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IMPERIAL ETHIOPIAN GOVERNMENT

CENTRAL STATISTICAL OFFICE

RESULTS OF THE NATIONAL SAMPLE SURVEY

SECOND ROUND

VOLUME I

THE DEMOGRAPHY OF ETHIOPIA

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ADDIS ABABA, JANUARY 1974

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INTRODUCTION

Demographic data are indispensable for decisions on matters of public policy and action on social and economic questions. The data not only indicate the present but also the possible future requirements of the population in terms of social services, health, education and other socio-economic needs. For an efficient performance of a government knowledge of the basic demographic situation of the country is paramount. This is because demographic data reveal the environment for active governmental participation and possible governmental priorities.

Change in the size of a population results from changes in the number of births, deaths and migrants. These variables, which are the fundamental questions that the demographers handle, constitute the components of population size itself. Since births and deaths occur continuously and people also frequently change their place of residence, the demographer is interested in this on-going process which he calls fertility, mortality and migration. These changes have serious socio-economic and political implications depending on the direction and magnitude of the components.

The measures of fertility, mortality and migration are of crucial importance not only for socio-economic planning but are the key for the estimation of the population growth rate. The rate of population growth is of great importance to economic and social planners in assessing present needs and for the expansion of the future socio-economic infrastructures. Knowledge of:-

a) Fertility trends and level helps a nation in the adoption of suitable population policy.

b) Mortality level and cause of deaths is invaluable for planning health facilities.

c) Trends and extent of migration help in the provision of socio-economic facilities for the migrants in the area of destination. As a country advances economically, usually there will be an influx of people from the rural to the urban areas. Hence, knowledge of the rate of migration to a certain town is essential in planning for the provision of

enough housing, schools, water supply, health services, transportation facilities, welfare, roads, sewers, and police protection to take care of the flood of newcomers to the town.

The age and sex composition of a population are also important in socio-economic planning, specifically manpower planning. Such demographic data reveal the potential number of the nation's people in the labour force. Thus, these data help the planners in planning for the provision of jobs. Moreover, the age and sex composition also provide measures of dependancy loads, consumption needs and other socio-economic infrastructure requirements of a nation in the present as well as in the future.

Demographic data reveal the number of people living in a country, it's provinces, cities, towns and even in small administrative subdivision and communities. Such knowledge helps to determine each province's or smaller administrative subdivision's (Awraja, Wereda - etc.) proportionate representation in the Parliament and House of the Senate. Since the relative population of a given province or administrative subdivision is changing, periodic demographic data (preferably from censuses) are necessary for periodic reapportionment of these legislatures.

The use of demographic data are not limited only to the government sectors, but are also of great value to the private sectors too. Therefore, before starting a new business or building a new plant a corporation or an entrepreneur should obtain as many facts as possible about the availability and educational background (skills) of its potential labour supply and the potential consumers of the products. Besides, this risk-taker should have some indications of whether the community, where he sets up the plant or the business, is growing, stagnant or declining.

Having this in mind, the Central Statistical Office, in its effort to enrich the available demographic data and data in other fields, has carried out the National Sample Survey Second Round during December 1968 to June 1971. The survey was multipurpose and covered data on demography, agriculture, indebtedness, land utilization, ownership, tenure, local production unit, measurements of land holding, etc. This bulletin deals with

the analysis of the demographic portion of the results of the survey. The bulletin consists of Volume I and II. Volume I deals with the overall demographic data of the nation, while Volume II deals with the surveyed areas of all the provinces except Eritrea, which has not been covered in the survey.

Volume I is presented in four chapters and an Annex. Chapter I deals with the population size and distribution, Chapter II discusses population characteristics, Chapter III deals with reported and estimated vital rates and Chapter IV presents the projection of the 1970 population estimate of Ethiopia by sex and age group to the year 2,000. Finally, it is important to note that Chapters I and IV deal with the entire population of the country while II and III are concerned with only the rural population that has been covered during the National Sample Survey Second Round.

The Annex deals with the sample design coverage of the survey, method of estimation and sampling error.

Central Statistical Office
January 1974

CHAPTER I

POPULATION SIZE AND DISTRIBUTION

Population Size

The National Sample Survey second round for the surveyed rural areas resulted in a population of 17,883,400 for January 1970. The population consists of 9,123,000 males and 8,760,400 females. The population figure for the rural areas that have not been covered by the National Sample Survey second round have been obtained from two sources - (1) by up-dating the population figure from the National Sample Survey first round (1964-67) if the area in question has been covered during the first round, and (2) by up-dating the population figure from the 1956 Ministry of Interior head count if the area in question has not been covered during the first round. Therefore, the three sources (National Sample Survey first and second round and the 1956 Ministry of Interior head count) resulted in an estimated rural population of 21,730,900 for January 1970. (See Table I). Based on the urban survey first round, the projected January 1970 urban population was 2,337,900.[1] (Urban is defined as a locality of 2,000 or more inhabitants). This implies that in January 1970, the estimated population of Ethiopia was 24,068,800 of whom 12,210,000 were males and 11,858,800 were females. The estimates of rural-urban population by awraja[2] are presented in Table I.

Population Distribution

Ethiopia has an area of 1,221,900 Km.^{2} which is divided into 14 provinces. The area, distribution and density of population of Ethiopia by province is shown in Table I.1.

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[1] I.E.G., Central Statistical Office, Urbanization in Ethiopia, Addis Ababa, August 1972, P.7.

[2] An Awraja is the highest administrative subdivision in a province. A province is made up of awrajas and an awraja is made up of weredas.

TABLE I. 1

Population Estimate, Area and Density of Population by Province

Province	Population* ('000)	Area ('000 Km.^{2})	Density of Population/Km.^{2}
Arussi	850.8	23.5	36.2
Bale	683.8	124.6	5.5
Begemdir	1,604.3	74.2	21.6
Eritrea	1,893.8	117.6	16.1
Gemu Gofa	781.7	39.5	19.8
Gojam	1,590.4	61.8	25.8
Hararge	2,440.1	259.7	9.4
Illubabor	611.8	47.4	12.9
Kefa	1,260.3	54.6	23.1
Shoa	4,922.6	85.4	57.6
Sidamo	2,190.3	117.3	18.7
Tigrai	1,688.6	65.9	25.6
Wollega	1,577.2	71.2	22.2
Wollo	1,974.1	79.4	24.9
Total	24,068.8	1,221.9	19.7

* Population figures given in this table include the urban population of the provinces. Any provincial population figure and population density given here which is different from that released by the Office for Jan. 1970 in its previous bulletins is due to fresh population figures from the results of the NSS second round.

The average population density for the country is 19.7 inhabitants per Km^2. The density is higher than the average density for Africa and

East Africa which is 11.0 and 15.0 inhabitants per km^2 respectively.[1] In Africa,[2] excluding small non-soverign territories inhabited mainly by non-Africans the density ranges from one to 121.0 inhabitants per $km.^2$. In Eastern Africa the density ranges from four to 33.0 inhabitants per $km.^2$

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1. United Nations, Demographic Handbook For Africa. Economic Commission for Africa, Addis Ababa, June 1971, pp. 17 - 18.

2. Ibid.

TABLE I.2

Regional Population Density of Ethiopia

Region			Population Density
North	–	Eritrea Wollo Tigrai Begemdir	22.0
West	–	Illubabor Wollega Gojam	20.3
South & South West	–	Sidamo Kefa Gemu Gofa	20.5
East	–	Hararge Bale	7.4
Central	–	Shoa Arussi	46.9

The population is relatively evenly distributed in the northern, western and south and south western regions. In these regions the average density per km.^{2} is in the lower twenties. The eastern region is sparsely populated with a density of 7.4 persons per km.^{2} However, the central region is relatively densely populated with a density of 46.9 persons per km.^{2}

Rural and Urban Population of Ethiopia

A considerable proportion of the Ethiopian population resides in the rural areas of the country. Only about 10.0 percent reside in urban localities of 2,000 or more, about 8.0 percent in localities of 5,000 or more, about 6.0 percent in localities of 20,000 or more and only about 4.0 percent in localities of 100,000 or more inhabitants.[1] The proportion of rural and urban population varies from one province to another as may be seen in Table I.3

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1 Urbanization in Ethiopia, Op.cit. P.7

TABLE I.3

Rural and Urban[1] Population By Province

Province	Population ('000)		% Urban
	Rural	Urban*	Population
Arussi	801.5	49.3	5.8
Bale	659.4	24.4	3.5
Begemdir	1,518.9	84.4	5.3
Eritrea	1,507.3	386.5	20.4
Gemu Gofa	749.2	32.5	4.2
Gojam	1,508.8	81.6	5.1
Hararge	2,276.2	163.9	6.7
Illubabor	588.4	23.4	3.8
Kefa	1,193.9	66.4	5.3
Shoa	3,884.9	1,037.7	21.1
Sidamo	2,078.0	112.3	5.1
Tigrai	1,565.1	123.5	7.3
Wollega	1,529.0	48.2	3.1
Wollo	1,870.3	103.8	5.3
Total	21,730.9	2,337.9	9.7

* I.E.G., Central Statistical Office, Urbanization in Ethiopia, Addis Ababa, August 1972, pp. 32 - 37.

The provinces of Shoa and Eritrea are relatively more urbanized than the remaining provinces. Wollega is the least urbanized of all the provinces followed by Bale, Illubabor, and Gemu Gofa in that order. For more detailed information on urbanization, see the Central Statistical Office bulletin number 9 entitled "Urbanization in Ethiopia."

1. Urban is defined as a locality of 2,000 or more inhabitants.

TABLE I

Estimates of Rural and Urban Population of Ethiopia by Awraja, Based on the National Sample Survey First and Second Round for Surveyed Areas and the 1956 Ministry of Interior Head Count for Areas that Have Been Never Surveyed.

Province	Awraja	Surveyed at 1st but not at 2nd round		Surveyed at 2nd round		Never Surveyed areas		Population January 1970		
		fig. for 1967	fig. for 1970	fig. at Survey date	up dated fig. for 1970	Estimated fig. for 1967	Estimated fig. for 1970	Rural (9)=(4)+(6)+(8)	Urban[1]	T o t a l
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Arussi	1. Arba Gugu	-	-	150,700	151,875	-	-	151,900	5,400	157,300
	2. Chilalo	-	-	410,500	413,702	-	-	413,700	34,800	448,500
	3. Ticho	-	-	234,100	235,926	-	-	235,900	9,100	245,000
Total		-	-	795,300	801,503	-	-	801,500	49,300	850,800
Bale	1. Dolo	-	-	37,000	37,289	-	40,000(Meda W.)	77,300	-	77,300
	2. Elkere	-	-	-	-	-	138,000	138,000	-	138,000
	3. Fassil	-	-	151,575	152,757	-	-	152,800	13,900	166,700
	4. Genale	-	-	113,200	114,083	-	-	114,100	6,200	120,300
	5. Wabe	-	-	136,195	137,257	-	40,000(Rayitu)	177,200	4,300	181,500
Total		-	-	437,970	441,100	-	[illegible]	659,400	24,400	683,800
Begemidir & Semien	1. Chilga	-	-	123,080	124,040	-	-	124,000	-	124,000
	2. Debretabor	-	-	360,000	362,808	-	-	362,800	14,600	377,400
	3. Gayint	-	-	163,400	164,675	-	-	164,700	2,200	166,900
	4. Gonder	-	-	263,900	265,958	-	-	265,900	48,600	314,500
	5. Libo	-	-	199,600	201,157	-	-	201,200	5,200	206,400
	6. Semien	-	-	193,300	194,808	-	-	194,800	5,200	200,000
	7. Wegera	-	-	203,900	205,490	-	-	205,500	8,600	214,100
Total		-	-	1,507,180	1,518,936	-	-	1,518,900	84,400	1,603,300
Gemu Goffa	1. Gardula	-	-	169,140	170,459	-	-	170,500	5,400	175,900
	2. Geleb & ~~Haber Buco~~ Hamer Baco	-	-	57,500	-	120,000[2]	135,600	135,600	3,600	139,200
	3. Gemu	-	-	215,130	216,808	-	-	216,800	10,400	227,200
	4. Goffa	-	-	153,000	154,193	68073(Wub hmr)[3]	72,157	226,300	13,100	239,400
Total		-	-	594,770	541,460	188,073	207,757	749,200	32,500	781,700

1. I.E.G., Central Statistical Office, Urbanization in Ethiopia, Addis Ababa August 1972. PP.32-37
2. Based on Sene 1956 (Ethiopian Calendar) Count by the Awraja governor.
3. 1967 Ministry of Interior Count which has covered all Awrajas except Geleb and Hamer Baco.

Province	Awraja	Surveyed at 1st but not at 2nd round		Surveyed at 2nd round		Never Surveyed areas		Population January 1970		
		fig. for 1967	fig. for 1970	fig. at Survey date	up dated fig. for 1970	Estimated fig. for 1967	Estimated fig. for 1970	Rural (9)=(4)+(6)+(8)	Urban[1]	T o t a l
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Eritrea	All Awrajas	-	-	-	-	1,422,000	1,507,320	1,507,300	386,500	1,893,800
Gojam	1. Agew Midir	-	-	154,000	155,201	-	-	155,200	4,700	159,900
	2. Bahir Dar	-	-	304,265	306,638	-	-	306,600	23,400	330,000
	3. Bichena	-	-	183,880	185,314	-	-	185,300	-	185,300
	4. Kola-Dega-Damot	-	-	305,875	308,261	-	-	308,300	14,200	322,500
	5. Debre Markos	-	-	281,215	283,408	-	-	283,400	33,500	316,900
	6. Metekel	-	-	93,830	94,562	-	-	94,600	-	94,600
	7. Motta	-	-	174,090	175,448	-	-	175,400	5,800	181,200
Total		-	-	1,497,155	1,508,832	-	-	1,508,800	81,600	1,590,400
Hararge	1. Adal & Issa	-	-	81,672	82,309	-	-	82,300	-	82,300
	2. Chercher	-	-	533,206	537,365	-	-	537,400	21,700	559,100
	3. Dire Dawa	-	-	38,100	38,397	-	-	38,400	59,400	97,800
	4. Gara Guracha	73,000	77,380	-	-	-	-	77,400	3,800	81,200
	5. Gara Muleta	-	-	160,100	161,349	-	-	161,300	5,400	166,700
	6. Gursum	-	-	64,000	64,500	-	-	64,500	5,700	70,200
	7. Harar	-	-	353,500	356,257	-	-	356,200	53,000	409,200
	8. Ogaden (6 Awrajas)	-	-	-	-	787,000	834,220	834,200	10,700	844,900
	13. Webera	-	-	123,500	124,463	-	-	124,500	4,200	128,700
Total		73,000	77,380	1,354,070	1,364,600	787,000	834,220	2,276,200	163,900	2,440,100
Illubabor	1. Buno Bedelle	-	-	213,200	214,863	-	-	214,800	2,500	217,300
	2. Gambella	-	-	-	-	77,500	78,105	78,100	2,100	80,200
	3. Gore	-	-	266,000	268,075	-	-	268,100	13,700	281,800
	4. Motcha	-	-	27,200	27,412	-	-	27,400	-	27,400
Total		-	-	506,400	510,300	77,500	78,105	588,400	18,300	606,700
Keffa	1. Gimira	-	-	49,000	49,382	-	-	49,400	3,700	53,100
	2. Jimma	-	-	355,040	357,809	-	-	357,800	39,800	397,600
	3. Kaffa	-	-	215,000	216,677	-	-	216,700	3,400	222,100
	4. Kulo-Konta	-	-	155,100	156,310	-	-	156,300	2,800	159,100
	5. Limu	-	-	280,330	282,517	-	-	282,500	14,700	297,200
	6. Madji & Goldia	-	-		-	123,800	131,228	131,200	-	131,200
Total		-	-	1,054,470	1,062,700	123,800	131,228	1,193,900	66,400	1,260,300

Province	Awraja	Surveyed at 1st but not at 2nd round		Surveyed at 2nd round		Never Surveyed areas		Population January 1970		
		fig. for 1967	fig. for 1970	fig. at Survey date	up dated fig. for 1970	Estimated fig. for 1967	Estimated fig. for 1970	Rural (9)=(4)+(6)+(8)	Urban[1]	T o t a l
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Shoa	1. Chebo & Gurage	-	-	687,565	692,928	-	-	692,900	17,300	710,200
	2. Haikoch & Butajira	-	-	456,590	460,151	-	-	460,200	29,200	489,400
	3. Jibat & Mecha	-	-	528,200	532,320	-	-	532,300	34,100	566,400
	4. Kembata	-	-	602,195	606,892	-	-	606,900	7,900	614,800
	5. Menagesha	-	-	344,940	347,610	-	-	347,600	38,100	385,700
	6. Merehabete	-	-	156,590	157,811	-	-	157,800	2,700	160,500
	7. Salale	-	-	264,270	266,331	-	-	266,300	12,900	279,200
	8. Tegulet & Bulga	-	-	329,915	332,488	-	-	332,500	18,400	350,900
	9. Yerer & Kereyu	-	-	236,216	238,052	-	-	238,100	69,500	307,600
	10. Menz & Gishe	-	-	115,340	116,240	-	-	116,300	4,200	120,500
	11. Yifat & Tumuga	-	-	133,000	134,037	-	-	134,000	7,500	141,500
	Addis Ababa	-	-	-	-	-	-	-	795,900	795,900
Total		-	-	3,854,815	3,884,900	-	-	3,884,900	1,037,700	4,922,600
Sidamo	1. Arero*	47,900	50,774	22,800	-	-	-	50,800	8,000	58,800
	2. Borena	-	-	-	-	101,800	107,908	107,900	14,700	122,500
	3. Derassa	-	-	349,100	351,923	-	-	351,900	22,700	374,600
	4. Jemjem*	290,500	307,930	118,000?		-	-	307,900	10,300	318,200
	5. Sidamo	-	-	616,500	621,309	-	-	621,300	45,200	666,500
	6. Wolamo	-	-	633,200	638,139	-	-	638,200	11,400	649,600
Total		338,400	358,704	1,598,800	1,611,400	101,800	107,908	2,078,000	112,300	2,190,300
Tigre	1. Adwa	-	-	329,600	332,171	-	-	332,200	17,400	349,600
	2. Agame*	216,700	229,700	108,162	-	-	-	229,700	11,600	241,300
	3. Axum	-	-	200,100	201,261	-	-	201,300	12,900	214,200
	4. Enderta*	202,700	214,862	139,820	-	-	-	214,900	32,300	247,200
	5. Hulet-Awlalo	-	-	143,800	144,921	-	-	144,900	6,100	151,000
	6. Raya-Azebo	-	-	78,300	78,911	-	-	78,900	12,700	91,600
	7. Shire	-	-	173,228	174,579	-	-	174,500	21,800	196,300
	8. Tembien	-	-	187,200	188,660	-	-	188,700	6,000	194,700
Total[1]		419,400	444,562	925,028	1,120,500	-	-	1,565,100	120,800	1,635,900

Province	Awraja	Surveyed at 1st but not at 2nd round		Surveyed at 2nd round		Never Surveyed areas		Population January 1970		
		fig. for 1967	fig. for 1970	fig. at Survey date	up dated fig. for 1970	Estimated fig. for 1967	Estimated fig. for 1970	Rural (9)=(4)+(6)+(8)	Urban[1]	T o t a l
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Wellega	1. Arjo	-	-	125,605	126,585	-	-	126,600	3,000	129,600
	2. Asosa	-	-	144,460	145,587	-	-	145,600	-	145,600
	3. Ghimbi	-	-	516,300	520,327	-	-	520,300	16,300	536,600
	4. Horo-Guduru	-	-	216,190	217,876	-	-	217,900	4,400	222,300
	5. Kelem	-	-	291,200	293,471	-	-	293,500	7,000	300,500
	6. Nekemte	-	-	223,400	225,143	-	-	225,100	17,500	242,600
Total		-	-	1,517,155	1,528,989	-	-	1,529,000	48,200	1,577,200
Wollo	1. Ambassel	-	-	235,285	237,120	-	-	237,100	2,800	239,900
	2. Aussa	-	-	18,390	18,533	-	-	18,500	7,400	25,900
	3. Borena	268,700	284,822	-	-	-	-	284,800	-	284,800
	4. Dessie Zuria	-	-	133,045	134,083	-	-	134,100	52,700	186,800
	5. Kalu	-	-	132,600	133,634	-	-	133,600	-	133,600
	6. Raya & Kobo	-	-	48,200	48,576	-	-	48,600	12,600	61,200
	7. Lasta	-	-	237,790	239,645	-	-	239,700	-	239,700
	8. Wadla Delanta*	149,600	160,820	51,400	-	-	-	160,800	-	160,800
	9. Wag	-	-	140,100	141,193	-	-	141,200	15,800	157,000
	10. WereHimenu	-	-	206,700	208,312	-	-	208,300	-	208,300
	11. Were Ilu	-	-	116,990	117,903	-	-	117,900	3,300	121,200
	12. Yeju	-	-	144,560	145,686	-	-	145,700	9,200	154,900
Total		418,300	445,600	1,465,060	1,424,685	-	-	1,870,300	103,800	1,974,100
Total	Population[1] of two towns(Tobba=2,590 and Dewele = 2,500) in Illubabor and a town (Adi Sheno=2,700) in Tigrai							-	7,800	-
Total	All Provinces	-	-	-	-	-	-	21,730,900	2,337,900	24,068,800

1. Population of towns whose awraja is not known.

* Awrajas in which all the weredas have not been surveyed during NSS second round.

CHAPTER II

CHARACTERISTICS OF THE RURAL POPULATION

(January 1970)

I. AGE COMPOSITION

The recorded age distribution (Table II) indicates that about 46.0 percent of the rural population is under 15 years, 51.0 percent is between 15 and 64 and about 3.0 percent is above 64 years. This is a typical age distribution of a developing country, and almost duplicates the age distribution that has been obtained from the National Sample Survey first round with 46.0 percent under 15, 52.0 percent 15-64 and 2.0 percent above 64 years of age.[1] Assuming that the proportion (51.0%) between the ages of 15 and 64 are economically productive (producers of economic goods and services this group has to support themselves and the remaining proportion (49.0%) that is, the too-young and too-old to work (economically unproductive). In other words, every 100 persons who are economically productive have to support themselves as well as 96 other persons who are economically unproductive. This implies a dependency ratio[2] of 96.0. This compares relatively well with dependency ratio of 92.0 and 90.0 for Tanzania[3] and Malawi[4] respectively. However, it is higher when compared with the dependency ratio of most of the developed countries where it is usually less than 75 per 100 person aged 15-64.

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1. I.E.G., Central Statistical Office, Population of Ethiopia, Addis Ababa, November 1971, p. 19.
2. This is a crude measure of dependency ratio, because among the persons who are between 15-64 years of age a good proportion of them might not be producers of goods and services. Thus, a more refined measure of dependency ratio has been given at a later stage in this chapter.
3. Joseph Kantner, Tanzania; A case Study. Paper presented at African Population Conference, in Accra, Ghana, 9-18 December 1971, p. 10.
4. United Nations, E.C.A., Country Statement: Malawi. Paper presented at African Population Conference, Accra, Ghana, 9-18 December 1971, p.1.

In a population that is not subjected to mass migration and/or natural calamities (epidemics, famine, etc.) the expected age distribution is one in which the younger age group is larger than the succeeding age group. Nevertheless, close observation at Table II reveals that there are irregularities in age distribution due to misreporting of age. For example, there are more males at 5-9 than at 0-4 years age group. Less males at 20-24 than at 25-29, 30-34 and 35-39 years age group. In the case of the females such irregularity has occured at 15-34 and 49-64 years age group.

A continuous fertility decline, for quite a number of years prior to the survey date, results in an excess of population in the succeeding over the preceeding age group. The population, at the younger age group is especially sensitive to this phenomenon and it affects both the sexes with equal magnitude. However, the excess has been observed only in the males in which population of 5-9 exceeds that of at 0-4 years age group. Had the observed excess been due to fertility decline there would also have been more females at 5-9 than at 0-4 years age group. Therefore, the observed excess of males at the succeeding over the preceeding age group is a sheer misreporting of age and not due to fertility declines in the last few years (five) prior to the survey date. Other factors that might have contributed to the irregularity of the age distribution could be rural-urban migration, under or over enumeration of certain age groups and/or sex differential in enumeration.

There exists a remarkable irregularity in the recorded age distribution. This irregularity does not reflect the actual situation and it is mainly the consequence of age misreporting. Therefore, to remove this irregularity the age distribution of the population has been adjusted through a stable population model and is presented in Table III.

2. SEX COMPOSITION

The results of the National Sample Survey second round indicated an over all sex ratio of 104.0 for the rural population of Ethiopia. In the National Sample Survey first round the ratio[1] was 104.1. Normally, sex

1. Population of Ethiopia, op.cit., p.17.

ratio at younger ages is higher, because male births are slightly more frequent than the female births (about 105 male birth for every 100 female births). However, males suffer higher death rates with the result that they generally fall short of the number of females at higher age group. "The preponderance of males in the younger ages is eaten away by differential mortality until a balance is reached at about age 48. After that, the proportion of women gradually increases with increasing age, until beyond age 95 there are about twice as many women as men."[2]

Reported age - specific sex ratio is shown in Table II. It has no pattern with the age distribution. It shows excess of males at all age groups except 20-24, 25-29 and 30-34. The excess of the males is very extreme in most of the age group that suffers from this problem. The three age groups that are free from this problem suffer from the excess of females (about 23% more females at 20-24 and 25-29 and 13% more females at 30-34 years age group). This unusual pattern of the observed sex ratio reveals that the data have a gross error in age reporting. Therefore, realizing that several factors have affected the data considerably, the data have been adjusted by stable population model and the results are given in Table III. The adjusted age specific sex ratio though free from extreme irregularity does not fall from one age group to the next smoothly and in a well defined pattern.

The sex ratio of the rural population by province is given below:-

Province	Sex Ratio	Province	Sex Ratio
Arussi	101.4	Illubabor	104.2
Bale	99.0	Kefa	101.5
Begemdir	108.8	Shoa	103.2
Eritrea	-	Sidamo	104.8
Gemu Gofa	101.6	Tigrai	102.7
Gojam	103.4	Wollega	98.6
Hararge	105.5	Wollo	114.6

2. Thomlinson, Ralph, Population Dynamics, Random House Inc. New York, 1965, PP. 429-30.

Except Wollega and Bale in all the provinces the sex ratio is over 100.0. The province of Wollo showed an unusually high sex ratio, which may be due to sex differential in rural urban migration.

3. SIZE OF HOUSEHOLDS

According to the National Sample Survey second round, the average size of the household was found to be 4.4 persons per household, while the average size of household[1] was 4.65 in the National Sample Survey first round.

The percentage distribution of the size of the households indicates a concentration at 3-7 person households. In other words 3-7 person households constitute about 76.0% of the total. One-person household constitute less than one percent and ten-and-more-person households make up slightly more than five percent of the total. The percentage distribution also reveals that there are considerably more large (five or more person) households (62.6%) than small (2 or less person) households (7.3%) (See Table IV).

The average size of the households for the provinces obtained from this same survey as indicated below ranges from 3.7 in Illubabor to 4.8 persons in Gojam.

Province	Size of household	Province	Size of household
Arussi	4.6	Illubabor	3.7
Bale	4.2	Keffa	4.0
Begemdir	4.7	Shoa	4.5
Eritrea	-	Sidamo	4.5
Gemu Gofa	4.1	Tegrai	4.4
Gojam	4.8	Wollega	4.5
Hararge	4.7	Wollo	4.2
		Total	4.4

1. Population of Ethiopia, op.cit., p.16.

4. COMPOSITION OF HOUSEHOLDS

Out of every 1,000 persons 223 are heads of households (198 males and 28 females), 193 are wives, 483 are children (269 sons and 214 daughters) 83 are relatives (one is the head's father, 16 are the head's mothers, ten are the head's brothers, 7 are the head's sisters and 49 are the head's other relatives), 13 are servants and 2 are others. Apparently most of the 28 female heads are widows and and divorcees who are heading their households. Out of the total population of 17,883,400 (Rural population of surveyed areas in the National Sample Survey second round) there are about 5,500 males who are mere husbands and not the head of the household. Therefore, some of the 28 females who are heads of households are wives heading the household in the presence of their husbands. The two persons who are indicated as others could presumably be household mates or lodgers. (See Table V).

5. MARITAL STATUS.

In the survey marital conditions were classified into four categories - (1) Single, that is, never married (2) Married (3) Widowed and (4) Divorced. Based on these four categories the marital composition of the population ten years and over is shown in Table II.1.

TABLE II.1.

Marital Status of the Population by Sex

Marital Status	Males		Females		Total	
	Number	%	Number	%	Number	%
Single	2,056,800	35.5	947,000	17.0	3,003,800	26.4
Married	3,520,400	60.9	3,810,600	68.3	7,331,000	64.5
Widowed	81,000	1.4	539,300	9.7	620,300	5.5
Divorced	120,900	2.1	269,300	4.8	390,200	3.4
Not Stated	6,100	0.1	13,100	0.2	19,200	0.2
Total	5,785,200	100.0	5,579,300	100.0	11,364,500	100.0

About two-third of the population ten years and over is married, one quarter is single, about five percent and three percent are widowed and divorced respectively. In absolute numbers, there are 290,200 more married females than males indicating that there are plural marriages among the males. The marital status of the males and the females presented here compares very well with the results of the National Sample Survey first round. In the National Sample Survey first round[1], the percent male and female single were 37.1 and 17.8, married were 59.8 and 67.6, divorced were 1.4 and 8.1 and widowed were 1.7 and 6.4.

Marital status by age group and sex is presented in Tables VI-VIII. Marriage at earlier ages for the females than for the males can be noted in the percent married particularly at age groups 15-19, 20-24 and 25-29. At these age groups the proportions married for the females are 60.8, 89.9, and 93.4 percent. The corresponding proportions for the males at the mentioned age groups are 5.9, 46.7 and 82.6 percent. Another important observation is that the number of single males at the age group 25-29 is about ten times as high as that of the single females.

The proportion widowed increases gradually with age. However, there are striking differences in widowhood between the male and the females population. For instance, at the age group 50-54 the proportion of widowed females is 32.6 percent whereas it is only 2.4 percent for males in this age group. The widowhood for the females reaches its peak of 85.7 percent at the age group 80 and over. For the males also its peak of 20.7 percent is reached at the age group of 80 and over.

The incidence of divorce has very little correlation with the age group. The males have the highest proportion (3.9%) divorced at the age group 20-24 and the females have the highest proportion (10.8%) at the age group 65-69.

The male population by number of wives and age group is presented in Table IX. At the time of the survey about 90.0 percent of the males had one wife each, about 9.0 percent had two wives each and about one percent

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1. Population of Ethiopia, op.cit., Table VIII.

had three wives or more. The table shows that the age group 65-69 has the highest proportion (15.0%) of males having two wives. Nevertheless, practically at all age groups a proportion that ranges from about 1-15 percent of the males have two wives each.

TABLE II.2.

Marital Status by Sex and by Province as Percent of Population Ten Years and Above.

Province	Marital Status								
	Males					Females			
	% Single	% Married	% Widowed	% Divorced	% males having two or more wives	% Single	% Married	% Widowed	% Divorced
Arussi	40.6	56.8	0.9	1.6	17.8	18.4	67.6	9.5	3.9
Bale	37.9	60.4	0.9	0.8	25.5	15.9	71.5	9.8	2.4
Begemdir	36.8	59.8	0.7	2.7	0.5	17.1	66.6	5.8	10.4
Eritrea	-	-	-	-	-	-	-	-	-
Gemu Gofa	28.3	65.2	3.3	2.8	10.3	13.6	72.3	11.3	2.6
Gojam	32.5	62.2	1.1	4.5	0.5	13.3	64.5	9.4	12.7
Hararge	33.9	63.4	1.7	0.8	11.7	17.9	70.8	10.0	1.2
Illubabor	28.3	67.0	1.9	2.5	14.0	9.7	75.9	12.0	2.1
Keffa	30.2	66.3	1.4	2.0	14.4	12.4	75.8	8.5	3.3
Shoa	37.8	58.9	1.4	1.9	9.7	20.8	65.7	9.7	3.3
Sidamo	32.0	64.1	1.3	2.6	22.5	13.0	78.2	7.5	1.3
Tigrai	41.2	56.0	1.5	1.0	5.0	19.6	58.8	13.2	8.1
Wollega	38.8	58.3	1.6	1.3	13.0	24.4	62.4	11.7	1.5
Wollo	35.0	61.4	1.3	2.2	3.9	10.8	72.1	9.6	7.2
Country	35.5	60.9	1.4	2.1	10.0	17.0	68.3	9.7	4.8

The proportion of males married ranges from 56.0 percent in Tigrai to 67.0 percent in Illubabor. The corresponding proportion for the females ranges from 58.8 in Tigrai to 78.2 percent in Sidamo. The highest pro-

portion of widowed males and females is found in Gemu Gofa and Illubabor respectively. But, the highest proportions of divorced males and females are found in Gojam Province. The proportion of married males having two or more wives ranges from as low as 0.5% in Begemdir and Gojam to as high as 25.5% in Bale. The province of Sidamo and Arussi have also relatively high proportion of males with two or more wives (See Table II.2.).

6. LITERACY STATUS

A literate person is defined as one who is ten years of age and over with the ability to read and write a simple sentence in any language. Literacy rate is the proportion of such persons to the total persons ten years and above. Based on this definition, the literacy status of the rural population of Ethiopia by sex is indicated in Table II.3.

TABLE II.3

Literacy Status of the Population by Sex

Literacy Status	Males		Females		Total	
	Number	%	Number	%	Number	%
Literates	512,300	8.9	22,100	0.4	534,400	4.7
Read only	139,100	2.4	6,300	0.1	145,400	1.3
Illiterates	5,072,200	87.7	5,487,200	98.4	10,559,400	92.9
Not Stated	61,600	1.0	63,700	1.1	125,300	1.1
Total	5,785,200	100.0	5,579,300	100.0	11,364,500	100.0

Out of the total population ten years and over about 4.7 percent are literate and about 1.3 percent can only read. If the literacy status is considered by sex, practically all the persons who are literate and who only read are males. The literacy rate in the National Sample Survey first round was 4.1 percent for the total population and 7.9 and 0.3 percent for the males and the females respectively.[1] This implies that the present

1. Population of Ethiopia, op.cit., p.28.

literacy rate has increased by about one percent for the males and one tenth of a percent for the females.

The literacy status by age group and sex are given in Table X-XII.

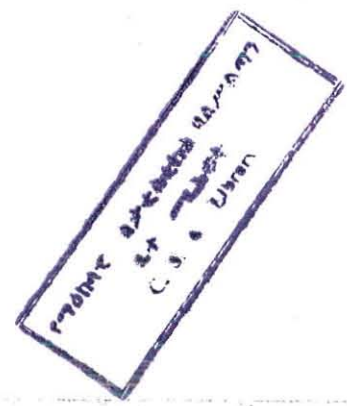
TABLE II.4

Literacy Status by Sex and Province

As Percent of Population above Ten years of age

Province	M A L E S			F E M A L E S			T O T A L		
	Lite-rates	Read only	Illite-rates	Lite-rates	Read only	Illite-rates	Lite-rates	Read only	Illite-rates
Arussi	9.9	2.4	86.4	0.3	0.3	98.0	5.2	1.3	92.2
Bale	11.1	1.2	86.5	0.3	0.2	98.4	5.6	0.7	92.6
Begemdir & Semien	11.3	2.4	35.1	0.5	0.1	98.3	6.2	1.3	91.4
Eritrea	-	-	-	-	-	-	-	-	-
Gemu Gofa	4.7	1.1	92.1	0.8	0.2	97.4	2.8	0.7	94.7
Gojam	8.3	1.7	88.6	0.5	-	98.3	4.4	0.1	93.4
Hararge	8.5	2.3	87.9	-	0.1	98.3	4.3	1.2	93.0
Illubabor	8.9	1.8	88.7	0.4	0.1	99.0	4.6	1.0	93.8
Kefa	8.8	2.3	87.8	0.3	0.1	98.4	4.5	1.2	93.1
Shoa	8.1	2.1	88.9	0.5	0.1	98.3	4.4	1.2	93.5
Sidamo	8.5	0.9	90.0	0.4	0.1	98.8	4.5	0.5	94.4
Tigrai	9.2	8.1	81.4	0.2	0.1	98.3	4.8	0.4	89.7
Wollega	13.6	1.8	83.9	0.8	0.2	98.1	7.0	1.0	91.2
Wollo	5.3	1.8	91.6	0.1	-	98.5	2.9	0.9	94.8
Country	8.9	2.4	87.7	0.4	0.1	98.4	4.7	1.3	92.9

Table II.4 indicates that there is hardly a province that has female literacy rate of even one percent. Therefore, the male pre-dominance in literacy hold true for all the provinces. The literacy rate for the provincial total population ranges from 2.8 in Gemu Gofa to 7.0 percent in Wollega. Four of the provinces have a literacy rate of over five percent, two have about 2.8 percent and the remaining have a literacy rate of over four but less than five percent.



7. USUAL ACTIVITY STATUS AND OCCUPATION.

a) Economically Active and Non-active Population - United Nations' Department of Economic and Social Affairs,[1] defines economically active population as the persons of either sex who furnish the supply of labour available for the production of economic goods and services. In brief, it comprises all persons engaged in or actively seeking productive work in some branch of the economy during some specified period of time. Usually there are age limits for such persons. In nations where there is restriction on child labour and a well established old age pension system, the economically active population consists of all persons aged 15-64, who meet the above definition. However, in nations where there is no restriction on child labour, the lower age limit may go down to five years and in most of the cases there is no upper age limit as such because even aged persons participate in the production of goods and services as long as they are physically able. But for comparing economic activity data internationally, a certain age limit that suits the concerned nation is usually adopted.

In Ethiopia, considering the substantial youth participation in various productive activities (herding livestock, weeding, harvesting, domestic services, etc.), the economically active population consists of all persons aged 10-59 who either (1) usually work to produce economic goods or services, or (2) are looking or available for such work.[2] The proportions of economically active, economically non-active and the too-young and the aged population are shown in Table II.5.

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1. United Nations, Demographic Yearbook, 1964. New York, 1965, P.26.
2. I.E.G., Central Statistical Office, National Sample Survey 2nd Round, Forms and Instructions. Addis Ababa, November 1968. P.40.

TABLE II.5.

Economically Active, Economically Non-active, and the Too Young and the Aged as Percent of the Total Population by Sex

Status	Males		Females		Total	
	Number	%	Number	%	Number	%
Economically Active	4,951,800	54.3	1,718,100	19.6	6,669,900	37.3
Economically Non-active	346,000	3.7	3,496,500	40.0	3,842,500	21.4
Too young and Aged	3,825,200	42.0	3,545,400	40.4	7,371,000	41.3
Total	9,123,000	100.0	8,760,400	100.0	17,883,400	100.0

Slightly more than half of the males, about one fifth of the females and slightly more than one third of the total population are economically active. These proportions are relatively in line with that of other African nations where the proportion of economically active population ranges from 22.0 percent in Algeria (1966) to 63.0 percent in Lesotho (1946).[1] Presumably, such a big difference in proportion economically active, among these nations, may be due to differential female participation rate and problems of definition of economically active population.

The economically active population supports the economically non-active, the too young and the aged population. Since the overall economic activity rate is about 37.3 percent, each 100 economically active persons support themselves and about 168 dependents. In other words, this implies a support ratio of 168.

Tables XIII - XV indicate age-specific activity rates.

1. United Nations, Demographic Handbook for Africa. Economic Commission for Africa, Addis Ababa, June 1971, pp. 110 - 111.

The participation rate in the production of economic goods and services is relatively high in the province of Wollega. This is due to an unusually high proportion of females reporting to be economically active (See Table II.6). The provincial economic activity rates range from a quarter in Sidamo to about half of the total population in Wollega. Only the province of Bale and Sidamo have indicated less than half of their male population as economically active. In the other provinces the male activity rates range from about 50.0 to 60.0 percent of the total male population. The provinces of Wollo and Bale indicated the lowest female activity rates (less than 15.0 percent). The remaining provinces have indicated female activity rates that ranges from one fifth in Gojam to about half in Wollega province.

TABLE II.6

Percent of Economically Active (10-59 years)
Based on Total Population by Sex and by Province

Province	Males	Females	Total
Arussi	51.5	22.0	36.8
Bale	48.7	13.8	31.2
Begemdir & Semien	60.4	19.8	41.0
Eritrea	-	-	-
Gemu Gofa	55.4	14.4	35.1
Gojam	54.3	20.0	37.4
Hararge	50.9	26.3	27.4
Illubabor	57.9	31.0	44.7
Kefa	56.4	22.2	39.4
Shoa	55.0	22.9	39.2
Sidamo	47.3	29.9	25.7
Tigrai	55.9	21.8	39.1
Wollega	51.3	47.8	49.5
Wollo	59.4	9.5	35.6
Country	54.3	19.6	37.3

b) Status of the Economically Active Population - Status refers to the position of the individual in relation to his occupation and the mode of remuneration of the work.[1] e.g. employer, employee, own account worker, and unpaid family worker. Table II.7 shows the activity status of the economically active population.

TABLE II.7

Economically Active Population by Sex and Status

Status	Males		Females		Total	
	Number	%	Number	%	Number	%
Employers	103,400	2.1	6,200	0.4	109,600	1.6
Employees	231,700	4.7	87,400	5.1	319,100	4.8
Own Account Workers	2,912,300	58.8	231,100	13.4	3,143,400	47.1
Unpaid Family Workers	1,704,400	34.4	1,393,400	81.1	3,097,800	46.5
Total	4,951,800	100.0	1,718,100	100.0	6,669,900	100.0

The data reveal that in the rural areas of Ethiopia unpaid family workers and own account workers are of equal importance. The proportion of employees is three times as high as the proportion of employers, which roughly indicates an average of three employees per employer. In the National Sample Survey first round the status of the economically active population were 0.5 percent employers 3.3 percent employees, 56.3 percent own account workers, and 39.9 percent unpaid family workers.[2] When the status is considered by sex the picture differs. The overwhelming majority of the females (about four-fifth) are unpaid family workers. The female employers are less than one percent of the total economically active females.

1. Demographic Yearbook 1964, op.cit., p.30.
2. Population of Ethiopia, op. cit., p. 30.

TABLE II. 8

Status of Economically Active Population by Sex and Province as Percent of Population 10 - 59 Years of Age who are Economically Active.

Province	M A L E S			
	Employers	Employees	Own Account Workers	Unpaid Family Workers
Arussi	2.7	4.6	56.9	35.8
Bale	1.0	2.4	64.1	32.5
Begemdir and Semien	4.3	6.2	48.3	41.2
Eritrea	-	-	-	-
Gemu Gofa	0.3	1.7	70.2	27.8
Gojam	1.4	5.5	56.0	37.1
Hararge	0.7	2.0	64.7	32.6
Illubabor	0.8	1.8	74.5	22.9
Kefa	1.1	3.0	69.8	26.1
Shoa	2.6	5.4	56.9	35.1
Sidamo	0.2	0.9	68.5	30.6
Tigrai	2.8	7.6	49.1	40.5
Wollega	1.6	4.3	60.6	33.5
Wollo	3.7	8.0	52.4	35.9
Country	2.1	4.7	58.8	34.4

TABLE II. 8 (Continued)

Province	F E M A L E S			
	Employers	Employees	Own Account Workers	Unpaid Family Workers
Arussi	0.6	2.2	13.3	83.4
Bale	0.3	1.1	17.9	80.7
Begemdir and Semien	0.6	9.3	18.4	71.7
Eritrea	-	-	-	-
Gemu Gofa	0.2	3.5	24.6	71.6
Gojam	0.1	4.8	14.2	80.9
Hararge	-	41.9	27.4	30.7
Illubabor	0.2	0.5	6.4	92.9
Kefa	0.5	2.4	9.4	87.7
Shoa	0.2	3.2	10.5	86.1
Sidamo	0.8	3.2	65.7	31.3
Tigrai	0.5	13.7	21.8	64.0
Wollega	-	1.8	7.2	91.0
Wollo	1.1	16.5	19.8	62.6
Country	0.4	5.1	13.4	81.1

TABLE II. 8 (Continued)

Province	T O T A L			
	Employers	Employees	Own Account Workers	Unpaid Family Workers
Arussi	2.1	3.9	44.1	49.9
Bale	0.8	2.1	53.9	43.2
Begemdir and Semien	3.4	6.9	41.4	48.3
Eritrea	-	-	-	-
Gemu Gofa	0.3	2.1	60.8	36.8
Gojam	1.1	5.3	45.0	48.6
Hararge	0.6	3.9	63.0	32.5
Illubabor	0.6	1.4	51.4	46.6
Kefa	0.9	2.8	53.0	43.3
Shoa	1.9	4.8	43.6	49.7
Sidamo	0.2	1.0	68.3	30.5
Tigrai	2.2	9.3	41.6	46.9
Wollega	0.9	3.1	34.6	61.4
Wollo	3.4	9.0	48.4	39.2
Country	1.6	4.8	47.1	46.5

Own account workers predominate among the economically active males, followed by unpaid family workers. About two percent of the economically active males are employers. The status of the economically active population by sex and age group is presented in Table XVI - XVIII. The status by sex and literacy is also indicated in Tables XIX - XXI.

Table II.8 presents the proportion of economically active population by province, sex and status. The two provinces with the highest proportion of employers are Wollo and Begemdir and Semien. The provinces of Tigrai and Wollo have the highest proportions of employees. The percent of own account workers ranges from mid 30's in Wollega to upper 60's in Sidamo. Further, the proportions of unpaid family workers range from 30.5 percent in Sidamo to 61.7 percent in Wollega.

c) Reason for non-activity of the Economically non-active population - These data are indicated in Table II.9.

TABLE II. 9

Economically non-active Population 10-59 years of Age by Sex and Reason for being Non-Active.

Reason for Being Non-active	Males		Females		Total	
	Number	%	Number	%	Number	%
Students	247,100	71.4	20,000	0.5	267,100	7.0
Homemakers	11,900	3.4	3,358,800	96.1	3,370,700	87.7
Income Recipients	11,100	3.2	51,500	1.5	62,600	1.6
Physically Disabled	33,900	9.8	37,400	1.1	71,300	1.9
Others Economically Non-active	42,000	12.2	28,800	0.8	70,800	1.8
Total	346,000	100.0	3,496,500	100.0	3,842,500	100.0

Considering both the sexes together, except for a handful of students, a remarkable proportion of the economically non-active population are homemakers. This statement is especially true for the economically non-active females with about only half percent students, and over ninety-five percent homemakers. The majority of the economically non-active males are students. The economically non-active population by sex, age group and reason for being nonactive is presented on Table XXII - XXIV.

TABLE II. 10 Percent of Economically non-active population 10-59 years by Province, Sex and Reason for being non-active

Province	Males				
	Students	Homemakers	Income Recipients	Physically Disabled	Others not Econ.Active
Arussi	76.7	-	3.7	7.3	12.3
Bale	69.5	7.6	1.2	4.3	17.4
Begemdir and Semien	72.2	2.8	0.6	17.2	7.2
Eritrea	-	-	-	-	-
Gemu Gofa	68.4	-	4.1	5.5	22.0
Gojam	57.9	12.7	3.9	14.5	11.0
Hararge	76.8	-	0.7	15.5	7.0
Illubabor	75.6	1.5	0.1	15.9	6.9
Kefa	75.8	-	2.9	6.6	14.7
Shoa	76.7	3.7	2.1	9.6	7.9
Sidamo	78.5	9.3	5.8	3.2	3.2
Tigrai	59.0	2.0	4.7	5.3	29.0
Wollega	84.5	-	1.0	8.1	6.4
Wollo	43.7	1.6	9.3	17.5	27.9
Country	71.4	3.4	3.2	9.8	12.2

TABLE II. 10 (Continued)

Province	Females				
	Students	Homemakers	Income Recipients	Physically Disabled	Others not Econ.Active
Arussi	0.2	86.1	11.0	0.8	1.9
Bale	0.6	93.3	4.9	0.4	0.8
Begemdir and Semien	0.6	97.3	0.2	1.3	0.6
Eritrea	-	-	-	-	-
Gemu Gofa	0.9	96.6	1.4	0.2	0.9
Gojam	0.7	95.2	1.5	2.1	0.5
Hararge	0.1	99.0	0.2	0.4	0.3
Illubabor	0.8	97.0	0.1	1.7	0.4
Kefa	0.3	98.2	0.3	0.8	0.4
Shoa	0.9	95.6	2.0	0.8	0.7
Sidamo	0.5	98.5	0.6	0.2	0,2
Tigrai	0.3	95.0	1.0	1.6	2.1
Wollega	2.9	88.3	1.7	5.0	2.1
Wollo	-	96.5	0.9	1.5	1.1
Country	0.5	96.1	1.5	1.1	0.8

TABLE II. 10 (Continued)

Province	Total				
	Students	Homemakers	Income Recipients	Physically Disabled	Others not Econ.Active
Arussi	8.7	76.7	10.2	1.4	3.0
Bale	7.0	85.3	4.5	0.7	2.5
Begemdir and Semien	4.7	91.9	0.2	2.2	1.0
Eritrea	-	-	-	-	-
Gemu Gofa	4.4	91.5	1.6	0.5	2.0
Gojam	5.6	88.1	1.7	3.1	1.5
Hararge	3.2	95.0	0.3	1.0	0.5
Illubabor	10.3	84.8	0.1	3.6	1.2
Kefa	7.0	89.5	0.5	1.3	1.7
Shoa	8.2	86.7	2.0	1.6	1.5
Sidamo	6.2	92.0	1.0	0.5	0.4
Tigrai	6.3	85.4	1.4	2.0	4.9
Wollega	29.4	59.6	1.5	6.0	3.5
Wollo	3.3	89.3	1.5	2.7	3.2
Country	7.0	87.7	1.6	1.9	1.8

The overwhelming majority of the economically non-active provincial population (both sexes) consists of homemakers. The percent ranges from about 60.0 in Wollega to about 95.0 in Hararge. This holds true, especially, for the economically non-active females where the percent ranges from 86.1 in Arussi to 90.0 in Hararge. However, in the case of the economically non-active males the proportion of students predominates (See Table II.10.)

d) The Occupation of the Economically active Population - In census and survey reports of economic characteristics "occupation" refers to the usual activity of the person - e.g. farmer, farm-laborer, herdsman, professional, manager, foreman, clerk, etc. Based on this grouping, the occupation of the economically active population is shown in Table II.11.

TABLE II.11. The Economically Active Population by Sex and Occupation

Occupation	Males		Females		Total	
	Number	%	Number	%	Number	%
Farmers	2,934,000	59.3	132,600	7.7	3,066,600	46.0
Farm Laborers & Shepherds	1,849,600	37.4	1,398,500	81.4	3,248,100	48.7
Herdsmen	7,900	0.1	1,900	0.1	9,800	0.1
Administrators	6,600	0.1	-	-	6,600	0.1
Professionals	11,400	0.2	300	-	11,700	0.2
Craftsmen	27,300	0.6	43,800	2.6	71,100	1.1
Traders	42,000	0.9	21,700	1.3	63,700	0.9
Tella & Tej Makers & Sellers	2,200	-	46,000	2.7	48,200	0.4
Services	51,200	1.0	65,900	3.8	117,100	1.8
Others	19,600	0.4	7,400	0.4	27,000	0.4
Total	4,951,800	100.0	1,718,100	100.0	6,669,900	100.0

The above table reveals that the most common occupation is that of agricultural workers (farmers, farm laborers, shepherds and herdsmen).

Except craftsmen and people engaged in services, each of the remaining occupational categories makes up less than one percent of the economically active population. If occupation is considered by sex, of the total economically active population, agricultural work occupies close to 90.0 percent of the females and over 95.0 percent of the males. Only people engaged in services make about one percent of the economically active males. Each of the remaining occupational group constitutes less than one percent of the economically active males. No woman is engaged in administration. However, the proportion of economically active females participating in services, tella and tej making[1] and selling and handicrafts are relatively higher.

Economically active population by age group, sex and occupation is given in Tables XXV - XXVII. Also economically active population by sex, occupation and literacy is indicated on Tables XXVIII - XXX.

Table II.12 reveals the predominance of agricultural occupation in all the provinces. It indicates that there is hardly a province in which at least 90.0 percent of the economically active population is not engaged in agricultural pursuits.

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1. Tella is a home made beverage which is comparable to beer. Tej is also a home beverage made out of honey or/and sugar with malt barley and a local shirub called Gesho. Tej is comparable to wine.

TABLE II. 12

Economic Occupation by Sex and by Province as Percent of Population 10-59 Years of Age.

Province	Male								
	Farmers	Farm Labourers Shepherds	Herds-men	Admini-strators	Profe-ssionals	Crafts-men	Traders	Maker/Seller of Telá and Tej	Services
Arussi	57.1	39.7	1.0	-	2.0	0.6	1.2	-	0.2
Bale	63.6	33.7	1.0	0.3	0.3	0.2	0.2	-	0.3
Begemdir & Semien	50.5	46.4	-	0.1	0.4	1.1	0.3	-	1.0
Eritrea	-	-	-	-	-	-	-	-	-
Gemu Gofa	68.1	28.0	-	0.3	0.4	1.1	0.8	-	0.5
Gojam	55.4	40.0	-	0.1	0.6	1.2	0.8	-	1.3
Hararge	64.2	33.9	-	-	0.1	0.2	0.4	-	0.6
Illubabor	74.1	24.0	0.1	-	0.2	0.2	0.6	0.1	0.3
Kefa	69.3	27.5	-	0.3	0.1	0.2	1.2	0.2	0.7
Shoa	58.0	38.9	0.1	0.1	0.2	0.4	1.1	-	0.9
Sidamo	67.7	30.4	0.2	0.1	-	0.3	0.9	-	0.3
Tigrai	49.8	44.1	0.6	0.4	0.3	0.8	1.0	-	2.4
Wollega	61.0	36.5	0.1	0.2	0.2	0.3	0.4	-	0.6
Wollo	54.4	40.6	-	-	0.3	0.6	1.3	0.1	2.3
Country	59.3	37.4	0.1	0.1	0.2	0.6	0.9	-	1.4

TABLE II. 12 (Continued)

Economic Occupation by Sex and by Province as Percent of Population 10-59 Years of Age.

Province	Female								
	Farmers	Farm Labourers Shepherds	Herds-men	Admini-strators	Profe-ssionals	Crafts-men	Traders	Maker/Seller of Tela and Tej	Services
Arussi	10.5	83.1	0.5	-	-	0.7	1.3	2.8	1.1
Bale	16.8	80.1	-	-	-	1.1	1.1	0.6	0.3
Begemdir & Semien	3.2	74.2	0.3	-	-	12.8	1.6	1.8	5.3
Eritrea	-	-	-	-	-	-	-	-	-
Gemu Gofa	9.7	70.3	-	-	-	6.6	0.5	8.7	3.3
Gojam	3.6	79.5	-	-	-	4.9	2.1	5.5	3.9
Hararge	17.8	32.2	-	-	-	1.7	3.2	4.7	39.6
Illubabor	3.6	92.8	0.1	-	-	0.4	0.1	2.7	0.3
Kefa	4.9	86.5	0.1	-	-	0.3	0.6	5.0	2.0
Shoa	7.3	86.9	0.1	-	-	0.6	1.1	2.0	1.9
Sidamo	60.6	29.5	-	-	-	0.8	0.4	5.5	2.8
Tigrai	11.7	63.9	0.1	-	-	3.9	2.9	3.4	12.7
Wollega	5.6	91.0	0.1	-	-	0.7	0.4	0.9	1.1
Wollo	10.5	64.7	-	-	-	4.4	3.8	2.1	13.8
Country	7.7	81.4	0.1	-	-	2.6	1.3	2.7	4.2

TABLE II. 12 (Continued)

Economic Occupation by Sex and by Province as Percent of Population 10-59 Years of Age.

Province	Total (Both Sexes)								
	Farmers	Farm Labourers Shepherds	Herds-men	Admini-strators	Profe-ssionals	Crafts-men	Traders	Maker/Seller of Tela and Tej	Services
Arussi	43.4	52.6	0.8	-	0.1	0.6	1.2	0.8	0.5
Bale	53.2	44.0	0.8	0.2	0.2	0.4	0.4	0.1	0.3
Begemdir & Semien	39.5	52.9	0.1	0.1	0.3	3.8	0.6	0.4	2.0
Eritrea	-	-	-	-	-	-	-	-	-
Gemu Gofa	56.1	36.7	-	0.2	0.3	8.2	0.7	1.8	1.1
Gojam	41.8	50.5	-	0.1	0.4	2.2	1.1	1.4	2.0
Hararge	62.0	33.7	-	-	0.1	0.3	0.6	0.3	2.4
Illubabor	50.1	47.3	0.1	-	0.2	0.2	0.4	1.0	0.3
Kefa	51.3	44.0	-	0.2	-	0.2	1.1	1.6	1.1
Shoa	43.5	52.7	0.8	-	0.1	0.4	1.1	0.6	1.2
Sidamo	67.3	30.3	0.2	0.1	-	0.3	0.8	0.4	0.4
Tigrai	39.3	49.6	0.5	0.3	0.2	1.7	1.5	0.9	5.2
Wollega	34.1	63.0	-	0.1	0.1	0.5	0.4	0.5	0.9
Wollo	48.9	43.6	-	-	0.3	1.1	1.6	0.4	3.7
Country	46.0	48.7	0.1	0.1	0.2	1.1	0.9	0.7	2.2

Table II.

Recorded Age Distribution And Sex Ratio of Rural Population

Age Group	Male		Female		Both Sex		Sex-Ratio
	No	%	No	%	No	%	M/F x 100
0 - 4	1,666,400	18.3	1,646,300	18.9	3,312,700	18.6	101.0
5 - 9	1,671,400	18.4	1,534,800	17.6	3,206,200	18.0	109.0
10 - 14	989,200	10.9	760,900	8.7	1,750,100	9.8	130.0
15 - 19	746,000	8.2	640,200	7.3	1,386,200	7.8	117.0
20 - 24	522,900	5.7	674,900	7.7	1,197,800	6.7	77.0
25 - 29	646,600	7.1	836,800	9.6	1,483,400	8.3	77.0
30 - 34	605,200	6.7	696,600	8.0	1,301,800	7.3	87.0
35 - 39	561,900	6.2	525,400	6.0	1,087,300	6.1	107.0
40 - 44	449,100	4.9	448,000	5.1	897,100	5.0	100.0
45 - 49	306,100	3.4	254,200	2.9	560,300	3.1	120.0
50 - 54	295,200	3.2	272,800	3.1	566,000	3.2	107.0
55 - 59	177,600	2.0	104,800	1.2	282,400	1.6	169.0
60 - 64	195,700	2.1	156,900	1.8	352,600	2.0	125.0
65 - 69	102,900	1.1	55,800	0.6	158,700	0.9	184.0
70 - 74	77,700	0.8	56,000	0.7	133,700	0.7	139.0
73 - 79	33,700	0.4	19,200	0.2	52,900	0.3	176.0
80 +	47,600	0.6	37,000	0.6	84,600	0.6	129.0
N/S	29,800	(0.3)	39,800	(0.5)	69,600	(0.4)	75.0
Total	9,123,000	100.0	8,760,400	100.0	17,883,400	100.0	104.0

Note The percentage distribution is based up on total population minus "age not stated." However, percentage for "age not stated" is based up on total population.

Table III.

Adjusted[1] Age Distribution And Sex Ratios of the Rural Population

Age group	Male		Female		Total	%	Sex-Ration M/F x100
	No	%	No	%			
0	364,900	4.0	350,400	4.0	715,300	4.0	104.0
1 - 4	1,213,400	13.3	1,147,600	13.1	2,361,000	13.2	106.0
5 - 9	1,295,500	14.2	1,226,500	14.0	2,522,000	14.1	106.0
10 - 14	1,122,100	12.3	1,051,300	12.0	2,173,400	12.2	107.0
15 - 19	967,000	10.6	911,100	10.4	1,878,100	10.5	106.0
20 - 24	821,100	9.0	779,700	8.9	1,600,800	9.0	105.0
25 - 29	693,300	7.6	657,000	7.5	1,350,300	7.5	106.0
30 - 34	583,900	6.4	551,900	6.3	1,135,800	6.4	106.0
35 - 39	492,600	5.4	464,300	5.3	956,900	5.4	106.0
40 - 44	410,500	4.5	394,200	4.5	804,700	4.5	104.0
45 - 49	328,400	3.6	324,100	3.7	652,500	3.6	101.0
50 - 54	264,600	2.9	262,800	3.0	527,400	2.9	101.0
55 - 59	200,700	2.2	210,300	2.4	411,000	2.3	95.0
60 - 64	146,000	1.6	166,400	1.9	312,400	1.7	88.0
65 - 69	100,400	1.1	113,900	1.3	214,300	1.2	88.0
70 - 74	63,900	0.7	78,800	0.9	142,700	0.8	81.0
75 - 79	36,500	0.4	43,800	0.5	80,300	0.5	83.0
80 +	18,200	0.2	26,300	0.3	44,500	0.2	69.0
Total	9,123,000	100.0	8,760,400	100.0	17,883,400	100.0	104.0

1. Adjusted through the United Nations' "west" model stable population.

Table IV.

Number of Households and Persons by

Size of Household of the Surveyed Rural Areas

Size of Household	Number of Household	%	Number of Persons	%
1	164,008	4.1	165,300	0.9
2	570,625	14.2	1,150,200	6.4
3	761,420	19.0	2,302,100	12.9
4	766,583	19.2	3,090,300	17.4
5	654,759	16.3	3,254,000	18.2
6	470,382	11.7	2,844,300	15.9
7	289,767	7.2	2,044,200	11.4
8	167,335	4.2	1,349,100	7.5
9	81,735	2.0	741,400	4.1
10 & above	84,292	2.1	942,500	5.3
Total	4,001,906	100.0	17,883,400	100.0

Table V.

Composition of Households in Surveyed Rural Areas

Household Members	Male		Female		Both Sex	
	No	%	No	%	No	%
Head of household	3,533,800	38.7	499,400	5.7	4,033,200	22.6
Husband	5,500	0.0	-	-	5,500	0.0
Wife	-	-	3,451,200	39.4	3,451,200	19.3
Son	4,804,100	52.7	-	-	4,804,100	26.9
Daughter	-	-	3,834,800	43.7	3,834,800	21.4
Father	23,300	0.3	-	-	23,300	0.1
Mother	-	-	281,400	3.2	281,400	1.6
Brother	180,700	2.0	-	-	180,700	1.0
Sister	-	-	125,800	1.5	125,800	0.7
Other relatives	390,900	4.3	491,000	5.6	881,900	4.9
Servant	166,500	1.8	58,200	0.7	224,700	1.3
Others	16,900	0.2	16,400	0.2	33,300	0.2
Not Stated	1,300	-	2,200	-	3,500	-
Total	9,123,000	100.0	8,760,400	100.0	17,883,400	100.0

Table VI.

MALE-Marital Status by Age Group

Age group	Single		Married		Widowed		Divorced		N/S		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	988,600	100.0	-	-	100	0.0	100	0.0	400	0.0	989,200	100.0
15 - 19	694,400	93.1	44,200	5.9	500	0.1	6,600	0.9	300	0.0	746,000	100.0
20 - 24	253,400	48.5	244,400	46.7	3,100	0.6	20,300	3.9	1,700	0.3	522,900	100.0
25 - 29	80,600	12.5	534,000	82.6	7,000	1.0	23,900	3.7	1,100	0.2	646,600	100.0
30 - 34	18,800	3.1	560,900	92.7	5,500	0.9	19,800	3.3	200	0.0	605,200	100.0
35 - 39	5,700	1.0	536,300	95.4	7,600	1.4	12,100	2.2	200	0.0	561,900	100.0
40 - 44	3,300	0.7	428,500	95.4	8,300	1.9	8,900	2.0	100	0.0	449,100	100.0
45 - 49	1,200	0.4	292,600	95.6	5,800	1.9	6,400	2.1	100	0.0	306,100	100.0
50 - 54	700	0.3	279,300	95.2	6,900	2.4	6,000	2.0	300	0.1	293,200	100.0
55 - 50	400	0.3	168,100	94.6	5,500	3.1	3,300	1.8	300	0.2	177,600	100.0
60 - 64	800	0.4	183,300	93.7	7,300	3.7	4,100	2.1	200	0.1	195,700	100.0
65 - 69	200	0.2	96,000	93.3	4,100	4.0	2,600	2.5	-	0.0	102,900	100.0
70 - 74	100	0.1	67,700	87.2	7,000	8.9	2,900	3.8	-	0.0	77,700	100.0
75 - 79	200	0.6	28,900	85.7	3,500	10.3	900	2.8	200	0.6	33,700	100.0
80 - +	1,000	2.1	37,200	78.2	7,700	16.2	1,500	3.2	200	0.3	47,600	100.0
N/S	7,400	24.2	19,000	64.8	1,100	3.4	1,500	4.8	800	2.8	29,800	100.0
Total	2,056,800	35.5	2,520,400	60.9	81,000	1.4	120,900	2.1	6,100	0.1	5,785,200	100.0

1,068,860 2,520,400 79800 119300 3,761,360
28.2 66.5 2.2 3.2 379150

Table VII.

FEMALE-Marital Status by Age Group

Age group	Single		Married		Widowed		Divorced		N/S		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	683,300	89.8	62,400	8.2	1,000	0.2	13,800	1.8	400	-	760,900	100.0
15 - 19	209,200	32.7	389,000	60.8	3,100	0.5	38,800	6.0	100	-	640,200	100.0
20 - 24	24,200	3.6	606,900	89.9	6,600	1.0	35,900	5.3	1,300	0.2	674,900	100.0
25 - 29	8,200	1.0	781,200	93.4	13,200	1.6	33,300	4.0	900	-	836,800	100.0
30 - 34	4,800	0.7	634,000	91.0	25,600	3.7	31,600	4.5	600	0.1	696,600	100.0
35 - 39	2,100	0.4	469,700	89.4	30,300	5.8	21,600	4.1	1,700	0.3	525,400	100.0
40 - 44	1,700	0.4	357,100	79.7	62,200	13.9	25,900	5.8	1,100	0.2	448,000	100.0
45 - 49	1,100	0.4	183,200	72.2	54,300	21.4	14,600	5.7	1,000	0.3	254,200	100.0
50 - 54	1,400	0.5	162,600	59.6	88,800	32.6	18,500	6.8	1,500	0.5	272,800	100.0
55 - 59	1,300	1.2	52,200	49.8	42,500	40.6	7,000	6.7	1,800	1.7	104,800	100.0
60 - 64	1,000	0.6	53,300	34.0	88,300	56.3	13,400	8.5	900	0.6	156,900	100.0
65 - 69	900	1.6	15,300	27.4	33,500	60.0	6,000	10.8	100	0.2	55,800	100.0
70 - 74	1,100	2.0	12,100	21.6	38,400	68.5	3,700	6.7	700	1.2	56,000	100.0
75 - 79	200	1.0	3,700	19.3	14,000	72.9	1,200	6.3	100	0.5	19,200	100.0
80 - +	1,100	3.0	1,800	4.9	31,700	85.7	2,000	5.4	400	1.0	37,000	100.0
N/S	5,400	13.6	26,100	65.6	5,800	14.6	2,000	5.0	500	1.2	39,800	100.0
Total	947,000	17.0	3,810,600	68.3	539,300	9.7	269,300	4.8	13,100	0.2	5,579,300	100.0

Table VIII

Marital Status (Both Sexes) by Age Group

Age group	Single		Married		Widowed		Divorced		N/S		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	1,671,900	95.5	62,400	3.6	1,100	0.1	13,900	0.8	800	0.0	1,750,100	100.0
15 - 19	903,600	65.2	433,200	31.3	3,600	0.2	45,400	3.3	400	0.0	1,386,200	100.0
20 - 24	277,600	23.2	851,300	71.1	9,700	0.8	56,200	4.7	3,000	0.2	1,197,800	100.0
25 - 29	88,800	6.0	1,315,200	88.7	20,200	1.4	57,200	3.8	2,000	0.1	1,483,400	100.0
30 - 34	23,600	1.8	1,194,900	91.8	31,100	2.4	51,400	3.9	800	0.1	1,301,800	100.0
35 - 39	7,800	0.7	1,006,000	92.5	37,900	3.5	33,700	3.1	1,900	0.2	1,087,300	100.0
40 - 44	5,000	0.6	785,600	87.6	70,500	7.9	34,800	3.8	1,200	0.1	897,100	100.0
45 - 49	2,300	0.4	475,800	84.9	60,100	10.7	21,000	3.7	1,100	0.3	566,300	100.0
50 - 54	2,100	0.4	441,900	78,1	95,700	16.9	24,500	4.3	1,800	0.3	566,000	100.0
55 - 59	1,700	0.6	220,300	78.0	48,000	17.0	10,300	3.6	2,100	0.8	282,400	100.0
60 - 64	1,800	0.5	236,600	67.1	95,600	27.1	17,500	5.0	1,100	0.3	352,600	100.0
65 - 69	1,100	0.8	111,300	70.1	37,600	23.7	8,600	5.4	100	-	158,700	100.0
70 - 74	1,200	0.9	79,800	59.7	45,400	34.0	6,600	4.9	700	0.5	133,700	100.0
75 - 79	400	0.8	32,600	61.6	17,500	33.1	2,100	4.0	300	0.5	52,900	100.0
80 - +	2,100	2.5	39,000	46.1	39,400	46.6	3,500	4.1	600	0.7	84,600	100.0
N/S	12,800	18.4	45,100	64.7	6,900	9.9	3,500	5.0	1,300	2.0	69,600	100.0
Total	3,003,800	26.4	7,331,000	64.5	620,300	5.5	390,200	3.4	19,200	0.2	11,364,500	100.0

1,331,900 7,268,600 619 200 376,300 9,596,000

13.9 75.7 6.5 3.9

Table IX.

Married MALE Population by Number of Wives and Age Group

Age group	1 Wife		2 Wives		3 Wives		4 Wives		5 or more Wives		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
15 - 19	43,700	98.9	400	0.9	100	0.2	-	-	-	-	44,200	100.0
20 - 24	241,300	98.7	3,000	1.2	100	0.1	-	-	-	-	244,400	100.0
25 - 29	516,000	96.6	17,600	3.3	400	0.1	-	-	-	-	534,000	100.0
30 - 34	521,900	93.0	36,700	6.5	2,100	0.4	200	0.1	-	-	560,900	100.0
35 - 39	476,500	88.8	54,700	10.2	4,600	0.9	500	0.1	-	-	536,300	100.0
40 - 44	371,700	86.8	51,500	12.0	4,900	1.1	300	0.1	100	-	428,500	100.0
45 - 49	251,300	85.9	36,900	12.6	3,400	1.2	900	0.3	100	-	292,600	100.0
50 - 54	237,200	84.9	36,800	13.2	4,600	1.7	400	0.1	300	0.1	279,300	100.0
55 - 59	141,100	83.9	24,400	14.5	1,900	1.1	700	0.5	-	-	168,100	100.0
60 - 64	154,800	84.4	25,400	13.8	2,500	1.4	300	0.2	300	0.2	183,300	100.0
65 - 69	80,200	83.6	14,400	15.0	1,000	1.0	300	0.3	100	0.1	96,000	100.0
70 - 74	59,000	87.1	7,200	10.6	1,100	1.6	300	0.5	100	0.2	67,700	100.0
75 - 79	25,200	87.2	3,300	11.4	400	1.4	-	-	-	-	28,900	100.0
80 - +	33,400	89.8	3,100	8.3	600	1.6	100	0.3	-	-	37,700	100.0
N/S	16,100	84.7	2,400	12.6	500	2.7	-	-	-	-	19,000	100.0
Total	3,169,400	90.0	317,800	9.0	28,200	0.8	4,000	0.2	1,000	-	3,520,400	100.0

Table X.

MALE- Population by Age Group and Literacy

Age group	Illiterate		Read only		Read and Write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
10 - 14	825,800	83.5	26,500	2.7	177,800	11.9	19,100	1.9	989,200	100.0
15 - 19	627,300	84.1	19,900	2.7	89,300	12.0	9,500	1.2	746,000	100.0
20 - 24	448,200	85.7	12,300	2.4	55,700	10.1	6,700	1.8	522,900	100.0
25 - 29	569,000	88.0	14,700	2.3	57,100	8.8	5,800	0.9	646,600	100.0
30 - 34	534,400	88.3	14,600	2.4	51,300	8.5	4,900	0.8	605,200	100.0
35 - 39	510,600	90.9	11,100	2.0	37,900	6.7	2,300	0.4	561,900	100.0
40 - 44	406,100	90.4	10,800	2.4	29,200	6.5	3,000	0.7	449,100	100.0
45 - 49	278,200	90.9	6,800	2.2	19,800	6.5	1,300	0.4	306,100	100.0
50 - 54	264,900	90.3	6,800	2.3	19,800	6.8	1,700	0.4	293,200	100.0
55 - 59	160,400	90.3	4,000	2.3	11,800	6.6	1,400	0.8	177,600	100.0
60 - 64	181,600	92.8	4,200	2.1	8,000	4.1	1,900	1.0	195,700	100.0
65 - 69	94,300	91.6	2,700	2.6	5,300	5.2	600	0.6	102,900	100.0
70 - 74	69,700	89.7	1,900	2.4	5,100	6.6	1,000	1.3	77,700	100.0
75 - 79	29,900	88.7	1,100	3.3	2,600	7.7	100	0.3	33,700	100.0
80 - +	45,100	94.7	1,100	2.3	900	1.9	500	1.1	47,600	100.0
N/S	26,700	89.6	600	2.1	700	2.3	1,800	6.0	29,800	100.0
Total	5,072,200	87.7	139,100	2.4	512,300	8.9	61,600	1.0	5,785,200	100.0

Table A1.

FEMALE-Population by Age Group and Literacy

Age group	Illiterate		Read only		Read and Write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
10 - 14	728,800	95.8	3,100	0.4	13,800	1.8	15,200	2.0	760,900	100.0
15 - 19	627,500	98.0	600	0.1	4,200	0.7	7,900	1.2	640,200	100.0
20 - 24	666,700	98.8	600	-	1,100	0.2	6,500	1.0	674,900	100.0
25 - 29	829,800	99.2	400	-	1,000	0.1	5,600	0.7	836,800	100.0
30 - 34	691,800	99.3	200	-	500	0.1	4,100	0.6	696,600	100.0
35 - 39	520,700	99.2	200	-	1,100	0.2	3,400	0.6	525,400	100.0
40 - 44	444,600	99.2	100	-	100	-	3,200	0.8	448,000	100.0
45 - 49	250,200	98.4	-	-	100	-	3,900	1.6	254,200	100.0
50 - 54	269,800	98.9	200	-	-	-	2,800	1.1	272,800	100.0
55 - 59	102,700	98.0	100	-	-	-	2,000	2.0	104,800	100.0
60 - 64	154,400	98.4	100	-	100	-	2,300	1.6	156,900	100.0
65 - 69	54,500	97.7	100	-	-	-	1,200	2.3	55,800	100.0
70 - 74	54,300	97.0	-	-	-	-	1,700	3.0	56,000	100.0
75 - 79	18,700	97.4	-	-	-	-	500	2.6	19,200	100.0
80 - +	35,100	94.9	300	0.8	-	-	1,600	4.3	37,100	100.0
N/S	37,600	94.5	300	0.8	100	0.2	1,800	4.5	39,800	100.0
Total	5,487,200	98.4	6,300	0.1	22,100	0.4	63,700	1.1	5,579,300	100.0

Table XII.

Total Population (Both Sexes) by Age Group and Literacy

Age group	Illiterate		Read only		Read and Write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
10 - 14	1,554,600	88.8	29,600	1.7	131,600	7.5	34,300	2.0	1,750,100	100.0
15 - 19	1,254,800	90.5	20,500	1.5	93,500	6.7	17,400	1.3	1,386,200	100.0
20 - 24	1,114,900	93.1	12,900	1.1	56,800	4.7	13,200	1.1	1,197,800	100.0
25 - 29	1,398,800	94.3	15,100	1.0	58,100	3.9	11,400	0.8	1,483,400	100.0
30 - 34	1,226,200	94.2	14,800	1.1	51,800	4.0	9,000	0.7	1,301,800	100.0
35 - 39	1,031,300	94.8	11,300	1.0	39,000	3.6	5,700	0.6	1,087,300	100.0
40 - 44	850,700	94.8	10,900	1.2	29,300	3.3	6,200	0.7	897,100	100.0
45 - 49	528,40	94.3	6,800	1.2	19,900	3.6	5,200	0.9	560,300	100.0
50 - 54	534,700	94.5	7,000	1.2	19,800	3.5	4,500	0.8	566,000	100.0
55 - 59	263,100	93.2	4,100	1.5	11,800	4.2	3,400	1.1	282,400	100.0
60 - 64	336,000	95.3	4,300	1.2	8,100	2.3	4,200	1.2	352,600	100.0
65 - 69	148,800	93.8	2,800	1.8	5,300	3.3	1,800	1.1	158,700	100.0
70 - 74	124,000	92.7	1,900	1.5	5,100	3.8	2,700	2.0	133,700	100.0
75 - 79	48,600	91.9	1,100	2.1	2,600	4.9	600	1.1	52,900	100.0
80 - +	80,200	94.8	1,400	1.6	900	1.1	2,100	2.5	84,600	100.0
N/S	64,300	92.4	900	1.3	800	1.1	3,600	5.2	69,600	100.0
Total	10,559,400	92.9	145,400	1.3	534,400	4.7	125,300	1.1	11,364,500	100.0

Table XIII.

Economidally Active and Non-Active MALE population by Age Group

Age group	Economically Active		Economicalyy Non-Active		Total	
	No	%	No	%	No	%
10 - 14	792,200	80.1	197,000	19.9	989,200	100.0
15 - 19	660,300	88.5	85,700	11.5	746,000	100.0
20 - 24	501,700	95.9	21,200	4.1	522,900	100.0
25 - 29	636,400	98.4	10,200	1.6	646,600	100.0
30 - 34	597,100	98.7	8,100	1.3	605,200	100.0
35 - 39	558,100	99.3	3,800	0.7	561,900	100.0
40 - 44	443,600	98.8	5,500	1.2	449,100	100.0
45 - 49	301,300	98.4	4,800	1.6	306,100	100.0
50 - 54	287,600	98.1	5,600	1.9	293,200	100.0
55 - 59	173,500	97.7	4,100	2.3	177,600	100.0
Total	4,951,800	93.5	346,000	6.5	5,297,800	100.0

Table XIV

Economically Active and Non-Active FEMALE Population by Age Group

Age group	Economically Active		Economically Non-Active		Total	
	No	%	No	%	No	%
10 - 14	203,700	26.8	557,200	73.2	760,900	100.0
15 - 19	190,200	29.7	450,000	70.3	640,200	100.0
20 - 24	216,100	32.0	458,800	68.0	674,900	100.0
25 - 29	287,300	34.3	549,500	65.7	836,800	100.0
30 - 34	242,300	34.8	454,300	65.2	696,600	100.0
35 - 39	191,000	36.4	334,400	63.6	525,400	100.0
40 - 44	163,300	36.5	284,700	63.5	448,000	100.0
45 - 49	90,000	35.4	164,200	64.6	254,200	100.0
50 - 54	99,700	36.5	173,100	63.5	272,800	100.0
55 - 59	34,500	32.9	70,300	67.1	104,800	100.0
Total	1,718,100	32.9	3,496,500	67.1	5,214,600	100.0

Table XV.

Economically Active and Non-Active Population (Both Sexes)
by Age Group

Age group	Economically Active		Economically Non-Active		Total	
	No	%	No	%	No	%
10 - 14	995,900	56.9	754,200	43.1	1,750,100	100.0
15 - 19	850,500	61.4	535,700	38.6	1,386,200	100.0
20 - 24	717,800	59.9	480,000	40.1	1,197,800	100.0
25 - 29	923,700	62.3	559,700	37.7	1,483,400	100.0
30 - 34	839,400	64.5	462,400	35.5	1,301,800	100.0
35 - 39	749,100	68.9	338,200	31.1	1,087,300	100.0
40 - 44	606,900	67.7	290,200	32.3	897,100	100.0
45 - 49	391,300	69.8	169,000	30.2	560,300	100.0
50 - 54	387,300	68.4	178,700	31.6	566,000	100.0
55 - 59	208,000	73.7	74,400	26.3	282,400	100.0
Total	6,669,900	63.4	3,842,500	36.6	10,512,400	100.0

Table XVI

Economically Active MALE Population by Age Group And Activity Status

Age group	Employer		Own Account Worker		Employee		Unpaid Family Worker		Other Economic Activity		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	100	-	3,000	0.3	51,200	6.5	734,000	92.7	3,900	0.5	792,200	100.0
15 - 19	700	0.1	40,400	6.2	55,700	8.4	561,300	85.0	2,200	0.3	660,300	100.0
20 - 24	3,400	0.7	207,300	41.3	36,900	7.4	252,900	50.4	1,200	0.2	501,700	100.0
25 - 29	12,600	2.0	493,000	77.4	28,400	4.5	101,700	16.0	700	0.1	636,400	100.0
30 - 34	17,300	2.9	530,200	88.8	20,300	3.4	29,300	4.9	-	-	597,100	100.0
35 - 39	16,800	3.0	520,800	93.3	12,100	2.2	8,300	1.5	100	-	558,100	100.0
40 - 44	15,500	3.5	413,000	93.2	9,800	2.2	5,000	1.1	300	-	443,600	100.0
45 - 49	13,200	4.4	280,300	93.1	6,100	2.0	1,600	0.5	100	-	301,300	100.0
50 - 54	12,900	4.5	265,400	92.3	7,900	2.7	1,400	0.5	-	-	287,600	100.0
55 - 59	10,900	6.3	158,900	91.6	3,300	1.9	400	0.2	-	-	173,500	100.0
Total	103,400	2.1	2,912,300	58.8	231,700	4.7	1,695,900	34.2	8,500	0.2	4,951,800	100.0

Table XVII

Economically Active FEMALE Population by Age Group and Activity Status

Age group	Employer		Own Account Worker		Employes		Unpaid Family Worker		Other Economic Activity		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	-	-	1,200	0.6	17,600	8.6	184,300	90.5	600	0.3	203,700	100.0
15 - 19	200	-	2,400	1.3	13,300	7.0	173,800	91.4	500	0.3	190,200	100.0
20 - 24	-	-	10,000	4.6	7,300	3.4	198,500	91.9	300	0.1	216,100	100.0
25 - 29	400	0.1	25,900	9.0	9,000	3.1	251,600	87.7	400	0.1	287,300	100.0
30 - 34	700	0.3	35,300	14.6	11,300	4.7	194,900	80.4	100	-	242,300	100.0
35 - 39	800	0.4	36,300	19.0	5,400	2.8	148,200	77.6	300	0.2	191,000	100.0
40 - 44	1,000	0.6	41,500	25.4	8,500	5.2	111,700	68.4	600	0.4	163,300	100.0
45 - 49	700	0.8	28,700	31.9	2,700	3.0	57,800	64.2	100	0.1	90,000	100.0
50 - 54	1,400	1.4	35,700	35.8	9,300	9.3	53,100	53.3	200	0.2	99,700	100.0
55 - 59	1,000	2.9	14,100	40.9	3,000	8.7	16,300	47.2	100	0.3	34,500	100.0
Total	6,200	0.4	231,100	13.4	87,400	5.1	1,390,200	80.9	3,200	0.2	1,718,100	100.0

Table XVIII

Economically Active Population (Both Sexes) by Age Group and Activity Status

Age group	Employer		Own Account Worker		Employee		Unpaid Family Worker		Other Economic Activity		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	100	-	4,200	0.4	68,800	6.9	918,300	92.2	4,500	0.5	995,900	100.0
15 - 19	900	0.1	42,800	5.0	69,000	8.1	735,100	86.5	2,700	0.3	850,500	100.0
20 - 24	3,400	0.5	217,300	30.3	44,200	6.2	451,400	62.9	1,500	0.1	717,800	100.0
24 - 29	13,000	1.4	518,900	56.3	37,400	4.0	353,300	38.2	1,100	0.1	923,700	100.0
30 - 34	18,000	2.1	565,500	67.4	31,600	3.8	224,200	26.7	100	-	839,400	100.0
35 - 39	17,600	2.4	557,100	74.4	17,500	2.3	156,500	20.9	400	-	749,100	100.0
40 - 44	16,500	2.8	454,500	74.9	18,300	3.0	116,700	19.2	900	0.1	606,900	100.0
45 - 49	13,900	3.6	309,000	79.0	8,800	2.2	59,400	15.2	200	-	391,300	100.0
50 - 54	14,300	3.7	301,100	77.8	17,200	4.4	54,500	14.1	200	-	387,300	100.0
55 - 59	11,900	5.7	173,000	83.2	6,300	3.0	16,700	8.0	100	0.1	208,000	100.0
Total	109,600	1.6	3,143,400	47.1	319,100	4.8	3,086,100	46.3	11,700	0.2	6,669,900	100.0

Table XIX.

Economically Active MALE Population 10-59, By Activity Status and Literacy

Activity Status	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Employers	80,200	77.6	4,300	4.2	18,800	18.2	100	0.0	103,400	100.0
Own Account Workers	2,624,300	90.1	64,600	2.2	207,000	7.1	16,400	0.6	2,912,300	100.0
Employees	206,500	89.1	3,600	1.6	15,100	6.5	6,500	2.8	231,700	100.0
Unpaid Family Workers	1,591,900	93.9	22,200	1.3	56,800	3.3	25,000	1.5	1,695,900	100.0
Others	6,900	81.2	300	3.5	1,200	14.1	100	1.2	8,500	100.0
Total	4,509,800	91.1	95,000	1.9	298,900	6.0	48,100	1.0	4,951,800	100.0

Table XX.

Economically Active FEMALE Population 10-59, by Activity Status and Literacy

Activity Status	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Employers	6,200	100.0	-	-	-	-	-	-	6,200	100.0
Own Account Workers	228,600	98.9	-	-	500	0.2	2,000	0.9	231,100	100.0
Employees	84,600	96.8	800	0.9	200	0.3	1,800	2.0	87,400	100.0
Unpaid Family Workers	1,377,400	99.0	700	0.1	900	0.1	11,200	0.8	1,390,200	100.0
Others	3,100	99.7	-	-	-	-	100	0.3	3,200	100.0
Total	1,699,900	98.9	1,500	0.1	1,600	0.1	15,100	0.9	1,718,100	100.0

Table XXI

Economically Active Population 10-59, (Both Sexes) by Activity Status and Literacy

Activity Status	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Employers	86,400	78.8	4,300	3.9	18,800	17.2	100	0.1	109,600	100.0
Own Account Workers	2,852,900	90.8	64,600	2.1	207,500	6.6	18,400	0.5	3,143,400	100.0
Employees	291,100	91.2	4,400	1.4	15,300	4.8	8,300	2.6	319,100	100.0
Unpaid family workers	2,969,300	96.2	22,900	0.8	57,700	1.9	36,200	1.1	3,086,100	100.0
Others	10,000	85.5	300	2.6	1,200	10.3	200	1.6	11,700	100.0
Total	6,209,700	93.1	96,500	1.4	300,500	4.5	63,200	1.0	6,669,900	100.0

Table XXII.

Economically Non-Active MALE Population by Age Group and Reason for Non-Activity

Age group	Students		Home Makers		Income Recipients		Physically Disabled		Others Not Economically Active		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	152,500	77.4	10,400	5.3	100	0.1	4,400	2.2	29,600	15.0	197,000	100.0
15 - 19	76,800	89.6	1,300	1.5	200	0.2	5,300	6.2	2,100	2.5	85,700	100.0
20 - 24	14,000	66.0	-	-	700	3.3	4,900	23.1	1,600	7.6	21,200	100.0
25 - 29	2,900	28.4	100	1.0	1,500	14.7	3,800	37.3	1,900	18.6	10,200	100.0
30 - 34	500	6.2	100	1.3	1,800	22.2	3,600	44.4	2,100	25.9	8,100	100.0
35 - 39	100	2.6	-	-	700	18.4	2,500	65.8	500	13.2	3,800	100.0
40 - 44	-	-	-	-	1,800	32.7	3,100	56.4	600	10.9	5,500	100.0
45 - 49	200	4.2	-	-	1,000	20.8	2,400	50.0	1,200	25.0	4,800	100.0
50 - 54	100	1.7	-	-	1,600	28.6	2,200	39.3	1,700	30.4	5,600	100.0
55 - 59	-	-	-	-	1,700	41.5	1,700	41.5	700	17.0	4,100	100.0
Total	247,100	71.4	11,900	3.4	11,100	3.2	33,900	9.8	42,000	12.2	346,000	100.0

Table XXIII

Economically Non-Active FEMALE Population by Age Group and Reason for Non-Activity

Age Group	Students		Home Makers		Income Recipients		Physically Disabled		Others Not Economically Active		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	17,100	3.1	531,300	95.4	300	-	2,500	0.4	6,000	1.1	557,200	100.0
15 - 19	2,800	0.6	441,000	98.0	1,900	0.4	3,500	0.8	800	0.2	450,000	100.0
20 - 24	100	-	451,300	98.4	3,000	0.7	3,600	0.8	800	0.1	458,800	100.0
25 - 29	-	-	536,00	97.6	8,200	1.5	4,600	0.8	700	0.1	549,500	100.0
30 - 34	-	-	442,000	97.3	7,400	1.6	3,800	0.8	1,100	0.3	454,300	100.0
35 - 39	-	-	323,600	96.8	6,700	2.0	3,300	1.0	800	0.2	334,400	100.0
40 - 44	-	-	272,200	95.6	6,800	2.4	3,800	1.3	1,900	0.7	284,700	100.0
45 - 49	-	-	153,800	93.7	5,400	3.5	3,500	2.1	1,500	0.9	164,200	100.0
50 - 54	-	-	150,800	87.1	8,300	4.8	5,700	3.3	8,300	4.8	173,100	100.0
55 - 59	-	-	56,800	80.8	3,500	5.0	3,100	4.4	6,900	9.8	70,300	100.0
Total	20,000	-	3,358,800	96.1	51,500	1.5	37,400	1.1	28,800	0.8	3,496,500	100.0

Table XXIV

Economically Non-Active Population (Both Sexes) By Age Group and Reason for Non-Activity

Age group	Students		Home Makers		Income Recipients		Physically Disabled		Others Not Economically Active		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
10 - 14	169,600	22.5	541,700	71.8	400	0.1	6,900	0.9	35,600	4.7	754,200	100.0
15 - 19	79,600	14.9	442,300	82.6	2,100	0.4	8,800	1.6	2,900	0.5	535,700	100.0
20 - 24	14,100	2.9	451,300	94.0	3,700	0.8	8,500	1.8	2,400	0.5	480,000	100.0
25 - 29	2,900	0.5	536,100	95.8	9,700	1.7	8,400	1.5	2,600	0.5	559,700	100.0
30 - 34	500	0.1	442,100	95.6	9,200	2.0	7,400	1.6	3,200	0.7	462,400	100.0
35 - 39	100	-	323,600	95.7	7,400	2.2	5,800	1.7	1,300	0.4	338,200	100.0
40 - 44	-	-	272,200	93.8	8,600	3.0	6,900	2.4	2,500	0.8	290,200	100.0
45 - 49	200	0.1	153,800	91.0	6,400	3.8	5,900	3.5	2,700	1.6	169,000	100.0
50 - 54	100	-	150,800	84.4	9,900	5.6	7,900	4.4	10,000	5.6	178,700	100.0
55 - 59	-	-	56,800	76.3	5,200	7.0	4,800	6.5	7,600	10.2	74,400	100.0
Total	267,100	7.0	3,370,700	87.7	62,600	1.6	71,300	1.9	70,800	1.8	3,842,500	100.0

Table XXV

Economically Active MALE Population by Age Group and Type of Occupation

Occupation		A G E G R O U P										
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	Total
Farmers	No	2,300	39,200	202,000	490,500	532,500	524,300	416,900	288,200	272,300	165,800	2,934,000
	%	0.3	5.9	40.3	77.1	89.1	93.9	94.0	95.7	94.7	95.6	59.3
Farm Labourers and Shepherds	No	773,900	602,900	277,200	121,600	41,300	13,500	8,700	4,100	5,300	1,100	1,849,600
	%	97.7	91.3	55.3	19.1	6.9	2.4	2.0	1.4	1.8	0.6	37.4
Herdsmen	No	1,400	200	700	600	1,200	600	1,200	500	1,100	400	7,900
	%	0.2	-	0.1	0.1	0.2	0.1	0.3	0.1	0.4	0.2	0.1
Administrators	No	200	200	700	1,100	900	1,400	500	300	500	800	6,600
	%	-	-	0.1	0.2	0.1	0.3	0.1	0.1	0.2	0.5	0.1
Professionals	No	1,100	800	1,800	1,400	1,800	1,500	1,100	500	700	700	11,400
	%	0.2	0.1	0.4	0.2	0.3	0.3	0.2	0.1	0.2	0.4	0.2
Craftsmen	No	900	2,000	4,100	3,700	4,500	4,200	3,900	1,900	1,300	800	27,300
	%	0.1	0.3	0.8	0.6	0.8	0.7	0.8	0.6	0.5	0.5	0.6
Traders	No	1,600	3,200	5,400	8,500	6,600	6,000	4,900	2,000	2,300	1,500	42,000
	%	0.2	0.5	1.1	1.3	1.1	1.1	1.1	0.7	0.8	0.9	0.9
Makers and Sellers of tella and tej	No	400	400	200	100	500	100	400	-	-	100	2,200
	%	-	0.1	-	-	0.1	-	0.1	-	-	-	-
Services	No	5,000	7,700	7,800	7,100	5,900	5,100	4,600	2,700	3,300	2,000	51,200
	%	0.6	1.2	1.6	1.1	1.0	0.9	1.1	0.9	1.1	1.2	1.0
New Workers	No	800	200	100	100	-	-	-	-	-	-	1,200
	%	0.1	-	-	-	-	-	-	-	-	-	-
N/S	No	4,600	3,500	1,700	1,700	1,900	1,400	1,400	1,100	800	300	18,400
	%	0.6	0.6	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.1	0.4
Total	No	792,200	660,300	504,700	636,400	597,100	558,100	443,600	301,300	287,600	173,500	4,951,800
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table XXVI

Economically Active FEMALE Population by Age Group and Type of Occupation

Occupation		AGE GROUP										
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	Total
Farmers	No	100	700	4,700	12,000	19,500	20,500	26,900	17,500	22,300	8,400	132,600
	%	-	0.4	2.2	4.2	8.0	10.7	16.5	19.4	22.4	24.4	7.7
Farm Labourers and Shepherds	No	187,900	177,300	198,200	251,400	195,400	148,600	112,400	57,500	53,000	16,800	1,398,500
	%	92.2	93.2	91.7	87.5	80.7	77.8	68.8	63.9	53.2	48.7	81.4
Herdsmen	No	700	-	-	200	100	400	-	200	200	100	1,900
	%	0.4	-	-	-	-	0.2	-	0.2	0.2	0.3	0.1
Administrators	No	-	-	-	-		-	-	-	-	-	-
	%	-	-	-	-	-	-	-	-	-	-	-
Professionals	No	-	-	100	-	100	-	-	-	100	-	300
	%	-	-	-	-	-	-	-	-	0.1	-	-
Craftsmen	No	3,300	2,800	1,800	6,700	5,000	5,000	5,700	3,800	6,200	3,500	43,800
	%	1.6	1.5	0.8	2.3	2.1	2.6	3.5	4.2	6.2	10.1	2.6
Traders	No	700	300	900	1,900	3,500	2,200	4,700	3,400	3,000	1,100	21,700
	%	0.4	0.1	0.4	0.7	1.5	1.2	2.9	3.8	3.0	3.2	1.3
Makers and Sellers of tella and tej	No	300	800	3,900	7,300	8,600	8,200	4,800	4,500	5,700	1,900	46,000
	%	0.1	0.4	1.8	2.6	3.5	4.3	2.9	5.0	5.7	5.5	2.7
Services	No	9,400	7,400	4,800	7,000	9,000	5,200	8,000	2,800	8,800	2,500	65,900
	%	4.6	3.9	2.7	2.4	3.7	2.8	4.9	3.2	8.8	7.3	3.8
New Workers	No	400	-	-	-	-	100	-	-	-	-	500
	%	0.2	-	-	-	-	-	-	-	-	-	-
N/S	No	900	900	700	800	1,100	800	800	300	400	200	6,900
	%	0.5	0.5	0.4	0.3	0.5	0.4	0.5	0.3	0.4	0.5	0.4
Total	No	203,700	190,200	216,100	287,300	242,300	191,000	163,300	90,000	99,700	34,500	1,718,100
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table XXVII

Economically Active Population (both sex) by Age Group and Type of Occupation

Occupation		A G E G R O U P										
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	Total
Farmers	No	2,400	39,900	206,700	502,500	552,000	544,800	443,800	305,700	294,600	174,200	3,066,600
	%	0.2	4.7	28.8	54.4	65.8	72.8	73.1	78.1	76.1	83.7	46.0
Farm Labourers and Shepherds	No	961,800	780,200	475,400	373,000	236,700	162,100	121,100	61,600	58,300	17,900	3,248,100
	%	96.6	91.8	66.2	40.4	28.2	21.6	20.0	15.8	15.1	8.6	48.7
Herdsmen	No	2,100	200	700	800	1,300	1,000	1,200	700	1,300	500	9,800
	%	0.2	-	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1
Administrators	No	200	200	700	1,100	900	1,400	500	300	500	800	6,600
	%	-	-	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.1
Professionals	No	1,100	800	1,900	1,400	1,900	1,500	1,100	500	800	700	11,700
	%	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2
Craftsmen	No	4,200	4,800	5,900	10,400	9,500	9,200	9,600	5,700	7,500	4,300	71,100
	%	0.4	0.6	0.8	1.1	1.1	1.2	1.6	1.5	1.9	2.1	1.1
Traders	No	2,300	3,500	6,300	10,400	10,100	8,200	9,600	5,400	5,300	2,600	63,700
	%	0.2	0.4	0.9	1.1	1.2	1.1	1.6	1.4	1.4	1.3	0.9
Makers and Sellers of tella and tej	No	700	1,200	4,100	7,400	9,100	8,300	5,200	4,500	5,700	2,000	48,200
	%	0.1	0.1	0.6	0.8	1.1	1.1	0.8	1.1	1.5	1.0	0.7
Services	No	14,400	15,100	13,600	14,100	14,900	10,300	12,600	5,500	12,100	4,500	117,100
	%	1.5	1.8	1.9	1.5	1.8	1.4	2.1	1.4	3.1	2.2	1.8
New Workers	No	1,200	200	100	100	-	100	-	-	-	-	1,700
	%	0.1	-	-	-	-	-	-	-	-	-	-
N/S	No	5,500	4,400	2,400	2,500	3,000	2,200	8,200	1,400	1,200	500	25,300
	%	0.6	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.4
Total	No	995,900	850,500	717,800	923,700	839,400	749,100	606,900	391,300	387,300	208,000	6,669,900
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE XXVIII

Economically Active MALE population 10-59, by occupation and Literacy

Occupation	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Farmers	2,641,000	90.0	66,000	2.1	211,800	7.2	15,200	0.7	2,934,000	100.0
Farm Laborers and Shepherds	1,737,300	94.0	22,900	1.2	59,300	3.2	30,100	1.6	1,849,600	100.0
Herdsmen	6,700	84.8	400	5.0	700	8.9	100	1.3	7,900	100.0
Administrators	1,800	27.3	200	3.0	4,500	68.1	100	1.4	6,600	100.0
Professionals	2,600	22.8	800	7.0	8,000	70.2	-	-	11,400	100.0
Craftsmen	22,500	82.4	900	3.3	3,700	13.6	200	1.7	27,300	100.0
Traders	33,100	78.8	1,300	3.1	6,800	16.2	800	1.9	42,000	100.0
Makers and Sellers of tella and tej	1,600	72.7	-	-	600	27.3	-	-	2,200	100.0
Services	46,400	90.1	1,000	2.3	2,600	5.1	1,200	2.5	51,200	100.0
New Workers	1,200	100.0	-	-	-	-	-	-	1,200	100.0
N/S	15,600	84.8	1,500	8.4	900	4.6	400	2.2	18,400	100.0
Total	4,509,800	91.1	95,000	1.9	298,900	6.0	48,100	1.0	4,951,800	100.0

Table XXIX

Economically Active FEMALE population 10-59, by occupation and Literacy

Occupation	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Farmers	131,800	99.4	-	-	100	0.1	700	0.5	132,600	100.0
Farm Laborers and Shepherds	1,385,600	99.2	900	-	800	-	11,200	0.8	1,398,500	100.0
Herdsmen	1,700	89.5	-	-	-	-	200	11.5	1,900	100.0
Administrators	-	-	-	-	-	-	-	-	-	-
Professionals	200	66.6	-	-	-	-	100	33.4	300	100.0
Craftsmen	42,900	97.9	-	-	-	-	900	2.1	43,800	100.0
Traders	20,900	96.3	-	-	100	0.5	700	3.2	21,700	100.0
Makers and Sellers of tella and tej	45,400	98.7	-	-	500	1.0	100	0.3	46,000	100.0
Services	64,600	98.0	100	0.2	100	0.2	1,100	1.6	65,900	100.0
New Workers	400	80.0	-	-	-	-	100	20.0	500	100.0
N/S	6,400	92.8	500	7.2	-	-	-	-	6,900	100.0
Total	1,699,900	98.9	1,500	0.1	1,600	0.1	15,100	0.9	1,718,100	100.0

Table XXX.

Economically Active Population 10-59 (Both Sexes) by Occupation and Literacy

Occupation	Illiterate		Read only		Read and write		N/S		Total	
	No	%	No	%	No	%	No	%	No	%
Farmers	2,772,800	90.4	66,000	2.2	211,900	6.9	15,900	0.5	3,066,600	100.0
Farm Laborers and Shepherds	3,122,900	96.1	23,800	0.8	60,100	1.8	41,300	1.3	3,248,100	100.0
Herdsmen	8,400	85.7	400	4.1	700	7.2	300	3.0	9,800	100.0
Administrators	1,800	27.2	200	3.1	4,500	68.2	100	1.5	6,600	100.0
Professionals	2,800	23.9	800	6.8	8,000	68.3	100	1.0	11,700	100.0
Craftsmen	65,400	92.0	900	1.3	3,700	5.2	1,100	1.5	71,100	100.0
Traders	54,000	84.8	1,300	2.0	6,900	10.8	1,500	2.4	63,700	100.0
Makers and Sellers of tella and tej	47,000	97.5	-	-	1,100	2.3	100	0.2	48,200	100.0
Service	111,000	99.4	1,100	0.1	2,700	0.3	2,300	0.2	117,100	100.0
New Workers	1,600	94.2	-	-	-	-	100	5.8	1,700	100.0
N/S	22,000	87.0	2,000	8.0	900	3.5	400	1.5	25,300	100.0
Total	6,209,700	93.1	96,500	1.6	300,500	4.4	63,200	0.9	6,669,900	100.0

CHAPTER III

VITAL RATES OF THE RURAL POPULATION

(January 1970)

In the National Sample Survey second round, concerning the vital rates, questions on the total number of children ever born, total number of children surviving, and total number of births and deaths during the last 12 months prior to the survey date were included in the form. Based on the response to these questions, reported and estimated fertility and mortality measures, whose definitions given below, have been computed.

Crude Birth Rate - The number of births that occur during one year per 1,000 population.

Child Woman Ratio - The number of children under age 5 per 1,000 women aged 15-49.

General Fertility Rate - The number of births that occur during the year per 1,000 women aged 15-49.

Age-specific Birth Rate - The number of births that occur during one year per women by age group (5 years age interval) of women aged 15-49.

Total Fertility Rate - The number of children that would be borne by a group of women aged 15-49 under given age - specific birth rates. It is usually expressed as rates per woman.

Gross Reproduction Rate - The number of daughters that would be borne by a group of women aged 15-49 under given age - specific birth rate. It is usually expressed as rates per woman.

Crude Death Rate - The number of deaths that occur during one year per 1,000 population.

Infant Mortality Rate - The number of infant deaths under one year of age that occur during one year per 1,000 live births.

Child Mortality Rate - The number of deaths of children 0-4 years of age that occur during one year per 1,000 children 0 - 4 years of age.

Fertility

The result of the National Sample Survey second round show fertility measures that are relatively low when compared with that of the results of the first round (See Table III.1). After the National Sample Survey first round there were no steps taken to curb fertility in Ethiopia (especially in the rural areas). Therefore, the descrepancy observed in the fertility measures obtained in the two rounds may be attributed to differences in the degree of underreporting of births.

TABLE III.1

Reported Fertility Measures in the National Sample Survey First and Second Round

Fertility Measures	National Sample Survey	
	First Round*	Second Round
Crude birth rate (per '000)	44.0	38.2
Child Woman ratio (per '000)	768.7	812.6
General fertility rate (per '000)	190.0	167.7
Total fertility rate	5.6	5.1
Gross reproduction rate	2.8	2.5

* I.E.G., Central Statistical Office, Population of Ethiopia, Addis Ababa, November 1971, p.24.

The average number of children ever born to women past the reproductive age (retrospective fertility report) indicates that the fertility level is relatively equal with that obtained from the number of children born during the last 12 months prior to the survey data (current fertility report). Assuming that the average number of children ever born to women just past the reproductive age is accurate, one can derive an approximation of the gross reproduction rate by simply dividing the average number of children ever born, 4.9 (See Table XXXI) by 2.05.[1] Gross reproduction rate is defined as the average number of daughters that could be born to a generation of women under the existing conditions of fertility of women at each age in the reproduction life, if none of the women die before reaching the end of the reproductive age.

The gross reproduction rate of 2.5 obtained through age specific fertility schedule (See Table XXXII) compares very well with that of 2.4 estimated from the reported average number of children ever born to women just passed the reproductive age. This implies that both the retrospective and current fertility suffer an under-reporting of almost equal magnitude.

In general most of the African countries[2] have a crude birth rates of 42-51 per 1,000, the modal being 45-49 per 1,000. A crude birth rate of 38.2 seems to be very low for the rural population of Ethiopia. So it is apparent that the data suffer from considerable under reporting. Hence, the application of some demographic technique is required in order to come out with better estimates of fertility.

The technique to be applied is dictated by the quality and quantity of demographic data available. If data from two censuses or surveys, or a census and a survey, were available it would have been possible to apply the census survival ratio technique for the estimation of fertility. In addition, had there been a reliable annual population growth rate, it would have been possible to estimate fertility through a stable population

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1. This is because the birth data obtained from hospitals in Ethiopia indicate a sex ratio of 1.05 at birth.

2. United Nations, Demographic Handbook for Africa. Economic Commission for Africa, Addis Ababa, June 1971, p.65.

model by combining the growth rate with the results of age distribution from the surveys. Though Ethiopia had two surveys that are conveniently set apart with regard to time, the territorial coverage in the two surveys was not identical. In the first round the coverage was only 12 provinces (excludes Bale and Eritrea) whereas in the second round it was 13 provinces (excludes Eritrea). Even within the provinces the coverage was not exhaustive in some of the provinces, at least in one of the rounds. Thus even within the province the areal coverage was not indentical. This condition rules out the possibility of computing reliable inter survey population growth rates from the survey data.

The available data from the survey are children ever born and children surviving to women at reproductive age and reports on child bearing during the pre-survey year. This information will enable one to make a plausible estimate of fertility through the application of the Brass P/F ratio technique. The application of the technique is indicated in appendix A. The findings of the fertility estimates are given in Table III.2.

TABLE III.2 Reported and Estimated Fertility Measure

Fertility	Reported	Estimated	
		By Brass's P/F ratio	By stable Population Model
Crude birth rate (per '000)	38.2	42.8	44.7
General Fertility rate (per '000)	167.7	188.0	-
Total fertility rate	5.1	5.8	6.2
Gross reproduction rate	2.5	2.8	3.0

Table III.3 indicates the fertility measures by province. Close observation of the table reveals that there exists a substantial difference in the reported fertility by province. Out of the 13 provinces four have crude birth rates and general fertility rates that are considerably below the crude birth rate and general fertility rate reported for the 13 provinces put together. However, about the same number of provinces have crude birth rates and general fertility rates that are substantially above the rate reported for the 13 provinces.

The Brass P/F ratio and the stable population techniques have been applied to the provincial fertility data. In most of the provinces the application of the techniques has stepped up the fertility rates while in some of the provinces it has suppressed the rates (See Table III.3). The latter phenomenon may be attributed to the misreporting of age of women of child bearing age and/or to under reporting of children ever born, particularly to women in the age group 20-24 (which has a supressing effect on the mean number of children ever born, P_2) that is used to derive the adjustment factor for estimating of the fertility rates.

TABLE III.3

Reported and Estimated Fertility Measures by Province

Province	Crude Birth Rate			General Fertility Rate		
		Estimated			Estimated	
	Reported	Brass's P/F ratio	Stable Population Model	Reported	Brass's P/F Ratio	Stable Population Model
Arussi	37.7	45.4	47.5	176.0	212.0	-
Bale	43.5	56.5	45.0	192.0	249.0	-
Begemdir & Semien	37.7	52.9	50.0	168.0	239.0	-
Eritrea	-	-	-	-	-	-
Gemu Gofa	49.3	44.9	47.0	199.0	177.0	-
Gojam	37.6	53.0	44.3	173.0	245.0	-
Hararge	46.5	45.4	51.5	213.0	208.0	-
Illubabor	28.7	26.9	33.2	106.0	99.0	-
Kefa	39.3	31.9	39.2	154.0	125.0	-
Shoa	35.0	35.3	45.0	131.0	171.0	-
Sidamo	42.4	43.7	51.0	174.0	178.0	-
Tigrai	38.3	47.7	44.0	172.0	214.0	-
Wollega	34.8	42.8	43.0	125.0	151.0	-
Wollo	32.0	43.2	42.0	133.0	179.0	-
Country	38.2	42.8	44.7	167.7	188.0	-

TABLE III.3 (Continued)

Province	Total Fertility Rate			Gross Reproduction Rate		
		Estimated			Estimated	
	Reported	Brass's P/F ratio	Stable Population Model	Reported	Brass's P/F ratio	Stable Population Model
Arussi	5.2	6.4	6.4	2.6	3.1	3.1
Bale	5.8	7.5	7.2	2.8	3.7	3.5
Begemdir & Semien	5.2	7.4	7.2	2.5	3.5	3.5
Eritrea	-	-	-	-	-	-
Gemu Gofa	6.2	5.0	6.6	3.0	2.4	3.2
Gojam	5.3	7.5	6.0	2.6	3.6	2.9
Hararge	6.2	6.1	8.0	3.0	3.0	3.9
Illubabor	3.3	3.1	5.0	1.6	1.5	2.4
Kefa	4.7	5.8	3.9	2.3	1.9	2.8
Shoa	4.9	4.6	6.6	2.4	2.2	3.2
Sidamo	5.7	5.8	7.2	2.8	2.8	3.5
Tigrai	5.3	6.6	6.4	2.6	3.2	3.1
Wollega	4.6	5.6	5.7	2.2	2.7	2.8
Sollo	3.9	4.6	5.3	2.0	2.2	2.6
Country	5.1	5.8	6.2	2.5	2.8	3.0

Mortality

The reported data indicate a crude death rate of 12.3 per 1,000, an infant mortality rate of 90.0 per 1,000 livebirths and a child mortality rate of 32.0 per 1,000. The corresponding rates for the National Sample Survey first round[1] were 22.0, 84.0 and 58.0 per 1,000 respectively.

The observed mortality rates also have been greatly underreported. Thus, it is obvious that these measures too need some sort of adjustment. A demographic technique that will lead to a more plausible estimate of mortality measures can be applied to the survey data. The technique to be used depends on the data available. Since there is only limited data, here too the possibility of applying the census survival ratio technique is ruled out in estimating mortality measures. The alternative method that can be applied estimates these measures from children ever born and children surviving (that is Brass method of estimating infant and childhood mortality). The technique has been applied to the rural population data of Ethiopia as shown in Appendix B. The adjusted mortality rates are given in Table III.3.

TABLE III.4

Reported and Adjusted Mortality Measures

Mortality Measures per thousand	Reported	Adjusted
Crude Death Rate	12.3	19.8
Infant Mortality Rate	90.0	155.0
Child Mortality Rate	32.0	247.0

The estimating technique raised the crude death rate by about 61.0 percent, the infant mortality rate by about 70.0 percent and the child

1. Population of Ethiopia, op.cit., p.24

mortality rate by about 672.0 percent. The estimated mortality rates are in line with a modal African crude death rate of 20.0-25.0 per 1,000 and infant mortality rate of over 150.0 per 1,000 live births for 14 of the 25 African nations for which the rate has been reported.[2]

Reported age-sex specific mortality rates are presented in Table XXXIII.

Table XXXIV - XXXVI show the life table of the population by sex. The tables indicate estimated expectation of life of 45.18 years for males, 41.00 years for females and 43.75 years for both sexes. The tables reveal that at all ages the males have higher expectation of life than the females, which is contrary to the situation in the developed nation where the females have higher expectation of life than the males. In developing nation like Ethiopia where modern medical care is not widespread, females face the risk of death and debilitation at childbirth and as a result have higher mortality rates, particularly at ages 15-49 (child bearing ages) than the males. Besides, in most regions of Ethiopia females in general undergo a hard working life (relative to the males) which subjects them to higher risk of death.

2. Demographic Handbook for Africa, op.cit., p.88

TABLE III.5

Reported and Estimated Mortality Measures by Province

Province	Crude Death Rate		Infant Mortality Rate		Child Mortality Rate (0 - 4)	
	Reported	Estimated (Stable population Model)	Reported	Estimated (Brass method)	Reported	Estimated (Brass Method)
Arussi	10.6	21.8	56.0	171.0	27.4	223.0
Bale	18.0	19.0	128.0	148.0	62.7	263.0
Begemdir & Semien	10.4	20.0	51.0	153.0	28.7	205.0
Eritrea	-	-	-	-	-	-
Gemu Gofa	16.1	23.0	83.0	202.0	35.4	306.0
Gojam	13.7	16.0	85.0	139.0	35.6	259.0
Hararge	9.7	19.5	57.0	120.0	19.6	327.0
Illubabor	14.5	16.7	69.0	132.0	31.0	241.0
Kefa	22.0	20.5	137.0	150.0	73.0	299.0
Shoa	10.0	18.0	43.0	129.0	28.0	195.0
Sidamo	15.3	20.0	70.0	142.0	38.0	246.0
Tigrai	7.9	12.5	46.0	124.0	23.0	211.0
Wollega	13.1	21.3	50.4	159.0	34.7	247.0
Wollo	9.0	20.0	55.0	162.0	28.8	262.0
Country	12.3	19.8	90.0	155.0	32.0	247.0

Reported and estimated mortality measures by province are given in Table III.5. The province of Kefa followed by Bale tops all the rest of the provinces in reported crude death rate, infant mortality rate and child mortality (death at 0-4) rate. The provinces of Tigrai, Wollo, Hararge, Shoa, Begemdir and Arussi have relatively low reported mortality rates. The Brass method of estimating childhood mortality and the stable population model for estimating mortality rates have been applied to the provincial data. The resulting estimates of mortality measures are relatively more reliable than the reported ones that have been subjected to a substantial underreporting in most of the provinces.

Migration

In the National Sample Survey second round no substantial information has been collected on migration for the rural population of Ethiopia. The only information collected was temporary absence[1] from the usual place of residence during the pre-survey year. The main reasons for being absent were economic (such as looking for job elsewhere to earn some cash to be used for settling land tax, purchasing of dresses and livestock, to trade etc). This information may throw some light on the temporary movement of people but cannot be used to measure the migration rate. The data that would have helped in measuring population mobility are place of birth, place of previous residence, place of residence on specific date and/or length of residence in the present place. This vital information on migration was not included in the questionnaire.

The data collected on the temporary absence of the members of the households indicate that about 6.7 percent of the surveyed rural population of Ethiopia were absent from their usual place of residence for a period ranging from a single day to several weeks. In Table III.6, of the total absentees, the highest proportion are found in Shoa province followed by Tigrai, Wollega, Wollo and Kefa. The province of Gemu Gofa followed by Hararge, Bale, Arussi and Begemdir showed the lowest proportion

1. Absence in the usual place of residence for a period of less than 52 weeks.

TABLE III.6

Number and Percent of persons Absent Part of the Presurvey year by Province and Destination

Province	Persons absent from		Persons absent by Destination	
	No.	%	No.	%
Arussi	2,800	2.3	1,300	1.1
Bale	1,800	1.5	4,120	3.5
Begemdir & Semien	2,700	2.3	17,001	14.3
Gemu Gofa	400	0.3	3,910	3.3
Gojam	3,500	2.9	4,130	3.5
Hararge	916	0.8	14,550	12.2
Illubabor	3,220	2.7	9,370	7.9
Kefa	10,275	8.6	5,400	4.5
Shoa	34,680	29.1	1,810	1.5
Sidamo	5,400	4.5	1,320	1.1
Tigrai	31,900	26.8	800	0.7
Wollega	11,130	9.3	1,840	1.5
Wollo	10,560	8.9	3,600	3.0
Eritrea	-	-	12,100	10.1
Addis Ababa	-	-	26,585	22.3
N/S	-	-	10,195	8.5
Abroad	-	-	1,250	1.0
Total	119,281	100.0	119,281	100.0

of absentees. The majority of the absentees have headed for Addis Ababa followed by the provinces of Begemdir and Semien, Harrarge, and Eritrea. Less than one percent have headed for Tigrai province and about one percent have gone to a foreign country or have just crossed the border to neighbouring countries like the Sudan, Kenya and Somalia.

In view of the fact that Addis Ababa is the nation's capital and the seat of the government, it has a lot to offer and people can settle their day to day problems there. The high court and the Imperial court are in Addis Ababa, various commodities (manufactured as well as imported) are found for purchase here, and most important of all the capital offers job opportunities for the rural population. They can get temporary jobs in construction industries, manufacturing industries, as domestic hands, etc. Therefore, it is no wonder that the highest proportion of the absentees have headed for Addis Ababa. The three other destinations to which a substantial proportion of the absentees have headed also have relatively better temporary job opportunities than the remaining destination. In Begemdir and Semien there is the Setit Humera Agricultural Estate where oil and cereal crops are being produced in large scale commercial farms. In the Province of Hararge there is labour demand for coffee picking and in Eritrea there is a considerable labour demand for various industrial and agricultural projects.

The main reason for being absent was to work as a labourer (37.0 percent), may be in agricultural projects or industries. The next reason that has drawn a substantial proportion of the absentees (31.0 percent) was to trade in something else other than coffee followed by to plant, cultivate or harvest own crop other than coffee or cotton (4.2 percent) and to trade in coffee (4.1 percent) (See Table III.7).

More elaborate information on the reasons for temporary absence of the rural population is presented in Tables XXXVII and XXXVIII.

TABLE III.7

Number of Persons and percent absent during part of the Pre-Survey year by sex and Reason for Absence.

Reason for absence	Male		Female		Total	
	No.	%	No.	%	No.	%
To plant, cultivate or pick own coffee	7,895	6.9	200	4.4	8,095	6.8
To plant, cultivate or pick own cotton	400	0.3	-	-	400	0.3
To grow or harvest own crop other than coffee or cotton	4,785	4.2	300	6.6	5,085	4.2
To graze own livestock	3,400	3.0	-	-	3,400	2.9
To trade in coffee	4,940	4.3	-	-	4,940	4.1
To trade in other things than coffee	35,786	31.2	710	15.8	36,496	30.6
As a coffee picker	5,650	4.9	200	4.4	5,850	4.9
As cotton picker	1,310	1.1	-	-	1,310	1.1
As sugar cane harvester	560	0.5	100	2.2	660	0.6
Sugar cane harvester & coffee & cotton picker	-	-	-	-	-	-
As a labourer (type of work not known)	41,605	36.3	2,620	57.8	44,225	37.1
Not stated	8,420	7.3	400	8.8	8,820	7.4
Total	114,751	100.0	4,530	100.0	119,281	100.0

Growth of Population

The National Sample Survey second round resulted a reported crude birth rate of 38.2 and a crude death rate of 12.3 per 1,000 rural population. This implies an annual natural rate of increase of 2.59 percent. In the earlier portion of this chapter it was explained that the birth and the death rates have been subject to under reporting and that both have been treated for this drawback in Appendices A, B, and C. The treatment resulted in two sets of rates that are relatively plausible. The first set has a crude birth rate of 42.8/1,000 and a crude death rate of 19.8/1,000 and the second set has a crude birth rate of 44.7/1,000 and a crude death rate of 20.3/1,000. The two sets will result in two sets of natural rate of increase of 2.30 and 2.44 percent. These two rates are relatively in line with that of 2.46 percent for the National Sample Survey first round.[1]

Realizing the limited data for estimating the fertility and mortality measures, one cannot categorically conclude that the annual rate of natural increase of the rural population is a certain fixed rate, say 2.44 percent. Therefore, until an intensive study of population growth (e.g. a survey of population growth estimates) is carried out in Ethiopia, one can safely assume that the annual rate of natural increase of the rural population of Ethiopia may lie at any point between 2.0 to 3.0 percent.

In a population closed to migration the annual rate of population growth is nothing more than the difference between the birth and the death rate (annual rate of natural increase). International migration to and from Ethiopia can be considered as insignificant, hence it does not affect the overall population growth rate. However, the internal migration, especially population movement from rural to urban areas, can affect the rural and urban population growth rate. In "Urbanization in Ethiopia"[2] it has been indicated that there is an annual net rural to

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1. Population of Ethiopia, op. cit., p. 12
2. I.E.G. Central Statistical Office, Urbanization in Ethiopia. Addis Ababa, August 1972, p. 10.

urban migration of 100,000 people (urban is defined as a locality with 2,000 or more inhabitants). This constituted about 0.4 percent of the rural population of Ethiopia. Therefore, the annual population growth rate of rural Ethiopia could be estimated as either 1.90 or 2.04 percent ($B - D - OM^3 = 42.8 - 19.8 - 4.0 = 19.0$ or $44.7 - 20.3 - 4.0 = 20.4$).

3. Net out migration.

APPENDIX A

Estimation of fertility from reports on child bearing. (Brass P/F Ratio Method).

The techniques of estimating fertility and mortality presented in Appendix A and B have been thoroughly discussed in Brass et. al.[1]. They have been also discussed briefly in the United Nations' Mannual IV[2]. Various other demographers have applied the techniques for estimating fertility and mortality levels in nations with limited demographic data. Page and Coale[3] have applied it to census and survey data of Africa South of the Sahara, Blacker[4] applied it to the census and survey data of East African countries, etc.

The technique of fertility estimation presented here involves the comparison of cummulated current fertility with average parity (the mean number of children ever born). The data required and the computational procedure as applied to the rural population of Ethiopia are given below.

Data Required

a. Total number of births during the pre-survey year by age of women.
b. Children ever born to women at child bearing age by age of women.
c. Women at child bearing age.

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1. Brass et, al,, The Demography of Tropical Africa. Princeton University Press, Princeton, New Jersey, 1968, pp.88-139.
2. United Nations, Methods of Estimating Basic Demographic Measures from Incomplete Data. Population Studies No. 42, Series A. New York, 1967, pp. 31-36 and 73-75.
3. H.J. Page and A.J. Coale, "Fertility and child Mortality South of the Sahara", In S.H. Ominde and C.N. Ejiogu, Population Growth and Economic Development in Africa. Heinemann, London, 1972,pp.51-66.
4. J.G,C. Blacker, "The Estimates of Vital Rates from census Data in Kenya and Uganda", a paper presented at the African population Conference in Accra, Ghana, December 9 - 18, 1971.

Computational Procedure

Based on the above information the following parameters have been computed (see Table 1).

1. The age specific fertility rate (fi), column 3.

2. The average number of children ever born (P_i) to women at each reproductive age group, column 4.

3. The cumulative fertility $\left(\sum_{j=0}^{i=1} fi\right)$ at the beginning of age interval, column 5.

4. The mean age of fertility schedule ($\bar{m}$).

5. The multiplying factors (wi), column 6. These factors are obtained by manupulating the combination of specific fertility ratio of the age group 15 - 19 and 20 - 24 ($f1/_{f2}$), cumulative fertility $\left(\sum_{j=0}^{i=1} fi\right)$, mean age of fertility schedule ($\bar{m}$) and Tables[1] for estimating cumulated fertility from age specific fertility rates.

6. The estimated cumulative fertility, column 7. It is the sum of the reported cumulative fertility (column 5) and the product of the age specific fertility (fi) and the multiplying factor (wi).

7. The adjusted age specific fertility rates (f'i), column 9. This column is obtained by multiplying the reported age specific fertility rates (fi), by the ration of P_2/F_2, which is the ratio of the average number of children ever born (P_2) at age 20-24 and the estimated cumulative fertility (F_2) at the same age group.

Making use of the value of the ratio (P_2/F_2), which is 1.1213 as a correction factor the reported fertility rates can be stepped up by 12 per cent. In other words the technique resulted in estimates of fertility

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1. Methods of Estimating Basic Demographic Measures from Incomplete Data, op.cit., p.124.

measures that are higher by about 12 percent than the reported ones. the estimated crude birth rate is 42.8, general fertility rate is 188.0, total fertility rate is 5.8 and the gross reproduction rate is 2.8.

The estimated fertility measures seem to be slightly low for the rural population of Ethiopia. It may be that the degree of underreporting in the reported fertility was considerable. Therefore, an alternative technique, that may confirm the results of the estimates presented here or prove otherwise, has been explored as shown in Appendix C.

The Estimation of Fertility by Brass P/F Ratio Method, Rural Population of Ethiopia, 1970

Age of women at the time of survey	Interval	Average No. of births per women in the preceeding year f_i	Average No. of children ever born P_i	Cumulative fertility at beginning of age interval $\left(\sum_{j=0}^{i=1} f_i\right)$	Multiplying factors for estimating average value of fertility w_i	Estimated average cumulative fertility $\left(F_i \sum_{j=0}^{i=1} f_i + w_i f_i\right)$	P_i/F_i	Adjusted age specific fertility rates $f_i = f_i \times P_2/F_2$
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15 - 19	1	.1453	.4416	-	2.552	.3708	-	.1629
20 - 24	2	.2563	1.6526	.7268	2.916	1.4739	1.1213	.2873
25 - 29	3	.2354	2.9189	2.0080	3.050	2.7260	1.0707	.2640
30 - 34	4	.1678	3.9793	3.1850	3.126	-	-	.1882
35 - 39	5	.1335	4.7192	4.0240	3.258	-	-	.1497
40 - 44	6	.0569	4.9732	4.6915	3.543	-	-	.0638
45 - 49	7	.0307	5.2852	4.9760	4.475	-	-	.0344
				5.1295				1.503

Appendix B.

Estimation of mortality from reported number of children ever born and children surviving.

This technique involves the translation of proportions surviving and proportions dead among the children ever born to women in different age groups into conventional measures of mortality.[1] The crux of the technique is the possibility of estimating the proportion of children born who survive to age 1, 2, 3, 5, 10, 15 ... 35, from proportion reported as surviving among children ever born to women 15 - 19, 20 - 24 ... and 60 - 64.

The conditions[2] that would allow the application of this technique are:-

1. If the age specific fertility schedule has been approximately constant in the recent past (at least for the younger women) and the approximate term of the schedule is known;

2. If the infant and child mortality rates have been approximately constant in recent years;

3. If there is no powerful association between age of mother and infant mortality and between death rates of mothers and of their children;

4. Omission rates of dead children and of surviving children are about the same in the reported numbers ever born;

5. The age pattern of mortality among infants and children conforms approximately to the model life tables.

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1. United Nations, Methods of Estimating Basic Demographic measures from Incomplete Data. Population studies No. 42, Series A. New York, 1967, p.34.
2. Ibid., p. 35.

It is assumed that most of the developing nations conform approximately to the above conditions and the technique can be safely applied in such nations.

Data Required

a. Children ever born alive and children surviving to women at reproductive age group.

b. Total number of birth during the pre-survey year to women at child bearing age, (for computing $\bar{m}$).

c. Women at reproductive age by five years age group.

Computational procedure

Through the manipulation of the above data the parameters indicated on Table 1 have been computed. The parameters are -

1. The average number of children ever born (P_i) to women at child bearing age by five years age group, column 3.

2. The average number of children surviving (S_i) to women at reproductive age by five years age group column 4.

3. The proportion of non-survivors ($1 - S_i/P_i$), i.e. the proportion dead, column 5.

4. The mean age of fertility schedule, ($\bar{m}$).

5. Multiplying factors (w_i), column 6. These factors are obtained with the help of P_1/P_2 (that is, the ratio of the average number of children ever born to women in 15 - 19 years age group and in the 20 - 24 years age group), the mean age of fertility schedule ($\bar{m}$) and the table[1] for estimating mortality from child survivors.

6. The proportion dead by age x (qx), column 8. This parameters is obtained as the product of proportion of non-survivors ($1 - S_i/P_i$) and the multiplying factor (w_i).

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1. Ibid., p. 125.

7. The proportion surviving by age x (lx), column 9. This parameter is obtained by subtracting the proportion of non-survivors i.e. the qx value from unity.

The l_x values indicated in column 9 can be translated into the conventional measure of mortality with the help of the Table[2] that shows the values of the function lx for x = 1, 2, 3, and 5 in "West" model life tables at various levels of mortality for females, for males and for both sexes. Though Brass suggested the use of l_2 value for the translation, however, in this case the l_2 value will lead to an inconsistent mortality level with that indicated by the values of l_3 and l_5 and it also indicates a much lower mortality for rural Ethiopia. The latter l_x values have indicated more or less an equal mortality value which is level 11.

Therefore, accepting the value of l_3 (78,000) as the most reliable estimate of l_x, the West model life table indicated a mortality value of level 11 for both sexes. This implies an infant mortality rate of 155.0 per 1,000 live births, a child mortality rate of 247.0 per 1,000 and an expectation of life of 43.8 years at birth. The values of the estimated infant and child mortality rates have been further extended to adult mortality by interpolation and this has resulted in an overall estimated crude death rate of 19.8 per 1,000. The estimated mortality rates indicated that about 16 percent of the children born die before observing their second birthday and about 25 percent die before observing their fifth birthday.

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2. Ibid., p. 93.

TABLE 1

Estimation of Childhood Mortality from the number of Children Ever Born and Number of Children Surviving

Interval (i)	Age of Women	Average No. of Children Ever Born (P_i)	Average No. of Children Surviving (S_i)	$1 - S_i/P_i$	Multipliers For Column 5 from P_2/P_3	Age x	Proportion Dead by Age x (xqo)	Proportion Surviving by Age x l_x
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(5)x(6)=(8)	9=1-col.8
1	15 - 19	.4416	.3759	.1488	.928	1	.138	.862
2	20 - 24	1.6526	1.3544	.1804	.982	2	.177	.823
3	25 - 29	2.9189	2.2771	.2199	.978	3	.215	.785
4	30 - 34	3.9793	3.0076	.2442	1.012	5	.247	.753
5	35 - 39	4.7192	3.4879	.2609	1.021	10	.266	.734
6	40 - 44	4.9732	3.5487	.2864	.999	15	.287	.713
7	45 - 49	5.2852	3.6094	.3171	.998	20	.317	.683

APPENDIX C

Estimation of fertility and an overall mortality from the estimate of the childhood mortality and age distribution

In applying this technique for the estimation of fertility and mortality, we have to make sure that the population in question is stable or quasi-stable. In a developing nation like Ethiopia it is safe to assume that fertility has been constant for quite a number of years (possibly a decade, two decades or even more). Mortality also might have been constant or slightly declining in the mentioned decades. Further, immigration rate to and emigration rate from Ethiopia can be considered as negligible. These conditions will make the population stable or quasi-stable depending on the mortality trends.

The technique under discussion is an extension of Appendix B. It involves the combining of the age distribution with the estimated child mortality from the reported children ever born and children surviving to women at child bearing age as shown on Table 1. The method begins with the estimate of 3qo value given in Appendix B. The 3qo value is used to determine the mortality level which in this case is level 11 combined for the two sexes. Thus, the male and female age distribution of rural Ethiopia have been applied on the "West" model stable population with mortality value of level[1] 11, for the estimation of fertility and an over-all mortality (See Table 1).

Column 2 of Table 1 shows the proportion of population under a given age as indicated in column 1. Columns 3-7 show various parameter values in West model stable population (males and females) that share the characteristics of having a mortality value of level 11.

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1. United Nations, Methods of Estimating Basic Demographic Measures from Incomplete Data. Population studies No.42, Series A. New York, 1967, pp.100 and 112.

The age distribution of the rural population of Ethiopia is of African-Indian-Indonesian-Pakistani[1] type, because the age distribution of the female population indicates an over reporting of adolescent girls and young women (10-14 = 8.7 percent, 15-19 = 7.3 percent, 20-24 = 7.7 percent and 25-29 = 9.6 percent). For a population with this type of age distribution a less biased estimated of births can be obtained from the value associated with C(35)[2]. Therefore, estimates of fertility and an overall mortality rates are separately made for both the sex with C(35) and West model stable population with a mortality value of level 11 as shown in Table 1. Then the results of the measures are merged to get the fertility and the mortality rates for the rural population of Ethiopia. The fertility and mortality rates obtained are given in Table 2.

1. Ibid. p.11
2. Ibid. p. 38.

TABLE 1.

Stable Population Estimates of Fertility and Mortality Rates Based on the Age Distribution of the Population and the Level of Mortality Derived from the Reported Child Survival Rates, Rural Population of Ethiopia.

M a l e s

Age x	Proportion of Population up to Age x	Value of various Parameters in Male Stable Population with C(x) shown in col. 2 and with Mortality Level 11.				
	C(x)	Birth rates	Death rates	Rates of Natural Increase	Gross Reproduction rates where $\bar{m}$ = 28.4	Total Fertility Rates where the Sex Ratio at Birth = 105
(1)	(2)	(3)	(4)	(5)	(6)	(7)
5	18.3	0491	.0215	.0276	3.230	6.622
10	36.7	0555	.0219	.0336	3.800	7.790
15	47.6	0515	.0215	.0300	3.430	7.032
20	55.8					
25	61.5					
30	68.6					
35	75.3	0429	.0212	.0217	2.760	5.658
40	81.5					
45	86.4					
		F e m a l e s				
5	18.9	.0393	0193	.020	2.60	5.330
10	36.5	.0547	0197	.035	3.88	7.954
15	45.2	.0474	0193	.028	3.23	6.622
20	52.8					
25	60.2					
30	69.8					
35	77.8	.0465	0193	.027	3.20	6.560
40	83.8					
45	88.9					

TABLE 2.

Fertility and mortality measures obtained through the West model stable population of level 11 and the age distribution of the rural population.

Fertility & Mortality Measures	Males	Females	Both Sexes
Birth rate (per '000)	42.9	46.5	44.7
Death rate (per '000)	21.2	19.3	20.3
Rate of natural increase (per '000)	21.7	27.2	24.4
Gross reproduction rate	2.8	3.8	3.0
Total fertility rate	5.7	6.6	6.2

TABLE XXXI.

Number of Children ever born and number Surviving by Age Group of Women

Age Group	Total No.of Women	TOTAL NUMBER OF CHILDREN			
		Ever Born alive (Total)	Per Woman	Surviving (Total)	Per Woman
10 - 14	760,900	5,700	-	4,600	-
15 - 19	640,000	282,600	0.4	240,600	0.3
20 - 24	675,000	1,115,500	1.7	914,200	1.4
25 - 29	836,800	2,442,600	2.9	1,905,500	2.3
30 - 34	696,600	2,772,000	4.0	2,095,100	3.0
35 - 39	525,700	2,480,900	4.7	1,833,600	3.5
40 - 44	448,000	2,228,800	5.0	1,589,800	3.5
45 - 49	254,200	1,343,500	5.3	917,500	3.6
50 - 54	272,800	1,346,500	4.9	877,100	3.2
55 - 59	104,800	513,500	4.9	328,300	3.1
60 - 64	156,900	754,300	4.8	456,500	2.9
65 - 69	55,800	246,600 ✓	4.4	150,400 ✓	2.7
70 - 74	56,000	265,100 ✓	4.7	158,000 ✓	2.8
75 - 79	19,200	96,600 ✓	5.0	57,300 ✓	3.0
80 +	36,900	152,500 ✓	4.1	83,800 ✓	2.3
N/S	38,800	94,300	2.4	68,200	1.8
TOTAL	5,578,400	16,141,000	2.9	11,680,500	2.1

167,900 760,800 449 50

TABLE XXXII.

Age Specific Fertility Rates

Age Group (1)	Total No. of women (2)	No. of births by age of women (3)	No. of Births by age of women adjusted for age unknown (3)x(1.0039)* (4)	Age Specific fertility rates (5)
15 - 19	640,000	92,600	93,000	145.3
20 - 24	675,000	172,300	173,000	256.3
25 - 29	836,800	196,200	197,000	235.4
30 - 34	696,600	116,500	116,900	167.8
35 - 39	525,700	69,900	70,200	133.5
40 - 44	448,000	25,400	25,500	56.9
45 - 49	254,200	7,800	7,800	30.7
N/S	-	2,700	-	-
Total	4,076,300	683,400	683,600	1.0259

Total Fertility rate = $1.0259 \times 5 = 5.13$

Gross Reproduction rate = $5.13 \times \frac{100}{205} = 2.50$

* $\frac{\text{Total Number of births}}{\text{Total Number of birth - births to age unknown}} = \frac{683,400}{683,400-2,700} = 1.0039$

TABLE XXXIII.

Age Specific Death Rate of the Rural Population

Age Group	Male Population	Deaths	Death Rate	Female Population	Deaths	Death Rate	Total Population	Deaths	Death Rate
0	299,800	26,600	88.0	294,700	26,900	91.0	594,500	53,500	90.0
1 - 4	1,366,600	30,000	22.0	1,351,600	23,800	17.0	2,718,100	53,900	19.0
0 - 4	1,666,400	56,600	34.0	1,646,300	50,800	31.0	3,312,700	107,400	32.0
5 - 9	1,671,400	10,700	6.0	1,534,800	7,300	5.0	3,206,200	18,000	6.0
10 - 14	989,200	3,900	4.0	760,900	3,000	4.0	1,750,100	6,900	4.0
15 - 19	746,000	2,500	3.0	640,200	3,300	5.0	1,386,200	5,800	4.0
20 - 24	522,900	1,900	4.0	674,900	4,200	6.0	1,197,800	6,100	5.0
25 - 29	646,600	1,600	2.0	836,800	4,700	6.0	1,483,400	6,300	4.0
30 - 34	605,200	2,800	5.0	696,600	5,200	7.0	1,301,800	8,000	6.0
35 - 39	561,900	1,600	3.0	525,400	2,900	5.0	1,087,300	4,500	4.0
40 - 44	449,100	3,300	7.0	448,000	3,100	7.0	897,100	6,400	7.0
45 - 49	306,100	2,300	8.0	254,200	2,700	11.0	560,300	5,000	9.0
50 - 54	293,200	2,100	7.0	272,800	2,700	10.0	566,000	4,800	8.0
55 - 59	177,600	1,700	9.0	104,800	1,400	13.0	282,400	3,100	11.0
60 - 64	195,700	3,900	20.0	156,900	3,600	23.0	352,600	7,500	22.0
65 - 69	102,900	2,200	21.0	55,800	1,100	20.0	158,700	3,300	20.0
70 - 74	77,700	2,800	36.0	56,000	2,700	48.0	133,700	5,500	41.0
75 - 79	33,700	800	24.0	19,200	600	31.0	52,900	1,400	26.0
80 +	47,600	2,800	58.8	37,000	2,600	70.3	84,600	5,400	63.8
N/S	29,800	6,400	215.0	39,800	7,700	193.0	69,600	14,100	204.0
T o t a l	9,123,000	109,900	12.0	8,760,400	109,600	12.5	17,883,400	219,500	12.3

TABLE XXXIV.

Abridged Life Table for Rural Male Population of Ethiopia

January 1970

Age Group	$_nM_x$	$_nQ_x$	$_nP_x$	$_nl_x$	$_nL_x$	T_x	e_x
0	.1512	.1512	.8488	100,000	89,416	4,517,930	45.18
1 – 4	.0376	.1399	.8601	84,880	315,770	4,428,514	52.18
5 – 9	.0110	.0431	.9569	73,005	357,158	4,112,744	56.33
10 – 14	.0066	.0325	.9675	69,858	343,615	3,755,586	53.76
15 – 19	.0059	.0291	.9709	67,588	333,023	3,411,971	50.48
20 – 24	.0061	.0292	.9708	65,621	323,315	3,078,948	46.92
25 – 29	.0044	.0218	.9782	63,705	315,053	2,755,633	43.26
30 – 34	.0076	.0373	.9627	62,316	305,770	2,440,580	39.17
35 – 39	.0050	.0245	.9755	59,992	296,285	2,134,810	35.58
40 – 44	.1260	.0611	.9389	58,522	283,670	1,838,525	31.42
45 – 49	.0133	.0643	.9357	54,946	265,898	1,554,855	28.30
50 – 54	.0121	.0587	.9413	51,413	249,520	1,288,957	25.07
55 – 59	.0160	.0769	.9231	48,395	232,670	1,039,437	21.48
60 – 64	.0340	.1567	.8433	44,673	205,865	806,767	18.06
65 – 69	.0362	.1660	.8340	37,673	172,730	600,902	15.95
70 – 74	.0615	.2665	.7335	31,419	137,063	428,172	13.63
75 – 79	.0420	.1900	.8100	23,046	105,183	291,109	12.63
80 +	.1004	1.0000	0.0000	18,667	185,926	185,926	9.96

TABLE XXXV.

Abridged Life Table for Rural Female Population of Ethiopia, January 1970

Age Group	$_nM_x$	$_nQ_x$	$_nP_x$	$_nl_x$	$_nL_x$	T_x	e_x
0	.1577	.1577	.8423	100,000	88,961	4,099,566	41.00
1 - 4	.0349	.1305	.8695	84,230	314,936	4,010,605	47.62
5 - 9	.0083	.0407	.9593	73,238	358,738	3,695,669	50.46
10 - 14	.0067	.0330	.9670	70,257	345,490	3,336,931	47.50
15 - 19	.0091	.0445	.9555	67,939	332,138	2,991,441	44.13
20 - 24	.0107	.0521	.9479	64,916	316,125	2,659,303	40.97
25 - 29	.0099	.0485	.9517	61,534	300,253	2,343,178	38.08
30 - 34	.0129	.0625	.9375	58,567	283,685	2,042,925	34.88
35 - 39	.0094	.0459	.9541	54,907	268,235	1,759,240	32.04
40 - 44	.0118	.0573	.9427	52,387	254,430	1,491,005	28.46
45 - 49	.0180	.0861	.9139	49,385	236,295	1,236,575	25.04
50 - 54	.0168	.0806	.9194	45,133	216,570	1,000,280	22.16
55 - 59	.0235	.1105	.8895	41,495	196,013	783,710	18.87
60 - 64	.0404	.1835	.8165	36,910	167,618	587,697	15.92
65 - 69	.0347	.1596	.8404	30,137	138,660	420,079	13.94
70 - 74	.0817	.3391	.6609	25,327	105,160	281,419	11.11
75 - 79	.0550	.2418	.7582	16,737	73,573	176,259	10.53
80 +	.1236	1.0000	0.0000	12,692	102,686	102,686	8.09

TABLE XXXVI.

Abridged Life Table for Rural Population

(Both Sexes) of Ethiopia, January 1970.

Age Group	$_nM_x$	$_nQ_x$	$_nP_x$	$_nl_x$	$_nL_x$	T_x	e_x
0	.1545	.1545	.8488	100,000	89,185	4,375,321	43.75
1 - 4	.0341	.1276	.8723	84,550	311,606	4,286,136	50.70
5 - 9	.0091	.0445	.9555	73,753	360,560	3,974,530	53.89
10 - 14	.0067	.0330	.9670	70,471	346,342	3,613,970	51.28
15 - 19	.0074	.0356	.9644	68,146	334,665	3,267,628	47.95
20 - 24	.0087	.0416	.9584	65,720	321,765	2,932,963	44.63
25 - 29	.0075	.0361	.9639	62,986	309,245	2,611,198	41.46
30 - 34	.0104	.0494	.9506	60,712	296,062	2,301,953	37.92
35 - 39	.0071	.0343	.9657	57,713	283,615	2,005,891	34.76
40 - 44	.0122	.0575	.9425	55,733	270,652	1,722,276	30.90
45 - 49	.0154	.0715	.9285	52,528	253,250	1,451,624	27.64
50 - 54	.0144	.0672	.9328	48,772	235,667	1,198,374	24.57
55 - 59	.0188	.0859	.9141	45,495	217,705	962,707	21.16
60 - 64	.0371	.1564	.8436	41,587	191,675	745,002	17.91
65 - 69	.0356	.1511	.8489	35,083	162,162	553,327	15.77
70 - 74	.0700	.2593	.7407	29,782	129,605	391,165	13.13
75 - 79	.0467	.1892	.8107	22,060	99,860	261,560	11.86
80 +	.1106	1.0000	0.0000	17,884	161,700	161,700	9.04

TABLE XXXVII.

Number of Persons Absent Part of the Year, by Province and Place of Absence

Province	Ar.	Bale	Beg.	Er.	GG.	Goj.	Har.	Ill.	Kefa	Shoa	Sid.	Tig.	W-A	W-O	A.A.	N/S	Abroad	Total
Arussi	400	-	1,600	-	-	-	-	-	-	-	-	-	-	-	500	300	-	2,800
Bale	-	300	800	100	200	-	-	-	100	-	100	-	-	-	100	100	-	1,800
Begemdir	-	300	-	100	400	400	400	500	-	-	-	200	-	-	-	400	-	2,700
Gemu Gofa	-	-	-	-	-	-	-	-	-	-	200	-	-	-	200	-	-	400
Gojam	-	400	300	-	-	1,880	300	120	-	100	-	-	100	-	100	-	200	3,500
Hararge	-	-	616	100	-	-	100	-	-	-	-	-	-	-	100	-	-	916
Illubabor	-	600	180	-	100	-	-	-	1,820	-	-	-	300	-	-	200	20	3,220
Kefa	-	600	2,900	500	200	150	4,535	330	100	370	100	-	90	100	100	200	-	10,275
Shoa	-	620	100	600	180	-	400	300	680	100	720	-	-	-	24,185	6,795	-	34,680
Sidamo	900	600	-	-	400	100	2,400	100	-	500	-	-	-	-	300	100	-	5,400
Tigrai	-	400	8,800	9,900	1,000	900	800	5,800	1,300	200	-	300	200	500	500	1,100	200	31,900
Wollega	-	100	400	800	100	600	5,260	200	1,400	440	-	-	500	-	400	100	830	11,130
Wollo	-	200	1,305	-	1,330	100	355	2,020	-	100	200	300	650	3,000	100	900	-	10,560
Total	1,300	4,120	17,001	12,100	3,910	4,130	14,550	9,370	5,400	1,810	1,320	800	1,840	3,600	26,585	10,195	1,250	119,281

TABLE XXXVIII.

Number of Persons Absent Part of the Year, by Province, Sex and Reason for Absence

	0		1		2		3		4		5		6		7		8		9		10		Total (Incl. Not Stated)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Arussi	-	-	-	-	800	100	100	-	200	-	700	-	-	-	100	-	-	-	-	-	100	-	2,500	300
Bale	-	-	-	-	200	-	-	-	-	-	700	-	200	-	-	-	-	-	-	-	400	-	1,700	100
Begemdir	-	-	-	-	500	-	300	-	400	-	400	-	-	-	200	-	-	-	-	-	900	-	2,700	-
Gemu Gofa	-	-	-	-	-	-	-	-	200	-	200	-	-	-	-	-	-	-	-	-	-	-	400	-
Gojam	-	-	-	-	-	-	-	-	-	-	2,100	200	-	-	-	-	-	-	-	-	400	-	3,300	200
Hararge	200	-	-	-	300	-	-	-	-	-	116	-	100	-	-	-	100	-	-	-	100	-	916	-
Illubabor	1,400	-	100	-	-	-	200	-	600	-	700	-	-	-	-	-	-	-	-	-	-	-	3,220	-
Kefa	2,300	-	100	-	200	-	-	-	1,200	-	2,355	-	2,210	-	-	-	-	-	-	-	520	-	10,175	100
Shoa	535	-	-	-	200	-	100	-	1,340	-	16,230	110	540	-	810	-	100	-	-	-	10,815	220	34,250	430
Sidamo	300	-	-	-	1,100	-	2,500	-	100	-	500	-	-	-	-	-	100	-	-	-	300	-	5,400	-
Tigrai	300	-	200	-	1,000	100	200	-	700	-	3,600	100	400	-	200	-	-	100	-	-	22,100	2,300	29,400	2,500
Wollega	2,760	100	-	-	400	100	-	-	200	-	3,800	100	2,300	200	-	-	160	-	-	-	1,010	-	10,630	500
Wollo	100	100	-	-	85	-	-	-	-	-	4,385	200	-	-	-	-	-	-	-	-	4,860	100	10,160	400
T o t a l	7,895	200	400	-	4,785	300	3,400	-	4,940	-	35,786	710	5,750	200	1,310	-	460	100	-	-	41,605	2,620	114,751	4,530

0 = To plant, cultivate or pick own coffee

1 = " " " " " " cotton

2 = To grow or harvest own crops other than coffee or cotton

3 = To graze own livestock

4 = To trade in coffee

5 = To trade in other things than coffee

6 = As a coffee picker

7 = As a cotton picker

8 = As a sugarcane harvester

9 = Sugarcane harvester and coffee and cotton picker

10 = As a labourer (type of work not known)

CHAPTER IV.

Population Projection

The purpose of population projection is to estimate the future size and structure of the population on the basis of certain plausible assumptions. If the assumptions are realistic projections may be useful to different organizations in estimating the needs for housing, water, transportations, roads, schools, hospitals, consumer products, services, jobs, etc. The fact is that planning to meet the future requirements of people usually cannot be done without some indication of the future size and composition of the population. For example, decisions regarding investment needed to provide educational services are made partly on the basis of projecting the current population. Stressing the importance of population projections in estimating the production capacity and the needs of a nation in the future, the United Nations' Department of Economic and Social Affairs stated:[1]

> The role of population projections in planning economic and social development is two fold. On the one hand, population plays a major part in determining the labour supply, an essential factor in production of all goods and services, while on the other hand, it defines the number of consumers, the satisfaction of whose wants is the ultimate aim of production.

There are several methods of projecting the population of a country, province, or smaller subdivision. The method selected for making the projection will vary depending on the basic data available, the extent of research which has been done, and the personnel and other resources that can be devoted to this work.[2] According to Shryock, the "conventional

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1. United Nations, General Principles for National Programmes of Population Projections as Aids to Development Planning. Population Studies No. 38, Series A. New York, 1965, pp. 2-3.

2. Ibid., p.4.

methods of projecting the size of the national population fall into two broad types: Mathematical methods using population totals and the component methods using the factors of population change."[1]

The component method is used to project the January 1970 population estimate (See Chapter I) of Ethiopia to the year 2,000. The term component is applicable to any method which takes into account mortality, fertility and net migration (if it exists)[2] in assessing future changes in a population under study. Generally, this method derives one or more of the component projections by using age specific detailed data. The logic of the component method, in its simplest term, calls for the preparation of separate projections for mortality, fertility and net migration. That is, first the base population is carried forward (aged) through appropriate survival rates by age and sex. Then the projected fertility and migration components are summed and added to the sum of the surviving population in each age-sex interval.

Mortality The January 1970 estimate of mortality indicates an expectation of life at birth of about 45.0 and 40.0 years for the male and the females respectively (See Chapter III p. 72). This implies a mortality value of level 11 for the males and level 9 for the females. In Ethiopia, there are no mortality data that go back even a decade. The limited data available on mortality appeared only in the sixties. Therefore, the past trends of mortality cannot be utilized to forecast the future trends, for there is no record of the past trends. Nevertheless,

1. Shryock, Henry S. Jr. "Accuracy of U.S. Population projection," in Inter American Statistical Institute, Estadistica. Vol. XII, No, 45, Washington D.C. December 1954, p. 588.

2. In Chapter III, it has been mentioned that the international migration in Ethiopia is insignificant. Hence it is not taken into consideration in projecting the population.

the United Nations Social and Economic Affairs' Office has constructed a formula regarding the assumption of the future mortality trends in the developing nations. The Office stated on this issue:

> This generalized form of the mortality assumption in all variants is half a year's gain in expectation of life at birth (both sexes) with the passing of each year but with different and eventually diminishing rates of gain at the high levels of life expectancy and no further gain past an expectation of life of 73.9 years.[1]

This generalized mortality assumption is strictly applied to the projection of the male population of Ethiopia. Nevertheless, in the light of the low expectation of life estimated for the female population, which may be attributed to higher female mortality rate at child bearing ages, the United Nations' assumption with regard to the future mortality trends for females is slightly modified. As a result of the existing higher female mortality rates at child bearing age due to maternal mortality, it is assumed that the Ministry of Public Health will make special efforts in training more gynaecologists, mid-wives, etc. and in setting up maternal and child health institutions all over the Empire. This effort will definitely result in a remarkable reduction in the risk of maternal mortality. Since this special effort affects only the females, it is assumed that their mortality rate will decline at a faster rate than that of the males.

The setting up of enough maternal and child health institutions will take quite a while in order to affect a reasonable proportion of the female population and thereby to bring about a decline in mortality. It may take a decade or more. Estimating that the new maternal and child health institutions will affect female mortality in about a decade,

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1. United Nations, World Population Prospects as Assessed in 1963. Population studies No. 41, Series A. New York, 1966, p. 45.

it is assumed that female mortality will decline at the rate suggested by the United Nations, (half a year's gain in expectation of life per year) till 1985. Thereafter it will decline at a rate twice as fast as that of the United Nations' assumption until 1995 and at the United Nations' rate for the rest of the projection period. This implies that the female expectation of life at birth which was estimated to be 40.0 years at the base year (1970) will rise at a rate of half a year for every year that passes till 1985, at a rate of one year per year until 1995 and at a half a year per year there after, ending up at an $^{\circ}e_{o}$ of 57.5 years in the year 2,000. On the other hand, in 1970 the male mortality rate was estimated to be at level 11 with an expectation of life at birth of about 45.0 years. It is assumed that the male $^{\circ}e_{o}$ will rise at the United Nations' rate of about half a year for every year that passes all the way up to the year 2,000 and end up with an $^{\circ}e_{o}$ of 56.1 years.

Fertility - Realizing that the future course of fertility is very uncertain, it is better to make several fertility assumptions rather than one, as in the case of mortality. Therefore, a series of assumptions are made with regard to the future course of fertility and computations are made to carry forward the effects on future fertility on those stated assumptions. To make fertility projection, the number of children that are to be born during the projection period should be estimated. This estimate is usually derived by first estimating the number of surviving women in the child bearing ages and applying to them the estimated fertility rate at the base date (January 1970) with some plausible assumptions regarding the future trends of these components. Where registration statistics of birth by age of mother are available fertility projections are usually made in terms of period age specific birth rates. Further, if cohort rates are available or can be derived, it would be preferable to use them in projecting the trends of fertility. However, in this particular case the two types of fertility data are either not available or not reliable, hence the estimate of the crude birth rate obtained from the stable population model have been used (See Chapter III. Appendix C, p. 91).

The crude birth rate is affected by variation in age-sex composition. To avoid this problem the United Nations suggested the use of sex-age adjusted birth rate defined as "the number of births per 1,000 aggregate number of women in various five year age groups from 15-44"[1]. The weights are one for the age group 15-19, seven for 20-24 and 25-29, six for 30-34, four for 35-39 and one for 40-44. These weights were selected because if the actual numbers of women in the respective age groups are multiplied by the weights, i.e., by 1, 7, 7, 6, 4, and 1 respectively, and the results are added, a total will be obtained (at least in populations that are not affected by migration, wars, epidemics, etc.) which does not generally differ in number very much from the actual total population. Thus, by relating the number of births to 1,000 of this weighted total of women, rather than to 1,000 of actual total population, a measure of fertility will be obtained that remains unaffected by variation in age structure of the population by age and sex. From an empirical study of age-specific birth rates for 52 countries by the United Nations, it was observed that these were approximately the relative values of the rates regardless of the general level of fertility.[2]

The 1970 estimate of crude birth rate in Appendix C of Chapter III through stable population model indicates a rate of 44.7. This rate results in a total of 1,075,880 births (24,068,800[3] x 44.7/1,000). Then on the basis of the estimated total number of births in 1970 a sex-age adjusted birth rate has been computed as shown in Table IV.1. The result is a sex-age adjusted birth rate of 48.0 per 1,000, which is designed to be commensurate with the crude birth rate.

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1. United Nations, Methods of Population Projection by sex and age. Population studies No. 25, Series A. New York, 1956, p.41.
2. Ibid., p.42
3. Estimated total population of Ethiopia for January 1970. See Chapter I.

TABLE IV.1 Computation of "Sex-Age Adjusted" Birth Rate, 1970.

Age Group	1970 Female Population (in '000)	Weights	Product (in '000)	Estimated Births 1970*	Sex-Age Adjusted Birth rate**
15 - 19	1,233.3	1	1,233.4	-	-
20 - 24	1,055.4	7	7,387.8	-	-
25 - 29	889.4	7	6,225.8		-
30 - 34	747.1	6	4,482.6	-	-
35 - 39	628.5	4	2,514.0	-	-
40 - 44	533.6	1	533.6	-	-
			22,377.2	1,075,880	48.0

SAABR

* Obtained by multiplying the estimated birth rate (44.7) through stable population model by total 1970 estimated population (24,068,800) of Ethiopia.

** $\frac{\text{Estimated Number of births}}{\text{weighted total of women}} \times 1{,}000 = \frac{1{,}075{,}880}{22{,}377{,}200} \times 1{,}000 = 48.0$

The future trends of fertility are dictated by the existing and future economic, social and cultural conditions in the country. Ethiopia is an agrarian society with a very high proportion of the population residing in rural areas (see chapter I). An agrarian society usually has characteristics which do not favour an early or an appreciable decline in fertility. In other words, in Ethiopia, generally the conditions (low level of mortality, substantial industrialization and urbanization, large scale social security institution, availability of various types of contraceptives, etc.) for the fertility to decline are non-existent at the moment. These conditions are brought about as a result of a considerable socio-economic development in the country.

> The theory of demographic transition asserts that the high birth rates, as well as the death rates, characteristic of an agrarian low-income society are affected by economic development. The changing structure of production, with a declining importance of the family as a production unit, with the growth of impersonal systems for the allocation of jobs, and with the development of economic roles for women outside of the home, tends to increase the possibility of economic mobility that can better be achieved with small families, and tends to decrease the economic advantage of a large family. One of the features of economic development is typically increasing urbanization, and children are usually more of a burden and less of an asset in an urban setting than in a rural. The whole process of economic change, moreover, weakens the force of traditional customs and beliefs.[1]

The efforts of the various Ministries to modernize the economy and to raise the standard of living of the population (in the near future) will result in -

a) Mortality decline - Once infant and child mortality decline, parents will be certain that a specified number of children will survive to maturity. In a society where the mortality is high, high fertility is favoured for the very maintenance of the population. Thus with the decline of mortality in general, the society will change its view that high fertility is essential for the maintenance of the level of population. In a high mortality society government and religious institutions encourage parents to have more children. Couples with more children are given high social status. However, once mortality declines, a high level of fertility will no longer be necessary to maintain the existing level of the population. Consequently, the government and religious institutions may shift from the position of favouring large families to neutrality or even to opposition.

b) Progress in industrialization - In an industrial society farms will be mechanized and the labour contributed by children will no longer

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1. Coale, A.J. and Hoover, E.M., Population Growth and Economic Development in Low Income Countries: A case study of India's Prospects. Princeton University Press, Princeton. New Jersey 1958, p.11.

be important. At a certain stage of socio-economic development universal and compulsory education for children will be effective. Further, the prohibition of child labour will be enforced. Thus the value given by the parents to a large family will decline.

c) Increase of urbanization - This will bring about a rise in the relative cost of living. No doubt the relative cost of rearing children will rise too, discouraging parents from having more children.

d) The establishment of social security institutions for the aged - At the moment the elderly expect to receive financial support from their children. Therefore, the development of social security institutions will change the attitude of parents towards additional children.

e) The availability of different types of contraceptives - In the meantime different types of contraceptives will be widespread in the society. The socio-economic development that has taken place will motivate the society to limit its fertility and the availability of the contraceptive will provide the means to control fertility. Thus, these factors may reasonably exist sometime after the middle of the projection period and may affect the level and trends of fertility negatively.

Fertility trends are also determined in part by whether the country has an official population policy and by the length of time during which wide spread family planning services have been available in the country. Ethiopia has no official population policy, nor has it wide spread family planning service. Therefore, it is most likely that fertility will remain constant. However, if after sometime during the projection period, say a decade, Ethiopia adopts a population policy and provides nation-wide family planning services, there might be a slight to a modest decline in fertility during the latter part of the projection period.

Since there are no retrospective fertility data for Ethiopia to serve as a basis for assumptions with regard to future alternative patterns of fertility, the United Nations generalized pattern of fertility decline has been adopted. This generalized pattern of fertility decline is that:

The sex-age adjusted birth rate in successive five year periods following the onset of the decline is to average 97.5, 90.0, 80.0, 70.0, 60.0 and 52.5 percent of its initial value and to settle thereafter at the level of 50.0 percent.[1]

Alternative dates of onset were set for high, low and medium assumptions. A high fertility assumption represents a late date of onset, and the low an early date. Thus, regarding the high fertility assumptions, it is assumed that fertility will not start to decline before the end of the projection period. With regard to the low and the medium fertility assumptions, the dates of onset for the decline will be 1985 - 1990 and 1990-1995, respectively.

Making the Projection - Component methods of projection usually show the future population distributed by sex and age (in terms of single years or five year age groups). Assuming that international migration is insignificant the following types of data are needed:

a) The number of persons in each age group for each sex on the same date, that is, the base population for making the projection. In this case it is the 1970 population estimate of Ethiopia.

b) The proportion of the group surviving each five year interval during which the survivors become five years older. Tables XXXIX and XL are obtained by successively applying the Coale - Demeny[2] West model life table survival ratios at various levels, starting with the 1970 population estimate of Ethiopia. In other words the base population has been made to survive to the year 2,000 by applying sex-age specific survival ratios.

c) The number of children that are to be born and survive during the projection period. This component has been derived by using the sex

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1. United Nations, World Population Prospects as Assessed in 1963. Population studies No.41, Series A, New York, 1966, p.46.

2. Coale, A.J. and Demeny, Paul, Regional Model Life Tables and Stable population. Princeton, New Jersey, Princeton University Press, 1966, pp.10 - 18.

age adjusted birth rate. First, the number of births is obtained for the mid-point of the quinquennial time period, by applying the sex-age adjusted birth rate to the total number of women obtained by averaging the female population at child bearing age in the consecutive quinquennial years, like 1970 and 1975, 1975 and 1980 .... up to 1995 and 2,000. The number of births so obtained is assumed to apply to each year in the quinquennium. Thus the average annual number of births for the period 1970-1975 is obtained by applying the 1970 sex-age adjusted birth rate (48.0/1,000) to the average weighted sum of females at child bearing age in 1970 and 1975.[1] Further, the average annual number of births has been multiplied by five, in order to get the total number of births for the quinquennium. The number of births for the remaining quinquinnia of the projection period is obtained in the same way (See Table XLI).

Table XLII summarizes the findings of Table XLI and presents the future number of births by sex at different level of fertility assumptions (as given on page 100), that is, "high," "medium" and "low". Here the average annual number of births has been multiplied by five to get the total births for both sexes during the quinquennium. Then assuming a sex ratio of 105 at birth the births for the quenquennium have been multiplied by 0.5121 and 0.4879 to split them into the number of male and female births respectively.

The males aged 0-4 years in 1975 are obtained by means of multiplying the estimate of 2,922,331 male births during the 1970 - 1975 (See Table XLII) by the proportion of male survivors (0.81752, See Table XXXIX) to age 0-4 for 1970 - 1975. This manipulation resulted in 2,389, 100 males 0-4 years in 1975. Thus, Table XLIII presents the number of surviving children, by sex and age group, born after the base date.

The population at age 5-9 in 1975 has been estimated by aging those 0-4 years old in 1970. For example, the male 0-4 years of age in 1970

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1. Women in the age group 10-40 in 1970 who have survived to 1975 as it has been indicated in Table XL.

were 2,112,500, and surviving this age group using a survival ratio of 0.93574 for the males during the 1970 - 1975, has resulted in 1,976,600 males 5-9 years old in 1975. The males at age 10-14 in 1975 were obtained as survivors of the males age 5-9 in 1970 and so forth, all the way down to the last age group (See Table XXXIX).

Then the overall population projection for 1975 by sex is the sum of the number of children born in the interval 1970 - 1975 and survived to 1975, plus the sum of the population at different ages who have survived the quinquennium from the population estimate of 1970 (See Table XXXIX, XL and XLIII). The results of the population projection for the period 1970 - 2,000 have been obtained in the same way. The summary of the population projection figures by sex are presented on Table IV.2.

Table IV.2

Results of Population Projection

by sex for the period 1970 - 2,000

YEAR	POPULATION		
	Males	Females	Total
1975	13,862,300	13,168,100	27,030,400
1980	15,882,900	14,771,600	30,654,500
1985	18,294,700	16,794,700	35,089,400
1990			
High	21,156,200	19,298,300	40,454,500
Medium	21,156,200	19,298,300	40,454,500
Low	21,064,400	19,212,400	40,276,400
1995			
High	24,404,700	22,550,600	46,955,300
Medium	24,298,200	22,449,000	46,747,200
Low	23,889,700	22,061,300	45,951,000
2,000			
High	28,433,400	26,442,500	54,875,900
Medium	27,832,100	25,869,400	53,701,500
Low	26,935,700	25,017,500	51,953,200

TABLE XXXIX

Estimated Survivors of the Male Population of Ethiopia, 1970-2,000

Age Group	Estimated Population in January 1970	$P_{(x)}$[1] 1970 - 75 at c_o=44.5	Estimated survivors in 1975	$P_{(x)}$ 1975 - 80 at e_o = 47.1	Estimated survivors in 1980
0		P^2=0.81752		0.53749	
0 - 4	2,112,500	0.93574		0.94494	
5 - 9	1,733,800	0.97966	1,976,600	0.98222	
10 - 14	1,501,800	0.97932	1,698,500	0.98261	1,941,600
15 - 19	1,294,300	0.97067	1,470,700	0.97355	1,669,000
20 - 24	1,098,800	0.96386	1,256,300	0.96740	1,431,800
25 - 29	928,000	0.95937	1,059,200	0.96343	1,215,300
30 - 34	781,400	0.95261	890,300	0.95730	1,020,500
35 - 39	659,300	0.94267	744,400	0.94815	852,300
40 - 44	549,400	0.92962	621,500	0.93584	705,800
45 - 49	439,600	0.91048	510,700	0.91762	581,600
50 - 54	354,100	0.88313	388,200	0.89119	468,600
55 - 59	268,600	0.84289	312,700	0.85193	346,000
60 - 64	195,400	0.78501	226,400	0.79540	266,400
65 - 69	134,300	0.70690	153,400	0.71826	180,100
70 - 74	85,500	0.60068	94,900	0.61291	110,200
75 - 79	48,800	0.36872	51,400	0.37770	58,200
80 +	24,400	-	18,000	-	19,400
Born before 1970	12,210,000	-	11,473,200	-	10,866,800
Born After 1970[3]	-	-	2,389,100	-	5,016,100
Total	12,210,000	-	13,862,300	-	15,882,900

1. P(X) - Age - Specific survival ratio
2. P(X) - The proportion of Survivors to age group 0 - 4
3. Total male survivors in the given year in Table XLIII

TABLE XXXIX (continued)

Age Group	Estimated Survivors in 1980	$P_{(x)}$ 1980 - 85 at e_o=49.7	Estimated Survivors in 1985	$P_{(x)}$ 1985 - 90 at e_o=51.8	Estimated Survivors in 1990
0		0.85583		0.87196	
0 - 4		0.95280		0.95941	
5 - 9		0.98434		0.98620	
10 - 14	1,941,600	0.98360		0.98536	
15 - 19	1,669,000	0.97625	1,909,800	0.97870	
20 - 24	1,431,800	0.97083	1,629,400	0.97392	1,869,100
25 - 29	1,215,300	0.96739	1,390,000	0.97094	1,586,900
30 - 34	1,020,500	0.96183	1,175,700	0.96591	1,349,600
35 - 39	852,300	0.95328	981,500	0.95792	1,135,600
40 - 44	705,800	0.94140	812,500	0.94643	940,200
45 - 49	581,600	0.92358	664,400	0.92904	769,000
50 - 54	468,600	0.89760	537,200	0.90353	617,300
55 - 59	346,000	0.85904	420,600	0.86569	485,400
60 - 64	266,400	0.80353	297,200	0.81117	364,100
65 - 69	180,100	0.72714	214,100	0.73552	241,100
70 - 74	110,200	0.62243	131,000	0.63147	157,500
75 - 79	58,200	0.38543	68,600	0.39303	82,700
80 +	19,400	-	22,400	-	27,000
Born before 1970	10,866,800	-	10,254,400	-	9,625,500
Born after 1970	5,016,100	-	8,040,300	-	11,530,700
T o t a l	15,882,900	-	18,294,700	-	21,156,200

TABLE XXXIX (continued)

Age Group	Estimated Survivors in 1990	$P_{(x)}$ 1990 - 95 at e_o=54.1	Estimated Survivors in 1995	$P_{(x)}$ 1995 - 2000 at e_o=56.5	Estimated Survivors in 2,000
0		0.88750		0.90214	
0 - 4		0.96562		0.97174	
5 - 9		0.98798		0.98969	
10 - 14		0.98706		0.98872	
15 - 19		0.98107		0.98338	
20 - 24	1,869,100	0.97692		0.97982	
25 - 29	1,586,900	0.97438	1,825,900	0.97770	
30 - 34	1,349,600	0.96987	1,546,200	0.97370	1,785,200
35 - 39	1,155,600	0.96246	1,308,900	0.96688	1,505,500
40 - 44	940,200	0.95141	1,093,000	0.95632	1,265,500
45 - 49	769,000	0.93452	894,500	0.93998	1,027,400
50 - 54	617,300	0.90957	718,600	0.91563	840,800
55 - 59	485,400	0.87248	561,500	0.87938	658,000
60 - 64	364,100	0.81961	423,500	0.82702	493,800
65 - 69	241,100	0.74417	298,400	0.75305	350,200
70 - 74	157,500	0.64084	179,400	0.65050	224,700
75 - 79	82,700	0.40116	100,900	0.40982	116,700
80 +	27,000	-	33,200	-	41,400
Born before 1970	9,625,500	-	8,984,000	-	8,309,200
Born after 1970	11,530,700	-	15,420,700	-	20,124,200
T o t a l	21,156,200	-	24,404,700	-	28,433,400

TABLE XL.

Estimated Survivors of the Female Population of Ethiopia, 1970 - 2,000

Age Group	Estimated Population in January 1970	$P_{(x)}$[1] 1970 - 75 at e_o=40	Estimated Survivors in 1975	$P_{(x)}$ 1975 - 80 at e_o=42.5	Estimated Survivors in 1980
0		p_b^2=0.78353		0.80321	
0 - 4	2,027,900	0.91004		0.91977	
5 - 9	1,660,200	0.96983	1,845,500	0.97289	
10 - 14	1,423,100	0.96937	1,610,100	0.97240	1,795,500
15 - 19	1,233,300	0.96059	1,379,200	0.96435	1,565,700
20 - 24	1,055,400	0.95332	1,184,700	0.95769	1,330,000
25 - 29	889,400	0.94738	1,006,100	0.95226	1,134,600
30 - 34	747,100	0.94120	842,600	0.94658	958,100
35 - 39	628,500	0.93552	703,200	0.94116	797,600
40 - 44	533,600	0.92912	588,000	0.93484	661,800
45 - 49	438,800	0.91438	495,800	0.92072	549,700
50 - 54	355,800	0.88914	401,200	0.89676	456,500
55 - 59	284,600	0.84813	316,400	0.85780	359,900
60 - 64	225,300	0.78946	241,400	0.80144	271,400
65 - 69	154,200	0.70999	177,900	0.72375	193,500
70 - 74	106,700	0.60060	109,500	0.61594	128,600
75 - 79	59,300	0.36574	64,100	0.37567	67,400
80 +	35,600	-	21,700	-	24,100
Born before 1970	11,858,800	-	10,987,400	-	10,294,400
Born after 1970	-	-	2,180,700	-	4,477,200
T o t a l	11,858,800	-	13,168,100	-	14,771,600

1. P(x) - Age - Specific survival ratio
2. P(b) - The proportion of survivors to age group 0 - 4
3. Total female survivors in the given year in Table XLIII

TABLE XL (continued)

Age Group	Estimated Survivors in 1980	$P_{(x)}$ 1980 - 85 at e_o=45	Estimated Survivors in 1985	$P_{(x)}$ 1985 - 90 at e_o=50	Estimated Survivors in 1990
0		0.82189		0.85661	
0 - 4		0.92880		0.94528	
5 - 9		0.97576		0.98100	
10 - 14	1,795,500	0.97524		0.98043	
15 - 19	1,565,700	0.96789	1,751,000	0.97430	
20 - 24	1,330,000	0.96180	1,515,400	0.96927	1,706,000
25 - 29	1,154,600	0.95685	1,279,200	0.96518	1,468,800
30 - 34	958,100	0.95162	1,085,600	0.96077	1,234,700
35 - 39	797,600	0.94646	911,700	0.95608	1,043,000
40 - 44	661,800	0.94022	754,900	0.94988	871,700
45 - 49	549,700	0.92669	622,200	0.95753	717,100
50 - 54	456,500	0.90393	509,400	0.91695	583,300
55 - 59	359,900	0.86689	412,600	0.88344	375,400
60 - 64	271,400	0.81269	312,000	0.83317	364,500
65 - 69	193,500	0.73670	220,600	0.76029	259,900
70 - 74	128,600	0.63036	142,600	0.65661	167,700
75 - 79	67,400	0.38561	81,100	0.40550	93,600
80 +	24,100	-	26,000	-	32,900
Born before 1970	10,294,400	-	9,624,300	-	8,918,600
Born after 1970	4,477,800	-	7,170,400	-	10,379,700
Total	14,771,600	-	16,794,700	-	19,298,300

TABLE XL (continued)

Age Group	Estimated Survivors in 1990	$P_{(x)}$ 1990 - 95 at e_o=55	Estimated Survivors in 1995	$P_{(x)}$ 1995-2,000 at e_o=57.5	Estimated Survivors in 2,000
0		0.88895		0.90332	
0 - 4		0.96125		0.96818	
5 - 9		0.98603		0.98821	
10 - 14		0.98523		0.98744	
15 - 19		0.97998		0.98285	
20 - 24	1,706,000	0.97572		0.97908	
25 - 29	1,468,800	0.97236	1,664,600	0.97605	
30 - 34	1,234,700	0.96864	1,428,200	0.97258	1,624,700
35 - 39	1,043,000	0.96426	1,196,000	0.96829	1,389,000
40 - 44	871,700	0.95810	1,005,700	0.96209	1,158,100
45 - 49	717,100	0.94636	835,200	0.95071	967,600
50 - 54	583,300	0.92742	678,600	0.93259	794,000
55 - 59	375,400	0.89661	541,000	0.90312	632,900
60 - 64	364,500	0.84916	336,600	0.85715	488,600
65 - 69	259,900	0.77830	309,500	0.78746	288,500
70 - 74	167,700	0.67648	202,300	0.68656	243,700
75 - 79	93,600	0.42345	113,400	0.43303	138,900
80 +	32,900	-	39,600	-	49,100
Born before 1970	8,918,600	-	8,350,700	-	7,775,100
Born after 1970	10,379,700	-	14,199,900	-	18,667,400
Total	19,298,300	-	22,550,600	-	26,442,500

TABLE XLI. Calculation of Estimated Average Annual Number of Births In 1970-75, 1975-80, 1980-85, 1985-90, 1990-95, 1995-2,000. (At Estimated Sex-Age Adjusted Birth Rate = 48.0)

Age Group	Estimated Population ('000) 1970	1975	Mean 1970-75 ('000)	Weight	Product ('000)	Estimated Average Annual Number of Births[1]
15 - 19	1,233.3	1,379.2	1,306.2	1	1,306.2	
20 - 24	1,055.4	1,184.7	1,120.0	7	7,840.0	
25 - 29	889.4	1,006.1	947.7	7	6,633.9	
30 - 34	747.1	842.6	794.8	6	4,768.8	
35 - 39	628.5	703.2	665.8	4	2,663.2	
40 - 44	533.6	588.0	560.6	1	560.6	
					23,772.7	1,141,090
	1975	1980	1975-80			
15 - 19	1,379.2	1,565.7	1,472.5	1	1,472.5	
20 - 24	1,184.7	1,330.0	1,257.5	7	8,802.5	
25 - 29	1,006.1	1,134.6	1,070.3	7	7,492.1	
30 - 34	842.6	958.1	900.3	6	5,401.8	
35 - 39	703.2	797.6	750.4	4	3,001.6	
40 - 44	588.0	661.8	624.9	1	624.9	
					26,795.4	1,286,180
	1980	1985	1980-85			
15 - 19	1,565.7	1,751.0	1,658.3	1	1,658.3	
20 - 24	1,330.3	1,515.4	1,422.8	7	9,959.5	
25 - 29	1,134.6	1.279.2	1,206.9	7	8,448.3	
30 - 34	958.1	1,085.6	1,021.8	6	6,130.8	
35 - 39	797.6	911.7	854.6	4	3,418.4	
40 - 44	661.8	754.9	708.3	1	708.3	
					30,323.7	1,455,537

1. , Mean weighted total of women for the given quinquennium times the estimated sex-age adjusted birth rate (48.0).

TABLE XLI. (continued)

Age Group	Estimated Population ('000) 1985	1990	Mean ('000) 1985-90	Weight	Product ('000)	Estimated Average Annual Number of Births
15 - 19	1,751.0	1,918.8	1,834.9	1	1,834.9	
20 - 24	1,515.4	1,706.0	1,610.7	7	11,274.9	
25 - 29	1,279.2	1,468.8	1,374.0	7	9,618.0	
30 - 34	1,085.6	1,234.7	1,160.1	6	6,960.6	
35 - 39	911.7	1,043.0	977.3	4	3,909.2	
40 - 44	754.9	871.7	813.3	1	813.3	
					34,410.9	1,651,723
	1990	1995	1990-95			
15 - 19	1,918.8	2,218.6	2,068.7	1	2,086.7	
20 - 24	1,706.0	1,880.4	1,793.2	7	12,552.4	
25 - 29	1,468.8	1,664.6	1,566.7	7	10,966.9	
30 - 34	1,234.7	1,428.2	1,331.4	6	7,988.4	
35 - 39	1,043.0	1,196.0	1,129.5	4	4,518.0	
40 - 44	871.7	1,005.7	938.7	1	938.7	
					39,051.1	1,874,452
	1995	2,000	1995-2,000			
15 - 19	2,218.6	2,685.4	2,452.0	1	2,452.0	
20 - 24	1,880.4	2,180.6	2,030.5	7	14,213.5	
25 - 29	1,664.6	1,841.1	1,752.8	7	12,269.6	
30 - 34	1,428.2	1,624.7	1,526.4	6	9,156.4	
35 - 39	1,196.0	1,389.0	1,492.5	4	5,718.0	
40 - 44	1,005.7	1,158.1	1,081.9	1	1,081.9	
					44,891.4	2,154,787

TABLE XLII Calculation of Estimated Number of Births by Sex for the Population of Ethiopia, from 1970 - 2000 Under High, Medium and Low Fertility Assumption

	1970 - 75	1975 - 80	1980 - 85	1985 - 90	1900 - 95	1995-2,000
"High" Assumption						
Mean weighted sum of female population 15 - 44	23,772,700	26,795,400	30,323,700	34,410,900	39,051,100	44,891,400
Sex-age adjusted birth rate	48.0	48.0	48.0	48.0	48.0	48.0
Estimated number of births	5,705,450	6,430,900	7,277,685	8,258,615	9,372,260	10,773,935
Males	2,922,331	3,293,906	3,727,630	4,230,062	4,800,471	5,518,409
Females	2,783,119	3,076,994	3,550,055	4,028,553	4,571,789	5,255,526
"Medium" Assumption						
Sex-age adjusted birth rate	48.0	48.0	48.0	48.0	46.8	43.2
Estimated number of births					9,138,285	9,696,541
Males					4,680,791	4,966,568
Females					4,457,494	4,729,973
"Low" Assumption						
Sex-age adjusted birth rate	48.0	48.0	48.0	46.8	43.2	38.4
Estimated number of births				8,052,149	8,435,034	8,619,148
Males				4,124,310	4,320,428	4,414,727
Females				3,927,839	4,114,606	4,204,421

TABLE XLIII Calculation of Estimated Number of Survivors in 1975 - 2,000 from Births in 1970 - 2,000, for the Population of Ethiopia, According to High, Medium and Low Fertility Assumptions.

Levels of Fertility	Age Group	Number of Survivors in 1975	1980	1985	1990	1995	2,000
				Males			
High	0 - 4	2,389,100	2,758,600	3,190,200	3,688,400	4,260,400	4,978,100
	5 - 9		2,257,500	2,628,400	3,060,700	3,561,600	4,140,000
	10 - 14			2,221,700	2,592,100	3,023,900	3,524,900
	15 - 19				2,189,500	2,558,600	2,989,800
	20 - 24					2,016,200	2,516,100
	25 - 29						1,975,300
	Total	2,389,100	5,016,100	8,040,300	11,530,700	15,420,700	20,124,200
Medium	0 - 4					4,153,900	4,480,300
	5 - 9						4,036,500
	10 - 14						
	15 - 19						
	20 - 24						
	25 - 29						
	Total					15,314,200	19,522,900
Low	0 - 4				3,596,200	3,834,400	3,982,500
	5 - 9					3,472,600	3,726,000
	10 - 14						3,436,800
	15 - 19						
	20 - 24						
	25 - 29						
	Total				11,438,500	14,905,700	18,626,500

TABLE XLIII (continued)

Levels of Fertility	Age Group	Number of Survivors in 1975	1980	1985	1990	1995	2,000
				Females			
High	0 - 4	2,180,700	2,471,500	2,917,800	3,450,900	4,064,100	4,747,400
	5 - 9		2,005,700	2,295,500	2,758,100	3,317,200	3,934,800
	10 - 14			1,957,100	2,251,900	2,719,600	3,278,100
	15 - 19				1,918,800	2,218,600	2,685,400
	20 - 24					1,880,400	2,180,600
	25 - 29						1,841,100
	Total	2,180,700	4,477,200	7,170,400	10,379,700	14,199,900	18,667,400
Medium	0 - 4					3,962,500	4,272,700
	5 - 9						3,836,400
	10 - 14						
	15 - 19						
	20 - 24						
	25 - 29						
	Total					14,098,300	18,094,300
Low	0 - 4				3,364,700	3,657,700	3,797,900
	5 - 9					3,234,300	3,541,300
	10 - 14						3,196,100
	15 - 19						
	20 - 24						
	25 - 29						
	Total				10,293,800	13,710,600	17,242,400

ANNEX

1. Sample Design

A stratified two-stage sampling design was adopted for the Second Round National Sample Survey in the rural areas. The whole country (excluding Eritrea and nomadic areas in the other provinces - see Annex 22 on the section Coverage for a complete list of rural areas not covered in the NSS 2nd Round), was at first stratified into about 450 weredas into which the country is divided for administrative purposes.

Within each wereda, a complete list of all the administrative sub-divisions was prepared for use as the first stage sampling frame.

In the case of weredas with less than 30 sub-divisions, the first stage sampling consisted of selecting two sub-divisions with probability proportional to their administrative population counts, or some other suitable measure of size if available, otherwise with equal probability.

When there are 30 or more sub-divisions in a wereda, two pairs of two contiguous sub-divisions were selected, by selecting two nucleus sub-divisions by the above method, and then selecting a neighbouring sub-division for each nucleus with equal probability among all its contiguous neighbours.

For the second stage sampling all the households residing in a selected sub-division were listed, and a proportion sampled for further inquiries by systematic sampling after stratification by household class (i.e. owner, tenant, etc.) such that the overall sampling fraction is 1 in 100.

2. Coverage

The areas which were not covered during the NSS 2nd Round in the rural areas of the country are listed below under each province. In case an Awraja has not been totally covered, the name of the Awraja is given, while weredas not covered are identified by their names and the Awraja they are part of.

I. Bale 1) Elkere Awraja. 2) Meda-Wolabo wereda in Dollo Awraja.
3) Rayitu wereda in Wabe Awraja.

II. Eritrea — All 9 Awrajas not covered

III. Gemu Gofa — 1) Dimie wereda and Wub-Hamer wereda in Gofa Awraja
2) Geleb wereda and ~~Muribodi~~ Murgibodi wereda in Geleb and Hamer Bako Awraja

IV. Harargie — 1) In Adal-Issa and Garaguracha Awraja the weredas Ayisha, Denkal, and Gewane. 2) Burka wereda and Meya Hulka wereda in Gara Muleta Awraja. 3) The six Awrajas of the Ogaden and Huad, namely Jigjiga, Dega-Habur, Gode, Kebri-Dehar, Kelafo, Welwel and Warder.

V. Illubabor — Akobo wereda in Gambella Awraja

VI. Kefa — 1) Nono and Boter wereda in Limu Awraja. 2) Bonga Zuria wereda in Kefa Awraja. 3) Biro Wereda and Termatid wereda in Madji and Goldia Awraja. 4) Chekorsa wereda in Jimma Awraja.

VII. Shoa — Buremo-Dayit wereda, Dawyina Rahemay wereda, Karakore wereda in Yifat and Timuga Awraja.

VIII. Sidamo — 1) Borena Awraja. 2) Arero wereda, Teltele wereda, and Yabello wereda in Arero Awraja. 3) Aroressa wereda in Jemjem Awraja.

IX. Tigre — 1) Dalol wereda in Agame Awraja.

X. Wollo — 1) Borena Awraja. 2) Afambo wereda, and Awsa wereda in Awsa Awraja. 3) Wadla Dant wereda in Wadla Dant Awraja.

The table below indicates the geographical coverage of the NSS 2nd Round. In its scope the NSS 2nd Round was planned to cover all the settled rural areas of the country, excluding nomadic areas, where survey work was feasible. The achieved coverage of the NSS 2nd Round, in terms of the total number of weredas

covered, was 82.2% of all weredas in the country.as shown in the Table below.

Table showing the extent of coverage of the NSS 2nd Round by province

Province	Total Number of Awrajas*	Number of Awrajas not Totally covered	Total Number of Weredas*	Number of Weredas not covered
Arussi	3	0	22	0
Bale	5	1	25	8
Begemder & Semien	7	0	28	0
Eritrea	9	9	27	27
Gemu Gofa	4	0	21	2
Hararge	13	6	62	32
Gojam	7	0	39	0
Illubabor	4	0	22	1
Kefa	6	0	41	5
Shoa	11	0	70	3
Sidamo	6	1	35	9
Tigre	8	0	55	1
Wollega	6	0	49	0
Wollo	12	1	31	6
TOTAL	101	18	527	94

*The number of Awraja and weredas for each province is as it existed at time the Second Round of the National Sample Survey was carried out - November 1969 to May 1971.

3. Method of Estimation

As outlined in the sampling design two methods were utilized depending on the number of sub-divisions in a wereda.

A. When the number of sub-divisions is less than 30, two sub-divisions were selected at random with probability proportional to some size measure if available, otherwise with equal probability. At the second stage, all the households in a selected sub-division were listed down and a proportion selected to be canvassed by systematic sampling with a random start after determining the sampling interval. The sampling interval, k, was chosen so that

$$k_i = 200\ p_i, \quad \text{where}$$

p_i = probability of selection of the ith sample sub-division.

When the sample aggregates, in the respective sub-divisions, for any desired characteristic, such as the number of persons, is multiplied by the inverse sampling fraction, i.e. 100 and the resultant totals for the two sub-divisions added up, this will give the wereda estimates.

Hence if we denote by t_1 and t_2 the respective sample totals for the two selected sub-divisons for a particular wereda, wereda estimates will be given by

$$100t_1 + 100t_2$$

B. When the number of sub-divisions in a wereda is more than 30, two pairs of two contiguous sub-divisions were selected, by selecting two nucleus sub-divisions either with probability proportional to size if available, otherwise with equal probability, and then selecting a neighbouring sub-division for each nucleus with equal probability among all its contiguous neighbours. For the second stage sampling, all the households residing in each of the selected sub-divisions were listed and a proportion sampled for further inquiries such that the overall sampling fraction is 1 in 100.

To get an estimate for the wereda for any desired characteristic, e.g., the number of persons or households, the following estimating formula

was used.

$$\frac{1}{2}\left[\frac{\frac{k_{1N}t_{1N}}{n_{1N}} + \frac{k_{1c}t_{1c}}{n_{1c}}}{\frac{p_{1N}}{n_{1N}} + \frac{p_{1c}}{n_{1c}}} + \frac{\frac{k_{2N}t_{2N}}{n_{2N}} + \frac{k_{2c}t_{2c}}{n_{2c}}}{\frac{p_{2N}}{n_{2N}} + \frac{p_{2c}}{n_{2c}}}\right]$$

where k_{iN} = sampling interval for i th selected nucleus subdivision (i=1,2)

p_{iN} = probability of selecting the i th nucleus subdivision (i=1,2)

n_{iN} = number of contiguous neighbouring subdivisions for the i th nucleus subdivision (i=1,2)

t_{iN} = sample total of the characteristic in the i th nucleus subdivision (i=1,2)

k_{ic} = sampling interval for the selected contiguous subdivision to the i th nucleus subdivisions (i=1,2)

p_{ic} = probability of selecting the selected contiguous subdivsion to the i th nucleus subdivision (i=1,2)

n_{ic} number of contiguous neighbouring subdivision to the selected contiguous subdivision to the i th nucleus subdivision (i=1,2)

t_{ic} = sample total of the characteristic in the chosen subdivision contiguous to the i th nucleus subdivision.

The sampling intervals k_{iN} and k_{ic} have been fixed such that

$$k_{iN} = 200\left(p_{iN} + p_{ic}\frac{n_{iN}}{n_{ic}}\right) \qquad i = 1,2$$

$$k_{ic} = 200\left(p_{ic} + p_{iN}\frac{n_{ic}}{n_{iN}}\right) \qquad i = 1,2$$

Since t_{1N}, t_{1c}, t_{2N} and t_{2c} represent the sample totals in the respective pairs of contiguous subdivision, by multiplying each of these totals by the inverse sampling fraction, i.e., 100, the wereda estimate is obtained.

When the wereda estimate has been obtained by using either A or B, as appropriate, the Awraja estimate totals are obtained by adding the wereda estimates. The same procedure was followed to get the final province and country aggregates (for the surveyed areas).

4. Sampling Error Estimates

Sampling errors have been computed at the Awraja level, province level and for the total surveyed areas of the country as a whole for the characteristics: total number of households and total number of persons.

Depending on whether 2 subdivisions were selected or two pairs of contiguous subdivision were selected, the following methods were used for computing estimates of sampling variance.

1. In the case where two subdivisions are selected, if the sample totals for the respective subdivisions are denoted by t_1 and t_2 for any desired characteristic, such as the number of person, for any particular wereda the sampling variance for the desired characteristic at wereda level is given by

$$R^2(t_1 - t_2)^2$$

where R is the inverse of the sampling fraction.

The sampling fraction was one in hundred in the NSS 2nd Round. Hence the expression reduces to

$$100^2(t_1 - t_2)^2$$

2. In the case of 2 pairs of contiguous subdivisions for any characteristic, such as the total number of persons, the sampling variance at the wereda is given by

$$R^2 \left[(t_{1N} + t_{1c}) - (t_{2N} + t_{2c})\right]^2$$

Since R is taken to be 100, the estimated sampling variance for the characteristic t at the wereda level is given by

$$100^2 \left[({}^{t}_{1N} + {}^{t}_{1c}) - ({}^{t}_{2N} + {}^{t}_{2c}) \right]^2$$

The sampling variance estimates have been calculated for the characteristics, total number of persons and total number of household at the Awraja level, at the province level and for the whole country (i.e. for the surveyed areas only).

For any characteristic t, such as the total number of households or persons

$$V_{ij} \left(\hat{t}_{\text{Awraja}} \right) = \sum_{k} V_{ijk} \left(\hat{t}_{\text{wereda}} \right)$$

$$V_{i} \left(\hat{t}_{\text{province}} \right) = \sum_{j} V_{ij} \left(\hat{t}_{\text{Awraja}} \right) \quad \text{and}$$

for $$V \left(\hat{t}_{\text{total country}} \right) = \sum_{i} V_{i} \left(\hat{t}_{\text{province}} \right)$$

where there are i Provinces, j awrajas in the i th province, and k weredas in the ij th awraja in the i th province.

NOTE: The summation extends only to the total number of weredas covered, the number of Awrajas covered, and the number of provinces covered as the case may be.

From the variance estimates, the standard error estimates and coefficient of variation have been determined as well.

The table below gives estimates for the number of households and persons in the surveyed areas for each province and for the country as a whole (excluding the Province of Eritrea which was not covered). The relative standard error both for the total number of households and persons was 1.7%.

Table showing the estimates of the number of households and population with their relative standard errors for the surveyed areas by province and for the whole country.

Province	Number of households	Coefficient of variation (%)	Number of persons [1]	Coefficient of variation (%)
Arussi	174,200	5.5	786,700	5.2
Bale	102,220	7.3	437,970	6.7
Begemder & Semien	323,415	3.4	1,567,180	2.9
Gemu Gofa	143,365	5.1	594,870	4.6
Gojam	313,030	7.0	1,497,605	6.2
Hararge	288,899	6.1	1,354,078	6.3
Illubabor	146,320	10.2	538,680	10.1
Kefa	274,185	5.4	1,082,730	5.9
Shoa	856,180	4.0	3,859,815	4.2
Sidamo	386,400	6.9	1,739,600	7.1
Tigrai	309,477	6.1	1,360,210	5.9
Wollega	337,705	3.5	1,517,155	3.7
Wollo	346,610	6.8	1,465,060	6.7
TOTAL	4,002,006	1.7	17,736,053	1.7

NOTE: These estimates of households and total number of persons do not include those of the unsurveyed areas.

[1] The total number of persons indicated here is 17,736,053 while that indicated in Table II (p. 36) is 17,883,400. The discrepancy observed should be attributed to the up-dating of the latter figure to January 1970 while the former figure refers to the date on which the survey has been carried out in the respective provinces. In the 11 of the 13 provinces, in which the survey has been carried out, the survey date dates back from 5 to 11 months from January 1970. The survey has been carried out 12 and 15 months after January 1970 in the remaining two provinces.

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