.1	100.0	1,607
Agew/ kamyr	99.5	0.0	0.0	0.4	0.0	0.0	0.0	100.0	13,254
Amara	85.2	0.1	0.0	14.6	0.0	0.0	0.0	100.0	81,297
Kunama	82.0	0.0	5.7	7.5	0.0	4.8	0.0	100.0	1,819
Oromo	12.7	0.4	0.1	86.7	0.0	0.0	0.1	100.0	3,802
Saho	41.5	0.0	43.1	15.3	0.0	0.0	0.0	100.0	22,858
Tigraway	96.5	0.0	0.1	3.3	0.0	0.0	0.1	100.0	2,971,738
Other Ethio. Nationals	92.5	32.4	32.3	36.7	32.8	32.6	32.4	291.6	1,650
Eritreans	94.8	0.1	0.8	4.2	0.0	0.0	0.1	100.0	28,998
Other Foreigners	20.3	1.4	19.1	57.1	0.0	2.2	0.0	100.0	829
Not Stated	43.9	0.0	0.2	7.4	0.0	0.0	48.5	100.0	435
Total	95.4	0.0	0.4	4.1	0.0	0.0	0.1	100.0	3,136,267

Table 2.21 Percentage Distribution of Population by Religion and Zone, Tigray Region: 1994

Religion	ZONES				Total	
	Mirabawi	Mehakelegnaw	Misrakawi	Debubawi	No.	%
Orthodox	96.3	97.8	95.3	92.2	2,992,305	95.4
Protestant	0.0	0.0	0.0	0.1	1,136	0.0
Catholic	0.0	0.0	2.0	0.1	12,489	0.4
Muslim	3.5	2.1	2.6	7.6	127,657	4.1
Traditional	0.0	0.0	0.0	0.0	53	0.0
Others	0.1	0.0	0.1	0.0	251	0.0
Not Stated	0.1	0.1	0.0	0.0	2,376	0.1
Total	100.0	100.0	100.0	100.0	3,136,267	100.0

2.9 Disability Status and Type

In the census data on disability status and type of disability were collected on 20.0 percent of the sample households thus, distribution of population by disability status and type of disability by broad age group and sex is given in Table 2.22. In the census a person was defined as disabled if due to physical or mental injuries, could not fully perform activities that other healthy persons could do. It represents decrease or loss of ability to discharge various social or economic functions. In the census disability was classified into 10 categories. As given in Table 2.22 the data shows that there were 90,742 disabled persons (i.e., 2.9 percent of the total population of excluding the homeless) in Tigray Region with sex ratio of 97 males per 100 females. Of the total disabled persons, 14.3 percent are in the age group 0-14, 42.4 percent are in the age group 15-49, and about 43.4 percent are in the age group 50 and over.

Among the major disability types are partial blindness, leg problem and total blindness affecting 26.3 percent, 17.7 percent and 14.9 percent of the disabled population, respectively. Hearing problem, hand/arm problems and mental problem are at the intermediate positions with 12.9 percent, 7.5 percent and 6.8 percent, respectively. At the bottom of the spectrum are leprosy and hearing-speaking problem, taking a share of 1.5 percent and 5.5 percent out of the total disabled population, respectively. About four percent and three percent of the disabled population are taken by multiple types of disability and other types of disability, respectively. Moreover, Table 2.22 shows disability by broad age group and by sex ratio.

Table 2.22 Distribution of Population by Disability status, Type of Disability, Broad Age Group and Sex Ratio, Tigray Region: 1994.

TYPE OF DISABILITY	All Persons		BROAD AGE GROUP						Sex
			Below 15		15-49		50+		
	No	%	No	%	No	%	No	%	Ratio
All persons	3,134,470	100.0	1,404,197	44.80	1,337,757	42.68	392,516	12.52	97
Not Disabled	3,040,641	100.0	1,389,595	45.70	1,298,208	42.70	352,838	11.60	97
Disabled	90,742	100.0	12,940	14.26	38,465	42.39	39,337	43.35	99
Totally Blind	13,477	100.0	855	6.34	2,622	19.46	10,000	74.20	69
Partially Blind	23,888	100.0	2,412	10.10	8,108	33.94	13,368	55.96	78
Hearing Problems	11,743	100.0	2,318	19.74	4,985	42.45	4,440	37.81	97
Hearing and Speaking problems	5,018	100.0	1,400	27.90	2,628	52.37	990	19.73	108
Leg problems	16,089	100.0	2,948	18.32	8,566	53.24	4,575	28.44	165
Hand/Arm problems	6,826	100.0	955	13.99	3,737	54.75	2,134	31.26	164
Leprosy	1,325	100.0	145	10.94	619	46.72	561	42.34	100
Mental problems	6,126	100.0	826	13.48	4,114	67.16	1,186	19.36	89
Others Types of Disability	2,971	100.0	577	19.42	1,527	51.40	867	29.18	92
Multiple Disability	3,279	100.0	504	15.37	1,559	47.54	1,216	37.08	96
Not Stated	3,087	100.0	1,662	53.84	1,084	35.11	341	11.05	107

ANNEX 2.1--List of Ethnic Groups in Ethiopia

Affar /Adal, Danakil, Denkel/
Agew-Awinigi /Konfele/
Agew-Kamyr /Kamtang/
Amara /Gondere, Gayente, Semen, Farte, Gojjame,Dawunte, Wadle, Saynte, Laste, Shewe, Tegulete, Jiruye, Yifate, Menze,Minjare,Bulge/
Anyiwak /Yembo/
Arborie /Erbore, Ulde, Murle/
Argoba
Ari /Bako, Ara, Shangamo/
Basketo /Mesketo, Anjila, Dolo, Tama/
Bench
She
Mer
Burji /Dashi, Bambala, Alga/
Charra /Tsara, Zara/
Dasenech /Geleb, Gelaba, Marle/
Dime
Dizi /Maji/
Felasha
Ganjule /Bacha/
Gedeo /Derassa/
Gewada /Kule, Gobeze, Werzie, Alie/
Gidole /Darashat, Dirasha, Gardula, Draytat, Durate/
Guagu /Kuagu/
Gumuz /Ganza, Ganzo, Bega, Baga, Shankila, Say, Sese/
Guragie /Cheha, Ener, Enemor, Ezaya, Gumer,Gura, Megareb, Meger, Meskan, Muher, Kistane, Endegay, Wecho, Welene, Azernet, Berbere, Enekor, Alichona, Weriro, Werabe/
Hadiya
Mareko /Libido/
Hamer /Bashada, Bana, Karo/
Harerri /Adere/
Jebelawi /Berta, Benshangul, Wutawut, Shogo, Undu,Meyu, Gebeto, Fakaro, Fakashi,Fakamkum/
Fadashi
Gamili
Gebato
Kechem /Kacheno, Gatsam, Haruro/
Keffa /Kefficho/
Mocha /Shekicho/
Kemant
Kembata
Alaba
kebena
Timbaro /Kambara/
Kewama
Koma /Komo, Hayahaya, Medin, Akuwma/
Konso /Karate, Komso, Garate/
Koyra /Amaro, Amaricho, Kore, Baditu/
Kunama
Mabaan
Mao /Anfilo, Gewami, Bambishi, Koman/

Me'en /Meken, Daim, Tishana, Me'ent, Manit, Shuro/
Bodi /Tumer/
Malie
Messengo /Mejenger, Majang, Ujang/
Mossiya /Bussa/
Mursi /Mun, Mursu, Murdi, Murzu, Nyicalabong/
Nao /Naho, Tolo/
Nuwer /Abigar/
Nyangatom /Turkana, Bume, Men, Bum, Rogegeno, Tobola/
Oromo /Guji, Borena, Tulema, Kereyu, Gelan, Lika, Weredube, Becho, Abichu, Selale, Arsi, Rayya, Mecha, Gerri, Gebra, Ittu, Jille, Qottu/
Werji /Tigrewerji/
Oyda
Saho /Shaho, Irob/
Shako
Shinasha /Boro, Shencho, Dengebo/
Shita /Sita, Lango/
Sidama
Somalie
Suri /Surma, Tirma, Dama, Zilmam, Chima, Murle/
Tigraway /Tigre/
Tsamay /Tsemay, Dume, Kuwele/
Welaita
Dorzie
Gamo
Goffa /Genu/
Konta
Kulo /Omete, Domete, Dawuro/
Mello
Weyito
Yemsa /Yem, Janjaro, Yangaro/
Zeysie
Zergula
Other Ethiopian National Groups
From Different Parents
Eritreans
Djebutians
omalians
Kenyans
Sudanese
Other foreigners

Note: From Differnt Parents refer to persons born to parents with differnt ethnic background.

ANNEX 2.2--List of Languages spoken in Ethiopia

Affarigna /Adaligna, Danakiligna, Denkeligna/
Agew-Awinigigna /konfeligna/
Agew-Kamyrigna /Kamtangigna/
Amarigna
Anyiwakgna /Yembogna/
Arboriegna /Erbore, Ulde, Murle/
Argobigna
Arigna /Bakogna, Shangamogna/
Basketigna/Masketigna,Angilaigna,Dolegna,Tamigna/
Benchigna /Benchenon/
Shegna
Mergna
Burjgna /Dashigna, Bambaligna, Algagna/
Charrigna /Tsarigna, Zaragna/
Dasenechgna /Gelebigna, Marlegna/
Dimegna
Dizigna /Majigna/
Ganjuligna /Bachegna/
Gedeogna /Derassigna/
Gewadigna /Kuligna, Gobezegna, Werziegna/
Gidoligna /Darashatigna, Dirashigna, Draytatigna,Durategna/
Guagugna /Kuagugna/
Gumuzigna /Ganzagna, Ganzogna, Bagagna, Shankiligna, Sayigna, Sesegna/
Guragie /Chehagna, Enerigna, Enemorigna, Ezyagna, Gumerigna, Guragna, Msigenigna,Megarebigna, Mugerigna, Skanigna, Muherigna, Kistanigna, Endeganigna, Wachogna, Welenegna, Azernet, Haberbere,Enkorigna,Alichona Weriro, Werabe/
Hadiyigna
Marekogna /Labidigna/
Hamerigna /Bashadigna, Banagna, Karogna/
Hareriegna /Aderigna/
Jebelawigna /Bertagna, Benshanguligna, Wutawut,Shogaligna, Meyugna, Gebetogna, Fakarogna,Fakashigna, Fakumankumigna, Andugna, Arabigna/
Fadashigna
Gamiligna
Gebatogna
Kechemigna /Kachenogna, Gatsamigna, Harurogna/
Keffagna /Kefficho/
Mochagna
Kemantigna
Kembatigna
Alabigna
Kebenagna
Timbarogna
Kewamigna
Komigna /Komigna, Hayahayagna/
Konsogna /Karategna, Komsogna, Garategna/
Koyrigna /Amaro, Amaricho, Koregna, Baditi/
Kunamigna
Mabaangna
Maogna /Anfilogna, Gewamigna, Komagna/

Me'enigna /Mekenigna, Damigna, Tishagna, Shurogna/
Bodigna
Maliegna
Messengogna /Mejengerigna, Majangigna,Ujangigna/
Mossigna /Bussagna/
Mursygna /Munigna, Murzugna, Nyicalabongigna/
Naogna /Nahogna, Tologna/
Nuwerigna /Abigarigna/
Nyangatomigna /Turkanigna, Bumegna/
Oromoigna /Guji, Borena/
Oydigna
Sahogna /Shahogna/
Shekogna
Shinashigna /Borogna, Shenchogna, Dengebogna/
Shitagna /Sitagna, Langugna/
Sidamigna
Somaligna
Surigna /Surmigna, Tirmagna, Damagna, Zilmamigna, Chimagna/
Tigrigna
Tsamaigna /Tsemayigna, Dumegna, Kuweligna/
Welaiyitigna
Dorzigna
Gamogna
Goffigna /Genugna/
Kontigna
Kulogna /Ometegna, Dometegna, Dawurogna/
Mellogna
Yemsagna /Yemigna, Janjarogna, Yangarogna/
Zeysigna
Zerguligna
Other Ethiopian Languages
English
Other Foreign Languages

CHAPTER III

EDUCATIONAL CHARACTERISTICS

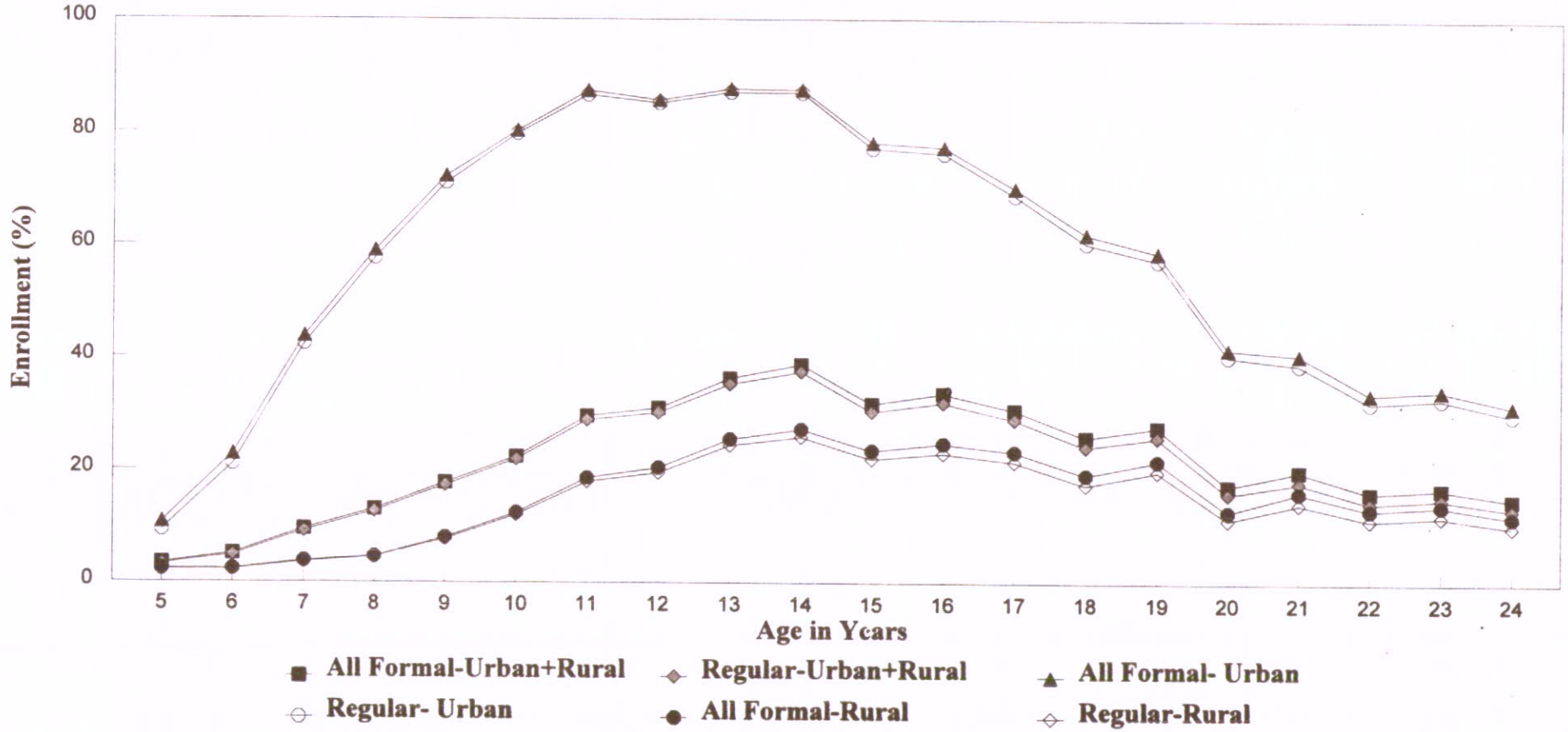
3.1 Introduction.

This chapter discusses the educational characteristics of Tigray based on the data collected in the 1994 Population and Housing Census of Ethiopia. In the census two types of data regarding education were collected and these were school attendance and educational attainment. The analysis of the data gives a clear picture on school attendance and educational attainment of the population under study. The information collected in the census refers to formal education. The formal education is defined as education in which students or participants are enrolled or registered regardless of the mode of teaching used. This is to mean that it includes both "regular school and university education" and "adult (out of school) education." Each of these two terms are elaborated below.

Regular school and university education (or regular education for short) is used "to describe the educational system that provides a ladder by which children and young people may progress from pre-primary or primary school through universities, although many may drop out on the way." Adult education is used "to describe out-of-school education, which provides education for people who are not in the regular school and university system and who are generally fifteen years or older although in some circumstances, younger students are accommodated with their older colleagues" (UNESCO, 1975:19). While all of regular school and university education is formal, adult education has both formal and non-formal components. The non-formal education that are not entertained in this report include random learning (learning from experience or observation), self directed learning and family and socially directed learning such as a mother teaching her children at home when she is not employed as a teacher.

The analysis of the educational charactersitcs of the population are presented in two sections. These are a) school attendance or enrollment and b) educational attainment.

Fig 3.1 Enrollment of Population Aged 5 to 24 Years in All Learning Institutions and Regular Schools, Tigray Region: 1994



The percentage distribution of the population aged 5 years and over who were attending school at the time of census period classified by single age is presented in Table 3.2. The table reveals that enrollment increases monotonously and reaches its peak (38.8 percent) at the age of 14 years and thereafter it fluctuates. This pattern is observed for each sex and rural areas. Although commencing age of education by the regulation of the country is age 7, enrollment prior to age 7 is apparent from the table. The data in the table reveals that the level of participation at age 7 is about 10.0 percent. This shows that still about 90 percent of the children happened to be out of the school system. In urban areas, nevertheless, enrollment at age 7 suggests that those who were attending consist 43.8 percent. As far as enrollment by sex is concerned, in general, slightly higher enrollment for males than for females is observed in almost all ages (Fig.3.2). The difference between males and females enrollment is more pronounced as age advances (see Fig 3.2 also).

3.2.2 Enrollment Ratios

a) Gross Enrollment Ratio

The gross enrollment ratio (Age specific Enrollment Ratio) is defined as a ratio between the number of pupils/students enrolled at a given level of education, regardless of age, and the size of population in the relevant or eligible age group usually expressed in percent. The gross enrollment ratio for both urban and rural areas and all levels of school is calculated and presented in Table 3.3.

The table presents that about 53 pupils per 100 population aged 7-12 are enrolled in primary schools. This ratio is observed to be higher than rates for some least developed African countries such as Mali (24 percent), Niger (29 percent) and almost equal with the rate for the Sudan (50 percent) for 1990 (UNESCO, 1993). About 16 pupils per 100 population aged 13-14 and about 8 pupils per 100 population aged 15-18 are enrolled in junior secondary and senior secondary schools; respectively (see Fig 3.3). In order to be able to compare the rates with some least developed African countries the gross enrollment ratio for secondary level[1] in general is

---

1 the quotient of total pupils in junior and senior secondary by population aged 13-18.

Table 3.2 Percent of Population Aged 5 Years and Over Currently Attending School by Age Sex, Urban and Rural, Tigray Region: 1994

	URBAN+RURAL			URBAN			RURAL		
AGE	Total	Male	Female	Total	Male	Female	Total	Male	Female
5	3.42	3.32	3.52	10.67	10.75	10.59	2.30	2.20	2.41
6	5.09	5.24	4.93	22.75	22.89	22.60	2.40	2.57	2.22
7	9.47	9.45	9.48	43.77	44.51	43.07	3.83	3.95	3.71
8	12.98	3.16	12.78	59.02	58.73	59.31	4.65	3.05	4.24
9	17.70	17.46	17.94	72.23	74.49	70.19	7.98	7.76	8.19
10	22.40	21.55	23.30	80.30	81.44	79.18	12.43	11.72	13.19
11	29.63	28.93	30.37	87.35	87.20	87.49	18.61	18.82	18.38
12	31.02	30.75	31.31	85.74	86.72	84.84	20.34	20.88	19.80
13	36.35	37.13	35.45	87.67	88.99	86.42	25.53	27.40	23.28
14	38.78	41.41	35.71	87.50	89.47	85.57	27.33	31.21	22.62
15	31.82	36.78	26.97	78.18	85.37	72.25	23.49	28.92	18.01
16	33.58	41.75	26.12	77.45	85.43	71.17	24.67	33.69	16.17
17	30.74	40.77	21.53	70.15	81.77	60.54	23.27	33.50	13.70
18	25.94	36.32	16.91	61.97	74.65	52.36	19.18	29.74	9.75
19	27.75	38.58	17.28	58.72	69.82	50.23	21.71	33.34	9.97
20	17.26	28.50	9.39	41.61	56.44	32.62	12.71	23.78	4.74
21	19.87	31.10	9.70	40.59	54.32	31.03	16.11	27.55	5.26
22	16.01	24.69	7.63	33.70	42.79	27.45	13.08	22.25	3.58
23	16.84	24.82	8.25	34.30	42.39	28.26	13.83	22.39	4.01
24	14.92	21.77	6.97	31.54	37.40	26.39	11.83	19.30	2.67
25-29	9.65	15.28	4.89	25.02	31.52	20.23	6.55	12.29	1.58
30+	0.43	7.51	1.36	10.57	16.28	6.41	3.19	6.17	0.37

Fig 3.2 Enrollment of Population Aged 5 to 24 Years in All Learning Institution by Sex, Tigray Region: 1994

computed to be 10.2 percent. This value is higher than Mali and Niger (each 7 percent) but lower than the Sudan (22 percent) for 1990 (UNESCO, 1993).

In urban areas, however, relatively higher values, about 136 percent for primary, 67 percent for junior secondary and 41 percent for senior secondary levels are observed. The value computed for primary schools pointed out that students whose age is outside the eligible age for primary (7-12 years) are registered in this level. Regarding enrollment in zones, highest enrollment ratio (73.6 percent) for primary level is recorded for Misrakawi zone whereas for the rest of the levels the highest ratio is observed for Debubawi zone, i.e: 26.0 percent for junior high school and 13.1 percent for senior secondary levels. Mirabawi zone exhibits the lowest enrollment ratios for each of the level.

It is believed that the availability of schools in urban areas is better than in rural areas. This creates better opportunity for schooling of children of urban dwellers to a higher degree than their counterparts in rural areas. As a result enrollment ratios for urban areas are observed to exceed that of the rural in all the levels. The enrollment ratios are 136.1 against 38 percent for primary, 67.1 percent as opposed to only four percent for junior secondary and 41.1 percent verses one percent for senior secondary. Similar pattern is observed for all zones.

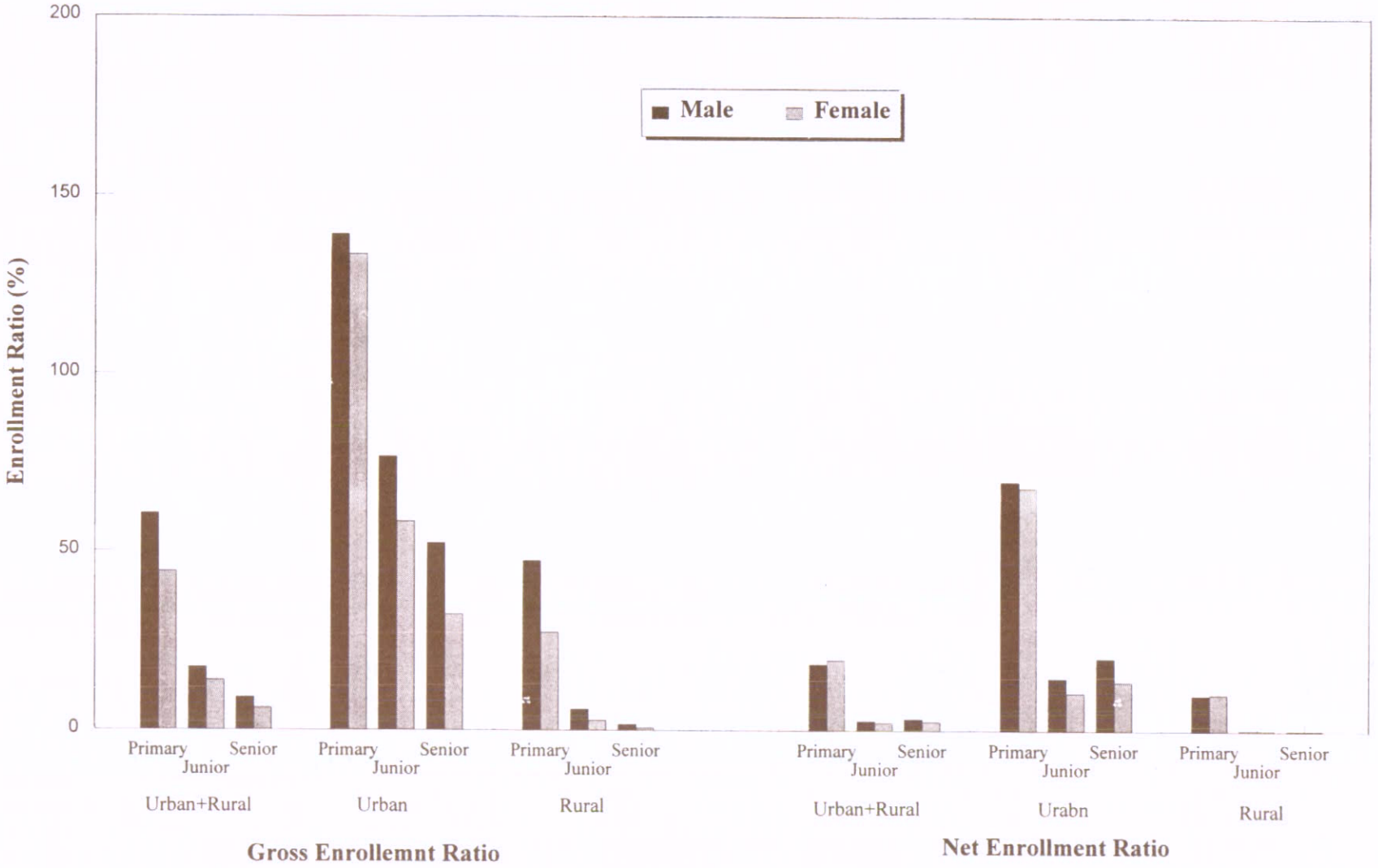
The table also reveals that male participation is relatively higher than female in all levels. Similar pattern is observed for both urban and rural areas and all zones.

Comparison of the gross enrollment ratio of the 1994 data for urban Tigray with that of the 1984 Population and Housing Census result of the respective population pointed out that the gross enrollment ratio at the primary level is found to be higher (136 percent) than the corresponding result (114 percent) of the 1984 census. With regard to junior secondary and senior secondary levels, however, the ratio is lower in the 1994 Population and Housing Census than that of the 1984 (83 percent for junior secondary school and 57 percent for senior secondary school). As opposed to the results of the 1994 Population and Housing Census for the urban areas, these ratios between the sexes indicates that females (123 percent) participation was relatively better than males (105 percent) in only primary level whereas relatively more males (90 percent and 81 percent) than females (77.0 percent and 41 percent) were enrolled in junior and

Table 3.3 Gross Enrollment Ratios by Sex, Level of School, Zone, Urban and Rural, Tigray Region: 1994

ZONE/URBAN/ RURAL	GROSS ENROLLMENT RATIOS								
	PRIMARY SCHOOL			JUNIOR SEC. SCHOOL			SENIOR SEC. SCHOOL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TIGRAY REGION									
Urban+Rural	52.6	60.6	44.3	15.8	17.5	13.9	7.5	9.1	6.1
Urban	136.3	139.1	133.5	67.2	76.5	58.4	41.2	52.3	32.3
Rural	37.7	47.3	27.4	4.4	5.8	2.8	1.2	1.6	0.7
MIRABAWI									
Urban+Rural	33.2	37.1	27.1	6.8	8.0	5.4	2.4	3.3	1.5
Urban	133.2	144.6	123.0	41.4	50.7	31.9	17.1	25.5	10.5
Rural	19.5	24.7	14.1	1.8	2.2	1.2	0.5	0.8	0.2
MEHAKELEGNAW									
Urban+Rural	57.4	67.4	46.9	12.6	14.2	10.8	5.5	6.2	4.8
Urban	149.3	146.3	125.2	70.9	79.9	62.6	43.8	53.0	37.1
Rural	47.5	59.3	34.9	4.9	6.5	2.9	1.1	1.5	0.8
MISRAKAWI									
Urban+Rural	73.6	90.3	56.4	18.4	21.2	15.3	9.2	10.5	8.0
Urban	139.7	145.0	134.6	73.8	85.8	62.1	48.8	57.9	41.6
Rural	61.7	80.9	41.7	7.3	9.2	5.1	2.2	2.9	1.5
DEBUBAWI									
Urban+Rural	51.3	53.7	48.7	26.4	27.6	24.1	13.1	16.6	9.9
Urban	130.3	131.3	129.4	72.5	81.0	64.4	45.8	59.4	34.6
Rural	25.1	29.6	20.2	4.0	5.6	2.1	1.1	1.8	0.6

Fig. 3.3 Gross and Net Enrollment Ratios of Primary, Junior Sec. and Senior Secondary Levels by Sex, Urban and Rural, Tigray Region: 1994



senior secondary schools, respectively, which is in accordance with the pattern observed in the results of the 1984 (CSA, 1991).

The gross enrollment ratio does not allow for matching of eligible age groups with corresponding levels of schooling. Inorder to overcome this limitation the net enrollment ratio is employed in the following sub-section.

b) Net Enrollment Ratio

The net enrollment ratio is defined as the ratio between the number of pupils of eligible age into a particular level by the population of the corresponding age group and is usually defined in percent. In other words, the net enrollment ratio for primary level is the ratio of children aged 7-12 and are in primary level to the total number of children in age group 7-12. Similarly the net enrollment ratio for junior secondary level is defined as the ratio of children aged 13-14 and are in junior secondary level to the total number of children in age group 13-14. This ratio in senior secondary level is obtained by dividing number of children aged 15-18 and are in senior secondary level to the total number of children in age group 15-18. The net enrollment ratio for different levels is calculated and is presented in Table 3.4.

The table reveals that the net enrollment ratio for primary, junior secondary and senior secondary levels are 18.9, 2.4 and 2.8, respectively. These results are interpreted as among 100 children aged 7-12 about 19 of them were attending primary education during the census enumeration. By the same token, among 100 children aged 13-14 and 15-18 about 2 and 3 were attending in junior secondary and senior secondary levels, respectively.

As far as net enrollment ratios for zones are concerned the highest rate for primary school level is recorded in Misrakawi zone (27.1 percent), for junior secondary in Mehakelegnaw zone (12.6 percent) and senior secondary in Debubawi zone (5.1 percent). On the otherhand, the lowest ratio for all levels is exhibited in Mirabawi zone.

The data in table also indicate no significant difference between the two sexes in each level. However, slightly higher net enrollment ratio for females than for males is observed for

Table 3.4 Net Enrollment Ratios by Sex, Level of School, Zone, Urban and Rural, Tigray Region: 1994

ZONE/URBAN/ RURAL	NET ENROLLMENT RATIOS								
	PRIMARY SCHOOL			JUNIOR SEC. SCHOOL			SENIOR SEC. SCHOOL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TIGRAY REGION									
Urban+Rural	18.89	18.43	19.38	2.42	2.60	2.21	2.82	3.18	2.49
Urban	68.23	68.64	67.85	12.48	14.56	10.47	16.54	20.19	13.62
Rural	10.06	9.93	10.20	0.19	0.22	0.15	0.23	0.24	0.21
MIRABAWI									
Urban+Rural	11.34	10.23	12.48	0.65	0.84	0.42	0.51	0.56	0.47
Urban	59.75	59.99	59.53	4.76	6.65	2.89	4.21	5.10	3.51
Rural	5.28	4.48	6.12	0.05	0.05	0.03	0.05	0.06	0.03
MEHAKELEGNAW									
Urban+Rural	15.95	15.29	16.64	12.64	14.15	10.87	2.11	2.10	2.11
Urban	72.43	71.47	73.35	70.86	79.87	62.61	18.92	20.99	17.38
Rural	9.83	9.51	10.17	4.88	6.50	2.92	0.21	0.21	0.21
MISRAKAWI									
Urban+Rural	27.06	28.81	25.26	2.70	2.97	2.40	3.53	3.71	3.37
Urban	71.85	71.83	71.88	13.67	16.11	11.27	20.47	23.80	17.85
Rural	18.99	21.40	16.48	0.50	0.53	0.46	0.51	0.46	0.57
DEBUBAWI									
Urban+Rural	23.34	22.11	24.64	4.70	5.35	3.96	5.08	6.39	3.92
Urban	68.32	69.45	67.22	14.14	17.46	10.96	18.44	23.81	14.01
Rural	8.47	7.40	9.65	0.25	0.35	0.13	0.21	0.33	0.10

primary level in all zones except Misrakawi where the reverse is depicted. This holds true for both urban and rural areas.

The net enrollment ratios for urban areas are observed to be very high compared to rural. The results are 68.2 percent for primary, 12.5 percent for junior secondary and 16.5 percent for senior secondary, in urban areas. The corresponding figures for the rural areas are 10.1 percent, 0.2 percent and 0.2 percent for primary, junior secondary and senior secondary levels, respectively. In urban areas the participation of boys (14.6 percent and 20.2 percent) is relatively higher compared to girls (10.5 percent and 13.6 percent) in junior and senior secondary schools, respectively. No significant difference between the two sexes is recorded in primary level.

Net enrolment ratio for urban areas is found to be higher than the corresponding figure (63 percent) in the 1984 Population and Housing Census results at primary level only. For the rest the reverse is true. These ratios for junior and senior secondary schools in the 1984 census result were 24 percent and 29 percent, respectively (CSA,1991).

c) School Progression

This section presents data on age and grade distribution of currently enrolled students. The classification of students by single year age and grade would throw some light on the grade progression of students in the school system. According to the existing school system of the country at the time of 1994 census, the length of years of schooling in primary level is six years, in junior secondary it is two years and in senior secondary it is four years. The onset age of formal schooling in the country is set to be seven years though there are pupils who commence before and after this age.

Tables 3.5(a) - 3.5(c) present numerical distribution of students by single year age and grade for the total, urban and rural areas, respectively. Assuming a student advances a grade each year and considering the age at which students start formal schooling, the data shows how students progress in the school system. The tables indicate the actual number of students who can be considered as being progressed normally, scholastically retarded and/or accelerated.

Table 3.5(a) Population Aged Five Years and Over Currently Attending School by Grade and Sex, Tigray-Urban+Rural: 1994

AGE / SEX	GRADE 0	1	2	3	4	5	6	7	8	9	10	11	12	Total
Under 7														
Total. . . .	3753	3235	670	59	0	0	0	0	0	0	0	0	0	7717
Male. . . .	1958	1626	367	34	0	0	0	0	0	0	0	0	0	3985
Female. . .	1795	1609	303	25	0	0	0	0	0	0	0	0	0	3732
7 Years														
Total. . . .	1784	6230	1453	484	62	0	0	0	0	0	0	0	0	10013
Male. . . .	889	3092	741	240	46	0	0	0	0	0	0	0	0	5008
Female. . .	895	3138	712	244	16	0	0	0	0	0	0	0	0	5005
8 Years														
Total. . . .	0	6898	3338	933	349	35	0	0	0	0	0	0	0	11553
Male. . . .	0	3487	1771	490	185	15	0	0	0	0	0	0	0	5948
Female. . .	0	3411	1567	443	164	20	0	0	0	0	0	0	0	5605
9 Years														
Total. . . .	0	5573	4793	2134	811	235	29	0	0	0	0	0	0	13575
Male. . . .	0	2644	2294	1098	402	115	15	0	0	0	0	0	0	6568
Female. . .	0	2929	2499	1036	409	120	14	0	0	0	0	0	0	7007
10 Years														
Total. . . .	0	6578	7649	4851	2507	621	210	25	0	0	0	0	0	22441
Male. . . .	0	2821	3599	2591	1461	359	111	19	0	0	0	0	0	10961
Female. . .	0	3757	4050	2260	1046	262	99	6	0	0	0	0	0	11480
11 Years														
Total. . . .	0	3842	5681	4522	2952	866	402	92	19	0	0	0	0	18376
Male. . . .	0	1741	2776	2248	1595	512	215	55	4	0	0	0	0	9146
Female. . .	0	2101	2905	2274	1357	354	187	37	15	0	0	0	0	9230
12 Years														
Total. . . .	0	4552	7822	7006	5681	1961	1057	421	114	29	0	0	0	28643
Male. . . .	0	2304	3703	3416	3136	1097	619	224	88	19	0	0	0	14606
Female. . .	0	2248	4119	3590	2545	864	438	197	26	10	0	0	0	14037
13 Years														
Total. . . .	0	3168	6294	7298	6510	2449	1620	909	398	132	16	0	0	28794
Male. . . .	0	1573	3288	3740	3751	1435	882	528	230	67	10	0	0	15504
Female. . .	0	1595	3006	3558	2759	1014	738	381	168	65	6	0	0	13290
14 Years														
Total. . . .	0	2212	5367	6153	6156	2745	2301	1646	830	392	153	34	0	27989
Male. . . .	0	1317	2983	3352	3461	1610	1210	899	525	267	92	25	0	15741
Female. . .	0	895	2384	2801	2695	1135	1091	747	305	125	61	9	0	12248
15 Years														
Total. . . .	0	2029	5043	6265	6456	2736	2360	1781	1324	677	314	91	52	29128
Male. . . .	0	1125	2813	3373	3684	1609	1193	952	791	378	173	66	34	16191
Female. . .	0	904	2230	2892	2772	1127	1167	829	533	299	141	25	18	12937
16 Years														
Total. . . .	0	1262	3163	4353	5023	2291	1952	1537	1319	1080	495	330	101	22906
Male. . . .	0	740	1897	2638	3105	1317	975	759	681	571	299	173	46	13201
Female. . .	0	522	1266	1715	1918	974	977	778	638	509	196	157	55	9705
17 Years														
Total. . . .	0	850	2331	3438	3724	1600	1516	1172	1006	854	615	396	254	17756
Male. . . .	0	600	1573	2167	2461	1009	862	621	526	468	329	193	155	10964
Female. . .	0	250	758	1271	1263	591	654	551	480	386	286	203	99	6792
18 Years														
Total. . . .	0	1045	2752	3783	4268	2068	1887	1233	1560	1181	1034	848	744	22403
Male. . . .	0	733	1860	2516	3024	1404	1131	673	835	616	546	446	407	14191
Female. . .	0	312	892	1267	1244	664	756	560	725	565	488	402	337	8212
19 Years														
Total. . . .	0	411	1148	1684	2027	965	839	636	555	568	402	395	430	10060
Male. . . .	0	317	819	1189	1457	735	593	378	294	260	215	222	242	6721
Female. . .	0	94	329	495	570	230	246	258	261	308	187	173	188	3339
20 + Years														
Total. . . .	1583	2185	8164	11710	10973	7552	6219	4054	4104	2660	2020	2525	5413	69162
Male. . . .	802	1688	6784	9306	8763	6024	4408	2885	2724	1558	1170	1557	3397	51066
Female. . .	1924	497	1380	2404	2210	1528	1811	1169	1380	1102	850	968	2016	19239
Total														
Total. . . .	7120	50070	65668	64673	57499	26124	20392	13506	11229	7573	5049	4619	6994	340516
Male. . . .	3649	25808	37268	38398	36531	17241	12214	7993	6698	4204	2834	2682	4281	199801
Female. . .	4614	24262	28400	26275	20968	8883	8178	5513	4531	3369	2215	1937	2713	141858

Accelerated - Above the two lines Normal - Between the two lines Retarded - Below the two lines

Table 3.5(b) Population Aged Five Years and Over Currently Attending School by Grade and Sex, Tigray-Urban:1994

AGE / SEX	GRADE													
	0	1	2	3	4	5	6	7	8	9	10	11	12	Total
Under 7														
Total.	1143	2424	322	20	0	0	0	0	0	0	0	0	0	3909
Male. . . .	594	1226	163	20	0	0	0	0	0	0	0	0	0	2003
Female. . .	549	1198	159	0	0	0	0	0	0	0	0	0	0	1906
7 Years														
Total.	440	4863	1032	218	21	0	0	0	0	0	0	0	0	6574
Male. . . .	208	2401	557	74	5	0	0	0	0	0	0	0	0	3245
Female. . .	232	2462	475	144	16	0	0	0	0	0	0	0	0	3329
8 Years														
Total.	0	4668	2516	695	167	35	0	0	0	0	0	0	0	8081
Male. . . .	0	2263	1298	384	104	15	0	0	0	0	0	0	0	4064
Female. . .	0	2405	1218	311	63	20	0	0	0	0	0	0	0	4017
9 Years														
Total.	0	3074	2959	1602	635	148	29	0	0	0	0	0	0	8447
Male. . . .	0	1433	1458	837	326	75	15	0	0	0	0	0	0	4144
Female. . .	0	1641	1501	765	309	73	14	0	0	0	0	0	0	4303
10 Years														
Total.	0	2456	3757	3114	1964	497	163	14	0	0	0	0	0	11965
Male. . . .	0	1051	1758	1662	1137	256	96	14	0	0	0	0	0	5974
Female. . .	0	1405	1999	1452	827	241	67	0	0	0	0	0	0	5991
11 Years														
Total.	0	970	2117	2268	2251	758	357	71	19	0	0	0	0	8811
Male. . . .	0	366	961	993	1181	445	180	44	4	0	0	0	0	4174
Female. . .	0	604	1156	1275	1070	313	177	27	15	0	0	0	0	4637
12 Years														
Total.	0	1131	2207	2946	3702	1707	954	396	83	24	0	0	0	13150
Male. . . .	0	481	909	1337	1888	951	557	204	62	19	0	0	0	6408
Female. . .	0	650	1298	1609	1814	756	397	192	21	5	0	0	0	6742
13 Years														
Total.	0	598	1336	2177	3449	1983	1458	839	383	132	16	0	0	12371
Male. . . .	0	241	543	898	1705	1147	757	483	225	67	10	0	0	6076
Female. . .	0	357	793	1279	1744	836	701	356	158	65	6	0	0	6295
14 Years														
Total.	0	333	926	1534	2545	2054	2071	1542	779	383	142	34	0	12343
Male. . . .	0	154	370	630	1218	1087	1062	826	495	263	92	25	0	6222
Female. . .	0	179	556	904	1327	967	1009	716	284	120	50	9	0	6121
15 Years														
Total.	0	277	655	1167	1896	1538	1859	1561	1241	640	310	91	52	11287
Male. . . .	0	99	244	469	871	755	902	816	735	346	173	66	34	5510
Female. . .	0	178	411	698	1025	783	957	745	506	294	137	25	18	5777
16 Years														
Total.	0	182	374	757	1051	1058	1398	1275	1217	1016	475	325	96	9224
Male. . . .	0	67	150	320	531	502	603	601	624	539	289	168	41	4435
Female. . .	0	115	224	437	520	556	795	674	593	477	186	157	55	4789
17 Years														
Total.	0	157	220	460	584	576	979	849	896	803	566	376	239	6705
Male. . . .	0	64	90	263	325	327	497	423	446	436	305	183	145	3504
Female. . .	0	93	130	197	259	249	482	426	450	367	261	193	94	3201
18 Years														
Total.	0	149	285	529	607	616	974	907	1292	1047	928	783	709	8826
Male. . . .	0	63	131	220	277	330	502	464	678	534	501	421	397	4518
Female. . .	0	86	154	309	330	286	472	443	614	513	427	362	312	4308
19 Years														
Total.	0	58	87	195	259	231	340	370	425	467	376	366	405	3579
Male. . . .	0	33	41	75	113	121	186	188	213	204	199	217	232	1822
Female. . .	0	25	46	120	146	110	154	182	212	263	177	149	173	1757
20 + above														
Total.	1583	604	1250	2536	2881	2560	3220	2357	2577	1945	1659	2111	4550	29833
Male. . . .	802	400	813	1410	1720	1595	1850	1516	1594	1038	903	1262	2754	17657
Female. . .	1924	204	437	1126	1161	965	1370	841	983	907	756	849	1796	13319
Total														
Total.	3166	21944	20043	20218	22012	13761	13802	10181	8912	6457	4472	4086	6051	155105
Male. . . .	1604	10342	9486	9592	11401	7606	7207	5579	5076	3446	2472	2342	3603	79756
Female. . .	2705	11602	10557	10626	10611	6155	6595	4602	3836	3011	2000	1744	2448	76492

Accelerated - Above the two lines Normal - Between the two lines Retarded - Below the two lines

Table 3.5(c) Population Aged Five Years and Over Currently Attending School by Grade and Sex, Tigray-Rural:1994

AGE / SEX	GRADE 0	1	2	3	4	5	6	7	8	9	10	11	12	Total
Under 7														
Total.	2610	811	348	39	0	0	0	0	0	0	0	0	0	3808
Male. . . .	1364	400	204	14	0	0	0	0	0	0	0	0	0	1982
Female. . .	1246	411	144	25	0	0	0	0	0	0	0	0	0	1826
7 Years														
Total.	1344	1367	421	266	41	0	0	0	0	0	0	0	0	3439
Male. . . .	681	691	184	166	41	0	0	0	0	0	0	0	0	1763
Female. . .	663	676	237	100	0	0	0	0	0	0	0	0	0	1676
8 Years														
Total.	0	2230	822	238	182	0	0	0	0	0	0	0	0	3472
Male. . . .	0	1224	473	106	81	0	0	0	0	0	0	0	0	1884
Female. . .	0	1006	349	132	101	0	0	0	0	0	0	0	0	1588
9 Years														
Total.	0	2499	1834	532	176	87	0	0	0	0	0	0	0	5128
Male. . . .	0	1211	836	261	76	40	0	0	0	0	0	0	0	2424
Female. . .	0	1288	998	271	100	47	0	0	0	0	0	0	0	2704
10 Years														
Total.	0	4122	3892	1737	543	124	47	11	0	0	0	0	0	10476
Male. . . .	0	1770	1841	929	324	103	15	5	0	0	0	0	0	4987
Female. . .	0	2352	2051	808	219	21	32	6	0	0	0	0	0	5489
11 Years														
Total.	0	2872	3564	2254	701	108	45	21	0	0	0	0	0	9565
Male. . . .	0	1375	1815	1255	414	67	35	11	0	0	0	0	0	4972
Female. . .	0	1497	1749	999	287	41	10	10	0	0	0	0	0	4593
12 Years														
Total.	0	3421	5615	4060	1979	254	103	25	31	5	0	0	0	15493
Male. . . .	0	1823	2794	2079	1248	146	62	20	26	0	0	0	0	8198
Female. . .	0	1598	2821	1981	731	108	41	5	5	5	0	0	0	7295
13 Years														
Total.	0	2570	4958	5121	3061	466	162	70	15	0	0	0	0	16423
Male. . . .	0	1332	2745	2842	2046	288	125	45	5	0	0	0	0	9428
Female. . .	0	1238	2213	2279	1015	178	37	25	10	0	0	0	0	6995
14 Years														
Total.	0	1879	4441	4619	3611	691	230	104	51	9	11	0	0	15646
Male. . . .	0	1163	2613	2722	2243	523	148	73	30	4	0	0	0	9519
Female. . .	0	716	1828	1897	1368	168	82	31	21	5	11	0	0	6127
15 Years														
Total.	0	1752	4388	5098	4560	1198	501	220	83	37	4	0	0	17841
Male. . . .	0	1026	2569	2904	2813	854	291	136	56	32	0	0	0	10681
Female. . .	0	726	1819	2194	1747	344	210	84	27	5	4	0	0	7160
16 Years														
Total.	0	1080	2789	3596	3972	1233	554	262	102	64	20	5	5	13682
Male. . . .	0	673	1747	2318	2574	815	372	158	57	32	10	5	5	8766
Female. . .	0	407	1042	1278	1398	418	182	104	45	32	10	0	0	4916
17 Years														
Total.	0	693	2111	2978	3140	1024	537	323	110	51	49	20	15	11051
Male. . . .	0	536	1483	1904	2136	682	365	198	80	32	24	10	10	7460
Female. . .	0	157	628	1074	1004	342	172	125	30	19	25	10	5	3591
18 Years														
Total.	0	896	2467	3254	3661	1452	913	326	268	134	106	65	35	13577
Male. . . .	0	670	1729	2296	2747	1074	629	209	157	82	45	25	10	9673
Female. . .	0	226	738	958	914	378	284	117	111	52	61	40	25	3904
19 Years														
Total.	0	353	1061	1489	1768	734	499	266	130	101	26	29	25	6481
Male. . . .	0	284	778	1114	1344	614	407	190	81	56	16	5	10	4899
Female. . .	0	69	283	375	424	120	92	76	49	45	10	24	15	1582
20 + Years														
Total.	0	1581	6914	9174	8092	4992	2999	1697	1527	715	361	414	863	39329
Male. . . .	0	1288	5971	7896	7043	4429	2558	1369	1130	520	267	295	643	33409
Female. . .	0	293	943	1278	1049	563	441	328	397	195	94	119	220	5920
Total														
Total.	3954	28126	45625	44455	35487	12363	6590	3325	2317	1116	577	533	943	185411
Male. . . .	2045	15466	27782	28806	25130	9635	5007	2414	1622	758	362	340	678	120045
Female. . .	1909	12660	17843	15649	10357	2728	1583	911	695	358	215	193	265	65366

Accelerated - Above the two lines Normal - Between the two lines Retarded - Below the two lines

A student is scholastically retarded if the grade in which he/she is enrolled is below the grade which is normally expected for his/her age. On the other hand, a student is scholastically accelerated if the grade in which he/she is enrolled is above the grade which is normally expected for his/her age (shryock & et.al. 1976). Hence, one could extend the definition to consider a student as progressing normally if he/she enrolls in a grade that is appropriate for his/her age.

3.3. Educational Attainment

The general level and size of the population which are very much essential in development planning can be assessed using the education attainment data. Educational attainment is defined as the highest grade completed within the most advanced level attended in the educational system of the country, where the education was received. For this purpose, a grade is defined as a stage of instruction usually covered in the course of the school year.

The census questionnaire included data on educational attainment. Irrespective of the educational status that a respondent may have had, every person aged 5 years and over was solicited to state whether he/she was literate or not. If literate, respondents were further enquired to report the highest grade completed in the formal education system. Following the recommendation of the United Nations that states age of 10 years as the minimum age for compiling and analyzing data on educational attainment the educational attainment of the population classified by sex, age, ethnic group, religion and grade are discussed below.

3.3.1 Literacy Status by Zone, and Urban and Rural

Table 3.6 reveals that only 20.5 percent of the Tigray population stated that they are literate. This rate is lower than values for some of the least developed countries such as Mali (32 percent) Chad (29.8 percent) and the Sudan (27.1 percent) for 1990 (UNESCO, 1993). Among the urban dwellers of Tigray region 57.2 percent stated that they are literate and 42.6 percent are illiterate. The corresponding figures for the rural areas are 13.7 percent and 86.2 percent; respectively. This suggests that literacy status in the region is very low. The fact that relatively significant proportion of the population of urban areas have reported to be literate could be attributed to the relatively better school facility available in the urban areas, the influx of literate

Table 3.6 Percentage Distribution of Population Aged 10 Years and Over by Sex, Literacy Status, Zone, Urban and Rural, Tigray Region: 1994

ZONE	LITERATE			ILLITERATE			NOT STATED		
URBAN/RURAL	Total	Male	Female	Total	Male	Female	Total	Male	Female
TIGRAY REGION									
Urban+Rural	20.47	27.80	13.61	79.36	72.00	86.26	0.16	0.20	0.13
Urban	57.20	71.18	64.34	42.57	28.51	53.50	0.23	0.32	0.16
Rural	13.68	20.67	6.89	86.17	79.15	92.98	0.15	0.18	0.15
MIRABAWI									
Urban+Rural	13.20	18.03	8.33	86.63	81.75	91.55	0.17	0.22	0.11
Urban	46.49	59.34	36.24	53.26	40.19	63.68	0.25	0.47	0.07
Rural	8.65	13.11	3.99	91.20	86.70	95.88	0.15	0.19	0.12
MEHAKELEGNAW									
Urban+Rural	20.75	28.68	13.28	79.09	71.12	86.59	0.20	0.20	0.10
Urban	60.29	74.77	49.93	39.48	25.55	49.95	0.23	0.38	0.13
Rural	16.30	24.22	8.66	83.54	75.50	91.21	0.16	0.18	0.13
MISRAKAWI									
Urban+Rural	25.45	35.90	16.27	74.35	63.86	83.57	0.19	0.23	0.16
Urban	61.00	75.55	49.94	38.79	24.18	49.89	0.20	0.30	0.20
Rural	19.25	29.61	9.92	80.56	70.16	89.92	0.19	0.23	0.16
DEBUBAWI									
Urban+Rural	22.93	30.11	16.36	76.92	69.72	83.53	0.14	0.17	0.12
Urban	58.67	73.03	47.34	41.11	26.71	52.46	0.22	0.24	0.19
Rural	10.97	17.20	4.97	88.91	82.65	94.94	0.12	0.15	0.09

population from rural to urban areas searching for jobs and other better opportunity. The table also shows that relatively more males than females are found to be literate in both urban and rural areas. For instance; 71.2 percent, 20.7 percent and 27.8 percent of the males in urban, rural and the region as a whole are literate while the corresponding figure for females are 64.3 percent, 6.9 percent and 13.6 percent; respectively.

Literacy rate among the zones ranged from 25.5 percent for Misrakawi to 13.2 percent for Mirabawi zones. Literacy rate is higher in urban than in rural areas and for males than females in all Zones.

3.3.2. Educational Attainment by Grade

The literate population are further classified by grade. The percentage distribution is given in Table 3.7. The table indicates that out of the total literate population the majority (69.6 percent) have completed grades in primary schools followed by 14.3 percent of the population who have attained "non-regular education" (level of education that could not be expressed in the regular school system). Population who have completed senior secondary, junior secondary and above secondary education accounted for 7.8 percent, 6.7 percent and 1.7 percent of the total literate population of the region, respectively. Almost similar pattern has also been observed for rural areas. In urban areas most (62.4 percent) of the literate population have completed grades 1-6. Unlike the rural population, it is followed by those who have completed grades in senior-secondary (15.5 percent). Literate population whose education described as 'non-regular' and above secondary education formed 6.6 percent and 3.2 percent, respectively.

In all zones, excepting Debubawi, the majority of literate population, about three-quarters, have been reported to have completed grades in primary level. On the otherhand, in Debubawi zone 58 percent of the literates completed grades 1-6.

3.3.3. Educational Attainment by Age

An attempt was made to examine the distribution of population aged ten years and over classified by age group and highest grade completed. The percentage distribution is given in

Table 3.7 Percentage Distribution of Literate Population Aged 10 Years and Over by Highest Grade Completed, Sex, Zone, Urban and Rural, Tigray Region: 1994

Zone/Urban Rural	Sex	1-6	7-8	9-12	Above 12	Non Regular	Literate
TIGRAY REGION							
Urban+Rural	Total	69.58	6.67	7.77	1.73	14.25	100.00
	Male	66.55	6.12	7.08	1.88	18.36	100.00
	Female	75.41	7.71	9.06	1.44	6.38	100.00
Urban	Total	62.37	12.31	15.50	3.24	6.58	100.00
	Male	59.49	12.96	16.68	4.36	6.52	100.00
	Female	65.81	11.53	14.09	1.91	6.65	100.00
Rural	Total	78.47	2.31	1.78	0.56	16.87	100.00
	Male	70.54	2.27	1.65	0.48	25.06	100.00
	Female	88.61	2.43	2.17	0.79	6.00	100.00
MIRABAWI							
Urban+Rural	Total	73.79	4.40	4.84	1.12	15.85	100.00
	Male	68.93	4.09	4.89	1.30	20.80	100.00
	Female	84.42	5.08	4.74	0.72	5.05	100.00
Urban	Total	75.54	8.23	9.24	1.79	5.20	100.00
	Male	71.43	8.78	11.23	2.54	6.01	100.00
	Female	80.89	7.50	6.65	0.81	4.15	100.00
Rural	Total	72.51	1.57	1.60	0.62	23.69	100.00
	Male	67.57	1.55	1.48	0.63	28.77	100.00
	Female	89.39	1.65	2.07	0.60	6.31	100.00
MEHAKELEGNAW							
Urban+Rural	Total	75.82	4.72	5.44	1.61	12.41	100.00
	Male	73.19	4.16	4.70	1.63	16.32	100.00
	Female	81.16	5.87	6.94	1.56	4.47	100.00
Urban	Total	64.02	11.54	15.33	3.91	5.19	100.00
	Male	61.52	11.65	16.39	5.35	5.09	100.00
	Female	66.80	11.42	14.16	2.31	5.30	100.00
Rural	Total	80.73	1.89	1.32	0.65	15.42	100.00
	Male	76.70	1.91	1.18	0.51	19.70	100.00
	Female	91.60	1.83	1.69	1.02	3.87	100.00
MISRAKAWI							
Urban+Rural	Total	74.00	6.81	6.94	1.21	11.04	100.00
	Male	73.02	6.24	6.01	1.29	13.45	100.00
	Female	75.90	7.92	8.74	1.07	6.37	100.00
Urban	Total	63.09	13.20	15.30	2.63	5.78	100.00
	Male	62.59	13.89	15.66	3.48	4.38	100.00
	Female	63.67	12.41	14.88	1.66	7.37	100.00
Rural	Total	80.02	3.28	2.31	0.43	13.95	100.00
	Male	77.24	3.14	2.09	0.40	17.13	100.00
	Female	87.50	3.66	2.91	0.50	5.43	100.00
DEBUBAWI							
Urban+Rural	Total	58.17	9.57	12.08	2.53	17.65	100.00
	Male	53.30	9.18	11.57	2.92	23.02	100.00
	Female	66.38	10.23	12.94	1.88	8.57	100.00
Urban	Total	57.14	13.58	17.65	3.65	7.97	100.00
	Male	53.43	14.51	19.01	4.88	8.16	100.00
	Female	61.64	12.44	16.01	2.16	7.74	100.00
Rural	Total	60.02	2.39	2.11	0.52	34.96	100.00
	Male	53.14	2.37	2.09	0.41	42.00	100.00
	Female	82.98	2.47	2.20	0.89	11.46	100.00

Tables 3.8(a)-3.8(c).

The data in the tables show that the proportion of literate population gradually increases up to age 20 years and thereafter it declines steadily. This pattern holds true for each sex and the rural areas. In urban areas, however, literacy attains its highest values(about 80 percent) even at early age groups 10-14 and 15-19, the proportion declines thereafter with advancing ages. In all age groups higher proportion of male literate population than female is observed and the difference is more glaring as age increases. The tables also display that the proportion of literate population who attained non-regular education increases as age advances. In all age groups, except in 35-49, higher proportion for females than for males is observed for this category. In these exceptional age groups proportion of literate male who attained non-regular education exceed their female counterparts. Moreover in the age groups 20-34 the proportion of literate male who completed grades in primary level is higher than their female counterparts.

3.3.4. Educational Attainment by Ethnicity

Table 3.9 presents data classified by highest grade completed and major ethnic groups. The table reveals that illiteracy is relatively more among the Amharas and Tigraways (about 79.0 percent) followed by the Sahos (73.8 percent) out of their respective total population. The table also indicates that most of the Tigraways (70.3 percent), Sahos (68.2 percent) and Amharas (53.2 percent) out of their respective total literate population in Tigray Region have completed grades 1-6.

3.3.5. Educational Attainment by Religion

The distribution of the population aged ten years and over by religion and highest grade completed is presented in Table 3.10. The table displays that 26.5 percent of the Muslims are literate while out of total Christians 20.2 percent are literate. Muslim persons who are illiterates accounted for slightly lower than three-quarters (73.3 percent) of the total followers of the religion. About 80 percent of the Christians are also illiterate. The literacy status among the different denominations of the Christians out of their respective total population indicates that the majority, 79.8 percent and 56.0 percent of the followers of the Orthodox and the Catholic

Table 3.8(a) Percentage Distribution of Population Ten Years and Over by Age Group, Sex and Highest Grade Completed, Tigray Urban+Rural: 1994

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
		URBAN+RURAL								
10 - 14	Total	94.5	1.8	0.2	0.0	3.5	27.6	72.2	0.2	100.0
	Male	92.8	2.1	0.2	0.0	4.9	28.2	71.6	0.2	100.0
	Female	96.4	1.5	0.2	0.0	1.9	27.0	72.9	0.1	100.0
15 - 19	Total	77.6	9.8	6.7	0.1	5.7	32.5	67.3	0.2	100.0
	Male	77.2	8.6	6.0	0.1	8.1	40.4	59.1	0.5	100.0
	Female	78.3	11.6	7.7	0.2	2.2	25.1	74.6	0.2	100.0
20 - 24	Total	60.1	10.5	17.2	2.8	9.3	26.1	73.7	0.2	100.0
	Male	64.3	8.3	13.2	2.2	12.0	37.3	62.5	0.3	100.0
	Female	51.7	15.1	25.4	3.9	4.0	16.2	83.6	0.2	100.0
25 - 29	Total	55.8	8.9	16.2	5.1	14.0	21.5	78.3	0.2	100.0
	Male	57.0	8.5	13.1	5.4	16.1	33.4	66.4	0.2	100.0
	Female	52.9	9.6	23.8	4.6	9.0	11.6	88.3	0.1	100.0
30 - 34	Total	53.4	6.5	14.1	5.6	20.4	17.0	82.9	0.1	100.0
	Male	54.5	6.2	13.1	5.5	20.8	30.5	69.3	0.2	100.0
	Female	50.4	7.4	17.2	6.0	19.1	7.4	92.6	0.1	100.0
35 - 39	Total	49.7	6.6	10.7	4.9	28.1	15.5	84.4	0.1	100.0
	Male	50.1	6.6	10.6	4.9	27.8	27.4	72.3	0.2	100.0
	Female	48.5	6.8	11.0	4.7	29.1	6.1	93.8	0.1	100.0
40 - 44	Total	45.8	5.5	8.2	3.3	37.1	11.7	88.2	0.1	100.0
	Male	45.8	5.5	8.7	3.4	36.6	21.4	78.4	0.2	100.0
	Female	46.1	5.5	5.4	2.7	40.4	3.1	96.9	0.1	100.0

Table 3.8(a) Cont'd

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
		URBAN+RURAL								
45 - 49	Total	43.2	4.8	5.6	1.8	44.6	10.9	89.0	0.1	100.0
	Male	43.0	4.8	6.1	2.1	44.0	18.2	81.6	0.2	100.0
	Female	44.8	4.4	2.1	0.3	48.5	2.8	97.2	0.0	100.0
50 - 54	Total	36.6	4.5	3.0	1.3	54.6	8.0	91.9	0.1	100.0
	Male	35.9	4.4	3.2	1.4	55.1	15.2	84.7	0.2	100.0
	Female	42.7	5.6	1.1	0.5	50.1	1.6	98.3	0.1	100.0
55 & above	Total	32.1	3.9	2.3	0.4	61.3	7.8	92.1	0.1	100.0
	Male	31.1	3.6	2.4	0.3	62.6	13.6	86.3	0.1	100.0
	Female	40.8	5.9	1.2	1.4	50.6	1.7	98.2	0.1	100.0
Not stated	Total	21.7	2.4	1.2	0.5	74.2	5.8	94.0	0.2	100.0
	Male	21.5	2.4	1.1	0.4	74.6	10.6	89.2	0.2	100.0
	Female	24.9	2.9	2.2	1.4	68.5	0.7	99.1	0.2	100.0
Total	Total	69.6	6.7	7.8	1.7	14.2	20.5	79.4	0.2	100.0
	Male	66.5	6.1	7.1	1.9	18.4	27.8	72.0	0.2	100.0
	Female	75.4	7.7	9.1	1.4	6.4	13.6	86.3	0.1	100.0

Table 3.8(b) Percentage Distribution of Population Ten Years and Over by Age Group, Sex and Highest Grade Completed, Tigray -Urban: 1994

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
		URBAN								
10 - 14	Total	95.0	3.5	0.4	0.0	1.1	79.5	20.4	0.1	100.0
	Male	93.7	4.4	0.5	0.0	1.4	81.7	18.1	0.1	100.0
	Female	96.4	2.7	0.3	0.0	0.7	77.4	22.5	0.1	100.0
15 - 19	Total	60.1	22.0	15.9	0.3	1.7	79.9	19.8	0.2	100.0
	Male	56.5	23.1	17.6	0.3	2.6	88.3	11.5	0.3	100.0
	Female	63.5	21.0	14.3	0.3	1.0	73.3	26.5	0.2	100.0
20 - 24	Total	38.1	18.9	35.6	4.4	3.0	69.2	30.6	0.3	100.0
	Male	36.9	18.3	36.2	5.3	3.3	82.3	17.3	0.4	100.0
	Female	39.3	19.4	35.1	3.5	2.8	60.2	39.6	0.2	100.0
25 - 29	Total	45.7	12.7	28.0	8.7	4.9	60.8	38.9	0.3	100.0
	Male	42.4	14.7	27.4	11.9	3.6	78.3	21.1	0.5	100.0
	Female	49.6	10.3	28.7	5.0	6.4	47.8	52.0	0.2	100.0
30 - 34	Total	46.3	9.7	24.4	9.9	9.7	52.6	47.1	0.3	100.0
	Male	45.1	10.6	27.1	11.8	5.4	73.9	25.5	0.6	100.0
	Female	48.1	8.2	20.2	7.0	16.5	36.4	63.5	0.1	100.0
35 - 39	Total	46.8	9.9	18.9	8.9	15.5	46.0	53.8	0.2	100.0
	Male	46.8	11.6	22.8	11.1	7.7	69.7	30.1	0.2	100.0
	Female	46.7	7.2	12.4	5.2	28.5	29.3	70.4	0.2	100.0
40 - 44	Total	47.5	9.9	16.9	7.1	18.7	36.2	63.6	0.2	100.0
	Male	47.8	11.4	20.8	8.6	11.4	58.8	40.9	0.3	100.0
	Female	46.7	5.9	6.3	3.1	38.0	17.9	82.0	0.1	100.0

Table 3.8(b) Cont'd

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
					URBAN					
45 - 49	Total	48.5	9.3	12.6	4.2	25.4	33.5	66.3	0.3	100.0
	Male	50.2	10.9	16.1	5.6	17.3	55.0	44.5	0.5	100.0
	Female	43.7	4.7	2.4	0.3	48.8	15.6	84.3	0.1	100.0
50 - 54	Total	46.1	10.2	7.6	3.3	32.8	23.1	76.8	0.2	100.0
	Male	46.5	11.7	9.7	4.2	28.0	42.6	57.2	0.2	100.0
	Female	44.8	5.9	1.3	0.6	47.4	9.5	90.3	0.1	100.0
55 & above	Total	48.6	8.5	6.2	0.8	35.8	20.2	79.7	0.1	100.0
	Male	51.8	9.6	7.8	0.6	30.2	39.3	60.6	0.1	100.0
	Female	39.0	5.2	1.5	1.5	52.9	8.2	91.7	0.1	100.0
Not stated	Total	36.4	5.6	3.2	1.3	53.6	12.3	87.4	0.3	100.0
	Male	38.8	6.2	3.4	1.2	50.4	26.3	73.2	0.4	100.0
	Female	20.4	1.0	2.0	2.0	74.4	2.7	97.1	0.2	100.0
Total	Total	62.4	12.3	15.5	3.2	6.6	57.2	42.6	0.2	100.0
	Male	59.5	13.0	16.7	4.4	6.5	71.2	28.5	0.3	100.0
	Female	65.8	11.5	14.1	1.9	6.7	46.3	53.5	0.2	100.0

Table 3.8(c) Percentage Distribution of Population Ten Years and Over by Age Group, Sex and Highest Grade Completed, Tigray -Rural: 1994

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
					RURAL					
10 - 14	Total	94.0	0.2	0.0	0.0	5.7	17.3	82.5	0.2	100.0
	Male	92.1	0.2	0.0	0.0	7.6	18.5	81.3	0.2	100.0
	Female	96.5	0.2	0.0	0.0	3.2	16.0	83.9	0.1	100.0
15 - 19	Total	89.0	1.9	0.7	0.1	8.3	23.5	76.3	0.2	100.0
	Male	86.9	1.8	0.5	0.1	10.8	32.2	67.6	0.2	100.0
	Female	93.2	2.2	1.2	0.0	3.4	15.2	84.6	0.2	100.0
20 - 24	Total	75.1	4.8	4.7	1.7	13.7	18.3	81.5	0.2	100.0
	Male	75.6	4.1	3.7	1.0	15.6	30.4	69.4	0.2	100.0
	Female	73.1	7.6	8.6	4.5	6.2	7.2	92.6	0.2	100.0
25 - 29	Total	64.9	5.4	5.6	1.9	22.2	13.6	86.2	0.1	100.0
	Male	65.4	5.0	4.8	1.6	23.2	25.1	74.7	0.2	100.0
	Female	62.1	7.7	10.4	3.5	16.3	3.7	96.2	0.1	100.0
30 - 34	Total	60.7	3.2	3.6	1.2	31.3	10.0	89.9	0.1	100.0
	Male	61.0	3.1	3.3	1.1	31.6	21.6	78.2	0.1	100.0
	Female	58.8	4.2	5.9	2.3	28.7	1.9	98.1	0.1	100.0
35 - 39	Total	52.8	3.2	2.2	0.7	41.1	9.2	90.7	0.1	100.0
	Male	52.4	3.1	2.2	0.7	41.7	19.3	80.5	0.2	100.0
	Female	59.5	4.3	2.1	1.7	32.3	1.1	98.9	0.1	100.0
40 - 44	Total	44.5	2.1	1.5	0.4	51.5	7.7	92.2	0.1	100.0
	Male	44.6	2.0	1.6	0.4	51.4	15.6	84.2	0.2	100.0
	Female	42.6	3.2	0.0	0.0	54.2	0.5	99.4	0.0	100.0

Table 3.8(c) Cont'd

AGE GROUP	SEX	LITERATE COMPLETED GRADES						Illiterate	Not stated	Total
		1-6	7-8	9-12	Above 12	Non Regular	Literate			
					RURAL					
45-49	Total	39.4	1.6	0.7	0.2	58.1	7.4	92.5	0.1	100.0
	Male	39.1	1.6	0.7	0.2	58.5	13.3	86.5	0.2	100.0
	Female	51.2	2.4	0.0	0.0	46.4	0.5	99.5	0.0	100.0
50 - 54	Total	30.8	1.0	0.1	0.1	67.9	5.7	94.2	0.1	100.0
	Male	30.9	1.0	0.1	0.1	68.0	11.6	88.2	0.2	100.0
	Female	29.4	3.7	0.0	0.0	66.9	0.3	99.7	0.1	100.0
55 & above	Total	23.2	1.4	0.1	0.2	75.1	5.9	94.0	0.1	100.0
	Male	22.5	1.1	0.1	0.2	76.1	10.7	89.2	0.1	100.0
	Female	50.5	9.7	0.0	1.0	38.8	0.3	99.6	0.1	100.0
Not stated	Total	14.9	0.9	0.3	0.1	83.9	4.7	95.2	0.2	100.0
	Male	14.3	0.8	0.2	0.1	84.7	8.5	91.4	0.2	100.0
	Female	34.5	7.2	2.7	0.0	55.6	0.3	99.6	0.2	100.0
Total	Total	75.2	2.3	1.8	0.6	20.2	13.7	86.2	0.2	100.0
	Male	70.5	2.3	1.7	0.5	25.1	20.7	79.1	0.2	100.0
	Female	88.6	2.4	2.2	0.8	6.0	6.9	93.0	0.1	100.0

Table 3.9 Percentage Distribution of Population Ten Years and Over by Major Ethinic Group and Highest Grade Completed, Urban and Rural, Tigray Region: 1994

ETHNIC GROUP	LITERATE HIGHEST GRADE COMPLETED						Illiterate	Not stated	Total
	1-6	7-8	9-12	Above 12	Non Rregular	Literate			
					URBAN+RURAL				
Amhara	53.2	10.4	13.8	3.7	18.9	20.5	79.4	0.1	100.0
Saho	68.2	8.5	16.3	1.7	5.3	26.0	73.8	0.2	100.0
Tigraway	70.3	6.5	7.4	1.6	14.2	20.5	79.3	0.2	100.0
Eritreans	60.3	9.3	15.9	3.3	11.2	16.2	83.6	0.2	100.0
Other	53.7	7.3	10.7	6.1	22.1	14.3	85.0	0.8	100.0
Total	69.6	6.7	7.8	1.7	14.2	20.5	79.4	0.2	100.0
					URBAN				
Amhara	53.2	12.5	17.5	4.6	12.2	45.3	54.6	0.1	100.0
Saho	33.7	13.8	42.7	7.0	2.9	76.8	23.2	0.0	100.0
Tigraway	63.2	12.3	15.2	3.1	6.3	57.9	41.9	0.2	100.0
Eritreans	53.9	13.4	22.7	4.8	5.3	67.6	32.2	0.3	100.0
Other	54.2	10.8	16.4	9.3	9.3	46.5	51.3	2.2	100.0
Total	62.4	12.3	15.5	3.2	6.6	57.2	42.6	0.2	100.0
					RURAL				
Amhara	53.2	4.9	4.0	1.2	36.7	8.4	91.5	0.1	100.0
Saho	77.9	7.0	8.9	0.3	6.0	22.0	77.8	0.2	100.0
Tigraway	75.5	2.2	1.7	0.6	20.0	13.9	86.0	0.2	100.0
Eritreans	74.2	0.5	1.2	0.2	24.0	6.1	93.7	0.1	100.0
Other	52.9	1.3	0.9	0.7	44.2	6.5	93.1	0.4	100.0
Total	75.2	2.3	1.8	0.6	20.2	13.7	86.2	0.2	100.0

Table 3.10 Percentage Distribution of Population Ten Years and Over by Religion and Highest Grade Completed, Urban and Rural, Tigray Region: 1994

RELIGION	LITERATE HIGHEST GRADE COMPLETED						Illiterate	Not stated	Total
	1-6	7-8	9-12	Above 12	Non regular	Literate			
					URBAN+RURAL				
Christian	69.4	6.6	7.8	1.8	14.4	20.2	79.6	0.2	100.0
Ortodox	69.6	6.5	7.6	1.7	14.6	20.1	79.8	0.2	100.0
Protestant	33.2	13.0	33.5	17.1	3.3	70.3	29.2	0.5	100.0
Catholic	54.9	11.0	24.7	7.8	1.7	43.6	56.0	0.4	100.0
Muslim	72.3	8.6	7.0	1.0	11.2	26.5	73.3	0.2	100.0
Traditional Relig.	45.5	45.5	0.0	0.0	9.1	31.4	68.6	0.0	100.0
Others	54.3	9.3	11.8	6.6	18.0	18.6	74.8	6.6	100.0
Total	69.6	6.7	7.8	1.7	14.2	20.5	79.4	0.2	100.0
					URBAN				
Christian	61.0	12.6	16.3	3.5	6.6	58.3	41.5	0.2	100.0
Ortodox	61.4	12.6	16.1	3.3	6.6	58.1	41.8	0.2	100.0
Protestant	31.8	14.4	33.8	16.3	3.6	90.9	8.5	0.7	100.0
Catholic	28.6	14.0	38.5	17.3	1.6	85.0	15.0	0.0	100.0
Muslim	74.6	9.8	8.0	1.1	6.5	49.0	50.6	0.4	100.0
Traditional Relig.	45.5	45.5	0.0	0.0	9.1	44.0	56.0	0.0	100.0
Others	55.6	8.1	17.8	14.1	4.4	56.7	14.7	28.6	100.0
Total	62.4	12.3	15.5	3.2	6.6	57.2	42.6	0.2	100.0
					RURAL				
Christian	75.4	2.3	1.8	0.6	19.9	13.8	86.0	0.2	100.0
Ortodox	75.4	2.2	1.7	0.6	20.1	13.8	86.1	0.2	100.0
Protestant	46.1	0.0	30.3	23.7	0.0	23.1	76.9	0.0	100.0
Catholic	73.9	8.7	14.8	0.9	1.7	32.3	67.3	0.5	100.0
Muslim	60.9	2.6	1.8	0.4	34.3	8.1	91.8	0.1	100.0
Traditional Relig.	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0
Others	53.2	10.4	6.5	0.0	29.9	11.7	85.7	2.6	100.0
Total	75.2	2.3	1.8	0.6	20.2	13.7	86.2	0.2	100.0

religion, respectively, can not read and write. Among the Protestant Christians only 29.2 percent are illiterate. The distribution of the literate population of the Christians by highest grades completed depicts exactly the same pattern observed for the total population of Tigray Region where the first and second highest are in primary and non-regular followed by senior secondary, junior secondary and above secondary education as the order mentioned. This distribution for Muslims, however, portrays that proportion of literates that completed grades in senior secondary is higher than in junior secondary.

3.3.6. Median Grade Completed

The median grade completed by the literate Population aged 10 years and above has been calculated for urban , rural and for the region by sex and presented in Table 3.11. In estimating median grade for the population who are literate and whose level of education could not be expressed in the regular school system (non-regular) are excluded from the calculation because their equivalent grade in the regular school system is not known.

Table 3.11 Literate Population by Median Grade Completed, Sex, Urban and Rural, Tigray Region: 1994

SEX	Urban+Rural	Urban	Rural
Total	0.6	2.2	0.6
Male	0.7	3.8	0.6
Female	0.6	0.9	0.5

Table 3.11 shows that the median grades completed by the literate population of Tigray were grades 0.7, 0.6 and 0.6 for male, female and both sexes; respectively. This value for the urban literate population is estimated to be 2.2. It can also be seen from the table that median grades for males (3.8) is higher than for females (0.9) in urban areas. Since level of educational attainment in the rural areas is very low median grades completed by either of the sexes is exteremly low and almost the same.

CHAPTER IV
ECONOMIC ACTIVITY STATUS

4.1 Introduction

In the 1994 Population and Housing Census, the information collected on economic activity status include:

a) whether engaged in productive work during the reference period;
b) reason for not being engaged in productive work during the reference period (for those who were not so engaged);
c) major type of occupation;
d) major product or service of the establishment or industry;
e) employment status in the main activity;
f) number of days worked during the seven days prior to the census day for those engaged in productive work (for urban areas only).

The above information on economic activity status were collected from sample households. The selection was done on the basis of systematic sampling and covered one fifth of the total households. The economic activity questions were referred to those members of households aged ten years and over. The minimum age was fixed at ten because it is presumed that most children start to participate in the production of economic goods and services at young ages, particularly in the rural areas.

Based on the above data set, the chapter will present major analytical outputs on the economically active and inactive population and the distribution of the economically active population by type of occupation, industrial division and status in employment. In addition, a brief description on concepts and measurements of major economic variables are included. However, those who need more tabulations on some economic variables and geographical break down should refer to Volume I of the Statistical Report of the 1994 Population and Housing Census result of Tigray Region (CSA, 1995).

The approaches used in the collection of data on economic activity status in the urban and rural areas were different. The current status approach was employed in the urban areas, while the usual status approach was used in the rural areas. The main difference between the two approaches is in the length of the reference periods. The current status approach is based on a short reference period, which in this case is the seven days before the census day. On the other

hand, the usual status approach measures in relation to a long reference period, that is, the twelve months before the census day.

Basically, the conventional way of collecting economic activity status data in the urban and rural areas is to use either of the two approaches in each of the areas or to limit the method to aone type of approach in the two areas, so that comparative analysis would easily be facilitated. However, due to a number of reasons, such as, limitation of space in the census questionnaires, time constraint in the data collection process and the problem in handling the editing and processing of the data, incorporating the two approaches in the urban and rural area questionnaires was not possible. On the other hand, it was found difficult to use a common approach in the urban and rural areas, because of the different nature of the economic activities in the two areas. Thus, in the rural areas, among other factors, to capture the slack periods in the agricultural activities, a longer reference period (usual status approach) is considered appropriate, while in the urban areas the activities are relatively less affected by seasonal variations and hence a shorter reference period or the labour force approach was employed. Therefore, caution should be taken in applying the results of the comparative analysis part for some of the economic activity status variables by urban and rural residence.

Economic activity in the census was defined in terms of production of goods and services that fall within the United Nations System of National Accounts (SNA) production boundary (ILO, 1990a). Hence, in the 1994 Population and Housing Census economic activity is defined as work which involves the production of goods and/or services for sale or production of certain products for own consumption. According to the above general definition, all economic goods and services produced for sale were considered as economic activity, however certain activities for own consumption or own use are also considered as economic activities. These includes production and processing of primary products (agriculture, hunting, fishing, forestry and logging, and mining and quarrying), processing of primary products by the producers themselves, production of other commodities where part of it is sold on the market; and own account construction and fixed asset formation (expected life use of one year or more). Such economic activities could be performed for an individual, family or private enterprise, government establishment or public organization. The remuneration may be on daily, weekly, monthly, yearly or contract basis. The activities of apprentices are also considered as economic. On the other hand, unpaid household chores such as preparing food, cleaning the house, taking care of children or collecting firewood are not considered to be economic activities. Similarly, unpaid community and volunteer services and prostitution are classified as non-economic activities.

In urban areas all persons aged ten years and over who were productively engaged for at least one day or were available to be engaged during the seven days reference period were

included as economically active persons. Whereas in the rural areas all persons aged ten years and over were classified to be economically active if they were engaged or available to be engaged in the production of economic goods and services during most of the twelve months prior to the census day. In the case of persons engaged in agriculture, it was decided to classify them in the economically active category if they have worked or available to work during most of the main agricultural season of the reference year.

4.2 Economically Active and Inactive Population

Statistical data on the economically active population is essential for planning and formulating policies on the development of the human resources of a country. The collection of data on the economically active population mainly provides data on the size of the work force engaged or available to be engaged in the production of economic goods and services during a given period and also its distribution in the various sectors of the economy.

The economically active population comprises all persons aged ten years and over who were employed or unemployed in the reference period. The employed population consists of those who were engaged in productive activity for at least one day during the seven days prior to the census day for urban areas and in most of the twelve months prior to the census day for rural areas. Persons who had regular jobs but did not work during the reference period because of poor health, social reason, seasonality of work, annual leave or due to temporary closure of establishment were included as employed persons. On the other hand, the unemployed population consists of those who were not working during the reference period and were actively looking for work or were discouraged job seekers. The discouraged job seekers are those who were not actively looking for work but were ready and willing to take up a job if one was available. A person who is looking for work but was temporarily engaged in a productive activity during the reference period is recorded as employed and not as an unemployed person. On the other hand, those who were neither employed nor unemployed during the reference period, following the definitions given above for employed and unemployed persons, were categorized to be economically inactive population. The reasons for being inactive in the reference period were classified in the census as: students, home makers, disabled, too young, pensioners, prostitutes and others. However, students, pensioners, the disabled, ... etc., will be considered as economically active if they were productively engaged during the reference period. Similarly, prostitutes who were partly engaged in productive activities during the reference period, such as preparing and selling of drinks or serving as waitresses in hotels, bars and resturants,...etc., are considered as economically active persons and not as inactive persons engaged in prostitution.

4.2.1 Sizes of the Economically Active and Inactive Population

Based on the above concepts and definitions of economic activity status, the results for Tigray Region is presented as follows. The population of the region aged ten years and over was found to be 2,146,956 persons in October 1994 among which, 335,295 are residing in the urban part, while the great majority of the population (1,811,661) are rural residents (See Tables 4.1a - 4.1c).

Among the population aged ten years and over 1,492,339 or 69.5 percent were reported to be economically active and 644,795 or 30.0 percent economically inactive (See Table 4.1a). The distribution of the economically active population by sex showed that among the male population aged ten years and over, 76.4 percent were found to be economically active, while in the case of females it was 63.1 percent. The Percentage distribution of the economically active population by sex in the four zones shows that the highest (83.6 percent) for males in Mirabawi Zone and for females (72.7 percent) in Mehakelegnaw Zone and the lowest for males in Misrakawi Zone (68.2 percent) and for females in Debubawi Zone (about 50 percent).

The tables also revealed that in all the four zones the percent economically active males are relatively higher than the females. This is true mainly because housewives are mostly engaged in activities that are not considered economic. It may be observed from the data that in the rural areas of Tigray Region more active persons were reported compared to the inactive ones for both males and females (See Table 4.1c). However, considering the urban part, the balance between the active and inactive females is reversed, where more inactive females are reported than the active ones (34.7 percent active against 64.8 percent inactive). This could happen because, unlike the rural areas, where the housewives are usually engaged in some form of agricultural activities during the year, in the urban part, unless they have some type of regular job, most housewives stay at home and are mainly engaged in housework activities. Similar patterns were observed in the four zones, where the lowest percent active females and the highest percent inactive females were observed in Misrakawi Zone, 30 percent and 69.4 percent, respectively.

4.2.2 Economic Activity Rates

The extent of the participation of the population in economic activity is measured using the economic activity rate or economic participation rate. The economic activity rate or the participation rate is computed as the percentage of the economically active population over the total of the active plus the inactive population. Table 4.2 provides the economic activity rates by five year age group, sex, urban and rural residence. The activity rate for Tigray Region is

Table 4.1a Distribution of Population Aged Ten Years and Over by Sex, Activity Status and Zone, Tigray Region Total: 1994

Zone and Sex	Total		Active population		Inactive population		Not Stated	
	No.	%	No.	%	No.	%	No.	%
All Zones								
Total	2146956	100.0	1492339	69.5	644795	30.0	9822	0.5
Male	1038721	100.0	793529	76.4	240357	23.1	4835	0.5
Female	1108235	100.0	698810	63.1	404438	36.5	4987	0.4
Mirabawi Zone								
Total	501130	100.0	384841	76.8	114062	22.8	2227	0.4
Male	251680	100.0	210303	83.6	40218	16.0	1159	0.5
Female	249450	100.0	174538	70.0	73844	29.6	1068	0.4
Mehakelegnaw Zone								
Total	646545	100.0	482132	74.6	161609	25.0	2804	0.4
Male	313440	100.0	240081	76.6	71928	22.9	1431	0.5
Female	333105	100.0	242051	72.7	89681	26.9	1373	0.4
Misrakawi Zone								
Total	400993	100.0	254330	63.4	143854	35.9	2809	0.7
Male	187523	100.0	127913	68.2	58360	31.1	1250	0.7
Female	213470	100.0	126417	59.2	85494	40.0	1559	0.7
Debubawi Zone								
Total	598288	100.0	371036	62.0	225270	37.7	1982	0.3
Male	286078	100.0	215232	75.2	69851	24.4	995	0.3
Female	312210	100.0	155804	49.9	155419	49.8	987	0.3

Table 4.1b Distribution of Population Aged Ten Years and Over by Sex, Activity Status and Zone, Tigray Region Urban: 1994

Zone and Sex	Total		Active population		Inactive population		Not Stated	
	No.	%	No.	%	No.	%	No.	%
All Zones								
Total	335295	100.0	141682	42.3	191691	57.2	1922	0.6
Male	146642	100.0	76200	52.0	69412	47.3	1030	0.7
Female	188653	100.0	65482	34.7	122279	64.8	892	0.5
Mirabawi Zone								
Total	60355	100.0	27933	46.3	32010	53.0	412	0.7
Male	26784	100.0	15284	57.1	11219	41.9	281	1.0
Female	33571	100.0	12649	37.7	20791	61.9	131	0.4
Mehakelegnaw Zone								
Total	65346	100.0	29073	44.5	35791	54.8	482	0.7
Male	28037	100.0	14365	51.2	13429	47.9	243	0.9
Female	37309	100.0	14708	39.4	22362	59.9	239	0.6
Misrakawi Zone								
Total	59560	100.0	22050	37.0	37039	62.2	471	0.8
Male	25696	100.0	11907	46.3	13542	52.7	247	1.0
Female	33864	100.0	10143	30.0	23497	69.4	224	0.7
Debubawi Zone								
Total	150034	100.0	62626	41.7	86851	57.9	557	0.4
Male	66125	100.0	34644	52.4	31222	47.2	259	0.4
Female	83909	100.0	27982	33.3	55629	66.3	298	0.4

Table 4.1c Distribution of Population Aged Ten Years and Over by Sex, Activity Status and Zone, Tigray Region Rural: 1994

Zone and Sex	Total		Active population		Inactive population		Not Stated	
	No.	%	No.	%	No.	%	No.	%
All Zones								
Total	1811661	100.0	1350657	74.6	453104	25.0	7900	0.4
Male	892079	100.0	717329	80.4	170945	19.2	3805	0.4
Female	919582	100.0	633328	68.9	282159	31.6	4095	0.5
Mirabawi Zone								
Total	440775	100.0	356908	81.0	82052	18.6	1815	0.4
Male	224896	100.0	195019	86.7	28999	12.9	878	0.4
Female	215879	100.0	161889	75.0	53053	24.6	937	0.4
Mehakelegnaw Zone								
Total	581199	100.0	453059	78.0	125818	21.6	2322	0.4
Male	285403	100.0	225716	79.1	58499	20.5	1188	0.4
Female	295796	100.0	227343	76.9	67319	22.8	1134	0.4
Misrakawi Zone								
Total	341433	100.0	232280	68.0	106815	31.3	2338	0.7
Male	161827	100.0	116006	71.7	44818	27.7	1003	0.6
Female	179606	100.0	116274	64.7	61997	34.5	1335	0.7
Debubawi Zone								
Total	448254	100.0	308410	68.8	138419	30.9	1425	0.3
Male	219953	100.0	180588	82.1	38629	17.6	736	0.3
Female	228301	100.0	127822	56.0	99790	43.7	689	0.3

Table 4.2 Economic Activity Rate * by Age Group, Sex, Urban and Rural, Tigray Region: 1994

Age Group and Sex	Urban+Rural	Urban	Rural
All Ages			
Total	69.8	45.5	74.9
Male	76.8	52.3	80.8
Female	63.3	34.9	69.2
10-14			
Total	41.0	4.9	48.1
Male	43.9	4.9	51.0
Female	37.7	4.9	44.9
15-19			
Total	62.6	22.7	70.2
Male	63.0	20.3	70.4
Female	62.2	24.5	69.9
20-24			
Total	76.8	51.1	81.4
Male	81.0	59.8	84.2
Female	73.2	45.3	78.9
25-29			
Total	83.0	65.2	86.6
Male	93.3	84.3	95.0
Female	74.4	51.1	79.4
30-34			
Total	84.1	67.4	87.3
Male	96.4	88.2	98.0
Female	75.3	51.8	79.8
35-39			
Total	84.5	67.1	88.1
Male	97.6	91.1	98.8
Female	74.3	50.2	79.5
40-44			
Total	85.6	70.2	88.1
Male	97.8	91.8	98.7
Female	74.7	52.7	78.5
45-49			
Total	86.8	68.9	89.6
Male	98.0	91.9	98.8
Female	74.3	49.9	78.8
50-54			
Total	84.3	64.6	87.3
Male	97.3	89.7	98.2
Female	72.8	47.4	77.2
55-59			
Total	83.3	60.7	86.8
Male	96.2	84.9	97.5
Female	69.5	45.6	74.5
60-64			
Total	75.6	51.5	79.8
Male	92.8	76.3	94.9
Female	60.3	37.2	65.2
65+			
Total	61.1	36.8	65.4
Male	76.5	53.0	79.7
Female	42.6	24.5	46.9

* Activity rates were calculated excluding " the activity not stated population".

reported to be 69.8 percent, 45.5 percent and 74.9 percent, for total, urban and rural areas, respectively. The table also revealed that in all age groups the activity rates for the rural area are higher than for the urban ones. Specifically in the age group 10-14 years the difference is much more wider, where the activity rate is 4.9 percent in urban areas and 48.1 percent in the rural areas. The major reason for such variation is that in the rural areas young children rather than going to school at an early age, they are usually engaged in farm activities such as herding cattle and helping parents in weeding and harvesting. On the other hand, in urban areas young children start schooling relatively at an early age and as a result the activity rate is more lower.

The distribution of the economic activity rate by age for both males and females showed lower levels at young and old ages while at the middle ages the rate attains its highest level (refer to Fig. 4.1a - 4.1c). The census result showed that the overall activity rate for females reach its peak at an early age (30-34 age group), compared to that of males (45-49 age group). This is also reflected in the rural part, however, for the urban area the distribution of the activity rate of females show some fluctuations which is generally true because female's activity is usually interrupted during pregnancy and child birth and here in the urban part the situation is observed to be more glaring. In the rural areas the rate of participation drop gently at older ages because of high rate of engagement in farm activities by old people.

Figure 4.1a Age Specific Activity Rates by Sex for Total Tigray Region : 1994

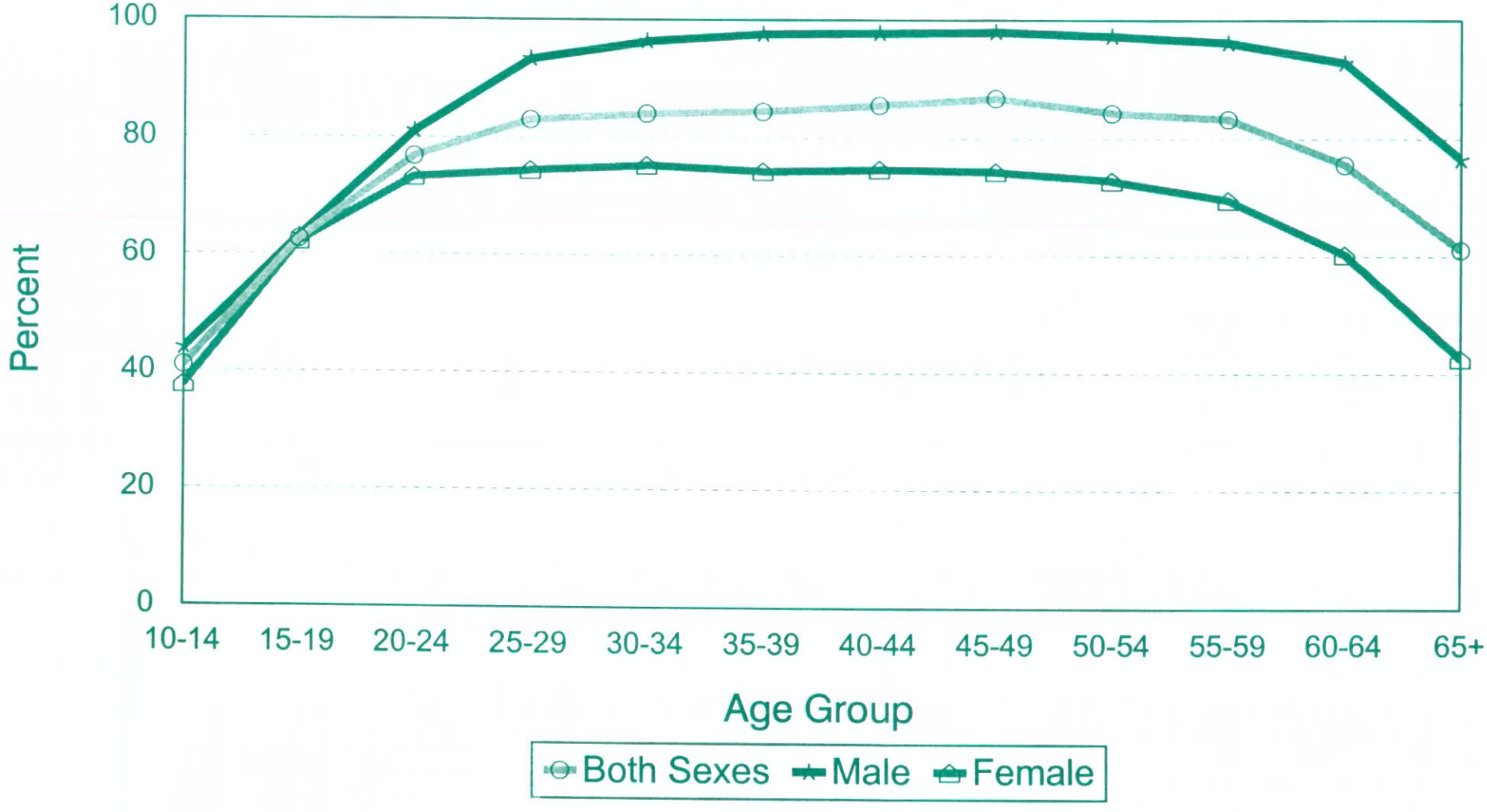


Figure 4.1b Age Specific Activity Rates by Sex for Urban Tigray Region: 1994

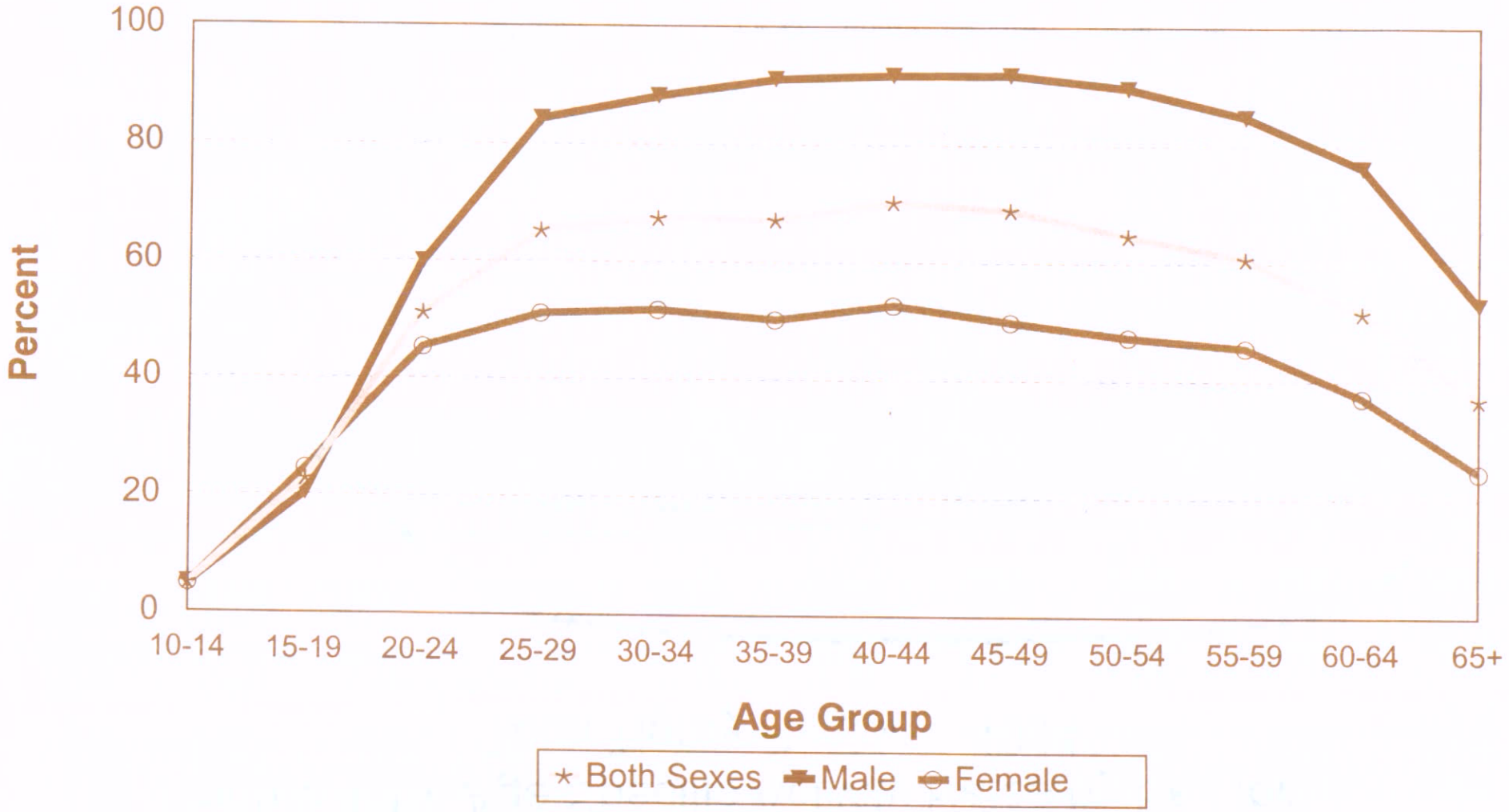
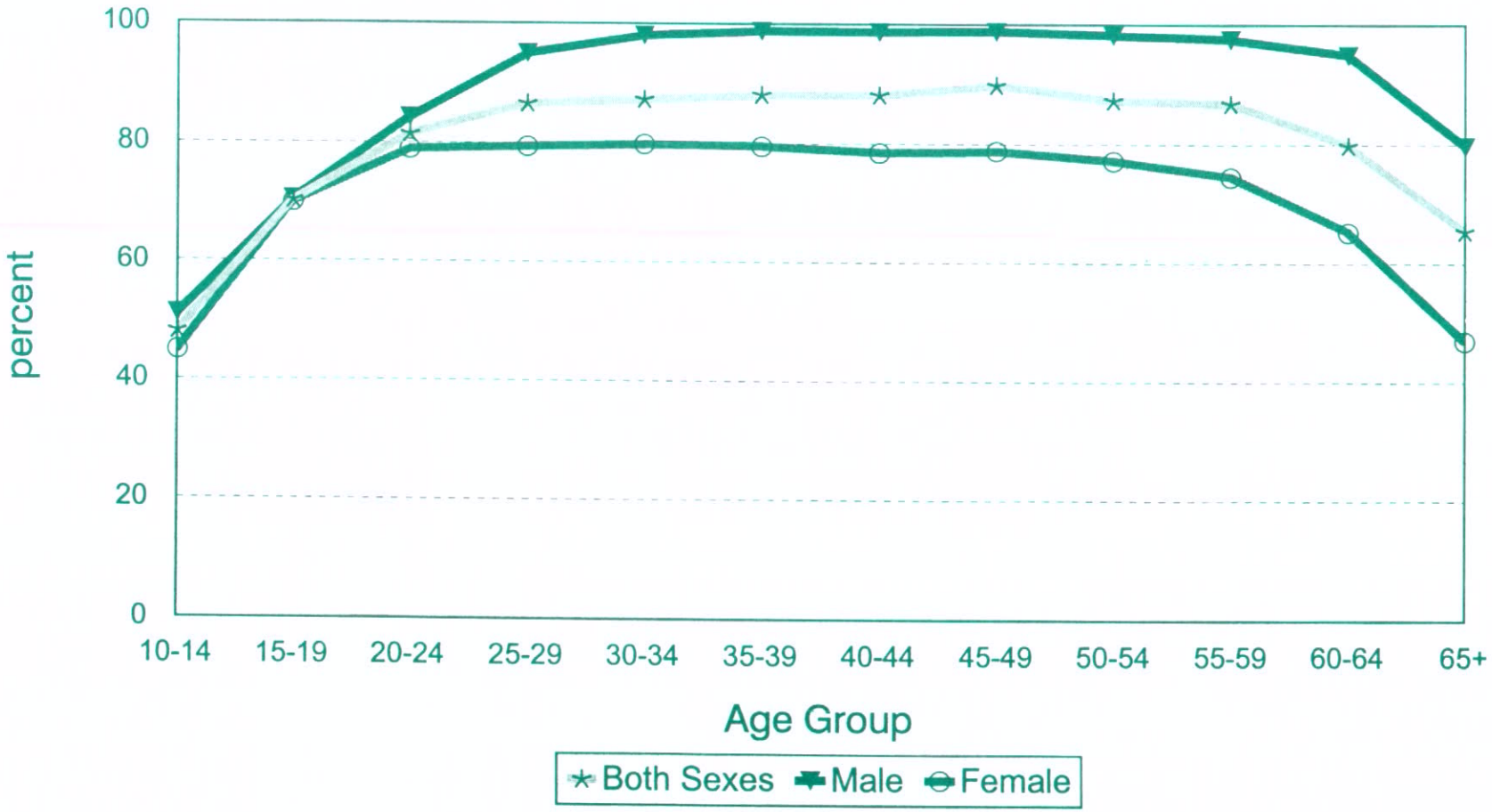


Figure 4.1c Age Specific Activity Rates by Sex for Rural Tigray Region: 1994



Economic activity rate for selected towns in the region is presented below in Table 4.3. Except in Humera, Adigrat and Korem towns, the activity rates for the population aged ten years and over have shown a marginal increase in the ten years interval.

Table 4.3 Economic Activity Rates for Towns with Population Sizes above 10,000 by Sex in the 1984 and 1994 Censuses

Towns	1984			1994		
	Total	Male	Female	Total	Male	Female
Humera	56.9	77.7	40.6	45.5	64.2	25.9
Endaselasie	38.4	51.2	29.8	39.7	49.8	31.9
Adwa	33.4	45.4	25.5	36.2	43.1	30.9
Axum	39.3	49.9	32.1	44.3	51.0	39.0
Adigrat	32.0	42.2	24.9	31.0	42.2	21.9
Wukro	33.4	44.7	26.2	35.5	42.2	30.4
Maychew	30.9	46.6	21.0	36.4	47.8	27.8
Alamata	35.0	61.9	45.2	44.2	56.4	34.7
Korem	56.1	65.8	50.6	48.4	55.0	43.9
Mekele	36.3	48.0	28.5	39.1	49.4	30.4

4.2.3 Employed and Unemployed Population

Among the economically active population of Tigray Region, the employed and unemployed population were reported to be 98.4 percent and 1.6 percent, respectively (See Table 4.4). Similar patterns were observed for males (98.5 percent employed and 1.5 percent unemployed) and also for females (98.3 percent employed and 1.7 percent unemployed). The above pattern holds true in all the Zones. However, for the urban and rural areas of Tigray Region a difference in rate is observed, where a very small number of unemployed persons were reported in the rural areas compared to the urban areas (9.8 percent urban unemployed Vs 0.7 percent rural unemployed). Among the unemployed population, those without work experience or first time job seekers constitute the majority 68.2 percent, while the employed with work experience were reported to be 31.8 percent. This pattern holds true for males and females in the four zones. In all the zones and in both the urban and rural parts (with the exception of rural areas of Mehakelegnaw Zone and urban areas of Misrakawi Zone) the percent unemployed females are consistently higher than the unemployed males. This could be because of the fact that more females than males are engaged in non-income generating activities which resulted a higher female unemployment rate compared to males.

Table 4.4 Distribution of Economically Active Population by Sex, Zone, whether Employed or not, Urban and Rural:1994

Urban/Rural and Sex	Economically Active	Employed	Unemployed		
			Total	With Work Experience	Without Work Experience
			Tigray Region		
Urban+Rural					
Total	1492339	1468583	23756	7546	16210
	(100.0)	(98.4)	(1.6)	(0.5)	(1.1)
Male	793529	781811	11718	4405	7313
	(100.0)	(98.5)	(1.5)	(0.6)	(0.9)
Female	698810	686772	12038	3141	8897
	(100.0)	(98.3)	(1.7)	(0.4)	(1.3)
Urban					
Total	141682	127824	13858	5242	8616
	(100.0)	(90.2)	(9.8)	(3.7)	(6.1)
Male	76200	68723	7477	3314	4163
	(100.0)	(90.2)	(9.8)	(4.3)	(5.5)
Female	65482	59101	6381	1928	4453
	(100.0)	(90.3)	(9.7)	(2.9)	(6.8)
Rural					
Total	1350657	1340759	9898	2304	7594
	(100.0)	(99.3)	(0.7)	(0.2)	(0.6)
Male	717329	713088	4241	1091	3150
	(100.0)	(99.4)	(0.6)	(0.2)	(0.4)
Female	633328	627671	5657	1213	4444
	(100.0)	(99.1)	(0.9)	(0.2)	(0.7)
			Mirabawi Zone		
Urban+Rural					
Total	384841	381147	3694	1358	2336
	(100.0)	(99.0)	(1.0)	(0.4)	(0.6)
Male	210303	208508	1795	787	1008
	(100.0)	(99.1)	(0.9)	(0.4)	(0.5)
Female	174538	172639	1899	571	1328
	(100.0)	(98.9)	(1.1)	(0.3)	(0.8)
Urban					
Total	27933	25820	2113	846	1267
	(100.0)	(92.4)	(7.6)	(3.0)	(4.5)
Male	15284	14155	1129	540	589
	(100.0)	(92.6)	(7.4)	(3.5)	(3.9)
Female	12649.0	11665	984.0	306.0	678.0
	(100.0)	(92.2)	(7.8)	(2.4)	(5.4)
Rural					
Total	356908	355327	1581	512	1069
	(100.0)	(99.6)	(0.4)	(0.1)	(0.3)
Male	195019	194353	666	247	419
	(100.0)	(99.7)	(0.3)	(0.1)	(0.2)
Female	161889	160974	915	265	650
	(100.0)	(99.4)	(0.6)	(0.2)	(0.4)
			Mehakelegnaw Zone		
Urban+Rural					
Total	482132	477982	4150	1140	3010
	(100.0)	(99.1)	(0.9)	(0.2)	(0.6)
Male	240081	238120	1961	599	1362
	(100.0)	(99.2)	(0.8)	(0.2)	(0.6)
Female	242051	239862	2189	541	1648
	(100.0)	(99.1)	(0.9)	(0.2)	(0.7)
Urban					
Total	29073	26836	2237	894	1343
	(100.0)	(92.3)	(7.7)	(3.1)	(4.6)
Male	14365	13361	1004	473	531
	(100.0)	(93.0)	(7.0)	(3.3)	(3.7)
Female	14708	13475	1233	421	812
	(100.0)	(91.6)	(8.4)	(2.9)	(5.5)
Rural					
Total	453059	451146	1913	246	1667
	(100.0)	(99.6)	(0.4)	(0.1)	(0.4)
Male	225716	224759	957	126	831
	(100.0)	(99.6)	(0.4)	(0.1)	(0.4)
Female	227343	226387	956	120	836
	(100.0)	(99.6)	(0.4)	(0.1)	(0.4)

Table 4.4 (Cont'd)

Urban/Rural and Sex		Economically Active	Employed	Unemployed		
				Total	With Work Experience	Without Work Experience
			Misrakawi Zone			
Urban+Rural						
Total	No.	254330	248318	6012	1956	4056
	%	(100.0)	(97.6)	(2.4)	(0.8)	(1.6)
Male	No.	127913	124903	3010	1146	1864
	%	(100.0)	(97.6)	(2.4)	(0.9)	(1.5)
Female	No.	126417	123415	3002	810	2192
	%	(100.0)	(97.6)	(2.4)	(0.6)	(1.7)
Urban						
Total	No.	22050	19045	3005	1179	1826
	%	(100.0)	(86.4)	(13.6)	(5.3)	(8.3)
Male	No.	11907	10122	1785	800	985
	%	(100.0)	(85.0)	(15.0)	(6.7)	(8.3)
Female	No.	10143	8923	1220	379	841
	%	(100.0)	(88.0)	(12.0)	(3.7)	(8.3)
Rural						
Total	No.	232280	229273	3007	777	2230
	%	(100.0)	(98.7)	(1.3)	(0.3)	(1.0)
Male	No.	116006	114781	1225	346	879
	%	(100.0)	(98.9)	(1.1)	(0.3)	(0.8)
Female	No.	116274	114492	1782	431	1351
	%	(100.0)	(98.5)	(1.5)	(0.4)	(1.2)
			Debubawi Zone			
Urban+Rural						
Total	No.	371036	361136	9900	3092	6808
	%	(100.0)	(97.3)	(2.7)	(0.8)	(1.8)
Male	No.	215232	210280	4952	1873	3079
	%	(100.0)	(97.7)	(2.3)	(0.9)	(1.4)
Female	No.	155804	150856	4948	1219	3729
	%	(100.0)	(96.8)	(3.2)	(0.8)	(2.4)
Urban						
Total	No.	62626	56123	6503	2323	4180
	%	(100.0)	(89.6)	(10.4)	(3.7)	(6.7)
Male	No.	34644	31085	3559	1501	2058
	%	(100.0)	(89.7)	(10.3)	(4.3)	(5.9)
Female	No.	27982	25038	2944	822	2122
	%	(100.0)	(89.5)	(10.5)	(2.9)	(7.6)
Rural						
Total	No.	308410	305013	3397	769	2628
	%	(100.0)	(98.9)	(1.1)	(0.2)	(0.9)
Male	No.	180588	179195	1393	372	1021
	%	(100.0)	(99.2)	(0.8)	(0.2)	(0.6)
Female	No.	127822	125818	2004	397	1607
	%	(100.0)	(98.4)	(1.6)	(0.3)	(1.3)

For the purpose of comparison, Humera, Korem and Alamata towns (because they have been part of other regions during the 1984 census) were excluded from the 1994 total urban Tigray Region. Based on this fact, the distribution of urban unemployed population of the region in the 1984 and 1994 censuses indicated that relatively more first time job seekers were observed in the year 1994 compared to 1984, 64.2 percent and 61.9 percent, respectively (See Table 4.5). This may have resulted mainly due to the combined effect of high population growth and a limited number of jobs available in the market.

Table 4.5 Distribution of the Unemployed Population in the 1984 and 1994 Censuses (Urban Tigray Region)

Unemployed Category	1984			1994*		
	Total	Male	Female	Total	Male	Female
Unemployed with Work Experience	38.1	46.9	31.1	35.8	42.3	28.1
Unemployed without work Experience	61.9	53.1	68.9	64.2	57.7	72.0
Total Unemployed	100.0	100.0	100.0	100.0	100.0	100.0

* Excluding Humera, Korem and Alamata towns.

4.3 Reasons for Being Economically Inactive

The distribution of the economically inactive population by reasons for not being engaged in an economic activity in the reference period showed that students constitute the highest percentage (37.7 percent), followed by home makers (27.8 percent) and the too young to work (17.7 percent), for total Tigray Region (See Table 4.6). The distribution of economiclly inactive population by reasons for not working revealed that home makers constitute the highest (43.0 percent), followed by students (25.1 percent) and the too young to work (14.3 percent). While in the case of males, students took the largest (about 60 percent) share, and the too young to work (23.5 percent) constitute the second largest group, followed by the pensioners (7.1 percent). In the urban part of Tigray Region students constitute the highest proportion of the inactive population for both males and females, 78.9 percent and 42.6 percent, respectively. Considering the rural part, about half of the inactive males were found to be students and a significant number of them were too young to work (31 percent). Whereas for the females, 45 percent of them were home makers, followed by the too young to work (19.1 percent) and students (17.6 percent).

In the urban part of all the zones, students comprised the highest percent inactive persons, where above three-fourths of the inactive males and over forty percent of the inactive females in most cases (except Mirabawi Zone) were reported to be students. On the other hand, in the rural

Table 4.6 Distribution of Economically Inactive Persons by Sex, Reason for Not Working, Zone, Urban and Rural: 1994

Urban/Rural and Sex		Total Inactive	Students	Home Makers	Disabled	Too Young	Pensioners	Prostitutes	Others
					Tigray Region				
Urban+Rural									
Total	No.	644795	243134	179051	22817	114391	59224	3183	22995
	%	(100.0)	(37.7)	(27.8)	(3.5)	(17.7)	(9.2)	(0.5)	(3.6)
Male	No.	240357	141509	4974	9756	56472	17170	0	10476
	%	(100.0)	(58.9)	(2.1)	(4.1)	(23.5)	(7.1)	(0.0)	(4.4)
Female	No.	404438	101625	174077	13061	57919	42054	3183	12519
	%	(100.0)	(25.1)	(43.0)	(3.2)	(14.3)	(10.4)	(0.8)	(3.1)
Urban									
Total	No.	191691	106839	48047	5194	7360	18502	1641	4108
	%	(100.0)	(55.7)	(25.1)	(2.7)	(3.8)	(9.7)	(0.9)	(2.1)
Male	No.	69412	54776	819	2559	3396	5878	_	1984
	%	(100.0)	(78.9)	(1.2)	(3.7)	(4.9)	(8.5)	(0.0)	(2.9)
Female	No.	122279	52063	47228	2635	3964	12624	1641	2124
	%	(100.0)	(42.6)	(38.6)	(2.2)	(3.2)	(10.3)	(1.3)	(1.7)
Rural									
Total	No.	453104	136295	131004	17623	107031	40722	1542	18887
	%	(100.0)	(30.1)	(28.9)	(3.9)	(23.6)	(9.0)	(0.3)	(4.2)
Male	No.	170945	86733	4155	7197	53076	11292	_	8492
	%	(100.0)	(50.7)	(2.4)	(4.2)	(31.0)	(6.6)	(0.0)	(5.0)
Female	No.	282159	49562	126849	10426	53955	29430	1542	10395
	%	(100.0)	(17.6)	(45.0)	(3.7)	(19.1)	(10.4)	(0.5)	(3.7)
					Mirabawi Zone				
Urban+Rural									
Total	No.	114062	33892	35402	3169	28729	7139	813	4918
	%	(100.0)	(29.7)	(31.0)	(2.8)	(25.2)	(6.3)	(0.7)	(4.3)
Male	No.	40218	19381	877	1274	14247	1843	0	2596
	%	(100.0)	(48.2)	(2.2)	(3.2)	(35.4)	(4.6)	(0.0)	(6.5)
Female	No.	73844	14511	34525	1895	14482	5296	813	2322
	%	(100.0)	(19.7)	(46.8)	(2.6)	(19.6)	(7.2)	(1.1)	(3.1)
Urban									
Total	No.	32010	16973	9962	465	1794	1604	343	869
	%	(100.0)	(53.0)	(31.1)	(1.5)	(5.6)	(5.0)	(1.1)	(2.7)
Male	No.	11219	8874	273	218	861	470	_	523
	%	(100.0)	(79.1)	(2.4)	(1.9)	(7.7)	(4.2)	(0.0)	(4.7)
Female	No.	20791	8099	9689	247	933	1134	343	346
	%	(100.0)	(39.0)	(46.6)	(1.2)	(4.5)	(5.5)	(1.6)	(1.7)
Rural									
Total	No.	82052	16919	25440	2704	26935	5535	470	4049
	%	(100.0)	(20.6)	(31.0)	(3.3)	(32.8)	(6.7)	(0.6)	(4.9)
Male	No.	28999	10507	604	1056	13386	1373	_	2073
	%	(100.0)	(36.2)	(2.1)	(3.6)	(46.2)	(4.7)	(0.0)	(7.1)
Female	No.	53053	6412	24836	1648	13549	4162	470	1976
	%	(100.0)	(12.1)	(46.8)	(3.1)	(25.5)	(7.8)	(0.9)	(3.7)
					Mehakelegnaw Zone				
Urban+Rural									
Total	No.	161609	73446	25232	6509	34985	14989	252	6196
	%	(100.0)	(45.4)	(15.6)	(4.0)	(21.6)	(9.3)	(0.2)	(3.8)
Male	No.	71928	42600	1431	2561	17923	4490	0	2923
	%	(100.0)	(59.2)	(2.0)	(3.6)	(24.9)	(6.2)	(0.0)	(4.1)
Female	No.	89681	30846	23801	3948	17062	10499	252	3273
	%	(100.0)	(34.4)	(26.5)	(4.4)	(19.0)	(11.7)	(0.3)	(3.6)
Urban									
Total	No.	35791	22073	6733	863	1147	3999	96	880
	%	(100.0)	(61.7)	(18.8)	(2.4)	(3.2)	(11.2)	(0.3)	(2.5)
Male	No.	13429	10776	123	329	559	1195	_	447
	%	(100.0)	(80.2)	(0.9)	(2.4)	(4.2)	(8.9)	(0.0)	(3.3)
Female	No.	22362	11297	6610	534	588	2804	96	433
	%	(100.0)	(50.5)	(29.6)	(2.4)	(2.6)	(12.5)	(0.4)	(1.9)
Rural									
Total	No.	125818	51373	18499	5646	33838	10990	156	5316
	%	(100.0)	(40.8)	(14.7)	(4.5)	(26.9)	(8.7)	(0.1)	(4.2)
Male	No.	58499	31824	1308	2232	17364	3295	_	2476
	%	(100.0)	(54.4)	(2.2)	(3.8)	(29.7)	(5.6)	(0.0)	(4.2)
Female	No.	67319	1,549	17191	3414	16474	7695	156	2840
	%	(100.0)	(29.0)	(25.5)	(5.1)	(24.5)	(11.4)	(0.2)	(4.2)

Table 4.6 (Cont'd)

Urban/Rural and Sex		Total Inactive	Students	Home Makers	Disabled	Too Young	Pensioners	Prostitutes	Others
		Misrakawi Zone							
Urban+Rural									
Total	No.	143854	65943	36499	5704	18367	13503	243	3595
	%	(100.0)	(45.8)	(25.4)	(4.0)	(12.8)	(9.4)	(0.2)	(2.5)
Male	No.	58360	40682	962	2839	8804	3742	0	1331
	%	(100.0)	(69.7)	(1.6)	(4.9)	(15.1)	(6.4)	(0.0)	(2.3)
Female	No.	85494	25261	35537	2865	9563	9761	243	2264
	%	(100.0)	(29.5)	(41.6)	(3.4)	(11.2)	(11.4)	(0.3)	(2.6)
Urban									
Total	No.	37039	21085	9495	1747	816	3443	194	259
	%	(100.0)	(56.9)	(25.6)	(4.7)	(2.2)	(9.3)	(0.5)	(0.7)
Male	No.	13542	10734	144	1117	400	1020	_	127
	%	(100.0)	(79.3)	(1.1)	(8.2)	(3.0)	(7.5)	(0.0)	(0.9)
Female	No.	23497	10351	9351	630	416	2423	194	132
	%	(100.0)	(44.1)	(39.8)	(2.7)	(1.8)	(10.3)	(0.8)	(0.6)
Rural									
Total	No.	106815	44858	27004	3957	17551	10060	49	3336
	%	(100.0)	(42.0)	(25.3)	(3.7)	(16.4)	(9.4)	(0.0)	(3.1)
Male	No.	44818	29948	818	1722	8404	2722	_	1204
	%	(100.0)	(66.8)	(1.8)	(3.8)	(18.8)	(6.1)	(0.0)	(2.7)
Female	No.	61997	14910	26186	2235	9147	7338	49	2132
	%	(100.0)	(24.0)	(42.2)	(3.6)	(14.8)	(11.8)	(0.1)	(3.4)
		Debubawi Zone							
Urban+Rural									
Total	No.	225270	69853	81918	7435	32310	23593	1875	8286
	%	(100.0)	(31.0)	(36.4)	(3.3)	(14.3)	(10.5)	(0.8)	(3.7)
Male	No.	69851	38846	1704	3082	15498	7095	0	3626
	%	(100.0)	(55.6)	(2.4)	(4.4)	(22.2)	(10.2)	(0.0)	(5.2)
Female	No.	155419	31007	80214	4353	16812	16498	1875	4660
	%	(100.0)	(20.0)	(51.6)	(2.8)	(10.8)	(10.6)	(1.2)	(3.0)
Urban									
Total	No.	86851	46708	21857	2119	3603	9456	1008	2100
	%	(100.0)	(53.8)	(25.2)	(2.4)	(4.1)	(10.9)	(1.2)	(2.4)
Male	No.	31222	24392	279	895	1576	3193	_	887
	%	(100.0)	(78.1)	(0.9)	(2.9)	(5.0)	(10.2)	(0.0)	(2.8)
Female	No.	55629	22316	21578	1224	2027	6263	1008	1213
	%	(100.0)	(40.1)	(38.8)	(2.2)	(3.6)	(11.3)	(1.8)	(2.2)
Rural									
Total	No.	138419	23145	60061	5316	28707	14137	867	6186
	%	(100.0)	(16.7)	(43.4)	(3.8)	(20.7)	(10.2)	(0.6)	(4.5)
Male	No.	38629	14454	1425	2187	13922	3902	_	2739
	%	(100.0)	(37.4)	(3.7)	(5.7)	(36.0)	(10.1)	(0.0)	(7.1)
Female	No.	99790	8691	58636	3129	14785	10235	867	3447
	%	(100.0)	(8.7)	(58.8)	(3.1)	(14.8)	(10.3)	(0.9)	(3.5)

part of Mirabawi, Misrakawi and Debubawi Zones the proportion of female home makers were found dominant among the female inactive population, 46.8 percent, 42.2 percent and 58.8 percent, respectively. In the case of rural Mehakelegnaw Zone students and home makers constitute, 29.0 percent and 25.5 percent, respectively. In the rural parts of the zones (except Mirabawi Zone), students form the highest inactive proportion among the males and home makers (except Mehakelegnaw Zone) among the females. In most of the zones, a significant number of the too young to work were reported next to students in the case of males and home makers in the case of females.

Table 4.7a which refers to the distribution of the economically inactive persons by level of education revealed that about three-fourths of the students have completed grades 1-6. It is also reported that a significant number (about 11 percent) of the students are illiterate, even though, they have been attending school during the census. This happens because these students were attending at the lower level education, where they have not attained the ability to read and write to be considered literate. In the remaining categories of reasons for being inactive, that is, the home makers, the pensioners and the too young to work, the proportion of illiterates were found to be dominant, about 91 percent, 92 percent and 95 percent illiterates, respectively. The corresponding figures for the disabled and prostitutes were about 89 percent and 81 percent, respectively. Similar distribution patters as indicated above were observed in the urban and rural areas, except that in the urban part the proportion illiterates are relatively lower in all the inactive categories than in the rural part (See Tables 4.7b - 4.7c). As a general feature, the percent inactive persons were observed diminishing as the level of education increases in both the urban and rural parts of the region.

4.4 Type of Activity

Employed persons were asked about the type of occupation, major product or industrial division of the establishment in which they were engaged during the reference period and the status of their employment in the main activity. These information were also collected from unemployed persons who had previous work experience. The information collected from these persons referred to the job they held before they became unemployed. The information on type of activity was not collected from unemployed persons with no previous work experience. Therefore, analysis of the economically active population by occupation, major product or type of industry of their establishment and status in employment will be based on a number fewer than the total economically active persons by the number of the unemployed persons who never had any work experience.

Table 4.7a Economically Inactive Population by Reason for being Economically Inactive, Educational Attainment and Sex, Tigray Region Total: 1994

Reason/ Sex	Economically Inactive	Educational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12 Completed	Grade 12+	Not Stated
All Persons									
Total	644795	394279	11440	204894	18628	12725	1879	400	550
Male	240357	101274	7036	114177	9722	6813	854	233	248
Female	404438	293005	4404	90717	8906	5912	1025	167	302
Students									
Total	243134	25816	4005	185387	15637	10910	1035	266	78
Male	141509	13725	3349	108123	9007	6421	686	150	48
Female	101625	12091	656	77264	6630	4489	349	116	30
Home makers									
Total	179051	162496	2956	9724	1897	1196	627	52	103
Male	4974	4282	134	420	56	40	26	6	10
Female	174077	158214	2822	9304	1841	1156	601	46	93
Disabled									
Total	22817	20207	619	1505	219	139	31	17	80
Male	9756	7652	576	1187	169	85	25	17	45
Female	13061	12555	43	318	50	54	6	0	35
Too Young									
Total	114391	109024	771	4396	44	0	0	0	156
Male	56472	53526	563	2274	24	0	0	0	85
Female	57919	55498	208	2122	20	0	0	0	71
Pensioners									
Total	59224	54163	2120	1891	489	302	128	48	83
Male	17170	13756	1616	1149	298	172	92	43	44
Female	42054	40407	504	742	191	130	36	5	39
Prostitutes									
Total	3183	2591	93	340	97	52	5	0	5
Male	0	0	0	0	0	0	0	0	0
Female	3183	2591	93	340	97	52	5	0	5
Others									
Total	22995	19982	876	1651	245	126	53	17	45
Male	10476	8333	798	1024	168	95	25	17	16
Female	12519	11649	78	627	77	31	28	0	29

Table 4.7b Economically Inactive Population by Reason for being Economically Inactive, Educational Attainment and Sex, Tigray Region Urban: 1994

Reason/ Sex	Economically Inactive	Educational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12 Completed	Grade 12+	Not Stated
All Persons									
Total	191691	69086	4927	88435	15646	11412	1648	388	149
Male	69412	11593	1939	41066	7802	6014	694	231	73
Female	122279	57493	2988	47369	7844	5398	954	157	76
Students									
Total	106839	6710	984	75327	13029	9670	841	254	24
Male	54776	2921	772	37550	7195	5643	543	148	4
Female	52063	3789	212	37777	5834	4027	298	106	20
Home makers									
Total	48047	34880	2187	7427	1692	1160	612	52	37
Male	819	480	38	188	41	40	26	6	0
Female	47228	34400	2149	7239	1651	1120	586	46	37
Disabled									
Total	5194	3490	149	1226	148	123	26	17	15
Male	2559	1198	120	1002	108	79	20	17	15
Female	2635	2292	29	224	40	44	6	0	0
Too Young									
Total	7360	5338	146	1832	24	0	0	0	20
Male	3396	2341	98	923	19	0	0	0	15
Female	3964	2997	48	909	5	0	0	0	5
Pensioners									
Total	18502	14695	1168	1655	468	297	123	48	48
Male	5878	3543	706	1001	292	167	87	43	39
Female	12624	11152	462	654	176	130	36	5	9
Prostitutes									
Total	1641	1149	73	285	77	47	5	0	5
Male	0	0	0	0	0	0	0	0	0
Female	1641	1149	73	285	77	47	5	0	5
Others									
Total	4108	2824	220	683	208	115	41	17	0
Male	1984	1110	205	402	147	85	18	17	0
Female	2124	1714	15	281	61	30	23	0	0

Table 4.7c Economically Inactive Population by Reason for being Economically Inactive, Educational Attainment and Sex, Tigray Region Rural: 1994

Reason/ Sex	Economically Inactive	Educational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12 Completed	Grade 12+	Not Stated
All Persons									
Total	453104	325193	6513	116459	2982	1313	231	12	401
Male	170945	89681	5097	73111	1920	799	160	2	175
Female	282159	235512	1416	43348	1062	514	71	10	226
Students									
Total	136295	19106	3021	110060	2608	1240	194	12	54
Male	86733	10804	2577	70573	1812	778	143	2	44
Female	49562	8302	444	39487	796	462	51	10	10
Home makers									
Total	131004	127616	769	2297	205	36	15	0	66
Male	4155	3802	96	232	15	0	0	0	10
Female	126849	123814	673	2065	190	36	15	0	56
Disabled									
Total	17623	16717	470	279	71	16	5	0	65
Male	7197	6454	456	185	61	6	5	0	30
Female	10426	10263	14	94	10	10	0	0	35
Too Young									
Total	107031	103686	625	2564	20	0	0	0	136
Male	53076	51185	465	1351	5	0	0	0	70
Female	53955	52501	160	1213	15	0	0	0	66
Pensioners									
Total	40722	39468	952	236	21	5	5	0	35
Male	11292	10213	910	148	6	5	5	0	5
Female	29430	29255	42	88	15	0	0	0	30
Prostitutes									
Total	1542	1442	20	55	20	5	0	0	0
Male	0	0	0	0	0	0	0	0	0
Female	1542	1442	20	55	20	5	0	0	0
Others									
Total	18887	17158	656	968	37	11	12	0	45
Male	8492	7223	593	622	21	10	7	0	16
Female	10395	9935	63	346	16	1	5	0	29

A national occupation and industrial classification code lists were prepared for the census. These lists were prepared closely following the International Standard Classification of Occupation (ILO, 1990b) and the International Standard Industrial Classification (UN, 1990) but took into account the prevailing socio-economic conditions of the country. These classifications were used for coding the responses on occupation and the type of industrial division of the establishment.

4.4.1 Status in Employment

In Tigray Region, nearly half of the economically active population were unpaid family workers and about 43 percent self employed (see Table 4.8). The major contributors for the self employed category were males (55.1 percent) and for the unpaid family workers were the females (64.8 percent). In the urban part of the region, the self employed females were relatively higher than the males, that is, 48.5 percent and 44 percent, respectively. On the other hand, in the rural part, more females than males were concentrated in the unpaid family workers group, because the females usually work in the farms of households that were largely led by males. A significant number of government and private employees were reported, 21.3 percent and 11.5 percent, for the urban and 0.5 percent and 1.0 percent for the rural areas, in that order. The table also revealed that the proportion of employers and members of co-operatives were found to be lower in urban and rural parts of the region. The general pattern described above for the total, urban and rural Tigray Region were reflected in the four zones of the region, except in the urban part of Mirabawi Zone where relatively lower percent government employees were reported compared to the other zones (See Table 4.8).

For the purpose of comparison, Humera, Korem and Alamata towns (because they have been part of other regions during the 1984 census) were excluded from the 1994 total urban Tigray Region. Thus, as can be seen from Table 4.9, the distribution of the urban economically active population by employment status in the two censuses, an increase in percentage points have been observed in the employers (3.1) and unpaid family workers (9.7) categories in the ten years interval. On the other hand, the government and private employee categories have become less popular in accomodating the economically active population. A marginal increase has been observed in the self employed category. In general, these shifts in the employment status of the economically active population could mainly be attributed to the socio-economic changes that have occurred during the ten years interval in the region.

Table 4.8 Distribution of Economically Active Population by Employment Status, Sex, Zone, Urban and Rural: 1994

Urban/Rural and Sex	Economically Active	Employer	Self Employed	Goverment Employee	Private Employee	Member of Co-operative	Unpaid Family Worker	Others	Not Stated
				Tigray Region					
Urban+Rural									
Total	1476129	33028	631468	34552	28316	1883	724240	1379	21263
	(100.0)	(2.2)	(42.8)	(2.3)	(1.9)	(0.1)	(49.1)	(0.1)	(1.4)
Male	786216	22926	433186	23465	18483	1024	277218	902	9012
	(100.0)	(2.9)	(55.1)	(3.0)	(2.4)	(0.1)	(35.3)	(0.1)	(1.1)
Female	689913	10102	198282	11087	9833	859	447022	477	12251
	(100.0)	(1.5)	(28.7)	(1.6)	(1.4)	(0.1)	(64.8)	(0.1)	(1.8)
Urban									
Total	133066	5102	61328	28374	15305	730	13694	886	7647
	(100.0)	(3.8)	(46.1)	(21.3)	(11.5)	(0.5)	(10.3)	(0.7)	(5.7)
Male	72037	2737	31730	19319	8595	458	5247	570	3381
	(100.0)	(3.8)	(44.0)	(26.8)	(11.9)	(0.6)	(7.3)	(0.8)	(4.7)
Female	61029	2365	29598	9055	6710	272	8447	316	4266
	(100.0)	(3.9)	(48.5)	(14.8)	(11.0)	(0.4)	(13.8)	(0.5)	(7.0)
Rural									
Total	1343063	27926	570140	6178	13011	1153	710546	493	13616
	(100.0)	(2.1)	(42.5)	(0.5)	(1.0)	(0.1)	(52.9)	(0.0)	(1.0)
Male	714179	20189	401456	4146	9888	566	271971	332	5631
	(100.0)	(2.8)	(56.2)	(0.6)	(1.4)	(0.1)	(38.1)	(0.0)	(0.8)
Female	628884	7737	168684	2032	3123	587	438575	161	7985
	(100.0)	(1.2)	(26.8)	(0.3)	(0.5)	(0.1)	(69.7)	(0.0)	(1.3)
				Mirabawi Zone					
Urban+Rural									
Total	382505	10931	149862	4911	6221	757	203968	268	5587
	(100.0)	(2.9)	(39.2)	(1.3)	(1.6)	(0.2)	(53.3)	(0.1)	(1.5)
Male	209295	8027	107452	3735	3962	515	82728	202	2674
	(100.0)	(3.8)	(51.3)	(1.8)	(1.9)	(0.2)	(39.5)	(0.1)	(1.3)
Female	173210	2904	42410	1176	2259	242	121240	66	2913
	(100.0)	(1.7)	(24.5)	(0.7)	(1.3)	(0.1)	(70.0)	(0.0)	(1.7)
Urban									
Total	26666	1476	13904	3517	2540	308	3453	56	1412
	(100.0)	(5.5)	(52.1)	(13.2)	(9.5)	(1.2)	(12.9)	(0.2)	(5.3)
Male	14695	849	7627	2679	1250	228	1373	56	633
	(100.0)	(5.8)	(51.9)	(18.2)	(8.5)	(1.6)	(9.3)	(0.4)	(4.3)
Female	11971	627	6277	838	1290	80	2080		779
	(100.0)	(5.2)	(52.4)	(7.0)	(10.8)	(0.7)	(17.4)	(0.0)	(6.5)
Rural									
Total	355839	9455	135958	1394	3681	449	200515	212	4175
	(100.0)	(2.7)	(38.2)	(0.4)	(1.0)	(0.1)	(56.3)	(0.1)	(1.2)
Male	194600	7178	99825	1056	2712	287	81355	146	2041
	(100.0)	(3.7)	(51.3)	(0.5)	(1.4)	(0.1)	(41.8)	(0.1)	(1.0)
Female	161239	2277	36133	338	969	162	119160	66	2134
	(100.0)	(1.4)	(22.4)	(0.2)	(0.6)	(0.1)	(73.9)	(0.0)	(1.3)
				Mehakelegnaw Zone					
Urban+Rural									
Total	479122	6736	198572	7960	4623	287	255696	190	5058
	(100.0)	(1.4)	(41.4)	(1.7)	(1.0)	(0.1)	(53.4)	(0.0)	(1.1)
Male	238719	4455	134813	5649	2970	111	88518	156	2047
	(100.0)	(1.9)	(56.5)	(2.4)	(1.2)	(0.0)	(37.1)	(0.1)	(0.9)
Female	240403	2281	63759	2311	1653	176	167178	34	3011
	(100.0)	(0.9)	(26.5)	(1.0)	(0.7)	(0.1)	(69.5)	(0.0)	(1.3)
Urban									
Total	27730	715	13160	6392	2368	84	3429	125	1457
	(100.0)	(2.6)	(47.5)	(23.1)	(8.5)	(0.3)	(12.4)	(0.5)	(5.3)
Male	13834	334	5884	4559	1351	40	973	116	577
	(100.0)	(2.4)	(42.5)	(33.0)	(9.8)	(0.3)	(7.0)	(0.8)	(4.2)
Female	13896	381	7276	1833	1017	44	2456	9	880
	(100.0)	(2.7)	(52.4)	(13.2)	(7.3)	(0.3)	(17.7)	(0.1)	(6.3)
Rural									
Total	451392	6021	185412	1568	2255	203	252267	65	3601
	(100.0)	(1.3)	(41.1)	(0.3)	(0.5)	(0.0)	(55.9)	(0.0)	(0.8)
Male	224885	4121	128929	1090	1619	71	87545	40	1470
	(100.0)	(1.8)	(57.3)	(0.5)	(0.7)	(0.0)	(38.9)	(0.0)	(0.7)
Female	226507	1900	56483	478	636	132	164722	25	2131
	(100.0)	(0.8)	(24.9)	(0.2)	(0.3)	(0.1)	(72.7)	(0.0)	(0.9)

Table 4.8 (Cont'd)

Urban/Rural and Sex	Economically Active	Employer	Self Employed	Goverment Employee	Private Employee	Member of Co-operative	Unpaid Family Worker	Others	Not Stated
				Misrakawi Zone					
Urban+Rural									
Total	250274	6594	112840	5828	4079	318	116513	255	3847
	(100.0)	(2.6)	(45.1)	(2.3)	(1.6)	(0.1)	(46.6)	(0.1)	(1.5)
Male	126049	4208	71327	3830	2645	125	42418	160	1336
	(100.0)	(3.3)	(56.6)	(3.0)	(2.1)	(0.1)	(33.7)	(0.1)	(1.1)
Female	124225	2386	41513	1998	1434	193	74095	95	2511
	(100.0)	(1.9)	(33.4)	(1.6)	(1.2)	(0.2)	(59.6)	(0.1)	(2.0)
Urban									
Total	20224	1270	8907	4205	2470	70	1785	180	1337
	(100.0)	(6.3)	(44.0)	(20.8)	(12.2)	(0.3)	(8.8)	(0.9)	(6.6)
Male	10922	641	4383	2896	1591	36	679	126	570
	(100.0)	(5.9)	(40.1)	(26.5)	(14.6)	(0.3)	(6.2)	(1.2)	(5.2)
Female	9302	629	4524	1309	879	34	1106	54	767
	(100.0)	(6.8)	(48.6)	(14.1)	(9.4)	(0.4)	(11.9)	(0.6)	(8.2)
Rural									
Total	230050	5324	103933	1623	1609	248	114728	75	2510
	(100.0)	(2.3)	(45.2)	(0.7)	(0.7)	(0.1)	(49.9)	(0.0)	(1.1)
Male	115127	3567	66944	934	1054	89	41739	34	766
	(100.0)	(3.1)	(58.1)	(0.8)	(0.9)	(0.1)	(36.3)	(0.0)	(0.7)
Female	114923	1757	36989	689	555	159	72989	41	1744
	(100.0)	(1.5)	(32.2)	(0.6)	(0.5)	(0.1)	(63.5)	(0.0)	(1.5)
				Debubawi Zone					
Urban+Rural									
Total	364228	8767	170194	15853	13393	521	148063	666	6771
	(100.0)	(2.4)	(46.7)	(4.4)	(3.7)	(0.1)	(40.7)	(0.2)	(1.9)
Male	212153	6236	119594	10251	8906	273	63554	384	2955
	(100.0)	(2.9)	(56.4)	(4.8)	(4.2)	(0.1)	(30.0)	(0.2)	(1.4)
Female	152075	2531	50600	5602	4487	248	84509	282	3816
	(100.0)	(1.7)	(33.3)	(3.7)	(3.0)	(0.2)	(55.6)	(0.2)	(2.5)
Urban									
Total	58446	1641	25357	14260	7927	268	5027	525	3441
	(100.0)	(2.8)	(43.4)	(24.4)	(13.6)	(0.5)	(8.6)	(0.9)	(5.9)
Male	32586	913	13836	9185	4403	154	2222	272	1601
	(100.0)	(2.8)	(42.5)	(28.2)	(13.5)	(0.5)	(6.8)	(0.8)	(4.9)
Female	25860	728	11521	5075	3524	114	2805	253	1840
	(100.0)	(2.8)	(44.6)	(19.6)	(13.6)	(0.4)	(10.8)	(1.0)	(7.1)
Rural									
Total	305782	7126	144837	1593	5466	253	143036	141	3330
	(100.0)	(2.3)	(47.4)	(0.5)	(1.8)	(0.1)	(46.8)	(0.0)	(1.1)
Male	179567	5323	105758	1066	4503	119	61332	112	1354
	(100.0)	(3.0)	(58.9)	(0.6)	(2.5)	(0.1)	(34.2)	(0.1)	(0.8)
Female	126215	1803	39079	527	963	134	81704	29	1976
	(100.0)	(1.4)	(31.0)	(0.4)	(0.8)	(0.1)	(64.7)	(0.0)	(1.6)

Table 4.9 Percentage Distribution of Status in Employment by sex in the 1984 and 1994 Censuses (Urban Tigray Region)

Status in employment	1984			1994*		
	Total	Male	Female	Total	Male	Female
Economically Active Population	100	100	100	100	100	100
Employer	0.9	0.7	1.0	4.0	3.8	4.2
Self Employed	46.3	40.3	53.5	47.0	43.6	50.9
Government Employee	30.4	43.0	15.1	24.7	30.6	17.7
Private Employee	20.1	12.8	29.1	12.4	13.0	11.8
Unpaid Family Worker	0.9	1.0	0.8	10.6	7.4	14.4
Member of Cooperatives	0.2	0.3	0.2	0.6	0.7	0.4
Others	1.2	1.9	0.3	0.8	0.9	0.6

* Excluding Humera, Korem and Alamata towns .

4.4.2 Type of Occupation

a) Occupational Distribution

As it is well known that the country's rural economy is predominantly agrarian, the majority (82.1 percent) of the economically active persons in rural areas of Tigray Region were found to be skilled agricultural and fishery workers (See Table 4.10). This is reflected for the total region where three-fourth of the economically active population were skilled agricultural workers. However, in the urban part the picture is different, where a significant number of the economically active persons were reported in the service workers and shop and market sales workers group (26.8 percent), crafts and related trade workers group (18.3 percent) and those engaged in elementary occupations (18.3 percent). The pattern observed above is also true for males and females in both urban and rural areas. Excepting in urban Mehakeiegnaw Zone where a higher number of persons engaged in crafts and related trade workers group compared to sales and service workers group, in the remaining zones for both urban and rural areas the general pattern presented above is found to be hold true. In general the economically active persons engaged in the white collar occupations are considerably small, where a total of 1.4 percent were reported in legislators, senior officials and managers group, professionals, technicians and clerks occupational groups. The major contributor for this value is the urban sector that was reported to have about 13.0 percent of the active persons in the white collar occupations.

Table 4.10 Distribution of Economically Active Population Aged Ten Years and Over by Major Occupational Group, Sex, Zone Urban and Rural: 1994

Urban/Rural and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
					Tigray Region						
Urban+Rural											
Total	1476129	2332	1605	13575	3669	41858	1118399	31720	4358	232597	26016
	(100.0)	(0.2)	(0.1)	(0.9)	(0.2)	(2.8)	(75.8)	(2.1)	(0.3)	(15.8)	(1.8)
Male	786216	1945	1402	8767	2148	15784	608359	15541	3535	117513	11222
	(100.0)	(0.2)	(0.2)	(1.1)	(0.3)	(2.0)	(77.4)	(2.0)	(0.4)	(14.9)	(1.4)
Female	689913	387	203	4808	1521	26074	510040	16179	823	115084	14794
	(100.0)	(0.1)	(0.0)	(0.7)	(0.2)	(3.8)	(73.9)	(2.3)	(0.1)	(16.7)	(2.1)
Urban											
Total	133066	2126	1511	10130	3499	35684	16134	24359	3581	24294	11748
	(100.0)	(1.6)	(1.1)	(7.6)	(2.6)	(26.8)	(12.1)	(18.3)	(2.7)	(18.3)	(8.8)
Male	72037	1751	1343	6391	2032	14194	11123	13091	3088	13158	5866
	(100.0)	(2.4)	(1.9)	(8.9)	(2.8)	(19.7)	(15.4)	(18.2)	(4.3)	(18.3)	(8.1)
Female	61029	375	168	3739	1467	21490	5011	11268	493	11136	5882
	(100.0)	(0.6)	(0.3)	(6.1)	(2.4)	(35.2)	(8.2)	(18.5)	(0.8)	(18.2)	(9.6)
Rural											
Total	1343063	206	94	3445	170	6174	1102265	7361	777	208303	14268
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.5)	(82.1)	(0.5)	(0.1)	(15.5)	(1.1)
Male	714179	194	59	2376	116	1590	597236	2450	447	104355	5356
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.2)	(83.6)	(0.3)	(0.1)	(14.6)	(0.7)
Female	628884	12	35	1069	54	4584	505029	4911	330	103948	8912
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(0.7)	(80.3)	(0.8)	(0.1)	(16.5)	(1.4)
					Mirabawi Zone						
Urban+Rural											
Total	382505	402	121	2140	464	9895	290503	5806	759	66918	5497
	(100.0)	(0.1)	(0.0)	(0.6)	(0.1)	(2.6)	(75.9)	(1.5)	(0.2)	(17.5)	(1.4)
Male	209295	335	101	1509	287	3596	162429	3291	663	34714	2370
	(100.0)	(0.2)	(0.0)	(0.7)	(0.1)	(1.7)	(77.6)	(1.6)	(0.3)	(16.6)	(1.1)
Female	173210	67	20	631	177	6299	128074	2515	96	32204	3127
	(100.0)	(0.0)	(0.0)	(0.4)	(0.1)	(3.6)	(73.9)	(1.5)	(0.1)	(18.6)	(1.8)
Urban											
Total	26666	338	115	1429	417	8577	5265	3724	573	4080	2148
	(100.0)	(1.3)	(0.4)	(5.4)	(1.6)	(32.2)	(19.7)	(14.0)	(2.1)	(15.3)	(8.1)
Male	14695	276	99	990	258	3231	3864	2366	501	2115	995
	(100.0)	(1.9)	(0.7)	(6.7)	(1.8)	(22.0)	(26.3)	(16.1)	(3.4)	(14.4)	(6.8)
Female	11971	62	16	439	159	5346	1401	1358	72	1965	1153
	(100.0)	(0.5)	(0.1)	(3.7)	(1.3)	(44.7)	(11.7)	(11.3)	(0.6)	(16.4)	(9.6)
Rural											
Total	355839	64	6	711	47	1318	285238	2082	186	62838	3349
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(0.4)	(80.2)	(0.6)	(0.1)	(17.7)	(0.9)
Male	194600	59	2	519	29	365	158565	925	162	32599	1375
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.2)	(81.5)	(0.5)	(0.1)	(16.8)	(0.7)
Female	161239	5	4	192	18	953	126673	1157	24	30239	1974
	(100.0)	(0.0)	(0.0)	(0.1)	(0.0)	(0.6)	(78.6)	(0.7)	(0.0)	(18.8)	(1.2)

Table 4.10 (Cont'd)

Urban/Rural and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
					Mehakelegnaw Zone						
Urban+Rural											
Total	479122	586	362	3889	552	5950	389242	10108	830	60983	6620
	(100.0)	(0.1)	(0.1)	(0.8)	(0.1)	(1.2)	(81.2)	(2.1)	(0.2)	(12.7)	(1.4)
Male	238719	480	326	2456	351	2515	195972	3627	747	29552	2693
	(100.0)	(0.2)	(0.1)	(1.0)	(0.1)	(1.1)	(82.1)	(1.5)	(0.3)	(12.4)	(1.1)
Female	240403	106	36	1433	201	3435	193270	6481	83	31431	3927
	(100.0)	(0.0)	(0.0)	(0.6)	(0.1)	(1.4)	(80.4)	(2.7)	(0.0)	(13.1)	(1.6)
Urban											
Total	27730	556	331	2616	520	5619	3206	8364	768	3398	2352
	(100.0)	(2.0)	(1.2)	(9.4)	(1.9)	(20.3)	(11.6)	(30.2)	(2.8)	(12.3)	(8.5)
Male	13834	450	310	1598	327	2378	1844	3277	726	1836	1088
	(100.0)	(3.3)	(2.2)	(11.6)	(2.4)	(17.2)	(13.3)	(23.7)	(5.2)	(13.3)	(7.9)
Female	13896	106	21	1018	193	3241	1362	5087	42	1562	1264
	(100.0)	(0.8)	(0.2)	(7.3)	(1.4)	(23.3)	(9.8)	(36.6)	(0.3)	(11.2)	(9.1)
Rural											
Total	451392	30	31	1273	32	331	386036	1744	62	57585	4268
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.1)	(85.5)	(0.4)	(0.0)	(12.8)	(0.9)
Male	224885	30	16	858	24	137	194128	350	21	27716	1605
	(100.0)	(0.0)	(0.0)	(0.4)	(0.0)	(0.1)	(86.3)	(0.2)	(0.0)	(12.3)	(0.7)
Female	226507	-	15	415	8	194	191908	1394	41	29869	2663
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(0.1)	(84.7)	(0.6)	(0.0)	(13.2)	(1.2)
					Misrakawi Zone						
Urban+Rural											
Total	250274	422	266	2421	593	6707	196813	4389	702	32663	5298
	(100.0)	(0.2)	(0.1)	(1.0)	(0.2)	(2.7)	(78.6)	(1.8)	(0.3)	(13.1)	(2.1)
Male	126049	346	222	1603	327	2998	99348	1730	477	16705	2293
	(100.0)	(0.3)	(0.2)	(1.3)	(0.3)	(2.4)	(78.8)	(1.4)	(0.4)	(13.3)	(1.8)
Female	124225	76	44	818	266	3709	97465	2659	225	15958	3005
	(100.0)	(0.1)	(0.0)	(0.7)	(0.2)	(3.0)	(78.5)	(2.1)	(0.2)	(12.8)	(2.4)
Urban											
Total	20224	378	246	1675	563	5968	1718	3436	510	3318	2412
	(100.0)	(1.9)	(1.2)	(8.3)	(2.8)	(29.5)	(8.5)	(17.0)	(2.5)	(16.4)	(11.9)
Male	10922	304	208	1100	309	2632	1073	1417	407	2162	1310
	(100.0)	(2.8)	(1.9)	(10.1)	(2.8)	(24.1)	(9.8)	(13.0)	(3.7)	(19.8)	(12.0)
Female	9302	74	38	575	254	3336	645	2019	103	1156	1102
	(100.0)	(0.8)	(0.4)	(6.2)	(2.7)	(35.9)	(6.9)	(21.7)	(1.1)	(12.4)	(11.8)
Rural											
Total	230050	44	20	746	30	739	195095	953	192	29345	2886
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.3)	(84.8)	(0.4)	(0.1)	(12.8)	(1.3)
Male	115127	42	14	503	18	366	98275	313	70	14543	983
	(100.0)	(0.0)	(0.0)	(0.4)	(0.0)	(0.3)	(85.4)	(0.3)	(0.1)	(12.6)	(0.9)
Female	114923	2	6	243	12	373	96820	640	122	14802	1903
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(0.3)	(84.2)	(0.6)	(0.1)	(12.9)	(1.7)

Table 4.10 (Cont'd)

Urban/Rural and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
	Debubawi Zone										
Urban+Rural											
Total	364228	922	856	5125	2060	19306	241841	11417	2067	72033	8601
	(100.0)	(0.3)	(0.2)	(1.4)	(0.6)	(5.3)	(66.4)	(3.1)	(0.6)	(19.8)	(2.4)
Male	212153	784	753	3199	1183	6675	150610	6893	1648	36542	3866
	(100.0)	(0.4)	(0.4)	(1.5)	(0.6)	(3.1)	(71.0)	(3.2)	(0.8)	(17.2)	(1.8)
Female	152075	138	103	1926	877	12631	91231	4524	419	35491	4735
	(100.0)	(0.1)	(0.1)	(1.3)	(0.6)	(8.3)	(60.0)	(3.0)	(0.3)	(23.3)	(3.1)
Urban											
Total	58446	854	819	4410	1999	15520	5945	8835	1730	13498	4836
	(100.0)	(1.5)	(1.4)	(7.5)	(3.4)	(26.6)	(10.2)	(15.1)	(3.0)	(23.1)	(8.3)
Male	32586	721	726	2703	1138	5953	4342	6031	1454	7045	2473
	(100.0)	(2.2)	(2.2)	(8.3)	(3.5)	(18.3)	(13.3)	(18.5)	(4.5)	(21.6)	(7.6)
Female	25860	133	93	1707	861	9567	1603	2804	276	6453	2363
	(100.0)	(0.5)	(0.4)	(6.6)	(3.3)	(37.0)	(6.2)	(10.8)	(1.1)	(25.0)	(9.1)
Rural											
Total	305782	68	37	715	61	3786	235896	2582	337	58535	3765
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(1.2)	(77.1)	(0.8)	(0.1)	(19.1)	(1.2)
Male	179567	63	27	496	45	722	146268	862	194	29497	1393
	(100.0)	(0.0)	(0.0)	(0.3)	(0.0)	(0.4)	(81.5)	(0.5)	(0.1)	(16.4)	(0.8)
Female	126215	5	10	219	16	3064	89628	1720	143	29038	2372
	(100.0)	(0.0)	(0.0)	(0.2)	(0.0)	(2.4)	(71.0)	(1.4)	(0.1)	(23.0)	(1.9)

b) Occupation and Level of Education

Tables 4.11a - 4.11c presented the distribution of the economically active population by major occupation and level of education for total, urban and rural population of Tigray Region, respectively. About 88.0 percent of the economically active population of Tigray Region were found to be illiterate. Except in the white collar occupations, the high level of illiteracy that prevailed among the economically active population of the regon is also reflected in the other occupational groups. For example, the overwhelming majority of the skilled agricultural workers and those engaged in elementary occupations are illiterate, 90.5 percent and 91.6 percent, respectively. Similarly, in the service workers and shop and market sales workers group and crafts and related trade workers group the corresponding figures were, 60.0 percent and 65.3 percent, respectively.

On the other hand, a significant number of persons who have completed at least grade twelve were reported in the legislators, senior officials and managers group (47.3 percent), professionals group (83.5 percent), technicians and associate professionals group (67.7 percent) and clerks group (46.8 percent). Similarly, a sizeable number of persons with elementary education, that is, who completed grades 1-6 were observed in the service workers and shop and market sales workers group (22.7 percent), crafts and related trades workers group (20.1 percent) and in plant and machine operators and assemblers group (34.5 percent). However, an insignificant number of persons who have education above elementary level were reported in the last five occupational groups as shown in Table 4.11a. Similar distribution patterns as indicated above were observed in the urban and rural parts of the region (See Tables 4.11b - 4.11c). The percent illiterate indicated under the legislators, senior officials and managers group seems inflated because of the inclusion of heads of kebeles or community organizers in the major group that will add to the number of illiterate.

4.4.3 Type of Industry

a) Industrial Distribution

About 90 percent of the economically active population of Tigray Region were reported to be engaged in the agricultural sector. As it was observed in the discussion on occupational distribution section above, here also agriculture is the major sector that absorbed the rural population (See Table 4.12). This is universal in the rural part of the region, where in all the rural parts of the zones above 95 percent of the rural work force is engaged in agriculture. However, in the urban part other than agriculture, a sizeable number of males were observed to be engaged in wholesale and retail trade, repair of vehicles, personal and household goods (16.7 percent),

Table 4.11a Distribution of Economically Active Population Aged Ten Years and Over by Major Occupational Group , Sex and Educational Attainment, Tigray Region Total: 1994

Education and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	1476129	2332	1605	13575	3669	41858	1118399	31720	4358	232597	26016
Male	786216	1945	1402	8767	2148	15784	608359	15541	3535	117513	11222
Female	689913	387	203	4808	1521	26074	510040	16179	823	115084	14794
Illiterate											
Total	1291698	227	67	855	155	25118	1011865	20724	1582	213023	18082
Male	639281	144	43	655	87	5804	514317	7155	993	104052	6031
Female	652417	83	24	200	68	19314	497548	13569	589	108971	12051
Non-Regular											
Total	50525	83	5	714	24	2393	40844	1699	165	3831	767
Male	45512	78	5	700	24	1092	38946	1098	145	2906	518
Female	5013	5	0	14	0	1301	1898	601	20	925	249
Grades 1-6											
Total	97824	518	50	812	488	9482	61062	6362	1505	13052	4493
Male	75975	380	40	516	365	5742	51299	4794	1330	8599	2910
Female	21849	138	10	296	123	3740	9763	1568	175	4453	1583
Grades 7-8											
Total	10030	161	66	610	448	2358	2349	1333	493	1446	766
Male	7572	131	63	362	331	1550	2001	1061	474	1062	536
Female	2458	30	3	248	117	807	348	272	19	384	230
Grades 9-11											
Total	7424	240	61	1318	837	1460	741	981	378	695	713
Male	5418	198	52	802	564	913	608	902	368	509	502
Female	2006	42	9	516	273	547	133	79	10	186	211
Grade 12 Completed											
Total	10107	482	153	4743	1502	901	399	482	204	336	905
Male	6313	406	125	2869	660	581	317	397	194	258	506
Female	3794	76	28	1874	842	320	82	85	10	78	399
Beyond Grade 12											
Total	7076	621	1188	4446	215	77	140	103	31	21	234
Male	5112	608	1059	2812	117	72	115	98	31	16	184
Female	1964	13	129	1634	98	5	25	5	0	5	50
Not Stated											
Total	1445	0	15	77	0	69	999	36	0	193	56
Male	1033	0	15	51	0	29	756	36	0	111	35
Female	412	0	0	26	0	40	243	0	0	82	21

Table 4.11b Distribution of Economically Active Population Aged Ten Years and Over by Major Occupational Group , Sex and Educational Attainment, Tigray Region Urban:1994

Education and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	133066	2126	1511	10130	3499	35684	16134	24359	3581	24294	11748
Male	72037	1751	1343	6391	2032	14194	11123	13091	3088	13158	5866
Female	61029	375	168	3739	1467	21490	5011	11268	493	11136	5882
Illiterate											
Total	68668	179	43	506	128	20090	11994	14262	1136	14675	5655
Male	28225	96	43	389	81	4963	7536	5419	805	6902	1991
Female	40443	83	0	117	47	15127	4458	8843	331	7773	3664
Non-Regular											
Total	7261	68	5	392	24	2193	1188	1448	137	1311	495
Male	4608	63	5	378	24	982	1049	919	122	763	303
Female	2653	5	0	14	0	1211	139	529	15	548	192
Grades 1-6											
Total	29043	473	39	632	467	8745	2368	5821	1283	5997	3218
Male	19719	335	29	395	350	5239	2007	4361	1165	3812	2026
Female	9324	138	10	237	117	3506	361	1460	118	2185	1192
Grades 7-8											
Total	7350	155	66	510	428	2243	262	1276	441	1308	661
Male	5366	125	63	296	311	1482	242	1009	432	949	457
Female	1984	30	3	214	117	761	20	267	9	359	204
Grades 9-11											
Total	6427	227	60	1210	803	1406	121	953	364	634	649
Male	4619	186	51	712	531	880	110	874	354	463	458
Female	1808	41	9	498	272	526	11	79	10	171	191
Grade 12 Completed											
Total	8367	448	153	3529	1441	865	127	465	194	313	832
Male	5106	382	125	2076	619	547	105	380	184	235	453
Female	3261	66	28	1453	822	318	22	85	10	78	379
Beyond Grade 12											
Total	5698	576	1130	3284	208	77	60	98	26	21	218
Male	4227	564	1012	2099	116	72	60	93	26	16	169
Female	1471	12	118	1185	92	5	0	5	0	5	49
Not Stated											
Total	252	0	15	67	0	65	14	36	0	35	20
Male	167	0	15	46	0	29	14	36	0	18	9
Female	85	0	0	21	0	36	0	0	0	17	11

Table 4.11c Distribution of Economically Active Population Aged Ten Years and Over by Major Occupational Group , Sex and Educational Attainment, Tigray Region Rural: 1994

Education and Sex	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	1343063	206	94	3445	170	6174	1102265	7361	777	208303	14268
Male	714179	194	59	2376	116	1590	597236	2450	447	104355	5356
Female	628884	12	35	1069	54	4584	505029	4911	330	103948	8912
Illiterate											
Total	1223030	48	24	349	27	5028	999871	6462	446	198348	12427
Male	611056	48	0	266	6	841	506781	1736	188	97150	4040
Female	611974	0	24	83	21	4187	493090	4726	258	101198	8387
Non-Regular											
Total	43264	15	0	322	0	200	39656	251	28	2520	272
Male	40904	15	0	322	0	110	37897	179	23	2143	215
Female	2360	0	0	0	0	90	1759	72	5	377	57
Grades 1-6											
Total	68781	45	11	180	21	737	58694	541	222	7055	1275
Male	56256	45	11	121	15	503	49292	433	165	4787	884
Female	12525	0	0	59	6	234	9402	108	57	2268	391
Grades 7-8											
Total	2680	6	0	100	20	115	2087	57	52	138	105
Male	2206	6	0	66	20	69	1759	52	42	113	79
Female	474	0	0	34	0	46	328	5	10	25	26
Grades 9-11											
Total	997	13	1	108	34	54	620	28	14	61	64
Male	799	12	1	90	33	33	498	28	14	46	44
Female	198	1	0	18	1	21	122	0	0	15	20
Grade 12 Completed											
Total	1740	34	0	1214	61	36	272	17	10	23	73
Male	1207	24	0	793	41	34	212	17	10	23	53
Female	533	10	0	421	20	2	60	0	0	0	20
Beyond Grade 12											
Total	1378	45	58	1162	7	0	80	5	5	0	16
Male	885	44	47	713	1	0	55	5	5	0	15
Female	493	1	11	449	6	0	25	0	0	0	1
Not Stated											
Total	1193	0	0	10	0	4	985	0	0	158	36
Male	866	0	0	5	0	0	742	0	0	93	26
Female	327	0	0	5	0	4	243	0	0	65	10

Table 4.12 Distribution of Economically Active Population Aged Ten Years and Over by Major Industrial Divisions, Sex, Urban and Rural: 1994

Major Industrial Division		Urban+Rural			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
		Tigray Region								
Economically Active										
	No.	1476129	786216	689913	133066	72037	61029	1343063	714179	628884
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Agriculture, Hunting Forestry and fishing										
	No.	1324445	712048	612397	19087	13083	6004	1305358	698965	606393
	%	(89.7)	(90.6)	(88.8)	(14.3)	(18.2)	(9.8)	(97.2)	(97.9)	(96.4)
Mining and Quarrying										
	No.	625	521	104	389	368	21	236	153	83
	%	(0.0)	(0.1)	(0.0)	(0.3)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Manufacturing										
	No.	21056	11277	9779	15099	9133	5966	5957	2144	3813
	%	(1.4)	(1.4)	(1.4)	(11.3)	(12.7)	(9.8)	(0.4)	(0.3)	(0.6)
Elecricity, Gas and Water Supply										
	No.	907	726	181	857	686	171	50	40	10
	%	(0.1)	(0.1)	(0.0)	(0.6)	(1.0)	(0.3)	(0.0)	(0.0)	(0.0)
Construction										
	No.	6615	5625	990	5729	4794	935	886	831	55
	%	(0.4)	(0.7)	(0.1)	(4.3)	(6.7)	(1.5)	(0.1)	(0.1)	(0.0)
Wholesale & Retail Trade Repair of Vehicles, Personal and Household Goods										
	No.	25804	13447	12357	21391	12020	9371	4413	1427	2986
	%	(1.7)	(1.7)	(1.8)	(16.1)	(16.7)	(15.4)	(0.3)	(0.2)	(0.5)
Hotels and Resturants										
	No.	21090	1487	19603	18631	1402	17229	2459	85	2374
	%	(1.4)	(0.2)	(2.8)	(14.0)	(1.9)	(28.2)	(0.2)	(0.0)	(0.4)
Transport, Storage & Communication										
	No.	7033	5846	1187	6154	5228	926	879	618	261
	%	(0.5)	(0.7)	(0.2)	(4.6)	(7.3)	(1.5)	(0.1)	(0.1)	(0.0)
Financial Intr-mediation										
	No.	201	168	33	201	168	33	-	-	-
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.2)	(0.1)	(0.0)	(0.0)	(0.0)
Real Estate, Renting and Business Activities										
	No.	353	292	61	343	287	56	10	5	5
	%	(0.0)	(0.0)	(0.0)	(0.3)	(0.4)	(0.1)	(0.0)	(0.0)	(0.0)
Public Administration and Defence, Compulsory Social Security										
	No.	17110	11994	5116	15374	10709	4665	1736	1285	451
	%	(1.2)	(1.5)	(0.7)	(11.6)	(14.9)	(7.6)	(0.1)	(0.2)	(0.1)
Education Health and Social Work										
	No.	12058	7391	4667	9339	5616	3723	2719	1775	944
	%	(0.8)	(0.9)	(0.7)	(7.0)	(7.8)	(6.1)	(0.2)	(0.2)	(0.2)
Other Social, Cultural, Personal and Household Activities										
	No.	7358	3933	3425	5486	3114	2372	1872	819	1053
	%	(0.5)	(0.5)	(0.5)	(4.1)	(4.3)	(3.9)	(0.1)	(0.1)	(0.2)
Private Households with Employed Persons										
	No.	6045	938	5107	4560	627	3933	1485	311	1174
	%	(0.4)	(0.1)	(0.7)	(3.4)	(0.9)	(6.4)	(0.1)	(0.0)	(0.2)
Extra-Territorial Organization and Bodies										
	No.	109	99	10	109	99	10	-	-	-
	%	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)
Not Stated										
	No.	25320	10424	14896	10317	4703	5614	15003	5721	9282
	%	(1.7)	(1.3)	(2.2)	(7.8)	(6.5)	(9.2)	(1.1)	(0.8)	(1.5)

Table 4.12 (Cont'd)

Major Industrial Division		Urban+Rural			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
		Mirabawi Zone								
Economically Active										
	No.	382505	209295	173210	26666	14695	11971	355839	194600	161239
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Agriculture, Hunting Forestry and fishing										
	No.	353159	194940	158219	6163	4430	1733	346996	190510	156486
	%	(92.3)	(93.1)	(91.3)	(23.1)	(30.1)	(14.5)	(97.5)	(97.9)	(97.1)
Mining and Quarrying										
	No.	144	87	57	53	37	16	91	50	41
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.3)	(0.1)	(0.0)	(0.0)	(0.0)
Manufacturing										
	No.	3986	2792	1194	2295	1775	520	1691	1017	674
	%	(1.0)	(1.3)	(0.7)	(8.6)	(12.1)	(4.3)	(0.5)	(0.5)	(0.4)
Elecricity, Gas and Water Supply										
	No.	61	46	15	51	36	15	10	10	0
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.2)	(0.1)	(0.0)	(0.0)	(0.0)
Construction										
	No.	488	450	38	421	383	38	67	67	0
	%	(0.1)	(0.2)	(0.0)	(1.6)	(2.6)	(0.3)	(0.0)	(0.0)	(0.0)
Wholesale & Retail Trade Repair of Vehicles, Personal and Household Goods										
	No.	5481	3076	2405	4818	2747	2071	663	329	334
	%	(1.4)	(1.5)	(1.4)	(18.1)	(18.7)	(17.3)	(0.2)	(0.2)	(0.2)
Hotels and Resturants										
	No.	5299	369	4930	4359	329	4030	940	40	900
	%	(1.4)	(0.2)	(2.8)	(16.3)	(2.2)	(33.7)	(0.3)	(0.0)	(0.6)
Transport, Storage & Communication										
	No.	1515	1152	363	1322	1021	301	193	131	62
	%	(0.4)	(0.6)	(0.2)	(5.0)	(6.9)	(2.5)	(0.1)	(0.1)	(0.0)
Financial Intr-mediation										
	No.	28	18	10	28	18	10	-	-	-
	%	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)
Real Estate, Renting and Business Activities										
	No.	52	52	-	47	47	-	5	5	-
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.3)	(0.0)	(0.0)	(0.0)	(0.0)
Public Administration and Defence, Compulsory Social Security										
	No.	2403	1901	502	2170	1725	445	233	176	57
	%	(0.6)	(0.9)	(0.3)	(8.1)	(11.7)	(3.7)	(0.1)	(0.1)	(0.0)
Education Health and Social Work										
	No.	1496	989	507	1045	680	365	451	309	142
	%	(0.4)	(0.5)	(0.3)	(3.9)	(4.6)	(3.0)	(0.1)	(0.2)	(0.1)
Other Social, Cultural, Personal and Household Activities										
	No.	1227	592	635	887	384	503	340	208	132
	%	(0.3)	(0.3)	(0.4)	(3.3)	(2.6)	(4.2)	(0.1)	(0.1)	(0.1)
Private Households with Employed Persons										
	No.	1228	136	1092	849	90	759	379	46	333
	%	(0.3)	(0.1)	(0.6)	(3.2)	(0.6)	(6.3)	(0.1)	(0.0)	(0.2)
Extra-Territorial Organization and Bodies										
	No.	-	-	-	-	-	-	-	-	-
	%	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Not Stated										
	No.	5938	2695	3243	2158	993	1165	3780	1702	2078
	%	(1.6)	(1.3)	(1.9)	(8.1)	(6.8)	(9.7)	(1.1)	(0.9)	(1.3)

Table 4.12 (Cont'd)

Major Industrial Division		Urban+Rural			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
		Mehakelegnaw Zone								
Economically Active										
	No.	479122	238719	240403	27730	13834	13896	451392	224885	226507
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Agriculture, Hunting Forestry and fishing										
	No.	446356	223505	222851	3812	2168	1644	442544	221337	221207
	%	(93.2)	(93.6)	(92.7)	(13.7)	(15.7)	(11.8)	(98.0)	(98.4)	(97.7)
Mining and Quarrying										
	No.	129	114	15	90	90	_	39	24	15
	%	(0.0)	(0.0)	(0.0)	(0.3)	(0.7)	(0.0)	(0.0)	(0.0)	(0.0)
Manufacturing										
	No.	6834	2782	4052	5489	2503	2986	1345	279	1066
	%	(1.4)	(1.2)	(1.7)	(19.8)	(18.1)	(21.5)	(0.3)	(0.1)	(0.5)
Elecricity, Gas and Water Supply										
	No.	195	140	55	195	140	55	_	_	_
	%	(0.0)	(0.1)	(0.0)	(0.7)	(1.0)	(0.4)	(0.0)	(0.0)	(0.0)
Construction										
	No.	1415	1300	115	1227	1121	106	188	179	9
	%	(0.3)	(0.5)	(0.0)	(4.4)	(8.1)	(0.8)	(0.0)	(0.1)	(0.0)
Wholesale & Retail Trade Repair of Vehicles, Personal and Household Goods										
	No.	3497	1843	1654	3067	1747	1320	430	96	334
	%	(0.7)	(0.8)	(0.7)	(11.1)	(12.6)	(9.5)	(0.1)	(0.0)	(0.1)
Hotels and Resturants										
	No.	4456	281	4175	4307	275	4032	149	6	143
	%	(0.9)	(0.1)	(1.7)	(15.5)	(2.0)	(29.0)	(0.0)	(0.0)	(0.1)
Transport, Storage & Communication										
	No.	1041	791	250	860	702	158	181	89	92
	%	(0.2)	(0.3)	(0.1)	(3.1)	(5.1)	(1.1)	(0.0)	(0.0)	(0.0)
Financial Intr-mediation										
	No.	52	52	0	52	52	_	0	_	_
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.4)	(0.0)	(0.0)	(0.0)	(0.0)
Real Estate, Renting and Business Activities										
	No.	43	38	5	43	38	5	_	_	_
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.3)	(0.0)	(0.0)	(0.0)	(0.0)
Public Administration and Defence, Compulsory Social Security										
	No.	3088	2369	719	2803	2139	664	285	230	55
	%	(0.6)	(1.0)	(0.3)	(10.1)	(15.5)	(4.8)	(0.1)	(0.1)	(0.0)
Education Health and Social Work										
	No.	3552	2241	1311	2476	1565	911	1076	676	400
	%	(0.7)	(0.9)	(0.5)	(8.9)	(11.3)	(6.6)	(0.2)	(0.3)	(0.2)
Other Social, Cultural, Personal and Household Activities										
	No.	809	479	330	586	345	241	223	134	89
	%	(0.2)	(0.2)	(0.1)	(2.1)	(2.5)	(1.7)	(0.0)	(0.1)	(0.0)
Private Households with Employed Persons										
	No.	1253	272	981	722	74	648	531	198	333
	%	(0.3)	(0.1)	(0.4)	(2.6)	(0.5)	(4.7)	(0.1)	(0.1)	(0.1)
Extra-Territorial Organization and Bodies										
	No.	100	94	6	100	94	6	_	_	_
	%	(0.0)	(0.0)	(0.0)	(0.4)	(0.7)	(0.0)	(0.0)	(0.0)	(0.0)
Not Stated										
	No.	6302	2418	3884	1901	781	1120	4401	1637	2764
	%	(1.3)	(1.0)	(1.6)	(6.9)	(5.6)	(8.1)	(1.0)	(0.7)	(1.2)

Table 4.12 (Cont'd)

Major Industrial Division		Urban+Rural			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
		Misrakawi Zone								
Economically Active										
	No.	250274	126049	124225	20224	10922	9302	230050	115127	114923
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Agriculture, Hunting Forestry and fishing										
	No.	225433	113594	111839	1958	1261	697	223475	112333	111142
	%	(90.1)	(90.1)	(90.0)	(9.7)	(11.5)	(7.5)	(97.1)	(97.6)	(96.7)
Mining and Quarrying										
	No.	171	139	32	75	70	5	96	69	27
	%	(0.1)	(0.1)	(0.0)	(0.4)	(0.6)	(0.1)	(0.0)	(0.1)	(0.0)
Manufacturing										
	No.	2406	1144	1262	1646	941	705	760	203	557
	%	(1.0)	(0.9)	(1.0)	(8.1)	(8.6)	(7.6)	(0.3)	(0.2)	(0.5)
Elecricity, Gas and Water Supply										
	No.	190	133	57	165	118	47	25	15	10
	%	(0.1)	(0.1)	(0.0)	(0.8)	(1.1)	(0.5)	(0.0)	(0.0)	(0.0)
Construction										
	No.	1199	1114	85	959	893	66	240	221	19
	%	(0.5)	(0.9)	(0.1)	(4.7)	(8.2)	(0.7)	(0.1)	(0.2)	(0.0)
Wholesale & Retail Trade Repair of Vehicles, Personal and Household Goods										
	No.	4293	2498	1795	3597	2148	1449	696	350	346
	%	(1.7)	(2.0)	(1.4)	(17.8)	(19.7)	(15.6)	(0.3)	(0.3)	(0.3)
Hotels and Resturants										
	No.	3653	239	3414	3451	234	3217	202	5	197
	%	(1.5)	(0.2)	(2.7)	(17.1)	(2.1)	(34.6)	(0.1)	(0.0)	(0.2)
Transport, Storage & Communication										
	No.	1439	1317	122	1306	1188	118	133	129	4
	%	(0.6)	(1.0)	(0.1)	(6.5)	(10.9)	(1.3)	(0.1)	(0.1)	(0.0)
Financial Intr-mediation										
	No.	35	35	0	35	35	–	–	–	–
	%	(0.0)	(0.0)	(0.0)	(0.2)	(0.3)	(0.0)	(0.0)	(0.0)	(0.0)
Real Estate, Renting and Business Activities										
	No.	53	47	6	53	47	6	–	–	–
	%	(0.0)	(0.0)	(0.0)	(0.3)	(0.4)	(0.1)	(0.0)	(0.0)	(0.0)
Public Administration and Defence, Compulsory Social Security										
	No.	2871	2093	778	2352	1741	611	519	352	167
	%	(1.1)	(1.7)	(0.6)	(11.6)	(15.9)	(6.6)	(0.2)	(0.3)	(0.1)
Education Health and Social Work										
	No.	2243	1435	808	1550	954	596	693	481	212
	%	(0.9)	(1.1)	(0.7)	(7.7)	(8.7)	(6.4)	(0.3)	(0.4)	(0.2)
Other Social, Cultural, Personal and Household Activities										
	No.	885	405	480	659	309	350	226	96	130
	%	(0.4)	(0.3)	(0.4)	(3.3)	(2.8)	(3.8)	(0.1)	(0.1)	(0.1)
Private Households with Employed Persons										
	No.	662	69	593	447	33	414	215	36	179
	%	(0.3)	(0.1)	(0.5)	(2.2)	(0.3)	(4.5)	(0.1)	(0.0)	(0.2)
Extra-Territorial Organization and Bodies										
	No.	9	5	4	9	5	4	–	–	–
	%	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Not Stated										
	No.	4732	1782	2950	1962	945	1017	2770	837	1933
	%	(1.9)	(1.4)	(2.4)	(9.7)	(8.7)	(10.9)	(1.2)	(0.7)	(1.7)

Table 4.12 (Cont'd)

Major Industrial Division		Urban+Rural			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
					Debubawi Zone					
Economically Active										
	No.	364228	212153	152075	58446	32586	25860	305782	179567	126215
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Agriculture, Hunting Forestry and fishing										
	No.	299497	180009	119488	7154	5224	1930	292343	174785	117558
	%	(82.2)	(84.8)	(78.6)	(12.2)	(16.0)	(7.5)	(95.6)	(97.3)	(93.1)
Mining and Quarrying										
	No.	181	181	–	171	171	0	10	10	–
	%	(0.0)	(0.1)	(0.0)	(0.3)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Manufacturing										
	No.	7830	4559	3271	5669	3914	1755	2161	645	1516
	%	(2.1)	(2.1)	(2.2)	(9.7)	(12.0)	(6.8)	(0.7)	(0.4)	(1.2)
Elecricity, Gas and Water Supply										
	No.	461	407	54	446	392	54	15	15	–
	%	(0.1)	(0.2)	(0.0)	(0.8)	(1.2)	(0.2)	(0.0)	(0.0)	(0.0)
Construction										
	No.	3513	2761	752	3122	2397	725	391	364	27
	%	(1.0)	(1.3)	(0.5)	(5.3)	(7.4)	(2.8)	(0.1)	(0.2)	(0.0)
Wholesale & Retail Trade Repair of Vehicles, Personal and Household Goods										
	No.	12533	6030	6503	9909	5378	4531	2624	652	1972
	%	(3.4)	(2.8)	(4.3)	(17.0)	(16.5)	(17.5)	(0.9)	(0.4)	(1.6)
Hotels and Resturants										
	No.	7682	598	7084	6514	564	5950	1168	34	1134
	%	(2.1)	(0.3)	(4.7)	(11.1)	(1.7)	(23.0)	(0.4)	(0.0)	(0.9)
Transport, Storage & Communication										
	No.	3038	2586	452	2666	2317	349	372	269	103
	%	(0.8)	(1.2)	(0.3)	(4.6)	(7.1)	(1.3)	(0.1)	(0.1)	(0.1)
Financial Intr-mediation										
	No.	86	63	23	86	63	23	–	–	–
	%	(0.0)	(0.0)	(0.0)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.0)
Real Estate, Renting and Business Activities										
	No.	205	155	50	200	155	45	5	–	5
	%	(0.1)	(0.1)	(0.0)	(0.3)	(0.5)	(0.2)	(0.0)	(0.0)	(0.0)
Public Administration and Defence, Compulsory Social Security										
	No.	8748	5631	3117	8049	5104	2945	699	527	172
	%	(2.4)	(2.7)	(2.0)	(13.8)	(15.7)	(11.4)	(0.2)	(0.3)	(0.1)
Education Health and Social Work										
	No.	4767	2726	2041	4268	2417	1851	499	309	190
	%	(1.3)	(1.3)	(1.3)	(7.3)	(7.4)	(7.2)	(0.2)	(0.2)	(0.2)
Other Social, Cultural, Personal and Household Activities										
	No.	4437	2457	1980	3354	2076	1278	1083	381	702
	%	(1.2)	(1.2)	(1.3)	(5.7)	(6.4)	(4.9)	(0.4)	(0.2)	(0.6)
Private Households with Employed Persons										
	No.	2902	461	2441	2542	430	2112	360	31	329
	%	(0.8)	(0.2)	(1.6)	(4.3)	(1.3)	(8.2)	(0.1)	(0.0)	(0.3)
Extra-Territorial Organization and Bodies										
	No.	–	–	–	–	–	–	–	–	–
	%	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Not Stated										
	No.	8348	3529	4819	4296	1984	2312	4052	1545	2507
	%	(2.3)	(1.7)	(3.2)	(7.4)	(6.1)	(8.9)	(1.3)	(0.9)	(2.0)

manufacturing (12.7 percent) and public administration and defence (14.9 percent) industrial divisions. Similarly, in the case of females a significant number of them were found in hotels and restaurants (28.2 percent) and in wholesale and retail trade, repair of vehicles, personal and household goods (15.4 percent) industrial divisions.

In the urban parts of all the zones, higher proportion of females were found to be engaged in hotels and restaurants industrial division, where about 34 percent in Mirabawi, 29 percent in Mehakelegnaw, 35 percent in Misrakawi and 23 percent in Debubawi Zones were reported. Similarly a significant proportion of women engaged in the wholesale and retail trade, repair of vehicles, personal and household goods industrial division were reported in Mirabawi (17 percent), Misrakawi (15.6 percent) and Debubawi (17.5 percent) Zones. In almost all the urban parts of the zones, a significant proportion of the economically active males were reported to be engaged in the agricultural division, manufacturing division, wholesale and retail trade, repair of vehicles, personal and household goods division and public administration and defence, compulsory social security industrial division (See Table 4.12).

b) Industry and Level of Education

Tables 4.13a - 4.13c presented the distribution of the economically active population by major industrial division and level of education for the total region, urban and rural areas, respectively. Table 4.13a revealed that the majority (about 88 percent) of the economically active population of the region were illiterate. The corresponding figures for the urban and rural part were 51.6 percent and 91.1 percent, respectively (See Tables 4.13b - 4.13c). As it was the case in the occupation section above, here also virtually the same phenomena was reflected in each of the industrial divisions. Thus, among the economically active population engaged in the agricultural sector 91.2 percent and 91.4 percent, were found to be illiterate, for total and rural Tigray Region, respectively. More than half of the active persons engaged in wholesale and retail trade, repair of vehicles, personal and household goods (58.4 percent), transport, storage and communications (52.9 percent) and other social, cultural, personal and household activities (58.3 percent) industrial divisions were reported to be illiterate (See Table 4.13a). Even higher percent illiterates were reported in mining and quarrying (69.9 percent), manufacturing (65.9 percent), hotels and restaurants (72.3 percent) and in the private households with employed persons (78.1 percent) industrial divisions. On the other hand, a significant proportion of literate active persons that have completed at least grade 12 were reported in finance inter-mediation (40.8 percent), public administration and defence, compulsory social security (28.6 percent) and in education, health and social work (65.7 percent) industrial divisions.

Table 4.13a Economically Active Population by Major Industrial Division, Educational Attainment, and Sex, Tigray Region Total: 1994

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Economically Active Population									
Total	1476129	1291698	50525	97824	10030	7424	10107	7076	1445
Male	786216	639281	45512	75975	7572	5418	6313	5112	1033
Female	689913	652417	5013	21849	2458	2006	3794	1964	412
Agriculture, Hunting, Forestry and Fishing									
Total	1324445	1208098	43308	68063	2440	795	408	178	1155
Male	712048	610944	41030	56045	2046	646	336	152	849
Female	612397	597154	2278	12018	394	149	72	26	306
Mining and Quarrying									
Total	625	437	22	99	30	15	10	7	5
Male	521	338	22	99	30	15	5	7	5
Female	104	99	0	0	0	0	5	0	0
Manufacturing									
Total	21056	13885	1117	4415	775	526	260	58	20
Male	11277	5539	801	3535	624	488	215	55	20
Female	9779	8346	316	880	151	38	45	3	0
Electricity, Gas and Water Supply									
Total	907	180	41	221	109	117	152	87	0
Male	726	156	35	172	83	86	117	77	0
Female	181	24	6	49	26	31	35	10	0
Construction									
Total	6615	2760	455	1987	512	406	299	180	16
Male	5625	2236	352	1779	475	379	217	171	16
Female	990	524	103	208	37	27	82	9	0
Wholesale & Retail Trade, Repair Of Vehicles, Personal and Household Goods									
Total	25804	15075	1566	5941	1471	939	665	110	37
Male	13447	5517	1019	4466	1117	728	480	100	20
Female	12357	9558	547	1475	354	211	185	10	17
Hotels and Restaurants									
Total	21090	15240	1127	3349	632	459	247	12	24
Male	1487	575	129	441	128	106	91	12	5
Female	19603	14665	998	2908	504	353	156	0	19
Transport,Storage and Communication									
Total	7033	3720	318	1792	557	352	239	48	7
Male	5846	2743	294	1702	543	331	184	42	7
Female	1187	977	24	90	14	21	55	6	0

Table 4.13a (Cont'd)

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Financial Inter-Mediation									
Total	201	14	10	43	28	24	47	35	0
Male	168	14	10	34	28	15	37	30	0
Female	33	0	0	9	0	9	10	5	0
Real Estate, Renting and Business Activities									
Total	353	37	1	116	44	69	65	21	0
Male	292	21	1	107	34	64	44	21	0
Female	61	16	0	9	10	5	21	0	0
Public Administration And Defence, Compulsory Social Security									
Total	17110	3003	438	5097	1739	1923	3113	1779	18
Male	11994	1555	257	3902	1362	1446	1940	1518	14
Female	5116	1448	181	1195	377	477	1173	261	4
Education Health and Social Work									
Total	12058	1014	293	1211	585	963	3662	4258	72
Male	7391	640	269	666	326	556	2185	2703	46
Female	4667	374	24	545	259	407	1477	1555	26
Other Social, Cultural, Personal and Household Activities									
Total	7358	4289	884	1363	354	221	180	57	10
Male	3933	1624	714	983	302	151	107	42	10
Female	3425	2665	170	380	52	70	73	15	0
Private Households With Employed Persons									
Total	6045	4723	177	969	114	27	16	0	19
Male	938	660	64	138	55	16	5	0	0
Female	5107	4063	113	831	59	11	11	0	19
Extra-Territorial Organization and Bodies									
Total	109	29	0	19	8	14	0	39	0
Male	99	29	0	19	8	4	0	39	0
Female	10	0	0	0	0	10	0	0	0
Not Stated									
Total	25320	19194	768	3139	632	574	744	207	62
Male	10424	6690	515	1887	411	387	350	143	41
Female	14896	12504	253	1252	221	187	394	64	21

Table 4.13b Economically Active Population by Major Industrial Division, Educational Attainment, and Sex, Tigray Region Urban : 1994

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Economically Active Population									
Total	133066	68668	7261	29043	7350	6427	8367	5698	252
Male	72037	28225	4608	19719	5366	4619	5106	4227	167
Female	61029	40443	2653	9324	1984	1808	3261	1471	85
Agriculture, Hunting, Forestry and Fishing									
Total	19087	14373	1251	2781	294	152	136	83	17
Male	13083	9029	1096	2360	259	136	117	72	14
Female	6004	5344	155	421	35	16	19	11	3
Mining and Quarrying									
Total	389	243	22	75	19	15	10	0	5
Male	368	227	22	75	19	15	5	0	5
Female	21	16	0	0	0	0	5	0	0
Manufacturing									
Total	15099	8695	952	3922	694	498	260	58	20
Male	9133	4024	678	3128	553	460	215	55	20
Female	5966	4671	274	794	141	38	45	3	0
Electricity, Gas and Water Supply									
Total	857	155	41	201	109	117	152	82	0
Male	686	131	35	162	83	86	117	72	0
Female	171	24	6	39	2o	31	35	10	0
Construction									
Total	5729	2256	385	1760	496	365	274	177	16
Male	4794	1780	282	1555	459	339	195	168	16
Female	935	476	103	205	37	26	79	9	0
Wholesale & Retail Trade, Repair Of Vehicles. Personal and Household Goods									
Total	21391	11392	1412	5476	1410	918	636	110	37
Male	12020	4671	914	4075	1082	707	451	100	20
Female	9371	6721	498	1401	328	211	185	10	17
Hotels and Restaurants									
Total	18631	13072	1058	3181	612	429	247	12	20
Male	1402	520	124	426	128	96	91	12	5
Female	17229	12552	934	2755	484	333	156	0	15
Transport,Storage and Communication									
Total	6154	3023	280	1694	532	336	239	43	7
Male	5228	2307	256	1604	518	315	184	37	7
Female	926	716	24	90	14	21	55	6	0

Table 4.13b (Cont'd)

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Financial Inter-Mediation									
Total	201	14	10	43	28	24	47	35	0
Male	168	14	10	34	28	15	37	30	0
Female	33	0	0	9	0	9	10	5	0
Real Estate, Renting and Business Activities									
Total	343	32	1	111	44	69	65	21	0
Male	287	21	1	102	34	64	44	21	0
Female	56	11	0	9	10	5	21	0	0
Public Administration and Defence, Compulsory Social Security									
Total	15374	2440	413	4590	1593	1849	2860	1611	18
Male	10709	1265	237	3445	1221	1372	1763	1392	14
Female	4665	1175	176	1145	372	477	1097	219	4
Education Health and Social Work									
Total	9339	906	191	1058	521	878	2545	3178	62
Male	5616	564	167	563	288	487	1452	2054	41
Female	3723	342	24	495	233	391	1093	1124	21
Other Social, Cultural, Personal And Household Activities									
Total	5486	2905	605	1183	336	217	173	57	10
Male	3114	1221	445	858	286	150	102	42	10
Female	2372	1684	160	325	50	67	71	15	0
Private Households With Employed Persons									
Total	4560	3335	147	907	114	27	16	0	14
Male	627	375	44	132	55	16	5	0	0
Female	3933	2960	103	775	59	11	11	0	14
Extra-Territorial Organization and Bodies									
Total	109	29	0	19	8	14	0	39	0
Male	99	29	0	19	8	4	0	39	0
Female	10	0	0	0	0	10	0	0	0
Not Stated									
Total	10317	5798	493	2042	540	519	707	192	26
Male	4703	2047	297	1181	345	357	328	133	15
Female	5614	3751	196	861	195	162	379	59	11

Table 4.13c Economically Active Population by Major Industrial Division, Educational Attainment, and Sex, Tigray Region Rural: 1994

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Economically Active Population									
Total	1343063	1223030	43264	68781	2680	997	1740	1378	1193
Male	714179	611056	40904	56256	2206	799	1207	885	866
Female	628884	611974	2360	12525	474	198	533	493	327
Agriculture, Hunting Forestry And Fishing									
Total	1305358	1193725	42057	65282	2146	643	272	95	1138
Male	698965	601915	39934	53685	1787	510	219	80	835
Female	606393	591810	2123	11597	359	133	53	15	303
Mining and Quarrying									
Total	236	194	0	24	11	0	0	7	0
Male.	153	111	0	24	11	0	0	7	0
Female	83	83	0	0	0	0	0	0	0
Manufacturing									
Total	5957	5190	165	493	81	28	0	0	0
Male	2144	1515	123	407	71	28	0	0	0
Female	3813	3675	42	86	10	0	0	0	0
Electricity, Gas and Water Supply									
Total	50	25	0	20	0	0	0	5	0
Male	40	25	0	10	0	0	0	5	0
Female	10	0	0	10	0	0	0	0	0
Construction									
Total	886	504	70	227	16	41	25	3	0
Male	831	456	70	224	16	40	22	3	0
Female	55	48	0	3	0	1	3	0	0
Wholesale & Retail Trade, Repair Of Vehicles, Personal and Household Goods									
Total	4413	3683	154	465	61	21	29	0	0
Male	1427	846	105	391	35	21	29	0	0
Female	2986	2837	49	74	26	0	0	0	0
Hotels and Restaurants									
Total	2459	2168	69	168	20	30	0	0	4
Male	85	55	5	15	0	10	0	0	0
Female	2374	2113	64	153	20	20	0	0	4
Transport,Storage and Communication									
Total	879	697	38	98	25	16	0	5	0
Male	618	436	38	98	25	16	0	5	0
Female	261	261	0	0	0	0	0	0	0

Table 4.13c (Cont'd)

Industrial Divisions and Sex	Economically Active	Edicational Attainment							
		Illiterate	Non-Regular	Grades 1-6	Grades 7-8	Grades 9-11	Grade 12+	Beyond Grade 12	Not Stated
Financial Inter-Mediation									
Total	0	0	0	0	0	0	0	0	0
Male	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0
Real Estate, Renting and Business Activities									
Total	10	5	0	5	0	0	0	0	0
Male	5	0	0	5	0	0	0	0	0
Female	5	5	0	0	0	0	0	0	0
Public Administration and Defence, Compulsory Social Security									
Total	1736	563	25	507	146	74	253	168	0
Male	1285	290	20	457	141	74	177	126	0
Female	451	273	5	50	5	0	76	42	0
Education Health and Social Work									
Total	2719	108	102	153	64	85	1117	1080	10
Male	1775	76	102	103	38	69	733	649	5
Female	944	32	0	50	26	16	384	431	5
Other Social, Cultural, Personal and Household Activities									
Total	1872	1384	279	180	18	4	7	0	0
Male	819	403	269	125	16	1	5	0	0
Female	1053	981	10	55	2	3	2	0	0
Private Households With Employed Persons									
Total	1485	1388	30	62	0	0	0	0	5
Male	311	285	20	6	0	0	0	0	0
Female	1174	1103	10	56	0	0	0	0	5
Extra-Territorial Organization and Bodies									
Total	0	0	0	0	0	0	0	0	0
Male	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0
Not Stated									
Total	15003	13396	275	1097	92	55	37	15	36
Male	5721	4643	218	706	66	30	22	10	26
Female	9282	8753	57	391	26	25	15	5	10

In the urban parts of the region, due to relatively a higher literacy level compared to the rural parts, the percent illiterates were observed to be much lower in the various industrial divisions (See Tables 4.13b - 4.13c). The data also revealed that in the urban parts a higher percent of literate economically active persons that have completed elementary education and in higher level of education for selected industrial divisions, such as, in financial inter-mediation division, real estate, renting and business activities division, public administration and defence, compulsory social security division and in education, health and social work industrial division were observed (See Table 4.13b). On the contrary, in the rural areas the majority of the economically active persons in the different industrial divisions are found to be illiterates (See Table 4.13c).

c) Occupation by Industrial Division

The distribution of the economically active population by major occupation and industry is presented in Tables 4.14a - 4.14c for total, urban and rural Tigray Region, respectively. The majority of persons engaged in the wholesale and retail trade, repair of vehicles, personal and household goods industrial division and in hotels and restaurants division were reported to be service workers and shop and market sales workers, 85.2 percent and 74.8 percent, respectively (See Table 4.14a). The corresponding figures for the urban areas were 86.7 percent and 73.6 percent and for the rural part 77.8 percent and 83.8 percent, in that order. In the agricultural sector the majority were agricultural workers 83.3 percent and 84.3 percent for the urban and rural areas, respectively (See Tables 4.14b - 4.14c).

In almost all the industrial divisions a sizeable number of persons engaged in elementary occupations were reported. On the contrary, a small percentage of legislators, senior officials and managers and professionals were observed in the majority of the industrial divisions. There is no much difference in the distribution pattern of occupation by industry between urban and rural areas, except that in the urban part compared to the rural, more persons that were engaged in the white collar occupations were observed in most industrial divisions. Moreover in rural areas there were some industrial divisions that were non-existent or with insignificant employed persons. These industrial divisions include the financial-intermediation division, real estate, renting and business activities and the extra-territorial organizations and bodies divisions.

4.5 Unemployment

The magnitude or extent of unemployment is measured using the unemployment rate. The unemployment rate is computed as the percentage of the unemployed population over the economically active population. The total unemployment rate of Tigray Region is reported to be

Table 4.14a Distribution of Economically Active Population by Major Occupation, Major Industrial Division and Sex, Tigray Region Total: 1994

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	1476129	2332	1605	13575	3669	41858	1118399	31720	4358	232597	26016
Male	786216	1945	1402	8767	2148	15784	608359	15541	3535	117513	11222
Female	689913	387	203	4808	1521	26074	510040	16179	823	115084	14794
Agriculture, Hunting , Forestry and Fishing											
Total	1324445	34	24	123	45	115	1116786	155	113	206880	170
Male	712048	24	15	86	27	18	607378	74	107	104236	83
Female	612397	10	9	37	18	97	509408	81	6	102644	87
Mining and Quarrying											
.Total	625	0	7	0	5	0	40	204	4	365	0
Male	521	0	7	0	0	0	14	160	4	336	0
Female	104	0	0	0	5	0	26	44	0	29	0
Manufacturing											
Total	21056	41	38	53	75	192	20	18817	994	805	21
Male	11277	36	18	40	56	126	15	9813	563	604	6
Female	9779	5	20	13	19	66	5	9004	431	201	15
Electricity, Gas and Water Supply											
Total	907	20	16	76	146	18	5	218	118	239	51
Male	726	20	16	61	81	12	5	209	113	168	41
Female	181	0	0	15	65	6	0	9	5	71	10
Construction											
Total	6615	61	30	160	186	14	5	3372	254	2528	5
Male	5625	56	30	151	103	3	0	3241	254	1782	5
Female	990	5	0	9	83	11	5	131	0	746	0
Wholesale & Retail Trade, Repair Of Vehicles, Personal and Household Goods											
Total	25804	49	9	87	67	21982	66	3029	22	478	15
Male	13447	39	9	77	53	11877	26	1078	22	252	14
Female	12357	10	0	10	14	10105	40	1951	0	226	1
Hotels and Restaurants											
Total	21090	105	0	15	101	15768	14	4726	0	355	6
Male	1487	28	0	0	40	1142	5	171	0	95	6
Female	19603	77	0	15	61	14626	9	4555	0	260	0
Transport,Storage and Communication											
Total	7033	30	0	82	156	27	198	91	1122	5307	20
Male	5846	25	0	62	100	22	102	86	1106	4338	5
Female	1187	5	0	20	56	5	96	5	16	969	15

Table 4.14a (Cont'd)

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Financial Inter-Mediation											
Total	201	10	8	35	52	0	0	0	0	96	0
Male	168	10	8	30	38	0	0	0	0	82	0
Female	33	0	0	5	14	0	0	0	0	14	0
Real Estate, Renting and Business Activities											
Total	353	5	20	33	44	15	0	154	12	70	0
Male	292	5	20	27	29	15	0	120	12	64	0
Female	61	0	0	6	15	0	0	34	0	6	0
Public Administration and Defence, Compulsory Social Security											
Total	17110	1535	532	3144	2051	2597	342	248	275	4023	2363
Male	11994	1333	483	2147	1276	2372	180	201	270	1835	1897
Female	5116	202	49	997	775	225	162	47	5	2188	466
Education Health And Social Work											
Total	12058	287	861	8616	524	97	7	200	362	1062	42
Male	7391	262	736	5034	230	16	2	150	361	569	31
Female	4667	25	125	3582	294	81	5	50	1	493	11
Other Social, Cultural, Personal and Household Activities											
Total	7358	124	52	1116	152	894	33	253	991	3692	51
Male	3933	87	52	1028	100	118	28	153	637	1700	30
Female	3425	37	0	88	52	776	5	100	354	1992	21
Private Households With Employed Persons											
Total	6045	0	0	0	5	58	10	112	59	5801	0
Male	938	0	0	0	0	5	10	8	54	861	0
Female	5107	0	0	0	5	53	0	104	5	4940	0
Extra-Territorial Organization and Bodies											
Total	109	10	8	10	0	0	0	29	0	14	38
Male	99	10	8	4	0	0	0	29	0	10	38
Female	10	0	0	6	0	0	0	0	0	4	0
Not Stated											
Total	25320	21	0	25	60	81	873	112	32	882	23234
Male	10424	10	0	20	15	58	594	48	32	581	9066
Female	14896	11	0	5	45	23	279	64	0	301	14168

Table 4.14b Distribution of Economically Active Population by Major Occupation, Major Industrial Division and Sex, Tigray Region Urban: 1994

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	133066	2126	1511	10130	3499	35684	16134	24359	3581	24294	11748
Male	72037	1751	1343	6391	2032	14194	11123	13091	3088	13158	5866
Female	61029	375	168	3739	1467	21490	5011	11268	493	11136	5882
Agriculture, Hunting Forestry and Fishing											
Total	19087	17	13	65	27	5	15895	5	27	3020	13
Male	13083	7	13	45	17	5	10975	5	27	1985	4
Female	6004	10	0	20	10	0	4920	0	0	1035	9
Mining and Quarrying											
Total	389	0	0	0	5	0	0	130	0	254	0
Male	368	0	0	0	0	0	0	118	0	250	0
Female	21	0	0	0	5	0	0	12	0	4	0
Manufacturing											
Total	15099	20	23	53	74	162	5	13553	676	522	11
Male	9133	15	18	40	55	111	5	8061	434	388	6
Female	5966	5	5	13	19	51	0	5492	242	134	5
Electricity, Gas and Water Supply											
Total	857	20	16	76	146	18	0	208	108	214	51
Male	686	20	16	61	81	12	0	199	103	153	41
Female	171	0	0	15	65	6	0	9	5	61	10
Construction											
Total	5729	48	29	125	169	9	0	2899	222	2223	5
Male	4794	43	29	116	90	1	0	2776	222	1512	5
Female	935	5	0	9	79	8	0	123	0	711	0
Wholesale & Retail Trade, Repair Of Vehicles, Personal and Household Goods											
Total	21391	49	9	87	67	18547	17	2157	22	421	15
Male	12020	39	9	77	53	10568	6	1016	22	216	14
Female	9371	10	0	10	14	7979	11	1141	0	205	1
Hotels and Restaurants											
Total	18631	105	0	15	101	13707	9	4343	0	345	6
Male	1402	28	0	0	40	1062	5	166	0	95	6
Female	17229	77	0	15	61	12645	4	4177	0	250	0
Transport,Storage and Communication											
Total	6154	30	0	77	146	27	4	86	1096	4683	5
Male	5228	25	0	57	95	22	4	81	1080	3864	0
Female	926	5	0	20	51	5	0	5	16	819	5

Table 4.14b (Cont'd)

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Financial Inter-Mediation											
Total	201	10	8	35	52	0	0	0	0	96	0
Male	168	10	8	30	38	0	0	0	0	82	0
Female	33	0	0	5	14	0	0	0	0	14	0
Real Estate, Renting and Business Activities											
Total	343	5	20	33	44	15	0	149	7	70	0
Male	287	5	20	27	29	15	0	120	7	64	0
Female	56	0	0	6	15	0	0	29	0	6	0
Public Administration and Defence, Compulsory Social Security											
Total	15374	1453	521	2830	1957	2443	128	237	275	3573	1957
Male	10709	1251	472	1921	1207	2223	69	190	270	1583	1523
Female	4665	202	49	909	750	220	59	47	5	1990	434
Education Health and Social Work											
Total	9339	235	812	6083	513	89	2	187	353	1024	41
Male	5616	222	698	3409	221	11	2	137	353	532	31
Female	3723	13	114	2674	292	78	0	50	0	492	10
Other Social, Cultural, Personal and Household Activities											
Total	5486	108	52	616	137	544	7	222	704	3086	10
Male	3114	71	52	584	95	112	7	142	484	1557	10
Female	2372	37	0	32	42	432	0	80	220	1529	0
Private Households With Employed Persons											
Total	4560	0	0	0	5	53	0	97	59	4346	0
Male	627	0	0	0	0	5	0	8	54	560	0
Female	3933	0	0	0	5	48	0	89	5	3786	0
Extra-Territorial Organization and Bodies											
Total	109	10	8	10	0	0	0	29	0	14	38
Male	99	10	8	4	0	0	0	29	0	10	38
Female	10	0	0	6	0	0	0	0	0	4	0
Not Stated											
Total	10317	16	0	25	56	65	67	57	32	403	9596
Male	4703	5	0	20	11	47	50	43	32	307	4188
Female	5614	11	0	5	45	18	17	14	0	96	5408

Table 4.14c Distribution of Economically Active Population by Major Occupation, Major Industrial Division and Sex, Tigray Region Rural: 1994

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Economically Active											
Total	1343063	206	94	3445	170	6174	1102265	7361	777	208303	14268
Male	714179	194	59	2376	116	1590	597236	2450	447	104355	5356
Female	628884	12	35	1069	54	4584	505029	4911	330	103948	8912
Agriculture, Hunting Forestry and Fishing											
Total	1305358	17	11	58	18	110	1100891	150	86	203860	157
Male	698965	17	2	41	10	13	596403	69	80	102251	79
Female	606393	0	9	17	8	97	504488	81	6	101609	78
Mining and Quarrying											
Total	236	0	7	0	0	0	40	74	4	111	0
Male	153	0	7	0	0	0	14	42	4	86	0
Female	83	0	0	0	0	0	26	32	0	25	0
Manufacturing											
Total	5957	21	15	0	1	30	15	5264	318	283	10
Male	2144	21	0	0	1	15	10	1752	129	216	0
Female	3813	0	15	0	0	15	5	3512	189	67	10
Electricity, Gas and Water Supply											
Total	50	0	0	0	0	0	5	10	10	25	0
Male	40	0	0	0	0	0	5	10	10	15	0
Female	10	0	0	0	0	0	0	0	0	10	0
Construction											
Total	886	13	1	35	17	5	5	473	32	305	0
Male	831	13	1	35	13	2	0	465	32	270	0
Female	55	0	0	0	4	3	5	8	0	35	0
Wholesale & Retail Trade, Repair Of Vehicles, Personal and Household Goods											
Total	4413	0	0	0	0	3435	49	872	0	57	0
Male	1427	0	0	0	0	1309	20	62	0	36	0
Female	2986	0	0	0	0	2126	29	810	0	21	0
Hotels and Restaurants											
Total	2459	0	0	0	0	2061	5	383	0	10	0
Male	85	0	0	0	0	80	0	5	0	0	0
Female	2374	0	0	0	0	1981	5	378	0	10	0
Transport,Storage and Communication											
Total	879	0	0	5	10	0	194	5	26	624	15
Male	618	0	0	5	5	0	98	5	26	474	5
Female	261	0	0	0	5	0	96	0	0	150	10

Table 4.14c (Cont'd)

Major Industrial Group	Economically Active	Legislators Senior Officials and Managers	Professionals	Technicians and Associate Professionals	Clerks	Service Workers and Shop and Market Sales Workers	Skilled Agricultural and Fishery Workers	Crafts and Related Trades Workers	Plant and Machine Operators & Assemblers	Elementary Occupations	Not Stated
Financial Inter-Mediation											
Total	0	0	0	0	0	0	0	0	0	0	0
Male	0	0	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0	0	0
Real Estate, Renting and Business Activities											
Total	10	0	0	0	0	0	0	5	5	0	0
Male	5	0	0	0	0	0	0	0	5	0	0
Female	5	0	0	0	0	0	0	5	0	0	0
Public Administration and Defence, Compulsory Social Security											
Total	1736	82	11	314	94	154	214	11	0	450	406
Male	1285	82	11	226	69	149	111	11	0	252	374
Female	451	0	0	88	25	5	103	0	0	198	32
Education Health and Social Work											
Total	2719	52	49	2533	11	8	5	13	9	38	1
Male	1775	40	38	1625	9	5	0	13	8	37	0
Female	944	12	11	908	2	3	5	0	1	1	1
Other Social, Cultural, Personal and Household Activities											
Total	1872	16	0	500	15	350	26	31	287	606	41
Male	819	16	0	444	5	6	21	11	153	143	20
Female	1053	0	0	56	10	344	5	20	134	463	21
Private Households With Employed Persons											
Total	1485	0	0	0	0	5	10	15	0	1455	0
Male	311	0	0	0	0	0	10	0	0	301	0
Female	1174	0	0	0	0	5	0	15	0	1154	0
Extra-Territorial Organization and Bodies											
Total	0	0	0	0	0	0	0	0	0	0	0
Male	0	0	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0	0	0
Not Stated											
Total	15003	5	0	0	4	16	806	55	0	479	13638
Male	5721	5	0	0	4	11	544	5	0	274	4878
Female	9282	0	0	0	0	5	262	50	0	205	8760

Table 4.15 Unemployement Rate by Sex, Zone, Urban and Rural: 1994

Zone and Sex	Economically Active			Unemployed			Unemployment Rate		
	Urban+Rural	Urban	Rural	Urban+Rural	Urban	Rural	Urban+Rural	Urban	Rural
Tigray Region									
Total	1492339	141682	1350657	23756	13858	9898	1.6	9.8	0.7
Male	793529	76200	717329	11718	7477	4241	1.5	9.8	0.6
Female	698810	65482	633328	12038	6381	5657	1.7	9.7	0.9
Mirabawi Zone									
Total	384841	27933	356908	3694	2113	1581	1.0	7.6	0.4
Male	210303	15284	195019	1795	1129	666	0.9	7.4	0.3
Female	174538	12649	161889	1899	984	915	1.1	7.8	0.6
Mehakelegnaw Zone									
Total	482132	29073	453059	4150	2237	1913	0.9	7.7	0.4
Male	240081	14365	225716	1961	1004	957	0.8	7.0	0.4
Female	242051	14708	227343	2189	1233	956	0.9	8.4	0.4
Misrakawi Zone									
Total	254330	22050	232280	6012	3005	3007	2.4	13.6	1.3
Male	127913	11907	116006	3010	1785	1225	2.4	15.0	1.1
Female	126417	10143	116274	3002	1220	1782	2.4	12.0	1.5
Debubawi Zone									
Total	371036	62626	308410	9900	6503	3397	2.7	10.4	1.1
Male	215232	34644	180588	4952	3559	1393	2.3	10.3	0.8
Female	155804	27982	127822	4948	2944	2004	3.2	10.5	1.6

1.6 percent, 1.5 percent and 1.7 percent, for both sexes, males and females, respectively (See table 4.15). For urban Tigray Region the rate is high, 9.8 percent, 9.8 percent and 9.7 percent, for both sexes, males and females, respectively. However, in the rural part the rates are relatively low 0.7 percent, 0.6 percent and 0.9 percent, for both sexes, males and females, respectively.

The distribution of unemployment rate by zone revealed that the highest being in Debubawi Zone (2.7 percent) and the lowest in Mehakelegnaw Zone (0.9 percent). Except in Misrakawi Zone where the unemployment level for males and females is equal, in the remaining zones the unemployment rate for females is reported to be relatively higher than for the males. In general, in all the zones the urban unemployment rate is higher and in particular in the urban part of Misrakawi and Debubawi Zones the rate is reported to be much higher, 13.6 percent and 10.4 percent, respectively (See Table 4.15).

The unemployment rate for the two census dates of urban part of Tigray Region is presented in Table 4.16. Except in Endaselasie, Axum and Wukro towns, the unemployment rate showed an upward trend. In some of the towns the rate has almost doubled, such as, Adwa, Maychew and Alamata towns, while in Korem town it has increased by ten fold.

Table 4.16 Distribution of Unemployment Rates for Towns with Population of 10,000 and above in 1984 and 1994 Censuses

Towns	1984			1994		
	Total	Male	Female	Total	Male	Female
Humera	2.4	1.8	3.4	9.1	6.6	15.6
Endaselasie	7.5	7.2	7.7	6.8	7.9	5.5
Adwa	5.9	5.2	6.9	10.8	8.9	13.1
Axum	10.3	7.6	13.2	8.7	8.3	9.1
Adigrate	17.6	10.6	15.9	20.2	20.9	19.0
Wukro	15.5	15.3	15.8	8.6	7.0	10.2
Maychew	5.1	4.7	5.8	10.0	9.9	10.0
Alamata	5.1	4.4	5.9	10.3	11.0	9.4
Korem	1.0	1.3	0.8	10.4	9.8	10.9
Mekele	7.6	6.9	8.3	11.6	11.7	11.5

4.5.1 Unemployment and Relationship to Head of Households

The distribution of the total unemployed population by relationship to head of household and zone is presented in Table 4.17. The table revealed that for both males and females the highest number of unemployed persons were heads of households, 38.3 percent and 30.3 percent, respectively. It is also reported that in the urban part of the region, heads of households constitute the largest portion of the unemployed for both males (44.1 percent) and females (37.9 percent).

Table 4.17 Distribution of Unemployed Population by Relationship to Head of Household, Sex and Zone: 1994

Urban/Rural and Sex	Unemployed Persons	Relationship to Head of Household									
		Head	Spouse	Son/Daughter of Head and Spouse	Son/ Daughter of Head	Son/ Daughter of Spouse	Parents	Brother/ Sister	Other Relatives	Non-Relatives	Not Stated
					Tigray Region						
Urban+Rural											
Total	23756	8141	1669	4494	5063	303	342	957	1783	1004	0
Male	11718	4489	207	2226	2520	132	78	446	845	775	0
Female	12038	3652	1462	2268	2543	171	264	511	938	229	0
Urban											
Total	13858	5711	945	1549	2784	78	67	670	1127	927	0
Male	7477	3294	162	847	1464	35	14	333	593	735	0
Female	6381	2417	783	702	1320	43	53	337	534	192	0
Rural											
Total	9898	2430	724	2945	2279	225	275	287	656	77	0
Male	4241	1195	45	1379	1056	97	64	113	252	40	0
Female	5657	1235	679	1566	1223	128	211	174	404	37	0
					Mirabawi Zone						
Urban+Rural											
Total	3694	1515	354	531	712	56	64	94	214	154	0
Male	1795	821	21	285	389	15	9	40	116	99	0
Female	1899	694	333	246	323	41	55	54	98	55	0
Urban											
Total	2113	992	191	231	343	17	10	68	134	127	0
Male	1129	560	16	159	194	6	0	35	70	89	0
Female	984	432	175	72	149	11	10	33	64	38	0
Rural											
Total	1581	523	163	300	369	39	54	26	80	27	0
Male	666	261	5	126	195	9	9	5	46	10	0
Female	915	262	158	174	174	30	45	21	34	17	0

Table 4.17 (Cont'd)

Urban/Rural and Sex	Unemployed Persons	Relationship to Head of Household									
		Head	Spouse	Son/Daughter of Head and Spouse	Son/ Daughter of Head	Son/ Daughter of Spouse	Parents	Brother/ Sister	Other Relatives	Non-Relatives	Not Stated
					Mehakelegnaw Zone						
Urban+Rural											
Total	4150	1378	379	943	816	47	88	129	332	38	0
Male	1961	749	39	520	436	26	25	31	117	18	0
Female	2189	629	340	423	380	21	63	98	215	20	0
Urban											
Total	2237	893	204	266	521	10	15	85	211	32	0
Male	1004	459	24	133	265	4	5	20	82	12	0
Female	1233	434	180	133	256	6	10	65	129	20	0
Rural											
Total	1913	485	175	677	295	37	73	44	121	6	0
Male	957	290	15	387	171	22	20	11	35	6	0
Female	956	195	160	290	124	15	53	33	86	0	0
					Misrakawi Zone						
Urban+Rural											
Total	6012	1977	283	1441	1257	56	83	250	434	231	0
Male	3010	1210	30	601	606	30	21	132	194	186	0
Female	3002	767	253	840	651	26	62	118	240	45	0
Urban											
Total	3005	1410	120	304	560	10	3	157	220	221	0
Male	1785	920	21	119	331	5	0	85	118	186	0
Female	1220	490	99	185	229	5	3	72	102	35	0
Rural											
Total	3007	567	163	1137	697	46	80	93	214	10	0
Male	1225	290	9	482	275	25	21	47	76	0	0
Female	1782	277	154	655	422	21	59	46	138	10	0

Table 4.17 (Cont'd)

Urban/Rural and Sex	Unemployed Persons	Relationship to Head of Household									
		Head	Spouse	Son/Daughter of Head and Spouse	Son/ Daughter of Head	Son/ Daughter of Spouse	Parents	Brother/ Sister	Other Relatives	Non-Relatives	Not Stated
		Debubawi Zone									
Urban+Rural											
Total	9900	3271	653	1579	2278	144	107	484	803	581	0
Male	4952	1709	117	820	1089	61	23	243	418	472	0
Female	4948	1562	536	759	1189	83	84	241	385	109	0
Urban											
Total	6503	2416	430	748	1360	41	39	360	562	547	0
Male	3559	1355	101	436	674	20	9	193	323	448	0
Female	2944	1061	329	312	686	21	30	167	239	99	0
Rural											
Total	3397	855	223	831	918	103	68	124	241	34	0
Male	1393	354	16	384	415	41	14	50	95	24	0
Female	2004	501	207	447	503	62	54	74	146	10	0

The second and third largest groups in the urban case were sons/daughters of heads only and those of heads and spouses, 20.1 percent and 11.2 percent, respectively. However, in the rural areas the percent unemployed heads were relatively lower compared to their urban counterparts. Nevertheless, they constitute the second largest group (24.6 percent), following sons/daughters of head and spouse, 29.8 percent.

The distribution of the unemployed persons by relationship to heads of households showed that the heads, the son/daughter of heads and spouse and son/daughter of heads only were the major groups among the total unemployed persons in all the zones (See Table 4.17). However, in the rural part the ranking is different in the different zones. For example, in Mirabawi Zone the unemployed heads constitute the largest group (33.1 percent), while in Mehakelegnaw and Misrakawi Zones the son/daughter of head and spouse were found highest, 35.4 percent and 37.8 percent, respectively. In Debubawi Zone son/daughter of heads took the highest share (27.0 percent). Except in Misrakawi Zone, the unemployed female spouses were observed to have a significant number in the urban part of the remaining zones.

4.5.2 Unemployment and Level of Education

Table 4.18 presents the distribution of the unemployed population by level of education and zone. In Tigray Region the majority of the unemployed persons were reported to be illiterate, 63.2 percent, 52.4 percent and 73.6 percent, for total, males and females, respectively. On the other hand, unemployed persons who have completed at least high school education were reported to be, 9.2 percent, 9.3 percent and 9 percent for total, males and females, respectively. Similar distributions as indicated above were reported in the different zones of the region, except that in Mirabawi Zone relatively small number of unemployed persons with at least high school education were reported (3.1 percent). The table revealed that the unemployed persons in the urban areas are better educated than those in the rural areas, where the percent literate were reported to be 54.7 percent for urban while for the rural it was about 12.0 percent only.

Table 4.18 Distribution of Unemployed Population Aged Ten Years and Over by Educational Level, Zone, Sex, Urban and Rural: 1994

Urban/Rural and Sex	Total Unemployed	Illiterate	Non-Regular	Grades 1-3	Grades 4-6	Grades 7-8	Grades 9-11	Grade 12 Completed	Beyond Grade 12	Not Stated
Tigray Region										
Urban+Rural										
Total	23756	15005	883	1835	1887	988	956	1960	217	25
	(100.0)	(63.2)	(3.7)	(7.7)	(7.9)	(4.2)	(4.0)	(8.3)	(0.9)	(0.1)
Male	11718	6142	599	1202	1352	662	655	927	163	16
	(100.0)	(52.4)	(5.1)	(10.3)	(11.5)	(5.6)	(5.6)	(7.9)	(1.4)	(0.1)
Female	12038	8863	284	633	535	326	301	1033	54	9
	(100.0)	(73.6)	(2.4)	(5.3)	(4.4)	(2.7)	(2.5)	(8.6)	(0.4)	(0.1)
Urban										
Total	13858	6268	689	1323	1702	920	902	1822	217	15
	(100.0)	(45.2)	(5.0)	(9.5)	(12.3)	(6.6)	(6.5)	(13.1)	(1.6)	(0.1)
Male	7477	2741	445	831	1203	611	621	851	163	11
	(100.0)	(36.7)	(6.0)	(11.1)	(16.1)	(8.2)	(8.3)	(11.4)	(2.2)	(0.1)
Female	6381	3527	244	492	499	309	281	971	54	4
	(100.0)	(55.3)	(3.8)	(7.7)	(7.8)	(4.8)	(4.4)	(15.2)	(0.8)	(0.1)
Rural										
Total	9898	8737	194	512	185	68	54	138	0	10
	(100.0)	(88.3)	(2.0)	(5.2)	(1.9)	(0.7)	(0.5)	(1.4)	(0.0)	(0.1)
Male	4241	3401	154	371	149	51	34	76	0	5
	(100.0)	(80.2)	(3.6)	(8.7)	(3.5)	(1.2)	(0.8)	(1.8)	(0.0)	(0.1)
Female	5657	5336	40	141	36	17	20	62	0	5.0
	(100.0)	(94.3)	(0.7)	(2.5)	(0.6)	(0.3)	(0.4)	(1.1)	(0.0)	(0.1)
Mirabawi Zone										
Urban+Rural										
Total	3694	2877	69	341	163	83	41	106	9	5
	(100.0)	(77.9)	(1.9)	(9.2)	(4.4)	(2.2)	(1.1)	(2.9)	(0.2)	(0.1)
Male	1795	1182	64	247	117	61	40	70	9	5
	(100.0)	(65.8)	(3.6)	(13.8)	(6.5)	(3.4)	(2.2)	(3.9)	(0.5)	(0.3)
Female	1899	1695	5	94	46	22	1	36	0	0
	(100.0)	(89.3)	(0.3)	(4.9)	(2.4)	(1.2)	(0.1)	(1.9)	(0.0)	(0.0)
Urban										
Total	2113	1474	40	260	149	57	35	89	9	0
	(100.0)	(69.8)	(1.9)	(12.3)	(7.1)	(2.7)	(1.7)	(4.2)	(0.4)	(0.0)
Male	1129	656	35	181	108	46	35	59	9	0
	(100.0)	(58.1)	(3.1)	(16.0)	(9.6)	(4.1)	(3.1)	(5.2)	(0.8)	(0.0)
Female	984	818	5	79	41	11	0	30	0	0
	(100.0)	(83.1)	(0.5)	(8.0)	(4.2)	(1.1)	(0.0)	(3.0)	(0.0)	(0.0)
Rural										
Total	1581	1403	29	81	14	26	6	17	0	5
	(100.0)	(88.7)	(1.8)	(5.1)	(0.9)	(1.6)	(0.4)	(1.1)	(0.0)	(0.3)
Male	666	526	29	66	9	15	5	11	0	5
	(100.0)	(79.0)	(4.4)	(9.9)	(1.4)	(2.3)	(0.8)	(1.7)	0	(0.8)
Female	915	877	0	15	5	11	1	6	0	0
	(100.0)	(95.8)	0	(1.6)	(0.5)	(1.2)	(0.0)	(0.7)	(0.0)	(0.0)
Mehakelegnaw Zone										
Urban+Rural										
Total	4150	2568	91	371	345	113	175	464	18	5
	(100.0)	(61.9)	(2.2)	(8.9)	(8.3)	(2.7)	(4.2)	(11.2)	(0.4)	(0.1)
Male	1961	1086	72	221	216	55	110	192	9	0
	(100.0)	(55.4)	(3.7)	(11.3)	(11.0)	(2.8)	(5.6)	(9.8)	(0.5)	(0.0)
Female	2189	1482	19	150	129	58	65	272	9	5
	(100.0)	(67.7)	(0.9)	(6.9)	(5.9)	(2.6)	(3.0)	(12.4)	(0.4)	(0.2)
Urban										
Total	2237	861	46	291	319	108	170	424	18	0
	(100.0)	(38.5)	(2.1)	(13.0)	(14.3)	(4.8)	(7.6)	(19.0)	(0.8)	(0.0)
Male	1004	290	32	156	190	50	110	167	9	0
	(100.0)	(28.9)	(3.2)	(15.5)	(18.9)	(5.0)	(11.0)	(16.6)	(0.9)	(0.0)
Female	1233	571	14	135	129	58	60	257	9	0
	(100.0)	(46.3)	(1.1)	(10.9)	(10.5)	(4.7)	(4.9)	(20.8)	(0.7)	(0.0)
Rural										
Total	1913	1707	45	80	26	5	5	40	0	5
	(100.0)	(89.2)	(2.4)	(4.2)	(1.4)	(0.3)	(0.3)	(2.1)	(0.0)	(0.3)
Male	957	796	40	65	26	5	0	25	0	0
	(100.0)	(83.2)	(4.2)	(6.8)	(2.7)	(0.5)	(0.0)	(2.6)	(0.0)	(0.0)
Female	956	911	5	15	0	0	5	15	0	5
	(100.0)	(95.3)	(0.5)	(1.6)	(0.0)	(0.0)	(0.5)	(1.6)	(0.0)	(0.5)

Table 4.18 (Contd)

Urban/Rural and Sex	Total Unemployed	Illiterate	Non-Regular	Grades 1-3	Grades 4-6	Grades 7-8	Grades 9-11	Grade 12 Completed	Grade 12+	Not Stated
					Misrakawi Zone					
Urban+Rural										
Total	6012	3979	176	474	488	256	141	445	44	9
	(100.0)	(66.2)	(2.9)	(7.9)	(8.1)	(4.3)	(2.3)	(7.4)	(0.7)	(0.1)
Male	3010	1640	110	348	376	186	102	209	34	5
	(100.0)	(54.5)	(3.7)	(11.6)	(12.5)	(6.2)	(3.4)	(6.9)	(1.1)	(0.2)
Female	3002	2339	66	126	112	70	39	236	10	4
	(100.0)	(77.9)	(2.2)	(4.2)	(3.7)	(2.3)	(1.3)	(7.9)	(0.3)	(0.1)
Urban										
Total	3005	1369	128	305	394	235	122	399	44	9
	(100.0)	(45.6)	(4.3)	(10.1)	(13.1)	(7.8)	(4.1)	(13.3)	(1.5)	(0.3)
Male	1785	687	82	222	298	171	92	194	34	5
	(100.0)	(38.5)	(4.6)	(12.4)	(16.7)	(9.6)	(5.2)	(10.9)	(1.9)	(0.3)
Female	1220	682	46	83	96	64	30	205	10	4
	(100.0)	(55.9)	(3.8)	(6.8)	(7.9)	(5.2)	(2.5)	(16.8)	(0.8)	(0.3)
Rural										
Total	3007	2610	48	169	94	21	19	46	0	0
	(100.0)	(86.8)	(1.6)	(5.6)	(3.1)	(0.7)	(0.6)	(1.5)	(0.0)	(0.0)
Male	1225	953	28	126	78	15	10	15	0	0
	(100.0)	(77.8)	(2.3)	(10.3)	(6.4)	(1.2)	(0.8)	(1.2)	(0.0)	(0.0)
Female	1782	1657	20	43	16	6	9	31	0	0
	(100.0)	(93.0)	(1.1)	(2.4)	(0.9)	(0.3)	(0.5)	(1.7)	(0.0)	(0.0)
					Debubawi Zone					
Urban+Rural										
Total	9900	5581	547	649	891	536	599	945	146	6
	(100.0)	(56.4)	(5.5)	(6.6)	(9.0)	(5.4)	(6.1)	(9.5)	(1.5)	(0.1)
Male	4952	2234	353	386	643	360	403	456	111	6
	(100.0)	(45.1)	(7.1)	(7.8)	(13.0)	(7.3)	(8.1)	(9.2)	(2.2)	(0.1)
Female	4948	3347	194	263	248	176	196	489	35	0
	(100.0)	(67.6)	(3.9)	(5.3)	(5.0)	(3.6)	(4.0)	(9.9)	(0.7)	(0.0)
Urban										
Total	6503	2564	475	467	840	520	575	910	146	6
	(100.0)	(39.4)	(7.3)	(7.2)	(12.9)	(8.0)	(8.8)	(14.0)	(2.2)	(0.1)
Male	3559	1108	296	272	607	344	384	431	111	6
	(100.0)	(31.1)	(8.3)	(7.6)	(17.1)	(9.7)	(10.8)	(12.1)	(3.1)	(0.2)
Female	2944	1456	179	195	233	176	191	479	35	0
	(100.0)	(49.5)	(6.1)	(6.6)	(7.9)	(6.0)	(6.5)	(16.3)	(1.2)	(0.0)
Rural										
Total	3397	3017	72	182	51	16	24	35	0	0
	(100.0)	(88.8)	(2.1)	(5.4)	(1.5)	(0.5)	(0.7)	(1.0)	(0.0)	(0.0)
Male	1393	1126	57	114	36	16	19	25	0	0
	(100.0)	(80.8)	(4.1)	(8.2)	(2.6)	(1.1)	(1.4)	(1.8)	(0.0)	(0.0)
Female	2004	1891	15	68	15	0	5	10	0	0
	(100.0)	(94.4)	(0.7)	(3.4)	(0.7)	(0.0)	(0.2)	(0.5)	(0.0)	(0.0)

CHAPTER V

POPULATION DYNAMICS

In the 1994 Population and Housing census, data on migration, fertility and mortality condition of the population were collected. The information on these items is useful to measure the change that will occur on the size of the population due to movements, births and deaths.

The information on fertility and mortality are based on the number of children ever born alive and dead and the number of births and deaths during the last 12 months prior to the census date. The information on migration was based on the question on length of continuous residence and area of previous residence of migrants. The information was collected from a sample of population and the results were weighted to provide figures for the total population.

Data on fertility and mortality are subject to various errors of reporting and interviewing. One of the major factors contributing to this error is the fact that the information is based on past events and hence is subject to memory lapse. Other factors that affect the quality of fertility and mortality data are deliberate miss-reporting on the side of respondents and errors committed by the enumerator through faulty interviewing. Due to these and other problems, indirect methods are used to estimate fertility and mortality parameters.

This chapter is divided into 3 sections. Section 5.1 deals with internal migration. Section 5.2 deals with fertility and section 5.3 presents the mortality condition.

5.1 Internal Migration

5.1.1 Introduction

Of the three components of population change, viz., fertility, mortality and migration, the role of migration in population changes in the regions, rural and urban areas is very important. Migration is sensitive to changes in socio-economic, political and physical factors. Moreover, it can affect the spatial, age and sex distribution and other characteristics of the population of both areas of origin and destination.

In the census, data on internal migration was collected in order to ascertain both magnitude and characteristics of the migrants. In this section, an attempt is made to examine the data on internal migration to and within Tigray Region. This section is sub-divided into five sub-sections. These are introduction, concepts and definitions used in this analytical report, levels and pattern of internal migration., differential with respect to demographic and socioeconomic characteristics and rates of in- migration.

5.1.2 Concepts And Definitions

Migration is a form of geographical mobility between one geographical unit and another, generally involving a change of residence from the place of departure to the place of arrival (UN, 1958). *Internal migration*, in this sense, is residential mobility from one geographical unit to another within the same country. In the census, data on internal migration was collected by employing two questions. These are the questions on the *length of continuous residence* and the *area of previous residence* of migrants.

The length of continuous residence refers to the number of years a person has lived continuously until the census date in *the area of enumeration.* According to the length of continuous residence data, the population of an area of enumeration is grouped into two. The first group constitutes those who have resided in the area of enumeration continuously since birth. The second group constitutes those who, in the course of their lives, have lived

elsewhere other than in the area of enumeration. The former group constitutes the *non-migrants* and the latter group constitutes the *migrants*. These two groups constitute the *migration status* of the population of the area of enumeration.

In an urban area of enumeration, a person is a migrant if he has lived in other urban or rural areas which are located either within or out of the region of enumeration. In a rural area of enumeration , a person is a migrant if he has lived in a wereda other than the wereda[1] in which the rural area of enumeration is found or if he has lived in urban areas of the same region or another region. The length of continuous residence classification of the population of an area of enumeration as migrants and non-migrants also defines return migrants as migrants

The length of continuous residence data is recorded in completed years, as less than one year, 1, 2, 3, 4, 5-6, 7-9 and 10 years and above. The time dimension has made it possible to distinguish between the current and long-time migrants. In addition to this, the recording of the length of continuous residence in completed years has enabled to determine the time of last arrival of the migrants to urban or rural area. In this respect, the length of continuous residence data, in this report, is used to:-

1. Determine the migration status of the population of the area of enumeration
2. Distinguish between the current and long-time migrants
3. Determine the year of last arrival of migrants
4. Estimate annual rate of in-migration

Once the migration status of the population of the *area of enumeration* is determined , migrants are further asked whether their *area of previous residence* was urban or rural . The area of previous residence is the area of *usual residence* before migrating to the area of enumeration. The *area of usual residence* is the area at which the respondent has lived continuously at least for six months. The *area of previous residence* is classified into *urban* and *rural*. This classification has enabled to generate details of inter-sectional flows of migrants, such as rural-urban, rural-rural, urban-rural and urban-urban. The *urban* and *rural* classification of the place of previous residence is based on the situation of the area at the time of migration.

[1]Wereda here refers to the 81 weredas that existed at the time of the census enumeration.

An *area of enumeration* refers to the *area of usual residence* of the population at the time of enumeration. The area of enumeration is classified as *urban* and *rural*. An urban area is defined as an agglomerated population center of 2000 or more and provides urban functions and all wereda capitals irrespective of their population size (CSA, 1995).

5.1.3 Levels And Patterns of Internal Migration

This sub-section examines the levels of internal migration, year of last arrival of migrants and forms of migration. Level of migration deals with the volume of internal migration. The volume of recent and long-time migrants that entered during the different periods of in-migration are discussed under year of last arrival. The pattern of movements between the rural and urban areas of Tigray Region are presented under forms of migration.

a) Levels of Internal Migration

Level of migration to an area is measured by taking percentages of migrants against the total population of the area. Table 5.1.1 presents the level for Tigray Region by sex and area of enumeration. In 1994, among the total population of Tigray Region, 17.6 percent were migrants and 81.9 percent were non-migrants. The level by sex showed that 82.5 percent males and 81.4 percent females were non-migrant, while the remaining 17.0 and 18.2 percent males and females, respectively were migrants. At this juncture, it is important to note that the weredas in Tigray Region were reconstituted and the number of the weredas were reduced from 81 to 31. In the census, wereda was migration defining area.

The levels of migration in urban and rural areas of Tigray Region vary substantially. The percentage of migrants in the urban areas amounted to 48.7 percent of the total urban population, while the corresponding percentage in the rural areas turned out to be only 12.1 percent. This disproportionate distribution of migrants between urban and rural areas could be explained partly by the fact that the rural areas are relatively less attractive in providing job opportunities than urban areas. The levels of migration in the zones also showed substantial

differences. The percentage of migrants among the Zones ranged from 10.7 percent in Mehakelegna Zone to 24.2 percent in Debubawi Zone (Table 5.1.2)

Table 5.1.1 Percentage Distribution of The Population by Migration Status, Sex and Area of Enumeration, Tigray Region : 1994

Migration Status	Sex	Area of Enumeration					
		Urban + Rural		Urban		Rural	
		No.	%	No.	%	No.	%
Total	Total	3134470	100	467176	100	2667294	100
	Male	1540679	100	212928	100	1327751	100
	Female	1593791	100	254248	100	1339543	100
Non- migrants	Total	2566891	81.9	235025	50.3	2331866	87.4
	Male	1270828	82.5	108077	50.8	1162751	87.6
	Female	1296063	81.4	126948	49.9	1169115	87.3
Migrants	Total	551560	17.6	227761	48.7	323799	12.1
	Male	261570	17.0	102602	48.2	158968	12.0
	Female	289990	18.2	125159	49.2	164831	12.3

NB:- Percentages do not add up to 100 because of the NS cases.

Table 5.1.2 Percentage Distribution of The Population by Migration Status, Zones and Sex , Tigray Region : 1994

Zones	Sex	Total		Migration Status	
		No.	%	Non-migrants	Migrants
Mirabawi	Total	733267	100	78.6	20.8
	Male	370549	100	79.1	20.3
	Female	362718	100	78.0	21.4
Mehakelenga	Total	943585	100	89.0	10.7
	Male	464463	100	89.5	10.1
	Female	479122	100	88.6	11.2
Misrakawi	Total	584771	100	84.6	14.9
	Male	280560	100	84.7	14.7
	Female	304211	100	84.5	15.0
Debubawi	Total	872847	100	75.2	24.2
	Male	425407	100	76.3	23.1
	Female	447740	100	74.1	25.3

NB:- Percentages do not add up to 100 because of NS cases

b) Year of Last Arrival

The percentage of migrants indicated in Tables 5.1.1 and 5.1.2 include those who have in-migrated and survived for a period ranging from less than a year to more than a decade before the census date. The length of continuous residence data groups the migrants by the number of years of continuous residence. This enabled to obtain the percentage of migrants by year of last arrival. It should, however, be borne in mind that due to the effects of mortality and return migration, the percentage of surviving migrants at the time of enumeration were less than those who arrived at the time of in-migration.

Table 5.1.3 represents the distribution of migrants by length of continuous residence and the corresponding year of last arrival . According to the data based on the year of last arrival of the total surviving migrants, 39.1 percent moved before 1984. The remaining 60.9 percent arrived during the last decade, i.e., between 1994 and 1984. The data, however, showed some fluctuations in the volume of migrants who moved during the different years of the last decade.

During the three years, between 1987 and 1984, 10.5 percent of the migrants made their move. During the following two years of 1989 and 1987, the percentage of migrants who made similar movements constituted 5.4 percent of the total migrants, showing a slight decrease in the average (2.7 percent per year) when compared with the average (3.5 percent per year) who moved during the previous three years. Then, the percentage of in-migrants, during the one year of 1991 and 1990, picked up to 11.6 percent of the total migrants. The percentage of migrants, then, slightly reduced to 9.6 percent during 1992-91 and again increased to 11.2 percent during 1993-92 to fall again to 7.0 percent in the subsequent year of 1994-93 period. The rise in the volume of in-migration which was observed during the 1991-1990 period draws particular attention. This rise could partly be attributed to the return of people (return migrants) back to their native place after the change in the government that took place in 1991.

Examination of the inflow of migrants to the urban and rural areas of Tigray Region during the different years of arrival revealed that, 45.4 percent of the surviving migrants in the rural areas entered before 1984, while the corresponding percentage for the urban areas

amounted to 30.1 percent. The remaining 54.6 percent in the rural areas and 69.9 percent in the urban areas entered during the last decade preceding the census date.

Table 5.1.3 Percentage Distribution of Migrants by Length of Continuous Residence, Year of Last Arrival, Sex and Area of Enumeration, Tigray Region : 1994

Length of Continuous Residence	Year of Last Arrival	Sex	Area of Enumeration					
			Urban + Rural		Urban		Rural	
			No.	%	No.	%	No.	%
	Total	Total	551560	100	227761	100	323799	100
		Male	261570	100	102602	100	158968	100
		Female	289990	100	125159	100	164831	100
< 1	1994-93	Total	38782	7.0	21304	9.4	17478	5.4
		Male	20490	7.8	10899	10.6	9591	6.0
		Female	1822	6.3	10405	8.3	7887	4.8
1	1993-92	Total	61882	11.2	28559	12.5	33323	10.3
		Male	31825	12.3	13984	13.6	17841	11.2
		Female	30057	10.4	14575	11.6	15482	9.4
2	1992-91	Total	52722	9.6	28360	12.5	24362	7.5
		Male	27010	10.3	14228	13.9	12782	8.1
		Female	25712	8.9	14132	11.3	11580	7.0
3	1991-90	Total	64194	11.6	42881	18.8	21313	6.6
		Male	31221	11.9	20174	19.7	11047	6.9
		Female	32973	11.4	22707	18.1	10266	6.2
4	1990-89	Total	30457	5.5	16843	7.4	13614	4.2
		Male	15094	5.8	8050	7.8	7044	4.4
		Female	15363	5.3	8793	7.0	6570	4.0
5-6	1989-87	Total	29859	5.4	10633	4.7	19226	5.9
		Male	14107	5.4	4768	4.6	9339	5.9
		Female	15752	5.4	5865	4.7	9887	6.0
7-9	1987-84	Total	57909	10.5	10578	4.6	47331	14.6
		Male	27905	10.7	4525	4.4	23380	14.7
		Female	30004	10.3	6053	4.8	23951	14.5
10 & Above	Before 1984	Total	215755	39.1	68603	30.1	147152	45.4
		Male	93918	35.9	25974	25.3	67944	42.7
		Female	121837	42.0	42629	34.1	79208	48.1

The pattern of the inflow of migrants to each zone during the different years of arrival was similar to the pattern observed for the whole , urban or the rural areas (Table 5.1.4).

However, there was a significant variation in the magnitude of the percentage of migrants. In this regard, the percentage of migrants who entered to each zone before 1984 ranged from 28.5 percent in Misrakawi Zone to 49.9 percent in Mirabawi Zone. The distributions indicated that the majority of migrants in Misrakawi, Mehakelenga and Debubawi Zones entered during the decade preceding the census date. Among these, 5.9, 7.8 and 6.4 percents, respectively entered into these Zones during the 12 months preceding the census date.

Table 5.1.4 Percentage Distribution of Migrants by Zones, Sex and Length of Continuous Residence , Tigray Region : 1994

				Length of continuous Residence			
		Total		< 1	1-4	5-9	10 & Above
Zones	Sex	No.	%	1994-93	1993-89	1989-84	Before 1984
Mirabawi	Total	152594	100	8.1	31.4	10.6	49.9
	Male	75082	100	8.5	32.6	10.8	48.1
	Female	77512	100	7.7	30.2	10.5	51.6
Mehakelenga	Total	100599	100	7.8	37.7	20.4	34.1
	Male	47030	100	8.8	39.8	21.3	30.1
	Female	53569	100	6.9	35.7	19.7	37.7
Misrakawi	Total	86980	100	5.9	47.8	17.8	28.5
	Male	41360	100	6.6	50.2	17.9	25.3
	Female	45620	100	5.2	45.7	17.2	31.4
Debubawi	Total	211387	100	6.4	38.7	16.8	38.1
	Male	98098	100	7.4	42.0	16.8	33.8
	Female	113289	100	5.5	35.9	16.8	41.8

c) Forms of Internal Migration

According to the information obtained on the area of previous residence of the migrants, the majority of the migrants (64.3 percent) moved directly from the rural areas, while 35.5 percent were from urban areas. Among male and female migrants, 61.8 and 66.6 percent, respectively, were from the rural areas (Table 5.1.5).

Table 5.1.5 also gives the *Form Of Migration,* which deals with the flow of migrants between the urban and rural sectors of the region and area of previous residence. The common forms of migration are rural-urban, rural-rural, urban-rural and urban-urban. The

main form of migration was the rural-rurai form which constituted 44.6 percent of the total migrants in Tigray Region. The second major form of migration was the urban-urban form of movement which consisted of 21.5 percent of the total migrants and the third form of migration was the rural-urban form which consisted of 19.8 percent of the total migrants. Although the urban-urban form of movement reflected direct moves among urban areas, it should be noted that the bulk of these migrants originally moved from the rural areas to the nearby urban centers and stayed there for sometimes and then moved to the next higher level urban centers. These step-wise movements are the common form of migratory movements often observed in a country.

Table 5.1.5 Percentage Distribution of Migrants by Area of Previous Residence, Form of Migration and Sex , Tigray Region : 1994

Area of Previous Residence And Form of Migration	Migrants By Sex		
	Total	Male	Female
Urban + Rural			
No.	551560	261570	289990
%	100	100	100
Urban	35.5	38.0	33.2
Rural	64.3	61.8	66.6
Total			
No.	550570	261128	289442
%	100	100	100
Urban-Urban	21.5	21.6	21.4
Urban-Rural	14.0	16.4	11.9
Rural-Urban	19.8	17.6	21.8
Rural-Rural	44.6	44.4	44.9

NB:- Percentages do not add up to 100 because of NS cases

The percentage of migrants from rural and urban areas by year of last arrival and length of continuous residence are shown in Table 5.1.6. Of the total migrants from the rural areas, 46.7 percent arrived before 1984, while 23.7 percent of the total migrants from the urban areas arrived during the same period. This suggested that migration from urban areas was a relatively more recent phenomenon than it was from rural areas. The glaring percentage of migrants from the urban and rural areas during the 1993-1989 period was due to the aforementioned return of displaced people. During the last decade, the tendency in population movement, within and from other regions towards the rural and urban areas of Tigray Region, reflected that urban population seems to be more mobile than the rural population.

Table 5.1.6 Percentage Distribution of Migrants by Length of Continuous Residence, Year of Last Arrival , Sex and Area of Previous Residence , Tigray Region : 1994

Length of Continuous Residence	Year of Last Arrival		Sex	Area of Previous Residence	
				Urban	Rural
	Total				
		No.	Total	195744	354826
			Male	99384	161744
			Female	96360	193082
		%	Total	100	100
			Male	100	100
			Female	100	100
< 1	1994-93		Total	8.1	6.4
			Male	9.1	7.0
			Female	7.0	5.9
1-4	1993-89		Total	51.8	30.3
			Male	52.7	32.5
			Female	50.8	28.5
5-9	1989-84		Total	16.4	15.6
			Male	16.2	16.0
			Female	16.7	15.3
10 +	before 1984		Total	23.7	46.7
			Male	22.0	44.5
			Female	25.5	50.3

5.1.4 Characteristics of Internal Migrants

Studies have shown that migrants often differ in certain aspects of demographic and socioeconomic characteristics from the non-migrants. Migration is often selective of the better educated, the youth and the never married, among others. In this sub-section, it is attempted to investigate the age-sex composition, marital status, educational attainment, labor force participation rates, unemployment rates and occupational characteristics of both migrants and non-migrants.

Usually, analysis of the characteristics of migrants focuses on the characteristics at the time of migration rather than at the time of enumeration. But the census gives data on the characteristics of migrants at the time of enumeration rather than at the time of in-migration. However, in this analytical report, the characteristics of recent migrants (migrants who resided for less than 12 months preceding the census date) can be taken to show the characteristics of the migrants at the time of in-migration. Then, the characteristics of non-migrants, total migrants (in-migrants who have in-migrated and resided for less than 12 months to 10 years and above preceding the census date) and the recent migrants are compared.

a) Age-sex Composition

The age-sex structure of the total migrant and non-migrant population is given in Table 5.1.7. The data showed that 49.5 percent of the non-migrant population and 21.7 percent of the total migrants were below age 15, while 48.5 percent of the total migrants and 32.2 percent of the non-migrants were at the age group of 15-39 years. The highest percentage of the total migrants were at the age group 15-19 years (11.9 percent) while the highest percentage of the non-migrants were at the age group 0-4 years (18.9 percent). Another notable feature of the age distribution of the total migrants was that only 11.3 percent of the migrant population was at the age group 0-9 years, while this was 35.5 percent for the non-migrants. Conversely, the percentage of the older segment of the population (65 years and over) among migrants (5.1 percent) was higher than non-migrants (3.8 percent). This indicated that the non-migrant population consisted of higher percentage of children below age of 15 years than the migrants, while the migrant population consisted of higher percentage of adults aged 15 years and above than the non-migrant population. This was in conformity with the age pattern commonly observed in migrant population.

The age distribution of the total migrants discussed above includes both recent and long time resident migrants. But many of the characteristics of total migrants tend to vary rather significantly by length of continuous residence at destination. For instance, the age distribution of migrants is positively correlated with length of continuous residence and does not reflect the

age distribution at the time of in-migration. Because of this fact, the age distribution of the recent migrants which can be taken to show the age distribution at the time of in-migration is given in Table 5.1.8.

The recent migrants, as expected, were rather older than the non-migrants and younger than the total migrants. However, similar to that of the total migrants, the highest percentage of the recent migrants were at the age group 15-19 years. While the above holds true for females, the highest percentage of the males turned out to be at the age group 25-29 years. Moreover, the majority (51.1 percent) of the recent migrants were at the age group of 10-29 years. Figures 5.1.1 and 5.1.2 present the population pyramid of the non-migrants and recent migrants, respectively.

Table 5.1.7 Percentage Distribution of The Population by Migration Status, Age Group Sex and Sex Ratio, Tigray Region : 1994

Age Group	Non-migrants				Total Migrants			
	Total	Male	Female	Sex Ratio	Total	Male	Female	Sex Ratio
Total No.	2566891	1270828	1296063	98	551560	261570	289990	90
%	100	100	100		100	100	100	
0-4	18.9	19.4	18.4	104	4.2	4.5	3.9	103
5-9	16.6	17.1	16.2	103	7.1	7.6	6.7	101
10-14	14.0	14.9	13.1	112	10.4	11.3	9.7	105
15-19	11.5	11.3	11.6	96	11.9	11.1	12.7	79
20-24	6.9	6.7	7.2	92	9.9	9.0	10.7	75
25-29	5.5	5.1	5.9	85	10.1	9.7	10.5	84
30-34	4.5	3.7	5.4	67	8.8	8.3	9.2	82
35-39	3.8	3.4	4.3	77	7.8	7.4	8.3	80
40-44	3.6	3.4	3.8	87	6.7	6.8	6.6	92
45-49	3.1	3.3	2.9	112	5.6	6.1	5.1	109
50-54	3.2	3.1	3.4	89	5.4	5.4	5.4	91
55-59	2.3	2.4	2.2	107	3.6	3.8	3.4	103
60-64	2.3	2.2	2.3	90	3.4	3.3	3.4	88
65+	3.8	4.0	3.3	120	5.1	5.8	4.5	116

The pyramids depict the age-sex pattern similar to the age-sex pattern of the non-migrant and migrant population, respectively. As can be seen from Figure 5.1.2, a very small percentage of the recent migrants were children aged 0-9 years while this was very large for the non-migrants as depicted by Figure 5.1.1. On the other hand, while the bulk of the recent migrants (Figure 5.1.2) were at the age group 10-34 years, the majority of the non-migrants (Figure 5.1.1)

were at the age group 0-15 years. Another important feature of the pyramids is that there were relatively higher percentage of recent migrants than non-migrants at the older ages of 65 years and above.

Table 5.1.9 presents the median ages of migrants and non-migrants. The median ages of the recent migrants were 23.5, 19.4 and 21.5 years for males, females and both sexes, respectively. The corresponding median ages of the total migrant males, females and both sexes were 26.8, 26.7 and 26.8 years, respectively. The median ages of the non-migrants during the same year were 12.9, 13.6 and 13.2 years for males, female and both sexes, respectively

Table 5.1.8 Percentage Distribution of Recent Migrants by Age Group and Sex, Tigray Region : 1994

Age Group	Recent Migrants			
	Total	Male	Female	Sex Ratio
Total				
No.	38782	20490	18292	112
%	100	100	100	
0-4	12.5	11.7	13.3	99
5-9	8.5	8.3	8.7	106
10-14	10.1	9.2	11.0	94
15-19	15.6	12.1	19.5	70
20-24	13.4	12.8	14.0	102
25-29	12.0	13.5	10.4	146
30-34	7.7	9.0	6.2	164
35-39	5.9	7.1	4.7	171
40-44	4.2	4.9	3.4	161
45-49	3.0	4.0	1.9	233
50-54	2.3	2.5	2.0	135
55-59	1.4	1.5	1.3	129
60-64	1.3	1.2	1.5	89
65+	2.2	2.2	2.1	115

Table 5.1.9 Median Ages of the Population by Migration Status and Sex , Tigray Region : 1994

Sex	Migration Status		
	Non-migrants	Total Migrants	Recent Migrants
Total	13.2	26.8	21.5
Male	12.9	26.8	23.5
Female	13.6	26.7	19.4

Figure 5.1.1 Age Pyramid of Non-migrants By Sex , Tigray Region : 1994

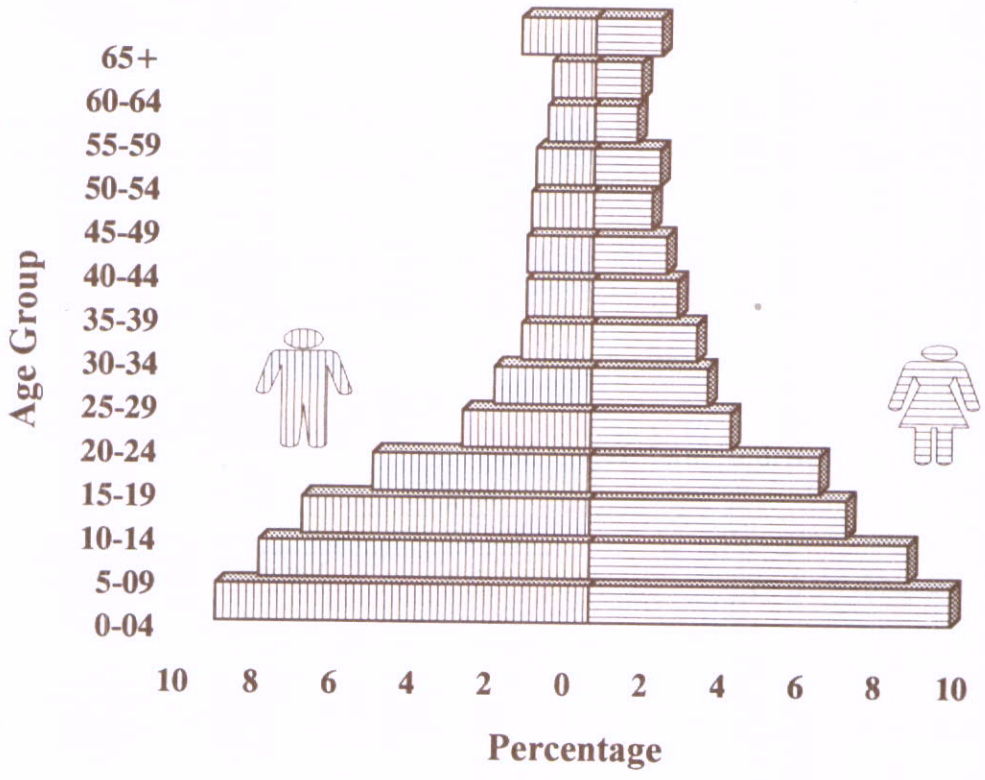
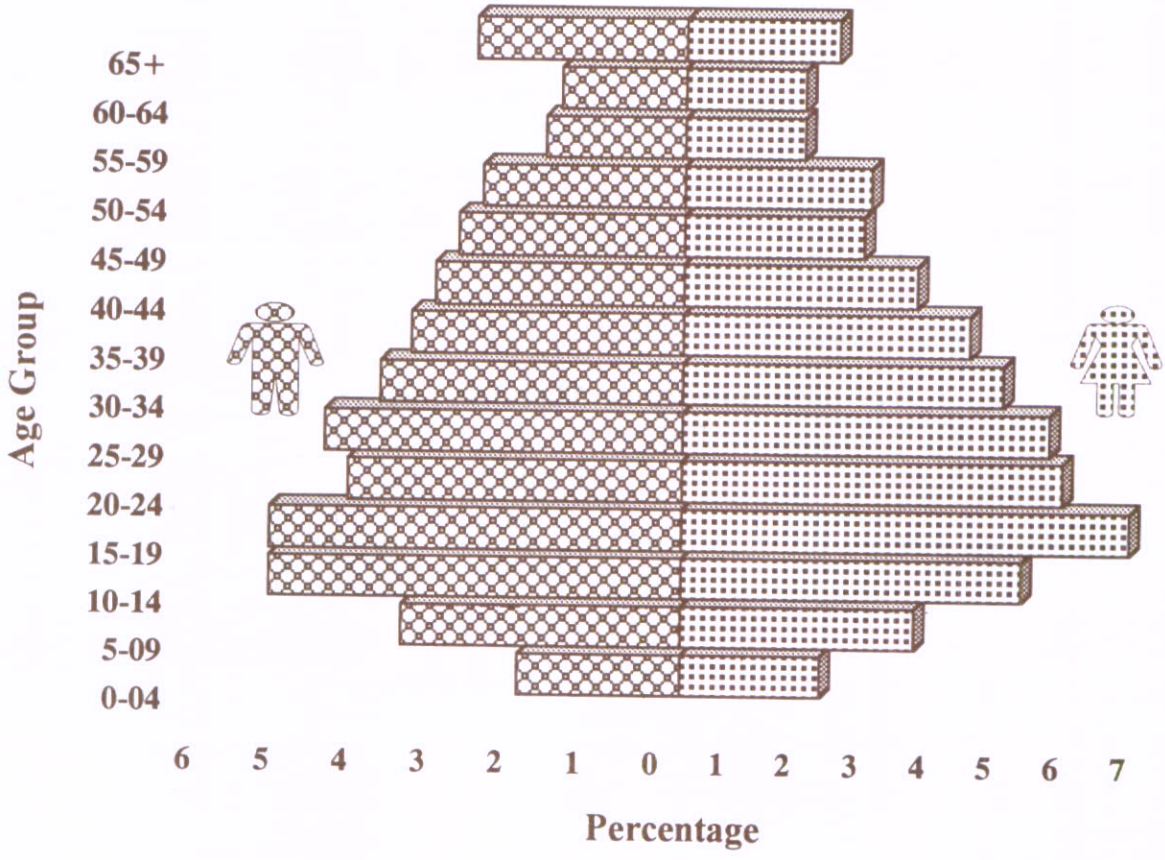


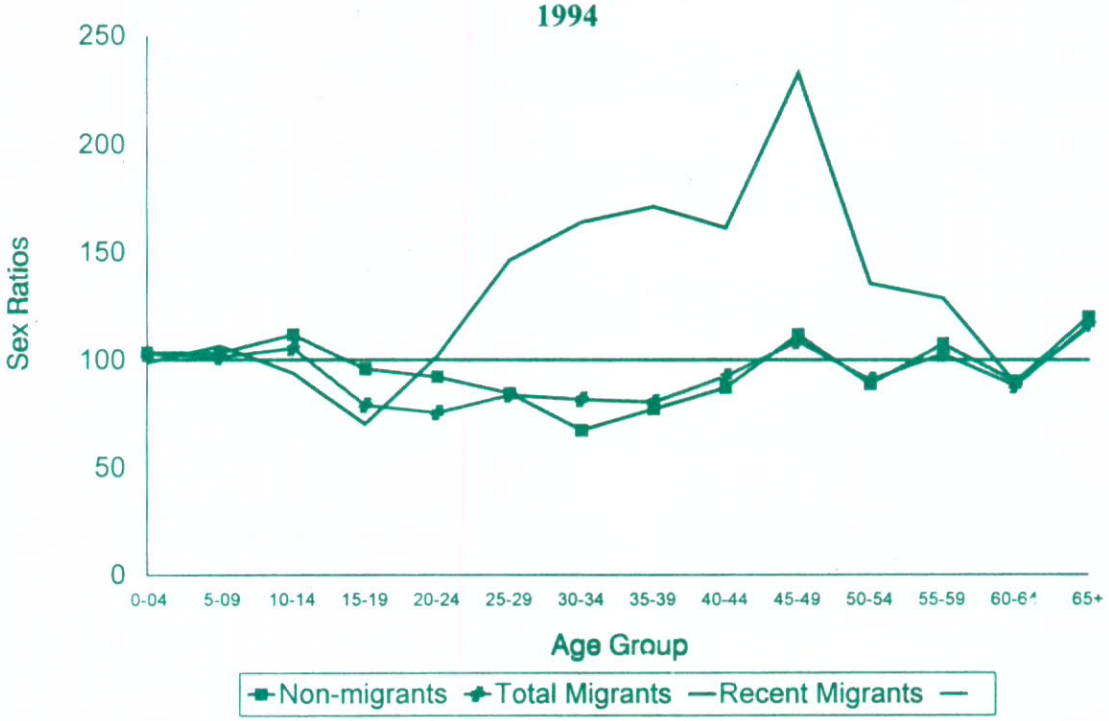
Figure 5.1.2 Age Pyramid of Migrants By Sex , Tigray Region : 1994



The general and age specific sex ratios of total migrants, non-migrants and recent migrants are presented in Tables 5.1.7 and 5.1.8, respectively. The general sex ratio of the total migrants and non-migrants were 90 and 98, respectively. Examination of the age specific sex ratio of the total migrants revealed that migrants of all ages were not subjected to male deficiency. On the contrary, males out number females at the age groups 0-14, 45-49, 55-59 and 65 years and over. A similar situation also holds among non-migrants. Male deficiency among total migrants was quite pronounced at the age groups 15-44, 50-59 and 60-64 years.

There was an extremely high sex ratio among the non-migrants at the age groups 10-14, 45-49 and 65 years and over and low sex ratio at the age groups 30-39 years. Recent migrants, on the other hand, were male dominated with a general sex ratio of 112. However, the age specific sex ratios indicated that the recent migrants at the age groups 0-4, 10-19 and 60-64 years suffer from male deficiency (Table 5.1.8 And Figure 5.1.3). On the other hand, the sex ratios at the age groups 25-59 and 65 years and above were extremely high.

Figure 5.1.3 Sex Ratio of The Population by Migration Status, Tigray Region : 1994



b) Marital Status

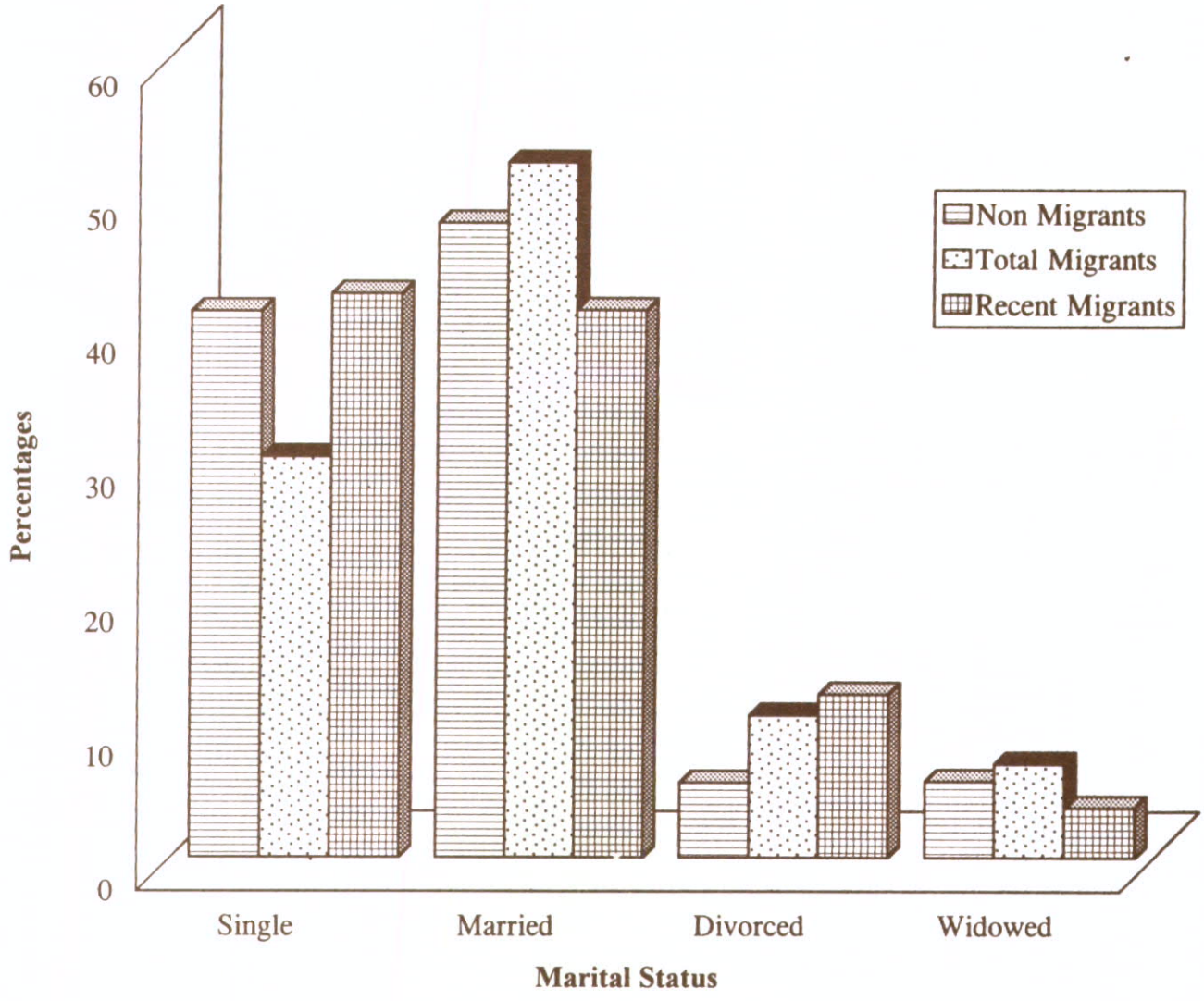
One of the characteristics of migrants that has been studied is their marital status. Studies showed that migration is selective of marital status and as a result mostly single persons dominate among migrants. Table 5.1.10 presents the population distribution by marital status and migration status. Accordingly, among the total migrants, 29.8 percent and 51.8 percent were single and currently married, respectively,, while these were 40.7 percent and 47.3 percent among non-migrants. The corresponding percentages among the recent migrants were 42.0 percent single and 40.8 percent married (See also Figure 5.1.4).

The data also showed that there was a high percentage of single persons of marriageable age among non-migrants than the total migrants. Another characteristic feature of the marital status composition of the population was that divorce was more prevalent among migrants than non-migrants. Comparing the prevalence of widowhood and divorce among recent and total migrants, one observes that divorce happened to be more prevalent among recent migrants and widowhood was more prevalent among total migrants.

Table 5.1.10 Percentage Distribution of Population Aged 10 years and Over by Migration Status, Marital Status and Sex , Tigray Region : 1994

Marital Status	Sex	Migration Status					
		Non-migrants		Total Migrants		Recent Migrants	
		No.	%	No.	%	No.	%
Total	Total	1654903	100	489042	100	30647	100
	Male	807119	100	230040	100	16389	100
	Female	847784	100	259002	100	14258	100
Single	Total	673854	40.7	145967	29.8	12864	42.0
	Male	399763	49.5	87105	37.9	7927	48.4
	Female	274091	32.3	58862	22.7	4937	34.6
Married	Total	782336	47.3	253461	51.8	12506	40.8
	Male	375892	46.6	128246	55.4	7063	43.1
	Female	406444	47.9	125215	48.3	5443	38.2
Divorced	Total	92716	5.6	52007	10.6	3752	12.2
	Male	15353	1.9	8951	3.9	920	5.6
	Female	77363	9.1	43056	16.6	2832	19.9
Widowed	Total	94194	5.7	34195	7.0	1130	3.7
	Male	10319	1 3	3891	1.7	176	1.1
	Female	83875	9.9	30304	11.7	954	6.7

Figure 5.1.4 Population by Migration Status and Marital Status, Tigray Region: 1994



A close comparison of the marital status composition of the total and recent migrants hints that the marital status composition of the total migrants might have changed rather significantly during their prolonged stay in the area of destination than it actually was when they in-migrated. For instance, the high percentage of married persons among total migrants and the high percentage of single persons among the recent migrants are clear indications that the above statement holds true.

c) Educational Attainment

Education generally acts as a stimulant in population movement. Studies have shown that it is the educated that are more mobile than the non-educated. The literacy status and educational attainment of all migrants and non-migrants aged ten years and over are presented in Table 5.1.11. The majority of the total migrants (68.7 percent), recent migrants (54.8 percent) and non-migrants (82.6 percent) were illiterate (see also Figure 5.1.5). Illiteracy was more pronounced among females than males in all migration status. Literacy was more prevalent among migrants, in particular, among recent migrants than non-migrants. Among the total and recent migrants, 31.2 and 44.9 percent were literate, respectively. The corresponding percentage for the non-migrants amounted to 17.3 percent. However, considering the educational attainment, a relatively higher percentage of non-migrants than migrants had completed primary and *non-regular* education. This also holds true for each sex (See also Figures 5.1.6). *Non-regular* education includes education attained by attending koranic and church schools and literacy campaign. Among migrants, on the other hand, a relatively higher percentage had attained junior and senior secondary and higher level education than non-migrants. Among migrants themselves, recent migrants were better educated than total migrants.

Another characteristic feature of the migrants was the difference in literacy status between migrants from urban and rural areas. Migrants from urban areas were more literate and better educated than their counterparts from the rural areas. As indicated in Table 5.1.12, 52.0 percent of the total migrants aged ten years and above from the urban areas were literate and this amounted to 20.0 percent for those from the rural areas. Similarly, with regard to the recent migrants, literacy level was even more higher for those from the urban areas (67.9 percent) than

Table 5.1.11 Percentage Distribution of Population Aged 10 Years and Above by Migration Status, Educational Attainment and Sex, Tigray Region : 1994

Educational Attainment	Sex	Migration Status					
		Non- migrants		Total Migrants		Recent Migrants	
		No.	%	No.	%	No.	%
Total	Total	1654903	100	489042	100	30647	100
	Male	807119	100	230040	100	16389	100
	Female	847784	100	259002	100	14258	100
Illiterate	Total	1366358	82.6	335807	68.7	16809	54.8
	Male	613979	76.1	133132	57.9	7202	43.9
	Female	752379	88.7	202675	78.2	9607	67.4
Literate	Total	286303	17.3	152638	31.2	13758	44.9
	Male	191869	23.8	96506	42.0	9136	55.8
	Female	94434	11.1	561332	21.7	4622	32.4
NS	Total	2242	0.1	597	0.1	80	0.3
	Male	1271	0.1	402	0.1	51	0.3
	Female	971	0.1	195	0.1	29	0.2
Total	Total	286303	100	152638	100	13758	100
	Male	191869	100	96506	100	9136	100
	Female	94434	100	56132	100	4622	100
Primary	Total	217845	76.1	87616	57.4	7625	55.4
	Male	138933	72.4	53000	54.9	4775	52.3
	Female	78912	83.6	34616	61.7	2850	61.7
Junior Secondary	Total	14039	4.9	15244	10.0	1558	11.3
	Male	8380	4.4	9297	9.6	1027	11.2
	Female	5659	6.0	5947	10.6	531	11.5
Senior Secondary	Total	11965	4.2	22129	14.5	2343	17.0
	Male	6700	3.5	13720	14.2	1472	16.1
	Female	5265	5.6	8409	15.0	871	18.8
Higher	Total	699	0.2	6858	4.5	1006	7.3
	Male	461	0.2	4940	5.2	760	8.3
	Female	238	0.2	1918	3.4	246	5.3
Non-regular	Total	41755	14.6	20791	13.6	1226	8.9
	Male	37395	19.5	15549	16.1	1102	12.1
	Female	4360	4.6	5242	9.3	124	2.7

Table 5.1.12 Percentage Distribution of Migrants by Area of Previous Residence, Educational Attainment and Sex , Tigray Region :1994

Educational Attainment	Sex	Migrants By Area of Previous Residence							
		Urban				Rural			
		Total Migrants		Recent Migrants		Total Migrants		Recent Migrants	
		No.	%	No.	%	No.	%	No.	%
Total	Total	171360	100	13547	100	317122	100	17044	100
	Male	87038	100	7872	100	142748	100	8484	100
	Female	84322	100	5675	100	174374	100	8560	100
Illiterate	Total	82038	47.9	4310	31.8	253360	79.9	12472	73.2
	Male	32954	37.9	1797	22.2	100016	70.1	5390	63.5
	Female	49084	58.2	2513	44.3	153344	87.9	7082	82.7
Literate	Total	89151	52.0	9205	67.9	63341	20.0	4529	26.6
	Male	53967	62.0	6049	78.4	42452	29.7	3074	36.2
	Female	35184	41.7	3156	55.6	20889	12.0	1455	17.0
Ns	Total	171	0.1	32	0.3	421	0.1	43	0.3
	Male	117	0.1	26	0.4	280	0.2	20	0.3
	Female	54	0.1	6	0.1	141	0.1	23	0.3
Total	Total	89151	100	9205	100	63341	100	4529	100
	Male	53697	100	6049	100	42452	100	3074	100
	Female	35184	100	3156	100	20889	100	1455	100
Primary	Total	45686	51.2	4576	49.7	41824	66.0	3025	66.8
	Male	26657	49.4	3000	49.6	26286	61.9	1762	57.3
	Female	19029	54.1	1576	49.9	15538	74.4	1263	86.8
Junior Secondary	Total	11154	12.5	1238	13.4	4085	6.4	320	8.2
	Male	6530	12.1	774	12.8	2762	6.5	253	4.6
	Female	4624	13.1	464	14.7	1323	6.3	67	7.1
Senior Secondary	Total	18415.	20.7	2092	22.7	3710	5.9	251	5.8
	Male	11213	20.8	1293	21.4	2503	5.9	179	5.0
	Female	7202	20.5	799	25.3	1207	5.8	72	5.5
Higher	Total	6189	6.9	908	9.9	669	1.1	98	2.5
	Male	4459	8.2	684	11.3	481	1.1	76	1.5
	Female	1730	4.9	224	7.1	188	0.9	22	2.2
Non-regular	Total	7707	8.7	391	4.2	13053	20.6	835	18.4
	Male	5108	9.5	298	4.9	10420	24.5	804	26.2
	Female	2599	7.4	93	2.9	2633	12.6	31	2.1

Figure 5.1.5 Percentage of Literate Population 10 Years and Above by Migration Status, Tigray Region : 1994

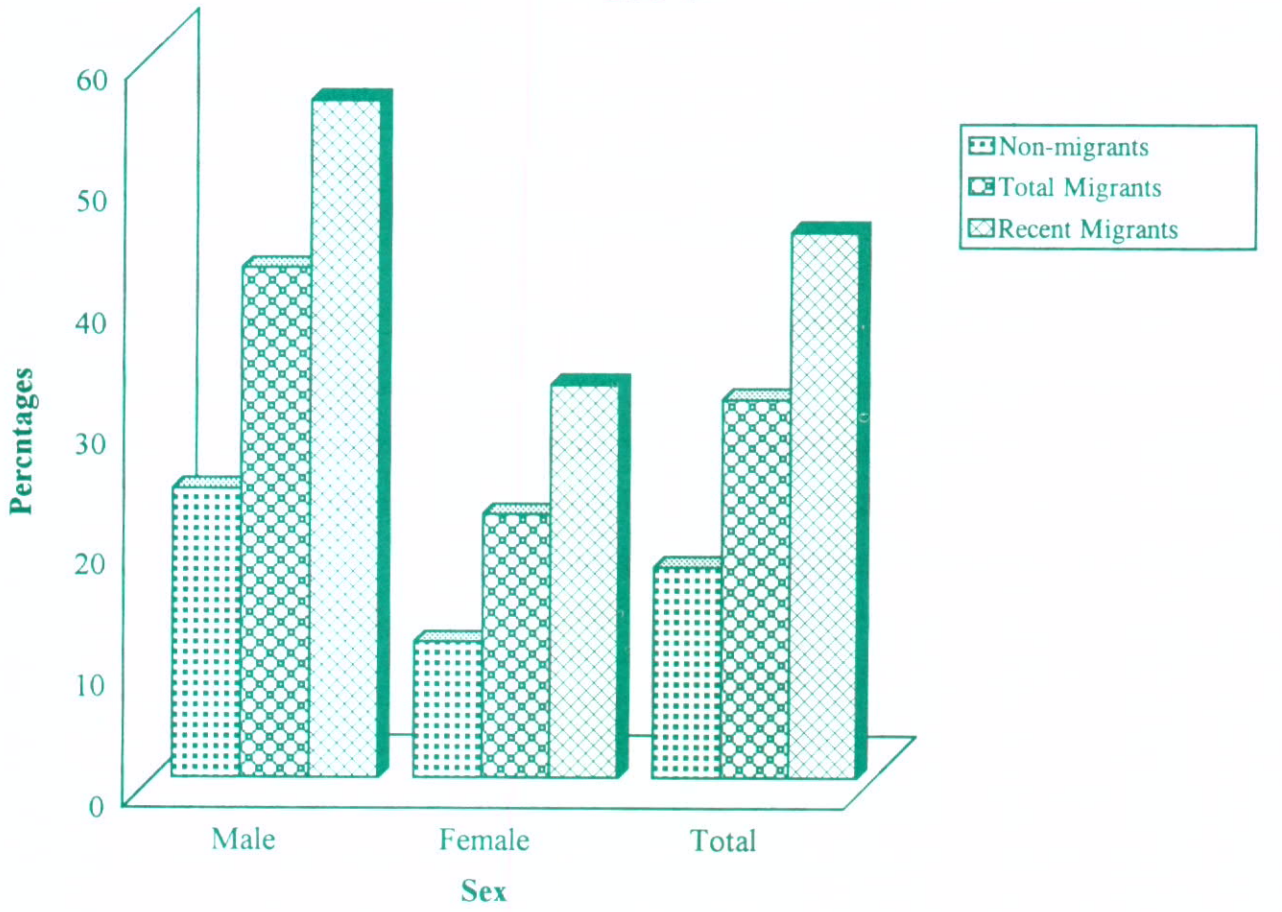


Figure 5.1.6 Percentage of Population 10 Years and Above by Migration Status and Educational Attainment , Tigray Region : 1994

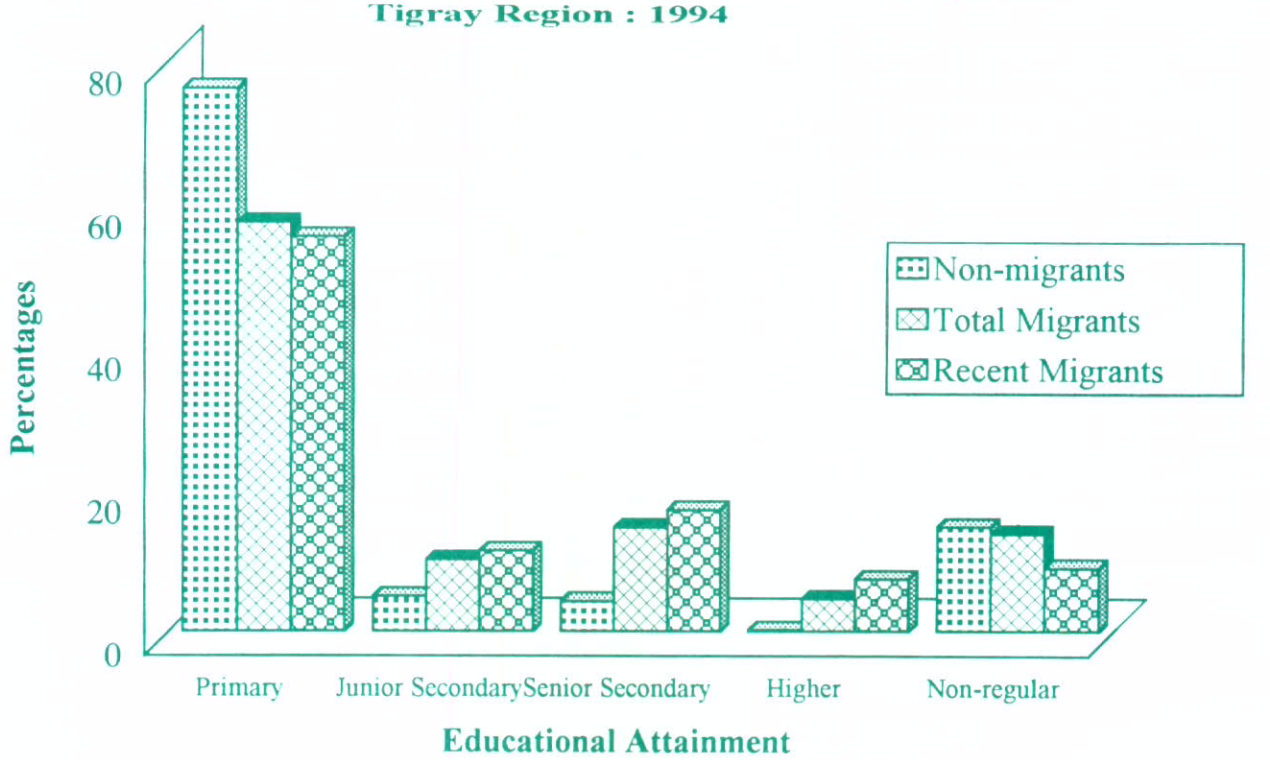
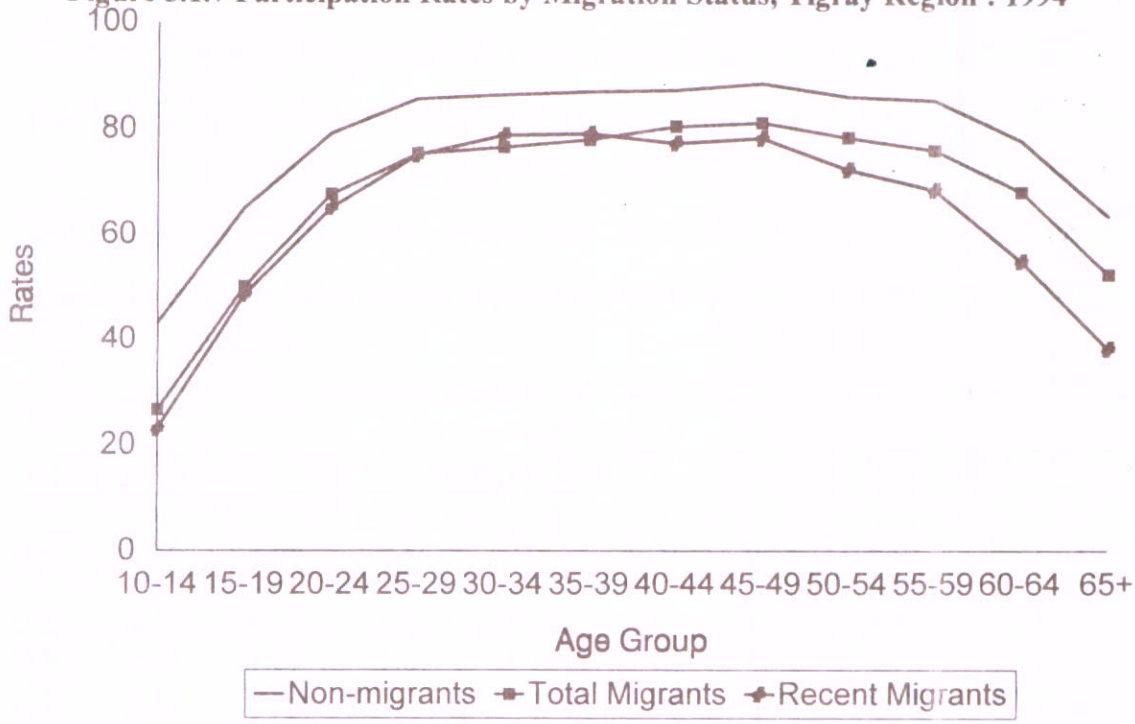


Figure 5.1.7 Participation Rates by Migration Status, Tigray Region : 1994



Contrasting age specific labor force participation rates of male and female total migrants, one observes that male total migrants had the highest labor force participation rate (96.2 percent) at the age group 45-49 years and female total migrants had the highest labor force participation rate (66.4 percent) at the age group 40-44 years. The corresponding highest rates of labor force participation for the recent migrant males (92.1 percent) and females (58.6 percent) occurred at the age groups 40-44 and 35-39 years, respectively. Considering the non-migrant males and females, the highest labor force participation rates for males (98.5 percent) occurred at the age group 45-49 years and the highest labor force participation rate for females (79.2 percent) occurred at the age group 30-34 years.

ii) Unemployment Rate

Unemployment rate is the percentage of the unemployed to the total economically active persons. Table 5.1.14 presents the age-sex specific unemployment rates of migrants and non-migrants. Unemployment rate was lower among non-migrants than both total and recent migrants. Recent migrants had higher unemployment rate than the total migrants. Of the total economically active total migrants, 12,262 were unemployed. Of these, 6,654 were males and 5,608 were females. The unemployment rates turned out to be 3.9, 3.8 and 3.9 percent for both

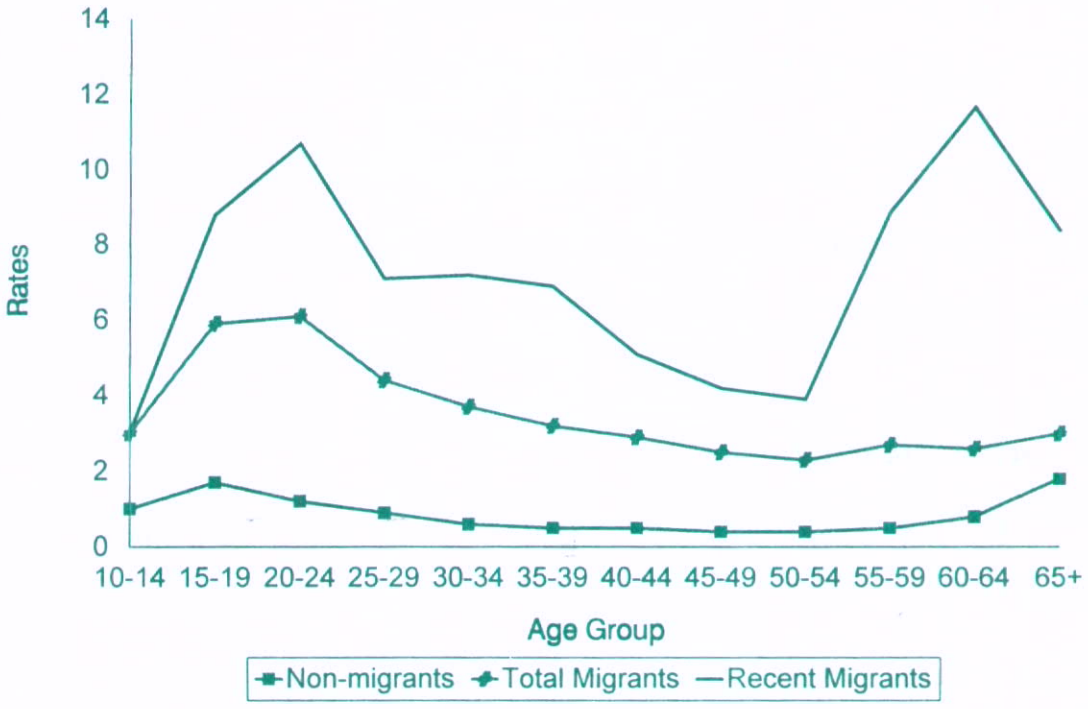
sexes, males and females, respectively. Among recent migrants, unemployment rates amounted to 7.5, 7.7 and 7.6 percent for males, females and both sexes, respectively. On the other hand, out of the total economically active non-migrants, 11,474 were unemployed. Of these, 5,058 were males and 6,416 were females. In terms of unemployment rates, these were 1.0 percent for both sexes, 0.8 percent and 1.2 percent for males and females, respectively. Among both migrant and non-migrant population, unemployment rate was higher among females than males. Further more, recent migrant females had higher unemployment rate than both total migrant and non-migrant females.

Table 5.1.14 Unemployment Rates by Migration Status, Age Group and Sex, Tigray Region : 1994

Age Group	Non-migrants			Total Migrants			Recent Migrants		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	1.0	0.8	1.2	3.9	3.8	3.9	7.6	7.5	7.7
10-14	1.0	0.9	1.2	3.0	2.5	3.7	3.0	2.5	3.6
15-19	1.7	1.4	2.0	5.9	5.3	6.3	8.8	8.2	9.2
20-24	1.2	1.1	1.3	6.1	6.5	5.7	10.7	10.5	11.1
25-29	0.9	0.9	0.9	4.4	4.3	4.4	7.1	7.0	7.3
30-34	0.6	0.7	0.6	3.7	3.9	3.5	7.2	7.1	7.5
35-39	0.5	0.4	0.5	3.2	3.6	2.8	6.9	7.8	4.6
40-44	0.5	0.5	0.6	2.9	3.0	2.8	5.1	5.9	3.0
45-49	0.4	0.3	0.6	2.5	3.0	1.8	4.2	4.7	2.5
50-54	0.4	0.3	0.5	2.3	2.2	2.5	3.9	4.5	2.6
55-59	0.5	0.3	0.8	2.7	2.8	2.6	8.9	12.4	-
60-64	0.8	0.5	1.1	2.6	2.4	3.0	11.7	10.6	13.7
65+	1.8	1.2	3.0	3.6	3.2	4.6	8.4	7.6	10.2

A look at the age specific unemployment rates revealed that the highest unemployment rate for total migrants (6.1 percent) existed at the age group 20-24 years, for recent migrants (11.7 percent) at the age group 60-64 years and for non-migrants (1.8 percent) at the age group 65 years and over. A close look at the age-sex specific unemployment rates indicated that the pattern was similar for both migrant and non-migrant population, except that the level of unemployment vary from one age group to another. The lowest rates of unemployment were observed at the age groups 50-54, 10-14 and 45-54 years for total migrants, recent migrants and non-migrants, respectively (Figure 5.1.8). As further depicted by Figure 5.1.8, recent migrants had the highest unemployment rates than both non-migrants and total migrants at all ages and the non-migrants had the lowest unemployment rates than both the recent and total migrants at all ages.

Figure 5.1.8 Unemployment Rates by Migration Status, Tigray Region : 1994



A contrast of the unemployment rates by length of continuous residence and area of previous residence showed that urban migrants had higher unemployment rate than rural migrants. Table 5.1.15 presents the unemployment rates by area of previous residence and length of continuous residence. As can be seen from the Table, 6.2 percent of the migrants from urban areas were unemployed, while this was 2.7 percent for the migrants from rural areas. Recent migrants had higher unemployment rate than migrants who had resided for longer periods. The unemployment rates for migrants from both areas decline as duration of stay extended. For instance, unemployment rate among recent migrants (duration of continuous residence is less than 1 year) from urban areas was 10.4 percent and this decreased to 8.4 and 2.6 percent for those who resided from 1 to 4 years and from 5 to 9 years, respectively and a similar situation holds true for migrants from rural areas.

Table 5.1.15 Unemployment Rate of Migrants by Length of Continuous Residence, Sex and Area of Previous Residence, Tigray Region : 1994

Length of Continuous Residence	Sex	Area of Previous Residence		
		Urban + Rural	Urban	Rural
Total	Total	3.9	6.2	2.7
	Male	3.8	5.8	2.6
	Female	3.9	6.7	2.8
< 1	Total	7.6	10.4	5.3
	Male	7.5	9.0	5.6
	Female	7.7	12.5	4.8
1-4	Total	6.1	8.4	4.0
	Male	5.6	7.4	3.8
	Female	6.8	10.1	4.3
5-9	Total	2.2	2.6	2.0
	Male	2.1	2.7	1.7
	Female	2.3	2.5	2.2
10+	Total	2.4	4.0	2.2
	Male	2.7	3.9	2.1
	Female	2.6	4.1	2.4

iii) Occupational Composition

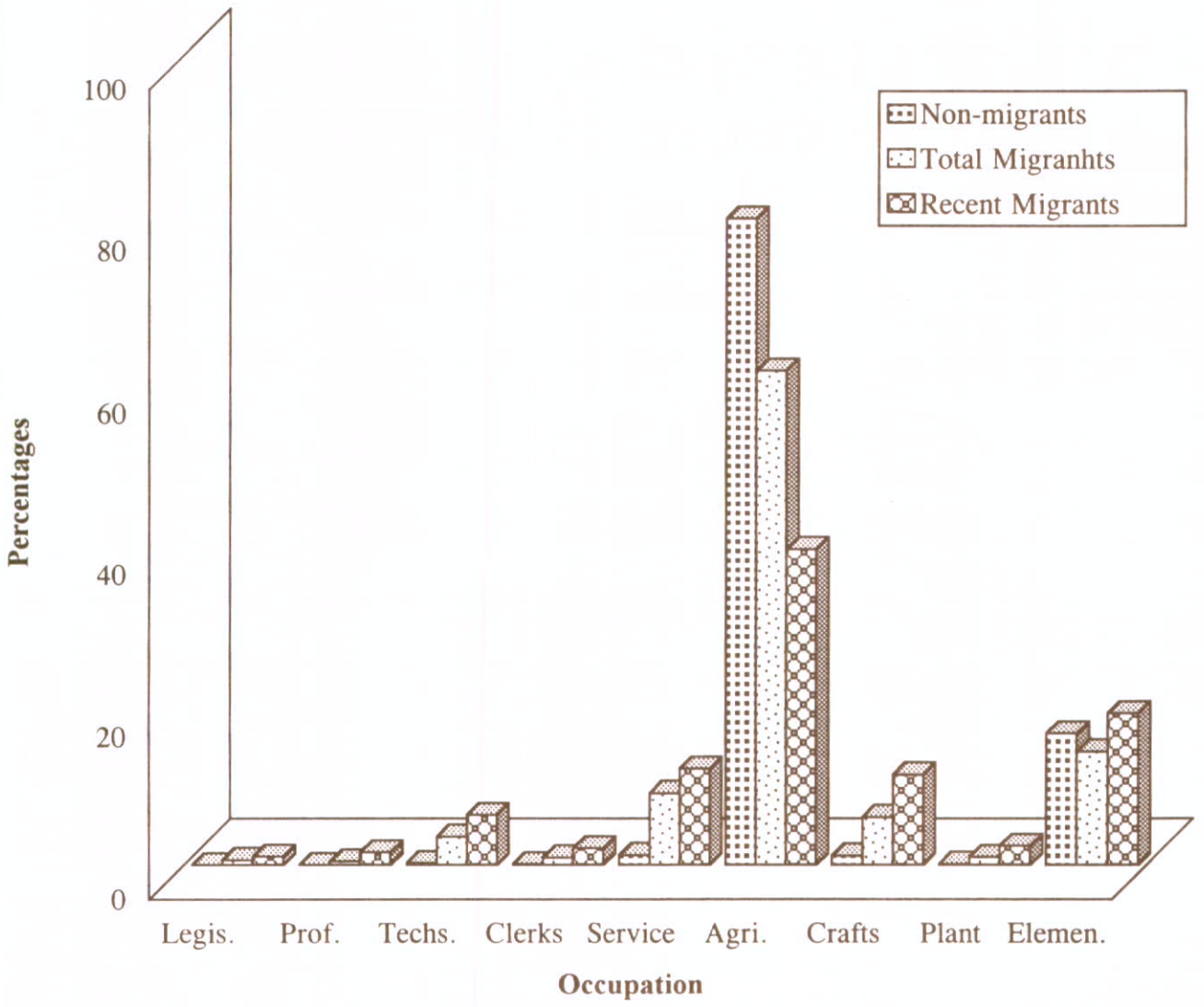
Examination of the occupational composition of migrants and non-migrants revealed that both migrants and non-migrants were concentrated in the skilled agricultural occupation followed by elementary, crafts, service and technical occupational categories. Table 5.1.16 and Figure 5.1.9 present the occupational composition of migrants and non-migrants . As indicated in the Table and depicted by the Figure, higher percentage of non-migrants (79.7 percent) than both total migrants (61.1 percent) and recent migrants (39.0 percent) were in agriculture. On the other hand, migrants, both recent and total, preponderate non-migrants in every other category of occupation, except in elementary occupation where non-migrants dominate total migrants.

Comparison of the occupational composition of recent and total migrants showed that recent migrants dominated total migrants in all types of occupations, except in agriculture. The observations made above for both sexes equally hold true for each sex. However, the percentage

Table 5.1.16 Percentage Distribution of The Population by Migration Status, Occupation and Sex , Tigray Region : 1994

Occupation	Sex	Migration Status					
		Non- migrants		Total Migrants		Recent Migrants	
		No.	%	No.	%	No.	%
Total	Total	1163524	100	310994	100	17934	100
	Male	612583	100	172719	100	11560	100
	Female	550941	100	138275	100	6374	100
Legislators Managers	Total	379	0.0	1948	0.6	187	1.0
	Male	271	0.0	1669	1.0	165	1.4
	Female	108	0.0	279	0.2	22	0.4
Professional	Total	182	0.0	1423	0.5	281	1.6
	Male	149	0.0	1253	0.7	251	2.2
	Female	33	0.0	170	0.1	30	0.5
Technicians Associate. Professional	Total	2620	0.2	10880	3.5	1108	6.2
	Male	1636	0.2	7085	4.1	760	6.6
	Female	984	0.2	3795	2.7	348	5.5
Clerks	Total	779	0.1	2885	0.9	372	2.1
	Male	393	0.1	1750	1.0	198	1.7
	Female	386	0.1	1135	0.8	174	2.7
Service and market sales	Total	14208	1.2	27569	8.9	2123	11.8
	Male	4658	0.8	11086	6.4	970	8.4
	Female	9550	1.7	16483	11.9	1153	18.1
Skilled Agricultural	Total	927486	79.7	189893	61.1	6991	39.0
	Male	498609	81.4	109144	63.2	4812	41.6
	Female	428877	77.8	80749	58.4	2179	34.2
Crafts And Related Activities	Total	13278	1.1	18372	5.9	1999	11.2
	Male	5336	0.9	10175	5.9	1487	12.9
	Female	7942	1.4	8197	5.9	512	8.0
Plant and machine Workers	Total	1334	0.1	3018	1.0	423	2.4
	Male	849	0.1	2685	1.6	397	3.4
	Female	485	0.1	333	0.2	26	0.4
Elementary occupation	Total	188791	16.2	43525	14.0	3363	18.8
	Male	95252	15.6	22115	12.8	1794	15.5
	Female	93528	17.0	21410	15.5	1569	24.6
NS	Total	14468	1.3	11481	3.7	1087	6.1
	Male	5430	0.9	5757	3.3	726	6.3
	Female	9038	1.6	5724	4.1	361	5.7

Figure 5.1.9 Occupational Composition by Migration Status, Tigray Region : 1994



of males was higher than the percentage of females in every type of occupation, except in the service, elementary, clerical (recent migrants) and crafts (non-migrants) where females of all migration status dominated males of all migration status.

5.1.5 Rate of Migration

a) Annual In-migration Rate

The rate of in-migration to each area is defined as the number of in-migrants to each area divided by the population of each area at time of migration times 100. The average annual rate of in-migration both to area of enumeration and from area of previous residence is estimated using migrants who arrived during 1994-93 and 1993-92. The average rate was restricted to only two years because an average longer than two years will understate the actual annual rate due to reduction in the amount of migrants by death and return migration. Table 5.1.17 presents the rates of in-migration during 1992-93, 1994-93 and the average of both periods to areas of enumeration and from areas of previous residence.

As indicated in the Table, the total rates of in-migration during 1994-93 and 1993-92 amounted to 1.2 and 2.0 percent and the average (1994-92) was 1.7 percent. The rate of in-migration for males amounted to 1.3 percent during 1994-93 and 2.1 percent during 1993-92 and the average was 1.7 percent during 1994-92. The corresponding rates for the females constituted 1.2, 1.9 and 1.5 percent during 1994-93, 1993-92 and the average(1994-92), respectively. The average rate of in-migration to the urban areas was higher (5.5 percent) than to the rural areas (1.0) and was decreasing to both areas. That is, the rate of in-migration to urban areas was 6.4 percent during 1993-92 and then declined to 4.6 percent during 1994-93. Similarly, the rate of in-migration to rural areas was 1.3 percent during 1993-92 and decreased to 0.7 percent during 1994-93.

Contrasting the rates of in-migration from areas of previous residence, one observes that the rate of in-migration from the rural areas was higher than from the urban areas and the trend of in-migration from both areas was declining. However, it should be borne in mind that the

decline in in-migration rates does not imply decline in the volume of in-migration. Rates decline because the size of the population which is used as a denominator in calculating the rates has increased.

Table 5.1.17 Annual Rate of In-migration Into Areas of Enumeration and From Areas of Previous Residence by Year of Last Arrival , Tigray Region: 1994

Year of last Arrival	Sex	Rate of In-migration Into Areas of Enumeration			Rate of In-migration From Areas of Previous Residence	
		Urban + Rural	Urban	Rural	Urban	Rural
1994-93	Total	1.2	4.6	0.7	0.5	0.7
	Male	1.3	5.1	0.7	0.6	0.7
	Female	1.2	4.1	0.6	0.4	0.7
1993-92	Total	2.0	6.4	1.3	0.7	1.3
	Male	2.1	6.9	1.4	0.8	1.3
	Female	1.9	6.0	1.2	0.6	1.4
1994-92 Average	Total	1.7	5.5	1.0	0.6	1.0
	Male	1.7	6.0	1.0	0.7	1.0
	Female	1.5	5.0	0.9	0.5	1.1

b) Age-sex Specific In-migration Rates

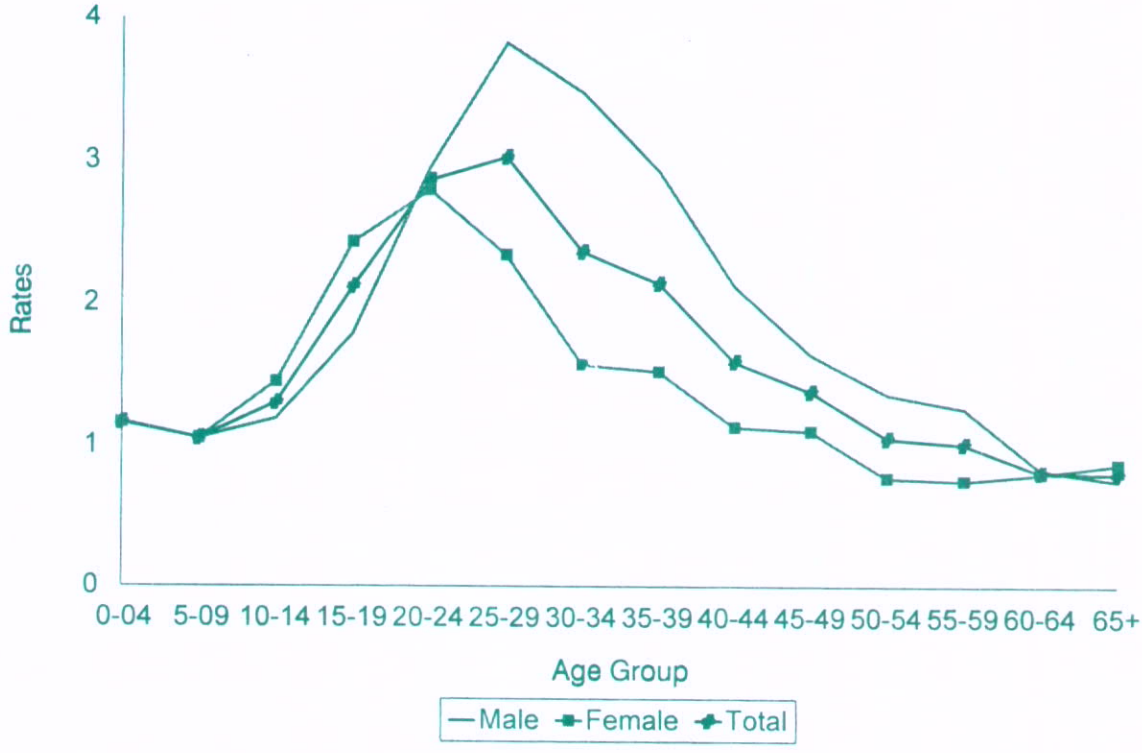
A Look at the distribution of the age-sex specific rates of in-migration by age group revealed that the propensity to migrate varies with age. Table 5.1.18 and Figure 5.1.10 present the age-sex specific annual in-migratin rates. The highest average rate of in-migration (3.0 percent) was observed at the age group 25-29 years and this was followed by age group 20-24 (2.9 percent) and 30-34 years (2.4 percent).

A significant variation in the average rate of in-migration by age was observed between the sexes. Males had the highest average rate of in-migration (3.8 percent) at the age groups 25-29 years and the lowest average rate of 0.8 percent at the age group 60-65 years and over. Females, on the other hand, had the highest average rate of 2.8 percent at the age group 20-24 years and the lowest average rate of 0.8 percent at the age group 50-59 years. Figure 5.1.10 depicts that the highest average rate of in-migration was at the age group 25-29 years for males and both sexes and 20-24 years for females and the lowest rate was at the age group 50-64 years for females and 65 years and over for males and both sexes.

Table 5.1.18 Age-sex Specific Average Annual In-migration Rate by Year of In-migration , Tigray Region : 1994

Age Group	1994-93			1993-92			Average (1994-92)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	0.7	0.7	0.7	2.0	2.1	1.9	1.3	1.4	1.3
0-4	0.9	0.9	1.0	1.4	1.4	1.4	1.2	1.2	1.2
5-9	0.7	0.7	0.7	1.4	1.4	1.4	1.1	1.1	1.1
10-14	0.9	0.9	1.0	1.7	1.5	1.9	1.3	1.2	1.5
15-19	1.7	1.4	1.9	2.6	2.1	3.0	2.1	1.8	2.4
20-24	2.3	2.4	2.1	3.5	3.5	3.5	2.9	3.0	2.8
25-29	2.4	3.1	1.8	3.6	4.6	2.9	3.0	3.8	2.3
30-34	1.8	2.7	1.2	2.9	4.3	2.0	2.4	3.5	1.6
35-39	1.6	2.3	1.1	2.6	3.5	2.0	2.1	2.9	1.5
40-44	1.3	1.7	0.9	1.9	2.6	1.3	1.6	2.1	1.1
45-49	1.1	1.4	0.7	1.7	1.9	1.5	1.4	1.6	1.1
50-54	0.8	1.0	0.6	1.3	1.8	0.9	1.1	1.4	0.8
55-59	0.7	0.8	0.6	1.3	1.7	0.9	1.0	1.3	0.8
60-64	0.7	0.7	0.7	1.0	1.0	1.0	0.8	0.8	0.8
65+	0.7	0.7	0.7	0.9	0.8	1.0	0.8	0.8	0.9

Figure 5.1.10 Average Age-sex Specific In-migration Rates , Tigray Region : 1994



5.2 FERTILITY

This section deals with fertility levels, patterns, trends and differentials for Tigray Region. In the 1994 Population and Housing Census, information was collected on both current and retrospective fertility. The information was collected using long questionnaire from women aged ten years and above residing in 20 percent sample households. The results were weighted to represent the entire population.

Data on current fertility was obtained by asking, "Did you have a live birth during the twelve months prior to the census day?" Information on retrospective fertility was obtained by asking about the total number of children ever born alive classified into number of children living at home, number of children living elsewhere and number who died.

Data on current and retrospective fertility collected in censuses of developing countries are not usually free from errors. Data on total number of children ever born may be distorted due to recall-lapse and socio-cultural factors (because of the extended family system in the country some women may include relatives with their own). Again, some births, especially those that end in early death may be omitted from being reported. These probable errors should be borne in mind while interpreting reported fertility measures presented in this section.
Based on the data collected on the number of births in the year preceding the census, the following fertility measures are computed.

- Crude Birth Rate (CBR): refers to the total number of births occurring in a given year per 1000 mid-year population.
- General Fertility Rate (GFR): is defined as the number of births occurring in a given year per 1000 women in the reproductive ages (i.e. women aged 15-49 years).
- Age Specific Fertility Rate (ASFR): refers to the number of births that occur in a given year per woman; the rates refer to women aged 15-49 years and are presented in five year age groups.
- Total Fertility Rate (TFR): refers to the number of children a woman may produce at the end of her reproductive period given the current age-schedule of fertility rates.

5.2.1 Reported Current Fertility

The 1994 census reported a Total Fertility Rate of 5.4 children per woman; a Crude Birth Rate of 34.1 per 1000 mid-year population; and a General Fertility Rate of 151.4 per 1000 women at child bearing age in Tigray region. The reported TFR value for urban women was 4.2, while for the rural women it was 5.6 children (Table 5.2.1). The pattern of current fertility by age and parity group (number of children ever born group) of women is presented in Table 5.2.2. The table indicates that about half of current births occurred among women who had less than three children, while seven percent of births occurred among women who already had more than eight children.

Table 5.2.1 Births During the Last Twelve Months, Age Specific Fertility Rates and Total Fertility Rates: Tigray Region 1994

Age	Urban + Rural			Urban			Rural		
Group	Women	Birth	ASFR	Women	Birth	ASFR	Women	Birth	ASFR
15-19	183924	13016	.071	31796	1714	.054	152195	11302	.074
20-24	121913	24112	.198	20830	3516	.169	101083	20596	.204
25-29	105607	23116	.219	18770	3426	.183	86837	19690	.227
30-34	95580	20659	.216	15223	2640	.173	80357	18018	.224
35-39	79069	15113	.191	14165	2001	.141	64904	13112	.202
40-44	67929	7536	.111	9997	683	.068	57932	6853	.118
45-49	52409	3385	.065	8136	403	.050	44273	2982	.067
Total	706431	106936		118850	14383		587581	92553	
TFR			5.355			4.190			5.580

5.2.2 Reported Cumulative Fertility

The other fertility index of interest is the mean number of children ever born. In particular, number of children ever born by women aged 45-49 years can be taken as the level of completed fertility. Data in Table 5.2.3 show percentage distribution of women at child bearing age by number of children ever born and urban-rural residence. The data presented in the table indicate that by the end of her reproductive period, a woman living in Tigray has an average completed

Table 5.2.2 Births During the Last Twelve Months By Parity Group of Women, Tigray Region: 1994

Age Group	Total	Parity Group												
		0	1	2	3	4	5	6	7	8	9	10	11+	N/S
Total														
N°. of Women	706431	209319	88675	77166	68486	59882	53754	46213	37369	28147	17360	9908	8640	1512
N°. of births	106936	0	19602	16837	15181	12953	11737	9575	7758	5622	3442	2102	1839	288
15 - 19														
N°. of Women	183924	147991	26700	6616	1542	354	138	0	0	0	0	0	0	583
N°. of births	13016	0	9418	2707	600	145	56	0	0	0	0	0	0	90
20 - 24														
N°. of Women	121913	36502	34313	28653	14164	5124	1884	650	128	45	10	0	0	440
N°. of births	24112	0	7541	8323	5294	1984	669	157	40	15	5	0	0	84
25 - 29														
N°. of Women	105607	11786	14952	22048	24009	17090	9288	3873	1528	570	177	107	55	124
N°. of births	23116	0	1975	4303	5873	5354	3234	1506	543	182	46	46	25	29
30 - 34														
N°. of Women	95580	4880	5699	9580	13353	17206	17023	13087	7506	4133	1716	778	521	98
N°. of births	20658	0	448	1091	2229	3565	4634	3696	2459	1391	589	306	211	39
35 - 39														
N°. of Women	79069	2993	2770	4466	7218	9537	12130	13170	11286	7855	4262	1844	1442	96
N°. of births	15113	0	135	282	773	1330	2295	2815	2839	2251	1250	656	456	31
40 - 44														
N°. of Women	67929	2946	2434	3321	4687	6048	7757	8848	9957	8757	6033	3726	3325	90
N°. of births	7536	0	55	55	220	388	645	1016	1363	1328	1039	716	701	10
45 - 49														
N°. of Women	52409	2221	1807	2482	3513	4523	5534	6585	6964	6787	5162	3453	3297	81
N°. of births	3385	0	30	76	192	187	204	385	514	455	513	378	446	5

. Note:- Women who did not state number of births during the last 12 months are omitted from the table

Table 5.2.3 Percentage Distribution Of Women By Number Of Children Ever Born and Current Age Group, Tigray Region: 1994

Age Group	Children Ever Born													Number Of Women	Mean Parity
	0	1	2	3	4	5	6	7	8	9	10+	N/S	Total		
Total															
15-19	79.1	14.2	3.5	0.8	0.2	0.1	-	-	-	-	-	2.0	100.0	187491	0.3
20-24	29.6	27.7	23.1	11.4	4.1	1.5	0.5	-	-	-	-	2.0	100.0	124209	1.4
25-29	11.1	14.0	20.6	22.5	16.0	8.7	3.6	1.4	0.5	0.2	0.2	1.1	100.0	106860	2.7
30-34	5.1	5.9	9.9	13.9	17.9	17.7	13.6	7.8	4.3	1.8	1.3	0.8	100.0	96353	4.3
35-39	3.8	3.5	5.6	9.1	12.0	15.3	16.6	14.2	9.9	5.4	4.1	0.6	100.0	79546	5.4
40-44	4.4	3.6	4.9	6.9	8.9	11.4	12.9	14.6	12.8	8.8	10.3	0.7	100.0	68241	6.0
45-49	4.2	3.4	4.7	6.7	8.6	10.5	12.5	13.2	12.9	9.8	12.8	0.7	100.0	52759	6.2
Total	29.4	12.4	10.8	9.6	8.4	7.5	6.5	5.2	3.9	2.4	2.6	1.3	100.0	715459	
Urban															
15-19	84.0	12.1	2.2	0.5	-	-	-	-	-	-	-	1.1	100.0	32102	0.2
20-24	37.8	29.6	19.3	7.4	2.6	1.0	0.3	0.0	-	-	-	1.8	100.0	21179	1.1
25-29	17.4	20.7	23.1	18.2	10.6	5.6	2.2	0.7	0.3	0.1	0.1	1.1	100.0	19006	2.2
30-34	8.9	10.6	15.7	16.4	15.8	12.6	9.7	5.2	2.5	1.0	0.7	0.8	100.0	15343	3.5
35-39	5.9	6.2	9.1	12.6	12.9	14.5	13.8	10.7	7.2	3.7	3.0	0.4	100.0	14229	4.7
40-44	9.1	6.6	7.6	9.3	10.2	10.4	12.3	11.2	9.0	6.3	7.5	0.7	100.0	10065	5.1
45-49	7.5	6.0	7.3	7.9	9.3	12.2	12.3	10.6	9.3	7.2	9.5	0.8	100.0	8186	5.4
Total	35.0	14.8	11.9	9.2	7.2	6.1	5.1	3.7	2.6	1.6	1.7	1.0	100.0	120110	
Rural															
15-19	78.1	14.7	3.8	-	-	-	-	-	-	-	-	2.2	100.0	155389	0.3
20-24	27.9	27.3	23.8	12.2	4.4	1.6	0.6	0.1	0.0	-	-	2.0	100.0	103030	1.4
25-29	9.7	12.6	20.1	23.4	17.2	9.4	3.9	1.6	0.6	-	-	1.2	100.0	87854	2.8
30-34	4.4	5.0	8.8	13.4	18.3	18.6	14.3	8.3	4.6	1.9	1.5	0.8	100.0	81010	4.5
35-39	3.3	2.9	4.9	8.3	11.8	15.4	17.2	15.0	10.5	5.7	4.4	0.7	100.0	65317	5.6
40-44	3.5	3.0	4.4	6.4	8.6	11.5	13.1	15.1	13.5	9.3	10.8	0.7	100.0	58176	6.2
45-49	3.6	3.0	4.2	6.5	8.4	10.2	12.5	13.7	13.5	10.3	13.4	0.7	100.0	44573	6.4
Total	28.2	11.9	10.6	9.7	8.6	7.8	6.7	5.5	4.2	2.6	2.8	1.4	100.0	595349	

fertility of 6.2 children, while urban and rural women have 5.4 and 6.4 children, respectively. Therefore, comparison of reported completed fertility and TFR reveals a large difference. The major explanation for the observed variation may be decline in the fertility level.

The table also shows that the proportion of women who have no children is 3.8 percent for those in the age group 35-39, while for those in the age group 40-44 it is 4.4 percent and for those in the age group 45-49 it is 4.2 percent. This indicates that a small proportion of women in Tigray Region remain childless.

Parity progression ratios for women in Tigray Region is presented in Table 5.2.4. Parity progression ratios indicate the probability of a woman progressing from one parity level to the next higher level. The difference in the ratios between the rural and urban areas for older women is smaller compared to differences among younger women. This implies that the difference in fertility experiences between urban and rural areas was getting wider through time.

5.2.3 Age Pattern of Fertility

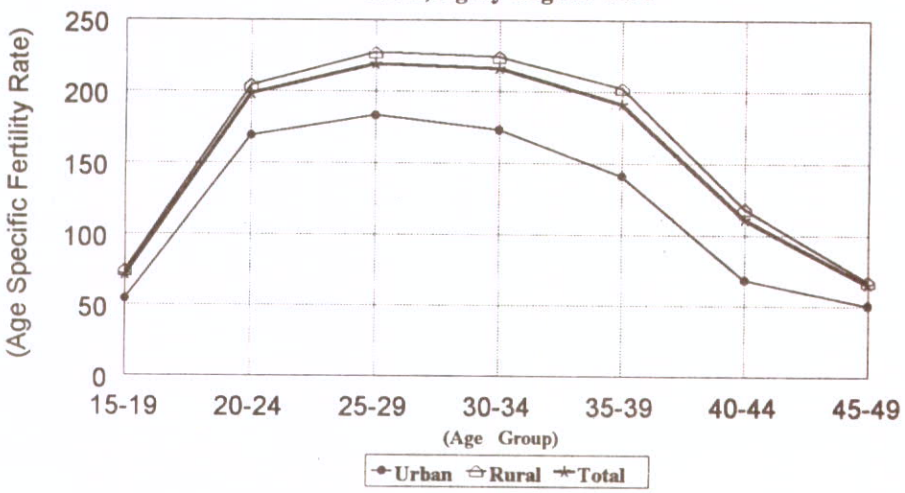
Figure 5.2.1 presents the pattern of fertility for 1994 for total, rural and urban areas of Tigray Region. The structure of fertility is closely dependent on age, nuptality characteristics and practice of contraception. Births are observed to occur in the entire period of reproduction. The fertility rate in the age group 15-19 is very small; but it quickly rises until the 30-34 year and decreases slightly thereafter. The fertility level still remains relatively high even at age group 40-44.

The mean age of fertility schedule was also computed for Tigray Region. The value obtained for the total region was 30.97 and it was 30.47 for urban areas and 31.02 for rural Tigray.

Table 5.2.4 Parity Progression Ratios, Tigray Region: 1994

parity.....	Age Groups						
progressions	45-49	40 - 44	35 - 39	30 - 34	25 - 29	20 - 24	15 - 19
Total							
0 to 1	0.9574	0.9561	0.9619	0.9486	0.8877	0.6984	0.1924
1 to 2	0.9639	0.9626	0.9635	0.9370	0.8402	0.5958	0.2448
2 to 3	0.9486	0.9468	0.9390	0.8872	0.7200	0.4344	0.2352
3 to 4	0.9232	0.9207	0.8949	0.8226	0.5764	0.3563	0.2421
4 to 5	0.8931	0.8888	0.8451	0.7223	0.4772	0.3469	
5 to 6	0.8537	0.8397	0.7665	0.6199	0.4044	0.3078	
6 to 7	0.7960	0.7823	0.6693	0.5279	0.3858	0.2186	
7 to 8	0.7285	0.6871	0.5772	0.4880	0.3735		
8 to 9	0.6376	0.5991	0.4898	0.4221	0.3740		
9 to 10	0.5659	0.5396	0.4352	0.4301	0.4794		
10 to 11	0.4880	0.4716	0.4387	0.4014			
Urban							
0 to 1	0.9239	0.9086	0.9405	0.9104	0.8241	0.6145	0.1505
1 to 2	0.9340	0.9273	0.9342	0.8820	0.7458	0.5090	0.1848
2 to 3	0.9148	0.9095	0.8965	0.8029	0.6199	0.3724	0.2005
3 to 4	0.8991	0.8772	0.8390	0.7436	0.5182	0.3543	0.1638
4 to 5	0.8675	0.8479	0.8047	0.6686	0.4565	0.3462	
5 to 6	0.8011	0.8157	0.7255	0.6032	0.3766	0.3199	
6 to 7	0.7494	0.7336	0.6419	0.4925	0.3448		
7 to 8	0.7103	0.6704	0.5668	0.4493	0.3636		
8 to 9	0.6428	0.6041	0.4819	0.4055	0.3750		
9 to 10	0.5682	0.5438	0.4442	0.4053	0.3333		
10 to 11	0.5109	0.4687	0.3732	0.5421			
Rural							
0 to 1	0.9636	0.9643	0.9666	0.9558	0.9014	0.7157	0.2012
1 to 2	0.9691	0.9683	0.9697	0.9469	0.8589	0.6112	0.2542
2 to 3	0.9543	0.9526	0.9478	0.9014	0.7372	0.4436	0.2392
3 to 4	0.9271	0.9272	0.9058	0.8345	0.5848	0.3565	0.2496
4 to 5	0.8971	0.8946	0.8523	0.7294	0.4798	0.3469	
5 to 6	0.8617	0.8429	0.7735	0.6219	0.4078	0.3064	
6 to 7	0.8026	0.7886	0.6737	0.5321	0.3904	0.1995	
7 to 8	0.7309	0.6892	0.5788	0.4922	0.3744		
8 to 9	0.6370	0.5985	0.4910	0.4238	0.3739		
9 to 10	0.5656	0.5391	0.4338	0.4325	0.4935		
10 to 11	0.4850	0.4719	0.4484	0.3887			

Figure 5.2.1. Reported Age Specific Fertility Rates Per 1000 Women,Tigray Region: 1994



5.2.4 Adjusted Fertility Estimates

Reported levels of current fertility in developing countries suffer from various sources of errors. One of these sources is that women tend to omit some of their children (particularly those who died during infancy) from reporting. Some women also tend to misunderstand the reference period of twelve months and report births that occurred during a lesser period. Because of these reasons and other related problems, it is customary to adjust the reported level of total fertility to a higher level. Many models that adjust a reported level of fertility from developing countries have been developed and some of these methods have been applied to the data from the census.

The reported current fertility levels for the urban and the rural parts of Tigray are adjusted separately. The adjusted rates for the two parts are then averaged (using the number of women in the reproductive ages as weight) to provide the estimate for total Tigray. The procedure selected to adjust the reported current fertility of both urban and rural areas is the fitting of the Brass Relational Gompertz model to the age specific fertility and parity data obtained from the census.

Computer programs have been developed that fit the curve to the information supplied and give adjusted levels of total fertility rates (US Bureau of the census, 1994). The programs also supply graphs which indicate the goodness of the fit of the data to the model. By using these graphs, points that lie on straight lines were selected to improve the quality of the adjusted estimates. The points selected in the case of urban and rural parts of Tigray are those of ages 20-24, 25-29, 30-34 and 35-39. A least square equation was fit for these points and the results (the

slope and the intercept) used in the construction of the adjusted levels of fertility. The model provides adjusted levels of TFR corresponding to all age groups. In the case of urban parts of Tigray, the average of the total fertility rates corresponding to ages 25-29 and 30-34 is taken as the adjusted level of fertility. For the rural part, on the other hand, average of TFR values corresponding to ages 20-24 through 40-44 is taken as the adjusted level of fertility rate. According to this result, the adjusted Total Fertility Rate for urban Tigray is estimated to be 5.38 births per woman, while for rural Tigray it is estimated to be 7.28.

Other adjustment procedures applied to both urban and rural parts of Tigray also provided results that are only marginally larger. For example, the application of the Brass P/F procedure provided adjusted TFR of 5.6 for the urban and 7.7 for the rural areas (using average of ages 25-29 and 30-34). Similarly, application of Arriaga One Date procedure provided a value of 5.6 for urban and 7.6 for rural Tigray

The adjusted level of fertility for the entire Tigray was computed by taking averages of the adjusted levels for the urban and the rural parts. Weights were used while adding the two figures and the weight used was the number of women in the reproductive ages in each part of Tigray. Accordingly, the adjusted level of Total Fertility Rate for total Tigray Region was computed to be 6.95.

The adjusted total fertility rates for each of the zones of Tigray is presented in Table 5.2.5. Zonal fertility levels were adjusted separately for urban, rural and total areas. Adjusted TFR for the urban part of a zone was obtained by multiplying the reported TFR of the zone by a weight. The weight for the urban areas was obtained by dividing the adjusted TFR of urban Tigray by the reported TFR for urban Tigray. Similar procedures were followed to obtain the rural weight for the adjustment of the rural part of each zone. Similarly, the reported and adjusted total fertility rates for the whole region were used to provide adjusted levels for the total areas of each zone. The weights used to adjust TFR values were also applied to reported levels of Crude Birth Rates (CBR) and General Fertility Rates (GFR) to obtain adjusted levels.

TABLE 5.2.5 Adjusted Fertility Measures by Zones: Tigray Region 1994

Zones.....	Urban + Rural			Urban			Rural		
	TFR	CBR	GFR	TFR	CBR	GFR	TFR	CBR	GFR
Total	6.95	44.26	196.49	5.38	39.42	155.37	7.28	45.27	205.48
Mirabawi	6.85	43.61	198.83	5.74	44.17	169.10	7.06	43.71	204.44
Mehakelegnaw	7.11	44.52	198.96	5.93	42.63	171.03	7.28	45.01	203.14
Misrakawi	6.64	40.49	181.05	5.21	38.91	152.93	6.94	40.97	187.35
Debubawi	7.05	46.98	201.82	5.07	36.34	143.81	7.74	50.36	222.71

Information on level of total fertility for various countries was collected in Demographic and Health Surveys (DHS). Summary results from these surveys are published in a series of a journal entitled "Studies in Family Planning" (Population Council, 1990-96). The level of total fertility rates obtained for selected countries is presented in Table 5.2.6. According to the results in the table, the adjusted total fertility rates of Tigray Region are higher than fertility estimates presented for all the countries in the table, except for Niger and Yemen. However, fertility levels reported in Table 5.2.6 are all reported levels, because DHS surveys are conducted under heavy supervision and better organization and no serious errors are expected to occur in the data collected.

5.2.5 Fertility Differentials

The analysis of fertility differentials by selected background variables presented on Table 5.2.7 was based on reported fertility levels. The variables selected are educational attainment, ethnic group, religion, marital status and occupation of women. Also access to safe drinking water and availability of toilet facility in the housing unit were included. According to the data, the illiterate showed the highest level of reported current fertility. Among those who had regular education, the higher the level of schooling of the mother, the lower her level of fertility. The illiterate were observed to have a higher level of fertility compared to the literate. The differential in the level of fertility of women of Tigraway, Amara, Saho, ethnic groups and Eritreans was analyzed. The Eritreans showed the highest level of fertility. The Tigraways showed the next highest and were followed by the Amara. The Saho experienced the lowest level of fertility. Fertility level was compared among all the major religious groups in Tigray Region. Accordingly, the Orthodox Christians showed the highest and were followed by the Muslims. The Catholics showed the least level of fertility

Table 5.2.6 Total Fertility Rates Recorded in Demographic and Health Surveys in Some Selected Countries.

Country	Year	TFR		
		Urban + Rural	Urban	Rural
Kenya	1990-92	5.4	3.4	5.8
Sudan	1990-92	4.5	3.8	5.2
Tanzania	1996	5.8	4.1	6.3
Zambia	1989-92	6.5	5.8	7.1
Zimbabwe	1991-94	4.3	3.1	4.9
Botswana	1985-88	4.9	3.9	5.4
Namibia	1989-92	5.4	4.0	6.3
Mali	1984-86	6.7	6.1	7.0
Niger	1986-92	7.4	6.7	7.5
Senegal	1989-92	6.0	5.1	6.7
Algeria	1986-92	4.2	3.4	5.2
Morocco	1989-92	4.0	2.5	5.5
Yemen	1989-91	7.7	5.6	8.2
Syria	1990-93	4.2	3.6	5.0
Bangladesh	1993-94	3.4	2.7	3.5
Indonesia	1988-91	3.0	3.2	2.6

The currently married women had the highest level of total fertility rate (6.9) compared to women in the remaining marital status groups. Never married women showed a reported total fertility rate of 1.6, indicating the occurrence of some births before marriage. Women who were non-active showed a high level of total fertility rate (5.7) compared to economically active counterparts. Among the women who had occupation, those who held "elementary occupations" indicated the highest fertility, while those in "white collar" occupations showed the lowest level of fertility.

Table 5.2.7 Reported Total Fertility Rates by Background Variables: Tigray Region 1994

Background Variables		TFR
Education	Illiterate	5.5
	Non-regular	4.0
	Primary	4.1
	Junior Secondary	3.9
	Senior Secondary and above	3.3
Ethnic Group	Tigraway	5.4
	Amara	5.0
	Saho	4.5
	Eritreans	6.6
Religion	Orthodox	5.4
	Catholic	2.8
	Muslim	5.1
Marital Status	Never married	1.6
	Currently married	6.9
	Divorced	3.1
	Widowed	2.4
Activity Status	Active	5.3
	Non Active	5.7
Occupation	White collar*	2.6
	Blue Collar**	3.6
	Elementary Occupations***	5.5
All Women		5.4

* White-collar occupations- Include, 1/Legislators, senior officials and managers; 2/Professionals; 3/Technicians and associate professionals; 4/Clerks

** Blue-collar occupation- Include, 1/ Service workers and shop and market sales workers; 2/ Crafts and related trade workers; 3/ Plant and machine operators and assemblers

***Elementary occupations- Include, 1/Skilled agricultural and fishery workers; 2/ Elementary occupations.

5.3 MORTALITY

This section deals with mortality levels, trends and differentials for Tigray Region. Regarding mortality only one type of information was collected in the 1994 Population and Housing Census. To get the data, all women aged 10 years and above (who were interviewed using the long questionnaire) were asked the total number of sons and daughters they ever gave birth to, and the total number of those who died. This information was then weighted and utilized to provide indirect estimates of mortality. Consequently, expectations of life at birth (e_0); infant mortality rates ($_1q_o$); child mortality rates($_4q_1$); and under-five mortality rates ($_5q_0$) were derived and shown in Table 5.3.2.

The rates of mortality presented in this section are defined as follows:

- Infant mortality($_1q_o$) : the probability of dying between birth and the first birthday per 1000 live birth.
- Child mortality($_4q_1$) : the probability of dying between exact age one and the fifth birthday per 1000 children surviving to the first birthday.
- Under-five mortality($_5 q_0$) : the probability of dying between birth and the fifth birthday per 1000 live birth.
- Expectation of life at birth(e_o) : the average number of years a new born baby is expected to live if he/she is exposed throughout its life to the prevailing pattern of age specific death rates.

These results have already been presented in the Statistical Report for Tigray Region (CSA, 1995). The current report however, presents more detailed and in-depth analysis of the mortality levels. It also presents the trend in mortality. To identify the mortality conditions of particular sections of the population, differentials by background variables are presented. Finally, abridged life tables for males and females are constructed.

5.3.1 Estimation of Infant and Child Mortality

In this section, indirect techniques developed by Brass and later modified by Sullivan and Trussell (UN 1983) have been used to estimate mortality from responses to questions on number of children ever born and surviving. These techniques convert the proportion dead among children ever born into probabilities of dying. Infant mortality rates, expectations of life at birth and child mortality rates were computed using a computer program, developed by the United Nations, called MORTPAK-LITE (UN, 1988). Under-five mortality rates were computed using a program called QFIVE, also developed by the UN. The reliability of indirect estimates based on information on children ever born and surviving highly depend on the quality of reporting of children ever born, children dead and age of women. In Tigray Region, the proportion of women who did not report their parity and number of surviving children were found to be 1.3 percent. These cases were totally discarded from the analysis.

The number of children ever born and the number surviving for Tigray Region is presented in Table 5.3.1. Detailed tables by sex, rural and urban areas for each of the zones is presented in the Statistical Report for Tigray Region (CSA, 1995). According to the results in the table, the mean number of children ever born shows a clear increase with age, while the proportion surviving shows a decline. As a proxy measure of sex ratio at birth by age of mother, children ever born by age of women used to calculate sex ratio for the region, rural and urban areas. Results show that sex ratio was 1.03 for urban areas, 1.07 for rural areas and 1.08 for the whole region. This indicates that the quality of the data collected in the region is reasonably good.

Estimated expectations of life at birth, infant mortality rates, child mortality rates, and under-five mortality rates are obtained according to the Trussell equations of the West Model mortality pattern of the Coale and Demeny Model Life Tables and the results are presented in Table 5.3.2 for Tigray as a whole and its zonal, rural and urban sub-divisions, by sex. The selection of the West Model pattern for the region was based on the data obtained from 1984 census, the 1990 National Family and Fertility Survey(NFFS), and the 1994 census of Ethiopia. The technique is applied to observe the difference in the estimated expectation of life implied by exact ages 2, 3 and 5. This is performed for each of the four families of the Coale and Demeny Model Life Tables. Then the family that gives the smallest difference is considered as the appropriate model that describes the

mortality pattern of the population for ages under 5. Accordingly, the 1984 census indicated the West family as the best fit, while NFFS show both South and West family as appropriate patterns of mortality for Ethiopia. The results of the 1994 census also indicated that the North Model followed by the West best fit the mortality pattern of the country. From these observations, it is evident that the West family describes the Ethiopian mortality pattern better. In addition, the West Model is often recommended as a first choice if little is known about the mortality pattern of the population under study (UN 1983). Hence, the West Model Trussell estimates are taken to reflect the final estimates of mortality for the region.

Table 5.3.1 Women Aged 15-49 by Number of Children Ever Born and Number of Children Surviving, Tigray Region: 1994

Age Group.	Women	Children Ever Born	Children Surviving	Mean Ever Born	Mean Surviving	Proportion Surviving
15-19	183,728	46,679	40,905	0.25	0.22	0.88
20-24	121,728	169,358	146,020	1.39	1.20	0.86
25-29	105,629	287,868	239,465	2.73	2.27	0.83
30-34	95,562	412,514	331,257	4.32	3.47	0.80
35-39	79,033	426,845	336,591	5.40	4.26	0.79
40-44	67,898	409,674	308,113	6.03	4.54	0.75
45-49	52,368	325,331	239,749	6.21	4.58	0.74

The estimated expectations of life at birth for Tigray Region are 48 years for males, 51 years for females and 50 years for both sexes. The infant mortality rates are 134 per thousand for males, 111 per thousand for females and 123 per thousand for both sexes. Child mortality rates are 67 for males, 65 for females and 66 for both sexes. Under-five mortality rates are also computed to be 192 per thousand for males, 169 per thousand for females and 181 per thousand for both sexes.

Zonal variations are also observed in expectations of life at birth. Among all zones males and females of Misrakawi Zone enjoy a longer life while those residing in Debubawi Zone exhibit the lowest expectation of life at birth. Moreover, the four types of mortality measures observed for Tigray Region follow the same pattern for both sexes of all Zones. In general, with the exception of Mirabawi Zone and females of Misrakawi Zone, the rural part of Tigray is observed to suffer from only a slightly higher level of mortality

compared to the urban part. The data also show that males have higher mortality compared to females.

Table 5.3.2 Estimated Expectation of Life at Birth, Infant Mortality Rates, Child and Under-five Mortality Rates by Zones, Rural and Urban Areas: Tigray Region 1994

Zone	Sex	Urban + Rural				Urban				Rural			
		$_1q_0$	$_4q_1$	$_5q_0$	e_0	$_1q_0$	$_4q_1$	$_5q_0$	e_0	$_1q_0$	$_4q_1$	$_5q_0$	e_0
Total	Total	123	66	181	49.6	121	65	178	49.9	123	67	182	49.5
	M	134	67	192	48.2	134	67	192	48.2	134	67	192	48.1
	F	111	65	169	51.1	108	62	164	51.6	112	66	170	51.0
Mirabawi	Total	120	64	177	50.1	147	85	219	45.5	117	61	171	50.7
	M	130	64	186	48.9	157	84	228	44.5	127	62	181	49.5
	F	110	64	167	51.4	136	86	210	46.6	106	61	161	52.0
Mehake-legnaw	Total	123	66	181	49.6	112	58	164	51.6	124	67	182	49.4
	M	135	68	194	48.0	129	63	184	49.1	135	68	195	47.9
	F	110	64	167	51.3	96	52	143	54.2	112	65	170	51.0
Misrakaw	Total	112	58	163	51.6	114	59	166	51.3	112	57	163	51.7
	M	122	58	173	50.4	129	63	184	49.2	120	57	171	50.6
	F	102	57	153	52.9	99	54	148	53.5	103	58	155	52.8
Debubawi	Total	132	74	196	47.9	116	61	170	50.9	136	77	202	47.2
	M	145	75	209	46.3	127	62	181	49.5	149	78	216	45.7
	F	119	72	183	49.5	105	59	158	52.3	122	75	188	49.0

$_1q_0$ = Infant Mortality

$_4q_1$ = Child Mortality

$_5q_0$ = Under-five Mortality

e_0 = Expectation of life at birth

5.3.2 Trends in Mortality

Indirect estimates based on children ever born and surviving provide a trend in mortality. As can be seen from Table 5.3.3, a general decline in mortality during the eighties and early nineties is observed. The result for the latest period (1993) that was derived from the information of women of ages 15-19 may be considered to suffer from small number of children ever born and thereby giving a less reliable estimate. The estimated level for 1979 which was obtained from women currently aged 45-49 may suffer from memory lapse (particularly of dead children), and therefore, may be considered to be less accurate.

Table 5.3.3 Trends in Expectation of Life at Birth: Tigray Region 1994 .

Age group of women	Reference date	e_0
15-19	Sep 1993	49.0
20-24	Apr 1992	51.1
25-29	Apr 1990	49.7
30-34	Nov 1987	48.0
35-39	Apr 1985	47.9
40-45	Jul 1982	45.8
45-49	Aug 1979	46.4

5.3.3 Mortality Differentials

Differentials in the level of mortality were examined for selected background variables (Table 5.3.4). These variables are educational attainment, ethnic group, religion, marital status, and occupation of the mothers and access to safe drinking water and the availability of toilet facilities in the housing unit. Values of infant mortality rates and expectations of life at birth are utilized to explore these differentials. According to these results, infant mortality rate was observed to decrease as the level of education of the mother increased, except for children of the illiterate women who reported better conditions compared to mothers who had Non-regular education. Five major ethnic groups namely, Tigraway, Amara, Saho and the Eritreans were selected because of their population size for the investigation of differentials in mortality. The Saho reported the lowest infant mortality rates while the Amaras reported the highest. Similarly, Catholics showed the lowest infant mortality rate, while the Muslims showed the highest.

Among the different marital status categories of mothers, children of currently married women had the lowest infant mortality rate. Children of divorced and never married women showed a high infant mortality rate, signifying the importance of stable marriages towards the health of children. The low IMR observed for women of elementary occupation compared to blue-collar seems unlikely. Of course, this might be an indication of the continuous and close motherly care given by house wife mothers to their children. The children of women in white collar occupations however showed the lowest level of infant mortality compared to the rest.

Table 5.3.4 Infant Mortality Rates (per thousand) and Expectations of Life a Birth by Background Variables: Tigray Region 1994

Background Variables		$_1q_0$	e_0
Education	Illiterate	125	49.4
	Non-regular	131	48.3
	Primary	115	51.2
	Junior Secondary	86	56.8
	Senior Secondary and above	63	61.7
Ethnic Group	Tigraway	123	49.7
	Amara	149	45.3
	Saho	75	59.1
	Eritreans	131	48.3
Religion	Orthodox	123	49.7
	Catholic	66	61.0
	Muslim	144	46.0
Marital Status	Never married	143	46.3
	Currently married	117	50.8
	Divorced	142	46.5
	Widowed	124	49.6
Activity Status	Active	124	49.5
	Non active	123	49.6
Occupation	White collar*	62	61.9
	Blue Collar**	146	45.7
	Elementary occupations***	123	49.7
Access to Safe Drinking Water	Yes	119	50.4
	No	124	49.4
Availability of Toilet Facility	Yes	116	51.0
	No	125	49.5
All women		123	49.4

*- White-collar occupations- Include, 1/Legislators, senior officials and managers; 2/Professionals; 3/Technicians and associate professionals; 4/Clerks;

**- Blue-collar occupation -Include, 1/Service workers and shop and market sales workers; 2/ Crafts and related trade workers; 3/ Plant and machine operators and assemblers;

***- Agricultural and Elementary occupations- Include, 1/Skilled agricultural and fishery workers; 2/ Elementary occupations.

Availability of drinking water is considered to be one of the items necessary for the good health of infants. Thus, infant mortality levels have been computed separately for those who have access to safe drinking water and those who do not. Those who use piped water or protected well/spring are considered to have access to safe drinking water. Those who use unprotected well/spring, river, lake, pond, etc. are considered not to have access to safe drinking water. According to this classification the infant mortality rate for those who have access to safe drinking water was observed to be slightly lower, compared to those who do not.

Expectation of life at birth that correspond to the infant mortality rates are also presented in Table 5.3.4. In general, it can be concluded that better education, being married, having better paid job(white-collar group) and having access to safe drinking water and toilet facilities guarantee longer life. However the result obtained for comparison of those in elementary occupation to blue-collar was not in conformity to the usual expectation. This may be considered more of an exception or it might be the effect of hard labour work blue-collar women are engaged in. Among the ethnic and religious groups mentioned, higher expectation of life at birth was observed for ethnic Sahos' and followers of catholic religion.

Good sanitation is also one of the variables that determine the health of children. Therefore, the level of infant mortality for those who live in housing units that have flush or pit toilets compared to those who live in housing units that have no toilets was computed. It was observed that those who have toilet facilities had a slightly lower infant mortality rate compared to those who do not.

Levels of infant mortality rates recorded for selected countries is presented in Table 5.3.5. The source of the information is the results of the Demographic and Health Surveys (DHS) conducted in these countries. Summary information from these surveys is published in a series of a journal entitled "Studies in Family Planning" (Population Council, 1990-1996) from which Table 5.3.5 is constructed. According to the results in the table, compared to these countries the region has higher infant mortality rates excepting Niger.

Table 5.3.5 Infant Mortality Rates Recorded in Demographic and Health Surveys in Some Selected Countries.

Country	Year	Infant Mortality Rate		
		Urban + Rural	Urban	Rural
Kenya	1982-92	63	46	65
Sudan	1983-92	77	75	78
Tanzania	1996	95	83	97
Zambia	1982-92	98	78	116
Zimbabwe	1984-94	51	44	54
Namibia	1982-92	62	63	61
Ghana	1984-93	75	55	82
Niger	1982-92	135	89	143
Senegal	1982-92	76	55	87
Cameroon	1981-91	81	72	86
Algeria	1982-92	54	41	64
Bangladesh	1983-93	101	81	103

5.3.4 Life Tables

To generate the life tables presented in Table 5.3.6 below, estimated expectations of life at birth were used as input values in UN MORTPAK Computer program MATCH procedure (UN, 1988). The life table columns presented are defined as follows:

Age:- The initial age of the age interval (x, x+n), where x is the initial age and n is the length of the interval. The interval n equals 5 years with the exception of the first interval (1 year), second interval (4 years) and last interval (open ended);

$_nm_x$:- Central death rate for the age interval (x, x+n);

$_nq_x$:- Probability of an individual at age x dying before the end of the age interval (x, x+n);

l_x :- Number of survivors to exact age x in a life table with radix of 100,000;

$_nd_x$:- Number of deaths in age interval (x, x+n);

$_nL_x$:- Number of person-years lived in age interval (x, x+n);

T_x :- Number of person-years lived at ages x and older ;

e_x :- Expectation of life at age x.

Table 5.3.6 Estimated Abridged Life Table: Tigray Region 1994

MALES.....

AGE	$_nm_x$	$_nq_x$	l_x	$_nd_x$	$_nL_x$	T_x	e_x
0	.14625	0.13320	100000	13320	91076	4819982	48.2
1	.01733	0.06626	86680	5744	331512	4728906	54.6
5	.00394	0.01953	80937	1581	400732	4397394	54.3
10	.00286	0.01419	79356	1126	393964	3996662	50.4
15	.00424	0.02097	78230	1641	387289	3602697	46.1
20	.00605	0.02981	76589	2283	377422	3215409	42.0
25	.00664	0.03264	74306	2426	365548	2837987	38.2
30	.00761	0.03734	71880	2684	352827	2472439	34.4
35	.00910	0.04451	69197	3080	338482	2119612	30.6
40	.01135	0.05523	66117	3652	321710	1781130	26.9
45	.01425	0.06886	62465	4301	301917	1459420	23.4
50	.01921	0.09179	58164	5339	277924	1157504	19.9
55	.02593	0.12200	52825	6444	248560	879579	16.7
60	.03742	0.17152	46380	7955	212601	631019	13.6
65	.05368	0.23716	38425	9113	169757	418418	10.9
70	.07953	0.33177	29312	9725	122280	248661	8.5
75	.12072	0.46015	19587	9013	74659	126381	6.5
80	.20445	.....	10574	10574	51722	51722	4.9

FEMALES.....

AGE	$_nm_x$	$_nq_x$	l_x	$_nd_x$	$_nL_x$	T_x	e_x
0	.12318	0.11404	100000	11404	92587	5100003	51.0
1	.01754	0.06704	88596	5939	338708	5007416	56.5
5	.00411	0.02034	82656	1681	409077	4668708	56.5
10	.00316	0.01567	80975	1269	401702	4259631	52.6
15	.00441	0.02183	79706	1740	394375	3857929	48.4
20	.00566	0.02790	77966	2175	384537	3463554	44.4
25	.00642	0.03160	75791	2395	373062	3079017	40.6
30	.00730	0.03585	73396	2631	360496	2705955	36.9
35	.00821	0.04023	70765	2847	346797	2345459	33.1
40	.00923	0.04512	67918	3065	332042	1998662	29.4
45	.01076	0.05244	64853	3401	316007	1666619	25.7
50	.01447	0.06994	61452	4298	296921	1350613	22.0
55	.01953	0.09329	57154	5332	273011	1053692	18.4
60	.02937	0.13718	51822	7109	242075	780681	15.1
65	.04305	0.19495	44714	8717	202495	538605	12.0
70	.06713	0.28816	35996	10373	154510	336111	9.3
75	.10420	0.41221	25624	10562	101364	181601	7.1
80	.18771		15061	15061	80237	80237	5.3

CHAPTER VI
HOUSING CHARACTERISTICS AND CONDITIONS

6.1 Introduction

The 1994 Population and Housing Census questionnare included different set of question on housing for urban and rural parts of Tigray Region. Thus information on housing characteristics and conditions were collected for residential and partly residential housing units on 20 percent sample bases.

In urban areas, information on housing facilities and amenities such as bathing, toilet, types of a kitchen, source of water supply, source of power for lighting, types of fuel used for cooking and availability of radio, television and telephone sets were collected during the census. Information on the status of tenure and monthly rent of housing units was also collected for urban areas. On the other hand, in rural areas, information on types of fuel used for cooking, availability of toilet, source of water supply and information on whether there was a separate room in the housing unit used mainly as a kitchen was collected.

This chapter presents statistical data on housing with analysis on housing characterstics and conditions in Tigray region. Thus, in the presentation of the results, some tables refer to urban areas only, a few tables refer to rural areas only, while others refer to both urban and rural areas. The data on housing units of Tigray region consists of summary tables and analysis of data by zones are dealt in this chapter and are presented in six sections.

6.2 Housing Units by Type of Building

During the census, buildings in which housing units are located were identified as either non-storied or multi-storied and each type of building was further classified into detached or attached; and if attached number of units in it was also recorded.

A housing unit is defined as a separate and independent place of abode either intended for habitation or not intended for habitation but was occupied as a living quarter by a household during the census. Although intended for habitation by one household, a housing unit may, at the time of census be occupied by one or more households or may be used partly for living and partly for establishment.

The distribution of housing units by type of building is shown in Table 6.1. A building is an independent free-standing structure comprising one or more room or other spaces covered by a

roof and usually enclosed by external walls or dividing walls that are extended from the foundation to the roof. A building maybe used or intended for residential and establishment, or establishment only. And buildings may contain several sets of living quarters as in apartment building or may constitute one set of living quarter.

The data on housing shows that a total of 115,421 housing units were found in the urban areas, out of which 111,469 (96.6 percent) were found in non-storied buildings and 3220 (2.8 percent) in multi-storied buildings. Further, it can be observed that in non-storied buildings, 67,104 (58.1 percent) of the housing units were found detached and 44,365 (38.4 percent) were attached buildings. Of the total housing units 23.0 percent were two units attached, 11.5 percent were 3-5 units attached, and 3.9 percent were six or more units attached buildings. On the other hand 1.4 percent of the housing units in storied buildings were found to be detached and 1.3 percent were attached buildings. The data in the table indicates that housing units in storied buildings were found to be very few compared with housing units in non-storied buildings.

The table also presents data on type of building by zone, and high proportion of non-storied housing units were observed in all zones. However, Mirabawi Zone had the highest proportion (98.7 percent) of housing units in non-storied buildings, and lowest proportion (93.3 percent) was observed in Mehakelegnaw Zone.

6.3 Structural Type of Housing Unit

Information on type of housing units based on the nature of construction is presented in Table 6.2. The type of housing units were grouped according to whether the housing units were permanent or improvised or mobile or any other. These terms were defined in the census as follows:

Permanent housing unit is a structure that may be expected to maintain its stability for ten years or more and have been constructed with materials such as cement, blockets and bricks or any other building materials.

Improvised housing unit is an independent makeshift shelter or structure built of waste materials and being utilized as living quarter at the time of the census.

Mobile housing unit is any type of living accommodation which has been made to be transported and occupied as living quarter at the time of census.

Table 6.1 Distribution of Housing Units by Type of Building and Zones, Urban Tigray :1994

TYPE OF BUILDING	Tigray Region		ZONES							
			Mirabawi		Mehakelegnaw		Misrakawi		Debubawi	
	No.	%	No.	%	No.	%	No.	%	No.	%
Non Storied	111,469	96.6	21,451	98.7	22,287	93.3	19,995	96.3	47,736	97.4
Detached	67,104	58.1	14,377	66.1	13,944	58.4	11,639	56.0	27,144	55.4
Attached	44,365	38.4	7,074	32.5	8,343	34.9	8,356	40.2	20,592	42.0
2 Units Attached	26,532	23.0	4,283	19.7	5,291	22.2	4,733	22.8	12,225	24.9
3-5 Units Attached	13,274	11.5	1,699	7.8	2,449	10.3	2,759	13.3	6,367	13.0
6 or more Units Attached	4,559	4.0	1,092	5.0	603	2.5	864	4.2	2,000	4.1
Multi -Storied	3,220	2.8	109	0.5	1,464	6.1	665	3.2	982	2.0
Detached	1,666	1.4	33	0.2	891	3.7	245	1.2	497	1.0
Attached	1,554	1.4	76	0.4	573	2.4	420	2.0	485	1.0
2-3 Units Attached	1,051	0.9	32	0.2	451	1.9	245	1.2	323	0.7
4-6 Units Attached	352	0.3	29	0.1	80	0.3	116	0.6	127	0.3
7-10 Units Attached	97	0.1	15	0.1	24	0.1	40	0.2	18	-
11 or more Units Attache	54	0.1	-	-	18	0.1	19	0.1	17	-
Not Stated	732	0.6	181	0.8	139	0.6	111	0.5	301	0.6
All Housing Units	115,421	100.0	21,741	100.0	23,890	100.0	20,771	100	49,019	100.0

Table 6.2 Distribution of Housing Units by Type of Housing Units and Zones, Tigray Region: 1994

URBAN/RURAL		All Housing Units	TYPE OF HOUSING UNITS				
			Permanent	Improvised	Mobile	Others	Not Stated
			TIGRAY REGION				
Urban + Rural	No.	686,876	663,911	18,733	438	634	3,160
	%	100.0	96.7	2.7	0.1	0.1	0.5
Urban	No.	115,421	110,001	4,415	193	71	741
	%	100.0	95.3	3.8	0.2	0.1	0.6
Rural	No.	571,455	553,910	14,318	245	563	2,419
	%	100.0	96.9	2.5	-	0.1	0.4
			MIRABAWI				
Urban + Rural	No.	158,010	152,351	4,666	102	120	771
	%	100.0	96.4	3.0	0.1	0.1	0.5
Urban	No.	21,741	20,806	731	15	18	171
	%	100.0	95.7	3.4	0.1	0.1	0.8
Rural	No.	136,269	131,545	3,935	87	102	600
	%	100.0	96.5	2.9	0.1	0.1	0.4
			MEHAKELEGNAW				
Urban + Rural	No.	204,469	198,838	4,097	147	317	1,070
	%	100.0	97.3	2.0	0.1	0.2	0.5
Urban	No.	23,890	22,692	910	77	14	197
	%	100.0	95.0	3.8	0.3	0.1	0.8
Rural	No.	180,579	176,146	3,187	70	303	873
	%	100.0	97.6	1.8	-	0.2	0.5
			MISRAKAWI				
Urban + Rural	No.	124,179	120,793	2.737	39	74	536
	%	100.0	97.3	2.2	-	0.1	0.4
Urban	No.	20,771	19,657	957	5	5	147
	%	100.0	94.6	4.6	-	-	0.7
Rural	No.	103,408	101,136	1,780	34	69	389
	%	100.0	97.8	1.7	-	0.1	0.4
			DEBUBAWI				
Urban + Rural	No.	200,218	191,929	7,233	150	123	783
	%	100.0	95.9	3.6	0.1	0.1	0.4
Urban	No.	49,019	46,846	1,817	96	34	226
	%	100.0	95.6	3.7	0.2	0.1	0.5
Rural	No.	151,199	145,083	5,416	54	89	557
	%	100	95.95	3.58	-	0.06	0.37

It can be observed from the table that large proportion of the housing units (96.7 percent) were permanent. The corresponding figures in rural and urban areas were 96.9 and 95.3 percent, respectively. The data reveals that improvised and mobile housing units constituted 2.7 and 0.1 percent, respectively. The corresponding figures for the urban areas were 3.8 and 0.2 percent respectively. Improvised housing units in the rural areas were 2.5 percent, whereas mobile housing units for the rural areas were almost non-existent. The pattern of structural type of housing units observed for the urban areas as a whole also holds true for all zones in Tigray region.

6.4 Quality of Housing Units

The absolute size of a housing unit provides only a crude measure of the extent of shelter in a community. However, it tells nothing about the quality of a housing unit. The quality of a residential housing unit is necessary to appreciate the extent to which the existing housing conditions are regarded as socially desirable in terms of structural quality, rates of occupancy, and other amenities of life. Besides this, knowledge about the materials used for the construction of walls, roofs and floors may be of special significance for the assessment of durability of the housing unit, demand for construction materials,...etc.

The predominant type of material used for the construction of buildings have important implications for setting up housing standards and the development of appropriate housing construction technology. Here, we will discuss qualitative aspects of the housing units in the following areas: Structure, number of rooms, and density of occupation.

6.4.1 Structure

a) Construction Materials of Wall

The distribution of housing units by type of materials used for the construction of wall is shown in Table 6.3. If the walls are constructed from different types of construction materials,the predominant one was reported in the census.

It can be observed from the table that the majority of the housing units in Tigray region are permanent type in their structure, i.e their walls are mostly made of stone and mud (71.5 percent) and wood and mud (20.2 percent). In urban and rural areas of Tigray Region housing units made of stone and mud walls constituted 47.9 percent and 76.3 percent, respectively. Housing units made of wood and mud walls for urban and rural areas constituted 39.9 and 16.2 percent, respectively. Housing units with stone and cement walls accounted for only 1.3 percent.

lantern,..etc. This information could provides planners with useful indication of areas where lighting services are deficent and needs to be extended. The data on type of lighting were collected in urban areas of the region. Table 6.14 summarizes data on type of lighting used in the living quarters. As can be seen from the table 48.4 percent of the housing units in the urban areas used electricity. Out of which 35.3 percent of housing units had shared electric meter reader and 13.1 percent had private electric meter reader. Nearly 44.1 percent of the housing units used kerosine lamp while 6.9 percent used lantern and other source of lighting.

The proportion of housing units that used electrcitiy for lighting varied from 58.4 percent in Debubawi Zone to 25.8 percent in Mirabawi Zone, while those who used kerosene lamp varied from 68.0 percent in Mirabawi Zone to 33.7 percent in Debubawi Zone. The use of lantern and other types of lighting varied from highest 9.0 percent in Misrakawi Zone, to lowest 5.1 percent in Mehakelegnaw Zone.

Table 6.14 Distribution of Housing Units by Type of Lighting and Zones, Urban Tigray :1994

ZONES		All Housing Units	TYPE OF LIGHTING					
			Electricity Meter Private	Electricity Meter Shared	Lantern	Kerosine Lamp	Others	Not Stated
TIGRAY REGION	No.	115,421	15,150	40,770	5,299	50,942	2,691	569
	%	100.0	13.1	35.3	4.6	44.1	2.3	0.5
MIRABAWI	No.	21,741	1,717	3,866	1,038	14,794	206	120
	%	100.0	7.9	17.8	4.8	68.1	1.0	0.6
MEHAKELEGNAW	No.	23,890	3,905	7,684	830	10,985	390	96
	%	100.0	16.4	32.2	3.5	46.0	1.6	0.4
MISRAKAWI	No.	20,771	2,937	7,170	1,723	8,662	150	129
	%	100.0	14.1	34.5	8.3	41.7	0.7	0.6
DEBUBAWI	No.	49,019	6,591	22,050	1,708	16,501	1,945	224
	%	100.0	13.5	45.0	3.5	4.0	4.0	0.5

6.5.4 Type of Kitchen

A kitchen is defined as a room primarily used for cooking meals, but due to lack of adequate rooms or space in the housing unit, some persons and/or some livestock may also spend the night in the kitchen. Information was obtained from the census on whether the housing units have a kitchen; whether the kitchen is modern or traditional, or whether it is shared or privately used. Table 6.15 shows that a sligtly over half (52.6 percent) of the housing units in urban areas had traditional type of kitchen,of which 26.8 percent were private and 25.8 percent were shared. A traditional type of kitchen is a room used mainly for cooking using firewood, charcoal, cotton seeds, sawdust, leaves or barks as fuel, with simple or no stoves and has no piped water or sink. On the other hand, 42.3 percent of the housing units had no kitchen facility.

Among the zones, the traditional type of kitchen is found to be highest in Misrakawi Zone (63.4 percent), while this was found to be lowest (31.8 percent) in Mirabawi Zone. In addition to this nearly 60.0 percent of the housing units of Mirabawi Zone had no independent kitchen facilities.

In Urban areas of Tigray region housing units that had modern kitchen constituted about 4.3 percent. A modern kitchen is a room used for cooking which uses electricity, gas, kerosene, firewood or charcoal as fuel with appropriate stove and had piped water and sink. The proportion of housing units with modern kitchen varied from 3.2 percent in Mehakelegnaw Zone to 6.8 percent in Mirabawi Zone.

The distribution of housing units in rural areas of Tigray by availability of kitchen facilities is given in Table 6.16. The data reveal that 43.0 percent of housing units had separate room for kitchen; about 45.0 percent use the same room for cooking which is also used by household members for sleeping at night; while 2.2 percent use the same room for cooking where livestock also spend the night. About 10.0 percent of the housing units did not have any kitchen.

The proportion of housing units with separate room for kitchen varied from highest 61.2 percent in Misrakawi Zone to lowest 24.0 percent in Mirabawi Zone. Among the zones, 17.5 percent of the housing units in Debubawi Zone did not have kitchen .

6.5.5 Type of Fuel Used for Cooking

The collection of data on the availability of kitchen may provide a convenient opportunity to gather information on the kind of fuel used for cooking. The availability of kitchen and type

Under the medium variant, the crude birth rate will decrease from 44.7 per thousand between 1995-2000 to 37.5 per thousand during the period 2005-2010, and 25.2 per thousand during the period 2025-2030. The crude death rate is also expected to decrease from 16.2 deaths per thousand to 6.6 deaths per thousand within the projection period. These tendencies are in conformity with the assumption of decreasing fertility and mortality over the entire projection period.

7.3.3 Projection of School Age Population

To satisfy the population data demand of Tigray Region in planning future educational services, the projection of the school age population is believed to be fundamental. In view of this fact, the three categories of the different levels of education i.e., primary (7-12 years), junior secondary (13-14 years) and senior secondary (15-18 years) are projected under the three variants. Table 7.8 presents the school age population in single year interval covering the period 1995-2030 (35 years) for the three different scenarios.

Under the medium variant, the elementary level school age population is expected to increase from about half million in 1995 to about 1 million in 2020. On the other hand, the senior secondary level school age population will rise from about 279 thousand in 1995 to about 565 thousand in 2017 and to about 740 thousand in 2030. This indicates that the elementary school age population will almost double in 25 years while that of the senior secondary school level population is expected to double in less than 22 years.

Table 7.3A Projected Total, Urban and Rural Population Size (in thousands) of Tigray Region by Sex in Single Year; Medium Variant: 1995-2030

	URBAN+RURAL			URBAN			RURAL		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	3,203	1,575	1,628	486	222	264	2,717	1,353	1,364
1996	3,299	1,622	1,677	512	241	271	2,787	1,381	1,406
1997	3,396	1,670	1,726	538	258	280	2,858	1,412	1,446
1998	3,494	1,718	1,776	565	274	291	2,929	1,444	1,485
1999	3,593	1,767	1,826	593	290	303	3,000	1,477	1,523
2000	3,694	1,817	1,877	622	306	316	3,072	1,511	1,561
2001	3,797	1,868	1,929	651	321	330	3,146	1,547	1,599
2002	3,901	1,920	1,981	682	337	345	3,219	1,583	1,636
2003	4,006	1,972	2,034	713	352	361	3,293	1,620	1,673
2004	4,113	2,025	2,088	746	368	378	3,367	1,657	1,710
2005	4,223	2,080	2,143	780	384	396	3,443	1,696	1,747
2006	4,335	2,136	2,199	816	402	414	3,519	1,734	1,785
2007	4,449	2,193	2,256	854	421	433	3,595	1,772	1,823
2008	4,565	2,251	2,314	892	440	452	3,673	1,811	1,862
2009	4,683	2,311	2,372	933	460	473	3,750	1,851	1,899
2010	4,802	2,370	2,432	975	481	494	3,827	1,889	1,938
2011	4,923	2,431	2,492	1,019	503	516	3,904	1,928	1,976
2012	5,046	2,493	2,553	1,064	526	538	3,982	1,967	2,015
2013	5,171	2,556	2,615	1,111	549	562	4,060	2,007	2,053
2014	5,296	2,619	2,677	1,159	573	586	4,137	2,046	2,091
2015	5,423	2,683	2,740	1,210	599	611	4,213	2,084	2,129
2016	5,551	2,747	2,804	1,262	625	637	4,289	2,122	2,167
2017	5,681	2,813	2,868	1,316	652	664	4,365	2,161	2,204
2018	5,811	2,879	2,932	1,371	679	692	4,440	2,200	2,240
2019	5,942	2,945	2,997	1,429	708	721	4,513	2,237	2,276
2020	6,073	3,011	3,062	1,488	738	750	4,585	2,273	2,312
2021	6,205	3,078	3,127	1,550	769	781	4,655	2,309	2,346
2022	6,338	3,145	3,193	1,612	800	812	4,726	2,345	2,381
2023	6,472	3,213	3,259	1,678	833	845	4,794	2,380	2,414
2024	6,604	3,280	3,324	1,745	867	878	4,859	2,413	2,446
2025	6,737	3,347	3,390	1,814	901	913	4,923	2,446	2,477
2026	6,869	3,414	3,455	1,885	937	948	4,984	2,477	2,507
2027	7,003	3,482	3,521	1,957	973	984	5,046	2,509	2,537
2028	7,134	3,548	3,586	2,032	1,011	1,021	5,102	2,537	2,565
2029	7,266	3,615	3,651	2,108	1,049	1,059	5,158	2,566	2,592
2030	7,396	3,681	3,715	2,187	1,089	1,098	5,209	2,592	2,617

Table 7.3B Projected Total, Urban and Rural Population Size (in thousands) of Tigray Region by Sex in Single Year; Low Variant: 1995-2030

Year	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	3,203	1,575	1,628	486	222	264	2,717	1,353	1,364
1996	3,303	1,624	1,679	513	241	272	2,790	1,383	1,407
1997	3,400	1,672	1,728	539	258	281	2,861	1,414	1,447
1998	3,492	1,717	1,775	565	274	291	2,927	1,443	1,484
1999	3,585	1,763	1,822	591	289	302	2,994	1,474	1,520
2000	3,676	1,808	1,868	618	304	314	3,058	1,504	1,554
2001	3,766	1,852	1,914	646	319	327	3,120	1,533	1,587
2002	3,854	1,896	1,958	674	333	341	3,180	1,563	1,617
2003	3,943	1,940	2,003	702	346	356	3,241	1,594	1,647
2004	4,031	1,984	2,047	731	360	371	3,300	1,624	1,676
2005	4,123	2,030	2,093	762	375	387	3,361	1,655	1,706
2006	4,218	2,077	2,141	794	391	403	3,424	1,686	1,738
2007	4,315	2,126	2,189	828	408	420	3,487	1,718	1,769
2008	4,413	2,175	2,238	863	425	438	3,550	1,750	1,800
2009	4,513	2,225	2,288	899	443	456	3,614	1,782	1,832
2010	4,614	2,276	2,338	937	462	475	3,677	1,814	1,863
2011	4,716	2,327	2,389	975	481	494	3,741	1,846	1,895
2012	4,818	2,378	2,440	1,015	501	514	3,803	1,877	1,926
2013	4,923	2,431	2,492	1,057	522	535	3,866	1,909	1,957
2014	5,028	2,484	2,544	1,101	544	557	3,927	1,940	1,987
2015	5,135	2,538	2,597	1,145	566	579	3,990	1,972	2,018
2016	5,243	2,592	2,651	1,192	589	603	4,051	2,003	2,048
2017	5,353	2,648	2,705	1,240	613	627	4,113	2,035	2,078
2018	5,463	2,703	2,760	1,289	638	651	4,174	2,065	2,109
2019	5,575	2,760	2,815	1,341	664	677	4,234	2,096	2,138
2020	5,686	2,816	2,870	1,393	690	703	4,293	2,126	2,167
2021	5,797	2,872	2,925	1,447	717	730	4,350	2,155	2,195
2022	5,909	2,929	2,980	1,503	745	758	4,406	2,184	2,222
2023	6,022	2,986	3,036	1,561	774	787	4,461	2,212	2,249
2024	6,134	3,043	3,091	1,621	804	817	4,513	2,239	2,274
2025	6,244	3,099	3,145	1,681	834	847	4,563	2,265	2,298
2026	6,353	3,154	3,199	1,743	865	878	4,610	2,289	2,321
2027	6,462	3,209	3,253	1,806	897	909	4,656	2,312	2,344
2028	6,570	3,264	3,306	1,871	930	941	4,699	2,334	2,365
2029	6,676	3,318	3,358	1,937	963	974	4,739	2,355	2,384
2030	6,778	3,370	3,408	2,004	996	1,008	4,774	2,374	2,400

Table 7.3C Projected Total, Urban and Rural Population Size (in thousands) of Tigray Region by Sex in Single Year; High Variant: 1995-2030

	URBAN+RURAL			URBAN			RURAL		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	3,203	1,575	1,628	486	222	264	2,717	1,353	1,364
1996	3,297	1,621	1,676	511	240	271	2,786	1,381	1,405
1997	3,395	1,669	1,726	538	258	280	2,857	1,411	1,446
1998	3,498	1,720	1,778	565	274	291	2,933	1,446	1,487
1999	3,606	1,773	1,833	595	291	304	3,011	1,482	1,529
2000	3,718	1,829	1,889	626	308	318	3,092	1,521	1,571
2001	3,833	1,886	1,947	658	325	333	3,175	1,561	1,614
2002	3,953	1,946	2,007	691	341	350	3,262	1,605	1,657
2003	4,076	2,007	2,069	726	358	368	3,350	1,649	1,701
2004	4,204	2,071	2,133	762	376	386	3,442	1,695	1,747
2005	4,334	2,136	2,198	801	395	406	3,533	1,741	1,792
2006	4,466	2,202	2,264	841	415	426	3,625	1,787	1,838
2007	4,602	2,270	2,332	883	436	447	3,719	1,834	1,885
2008	4,741	2,340	2,401	926	457	469	3,815	1,883	1,932
2009	4,883	2,411	2,472	972	480	492	3,911	1,931	1,980
2010	5,028	2,484	2,544	1,020	504	516	4,008	1,980	2,028
2011	5,175	2,558	2,617	1,070	529	541	4,105	2,029	2,076
2012	5,326	2,634	2,692	1,122	555	567	4,204	2,079	2,125
2013	5,479	2,711	2,768	1,177	582	595	4,302	2,129	2,173
2014	5,634	2,789	2,845	1,234	611	623	4,400	2,178	2,222
2015	5,793	2,869	2,924	1,292	640	652	4,501	2,229	2,272
2016	5,955	2,951	3,004	1,354	671	683	4,601	2,280	2,321
2017	6,120	3,034	3,086	1,418	703	715	4,702	2,331	2,371
2018	6,288	3,119	3,169	1,484	736	748	4,804	2,383	2,421
2019	6,458	3,205	3,253	1,552	770	782	4,906	2,435	2,471
2020	6,632	3,293	3,339	1,625	807	818	5,007	2,486	2,521
2021	6,809	3,382	3,427	1,701	845	856	5,108	2,537	2,571
2022	6,990	3,474	3,516	1,779	884	895	5,211	2,590	2,621
2023	7,173	3,566	3,607	1,860	925	935	5,313	2,641	2,672
2024	7,360	3,661	3,699	1,944	967	977	5,416	2,694	2,722
2025	7,548	3,756	3,792	2,032	1,011	1,021	5,516	2,745	2,771
2026	7,739	3,853	3,886	2,123	1,057	1,066	5,616	2,796	2,820
2027	7,933	3,951	3,982	2,217	1,104	1,113	5,716	2,847	2,869
2028	8,129	4,050	4,079	2,316	1,154	1,162	5,813	2,896	2,917
2029	8,328	4,151	4,177	2,417	1,205	1,212	5,911	2,946	2,965
2030	8,528	4,252	4,276	2,521	1,257	1,264	6,007	2,995	3,012

Table 7.4A Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 1995

Age	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	537,137	273,763	263,374	69,933	35,812	34,121	467,204	237,951	229,253
5-9	471,395	238,871	232,524	66,805	32,908	33,897	404,590	205,963	198,627
10-14	405,808	203,924	201,884	62,945	29,763	33,182	342,863	174,161	168,702
15-19	340,988	168,698	172,290	55,420	25,408	30,012	285,568	143,290	142,278
20-24	268,973	128,676	140,297	45,118	19,822	25,296	223,855	108,854	115,001
25-29	219,770	102,591	117,179	37,294	16,000	21,294	182,476	86,591	95,885
30-34	174,624	78,760	95,864	29,270	12,379	16,891	145,354	66,381	78,973
35-39	147,937	66,680	81,257	24,183	10,187	13,996	123,754	56,493	67,261
40-44	130,788	61,114	69,674	20,253	8,713	11,540	110,535	52,401	58,134
45-49	114,742	54,756	59,986	17,164	7,336	9,828	97,578	47,420	50,158
50-54	101,475	49,710	51,765	14,584	6,045	8,539	86,891	43,665	43,226
55-59	86,287	42,789	43,498	12,325	5,005	7,320	73,962	37,784	36,178
60-64	70,983	35,227	35,756	10,484	4,103	6,381	60,499	31,124	29,375
65-69	54,541	27,439	27,102	8,125	3,207	4,918	46,416	24,232	22,184
70-74	37,659	19,487	18,172	5,621	2,328	3,293	32,038	17,159	14,879
75-79	20,335	11,370	8,965	2,977	1,469	1,508	17,358	9,901	7,457
80+	19,302	10,998	8,304	3,232	1,465	1,767	16,070	9,533	6,537
Total	3,202,744	1,574,853	1,627,891	485,733	221,950	263,783	2,717,011	1,352,903	1,364,108

Table 7.4B Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 1996

Age	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	562,285	285,320	276,965	75,119	39,531	35,588	487,166	245,789	241,377
5-9	479,238	243,175	236,063	69,610	35,138	34,472	409,628	208,037	201,591
10-14	417,233	210,052	207,181	66,289	32,280	34,009	350,944	177,772	173,172
15-19	352,264	174,872	177,392	58,621	27,787	30,834	293,643	147,085	146,558
20-24	281,357	135,574	145,783	48,324	22,160	26,164	233,033	113,414	119,619
25-29	227,829	106,901	120,928	39,529	17,615	21,914	188,300	89,286	99,014
30-34	182,010	82,694	99,316	31,201	13,769	17,432	150,809	68,925	81,884
35-39	151,907	68,463	83,444	25,345	10,993	14,352	126,562	57,470	69,092
40-44	132,951	61,651	71,300	20,986	9,183	11,803	111,965	52,468	59,497
45-49	116,588	55,339	61,249	17,792	7,756	10,036	98,796	47,583	51,213
50-54	102,613	49,929	52,684	15,041	6,342	8,699	87,572	43,587	43,985
55-59	87,500	43,178	44,322	12,751	5,287	7,464	74,749	37,891	36,858
60-64	71,881	35,554	36,327	10,829	4,336	6,493	61,052	31,218	29,834
65-69	55,316	27,636	27,680	8,402	3,379	5,023	46,914	24,257	22,657
70-74	38,302	19,603	18,699	5,830	2,448	3,382	32,472	17,155	15,317
75-79	21,073	11,505	9,568	3,146	1,556	1,590	17,927	9,949	7,978
80+	18,653	10,554	8,099	3,185	1,440	1,745	15,468	9,114	6,354
Total	3,299,000	1,622,000	1,677,000	512,000	241,000	271,000	2,787,000	1,381,000	1,406,000

Table 7.4C Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 1997

	TOTAL			URBAN			RURAL		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	587,659	297,287	290,372	80,268	42,850	37,418	507,391	254,437	252,954
5-9	487,063	247,454	239,609	72,317	37,128	35,189	414,746	210,326	204,420
10-14	428,762	216,282	212,480	69,566	34,526	35,040	359,196	181,756	177,440
15-19	363,684	181,182	182,502	61,768	29,910	31,858	301,916	151,272	150,644
20-24	293,964	142,690	151,274	51,492	24,246	27,246	242,472	118,444	124,028
25-29	236,005	111,315	124,690	41,744	19,056	22,688	194,261	92,259	102,002
30-34	189,512	86,741	102,771	33,117	15,010	18,107	156,395	71,731	84,664
35-39	155,897	70,262	85,635	26,508	11,713	14,795	129,389	58,549	70,840
40-44	135,075	62,144	72,931	21,734	9,602	12,132	113,341	52,542	60,799
45-49	118,411	55,896	62,515	18,427	8,132	10,295	99,984	47,764	52,220
50-54	103,717	50,108	53,609	15,506	6,607	8,899	88,211	43,501	44,710
55-59	88,696	43,547	45,149	13,182	5,539	7,643	75,514	38,008	37,506
60-64	72,770	35,865	36,905	11,175	4,543	6,632	61,595	31,322	30,273
65-69	56,080	27,817	28,263	8,686	3,532	5,154	47,394	24,285	23,109
70-74	38,933	19,705	19,228	6,048	2,555	3,493	32,885	17,150	15,735
75-79	21,806	11,636	10,170	3,327	1,634	1,693	18,479	10,002	8,477
80+	17,966	10,069	7,897	3,135	1,417	1,718	14,831	8,652	6,179
Total	3,396,000	1,670,000	1,726,000	538,000	258,000	280,000	2,858,000	1,412,000	1,446,000

Table 7.4D Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 1998

	TOTAL			URBAN			RURAL		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	613,234	309,338	303,896	85,629	45,974	39,655	527,605	263,364	264,241
5-9	494,933	251,689	243,244	75,066	39,001	36,065	419,867	212,688	207,179
10-14	440,411	222,509	217,902	72,941	36,641	36,300	367,470	185,868	181,602
15-19	375,243	187,503	187,740	65,020	31,909	33,111	310,223	155,594	154,629
20-24	306,742	149,846	156,896	54,777	26,209	28,568	251,965	123,637	128,328
25-29	244,290	115,741	128,549	44,047	20,413	23,634	200,243	95,328	104,915
30-34	197,112	90,806	106,306	35,110	16,178	18,932	162,002	74,628	87,374
35-39	159,935	72,052	87,883	27,728	12,390	15,338	132,207	59,662	72,545
40-44	137,215	62,614	74,601	22,529	9,996	12,533	114,686	52,618	62,068
45-49	120,248	56,435	63,813	19,097	8,485	10,612	101,151	47,950	53,201
50-54	104,829	50,268	54,561	16,000	6,856	9,144	88,829	43,412	45,417
55-59	89,907	43,906	46,001	13,638	5,776	7,862	76,269	38,130	38,139
60-64	73,672	36,169	37,503	11,541	4,739	6,802	62,131	31,430	30,701
65-69	56,855	27,990	28,865	8,991	3,676	5,315	47,864	24,314	23,550
70-74	39,572	19,801	19,771	6,284	2,656	3,628	33,288	17,145	16,143
75-79	22,544	11,764	10,780	3,525	1,707	1,818	19,019	10,057	8,962
80+	17,258	9,569	7,689	3,077	1,394	1,683	14,181	8,175	6,006
Total	3,494,000	1,718,000	1,776,000	565,000	274,000	291,000	2,929,000	1,444,000	1,485,000

Table 7.4E Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 1999

Age	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	639,003	321,669	317,334	91,193	49,098	42,095	547,810	272,571	275,239
5-9	502,888	255,998	246,890	77,896	40,874	37,022	424,992	215,124	209,868
10-14	452,195	228,864	223,331	76,429	38,755	37,674	375,766	190,109	185,657
15-19	386,946	193,958	192,988	68,384	33,907	34,477	318,562	160,051	158,511
20-24	319,692	157,165	162,527	58,184	28,173	30,011	261,508	128,992	132,516
25-29	252,681	120,262	132,419	46,434	21,769	24,665	206,247	98,493	107,754
30-34	204,806	94,960	109,846	37,177	17,345	19,832	167,629	77,615	90,014
35-39	164,012	73,877	90,135	28,996	13,067	15,929	135,016	60,810	74,206
40-44	139,362	63,087	76,275	23,361	10,390	12,971	116,001	52,697	63,304
45-49	122,095	56,979	65,116	19,796	8,838	10,958	102,299	48,141	54,158
50-54	105,943	50,426	55,517	16,516	7,105	9,411	89,427	43,321	46,106
55-59	91,122	44,267	46,855	14,112	6,012	8,100	77,010	38,255	38,755
60-64	74,579	36,474	38,105	11,921	4,934	6,987	62,658	31,540	31,118
65-69	57,634	28,164	29,470	9,310	3,820	5,490	48,324	24,344	23,980
70-74	40,211	19,895	20,316	6,532	2,756	3,776	33,679	17,139	16,540
75-79	23,286	11,896	11,390	3,738	1,782	1,956	19,548	10,114	9,434
80+	16,545	9,059	7,486	3,021	1,375	1,646	13,524	7,684	5,840
Total	3,593,000	1,767,000	1,826,000	593,000	290,000	303,000	3,000,000	1,477,000	1,523,000

Table 7.4F Projected Population Size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2000

Age	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	665,486	334,352	331,134	96,849	52,153	44,696	568,637	282,199	286,438
5-9	511,024	260,378	250,646	80,747	42,706	38,041	430,277	217,672	212,605
10-14	464,293	235,367	228,926	79,962	40,822	39,140	384,331	194,545	189,786
15-19	398,971	200,573	198,398	71,795	35,861	35,934	327,176	164,712	162,464
20-24	333,017	164,686	168,331	61,642	30,093	31,549	271,375	134,593	136,782
25-29	261,308	124,899	136,409	48,861	23,096	25,765	212,447	101,803	110,644
30-34	212,721	99,227	113,494	39,278	18,487	20,791	173,443	80,740	92,703
35-39	168,197	75,740	92,457	30,289	13,729	16,560	137,908	62,011	75,897
40-44	141,556	63,555	78,001	24,214	10,776	13,438	117,342	52,779	64,563
45-49	123,984	57,525	66,459	20,510	9,183	11,327	103,474	48,342	55,132
50-54	107,076	50,574	56,502	17,044	7,349	9,695	90,032	43,225	46,807
55-59	92,368	44,630	47,738	14,599	6,244	8,355	77,769	38,386	39,383
60-64	75,508	36,781	38,727	12,310	5,125	7,185	63,198	31,656	31,542
65-69	58,429	28,336	30,093	9,637	3,961	5,676	48,792	24,375	24,417
70-74	40,867	19,989	20,878	6,788	2,855	3,933	34,079	17,134	16,945
75-79	24,044	12,026	12,018	3,955	1,853	2,102	20,089	10,173	9,916
80+	15,801	8,522	7,279	2,961	1,353	1,608	12,840	7,169	5,671
Total	3,694,650	1,817,160	1,877,490	621,441	305,646	315,795	3,073,209	1,511,514	1,561,695

Table 7.4G Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2005

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	704,267	354,298	349,969	112,603	60,572	52,031	591,664	293,726	297,938
5-9	638,422	320,592	317,830	110,602	57,576	53,026	527,820	263,016	264,804
10-14	504,417	257,063	247,354	95,150	48,766	46,384	409,267	208,297	200,970
15-19	457,484	231,961	225,523	90,079	45,333	44,746	367,405	186,628	180,777
20-24	390,741	196,343	194,398	79,080	39,198	39,882	311,661	157,145	154,516
25-29	324,619	160,413	164,206	66,345	32,400	33,945	258,274	128,013	130,261
30-34	253,898	121,293	132,605	51,283	24,679	26,604	202,615	96,614	106,001
35-39	205,773	95,869	109,904	40,559	18,990	21,569	165,214	76,879	88,335
40-44	161,708	72,579	89,129	30,305	13,466	16,839	131,403	59,113	72,290
45-49	134,896	60,178	74,718	24,493	10,525	13,968	110,403	49,653	60,750
50-54	116,369	53,478	62,891	20,363	8,528	11,835	96,006	44,950	51,056
55-59	98,137	45,736	52,401	17,081	7,027	10,054	81,056	38,709	42,347
60-64	81,503	38,688	42,815	14,617	5,920	8,697	66,886	32,768	34,118
65-69	62,796	29,893	32,903	11,381	4,589	6,792	51,415	25,304	26,111
70-74	44,354	20,902	23,452	8,112	3,277	4,835	36,242	17,625	18,617
75-79	26,552	12,535	14,017	4,806	2,118	2,688	21,746	10,417	11,329
80+	17,078	8,328	8,750	3,556	1,449	2,107	13,522	6,879	6,643
Total	4,223,014	2,080,149	2,142,865	780,415	384,413	396,002	3,442,599	1,695,736	1,746,863

Table 7.4H Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2010

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	757,008	381,331	375,677	132,939	71,490	61,449	624,069	309,841	314,228
5-9	680,387	342,107	338,280	129,258	67,303	61,955	551,129	274,804	276,325
10-14	631,352	317,070	314,282	130,342	65,808	64,534	501,010	251,262	249,748
15-19	498,013	253,806	244,207	107,219	54,231	52,988	390,794	199,575	191,219
20-24	449,253	227,652	221,601	99,342	49,664	49,678	349,911	177,988	171,923
25-29	382,140	191,873	190,267	85,308	42,337	42,971	296,832	149,536	147,296
30-34	316,580	156,364	160,216	69,891	34,749	35,142	246,689	121,615	125,074
35-39	246,618	117,696	128,922	53,157	25,481	27,676	193,461	92,215	101,246
40-44	198,713	92,329	106,384	40,756	18,751	22,005	157,957	73,578	84,379
45-49	154,838	69,108	85,730	30,798	13,248	17,550	124,040	55,860	68,180
50-54	127,327	56,298	71,029	24,493	9,858	14,635	102,834	46,440	56,394
55-59	107,360	48,710	58,650	20,540	8,224	12,316	86,820	40,486	46,334
60-64	87,319	39,982	47,337	17,233	6,724	10,509	70,086	33,258	36,828
65-69	68,563	31,771	36,792	13,658	5,360	8,298	54,905	26,411	28,494
70-74	48,2 /5	22,331	25,944	9,690	3,846	5,844	38,585	18,485	20,100
75-79	29,310	13,323	15,987	5,825	2,469	3,356	23,485	10,854	12,631
80+	19,243	8,727	10,516	4,419	1,664	2,755	14,824	7,063	7,761
Total	4,802,299	2,370,478	2,431,821	974,868	481,207	493,661	3,827,431	1,889,271	1,938,160

Table 7.4I Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2015

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	800,072	403,476	396,596	154,515	83,100	71,415	645,557	320,376	325,181
5-9	736,359	370,705	365,654	153,571	80,027	73,544	582,788	290,678	292,110
10-14	674,096	338,931	335,165	152,458	77,087	75,371	521,638	261,844	259,794
15-19	624,565	313,612	310,953	147,159	73,375	73,784	477,406	240,237	237,169
20-24	490,352	249,716	240,636	118,559	59,619	58,940	371,793	190,097	181,696
25-29	440,791	223,177	217,614	107,563	53,876	53,687	333,228	169,301	163,927
30-34	374,039	187,713	186,326	90,310	45,630	44,680	283,729	142,083	141,646
35-39	308,752	152,369	156,383	72,831	36,108	36,723	235,921	116,261	119,660
40-44	239,211	113,907	125,304	53,744	25,365	28,379	185,467	88,542	96,925
45-49	191,145	88,398	102,747	41,643	18,606	23,037	149,502	69,792	79,710
50-54	146,923	65,056	81,867	31,007	12,535	18,472	115,916	52,521	63,395
55-59	118,248	51,643	66,605	24,909	9,601	15,308	93,339	42,042	51,297
60-64	96,302	42,939	53,363	20,899	7,952	12,947	75,403	34,987	40,416
65-69	74,316	33,174	41,142	16,300	6,163	10,137	58,016	27,011	31,005
70-74	53,385	24,035	29,350	11,778	4,556	7,222	41,607	19,479	22,128
75-79	32,422	14,467	17,955	7,071	2,946	4,125	25,351	11,521	13,830
80+	21,894	9,460	12,434	5,524	1,981	3,543	16,370	7,479	8,891
Total	5,422,872	2,682,778	2,740,094	1,209,841	598,527	611,314	4,213,031	2,084,251	2,128,780

Table 7.4J Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2020

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	832,955	420,476	412,479	176,945	95,210	81,735	656,010	325,266	330,744
5-9	782,797	394,581	388,216	179,226	93,531	85,695	603,571	301,050	302,521
10-14	730,754	367,842	362,912	181,024	91,727	89,297	549,730	276,115	273,615
15-19	668,031	335,790	332,241	172,190	86,065	86,125	495,841	249,725	246,116
20-24	616,437	309,276	307,161	162,950	80,839	82,111	453,487	228,437	225,050
25-29	482,527	245,527	237,000	128,667	64,868	63,799	353,860	180,659	173,201
30-34	432,875	219,071	213,804	114,261	58,269	55,992	318,614	160,802	157,812
35-39	366,151	183,630	182,521	94,492	47,653	46,839	271,659	135,977	135,682
40-44	300,709	148,138	152,571	73,990	36,189	37,801	226,719	111,949	114,770
45-49	231,120	109,627	121,493	55,163	25,354	29,809	175,957	84,273	91,684
50-54	182,265	83,714	98,551	42,091	17,763	24,328	140,174	65,951	74,223
55-59	137,275	60,090	77,185	31,713	12,314	19,399	105,562	47,776	57,786
60-64	106,935	45,901	61,034	25,538	9,371	16,167	81,397	36,530	44,867
65-69	82,720	35,995	46,725	19,933	7,371	12,562	62,787	28,624	34,163
70-74	58,624	25,413	33,211	14,225	5,307	8,918	44,399	20,106	24,293
75-79	36,452	15,825	20,627	8,726	3,544	5,182	27,726	12,281	15,445
80+	25,008	10,515	14,493	6,903	2,419	4,484	18,105	8,096	10,009
Total	6,073,635	3,011,411	3,062,224	1,488,037	737,794	750,243	4,585,598	2,273,617	2,311,981

Table 7.4K Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2025

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	847,846	428,336	419,510	198,414	106,834	91,580	649,432	321,502	327,930
5-9	819,541	413,509	406,032	206,258	107,813	98,445	613,283	305,696	307,587
10-14	778,090	392,125	385,965	211,344	107,379	103,965	566,746	284,746	282,000
15-19	725,438	365,017	360,421	204,745	102,644	102,101	520,693	262,373	258,320
20-24	660,890	331,897	328,993	191,123	95,115	96,008	469,767	236,782	232,985
25-29	608,354	304,954	303,400	177,441	88,303	89,138	430,913	216,651	214,262
30-34	475,396	241,789	233,607	137,302	70,469	66,833	338,094	171,320	166,774
35-39	425,296	215,112	210,184	120,184	61,219	58,965	305,112	153,893	151,219
40-44	358,250	179,506	178,744	96,658	48,188	48,470	261,592	131,318	130,274
45-49	291,799	143,293	148,506	76,371	36,480	39,891	215,428	106,813	108,615
50-54	221,469	104,425	117,044	56,080	24,453	31,627	165,389	79,972	85,417
55-59	171,268	77,850	93,418	43,307	17,623	25,684	127,961	60,227	67,734
60-64	125,080	53,847	71,233	32,749	12,145	20,604	92,331	41,702	50,629
65-69	92,701	38,872	53,829	24,589	8,794	15,795	68,112	30,078	38,034
70-74	66,082	27,921	38,161	17,623	6,438	11,185	48,459	21,483	26,976
75-79	40,703	17,005	23,698	10,709	4,196	6,513	29,994	12,809	17,185
80+	28,925	11,832	17,093	8,739	2,997	5,742	20,186	8,835	11,351
Total	6,737,128	3,347,290	3,389,838	1,813,636	901,090	912,546	4,923,492	2,446,200	2,477,292

Table 7.4L Projected Population size of Tigray Region by 5 year Age Group, Sex, Urban and Rural; Medium Variant: 1 July 2030

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	847,036	428,084	418,952	218,525	117,700	100,825	628,511	310,384	318,127
5-9	837,906	423,101	414,805	231,924	121,418	110,506	605,982	301,683	304,299
10-14	815,721	411,456	404,265	243,003	123,792	119,211	572,718	287,664	285,054
15-19	773,628	389,646	383,982	239,118	120,262	118,856	534,510	269,384	265,126
20-24	719,177	361,494	357,683	227,545	113,624	113,921	491,632	247,870	243,762
25-29	653,877	328,061	325,816	208,590	104,146	104,444	445,287	223,915	221,372
30-34	601,077	301,139	299,938	189,923	96,197	93,726	411,154	204,942	206,212
35-39	468,578	238,175	230,403	145,017	74,364	70,653	323,561	163,811	159,750
40-44	418,274	211,717	206,557	123,793	62,490	61,303	294,481	149,227	145,254
45-49	349,015	174,389	174,626	100,262	48,906	51,356	248,753	125,483	123,270
50-54	280,866	137,190	143,676	77,984	35,488	42,496	202,882	101,702	101,180
55-59	209,233	97,698	111,535	58,002	24,457	33,545	151,231	73,241	77,990
60-64	157,099	70,280	86,819	44,949	17,531	27,418	112,150	52,749	59,401
65-69	109,428	46,028	63,400	31,815	11,515	20,300	77,613	34,513	43,100
70-74	74,988	30,502	44,486	22,001	7,773	14,228	52,987	22,729	30,258
75-79	46,622	18,965	27,657	13,476	5,161	8,315	33,146	13,804	19,342
80+	33,423	13,174	20,249	11,056	3,677	7,379	22,367	9,497	12,870
Total	7,395,948	3,681,099	3,714,849	2,186,983	1,088,501	1,098,482	5,208,965	2,592,598	2,616,367

Table 7.5A Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 1995

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	537,137	273,763	263,374	69,933	35,812	34,121	467,204	237,951	229,253
5-9	471,395	238,871	232,524	66,805	32,908	33,897	404,590	205,963	198,627
10-14	405,808	203,924	201,884	62,945	29,763	33,182	342,863	174,161	168,702
15-19	340,988	168,698	172,290	55,420	25,408	30,012	285,568	143,290	142,278
20-24	268,973	128,676	140,297	45,118	19,822	25,296	223,855	108,854	115,001
25-29	219,770	102,591	117,179	37,294	16,000	21,294	182,476	86,591	95,885
30-34	174,624	78,760	95,864	29,270	12,379	16,891	145,354	66,381	78,973
35-39	147,937	66,680	81,257	24,183	10,187	13,996	123,754	56,493	67,261
40-44	130,788	61,114	69,674	20,253	8,713	11,540	110,535	52,401	58,134
45-49	114,742	54,756	59,986	17,164	7,336	9,828	97,578	47,420	50,158
50-54	101,475	49,710	51,765	14,584	6,045	8,539	86,891	43,665	43,226
55-59	86,287	42,789	43,498	12,325	5,005	7,320	73,962	37,784	36,178
60-64	70,983	35,227	35,756	10,484	4,103	6,381	60,499	31,124	29,375
65-69	54,541	27,439	27,102	8,125	3,207	4,918	46,416	24,232	22,184
70-74	37,659	19,487	18,172	5,621	2,328	3,293	32,038	17,159	14,879
75-79	20,335	11,370	8,965	2,977	1,469	1,508	17,358	9,901	7,457
80+	19,302	10,998	8,304	3,232	1,465	1,767	16,070	9,533	6,537
Total	3,202,744	1,574,853	1,627,891	485,733	221,950	263,783	2,717,011	1,352,903	1,364,108

Table 7.5B Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2000

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	646,671	324,899	321,772	94,049	50,660	43,389	552,622	274,239	278,383
5-9	511,024	260,378	250,646	80,693	42,690	38,003	430,331	217,688	212,643
10-14	464,293	235,367	228,926	79,909	40,807	39,102	384,384	194,560	189,824
15-19	398,971	200,573	198,398	71,746	35,847	35,899	327,225	164,726	162,499
20-24	333,017	164,686	168,331	61,599	30,081	31,518	271,418	134,605	136,813
25-29	261,308	124,899	136,409	48,827	23,087	25,740	212,481	101,812	110,669
30-34	212,721	99,227	113,494	39,250	18,480	20,770	173,471	80,747	92,724
35-39	168,197	75,740	92,457	30,267	13,724	16,543	137,930	62,016	75,914
40-44	141,556	63,555	78,001	24,197	10,772	13,425	117,359	52,783	64,576
45-49	123,984	57,525	66,459	20,496	9,180	11,316	103,488	48,345	55,143
50-54	107,076	50,574	56,502	17,031	7,346	9,685	90,045	43,228	46,817
55-59	92,368	44,630	47,738	14,589	6,242	8,347	77,779	38,388	39,391
60-64	75,508	36,781	38,727	12,301	5,123	7,178	63,207	31,658	31,549
65-69	58,429	28,336	30,093	9,630	3,960	5,670	48,799	24,376	24,423
70-74	40,867	19,989	20,878	6,783	2,854	3,929	34,084	17,135	16,949
75-79	24,044	12,026	12,018	3,953	1,853	2,100	20,091	10,173	9,918
80+	15,801	8,522	7,279	2,958	1,352	1,606	12,843	7,170	5,673
Total	3,675,835	1,807,707	1,868,128	618,278	304,058	314,220	3,057,557	1,503,649	1,553,908

Table 7.5C Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2005

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	622,869	313,349	309,520	99,309	53,484	45,825	523,560	259,865	263,695
5-9	620,372	311,528	308,844	107,168	55,857	51,311	513,204	255,671	257,533
10-14	504,417	257,063	247,354	94,876	48,686	46,190	409,541	208,377	201,164
15-19	457,484	231,961	225,523	89,818	45,259	44,559	367,666	186,702	180,964
20-24	390,741	196,343	194,398	78,850	39,134	39,716	311,891	157,209	154,682
25-29	324,619	160,413	164,206	66,150	32,347	33,803	258,469	128,066	130,403
30-34	253,898	121,293	132,605	51,131	24,638	26,493	202,767	96,655	106,112
35-39	205,773	95,869	109,904	40,438	18,959	21,479	165,335	76,910	88,425
40-44	161,708	72,579	89,129	30,212	13,444	16,768	131,496	59,135	72,361
45-49	134,896	60,178	74,718	24,417	10,508	13,909	110,479	49,670	60,809
50-54	116,369	53,478	62,891	20,299	8,514	11,785	96,070	44,964	51,106
55-59	98,137	45,736	52,401	17,028	7,016	10,012	81,109	38,720	42,389
60-64	81,503	38,688	42,815	14,570	5,910	8,660	66,933	32,778	34,155
65-69	62,796	29,893	32,903	11,346	4,582	6,764	51,450	25,311	26,139
70-74	44,354	20,902	23,452	8,087	3,272	4,815	36,267	17,630	18,637
75-79	26,552	12,535	14,017	4,791	2,114	2,677	21,761	10,421	11,340
80+	17,078	8,328	8,750	3,544	1,446	2,098	13,534	6,882	6,652
Total	4,123,566	2,030,136	2,093,430	762,034	375,170	386,864	3,361,532	1,654,966	1,706,566

Table 7.5D Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2010

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	664,826	334,896	329,930	116,335	62,659	53,676	548,491	272,237	276,254
5-9	601,750	302,567	299,183	113,906	59,405	54,501	487,844	243,162	244,682
10-14	613,501	308,105	305,396	126,192	63,819	62,373	487,309	244,286	243,023
15-19	498,013	253,806	244,207	106,825	54,122	52,703	391,188	199,684	191,504
20-24	449,253	227,652	221,601	98,976	49,565	49,411	350,277	178,087	172,190
25-29	382,140	191,873	190,267	84,992	42,252	42,740	297,148	149,621	147,527
30-34	316,580	156,364	160,216	69,633	34,680	34,953	246,947	121,684	125,263
35-39	246,618	117,696	128,922	52,958	25,430	27,528	193,660	92,266	101,394
40-44	198,713	92,329	106,384	40,601	18,714	21,887	158,112	73,615	84,497
45-49	154,838	69,108	85,730	30,677	13,221	17,456	124,161	55,887	68,274
50-54	127,327	56,298	71,029	24,396	9,839	14,557	102,931	46,459	56,472
55-59	107,360	48,710	58,650	20,458	8,208	12,250	86,902	40,502	46,400
60-64	87,319	39,982	47,337	17,163	6,710	10,453	70,156	33,272	36,884
65-69	68,563	31,771	36,792	13,602	5,349	8,253	54,961	26,422	28,539
70-74	48,275	22,331	25,944	9,651	3,838	5,813	38,624	18,493	20,131
75-79	29,310	13,323	15,987	5,802	2,464	3,338	23,508	10,859	12,649
80+	19,243	8,727	10,516	4,402	1,661	2,741	14,841	7,066	7,775
Total	4,613,629	2,275,538	2,338,091	936,569	461,936	474,633	3,677,060	1,813,602	1,863,458

Table 7.5E Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2015

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	696,886	351,439	345,447	134,146	72,261	61,885	562,740	279,178	283,562
5-9	646,692	325,564	321,128	134,422	70,164	64,258	512,270	255,400	256,870
10-14	596,186	299,758	296,428	134,381	68,063	66,318	461,805	231,695	230,110
15-19	606,906	304,745	302,161	142,511	71,181	71,330	464,395	233,564	230,831
20-24	490,352	249,716	240,636	118,157	59,519	58,638	372,195	190,197	181,998
25-29	440,791	223,177	217,614	107,196	53,785	53,411	333,595	169,392	164,203
30-34	374,039	187,713	186,326	90,004	45,553	44,451	284,035	142,160	141,875
35-39	308,752	152,369	156,383	72,583	36,048	36,535	236,169	116,321	119,848
40-44	239,211	113,907	125,304	53,556	25,322	28,234	185,655	88,585	97,070
45-49	191,145	88,398	102,747	41,494	18,575	22,919	149,651	69,823	79,828
50-54	146,923	65,056	81,867	30,891	12,514	18,377	116,032	52,542	63,490
55-59	118,248	51,643	66,605	24,815	9,585	15,230	93,433	42,058	51,375
60-64	96,302	42,939	53,363	20,820	7,939	12,881	75,482	35,000	40,482
65-69	74,316	33,174	41,142	16,238	6,153	10,085	58,078	27,021	31,057
70-74	53,385	24,035	29,350	11,733	4,548	7,185	41,652	19,487	22,165
75-79	32,422	14,467	17,955	7,045	2,941	4,104	25,377	11,526	13,851
80+	21,894	9,460	12,434	5,502	1,977	3,525	16,392	7,483	8,909
Total	5,134,450	2,537,560	2,596,890	1,145,494	566,128	579,366	3,988,956	1,971,432	2,017,524

Table 7.5F Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2020

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	729,527	368,265	361,262	154,616	83,316	71,300	574,911	284,949	289,962
5-9	681,839	343,691	338,148	155,741	81,397	74,344	526,098	262,294	263,804
10-14	641,769	323,049	318,720	158,596	80,487	78,109	483,173	242,562	240,611
15-19	590,822	296,980	293,842	151,917	76,052	75,865	438,905	220,928	217,977
20-24	599,008	300,531	298,477	157,956	78,486	79,470	441,052	222,045	219,007
25-29	482,527	245,527	237,000	128,356	64,812	63,544	354,171	180,715	173,456
30-34	432,875	219,071	213,804	113,987	58,219	55,768	318,888	160,852	158,036
35-39	366,151	183,630	182,521	94,264	47,612	46,652	271,887	136,018	135,869
40-44	300,709	148,138	152,571	73,808	36,158	37,650	226,901	111,980	114,921
45-49	231,120	109,627	121,493	55,021	25,332	29,689	176,099	84,295	91,804
50-54	182,265	83,714	98,551	41,979	17,748	24,231	140,286	65,966	74,320
55-59	137,275	60,090	77,185	31,625	12,304	19,321	105,650	47,786	57,864
60-64	106,935	45,901	61,034	25,465	9,363	16,102	81,470	36,538	44,932
65-69	82,720	35,995	46,725	19,877	7,365	12,512	62,843	28,630	34,213
70-74	58,624	25,413	33,211	14,185	5,303	8,882	44,439	20,110	24,329
75-79	36,452	15,825	20,627	8,702	3,541	5,161	27,750	12,284	15,466
80+	25,008	10,515	14,493	6,883	2,417	4,466	18,125	8,098	10,027
Total	5,685,626	2,815,962	2,869,664	1,392,978	689,912	703,066	4,292,648	2,126,050	2,166,598

Table 7.5G Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2025

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	738,820	373,256	365,564	172,684	93,105	79,579	566,136	280,151	285,985
5-9	717,779	362,164	355,615	180,414	94,436	85,978	537,365	267,728	269,637
10-14	677,739	341,552	336,187	183,840	93,540	90,300	493,899	248,012	245,887
15-19	637,100	320,568	316,532	179,569	90,154	89,415	457,531	230,414	227,117
20-24	584,506	293,537	290,969	168,803	84,131	84,672	415,703	209,406	206,297
25-29	591,154	296,332	294,822	172,188	85,815	86,373	418,966	210,517	208,449
30-34	475,396	241,789	233,607	137,120	70,476	66,644	338,276	171,313	166,963
35-39	425,296	215,112	210,184	120,024	61,226	58,798	305,272	153,886	151,386
40-44	358,250	179,506	178,744	96,526	48,193	48,333	261,724	131,313	130,411
45-49	291,799	143,293	148,506	76,262	36,484	39,778	215,537	106,809	108,728
50-54	221,469	104,425	117,044	55,992	24,455	31,537	165,477	79,970	85,507
55-59	171,268	77,850	93,418	43,237	17,625	25,612	128,031	60,225	67,806
60-64	125,080	53,847	71,233	32,692	12,146	20,546	92,388	41,701	50,687
65-69	92,701	38,872	53,829	24,545	8,794	15,751	68,156	30,078	38,078
70-74	66,082	27,921	38,161	17,592	6,439	11,153	48,490	21,482	27,008
75-79	40,703	17,005	23,698	10,692	4,197	6,495	30,011	12,808	17,203
80+	28,925	11,832	17,093	8,723	2,998	5,725	20,202	8,834	11,368
Total	6,244,067	3,098,861	3,145,206	1,680,903	834,214	846,689	4,563,164	2,264,647	2,298,517

Table 7.5H Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; Low Variant: 1 July 2030

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	718,446	363,096	355,350	185,246	99,926	85,320	533,200	263,170	270,030
5-9	730,158	368,694	361,464	201,976	105,904	96,072	528,182	262,790	265,392
10-14	714,433	360,365	354,068	212,689	108,523	104,166	501,744	251,842	249,902
15-19	673,852	339,393	334,459	208,136	104,850	103,286	465,716	234,543	231,173
20-24	631,603	317,475	314,128	199,698	99,882	99,816	431,905	217,593	214,312
25-29	578,304	290,145	288,159	184,354	92,196	92,158	393,950	197,949	196,001
30-34	584,083	292,625	291,458	184,429	93,565	90,864	399,654	199,060	200,594
35-39	468,578	238,175	230,403	144,923	74,434	70,489	323,655	163,741	159,914
40-44	418,274	211,717	206,557	123,710	62,549	61,161	294,564	149,168	145,396
45-49	349,015	174,389	174,626	100,189	48,952	51,237	248,826	125,437	123,389
50-54	280,866	137,190	143,676	77,918	35,521	42,397	202,948	101,669	101,279
55-59	209,233	97,698	111,535	57,947	24,480	33,467	151,286	73,218	78,068
60-64	157,099	70,280	86,819	44,901	17,547	27,354	112,198	52,733	59,465
65-69	109,428	46,028	63,400	31,779	11,526	20,253	77,649	34,502	43,147
70-74	74,988	30,502	44,486	21,975	7,780	14,195	53,013	22,722	30,291
75-79	46,622	18,965	27,657	13,462	5,166	8,296	33,160	13,799	19,361
80+	33,423	13,174	20,249	11,042	3,680	7,362	22,381	9,494	12,887
Total	6,778,405	3,369,911	3,408,494	2,004,374	996,481	1,007,893	4,774,031	2,373,430	2,400,601

Table 7.6A Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 1995

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	537,137	273,763	263,374	69,933	35,812	34,121	467,204	237,951	229,253
5-9	471,395	238,871	232,524	66,805	32,908	33,897	404,590	205,963	198,627
10-14	405,808	203,924	201,884	62,945	29,763	33,182	342,863	174,161	168,702
15-19	340,988	168,698	172,290	55,420	25,408	30,012	285,568	143,290	142,278
20-24	268,973	128,676	140,297	45,118	19,822	25,296	223,855	108,854	115,001
25-29	219,770	102,591	117,179	37,294	16,000	21,294	182,476	86,591	95,885
30-34	174,624	78,760	95,864	29,270	12,379	16,891	145,354	66,381	78,973
35-39	147,937	66,680	81,257	24,183	10,187	13,996	123,754	56,493	67,261
40-44	130,788	61,114	69,674	20,253	8,713	11,540	110,535	52,401	58,134
45-49	114,742	54,756	59,986	17,164	7,336	9,828	97,578	47,420	50,158
50-54	101,475	49,710	51,765	14,584	6,045	8,539	86,891	43,665	43,226
55-59	86,287	42,789	43,498	12,325	5,005	7,320	73,962	37,784	36,178
60-64	70,983	35,227	35,756	10,484	4,103	6,381	60,499	31,124	29,375
65-69	54,541	27,439	27,102	8,125	3,207	4,918	46,416	24,232	22,184
70-74	37,659	19,487	18,172	5,621	2,328	3,293	32,038	17,159	14,879
75-79	20,335	11,370	8,965	2,977	1,469	1,508	17,358	9,901	7,457
80+	19,302	10,998	8,304	3,232	1,465	1,767	16,070	9,533	6,537
Total	3,202,744	1,574,853	1,627,891	485,733	221,950	263,783	2,717,011	1,352,903	1,364,108

Table 7.6B Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2000

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	688,263	345,796	342,467	100,243	53,963	46,280	588,020	291,833	296,187
5-9	511,024	260,378	250,646	80,811	42,725	38,086	430,213	217,653	212,560
10-14	464,293	235,367	228,926	80,028	40,841	39,187	384,265	194,526	189,739
15-19	398,971	200,573	198,398	71,854	35,877	35,977	327,117	164,696	162,421
20-24	333,017	164,686	168,331	61,692	30,106	31,586	271,325	134,580	136,745
25-29	261,308	124,899	136,409	48,902	23,106	25,796	212,406	101,793	110,613
30-34	212,721	99,227	113,494	39,310	18,495	20,815	173,411	80,732	92,679
35-39	168,197	75,740	92,457	30,315	13,736	16,579	137,882	62,004	75,878
40-44	141,556	63,555	78,001	24,235	10,781	13,454	117,321	52,774	64,547
45-49	123,984	57,525	66,459	20,527	9,187	11,340	103,457	48,338	55,119
50-54	107,076	50,574	56,502	17,059	7,352	9,707	90,017	43,222	46,795
55-59	92,368	44,630	47,738	14,612	6,247	8,365	77,756	38,383	39,373
60-64	75,508	36,781	38,727	12,320	5,127	7,193	63,188	31,654	31,534
65-69	58,429	28,336	30,093	9,646	3,963	5,683	48,783	24,373	24,410
70-74	40,867	19,989	20,878	6,793	2,856	3,937	34,074	17,133	16,941
75-79	24,044	12,026	12,018	3,959	1,854	2,105	20,085	10,172	9,913
80+	15,801	8,522	7,279	2,963	1,353	1,610	12,838	7,169	5,669
Total	3,717,427	1,828,604	1,888,823	625,269	307,569	317,700	3,092,158	1,521,035	1,571,123

Table 7.6C Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2005

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	792,742	398,807	393,935	127,124	68,298	58,826	665,618	330,509	335,109
5-9	660,273	331,565	328,708	114,732	59,649	55,083	545,541	271,916	273,625
10-14	504,417	257,063	247,354	95,437	48,849	46,588	408,980	208,214	200,766
15-19	457,484	231,961	225,523	90,353	45,410	44,943	367,131	186,551	180,580
20-24	390,741	196,343	194,398	79,323	39,265	40,058	311,418	157,078	154,340
25-29	324,619	160,413	164,206	66,550	32,455	34,095	258,069	127,958	130,111
30-34	253,898	121,293	132,605	51,442	24,721	26,721	202,456	96,572	105,884
35-39	205,773	95,869	109,904	40,686	19,022	21,664	165,087	76,847	88,240
40-44	161,708	72,579	89,129	30,402	13,489	16,913	131,306	59,090	72,216
45-49	134,896	60,178	74,718	24,572	10,543	14,029	110,324	49,635	60,689
50-54	116,369	53,478	62,891	20,429	8,542	11,887	95,940	44,936	51,004
55-59	98,137	45,736	52,401	17,137	7,039	10,098	81,000	38,697	42,303
60-64	81,503	38,688	42,815	14,665	5,930	8,735	66,838	32,758	34,080
65-69	62,796	29,893	32,903	11,419	4,597	6,822	51,377	25,296	26,081
70-74	44,354	20,902	23,452	8,138	3,282	4,856	36,216	17,620	18,596
75-79	26,552	12,535	14,017	4,821	2,121	2,700	21,731	10,414	11,317
80+	17,078	8,328	8,750	3,567	1,451	2,116	13,511	6,877	6,634
Total	4,333,340	2,135,631	2,197,709	800,797	394,663	406,134	3,532,543	1,740,968	1,791,575

Table 7.6D Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2010

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	875,726	441,133	434,593	154,410	82,890	71,520	721,316	358,243	363,073
5-9	765,863	385,085	380,778	146,096	75,931	70,165	619,767	309,154	310,613
10-14	652,961	327,922	325,039	135,367	68,216	67,151	517,594	259,706	257,888
15-19	498,013	253,806	244,207	107,666	54,354	53,312	390,347	199,452	190,895
20-24	449,253	227,652	221,601	99,760	49,778	49,982	349,493	177,874	171,619
25-29	382,140	191,873	190,267	85,668	42,434	43,234	296,472	149,439	147,033
30-34	316,580	156,364	160,216	70,186	34,829	35,357	246,394	121,535	124,859
35-39	246,618	117,696	128,922	53,385	25,539	27,846	193,233	92,157	101,076
40-44	198,713	92,329	106,384	40,933	18,794	22,139	157,780	73,535	84,245
45-49	154,838	69,108	85,730	30,936	13,278	17,658	123,902	55,830	68,072
50-54	127,327	56,298	71,029	24,606	9,881	14,725	102,721	46,417	56,304
55-59	107,360	48,710	58,650	20,634	8,243	12,391	86,726	40,467	46,259
60-64	87,319	39,982	47,337	17,312	6,739	10,573	70,007	33,243	36,764
65-69	68,563	31,771	36,792	13,721	5,372	8,349	54,842	26,399	28,443
70-74	48,275	22,331	25,944	9,735	3,855	5,880	38,540	18,476	20,064
75-79	29,310	13,323	15,987	5,851	2,475	3,376	23,459	10,848	12,611
80+	19,243	8,727	10,516	4,440	1,668	2,772	14,803	7,059	7,744
Total	5,028,102	2,484,110	2,543,992	1,020,706	504,276	516,430	4,007,396	1,979,834	2,027,562

Table 7.6E Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2015

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	948,426	478,291	470,135	183,930	98,725	85,205	764,496	379,566	384,930
5-9	851,840	428,842	422,998	178,410	92,781	85,629	673,430	336,061	337,369
10-14	758,782	381,510	377,272	172,350	86,961	85,389	586,432	294,549	291,883
15-19	645,941	324,346	321,595	152,855	76,052	76,803	493,086	248,294	244,792
20-24	490,352	249,716	240,636	119,072	59,750	59,322	371,280	189,966	181,314
25-29	440,791	223,177	217,614	108,028	53,994	54,034	332,763	169,183	163,580
30-34	374,039	187,713	186,326	90,700	45,730	44,970	283,339	141,983	141,356
35-39	308,752	152,369	156,383	73,149	36,188	36,961	235,603	116,181	119,422
40-44	239,211	113,907	125,304	53,983	25,420	28,563	185,228	88,487	96,741
45-49	191,145	88,398	102,747	41,834	18,647	23,187	149,311	69,751	79,560
50-54	146,923	65,056	81,867	31,153	12,562	18,591	115,770	52,494	63,276
55-59	118,248	51,643	66,605	25,030	9,623	15,407	93,218	42,020	51,198
60-64	96,302	42,939	53,363	21,001	7,970	13,031	75,301	34,969	40,332
65-69	74,316	33,174	41,142	16,379	6,177	10,202	57,937	26,997	30,940
70-74	53,385	24,035	29,350	11,835	4,566	7,269	41,550	19,469	22,081
75-79	32,422	14,467	17,955	7,104	2,952	4,152	25,318	11,515	13,803
80+	21,894	9,460	12,434	5,551	1,985	3,566	16,343	7,475	8,868
Total	5,792,769	2,869,043	2,923,726	1,292,364	640,083	652,281	4,500,405	2,228,960	2,271,445

Table 7.6F Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2020

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	1,026,554	518,205	508,349	218,953	117,557	101,396	807,601	400,648	406,953
5-9	927,947	467,746	460,201	213,333	111,079	102,254	714,614	356,667	357,947
10-14	845,356	425,529	419,827	210,290	106,309	103,981	635,066	319,220	315,846
15-19	751,955	377,975	373,980	194,639	97,057	97,582	557,316	280,918	276,398
20-24	637,535	319,861	317,674	169,242	83,761	85,481	468,293	236,100	232,193
25-29	482,527	245,527	237,000	129,208	64,989	64,219	353,319	180,538	172,781
30-34	432,875	219,071	213,804	114,738	58,377	56,361	318,137	160,694	157,443
35-39	366,151	183,630	182,521	94,889	47,742	47,147	271,262	135,888	135,374
40-44	300,709	148,138	152,571	74,306	36,256	38,050	226,403	111,882	114,521
45-49	231,120	109,627	121,493	55,406	25,401	30,005	175,714	84,226	91,488
50-54	182,265	83,714	98,551	42,284	17,796	24,488	139,981	65,918	74,063
55-59	137,275	60,090	77,185	31,863	12,337	19,526	105,412	47,753	57,659
60-64	106,935	45,901	61,034	25,661	9,388	16,273	81,274	36,513	44,761
65-69	82,720	35,995	46,725	20,030	7,385	12,645	62,690	28,610	34,080
70-74	58,624	25,413	33,211	14,294	5,317	8,977	44,330	20,096	24,234
75-79	36,452	15,825	20,627	8,767	3,551	5,216	27,685	12,274	15,411
80+	25,008	10,515	14,493	6,938	2,424	4,514	18,070	8,091	9,979
Total	6,632,008	3,292,762	3,339,246	1,624,841	806,726	818,115	5,007,167	2,486,036	2,521,131

Table 7.6G Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2025

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	1,106,064	558,789	547,275	259,869	139,569	120,300	846,195	419,220	426,975
5-9	1,010,022	509,618	500,404	255,228	133,060	122,168	754,794	376,558	378,236
10-14	922,368	464,835	457,533	251,567	127,470	124,097	670,801	337,365	333,436
15-19	839,206	422,261	416,945	237,841	118,909	118,932	601,365	303,352	298,013
20-24	743,917	373,593	370,324	216,035	107,217	108,818	527,882	266,376	261,506
25-29	629,175	315,391	313,784	184,283	91,455	92,828	444,892	223,936	220,956
30-34	475,396	241,789	233,607	137,865	70,569	67,296	337,531	171,220	166,311
35-39	425,296	215,112	210,184	120,679	61,306	59,373	304,617	153,806	150,811
40-44	358,250	179,506	178,744	97,063	48,257	48,806	261,187	131,249	129,938
45-49	291,799	143,293	148,506	76,700	36,532	40,168	215,099	106,761	108,338
50-54	221,469	104,425	117,044	56,334	24,488	31,846	165,135	79,937	85,198
55-59	171,268	77,850	93,418	43,511	17,648	25,863	127,757	60,202	67,555
60-64	125,080	53,847	71,233	32,909	12,162	20,747	92,171	41,685	50,486
65-69	92,701	38,872	53,829	24,711	8,806	15,905	67,990	30,066	37,924
70-74	66,082	27,921	38,161	17,709	6,447	11,262	48,373	21,474	26,899
75-79	40,703	17,005	23,698	10,760	4,202	6,558	29,943	12,803	17,140
80+	28,925	11,832	17,093	8,783	3,002	5,781	20,142	8,830	11,312
Total	7,547,721	3,755,939	3,791,782	2,031,847	1,011,099	1,020,748	5,515,874	2,744,840	2,771,034

Table 7.6H Projected Quinquennial Population size of Tigray Region by 5 year Age Group, Urban and Rural; High Variant: 1 July 2030

Age	URBAN+RURAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	1,175,788	594,232	581,556	304,496	163,505	140,991	871,292	430,727	440,565
5-9	1,093,097	551,960	541,137	303,742	158,516	145,226	789,355	393,444	395,911
10-14	1,005,314	507,088	498,226	300,682	152,679	148,003	704,632	354,409	350,223
15-19	917,078	461,896	455,182	284,604	142,669	141,935	632,474	319,227	313,247
20-24	831,963	418,186	413,777	264,303	131,543	132,760	567,660	286,643	281,017
25-29	736,022	369,275	366,747	235,752	117,318	118,434	500,270	251,957	248,313
30-34	621,650	311,446	310,204	197,215	99,565	97,650	424,435	211,881	212,554
35-39	468,578	238,175	230,403	145,595	74,420	71,175	322,983	163,755	159,228
40-44	418,274	211,717	206,557	124,293	62,537	61,756	293,981	149,180	144,801
45-49	349,015	174,389	174,626	100,679	48,943	51,736	248,336	125,446	122,890
50-54	280,866	137,190	143,676	78,325	35,515	42,810	202,541	101,675	100,866
55-59	209,233	97,698	111,535	58,269	24,476	33,793	150,964	73,222	77,742
60-64	157,099	70,280	86,819	45,164	17,544	27,620	111,935	52,736	59,199
65-69	109,428	46,028	63,400	31,973	11,523	20,450	77,455	34,505	42,950
70-74	74,988	30,502	44,486	22,112	7,779	14,333	52,876	22,723	30,153
75-79	46,622	18,965	27,657	13,541	5,165	8,376	33,081	13,800	19,281
80+	33,423	13,174	20,249	11,114	3,680	7,434	22,309	9,494	12,815
Total	8,528,438	4,252,201	4,276,237	2,521,859	1,257,377	1,264,482	6,006,579	2,994,824	3,011,755

Table 7.7 Summary Demographic Indicators of Population Projection for Tigray Region: 1995-2030

LOW VARIANT	1995-2000	2000-05	2005-10	2010-15	2015-20	2020-25	2025-30	
TFR	6.53	5.28	4.76	4.24	3.80	3.36	2.92	
Male LE	49.50	52.00	54.50	57.00	59.50	62.00	64.30	
Female LE	52.40	54.90	57.40	59.90	62.40	64.90	67.40	
IMR /1000 births	116.00	102.00	90.00	77.00	66.00	55.00	45.00	
U5MR/1000 births	171.00	148.00	129.00	109.00	91.00	74.00	58.00	
CBR per 1000	43.60	36.30	34.00	31.40	29.20	26.40	23.20	
CDR per 1000	16.10	13.30	11.60	10.00	8.80	7.70	6.80	
RNI percent	2.80	2.30	2.20	2.10	2.00	1.90	1.60	
GR percent	2.80	2.30	2.20	2.10	2.00	1.90	1.60	
Urban GR percent	4.80	4.20	4.10	4.10	3.90	3.70	3.50	
Rural GR percent	2.40	1.90	1.80	1.60	1.50	1.20	0.90	
Period	1995	2000	2005	2010	2015	2020	2025	2030
Sex ratio	96.70	96.80	97.00	97.30	97.70	98.10	98.50	98.90
Dependency ratio	0.85	0.85	0.79	0.73	0.64	0.60	0.55	0.50
MEDIUM VARIANT	1995-2000	2000-05	2005-10	2010-15	2015-20	2020-25	2025-30	
TFR	6.72	5.97	5.42	4.86	4.29	3.73	3.24	
Male LE	49.50	52.00	54.50	57.00	59.50	62.00	64.30	
Female LE	52.40	54.90	57.40	59.90	62.40	64.90	67.40	
IMR /1000 births	116.00	102.00	90.00	77.00	66.00	55.00	45.00	
U5MR/1000 births	171.00	148.00	129.00	109.00	91.00	74.00	58.00	
CBR per 1000	44.70	40.40	37.50	34.40	31.40	28.20	25.20	
CDR per 1000	16.20	13.70	11.80	10.10	8.70	7.50	6.60	
RNI percent	2.90	2.70	2.60	2.40	2.30	2.10	1.90	
GR percent	2.90	2.70	2.60	2.40	2.30	2.10	1.90	
Urban GR percent	4.90	4.50	4.40	4.30	4.10	3.90	3.70	
Rural GR percent	2.50	2.30	2.10	1.90	1.70	1.40	1.10	
Period	1995	2000	2005	2010	2015	2020	2025	2030
Sex ratio	96.70	96.80	97.10	97.50	97.90	98.30	98.70	99.10
Dependency ratio	0.85	0.86	0.83	0.81	0.73	0.67	0.60	0.54
HIGH VARIANT	1995-2000	2000-05	2005-10	2010-15	2015-20	2020-25	2025-30	
TFR	6.95	6.72	6.27	5.75	5.22	4.69	4.20	
Male LE	49.50	52.00	54.50	57.00	59.50	62.00	64.30	
Female LE	52.40	54.90	57.40	59.90	62.40	64.90	67.40	
IMR /1000 births	116.00	102.00	90.00	77.00	66.00	55.00	45.00	
U5MR/1000 births	171.00	148.00	129.00	109.00	91.00	74.00	58.00	
CBR per 1000	46.10	44.80	41.80	38.50	35.80	33.30	30.80	
CDR per 1000	16.40	14.20	12.10	10.30	8.70	7.40	6.40	
RNI percent	3.00	3.10	3.00	2.80	2.70	2.60	2.40	
GR percent	3.00	3.10	3.00	2.80	2.70	2.60	2.40	
Urban GR percent	5.00	4.90	4.80	4.70	4.60	4.50	4.30	
Rural GR percent	2.6	2.7	2.5	2.3	2.1	1.9	1.7	
Period	1995	2000	2005	2010	2015	2020	2025	2030
Sex ratio	96.70	96.80	97.20	97.60	98.10	98.60	99.10	99.40
Dependency ratio	0.85	0.87	0.88	0.89	0.84	0.77	0.71	0.66

Table 7.8A Projected School age Population Size of Tigray Region : 1995-2030
Medium Variant

Year	Population Aged 7-12			Population Aged 13-14			Population Aged 15-18		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	526,214	265,674	260,540	154,606	77,422	77,184	278,651	138,214	140,437
1996	530,440	268,809	261,631	163,957	82,118	81,839	286,934	142,830	144,104
1997	538,972	273,776	265,196	169,937	85,266	84,671	295,966	147,803	148,163
1998	550,799	280,139	270,660	173,758	87,414	86,344	305,433	152,975	152,458
1999	564,911	287,465	277,446	176,633	89,113	87,520	315,022	158,188	156,834
2000	580,293	295,317	284,976	179,772	90,911	88,861	324,421	163,285	161,136
2001	597,622	303,987	293,635	182,369	92,443	89,926	333,838	168,370	165,468
2002	617,571	313,763	303,808	183,616	93,342	90,274	343,482	173,549	169,933
2003	639,130	324,212	314,918	184,724	94,158	90,566	353,040	178,664	174,376
2004	661,285	334,898	326,387	186,905	95,440	91,465	362,198	183,557	178,641
2005	683,025	345,386	337,639	191,373	97,738	93,635	370,643	188,069	182,574
2006	705,361	356,115	349,246	199,105	101,489	97,616	377,031	191,585	185,446
2007	728,968	367,375	361,593	209,296	106,328	102,968	381,569	194,210	187,359
2008	752,329	378,508	373,821	220,474	111,597	108,877	386,275	196,868	189,407
2009	773,928	388,856	385,072	231,172	116,640	114,532	393,170	200,484	192,686
2010	792,246	397,760	394,486	239,921	120,801	119,120	404,269	205,981	198,288
2011	806,188	404,729	401,459	246,386	123,920	122,466	421,946	214,421	207,525
2012	816,765	410,202	406,563	251,547	126,436	125,111	444,852	225,186	219,666
2013	825,622	414,916	410,706	255,905	128,586	127,319	469,433	236,687	232,746
2014	834,404	419,610	414,794	259,962	130,609	129,353	492,133	247,333	244,800
2015	844,757	425,022	419,735	264,218	132,742	131,476	509,398	255,534	253,864
2016	857,083	431,350	425,733	268,628	134,971	133,657	519,693	260,587	259,106
2017	870,284	438,101	432,183	272,860	137,138	135,722	525,392	263,554	261,838
2018	883,758	444,979	438,779	276,978	139,263	137,715	528,791	265,487	263,304
2019	896,900	451,689	445,211	281,053	141,370	139,683	532,186	267,438	264,748
2020	909,107	457,934	451,173	285,150	143,478	141,672	537,874	270,459	267,415
2021	920,431	463,743	456,688	289,321	145,614	143,707	546,322	274,779	271,543
2022	931,277	469,315	461,962	293,519	147,763	145,756	555,999	279,695	276,304
2023	941,563	474,605	466,958	297,670	149,887	147,783	566,205	284,867	281,338
2024	951,206	479,568	471,638	301,701	151,950	149,751	576,242	289,953	286,289
2025	960,122	484,160	475,962	305,537	153,914	151,623	585,412	294,613	290,799
2026	968,368	488,411	479,957	309,231	155,806	153,425	594,179	299,073	295,106
2027	975,998	492,350	483,648	312,827	157,648	155,179	603,010	303,562	299,448
2028	982,929	495,933	486,996	316,255	159,404	156,851	611,206	307,738	303,468
2029	989,079	499,115	489,964	319,440	161,038	158,402	618,070	311,261	306,809
2030	994,366	501,852	492,514	322,309	162,513	159,796	622,901	313,789	309,112

Table 7.8B Projected School age Population Size of Tigray Region : 1995-2030
Low Variant

Year	Population Aged 7-12			Population Aged 13-14			Population Aged 15-18		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	526,214	265,674	260,540	154,606	77,422	77,184	278,651	138,214	140,437
1996	529,222	268,195	261,027	163,586	81,932	81,654	286,902	142,813	144,089
1997	538,065	273,317	264,748	169,465	85,029	84,436	295,928	147,783	148,145
1998	550,923	280,199	270,724	173,355	87,212	86,143	305,406	152,961	152,445
1999	565,972	287,997	277,975	176,366	88,979	87,387	315,011	158,182	156,829
2000	581,392	295,869	285,523	179,609	90,829	88,780	324,422	163,285	161,137
2001	598,398	304,378	294,020	182,343	92,430	89,913	333,851	168,376	165,475
2002	618,203	314,084	304,119	183,829	93,449	90,380	343,517	173,566	169,951
2003	638,986	324,145	314,841	185,175	94,384	90,791	353,095	178,692	174,403
2004	658,925	333,718	325,207	187,496	95,736	91,760	362,262	183,589	178,673
2005	676,198	341,962	334,236	191,900	98,002	93,898	370,692	188,094	182,598
2006	691,070	348,940	342,130	199,648	101,762	97,886	377,295	191,718	185,577
2007	704,755	355,213	349,542	210,001	106,683	103,318	382,287	194,571	187,716
2008	716,857	360,686	356,171	221,067	111,897	109,170	387,304	197,385	189,919
2009	726,979	365,264	361,715	230,954	116,533	114,421	393,988	200,895	193,093
2010	734,723	368,849	365,874	237,768	119,722	118,046	403,975	205,834	198,141
2011	738,465	370,685	367,780	240,604	121,017	119,587	419,897	213,393	206,504
2012	738,468	370,835	367,633	240,723	120,998	119,725	440,660	223,083	217,577
2013	737,172	370,436	366,736	239,485	120,335	119,150	462,321	233,118	229,203
2014	737,013	370,625	366,388	238,250	119,697	118,553	480,930	241,709	239,221
2015	740,428	372,538	367,890	238,379	119,754	118,625	492,540	247,068	245,472
2016	748,372	376,649	371,723	239,993	120,575	119,418	494,398	247,880	246,518
2017	759,219	382,200	377,019	242,185	121,714	120,471	489,134	245,335	243,799
2018	771,539	388,482	383,057	244,772	123,066	121,706	480,881	241,409	239,472
2019	783,899	394,781	389,118	247,573	124,528	123,045	473,770	238,076	235,694
2020	794,869	400,389	394,480	250,405	125,997	124,408	471,933	237,311	234,622
2021	804,461	405,312	399,149	253,331	127,502	125,829	476,607	239,727	236,880
2022	813,629	410,025	403,604	256,474	129,115	127,359	485,036	244,008	241,028
2023	822,354	414,516	407,838	259,737	130,787	128,950	495,366	249,233	246,133
2024	830,616	418,771	411,845	263,027	132,472	130,555	505,741	254,480	251,261
2025	838,398	422,779	415,619	266,248	134,122	132,126	514,308	258,828	255,480
2026	845,712	426,549	419,163	269,464	135,769	133,695	522,302	262,891	259,411
2027	852,569	430,087	422,482	272,737	137,443	135,294	530,958	267,282	263,676
2028	858,953	433,383	425,570	275,973	139,099	136,874	538,424	271,082	267,342
2029	864,841	436,422	428,419	279,077	140,689	138,388	542,843	273,367	269,476
2030	870,217	439,194	431,023	281,955	142,166	139,789	542,361	273,217	269,144

Table 7.8C Projected School age Population Size of Tigray Region : 1995-2030
High Variant

Year	Population Aged 7-12			Population Aged 13-14			Population Aged 15-18		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	526,214	265,674	260,540	154,606	77,422	77,184	278,651	138,214	140,437
1996	531,328	269,258	262,070	164,477	82,379	82,098	286,975	142,850	144,125
1997	539,393	273,990	265,403	170,591	85,594	84,997	296,013	147,826	148,187
1998	550,176	279,828	270,348	174,304	87,688	86,616	305,466	152,991	152,475
1999	563,445	286,729	276,716	176,978	89,286	87,692	315,036	158,195	156,841
2000	578,964	294,649	284,315	179,971	91,011	88,960	324,422	163,285	161,137
2001	596,889	303,617	293,272	182,375	92,446	89,929	333,822	168,362	165,460
2002	617,376	313,662	303,714	183,286	93,177	90,109	343,439	173,527	169,912
2003	640,193	324,741	315,452	184,063	93,827	90,236	352,972	178,630	174,342
2004	665,105	336,810	328,295	186,064	95,018	91,046	362,120	183,518	178,602
2005	691,879	349,828	342,051	190,648	97,375	93,273	370,585	188,040	182,545
2006	722,138	364,538	357,600	198,553	101,212	97,341	376,719	191,429	185,290
2007	756,043	380,973	375,070	208,876	106,116	102,760	380,724	193,786	186,938
2008	791,151	398,010	393,141	220,506	111,611	108,895	385,068	196,262	188,806
2009	825,026	414,530	410,496	232,335	117,222	115,113	392,222	200,008	192,214
2010	855,227	429,412	425,815	243,254	122,473	120,781	404,653	206,174	198,479
2011	881,194	442,433	438,761	253,388	127,436	125,952	424,527	215,717	208,810
2012	904,548	454,337	450,211	263,475	132,428	131,047	450,199	227,870	222,329
2013	926,139	465,464	460,675	273,330	137,341	135,989	478,419	241,197	237,222
2014	946,811	476,148	470,663	282,766	142,069	140,697	505,939	254,264	251,675
2015	967,415	486,729	480,686	291,598	146,504	145,094	529,510	265,634	263,876
2016	987,721	497,086	490,635	299,714	150,599	149,115	548,605	275,111	273,494
2017	1,007,162	506,994	500,168	307,242	154,426	152,816	565,389	283,651	281,738
2018	1,026,082	516,632	509,450	314,341	158,054	156,287	580,652	291,550	289,102
2019	1,044,827	526,183	518,644	321,178	161,554	159,624	595,188	299,104	296,084
2020	1,063,743	535,827	527,916	327,913	164,994	162,919	609,788	306,610	303,178
2021	1,082,702	545,501	537,201	334,439	168,320	166,119	624,374	314,023	310,351
2022	1,101,480	555,088	546,392	340,649	171,487	169,162	638,418	321,144	317,274
2023	1,120,257	564,677	555,580	346,701	174,574	172,127	652,038	328,043	323,995
2024	1,139,217	574,357	564,860	352,757	177,663	175,094	665,350	334,787	330,563
2025	1,158,539	584,216	574,323	358,978	180,834	178,144	678,470	341,445	337,025
2026	1,178,103	594,194	583,909	365,256	184,034	181,222	691,320	347,971	343,349
2027	1,197,790	604,235	593,555	371,484	187,208	184,276	703,823	354,320	349,503
2028	1,217,780	614,426	603,354	377,823	190,438	187,385	716,096	360,560	355,536
2029	1,238,253	624,855	613,398	384,432	193,803	190,629	728,255	366,760	361,495
2030	1,259,396	635,613	623,783	391,473	197,385	194,088	740,418	372,988	367,430

Appendix I Short Questionnaire (English translation)

1994 ETHIOPIAN POPULATION AND HOUSING CENSUS SHORT QUESTIONNAIRE - URBAN

LOCALITY NAME _____

SECTION 1 - AREA IDENTIFICATION

1. KILLIL	2. ZONE	3. WEREDA	4. TOWN	5. KEFETEGNA	6. SUPERVISION AREA	7. KEBELE	8. ENUMERATION AREA

SECTION 2 - TYPE OF RESIDENCE AND HOUSING UNIT PARTICULARS

9. TYPE OF RESIDENCE		10. HOUSING UNIT SERIAL NO.			11. HOUSE NO./SUB NO.	12. HOUSEHOLD SERIAL NO.		
1=CONVENTIONAL HOUSEHOLD 2= HOTEL/HOSTEL 3=OTHER COLLECTIVE QUARTERS 4= XXXX 5=HOMELESS								

SECTION 3 - PARTICULARS OF HOUSEHOLD MEMBERS

SERIAL NUMBER OF HOUSEHOLD MEMBERS	NAME OF USUAL HOUSEHOLD MEMBER	RESIDENCE STATUS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	AGE	RELIGION	LANGUAGE		ETHNIC GROUP	MARITAL STATUS
	LIST NAMES OF MEMBERS IN THE FOLLOWING ORDER -HEAD -SPOUSE -NEVER MARRIED CHILDREN ACCORDING TO SENIORITY IN AGE -MARRIED CHILDREN AND THEIR HOUSEHOLD MEMBERS WHO LIVE IN THIS HOUSING UNIT -OTHER RELATIVES -NON-RELATIVES -VISITORS	1= RESIDENT PRESENT 2= RESIDENT ABSENT 3= VISITOR	0=HEAD 1=SPOUSE 2=SON/DAUGHTER OF HEAD AND SPOUSE 3=SON/DAUGHTER OF HEAD 4=SON/DAUGHTER OF SPOUSE 5=MOTHER/FATHER OF HEAD/SPOUSE 6=SISTER/BROTHER OF HEAD/SPOUSE 7=OTHER RELATIVES 8=NON RELATIVES	1= MALE 2= FEMALE	WHAT IS _____'S AGE ? ENTER AGE IN COMPLETED YEARS. IF _____'S AGE IS UNDER ONE YEAR, ENTER '00' IN THE COLUMN	WHAT IS _____'S RELIGION ? 1=ORTHODOX 2=PROTESTANT 3=CATHOLIC 4=MUSLIM 5=TRADITIONAL 6=OTHER	WHAT IS _____'S MOTHER TONGUE ?	DOES _____ SPEAK ANOTHER LANGUAGE ? IF YES STATE THE MOST FREQUENTLY USED ADDITIONAL LANGUAGE. IF NO WRITE "00 NOT SPEAK"	WHAT IS _____'S ETHNIC GROUP ?	10 YEARS AND ABOVE 1=NEVER MARRIED 2=CURRENTLY MARRIED 3=DIVORCED 4=WIDOWED
13	14	15	16	17	18	19	20	21	22	23
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										

NAME OF ENUMERATOR AND SUPERVISOR

ENUMERATOR _____ SIG. _____ DATE ____/____/____

SUPERVISOR _____ SIG. _____ DATE ____/____/____

Appendix II Long Urban Questionnaire (English translation)

1994 ETHIOPIAN POPULATION AND HOUSING CENSUS LONG QUESTIONNAIRE - URBAN

SECTION 1-AREA IDENTIFICATION

1. killil	2. ZONE	3. WEREDA	4. TOWN	5. KEFTEGNA	6. SUPERVISION AREA	7. KEBELE	8. ENUMERATION AREA

SECTION 2 .TYPE OF RESIDENCE AND HOUSING UNIT PARTICULARS

LOCALITY NAME_____

9.TYPE OF RESIDENCE	10. HOUSING UNIT SERIAL NUMBER	11.HOUSE No./ SUB No.	12. HOUSEHOLD SERIAL NUMBER
1=CONVENTIONAL HOUSEHOLD 2= HOTEL/HOSTEL 3=OTHER COLLECTIVE QUARTERS 4=X X X X 5=HOMELESS			

SECTION 3 - PARTICULARS OF HOUSEHOLD MEMBERS

	ASK FOR EVERY MEMBER OF THE HOUSEHOLD											FIVE YEAR AND OVER		ASK FOR MEMBERS AGED 10 YEARS AND OVER					ASK FOR WOMEN AGED 10 YEARS AND OVER				
							LANGUAGE			MIGRATION STATUS			EDUCATIONAL STATUS		ECONOMIC STATUS				MARITAL STATUS	TOTAL NUMBER OF CHILDREN EVERBORN ALIVE				BIRTHS LAST 12 MONTHS
SERIAL NUMBER OF HOUSEHOLD MEMBERS	NAME OF USUAL HOUSEHOLD MEMBERS	RESIDENCE STATUS	RELATIONSHIP TO THE HEAD OF THE HOUSEHOLD	SEX	AGE	RELIGION			ETHNIC GROUP		ASK ONLY FOR CODES 0-7 IN col 23	DISABILITY STATUS			REASON FOR NOT WORKING	FOR THOSE WHO HAVE BEEN ENGAGED IN PRODUCTIVE WORK DURING THE LAST SEVEN DAYS FOR AT LEAST ONE DAY (COL. 28 CODE 1.7), UNEMPLOYED WITH PREVIOUS EXPERIENCE (COL. 29 CODE 02) AND FOR THOSE WHO HAD WORK BUT DID NOT WORK DURING THE LAST SEVEN DAYS (COL. 29 CODE 03)				WHAT IS THE NUMBER OF CHILDREN LIVING AT HOME ?	WHAT IS THE NUMBER OF CHILDREN LIVING ELSEWHERE ?	WHAT IS THE NUMBER OF CHILDREN DEAD ?		DID YOU HAVE A LIVE BIRTH DURING THE LAST 12 MONTHS ? IF YES, ENTER THE NUMBER OF LIVE BIRTHS, OTHERWISE ENTER '0'
	LIST NAMES OF MEMBERS IN THE FOLLOWING ORDER - HEAD - SPOUSE - NEVER MARRIED CHILDREN ACCORDING TO SENIORITY IN AGE - MARRIED CHILDREN AND THEIR HOUSEHOLD MEMBERS WHO LIVE IN THIS HOUSING UNIT - OTHER RELATIVES - NON-RELATIVES - VISITORS	1= RESIDENT PRESENT 2= RESIDENT ABSENT 3= VISITOR	0=HEAD 1=SPOUSE 2=SON/DAUGHTER OF HEAD AND SPOUSE 3=SON/DAUGHTER OF HEAD 4=SON/DAUGHTER OF SPOUSE 5=MOTHER/FATHER OF HEAD/SPOUSE 6=SISTER/BROTHER OF HEAD/SPOUSE 7=OTHER RELATIVES 8=NON-RELATIVES	1= MALE 2= FEMALE	WHAT IS ____'S AGE ? ENTER AGE IN COMPLETED YEARS. IF ____'S AGE IS UNDER ONE YEAR, ENTER '00' IN THE COLUMN	WHAT IS ____'S RELIGION ? 1=ORTHODOX 2=PROTESTANT 3=CATHOLIC 4=MUSLIM 5=TRADITIONAL 6=OTHER	WHAT IS ____'S MOTHER TONGUE ?	DOES ____ SPEAK ANOTHER LANGUAGE ? IF YES STATE THE MOST FREQUENTLY USED ADDITIONAL LANGUAGE. IF NO WRITE "DO NOT SPEAK".	WHAT IS ____'S ETHNIC GROUP ?	WHAT IS THE NUMBER OF YEARS ____ HAS CONTINUOUSLY LIVED IN THIS TOWN?	IF PREVIOUS RESIDENCE WAS IN AN URBAN AREA WRITE NAME OF TOWN, IF IT WAS IN A RURAL AREA WRITE 'RURAL'	IS THERE A MEMBER OF THE HOUSEHOLD WHO IS PHYSICALLY OR MENTALLY DISABLED ? IF YES, STATE THE TYPE	ENTER GRADE ENROLLED FOR THOSE NOW ATTENDING SCHOOL 97=ATTENDED SCHOOL IN THE PAST 98=NEVER ATTENDED SCHOOL	IS ____ LITERATE ? WRITE '00' FOR ILLITERATE AND IF LITERATE HIGHEST GRADE COMPLETED	WAS ____ ENGAGED IN PRODUCTIVE WORK DURING THE LAST SEVEN DAYS? IF YES WRITE THE NUMBER OF DAYS WORKED. IF NO WRITE "0"	IF DID NOT WORK (COL. 28 CODE 2), WHAT WAS THE REASON FOR NOT WORKING	OCCUPATION	MAJOR PRODUCT OR SERVICE OF ESTABLISHMENT	STATUS	1=NEVER MARRIED 2=CURRENTLY MARRIED 3=DIVORCED 4=WIDOWED					
																				MALE	FEMALE	MALE	FEMALE	MALE	FEMALE		
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		36		37	38
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Appendix III Long Rural Questionnaire (English translation)

1994 ETHIOPIAN POPULATION AND HOUSING CENSUS LONG QUESTIONNAIRE– RURAL

SECTION 1-AREA IDENTIFICATION

1. Killil	2. ZONE	3. WEREDA	4. TOWN	5. KEFTEGNA	6. SUPERVISION AREA	7. FARMER' ASSOCIATION	8. ENUMERATION AREA

SECTION 2 .TYPE OF RESIDENCE AND HOUSING UNIT PARTICULARS

LOCALITY NAME_____

9.TYPE OF RESIDENCE	10. HOUSING UNIT SERIAL NUMBER	11.HOUSE No./ SUB No.	12. HOUSEHOLD SERIAL NUMBER
1=CONVENTIONAL HOUSEHOLD 2= HOTEL/HOSTEL 3=OTHER COLLECTIVE QUARTERS 4=NOMADS 5=HOMELESS			

SECTION 3 - PARTICULARS OF HOUSEHOLD MEMBERS

	ASK FOR EVERY MEMBER OF THE HOUSEHOLD												FIVE YEAR AND OVER		ASK FOR MEMBERS AGED 10 YEARS AND OVER						ASK FOR WOMEN AGED 10 YEARS AND OVER						
	NAME OF USUAL HOUSEHOLD MEMBERS	RESIDENCE STATUS	RELATIONSHIP TO THE HEAD OF THE HOUSEHOLD	SEX	AGE	RELIGION	LANGUAGE		ETHNIC GROUP	MIGRATION STATUS		DISABILITY STATUS	EDUCATIONAL STATUS		ECONOMIC STATUS				MARITAL STATUS	TOTAL NUMBER OF CHILDREN EVERBORN ALIVE						BIRTHS LAST 12 MONTHS
SERIAL NUMBER OF HOUSEHOLD MEMBERS	LIST NAMES OF MEMBERS IN THE FOLLOWING ORDER - HEAD - SPOUSE - NEVER MARRIED CHILDREN ACCORDING TO SENIORITY IN AGE - MARRIED CHILDREN AND THEIR HOUSEHOLD MEMBERS WHO LIVE IN THIS HOUSING UNIT - OTHER RELATIVES - NON-RELATIVES - VISITORS	1= RESIDENT PRESENT 2= RESIDENT ABSENT 3= VISITOR	0=HEAD 1=SPOUSE 2=SON/DAUGHTER OF HEAD AND SPOUSE 3=SON/DAUGHTER OF HEAD 4=SON/DAUGHTER OF SPOUSE 5=MOTHER/FATHER OF HEAD/SPOUSE 6=SISTER/BROTHER OF HEAD/SPOUSE 7=OTHER RELATIVES 8=NON-RELATIVES	1= MALE 2= FEMALE	WHAT IS _____'S AGE ? ENTER AGE IN COMPLETED YEARS; IF _____'S AGE IS UNDER ONE YEAR, ENTER '00' IN THE COLUMN	WHAT IS _____'S RELIGION ? 1=ORTHODOX 2=PROTESTANT 3=CATHOLIC 4=MUSLIM 5=TRADITIONAL 6=OTHER	WHAT IS _____'S MOTHER TONGUE ?	DOES _____ SPEAK ANOTHER LANGUAGE ? IF YES STATE THE MOST FREQUENTLY USED ADDITIONAL LANGUAGE. IF NO WRITE "DO NOT SPEAK".	WHAT IS _____'S ETHNIC GROUP ?	WHAT IS THE NUMBER OF YEARS _____ HAS CONTINUOUSLY LIVED IN THE RURAL AREA OF THIS WEREDA ?	ASK ONLY IF CODES 0-7 IN col 23 IF PREVIOUS RESIDENCE WAS IN AN URBAN AREA WRITE NAME OF TOWN; IF IT WAS IN A RURAL AREA WRITE 'RURAL'	IS THERE A MEMBER OF THE HOUSEHOLD WHO IS PHYSICALLY OR MENTALLY DISABLED ? IF YES, STATE THE TYPE	ENTER GRADE ENROLLED FOR THOSE NOW ATTENDING SCHOOL 97=ATTENDED SCHOOL IN THE PAST 98=NEVER ATTENDED SCHOOL	IS _____ LITERATE ? WRITE '00' FOR ILLITERATE AND IF LITERATE HIGHEST GRADE COMPLETED	WAS _____ ENGAGED IN PRODUCTIVE WORK DURING MOST OF LAST 12 MONTHS ? 1= YES 2= NO	REASON FOR NOT WORKING IF DID NOT WORK (COL. 28 CODE 2), WHAT WAS THE REASON FOR NOT WORKING	FOR THOSE WHO HAVE BEEN ENGAGED IN PRODUCTIVE WORK DURING MOST OF THE LAST 12 MONTHS (COL. 28 CODE 1), UNEMPLOYED WITH PREVIOUS WORK EXPERIENCE (COL. 29 CODE 02) AND FOR THOSE WHO HAD WORK BUT DID NOT WORK DURING THE LAST 12 MONTHS (COL. 29 CODE 03) OCCUPATION	MAJOR PRODUCT OR SERVICE OF ESTABLISHMENT	STATUS	1=NEVER MARRIED 2=CURRENTLY MARRIED 3=DIVORCED 4=WIDOWED	WHAT IS THE NUMBER OF CHILDREN LIVING AT HOME ?		WHAT IS THE NUMBER OF CHILDREN LIVING ELSEWHERE ?		WHAT IS THE NUMBER OF CHILDREN DEAD ?		WHAT IS THE TOTAL NUMBER OF CHILDREN EVERBORN ALIVE ?	DID YOU HAVE A LIVE BIRTH DURING THE LAST 12 MONTHS ? IF YES ENTER THE NUMBER OF LIVE BIRTHS, OTHERWISE ENTER '0'
																					MALE	FEMALE	MALE	FEMALE	MALE	FEMALE		
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		35		36		37	38
01																												
02																												
03																												
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07																												
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09																												
10																												

SECTION 4:- DETAILED INFORMATION ON HOUSING UNIT

39	40	41	42	43	44	45	46	47	48	49	50
WILL HOUSING UNIT INFORMATION BE COLLECTED? 1=YES 2=NO	WHAT IS THE TYPE OF HOUSING UNIT? 1= PERMANENT 2=IMPROVISED 3=MOBILE 4=OTHER/SPECIFY/_____	WHAT IS THE MAJOR MATERIAL USED FOR THE CONSTRUCTION OF THE WALL? 1=WOOD AND MUD 2=WOOD AND THATCH 3=REED/BAMBOO 4=STONE AND MUD 5=STONE AND CEMENT 6=BLOKETS 7=BRICKS 8=OTHRE /SPECIFY/_____	WHAT IS THE MAJOR MATERIAL USED FOR THE CONSTRUCTION OF THE ROOF? 1=CORRUGATED IRON 2=THATCH 3=WOOD AND MUD 4=REED/BAMBOO 5= OTHER /SPECIFY/_____	WHERE DO THE RESIDENTS OF THE HOUSING UNIT GET THEIR DRINKING WATER? 1=TAP 2=PROTECTED WELL/SPRING 3=UNPROTECTED WELL/SPRING 4= RIVER / LAKE / POND	WHAT IS THE NUMBER OF ROOMS IN THE HOUSING UNIT?	WHAT TYPE OF TOILET DOES THE HOUSING UNIT HAVE? 1=NONE 2=PIT OR FLUSH TOILET	DO DOMESTIC ANIMALS SPEND THE NIGHT IN THE ROOMWHERE MEMBERS SPEND THE NIGHT? 1=YES 2=NO	DOES THE HOUSING UNIT HAVE A SEPARATE KITCHEN? 1=HAS A ROOM MAINLY USED AS A KITCHEN 2=USES AS KITCHEN A ROOM WHERE MEMBERS SPEND THE NIGHT 3=USES AS KITCHEN THE ROOM WHERE LIVESTOCK SPEND THE NIGHT 4=HAS NO KITCHEN	WHAT TYPE OF FUEL IS MOSTLY USED FOR COOKING IN THE HOUSING UNIT? 1=FIRE WOOD /LEAVES/ 2=DUNG /MANURE/ 3=CHARCOAL 4=KEROSINE 5= OTHER /SPECIFY/_____ 6=USES NO FUEL	IS THERE A RADIO IN THIS HOUSING UNIT? 1=YES 2=NO	NAME OF ENUMERATOR AND SUPERVISOR DESIGNATION ENUMERATOR SUPERVISOR NAME_____ SIGNATURE_____ DATE_____

SECTION 4 - DETAILED INFORMATION ON HOUSING UNIT

39. WILL HOUSING UNIT INFORMATION TO BE COLLECTED ?

1= YES 2= NO

40. WHAT IS THE TOTAL NUMBER OF HOUSEHOLDS LIVING IN THE HOUSING UNIT ?

41. WHAT IS THE TOTAL NUMBER OF MEMBERS OF HOUSEHOLD OR HOUSEHOLDS IN THE HOUSING UNIT ?

MALE	FEMALE	TOTAL

42. WHAT IS THE TYPE OF HOUSING UNIT ?

1= PERMANENET
2= IMPROVISED
3= MOBILE
4= OTHER/SPECIFY/_____

43. WHAT IS THE TYPE OF BUILDING IN WHICH THE HOUSING UNIT IS FOUND?

0= NON-STOREYED DETACHED
1= NON-STOREYED 2 UNITS ATTACHED
2= NON-STOREYED 3-5 UNITS ATTACHED
3= NON-STOREYED 6 OR MORE UNITS ATTACHED
4= ONE OR MORE STOREYED DETACHED
5= ONE OR MORE STOREYED,2-3 UNITS ATTACHED
6= ONE OR MORE STOREYED, 4-6 UNITS ATTACHED
7= ONE OR MORE STOREYED,7-10 UNITS ATTACHED
8= ONE OR MORE STOREYED, 11 OR MORE UNITS ATTACHED

44. HOW MANY YEARS AGO WAS THE HOUSING UNIT BUILT ?

1= LESS THAN FIVE YEARS
2= 5-9 YEARS
3= 10-14 YEARS
4= 15-19 YEARS
5= 20 YEARS OR MORE

45. WHAT IS THE MAJOR MATERIAL USED FOR THE CONSTRUCTION OF THE WALL OF THE HOUSING UNIT ?

1= WOOD AND MUD
2= WOOD AND THATCH
3= STONE AND MUD
4= STONE AND CEMENT
5= BLOCKETS
6= BRICKS
7= REED/BAMBOO
8= OTHER/SPECIFY/_____

46. WHAT IS THE MATERIAL USED FOR THE CONSTRUCTION OF THE MAJOR PART OF THE ROOF OF THE HOUSING UNIT ?

1= CORRUGATED IRON SHEET
2= CONCRETE OR CEMENT
3= THATCH
4= WOOD AND MUD
5= BAMBOO OR REED
6= OTHER/SPECIFY/____

47. WHAT IS THE MATERIAL USED FOR THE CONSTRUCTION OF THE MAJOR PART OF THE CEILING OF THE HOUSING UNIT ?

1= NONE
2= FABRICS
3= CHIPWOOD/HARD BOARD
4= WOODEN
5= CONCRETE
6= OTHER/SPECIFY/_____

48. WHAT IS THE MAJOR MATERIAL USED FOR THE CONSTRUCTION OF THE FLOOR OF THE HOUSING UNIT ?

1= MUD
2= WOOD TILES
3= CEMENT/CONCRETE FINISH
4= PLASTIC TILES
5= CEMENT BRICK TILE
6= BAMBOO OR REED
7= OTHER/SPECIFY/_____

49. HOW MANY ROOMS ARE THERE IN THE HOUSING UNIT?

_____

50. WHAT IS THE TYPE OF TENURE OF THE HOUSING UNIT ?

1= OWNER OCCUPIED
2= RENTED FROM KEBELE
3= RENTED FROM PUBLIC HOUSING AGENCY
4= RENTED FROM OTHER ORGANIZATION
5= PAYING DIFFERENCE IN RENT
6= RENTED FROM PRIVATE HOUSEHOLD
7= RENT FREE

51. IF RENTED, WHAT IS THE MONTHLY AMOUNT OF RENT IN BIRR ?

_____

52 WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR THE MEMBERS OF THIS HOUSING UNIT ?

1= TAP INSIDE THE HOUSE
2= TAP IN COMPOUND, PRIVATE
3= TAP IN COMPOUND, SHARED
4= TAP OUTSIDE COMPOUND/ FROM PRIVATE TAP, PUBLIC TAP, OTHER ORGANIZATION, BOUGHT OR FREE OF CHARGE/
5= PROTECTED WELL OR SPRING
6= UNPROTECTED WELL OR SPRING
7= RIVER, LAKE/POND

53. WHAT TYPE OF KITCHEN DOES THE HOUSING UNIT HAVE?

1= NO KITCHEN
2= MODERN KITCHEN PRIVET
3= MODERN KITCHEN SHARED
4= TRADITIONAL KITCHEN PRIVATE
5= TRADITIONAL KITCHEN SHARED

54. WHAT TYPE OF FUEL IS MOSTLY USED FOR COOKING IN THE HOUSING UNIT ?

01= USES NO FUEL
02= ELECTRICITY
03= GAS
04= KEROSINE
05= CHARCOAL
06= FIREWOOD/LEAVES SAWDUST
07= DUNG/MANURE
08= FIREWOOD AND CHARCOAL
09= FIREWOOD AND DUNG
10= FIREWOOD AND KEROSINE
11= FIREWOOD AND GAS
12 =ELECTRICITY AND KEROSINE
13 =ELECTRICITY AND FIREWOOD
14 =ELECTRICITY AND CHARCOAL
15= ELECTRICITY AND GAS
16= OTHER/SPECIFY/_____

55. WHAT TYPE OF BATHING FACILITY DOES THE HOUSING UNIT HAVE ?

1= NONE
2= BATHTUB PRIVATE
3= BATHTUB SHARED
4= SHOWER PRIVATE
5= SHOWER SHARED
6= OTHER/SPECIFY/_____

56. WHAT TYPE OF TOILET FACILITY DOES THE HOUSING UNIT HAVE ?

1= NONE
2= FLUSH TOILET, PRIVATE
3= FLUSH TOILET, SHARED
4= PIT, PRIVATE
5= PIT, SHARED

57 WHAT TYPE OF LIGHTING HAS THE HOUSING UNIT ?

1= ELECTRICITY (METER PRIVATE)
2= ELECTRICITY (METER SHARED)
3= LANTERN
4= KEROSINE
5= OTHER/SPECIFY/____

58. IS THERE A RADIO IN THIS HOUSING UNIT ?

1= YES
2= NO

59. IS THERE A TELEPHONE IN THIS HOSING UNIT ?

1= YES
2= NO

60. IS THERE A TELEVISION SET IN THIS HOUSING UNIT ?

1= YES
2= NO

NAME OF ENUMERATOR AND SUPERVISOR

61.	NAME	SIGNATURE	DATE
ENUMERATOR			
SUPERVISOR			

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while housing units with blockets and bricks accounted for less than one percent. "Other" type of construction materials used for walls constituted 1.0 percent. The table presents materials of construction of walls by zone and in all zones high proportion of stone and mud walls was observed.

b) Construction Materials of Roof

The majority of the roofs of housing units in Tigray region particularly those of the rural areas have roofs mostly made of wood and mud. Table 6.4 presents the construction materials of roof and indicates that the most prevalent type of materials (45.1 percent) used for the construction of roofs was wood and mud. The corresponding figures in urban and rural areas were 11.8 and 51.9 percent, respectively. The construction materials of roofs in the urban areas is of better quality compared to those in the rural areas. In the rural areas the majority of the roofs of housing units are made of thatched/grass and this accounted for 39.4 percent. Only 5.5 percent of the housing units in the rural areas had roofs made of corrugated iron sheets whereas in urban areas roofs made of corrugated iron sheets accounted for 73.6 percent.

Among the zones the use of wood and mud for the construction of roof is highest in Misrakawi Zone (80.8 percent) and lowest in Debubawi Zone (21.2 percent). A higher proportion (62.6 percent) of housing units with thatch/grass roof were found in rural areas of Debubawi Zone, while the lowest proportion (4.6 percent), were found in rural areas of Misrakawi Zone.

c) Construction Materials of Floor

Data on construction materials of floor were only collected in urban areas. The distribution of housing units in the urban areas by type of materials used for the construction of floor is shown in Table 6.5. It may be observed from the table that 83.9 percent of the urban housing units had earth/mud floor, about 10.0 percent had cement/concrete floor and only 2.1 percent had floor of cement brick tiles. Wood and Plastic types of tile put together comprised about 0.8 percent of all housing units.

The overall pattern of materials used in the construction of floor observed for the urban areas as a whole also holds for most of the zones of urban areas. However, among the zones, the use of earth/mud for the construction of floor is highest in Mirabawi Zone(88.8 percent) and lowest in Misrakawi Zone (81.5 percent). Mehakelegnaw and Debubawi Zones occupy second (83.9 percent) and third (82.8 percent) positions, respectively. The use of cement/concrete in the

Table 6.4 Distribution of Housing Units by Construction Material of Roof and Zones, Tigray Region : 1994

URBAN/RURAL		All Housing Units	MATERIAL OF ROOF					
			Corrugated Iron Sheets	Thatch	Wood and Mud	Reed/ Bamboo	Others	Not Stated
		TIGRAY REGION						
Urban + Rural	No.	686,876	116,446	238,530	310,007	8,869	8,799	4,225
	%	100.0	17.0	34.7	45.1	1.3	1.3	0.6
Urban	No.	115,421	84,957	13,114	13,592	496	1,866	1,396
	%	100.0	73.6	11.4	11.8	0.4	1.6	1.2
Rural	No.	571,455	31,489	225,416	296,415	8,373	6,933	2,829
	%	100.0	5.5	39.5	51.9	1.5	1.2	0.5
		MIRABAWI						
Urban + Rural	No.	158,010	24,231	71,813	54,735	2,891	3,324	1,016
	%	100.0	15.3	45.5	34.6	1.8	2.1	0.6
Urban	No.	21,741	15,803	4,153	956	61	491	277
	%	100.0	72.7	19.1	4.4	0.3	2.3	1.3
Rural	No.	136,269	8,428	67,660	53,779	2,830	2,833	739
	%	100.0	6.2	49.7	39.5	2.1	2.1	0.5
		MEHAKELEGNAW						
Urban + Rural	No.	204,469	27,750	59,519	112,636	2,272	1,076	1,216
	%	100.0	13.6	29.1	55.1	1.1	0.5	0.6
Urban	No.	23,890	18,271	1,236	3,645	47	427	264
	%	100.0	76.5	5.2	15.3	0.2	1.8	1.1
Rural	No.	180,579	9,479	58,283	108,991	2,225	649	952
	%	100.0	5.3	32.3	60.4	1.2	0.4	0.5
		MISRAKAWI						
Urban + Rural	No.	124,179	15,931	5,475	100,271	1,227	538	737
	%	100.0	12.8	4.4	80.8	1.0	0.4	0.6
Urban	No.	20,771	13,160	693	6,248	135	201	334
	%	100.0	63.4	3.3	30.1	0.7	1.0	1.6
Rural	No.	103,408	2,771	4,782	94,023	1,092	337	403
	%	100.0	2.7	4.6	90.9	1.1	0.3	0.4
		DEBUBAWI						
Urban + Rural	No.	200,218	48,534	101,723	42,365	2,479	3,861	1,256
	%	100.0	24.2	50.8	21.2	1.2	1.9	0.6
Urban	No.	49,019	37,723	7,032	2,743	253	747	521
	%	100.0	77.0	14.4	5.6	0.5	1.5	1.1
Rural	No.	151,199	10,811	94,691	39,622	2,226	3,114	735
	%	100.0	7.2	62.6	26.2	1.5	2.1	0.5

Table 6.5 Distribution of Housing Units by Construction Material of Floor and Zones, Urban Tigray: 1994

ZONES		All Housing Units	MATERIAL OF FLOOR							
			Mud	Wood Tiles	Cement/ Concrete	Plastic Tiles	Cement Brick Tiles	Bamboo/ Reed	Others	Not Stated
TIGRAY REGION	No.	115,421	96,867	327	11,312	546	2,457	21	2,400	1,491
	%	100.0	83.9	0.3	9.8	0.5	2.1	-	2.1	1.3
MIRABAWI	No.	21,741	19,310	76	1,521	71	444	-	4	315
	%	100.0	88.8	0.4	7.0	0.3	2.0	-	-	1.5
MEHAKELEGNAW	No.	23890	20,052	53	2,989	91	397	5	-	303
	%	100.0	83.9	0.2	12.5	0.4	1.7	-	-	1.3
MISRAKAWI	No.	20771	16,922	54	3,156	61	186	4	80	308
	%	100.0	81.5	0.3	15.2	0.3	0.9	-	0.4	1.5
DEBUBAWI	No.	49019	40,583	144	3,646	323	1,430	12	2,316	565
	%	100.0	82.8	0.3	7.4	0.7	2.9	-	4.7	1.2

construction of floor is highest in Misrakawi Zone (15.2 percent) followed by Mehakelegnaw Zone (12.5 percent), Debubawi Zone (7.4 percent) and Mirabawi Zone (7.0 percent).

6.4.2 **Number of Rooms**

In the census a room was defined as a space enclosed by walls reaching from the floor to the ceiling or roof at least to a height of two meters and has a size large enough to hold a bed for an adult. Except for bathrooms, toilets and passage ways, other rooms found in the housing unit were considered as rooms.

One can obtain some idea about spacing in housing unit by examining number of rooms per household and number of persons living per room. The distribution of housing units by number of rooms and zones is presented in Table 6.6a.

It may be observed from the data in the table that the majority of the housing units in Tigray region are not only below standard but also lack adequate spacing. The highest proportion of housing units had only one room (55.7 percent) followed by two rooms (28.4 percent) and those with three rooms constitute 11.4 percent of the total housing unit. Then the proportion declines steadily with increasing number of rooms. In urban areas, the proportion of housing units with one or two rooms is relatively higher as compared to rural areas. These proportions were 82.9 percent and 89.6 percent in rural and urban areas, respectively. In rural areas about 15.6 percent of the housing unit had 3-4 rooms, while housing units with five or more rooms are almost non-existent.

As indicated above, the majority of housing units consisted of 1-2 rooms and this also holds for each zone in the urban areas although its magnitude varies from one zone to the other. The housing units with 1-2 rooms were highest (94.1 percent) in Debubawi Zone and lowest (70.3 percent) in Mehakelegnaw Zone. Housing units with three rooms varies from 3.5 percent in Debubawi Zone to 22.1 percent in Mehakelegnawi Zone. Housing units with four or more rooms were relatively higher in Mehakelegnaw Zone, and the variation between other zones was very small (see Table 6.6a.)

6.4.3 **Density of Occupation**

Density of occupation is consistent with maintenance of health and privacy of occupants. Infectious deaseses spread faster in densely populated areas; and it is more difficult to evacuate people during disasters and calamities. There are even suggestions that lack of privacy, high

Table 6.6a Distribution of Housing Units by Number of Rooms and Zones, Tigray Region: 1994

URBAN/RURAL		All Housing Units	NUMBER OF ROOMS									Total Number of Rooms
			One	Two	Three	Four	Five	Six	Seven	Eight or More	Not Stated	
TIGRAY REGION												
Urban + Rural	No.	686,876	382,568	194,769	78,398	18,460	3,461	988	335	615	7,282	1,112,861
	%	100.0	55.7	28.4	11.4	2.7	0.5	0.1	0.1	0.1	1.1	
Urban	No.	115,421	83,162	20,245	5,483	2,384	1,146	495	231	574	1,701	165,769
	%	100.0	72.1	17.5	4.8	2.1	1.0	0.4	0.2	0.5	1.5	
Rural	No.	571,455	299,406	174,524	72,915	16,076	2,315	493	104	41	5,581	947,092
	%	100.0	52.4	30.5	12.8	2.8	0.4	0.1	-	-	1.0	
MIRABAWI												
Urban + Rural	No.	158,010	84,284	49,653	17,238	3,883	594	113	40	87	2,118	255,610
	%	100.0	53.3	31.4	10.9	2.5	0.4	0.1	-	0.1	1.3	
Urban	No.	21,741	16,636	3,563	618	320	140	24	20	78	342	28,654
	%	100.0	76.5	16.4	2.8	1.5	0.6	0.1	0.1	0.4	1.6	
Rural	No.	136,269	67,648	46,090	16,620	3,563	454	89	20	9	1,776	226,956
	%	100.0	49.6	33.8	12.2	2.6	0.3	0.1	-	-	1.3	
MEHAKELEGNAW												
Urban + Rural	No.	204,469	70,814	73,072	45,136	11,081	1,714	431	101	119	2,001	409,802
	%	100.0	34.6	35.7	22.1	5.4	0.8	0.2	0.1	0.1	1.0	
Urban	No.	23,890	16,818	4,411	1,318	538	187	97	46	105	370	34,722
	%	100.0	70.4	18.5	5.5	2.3	0.8	0.4	0.2	0.4	1.6	
Rural	No.	180,579	53,996	68,661	43,818	10,543	1,527	334	55	14	1,631	375,080
	%	100.0	29.9	38.0	24.3	5.8	0.9	0.2	-	-	0.9	
MISRAKAWI												
Urban + Rural	No.	124,179	72,981	38,137	9,097	1,751	535	183	92	234	1,169	190,274
	%	100.0	58.8	30.7	7.3	1.4	0.4	0.2	0.1	0.2	0.9	
Urban	No.	20,771	14,261	3,586	1,223	482	344	163	92	216	404	32,535
	%	100.0	68.7	17.3	5.9	2.3	1.7	0.8	0.4	1.0	2.0	
Rural	No.	103,408	58,720	34,551	7,874	1,269	191	20	-	18	765	157,739
	%	100.0	56.8	33.4	7.6	1.2	0.2	-	-	-	0.7	
DEBUBAWI												
Urban + Rural	No.	200,218	154,489	33,907	6,927	1,745	618	261	102	175	1,994	257,175
	%	100.0	77.2	16.9	3.5	0.9	0.3	0.1	0.1	0.1	1.0	
Urban	No.	49,019	35,447	8,685	2,324	1,044	475	211	73	175	585	69,858
	%	100.0	72.3	17.7	4.7	2.1	1.0	0.4	0.2	0.4	1.2	
Rural	No.	151,199	119,042	25,222	4,603	701	143	50	29	-	1,409	187,317
	%	100.0	78.7	16.7	3.0	0.5	0.1	-	-	-	0.9	

noise levels, and other concomitant of high densities may tend to increase mental illness and mal-adjustments. (Laquian A.A, Basic Housing:1983, p.82)

"Over crowding" is usually measured in terms of the average number of persons per room and it is also expressed by the relationship between the average size of household and the number of rooms in the housing unit.

The average number of rooms per housing unit was about 1.7 for the region as a whole. The corresponding figures in rural and urban Tigray were 1.7 and 1.5, respectively. The average number of rooms per housing unit was relatively higher in Mehakelegnaw Zone and variation between other zones was very small. The number of rooms per housing unit is an adequate measure of crowding or spacing in view of the household size. The average household size was 4.3 for the region as a whole, while these were 4.5 and 3.8 in rural and urban Tigray region, respectively. On the average, about 2.8 persons in rural and urban areas live in a room. This number varied from 2.3 in Mehakelegnaw Zone to 3.3 in Debubawi Zone. The average household size ranged from 4.1 in Debubawi Zone to 4.5 in Mirabawi Zone. (see Table 6.6b.)

The data in table 6.7a indicated that 32.5 percent of the housing units are occupied by one to two persons. In the urban areas of Tigray region 64.5 percent of the housing units are occupied by three or more persons per housing unit. The table does not actually reflect the conditions of "overcrowding". The true picture of "overcrowding" would have been brought out if the analysis was restricted to bed rooms only. To give additional information on "over crowding", the percentage distribution of housing units by number of rooms occupied cross-classified by and number of persons is presented in Table 6.7b.

Three categories of density of occupation of housing units could be identified according to the UN recommendation of "over crowding"[1] these classifications are:

a) Housing units with more than one room occupied on the average by less than one person per room are classified as under occupied.
b) Housing units with one or more rooms occupied on the average by 2.5 or more persons per room are classified as over crowded.
c) Housing units with one or more rooms occupied on the average by one to 2.4 persons per room are classified as adequately occupied.

Based on the above classification we have also assessed the degree of over-crowding in urban areas of Tigray region and the data in table 6.7b shows that 3.4 percent of the housing

[1]U.N, Methods of Estimating Housing Needs (UN Publication No.12, New York, 1967),p.49.

Table 6.6b Selected Indicators of Over-crowding by Zones, Tigray Region: 1994

URBAN/RURAL	SELECTED INDICATORS				
	Persons per Housing unit	Rooms per Housing Unit	Rooms per Household	Persons per Room	Average Household Size
	TIGRAY REGION				
Urban + Rural	4.7	1.7	1.6	2.8	4.3
Urban	4.2	1.5	1.4	2.8	3.8
Rural	4.8	1.7	1.6	2.8	4.5
	MIRABAWI				
Urban + Rural	4.8	1.7	1.6	2.8	4.5
Urban	4.0	1.4	1.3	2.8	3.7
Rural	3.8	1.7	1.6	2.8	4.6
	MEHAKELEGNAW				
Urban + Rural	4.7	2.1	1.9	2.3	4.4
Urban	3.9	1.5	1.4	2.5	3.9
Rural	4.8	2.1	2.0	2.3	4.5
	MISRAKAWI				
Urban + Rural	4.8	1.6	1.5	3.0	4.4
Urban	4.2	1.7	1.5	2.5	3.9
Rural	4.9	1.6	1.4	3.1	4.5
	DEBUBAWI				
Urban + Rural	4.5	1.3	1.2	3.3	4.1
Urban	4.3	1.5	1.4	2.9	3.9
Rural	4.6	1.3	1.2	3.5	4.2

Table 6.7a Distribution of Housing Units by Total Number of Persons Per Housing Unit and Zones, UrbanTigray:1994

ZONES		All Housing Units	NUMBER OF PERSONS PER HOUSING UNIT									
			One Person	Two Persons	Three Persons	Four Persons	Five Persons	Six Persons	Seven Persons	Eight Persons	Nine Persons	10+ Persons
TIGRAY REGION	No.	115,421	18,004	19,547	20,138	17,314	13,525	9,525	6,729	4,602	2,667	3,370
	%	100.0	15.6	16.9	17.5	15.0	11.7	8.3	5.8	4.0	2.3	2.9
MIRABAWI	No.	21,741	3,534	3,912	3,938	3,315	2,560	1,668	1,123	730	416	545
	%	100.0	16.3	18.0	18.1	15.3	11.8	7.7	5.2	3.4	1.9	2.5
MEHAKELEGNAW	No.	23,890	4,417	4,237	4,272	3,456	2,547	1,780	1,244	893	497	547
	%	100.0	18.5	17.7	17.9	14.5	10.7	7.5	5.2	3.7	2.1	2.3
MISRAKAWI	No.	20,771	3,039	3,453	3,659	3,208	2,539	1,719	1,252	847	474	581
	%	100.0	14.6	16.6	17.6	15.4	12.2	8.3	6.0	4.1	2.3	2.8
DEBUBAWI	No.	49,019	7,014	7,945	8,269	7,335	5,879	4,358	3,110	2,132	1,280	1,697
	%	100.0	14.3	16.2	16.9	15.0	12.0	8.9	6.3	4.4	2.6	3.5

Table 6.7b Percentage* Distribution of Housing Units by Number of Rooms and Number of Persons, Urban Tigray: 1994

NUMBER OF PERSONS	NUMBER OF ROOMS PER HOUSING UNIT																				All Housing Units	
	1		2		3		4		5		6		7		8		9+		Not Stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1 Person	15983	13.8	1667	1.4	297	0.3	103	0.1	62	0.1	20	0.0	29	0.0	5	0.0	24	0.0	373	0.3	18563	16.1
2 Persons	16475	14.3	2560	2.2	471	0.4	123	0.1	80	0.1	33	0.0	15	0.0	10	0.0	26	0.0	320	0.3	20113	17.4
3 Persons	15560	13.5	2908	2.5	490	0.4	291	0.3	115	0.1	58	0.1	15	0.0	18	0.0	19	0.0	304	0.3	19778	17.1
4 Persons	13057	11.3	3041	2.6	684	0.6	276	0.2	104	0.1	57	0.1	14	0.0	10	0.0	62	0.1	193	0.2	17498	15.2
5 Persons	9393	8.1	2905	2.5	649	0.6	297	0.3	138	0.1	36	0.0	13	0.0	24	0.0	33	0.0	145	0.1	13633	11.8
6 Persons	5645	4.9	2512	2.2	730	0.6	347	0.3	99	0.1	61	0.1	24	0.0	14	0.0	64	0.1	98	0.1	9594	8.3
7 Persons	3622	3.1	1738	1.5	675	0.6	191	0.2	144	0.1	53	0.0	29	0.0	14	0.0	15	0.0	92	0.1	6573	5.7
8 Persons	1773	1.5	1418	1.2	542	0.5	268	0.2	108	0.1	47	0.0	29	0.0	45	0.1	19	0.0	43	0.0	8335	7.2
9+ Persons	1654	1.4	1496	1.3	945	0.8	488	0.4	296	0.3	130	0.1	63	0.1	164	0.1	148	0.1	133	0.1	1334	1.2
Total	83162	72.1	20245	17.5	5483	4.8	2384	2.1	1146	1.0	495	0.4	231	0.2	164	0.1	410	0.4	1701	1.5	115421	100.0

Under Occupied

Adequately Occupied

Overcrowded

* Percentage distribution of housing units is computed from the total number of housing units in the urban areas.

Adequately occupied (Between the two lines) = one to less than three persons per room '42.8%

Overcrowded (Below the two lines) = three and above persons = 52.2%

Under occupied (Above the two lines) = less than one person per room = 3.4%

units were under occupied, 52.0 percent were overcrowded and 42.7 percent were adequately occupied.

The distribution of housing units by number of householdes per housing unit indicated that about 4.3 percent of the housing units were shared by two or more households. The number of households per housing unit observed for the region as a whole also holds true for all zones. (see Table 6.8).

Table 6.8 Distribution of Housing Units by Number of Households per Housing Unit and Zones, Urban Tigray : 1994

ZONES		All Housing Units	NUMBER OF HOUSEHOLDS PER HOUSING UNIT			
			One Household	Two Households	Three(+) Households	Total Households
TIGRAYREGION	No.	115,421	110,539	4,356	526	121,178
	%	100.0	95.8	3.8	0.5	
MIRABAWI	No.	21,741	21,045	636	60	22,527
	%	100.0	96.8	2.9	0.3	
MEHAKELEGNAW	No.	23,890	22807	931	152	25,284
	%	100.0	95.5	3.9	0.6	
MISRAKAWI	No.	20,771	20,081	643	47	21,527
	%	100.0	96.7	3.1	0.2	
DEBUBAWI	No.	49,019	46,606	2,146	267	51,840
	%	100,0	95.1	4.4	0.5	

The housing units in rural areas of Tigray are not only structurally poor but also lack adequte space. As a result in about 11 percent of the housing units members of the household spend the night in the same room with their domestic animals. In the remaining 88.4 percent of the housing units, the rooms are exclusively used by members of the household. This situation not only depicts over-crowding but also portrays poor sanitary conditions of housing units in rural areas. (see Table 6.9).

Table 6.9 Distribution of Housing Units by Whether Livestock Spend the Night in the Room where Persons also Spend the Night and Zones, Rural Tigray: 1994

ZONES		All Housing Units	WHETHER LIVESTOCK SPEND THE NIGHT IN SAME ROOM AS PERSONS		
			Yes	No	Not stated
TIGRAY REGION	No.	571,455	62,202	505,238	4,015
	%	100,.0	10.9	88.4	0.7
MIRABAWI	No.	136,269	15,655	119,470	1,144
	%	100.0	11.5	87.7	0.8
MEHAKELEGNAW	No.	180,579	11,958	167,370	1,251
	%	100.0	6.6	92.7	0.7
MISRAKAWI	No.	103,408	12,807	89,982	619
	%	100.0	12.4	87.0	0.6
DEBUBAWI	No.	151,199	21,782	128,416	1,001
	%	100.0	14.4	84.9	0.7

6.5 Housing Facilities and Amenities

The availability of sanitary conditions is considered to be the most valuable indicator and it is associated with the quality of the housing unit. Beside this, the availability of safe water supply, kitchen facility and safe and efficient disposal of human waste is considered among the first basic steps which should be taken towards assuring a suitable environment for the well-being of the population.

In urban areas, information on housing facilities such as toilet, kitchen, source of water supply, type of lighting, type of fuel used for cooking, and also availability of radio, television and telephone sets,..etc. were collected in the census. However, in the rural areas information such as source of drinking water, type of fuel used for cooking and availability of toilet and whether there was a separate room in the housing unit that was used mainly as a kitchen, or if the room where members spend the night was used as a kitchen, or if the room where livestock spend the night was used as a kitchen were collected in the census.

The basic information to be obtained by the census is whether the housing units have essential amenities and housing facilities. To what extent these amenities are available in Tigray region is examined below.

6.5.1 **Source of Water Supply**

The supplying of water through pipes is recognized as the most effective means of protecting it from pollution and of ensuring its purity, provided that the water supply system is efficiently administered.

The basic information to be obtained by the census is whether the housing units have piped-water installation. A housing unit may be further classified according to the source of drinking water (tap, protected/unprotected well or spring, river, lake, and pond,.. etc.).

The data on the distribution of housing units by source of water supply is presented in Table 6.10. In general, of all housing units, about 13.8 percent had piped water supply, 36.3 percent of the housing units got their water from unprotected well/spring and 7.4 percent from protected well/spring. The availability of tap and protected water supply for the occupants of each set of housing unit is essential for the prevention of communicable diseases as well as for the cleanliness and general comfort of occupants. It must, however, be noted that the housing units which had got their water supply from river or lakes is very much higher (41.9 percent) than the above mentioned sources of water supply for the region as a whole.

In the urban areas, the principal sources of water supply are piped tap water, i.e. 66.5 percent of housing units in urban areas have piped/tap water supply. Housing units which obtained their water from unprotected well or spring constituted 13.9 percent. It appears from Table 6.10 that unprotected well/spring, river; lake and pond are the usual sources of water supply for the rural households. Almost 41.0 percent of the rural housing units used nearby unprotected well/spring as their sources of water while about 48.0 percent of the housing units used river/lake or pond as their source of water supply. The data show that 3.2 percent of the rural housing units of Tigray region mentioned piped/ tap water as their sources of water supply. and 7.4 percent of the housing units used protected well/ spring. It appears from the above findings that only a small number of the rural households have access to pure drinking water, and they are still subject to the use of unclean water.

The distribution of source of water supply by zone shows that in the urban areas of all zones very high proportion of the housing units have access to piped water facilities. This proportion ranged from 50.2 percent in Mirabawi Zone to 76.3 percent in Misrakawi Zone. In the

Table 6.10 Distribution of Housing Units by Source of Drinking Water and Zones, Tigray Region: 1994

URBAN/RURAL		All Housing Units	SOURCE OF DRINKING WATER				
			Tap	Protected Well/ Spring	Unprotected Well/ Spring	River/ Lake/ Pond	Not Stated
			TIGRAY REGION				
Urban + Rural	No.	686,876	95,002	51,051	249,464	287,928	3,431
	%	100.0	13.8	7.4	36.3	41.9	0.5
Urban	No.	115,421	76,698	8,633	16,051	13,299	740
	%	100.0	66.5	7.5	13.9	11.5	0.6
Rural	No.	571,455	18,304	42,418	233,413	274,629	2,691
	%	100.0	3.2	7.4	40.9	48.1	0.5
			MIRABAWI				
Urban + Rural	No.	158,010	14,312	14,010	71,374	57,421	893
	%	100.0	9.1	8.9	45.2	36.3	0.6
Urban	No.	21,741	10,921	2,737	4,973	2,938	172
	%	100.0	50.2	12.6	22.9	13.5	0.8
Rural	No.	136,269	3,391	11,273	66,401	54,483	721
	%	100.0	2.5	8.3	48.7	40.0	0.5
			MEHAKELEGNAW				
Urban + Rural	No.	204,469	15,552	13,579	83,226	91,093	1,019
	%	100.0	7.6	6.6	40.7	44.6	0.5
Urban	No.	23,890	12,817	1,686	5,391	3,867	129
	%	100.0	53.7	7.1	22.6	16.2	0.5
Rural	No.	180,579	2,735	11,893	77,835	87,226	890
	%	100.0	1.5	6.6	43.1	48.3	0.5
			MISRAKAWI				
Urban + Rural	No.	124,179	22,080	10,089	38,790	52,650	570
	%	100.0	17.8	8.1	31.2	42.4	0.5
Urban	No.	20,771	15,843	1,463	1,643	1,641	181
	%	100.0	76.3	7.0	7.9	7.9	0.9
Rural	No.	103,408	6,237	8,626	37,147	51,009	389
	%	100.0	6.0	8.3	35.9	49.3	0.4
			DEBUBAWI				
Urban + Rural	No.	200,218	43,058	13,373	56,074	86,764	949
	%	100.0	21.5	6.7	28.0	43.3	0.5
Urban	No.	49,019	37,117	2,747	4,044	4,853	258
	%	100.0	75.7	5.6	8.3	9.9	0.5
Rural	No.	151,199	5,941	10,626	52,030	81,911	691
	%	100.0	3.9	7.0	34.4	54.2	0.5

rural areas, the majority of the housing units used river/lake or pond as their source of water supply and this was highest (54.2percent) in Debubawi Zone and lowest (40.0 percent) in Mirabawi Zone 40.0 percent. Among the zones the housing units, using unprotected well/spring ranged from 28.0 percent in Debubawi Zone to 45.2 percent in Mirabawi Zone.

Table 6.11 shows the distribution of housing units in urban areas by main sources of water supply and its relative location from the housing unit. Of the total housing units, 66.4 percent had piped/tap water supply. Further, it can be observed that about 3.0 percent of the housing units got piped water inside the housing unit and 13.0 percent got piped water within their compound (private or shared), while 50.4 percent of the housing unit got piped water from outside the compound.

The distribution of housing units by source of water supply in urban areas for zones shows that Misrakawi Zone had the highest proportion (3.6 percent) of housing units with tap inside the house. The proportion of housing units with piped/tap water varied from 50.3 percent in Mirabawi Zone to 76.3 percent in Misrakawi Zone, while the proportion of housing units with unprotected well/spring and river/lake varied from 15.8 percent in Misrakawi Zone to 38.8 percent in Mehakelegnawi Zone. The proportion of housing units with protected well spring is highest (12.6 percent) in Mirabawi Zone and lowest (5.6 percent) in Debubawi Zone.

6.5.2 **Toilet Facilities**

Along with the provision of water supplies, the safe and efficient disposal of human waste is one of the measurement of environmental sanitation. From the census, data were obtained on whether the housing units have toilet. A toilet is defined as an installation for the disposal of human excreta. Table 6.12 reveals that 92.1 percent of the housing units in the region did not have toilet facility, whereas only 7.0 percent of the housing units had toilet facility. The corresponding figure for the urban parts constituted 70.0 percent and 28.6 percent, respectively.

Sanitary toilet facilities are very rare in rural areas of Tigray region. Only 2.7 percent of the rural housing units have access to toilet facilities, whereas nearly 97.0 percent of the housing units have no toilet facilities. Among the zones, Mehakelegnaw Zone occupies the lowest position in terms of its access to toilet facilities; about 94.4 percent of its housing units have no toilet facility. The proportion of housing units that have toilet facility varied from the highest 11.3 percent in Debubawi Zone to the lowest 4.7 percent in Mehakelegnaw Zone. (see Table 6.12).

Table 6.11 Distribution of Housing Units by Source of Drinking Water and Zones, Urban Tigray: 1994

ZONES		All Housing Units	SOURCE OF DRINKING WATER							
			Tap Inside House	Tap in Compound Private	Tap in Compound Shared	Tap Outside Compound	Protected Well/ Spring	Unprotected Well/ Spring	River/ Lake/ Pond	Not Stated
TIGRAY REGION	No.	115,421	3,491	6,151	8,915	58,141	8,633	16,051	13,299	740
	%	100.0	3.0	5.3	7.7	50.4	7.5	13.9	11.5	0.6
MIRABAWI	No.	21,741	422	431	665	9,403	2,737	4,973	2,938	172
	%	100.0	1.9	2.0	3.1	43.3	12.6	22.9	13.5	0.8
MEHAKELEGNAW	No.	23,890	701	731	1,062	10,323	1,686	5,391	3,867	129
	%	100.0	2.9	3.1	4.5	43.2	7.1	22.6	16.2	0.5
MISRAKAWI	No.	20,771	744	1,428	1,795	11,876	1,463	1,643	1,641	181
	%	100.0	3.6	6.9	8.6	57.2	7.0	7.9	7.9	0.9
DEBUBAWI	No.	49,019	1,624	3,561	5,393	26,539	2,747	4,044	4,853	258
	%	100.0	3.3	7.3	11.0	54.1	5.6	8.3	9.9	0.5

Table 6.12 Distribution of Housing Units by Availability of Toilet Facility and Zones Tigray Region: 1994

URBAN/RURAL		All Housing Units	AVAILABILITY OF TOILET		
			Has Toilet	Has no Toilet	Not Stated
		TIGRAY REGION			
Urban + Rural	No.	686,876	48,390	632,470	6,016
	%	100.0	7.0	92.1	0.9
Urban	No.	115,421	33,016	80,779	1,626
	%	100.0	28.6	70.0	1.4
Rural	No.	571,455	15,374	551,691	4,390
	%	100.0	2.7	96.5	0.8
		MIRABAWI			
Urban + Rural	No.	158,010	8,192	148,341	1,477
	%	100.0	5.2	93.9	0.9
Urban	No.	21,741	4,120	17,352	269
	%	100.0	19.0	79.8	1.2
Rural	No.	136,269	136,270	136,271	136,272
	%	100.0	3.0	96.1	0.9
		MEHAKELEGNAW			
Urban + Rural	No.	204,469	9,650	193,068	1,751
	%	100.0	4.7	94.4	0.9
Urban	No.	23,890	5,439	18,161	290
	%	100.0	22.8	76.0	1.2
Rural	No.	180,579	180,580	180,581	180,582
	%	100.0	2.3	96.9	0.8
		MISRAKAWI			
Urban + Rural	No.	124,179	8,010	115,098	1,071
	%	100.0	6.5	92.7	0.9
Urban	No.	20,771	4,662	15,788	321
	%	100.0	22.4	76.0	1.6
Rural	No.	103,408	3,348	99,310	750
	%	100.0	3.2	96.0	0.7
		DEBUBAWI			
Urban + Rural	No.	200,218	22,538	175,963	1,717
	%	100.0	11.3	87.9	0.9
Urban	No.	49,019	18,795	29,478	746
	%	100.0	38.3	60.1	1.5
Rural	No.	151,199	3,743	146,485	971
	%	100.0	2.5	96.9	0.6

The distribution of housing units in urban areas by type of toilet facility is given in Table 6.13. It can be observed from the table that about 70.0 percent of the housing units did not have toilet facility, whereas 5.0 percent had flush toilet private/shared, 23.6 percent dry pit toilet private/shared.

In Debubawi Zone 32.2 percent of the housing units have toilet facilities, particularly private/shared dry pit. Only 2.4 percent of the urban housing units have access to private flush toilet and this was found to be highest in Misrakawi Zone (2.8 percent) and lowest in Mirabawi Zone (1.5 percent). The proportion of housing units that had no toilet facility varied from 79.8 percent in Mirabawi Zone to 60.1 percent in Debubawi Zone.

Table 6.13 Distribution of Housing Units by Type of Toilet Facility and Zones, Urban Tigray: 1994

ZONES		All Housing Units	TYPE OF TOILET FACILITY					
			Has No Toilet	Flush Toilet Private	Flush Toilet Shared	Pit Private	Pit Shared	Not Stated
TIGRAY REGION	No.	115,421	80,779	2,737	3,051	11,332	15896	1,626
	%	100.0	70.0	2.4	2.6	9.8	13.8	1.4
MIRABAWI	No.	21,741	17,352	333	342	2,014	1,431	269
	%	100.0	79.8	1.5	1.6	9.3	6.6	1.2
MEHAKELEGNAW	No.	23,890	18,161	518	454	2,221	2,246	290
	%	100.0	76.0	2.2	1.9	9.3	9.4	1.2
MISRAKAWI	No.	20,771	15,788	581	518	1,485	2,078	321
	%	100.0	76.0	2.8	2.5	7.2	10.0	1.6
DEBUBAWI	No.	49,019	29,478	1,305	1,737	5,612	10,141	746
	%	100.0	60.1	2.7	3.5	11.5	20.7	1.5

6.5.3 Type of Lighting

Considerable importance is attached to source of lighting in housing unit. Information collected in the census is the type of lighting in the housing unit such as electricity, kerosin lamp,

lantern,..etc. This information could provides planners with useful indication of areas where lighting services are deficent and needs to be extended. The data on type of lighting were collected in urban areas of the region. Table 6.14 summarizes data on type of lighting used in the living quarters. As can be seen from the table 48.4 percent of the housing units in the urban areas used electricity. Out of which 35.3 percent of housing units had shared electric meter reader and 13.1 percent had private electric meter reader. Nearly 44.1 percent of the housing units used kerosine lamp while 6.9 percent used lantern and other source of lighting.

The proportion of housing units that used electrcitiy for lighting varied from 58.4 percent in Debubawi Zone to 25.8 percent in Mirabawi Zone, while those who used kerosene lamp varied from 68.0 percent in Mirabawi Zone to 33.7 percent in Debubawi Zone. The use of lantern and other types of lighting varied from highest 9.0 percent in Misrakawi Zone, to lowest 5.1 percent in Mehakelegnaw Zone.

Table 6.14 Distribution of Housing Units by Type of Lighting and Zones, Urban Tigray :1994

ZONES		All Housing Units	TYPE OF LIGHTING					
			Electricity Meter Private	Electricity Meter Shared	Lantern	Kerosine Lamp	Others	Not Stated
TIGRAY REGION	No.	115,421	15,150	40,770	5,299	50,942	2,691	569
	%	100.0	13.1	35.3	4.6	44.1	2.3	0.5
MIRABAWI	No.	21,741	1,717	3,866	1,038	14,794	206	120
	%	100.0	7.9	17.8	4.8	68.1	1.0	0.6
MEHAKELEGNAW	No.	23,890	3,905	7,684	830	10,985	390	96
	%	100.0	16.4	32.2	3.5	46.0	1.6	0.4
MISRAKAWI	No.	20,771	2,937	7,170	1,723	8,662	150	129
	%	100.0	14.1	34.5	8.3	41.7	0.7	0.6
DEBUBAWI	No.	49,019	6,591	22,050	1,708	16,501	1,945	224
	%	100.0	13.5	45.0	3.5	4.0	4.0	0.5

6.5.4 **Type of Kitchen**

A kitchen is defined as a room primarily used for cooking meals, but due to lack of adequate rooms or space in the housing unit, some persons and/or some livestock may also spend the night in the kitchen. Information was obtained from the census on whether the housing units have a kitchen; whether the kitchen is modern or traditional, or whether it is shared or privately used. Table 6.15 shows that a sligtly over half (52.6 percent) of the housing units in urban areas had traditional type of kitchen,of which 26.8 percent were private and 25.8 percent were shared. A traditional type of kitchen is a room used mainly for cooking using firewood, charcoal, cotton seeds, sawdust, leaves or barks as fuel, with simple or no stoves and has no piped water or sink. On the other hand, 42.3 percent of the housing units had no kitchen facility.

Among the zones, the traditional type of kitchen is found to be highest in Misrakawi Zone (63.4 percent), while this was found to be lowest (31.8 percent) in Mirabawi Zone. In addition to this nearly 60.0 percent of the housing units of Mirabawi Zone had no independent kitchen facilities.

In Urban areas of Tigray region housing units that had modern kitchen constituted about 4.3 percent. A modern kitchen is a room used for cooking which uses electricity, gas, kerosene, firewood or charcoal as fuel with appropriate stove and had piped water and sink. The proportion of housing units with modern kitchen varied from 3.2 percent in Mehakelegnaw Zone to 6.8 percent in Mirabawi Zone.

The distribution of housing units in rural areas of Tigray by availability of kitchen facilities is given in Table 6.16. The data reveal that 43.0 percent of housing units had separate room for kitchen; about 45.0 percent use the same room for cooking which is also used by household members for sleeping at night; while 2.2 percent use the same room for cooking where livestock also spend the night. About 10.0 percent of the housing units did not have any kitchen.

The proportion of housing units with separate room for kitchen varied from highest 61.2 percent in Misrakawi Zone to lowest 24.0 percent in Mirabawi Zone. Among the zones, 17.5 percent of the housing units in Debubawi Zone did not have kitchen .

6.5.5 **Type of Fuel Used for Cooking**

The collection of data on the availability of kitchen may provide a convenient opportunity to gather information on the kind of fuel used for cooking. The availability of kitchen and type

Table 6.15 Distribution of Housing Units by Type of Kitchen Facility and Zones, Urban Tigray: 1994

ZONES		All Housing Units	TYPE OF KITCHEN					
			Has no Kitchen	Modern Kitchen Private	Modern Kitchen Shared	Traditional Kitchen Private	Traditional Kitchen Shared	Not Stated
TIGRAY REGION	No.	115,421	48,867	3,087	1,889	30,885	29,815	878
	%	100.0	42.3	2.7	1.6	26.8	25.8	0.8
MIRABAWI	No.	21,741	13,137	994	481	4,992	1,917	220
	%	100.0	60.4	4.6	2.2	23.0	8.8	1.0
MEHAKELEGNAW	No.	23,890	11,176	512	252	7,220	4,553	177
	%	100.0	46.8	2.1	1.1	30.2	19.1	0.7
MISRAKAWI	No.	20,771	6,490	490	434	5,684	7,470	203
	%	100.0	31.3	2.4	2.1	27.4	36.0	1.0
DEBUBAWI	No.	49,019	18,064	1,091	722	12,989	15,875	278
	%	100.0	36.9	2.2	1.5	26.5	32.4	0.6

Table 6.16 Distribution of Housing Units by Availability of Kitchen and Zones, Rural Tigray:1994

ZONES		All Housing Units	Has a Room Mainly Used as a Kitchen	Uses as a Kitchen a Room Where Persons Spend the Night	Uses as a Kitchen a Room Where Livestock Spend the Night	Has no Kitchen	Not Stated
TIGRAY REGION	No.	571,455	245,571	255,014	12,379	54,741	3,750
	%	100.0	43.0	44.6	2.2	9.6	0.7
MIRABAWI	No.	136,269	32,750	90,120	1,817	10,476	1,106
	%	100.0	24.0	66.1	1.3	7.7	0.8
MEHAKELEGNAW	No.	180,579	69,513	99,676	2,133	8,076	1,181
	%	100.0	38.5	55.2	1.2	4.5	0.7
MISRAKAWI	No.	103,408	63,289	23,122	6,798	9,659	540
	%	100.0	61.2	22.4	6.6	9.3	0.5
DEBUBAWI	No.	151,199	80,019	42,096	1,631	26,530	923
	%	100.0	52.9	27.8	1.1	17.6	0.6

of fuel used for cooking are important aspects in considering the adequacy of housing. The analysis utilized in the following tabulation express clearly the types of fuel normally used in the region.

The distribution of housing units in rural areas by type of fuel used for cooking is given in Table 6.17. A large proportion (76.3 percent) of the housing units used Firewood/leaves. Housing units which used dung/manure constituted 22.6 percent. The proportion of housing units that used charcoal and kerosine was about 0.3 percent. Less than one percent of the housing units used no fuel. Mirabawi Zone had higher proportion (92.9 percent) of housing units that use firewood/leaves and lower proportion of housing units that use kerosine (0.1 percent). In all zones, housing units which used charcoal and kerosine accounted for less than one percent.

Table 6.18 summarizes data on type of fuel used for cooking in urban areas. The data show that 12.5 percent of housing units used only firewood, whereas 1.0 percent used charcoal. The proportion of housing units that used electricity and those that used combination of kerosine, firewood, charcoal and gas accounted for less than one percent.

A high proportion (66.2 percent) of housing units used a combination of firewood and charcoal, and about 10.0 percent of housing units used a combination of firewood and dung. Nearly 4.0 percent of the housing units used no fuel and 12.5 percent of the housing units use firewood/leaves.

In general about 77.0 percent of the housing units used a combination of firewood with other types of fuels such as leaves, dung, charcoal,... etc for cooking, while 1.3 percent of the housing units used a combination of electricity with other types of fuels. The foregoing data revealed that housing units in urban areas heavily depend on sources of fuel such as charcoal, firewood, and the combination of both.

The proportion of housing units that used modern sources of fuel (electricity, gas and a combination of both) varied from highest 1.1 percent in Debubawi Zone to lowest 0.2 percent in Mirabawi Zone and the corresponding figure for the urban areas as a whole was 0.8 percent. The use of traditional sources of fuel such as firewood, firewood and charcoal, firewood and dung,... etc accounted for 92.0 percent for the region and within each zone it varied from 91.5 percent in Debubawi Zone to 95.6 percent in Mirabawi Zone.

Table 6.17 Distribution of Housing Units by Major Type of Fuel Used for Cooking and Zones, Rural Tigray: 1994

ZONES		All Housing Units	TYPE OF FUEL						
			Firewood (Leaves)	Dung (Manure)	Charcoal	Kerosine	Uses no Fuel	Others	Not Stated
TIGRAY REGION	No.	571,455	435,977	129,019	908	455	1,439	702	2,955
	%	100.0	76.3	22.6	0.2	0.1	0.3	0.1	0.5
MIRABAWI	No.	136,269	126,600	7,937	421	126	247	164	774
	%	100.0	92.9	5.8	0.3	0.1	0.2	0.1	0.6
MEHAKELEGNAW	No.	180,579	143,624	35,303	224	98	197	153	980
	%	100.0	79.5	19.6	0.1	0.1	0.1	0.1	0.5
MISRAKAWI	No.	103,408	65,024	37,276	138	75	328	127	440
	%	100.0	62.9	36.1	0.1	0.1	0.3	0.1	0.4
DEBUBAWI	No.	151,199	100,729	48,503	125	156	667	258	761
	%	100.0	66.6	32.1	0.1	0.1	0.4	0.2	0.5

Table 6.18 Distribution of Housing Units by Major Type of Fuel Used for Cooking and Zones, Urban Tigray: 1994

ZONES		All Housing Units	TYPE OF FUEL							
			Uses no Fuel	Electricity	Gas	Kerosine	Charcoal	Firewood/ Leaves	Dung/ Manure	Firewood and Charcoal
TIGRAY REGION	No.	115,421	4,834	604	106	936	1,176	14,398	1,477	76,466
	%	100.0	4.2	0.5	0.1	0.8	1.0	12.5	1.3	66.3
MIRABAWI	No.	21,741	658	19	30	25	107	2,626	46	16,134
	%	100.0	3.0	0.1	0.1	0.1	0.5	12.1	0.2	74.2
MEHAKELEGNAW	No.	23,890	1,210	102	14	162	126	3,155	516	15,308
	%	100.0	5.1	0.4	0.1	0.7	0.5	13.2	2.2	64.1
MISRAKAWI	No.	20,771	662	157	14	310	344	1,727	116	14,277
	%	100.0	3.2	0.8	0.1	1.5	1.7	8.3	0.6	68.7
DEBUBAWI	No.	49,019	2,304	326	48	439	599	6,890	799	30,747
	%	100.0	4.7	0.7	0.1	0.9	1.2	14.1	1.6	62.7

Table 6.18 (Contd.)

ZONES		TYPE OF FUEL								
		Firewood and Dung	Firewood and Kerosine	Firewood and Gas	Electricity and Kerosine	Electricity and Firewood	Electricity and Charcoal	Electricity and Gas	Others	Not Stated
TIGRAY REGION	No.	11,084	1,309	321	298	138	789	175	609	701
	%	9.6	1.1	0.3	0.3	0.1	0.7	0.2	0.5	0.6
MIRABAWI	No.	1,833	4	24	9	5	30	5	45	141
	%	8.4	-	0.1	-	-	0.1	-	0.2	0.7
MEHAKELEGNAW	No.	2,618	315	75	30	38	71	29	19	102
	%	11.0	1.3	0.3	0.1	0.2	0.3	0.1	0.1	0.4
MISRAKAWI	No.	1,909	613	75	108	48	137	18	48	208
	%	9.2	3.0	0.4	0.5	0.2	0.7	0.1	0.2	1.0
DEBUBAWI	No.	4,724	377	147	151	47	551	123	497	250
	%	9.6	0.8	0.3	0.3	0.1	1.1	0.3	1.0	0.5

6.5.6 Availability of Radio, Telephone and Television Sets in the Housing Units

There is a need for providing information on basic amenities such as radio, telephone and television sets for the society. Broadcasting plays a vital role in reaching the masses and enabling the government to keep in touch with its people in order to promote their economic, social and political participation to enhance the over all development of the country.

Table 6.19 shows that 13.8 percent of housing units had radios. The corresponding figure in urban and rural areas constituted 37.8 and 8.9 percent, respectively. The majority of the housing units (90.2 percent) in the rural areas had no radios. This figure was found to be highest in Debubawi Zone (93.3 percent). The Table indicates that Misrakawi Zone had the highest (15.8 percent) proportion of housing units with radios and Mehakelegnaw Zone had the lowest proportion (11.7 percent).

The distribution of housing units in urban areas by availability of consumer durable, such as radio, television and telephone sets are presented in Table 6.20. The data reveal that 37.8 percent of urban housing units had radios. Nearly 3.0 percent of the urban housing units had television sets and 2.4 percent had telephone.

Among the zones the proportion of housing units owning television was highest (3.6 percent) in Debubawi Zone and lowest (1.3 percent) in Mirabawi Zone. The proportion of housing units that own telephone sets ranged from 2.8 percent in Debubawi Zone to 1.6 percent in Mirabawi Zone. The table indicates that Mehakelegnaw Zone had the highest proportion of housing units with radios. The availability of television and telephone sets was higher in Debubawi Zone. The distribution of these amenities in other zones was more or less similar.

It should be noted that at the time of the census, a housing unit was considered as having the required amenities whether it had one or more of the amenities. Thus, the actual number of these sets expected could be higher than the number of housing units reported as having such amenities. Besides, information on the status of these sets found in establishments were not collected in the census.

6.6 Type of Tenure

Tenure refers to the arrangements under which the household occupied its living quarters. Tenure information collected for living quarters shows very clearly the distinction between rented units and units that are owner-occupied. A housing unit is considered as rented if the household

Table 6.19 Distribution of Housing Units by Availability of Radio and Zones, Tigray Region: 1994

URBAN/RURAL		All Housing Units	AVAILABILITY OF RADIO		
			Has Radio	Has no Radio	Not Stated
		TIGRAY REGION			
Urban + Rural	No.	686,876	94,666	586,986	5,224
	%	100.0	13.8	85.5	0.8
Urban	No.	115,421	43,577	71,368	476
	%	100.0	37.8	61.8	0.4
Rural	No.	571,455	51,089	515,618	4,748
	%	100.0	8.9	90.2	0.8
		MIRABAWI			
Urban + Rural	No.	158,010	23,755	132,866	1,389
	%	100.0	15.0	84.1	0.9
Urban	No.	21,741	7,354	14,286	101
	%	100.0	33.8	65.7	0.5
Rural	No.	136,269	16,401	118,580	1,288
	%	100.0	12.0	87.0	1.0
		MEHAKELEGNAW			
Urban + Rural	No.	204,469	23,981	178,920	1,568
	%	100.0	11.7	87.5	0.8
Urban	No.	23,890	9,659	14,152	79
	%	100.0	40.4	59.2	0.3
Rural	No.	180,579	14,322	164,768	1,489
	%	100.0	7.9	91.2	0.8
		MISRAKAWI			
Urban + Rural	No.	124,179	19,628	103,573	978
	%	100.0	15.8	83.4	0.8
Urban	No.	20,771	8,304	12,348	119
	%	100.0	40.0	59.5	0.6
Rural	No.	103,408	11,324	91,225	859
	%	100.0	11.0	88.2	0.8
		DEBUBAWI			
Urban + Rural	No.	200,218	27,302	171,627	1,289
	%	100.0	13.6	85.7	0.6
Urban	No.	49,019	18,260	30,582	177
	%	100.0	37.3	62.4	0.4
Rural	No.	151,199	9,042	141,045	1,112
	%	100.0	6.0	93.3	0.7

Table 6.20 Distribution of Housing Units by Availability of Radio, Telephone and Television Sets and Zones, Urban Tigray:1994

ZONES		TYPE OF AMENITIES AVAILABLE											
		Radio				Television				Telephone			
		All Housing Units	Has Radio	Has no Radio	Not Stated	All Housing Units	Has Television	Has no Television	Not Stated	All Housing Units	Has Telephone	Has no Telephone	Not Stated
TIGRAY REGION	No.	115,421	43,577	71,368	476	115,421	2,834	112,046	541	115,421	2,766	112,176	479
	%	100.0	37.8	61.8	0.4	100.0	2.5	97.1	0.5	100.0	2.4	97.2	0.4
MIRABAWI	No.	21,741	7,354	14,286	101	21,741	278	21,357	106	21,741	354	21,296	91
	%	100.0	33.8	65.7	0.5	100.0	1.3	98.2	0.5	100.0	1.6	98.0	0.4
MEHAKELEGNAW	No.	23,890	9,659	14,152	79	23,890	422	23,369	99	23,890	558	23,252	80
	%	100.0	40.4	59.2	0.3	100.0	1.8	97.8	0.4	100.0	2.3	97.3	0.3
MISRAKAWI	No.	20,771	8,304	12,348	119	20,771	353	20,300	118	20,771	463	20,185	123
	%	100.0	40.0	59.5	0.6	100.0	1.7	97.7	0.6	100.0	2.2	97.2	0.6
DEBUBAWI	No.	49,019	18,260	30,582	177	49,019	1,781	47,020	218	49,019	1,391	47,443	185
	%	100.0	37.3	62.4	0.4	100.0	3.6	95.9	0.4	100.0	2.8	96.8	0.4

living in it pays rent to kebele office or to Agency for the Administration of Rented Houses (AARH) or to private individuals or other organization. There are also housing units occupied by households paying difference in rents because they own other housing units that are rented elsewhere for lesser rent than that of housing units they were occupying at the time of the census.

Table 6.21 presents data on tenurial status of the housing units in urban areas. Information on tenurial status of the housing units is necessary for development of housing and establishment of rent policy. Data on rent of housing is also of special significance for housing programs. The distribution of housing units by type of tenure shows that 45.3 percent of all housing units were owner occupied and 45.5 percent were rented. Out of the rented housing units 3.4 percent were rented from kebele, 0.5 percent were rented from Agency for the Administration of Rented Houses and 41.6 percent were rented from private household or other organizations. The data also shows that 0.6 percent of the housing units were paying difference in rent, nearly eight percent were rent free.

The proportion of housing units that were owner occupied varied from 47.4 percent in Debubawi Zone to 37.7 percent in Misrakawi Zone, whereas, the proportion of housing units which were rented varied from 51.6 percent in Misrakawi Zone to 42.9 percent in Debubawi Zone.

6.7 Monthly Rent

Rent is the amount paid monthly for the housing unit occupied by a household. Table 6.22 shows that of the total rented housing units in urban areas, about 79.0 percent were rented below 50 Birr per month. Housing units that were rented from 50 to 149 Birr accounted for 17.5 percent and those that rented for 150 Birr and above accounted for 2.0 percent of the total rented housing units.

The proportion of housing units that were rented for 50 Birr or lower per month ranged from 74.6 percent in Debubawi Zone to 82.8 percent in Mirabawi Zone. On the other hand, the proportion of housing units that were rented from 50 to 149 Birr per month varied from 14.3 percent in Mirabawi Zone to 21.5 percent in Debubawi Zone and those rented for 150 Birr and above varied from 1.1 percent in Misrakawi Zone to 2.8 percent in Debubawi Zone.

Table 6.21 Distribution of Housing Units by Type of Tenure and Zones, Urban Tigray: 1994

ZONES		All Housing Units	TYPE OF TENURE							
			Owner Occupied	Rented From Kebele	Rented From Puplic Housing Agency	Rented From Other Organization	Rented From Private Household	Paying Difference in Rent	Rent Free	Not Stated
TIGRAY REGION	No.	115,421	52,324	3,917	593	195	47,734	697	8,633	1,328
	%	100.0	45.3	3.4	0.5	0.2	41.4	0.6	7.5	1.2
MIRABAWI	No.	21,741	10,186	799	92	58	9,214	144	996	252
	%	100.0	46.9	3.7	0.4	0.3	42.4	0.7	4.6	1.2
MEHAKELEGNAW	No.	23,890	11,073	256	122	17	10,105	121	1,907	289
	%	100.0	46.4	1.1	0.5	0.1	42.3	0.5	8.0	1.2
MISRAKAWI	No.	20,771	7,840	197	43	30	10,469	234	1,677	281
	%	100.0	37.7	1.0	0.2	0.1	50.4	1.1	8.1	1.4
DEBUBAWI	No.	49,019	23,225	2,665	336	90	17,946	198	4,053	506
	%	100.0	47.4	5.4	0.7	0.2	36.6	0.4	8.3	1.0

Table 6.22 Distribution of Housing Units by Amount of Monthly Rent and Zones, Urban Tigray: 1994

ZONES		All Housing Units	AMOUNT OF MONTHLY RENT								
			1-4 Birr	5-9 Birr	10-49 Birr	50-99 Birr	100-149 Birr	150-299 Birr	300+ Birr	Not Stated	Total Rent
TIGRAY REGION	No.	53,136	2,429	2,216	37,478	7,873	1,412	729	319	680	1,850,010
	%	100.0	4.6	4.2	70.5	14.8	2.7	1.4	0.6	1.3	
MIRABAWI	No.	10,307	267	443	7,818	1,263	203	124	45	144	332,570
	%	100.0	2.6	4.3	75.9	12.3	2.0	1.2	0.4	1.4	
MEHAKELEGNAW	No.	10,621	56	308	8,319	1,434	221	114	46	123	348,882
	%	100.0	0.5	2.9	78.3	13.5	2.1	1.1	0.4	1.2	
MISRAKAWI	No.	10,973	55	276	8,753	1,426	191	93	28	151	368,435
	%	100.0	0.5	2.5	79.8	13.0	1.7	0.9	0.3	1.4	
DEBUBAWI	No.	21,235	2,051	1,189	12,588	3,750	797	398	200	262	800,123
	%	100.0	9.7	5.6	59.3	17.7	3.8	1.9	0.9	1.2	

CHAPTER VII

POPULATION PROJECTION

Population projection provides information on the future size and composition of the population of a given area. Knowledge of this information is fundamental for development plans whose target is to satisfy the future needs of the population in the areas of health, education, employment, housing,...,etc. The basic components of changes in the size and composition of the population of a certain area include fertility, mortality, and migration.

In view of this, this chapter presents the projection of the size, age-sex structure and school age population of Tigray Region for the coming 35 years (1995-2030). For this purpose, the cohort component projection method was employed using the DemProj computer program (John Stover; 1990). The method involves projectin g separately the three components of population change and applying them to each age group of males and females. In addition to this, DemProj includes a section on AIDS which allows to evaluate the demographic consequences of the spread of HIV and the progression to AIDS and death. However, due to lack of reliable data on AIDS at regional level, the impact of AIDS on the population is not taken into account.

7.1 Components of Population Projection

The components of the projection required by the DemProj include population size of the total and urban areas by age and sex, fertility, mortality, migration and urbanization.

7.1.1 Age-Sex Composition of the base year population

The age-sex structure of the population count of the 1994 census of Tigray Region has been evaluated for its coverage and age reporting errors. Since the age structure is observed to be distorted, strong smoothing is applied to adjust the data for age mis-reporting (Arriaga, 1994). Moreover, the population age-sex structure should refer to the mid point of the base year. To derive the base year population, the exponential growth model ($P_t=P_0e^{rt}$) is employed. For this purpose, the average annual growth rates of the population of the urban and rural areas of the region are applied. Table 7.1 illustrates the base year population of July 1, 1995.

Table 7.1 Base Year Population by Sex and Age group, Tigray: July 1, 1995.

Age	URBAN+RURAL			URBAN			RURAL		
Group	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	537137	273763	263374	69933	35812	34121	467204	237951	229253
5-9	471395	238871	232524	66805	32908	33897	404590	205963	198627
10-14	405808	203924	201884	62945	29763	33182	342863	174161	168702
15-19	340988	168698	172290	55420	25408	30012	285568	143290	142278
20-24	268973	128676	140297	45118	19822	25296	223855	108854	115001
25-29	219770	102591	117179	37294	16000	21294	182476	86591	95885
30-34	174624	78760	95864	29270	12379	16891	145354	66381	78973
35-39	147937	66680	81257	24183	10187	13996	123754	56493	67261
40-44	130788	61114	69674	20253	8713	11540	110535	52401	58134
45-49	114742	54756	59986	17164	7336	9828	97578	47420	50158
50-54	101475	49710	51765	14584	6045	8539	86891	43665	43226
55-59	86287	42789	43498	12325	5005	7320	73962	37784	36178
60-64	70983	35227	35756	10484	4103	6381	60499	31124	29375
65-69	54541	27439	27102	8125	3207	4918	46416	24232	22184
70-74	37659	19487	18172	5621	2328	3293	32038	17159	14879
75-79	20335	11370	8965	2977	1469	1508	17358	9901	7457
80 +	19302	10998	8304	3232	1465	1767	16070	9533	6537
Total	3202744	1574853	1627891	485733	221950	263783	2717011	1352903	1364108

7.1.2 Fertility Component

The fertility input used in the projection is an estimate of the total fertility rate (TFR). The TFR of 6.95 estimated from the 1994 Population and Housing Census data using the Gompertz Model is used as a measure of the level of fertility, while the age pattern of fertility is assumed to be similar to the pattern observed in the reported age specific fertility rates and will be applied throughout the projection period (see the section on fertility). The number of births expected to occur during each projection period will be estimated by applying the adjusted age specific fertility rates to the female population of reproductive ages (15-49). Births are then distributed by

sex on the basis of the sex ratio at birth which is assumed to be 103 male births to 100 female births.

7.1.3 Mortality Component

The expectations of life at birth for males and females are used as basic indicators of the level of mortality. Based on the information on the number of children ever born and surviving obtained from the 1994 Population and Housing Census of the region, the childhood mortality was estimated using the Trussel method (1975). Corresponding to this childhood mortality, the expectations of life at birth were derived assuming that the age pattern of mortality follows the West Model of the Coale-Demeny Regional Model Life Tables. The estimates of expectations of life at birth were 48.2 and 51.1 years for males and females, respectively (see the section on mortality). The age and sex specific survival ratios are also derived from the same model life table.

7.1.4 Migration Component

Data on inter-regional migration is not available. Thus, in preparing this projection, migration component is not taken in to consideration.

7.2 Future Course of Fertility and Mortality

7.2.1 Fertility

The government of Ethiopia being conscious of the interdependence between economic and social development with high fertility, has launched a national population policy in July 1993. One of the major objectives of this program was reducing the total fertility rate of 7.7 observed for the country at that period to approximately 4.0 by the year 2015. Though the government has set the goal of the population policy at national level, the objective of reducing the Total Fertility Rate (TFR) of the country to 4.0 by the year 2015 can also be extended for regions with prevailing high fertility. In view of this, three alternative assumptions were made

with regard to the future course of fertility of Tigray Region. These include the high, medium and low variants.

a) High Variant

This variant assumes that the government makes some attempts to reduce the current high level of fertility by introducing different alternative approaches of the national population program to the population of the area: i.e., information education and communication, reproductive health, family planning, etc. However, the availability and effectiveness of these programs will be very limited. In view of this fact, the level of fertility will decrease at a very slow momentum, from an average of 6.95 children per woman between the period 1995-2000 to a TFR of 4 by the year 2030. That means the goal will be attained 15 years later than it was expected. The pace is determined by adopting the United Nations model of fertility decline to the assumption setting the current value of Gross Reproduction Rate (3.42) as the onset value and 1.27 as the final value (U.N.; 1994). The transition period between these two values becomes 50 years. Since the fertility inputs used in the projection are the values of the TFR, the GRR obtained for each projection period will be converted to the corresponding TFR.

b) Medium Variant

For this variant, it is assumed that the different approaches of the national population program will be moderately effective. Compared to the high series, the medium variant assumes a more faster pace of decline in the level of fertility. The TFR is expected to decrease from its current level of 6.95 to 4.0 by the year 2020 (i.e., five years later than the predicted time), and continues to decline at a slower rate until it attains the final value. Here also the pace is determined by adopting the United Nations model of fertility decline to the assumption setting the onset value of the GRR and the transition period as were in the high variant, the final value of the GRR will be changed to 1.0.

c) Low Variant

In this variant an optimistic assumption is made by expecting that the current high level of fertility will be going to decrease at an accelerated pace and attain a TFR of 4.0 by the year 2015. The decline will also continue at a slower pace thereafter until it reaches the final value. The pace is determined by employing the method used in the previous two variants changing the final value of the GRR to 0.86. Here it is expected that the government will be successful in the implementation of the different alternative approaches of the national population program to attain its goal.

7.2.2 Mortality

In the case of mortality, only one variant is used for the three different scenarios of the projection. Three working models of mortality have been developed by the United Nations: a slow life expectancy rise; a middle life expectancy rise and a fast life expectancy rise. In the present case, the middle model is applied. This model assumes that life expectancy at birth will increase by 2.5 years every quinquennium till it reaches 60 and 65 years for males and females, respectively. The gain is gradually reduced to 0.4 year at life expectancy of 77.5 and 82.5 for males and females in that order, and thereafter it remains unchanged (U.N.; 1994).

7.2.3 Urbanization

DemProj provides the size of the urban population by age and sex using as inputs the base period urban population and, either urban-rural growth rate difference or the projected percentage urban for each five year projection period. In the present case since urban and rural growth rates are not available for Tigray Region, the use of the projected percentage urban is preferred. The projection of the percent urban is based on the proportion urban of the region obtained from the 1994 census count (i.e., 15.11%) and the urban rural growth rate difference of the region. In the absence of data on urban-rural growth rate difference at regional level, the difference in the urban-rural growth rates observed at national level will be applied to the region assuming that it will remain constant during the entire projection period. The projection of the percent urban is

performed using the United Nations formula (U.N.; 1987) which assumes that the ratio of urban to rural populations at time t , denoted by s(t), grows n years later as follows:

$$s_{(t+n)} = s_{(t)} \exp [(r_u - r_r)n] = s_{(t)} \exp [gn]$$

where r_u and r_r are the rates of growth of urban and rural areas, respectively and $g = r_u - r_r$ is the urban-rural growth rate difference.

Table 7.2 Inputs Used In the Projection For Different Variants (1995-2030)

Input	Variant	Period						
		1995-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	2026-2030
Fertility (TFR)	Low	6.53	5.28	4.76	4.24	3.80	3.36	2.92
	Medium	6.72	5.97	5.42	4.86	4.29	3.73	3.24
	High	6.95	6.72	6.27	5.75	5.22	4.69	4.20
Mortality (Eo)	Medium							
	Eo (Male)	49.45	51.95	54.45	56.95	59.45	61.95	64.25
	Eo(Female)	52.35	54.85	57.35	59.85	62.35	64.85	67.35
				Period				
Urbanization (% Urban)	1995	2000	2005	2010	2015	2020	2025	2030
	15.32	16.83	18.48	20.30	22.31	24.50	26.92	29.57

7.3 Projection Results

Three different variants of population projections are made on the basis of the above three alternative assumptions regarding fertility and only one assumption being employed with regard to mortality and urbanization. The projection under the medium variant is assumed to be more plausible than those given by the low and high variants. For the medium variant, the total, urban and rural population by sex in single years covering the period 1995-2030 is provided in Table 7.3A, while Table 7.3B and Table 7.3C illustrate the above results for the low and high variants, respectively. Tables 7.4A-7.4F present the age sex breakdown in single years covering the period

1995-2000 under the medium variant. Tables 7.4G-7.4L, 7.5 and 7.6 demonstrate the age-sex breakdown at five year intervals up to the end of the projection period under the medium, low and high variants, respectively. Working age populations can also be obtained from these tables.

7.3.1 Total, Urban and Rural Population

Results from Table 7.3A indicate that under the medium variant, the total population of Tigray Region will increase from about 3.1 million in 1994 to about 4.8 million in 2010, and to about 6.2 million in 2021. On the other hand, the urban population is expected to increase from about half million in 1994 to about 1 million in 2010, and about 2.2 million in 2030. The rural population will increase from about 2.7 million in 1994 to about 3.8 million in 2010 and about 5.2 million in 2030. This shows that the 1994 total and urban population of Tigray Region will almost double in 27 and 16 years, respectively. The doubling time for the urban population is less than that of the total population of the region due to rural to urban migration. If however, fertility will decrease as assumed in the low variant, the 1994 population of the region will double in 2025 for the total and 2010 for the urban areas (i.e., 4 years later than the medium series for the total and same year for the urban areas).

7.3.2 Summary Demographic Indicators

For each variant, Demproj also provides summary demographic indicators which include, total fertility rate, male and female life expectations at birth, infant mortality rate, under-five mortality rate, crude birth rate, crude death rate, rate of natural increase, average annual population growth rate (TFR, Male LE, Female LE, IMR, U5MR, CBR, CDR, RNI, GR), sex ratio and dependency ratio for every five year interval during the entire projection period. Table 7.7 shows the summary indicators for the three different scenarios.

From the table it can be seen that the annual rate of population growth for Tigray Region as a whole implied in the medium variant decreases from 2.9 percent to 1.9 percent within the projection period. Though the growth rate of the urban population will also decrease as year advances, it still remains high at the end of the projection period (i.e., 3.7 percent).

Under the medium variant, the crude birth rate will decrease from 44.7 per thousand between 1995-2000 to 37.5 per thousand during the period 2005-2010, and 25.2 per thousand during the period 2025-2030. The crude death rate is also expected to decrease from 16.2 deaths per thousand to 6.6 deaths per thousand within the projection period. These tendencies are in conformity with the assumption of decreasing fertility and mortality over the entire projection period.

7.3.3 Projection of School Age Population

To satisfy the population data demand of Tigray Region in planning future educational services, the projection of the school age population is believed to be fundamental. In view of this fact, the three categories of the different levels of education i.e., primary (7-12 years), junior secondary (13-14 years) and senior secondary (15-18 years) are projected under the three variants. Table 7.8 presents the school age population in single year interval covering the period 1995-2030 (35 years) for the three different scenarios.

Under the medium variant, the elementary level school age population is expected to increase from about half million in 1995 to about 1 million in 2020. On the other hand, the senior secondary level school age population will rise from about 279 thousand in 1995 to about 565 thousand in 2017 and to about 740 thousand in 2030. This indicates that the elementary school age population will almost double in 25 years while that of the senior secondary school level population is expected to double in less than 22 years.