CHAPTER I

INTRODUCTION AND OBJECTIVES

1.1   Introduction

Poverty is a major concern and an important issue in Ethiopia. It is a chronic problem exacerbated by war, draught and inappropriate policies. According to analyze of the combined 1995/96 Household Budget Survey and the 1996 Welfare Monitoring Survey [1] 45.5 percent of the population were falling the poverty line. About 47.5 percent of the rural population fell below the poverty line while the corresponding figure for the urban population was 33.2 percent.

As in the case of a number of African countries which undertook the Social Dimensions of Adjustment (SDA) program, the issue of welfare monitoring in Ethiopia arose as part of the Economic Reform Program (ERP) currently being undertaken in the country. The ERP specifically and strongly underlies the effects of the reform program on poverty and the analytical capacity of the government to monitor such effects. To this end, a Welfare Monitoring System (WMS) was set up by the government by mid 1994.

In view of the wider context of the problem, the establishment of the WMS, as justified above, is envisaged to consist major elements such as establishing an information system that provides a continuous picture of the poverty scenario in the country, indicate the impact of reform programs on the level of household welfare, establish follow-up procedures on the various programs and activities targeted towards poverty alleviation and conduct regular statistical surveys to assess in particular the efficiency of targeted programs.

The WMS places emphasis on six basic needs indicators. These are health, education,

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[1] POVERTY SITUATION IN RTHIOPIA, Welfare Monitoring Unit, Ministry of Development and Cooperation, Addis Ababa, March, 1999.

anthropometry, access to selected facilities/services, amenities and assets. However, the distribution of household domestic expenditure was obtained by recall interview with reference periods of the last month previous the day of the interview. These WMS data were classified by expenditure quintile and used as back ground variable for tabulation. The 1996 Welfare Monitoring Survey was reported in Statistical Bulletin 205, March 1999.

1.2 Objectives of the Welfare Monitoring System

The WMS which involves various ministries and the Central Statistical Authority (CSA) is established with the following objectives

a) provide baseline data on existing poverty situation and establish a system of information gathering on relevant key indicators;

b) identify poor and vulnerable groups that could be the focus of targeted intervention programs;

c) undertake periodic surveys and researches to evaluate targeted programs;

d) assess the short and medium term effects of macroeconomics and sectional policies and programs on the poor;

e) produce conclusive reports and suggestions needed for due attention by the government and concerned implementing agencies.

These objectives can be achieved by defining clearly specified strategies. One of the most important strategies is to collect and analyze data that could be fed into the welfare monitoring system. The Central Statistical Authority, as specified in the proclamation that founded it, is the main institution to collect, analyze and disseminate data of such magnitude. Anyhow, the Welfare Monitoring Unit (WMU) in the Ministry of Economic Development and Cooperation (MEDaC) has a responsibility of (1) coordination of the various elements of the system, (2) creation and maintenance of the socio-economic database, (3) analysis and policy advice and (4) workshops and seminars at central and regional levels.

To this effect, the CSA has conducted a Welfare Monitoring Survey in January 1996 in connection with the 1995/96 Household Budget Survey. However, January 1996 welfare

monitoring survey and the household income, consumption and expenditure survey were considered as a baseline/benchmark surveys for monitoring the living conditions of households and to draw poverty line of the country. This 1996 WMS is reported in Statistical Bulletin 205, March 1999: REPORT ON THE 1996 WELFARE MONITORING SURVEY.

CHAPTER II

SAMPLE DESIGN, DATA COLLECTION AND
DATA PROCESSING

2.1 Scope, Coverage and Contents

The 1998 (1990 Ethiopian Calendar, E.C.) Welfare Monitoring Survey covered the population in the country on a sample basis excluding the non-sedentary population in Afar and Somali Regions. Moreover, residents of collective quarters, homeless persons and foreigners were not covered in the surveys. The survey population constitutes all the eleven administrative regions (i.e., Tigray, Affar, Amhara, Oromiya, Somali, Benishangul-Gumuz, Southern Nations and Nationalities Peoples (SNNP), Gambela, Harari, Addis Ababa and Dire Dawa) covering both rural and selected urban areas.

A total of 1827 Enumeration Areas, EAs (1380 rural and 447 urban) were selected to be covered in the survey in all regions. Nevertheless, 19 rural EAs were not covered in the survey due to various reasons. Thus the survey succeeded to cover 1808 (99.0 percent) of the selected EAs. From each sampled EA 25 households were systematically selected for the survey from a fresh list of households prepared at the beginning of the field work.

With regard to ultimate sampling units, it was planned to cover a total of 45,675 households (34,500 in rural area and 11,175 in urban areas) all over the country. The response rate was found to be 98.8 percent (98.5 percent or 33,981 households in rural areas and 99.7 percent or 11,142 households in urban areas).Only 519 of the selected rural households did not participate (see Summary tables 2A and 2B).

In this Survey, data were collected on basic population characteristics, health, education, housing, anthropometry, services and amenities available, distance from home to facilities/services, and profile of asset ownership using seven schedules. For details on the content of the survey refer to survey questionnaire in **Appendix 1.**

2.2 Concepts and Definitions

a) *URBAN CENTER*: is in principle defined as a locality with 2000 or more inhabitants. However for practical purposes an urban center includes the following regardless of the number of inhabitants.

i)   All administrative capitals (Regional capitals, Zonal capitals and Wereda capitals)

ii)   Localities with UDAs not included in (i)

iii)   All localities which are not included either in (i) or (ii) above having a population of
        1000 or more persons, and whose inhabitants are
        primarily engaged in non-agricultural activities.

b) *URBAN DWELLER'S ASSOCIATION, UDA, (KEBELE)*: is the lowest administrative unit in an urban center with its own jurisdiction. It is an association of urban dwellers (commonly known as Kebele) formed by the inhabitants, and usually constitutes a part of the urban center.

c) *FARMER'S ASSOCIATION AREA (FA)*: is the lowest administrative unit in a settled rural area with its own jurisdiction. It is an association of rural dwellers formed by the inhabitants of a given area whose members are engaged either in agricultural and/or non-agricultural activities.

d) *ENUMERATION AREA (EA)*: is a unit of land delineated for the purpose of enumerating housing units and population without omission and duplication. An EA in rural areas usually consists of 150 - 200 households, and on the other hand an EA in urban centers constitutes 150-200 housing units. An enumeration area should be related to a UDA or an FA in one of the following ways.

* An EA may be equal to an FA if the number of the households in the FA is less than or equal to 150 - 200, in rural areas and equal to a UDA in urban areas if the number of housing units in the UDA is 150 - 200.

* An EA may be a part of an FA or an urban dwellers association area and should not cross an FA boundary in rural areas and a UDA boundary in urban centers.

e) <u>COLLECTIVE QUARTER</u>:- A collective quarter is a premise (a housing unit, a building or a compound) in which a number of unrelated persons reside together, and share common facilities. Examples of collective quarters are monasteries, prisons, boarding schools, hostels, home for aged, children's homes, work camps, military barracks, etc. It is important to note that in the premises of some collective quarters, there may be private households.

f) *<u>HOUSEHOLD</u>*: Constitutes of a person or group of persons, irrespective of weather related or not who normally live together in the same housing unit or group of housing units and who have common cooking arrangements.

g) *<u>HEAD OF HOUSEHOLD</u>*: A head of a household is a person who economically supports or manages the household or for reasons of age or respect, is considered as head by the household or declares himself as such or by members of the household is called head of the household. The head of the household could be a male or a female.

h) <u>MEMBER OF HOUSEHOLD</u>: Person constituting a household is called member of the household. The following are considered as members of a household:

   i)   All persons who lived and ate with the household for at least six months including those who were not within the household at the time of the survey and were expected to be absent from the household for less than six months

   ii) All guests and visitors who ate and stayed with the household for six months and more.

   iii) House maids, guards, baby-sitters, etc. who lived and ate with the household even for less than six months.

i) *<u>HOUSEHOLD SIZE</u>* : Is the total number of members of a household.

j) *<u>DOMESTIC EXPENDITURE</u>* : is defined as total expenditure incurred by the household or any of its members and includes expenditure on consumption as well as non-consumption items.

k) *INCOME*: Refers to domestic consumption of own crops and own livestock and livestock products, domestic consumption of goods and services purchased for resale or produced or processed in the household enterprise other than agriculture, wages and salaries, allowance, overtime, bonus, pension, commission, discounts (i.e. concessions obtained), imputed rent of free housing (i.e. subsidized amount only), imputed rent of owner occupied housing, other employee's benefit, interest received, profit and dividend received, remittance (regularly received), value of items obtained free (i.e. firewood, water, etc.), rent of personal possessions, alimony (regularly received) and other types of income.

l) *GROSS ENROLLMENT RATIO*: It is expressed as the number of enrollment in given level regardless of age per 100 children in the appropriate age-groups. For example the gross enrollment ratio for primary level is defined as a quotient of the total number of pupils in grades 1-6 and the total population aged 7-12 years.

m) *SCHOOL DROPOUT*: A person is considered to be a school dropout if he/she did not appear for the end of year examination or took the examination but did not register the following academic year.

n) *AGE GRADE MISMATCH:* Age grade mismatch indicates the relationship between an enrollees age and the grade in which he is enrolled.

o) *FACILITIES AND AMENITIES*: These are basic infrastructures such as food markets, postal, telephone, school, health, drinking water and transport services etc.

p) *ANTHROPOMETRY*: The technique that deals with the measurement of the size, weight and proportions of the human body.

q) *ACUTE MALNUTRITION OR WASTING*: A nutritionally deficient state of recent onset related to sudden food deprivation or malabsorption or poor utilization of nutrients which results in rapid weight loss. The highest prevalence occur in times of famine, during seasonal food shortages, or during sever illness. A child who is less than 80 percent of the reference medium for weight-for-height, or two standard deviations below it, is classified as "acutely malnourished" or "wasted".

r) *CHRONIC MALNUTRITION OR STUNTING*: A nutritional deficient state related to frequent episodes of acute malnutrition or a long-term food deficiency, often combined with persistent of recurrent ill health in the first few years of life. A child who is less than 90 percent of the reference median of height-for-age, or two standard deviations below it, is classified as "chronically malnourished" or "stunted".

s) *UNDERWEIGHT*: A nutritional status indicator of malnutrition (either acute or chronic malnutrition) based on the principle that a child has an expected weight for that child's age.

t) *Z-SCORE*: The standard deviation (SD) from the mean.

u) VACCINATION: Any incurable immunizing agent or a preparation containing bacteria so treated as to give immunity from specific diseases when injected in to the subject.

2.3   Sample Design

The 1998 (1990 E.C.) Welfare Monitoring Survey covered both urban and rural parts of the country, except six zones in Somali Region and two zones in Afar Region. For the purpose of the survey, the country was divided into three categories. Urban areas were divided into two broad categories taking into account sizes of their population. Rural areas were also grouped into one category.

Category I: Ten regional capitals and five urban centers with a population of 100,000 and over were grouped in this category. Each urban center in this category was the survey domain (reporting level) for which separate survey results **for major survey characteristics** were reported.

Category II: Urban centers in the country other than the fifteen urban centers in category I were grouped in this category. There were four domains (reporting levels) in this category, namely;

a) Other Urban Amhara (excluding Gondar, Bahr Dar, Dessie)

b) Other Urban Oromiya (excluding Jima, Nazreth, Debre Zeit)

c) Other Urban SNNP (excluding Awasa)

d) Other Urban (excluding all urban centers in Category I and those in a, b and c in category II)

Other than the nineteen domains (reporting levels) defined in category I and Category II, three additional domains can be constructed by combining basic domains from the first two categories. These domains are:

i) Urban Amhara

ii) Urban Oromiya

iii) Urban SNNP

Category III: Rural parts of 44 Zones and 5 special weredas in seven regions and rural parts of Gambela, Harari, Addis Ababa and Dire Dawa regions were grouped in this category each of which were the survey domains (reporting levels). The seven regions are Tigray, Afar, Amhara, Oromiya, Somali, Benishangul-Gumuz, and SNNP.

All in all 54 basic rural domains (reporting levels) including total rural (country level) were defined for the survey.

In addition to the above urban and rural domains, survey results can be reported at regional and country levels by aggregating the survey results for corresponding urban and rural areas.

Definition of the survey domains was based on both technical and resource considerations. More specifically, sample sizes for the domains were determined to enable provision of major indicators with reasonable precision subject to the resources that were available for the survey.

2.4   Selection scheme and Sample Size

a) <u>Category I:</u> Stratified two-stage sample design was used to select the sample in which the primary sampling units (PSUs) were enumeration areas (EAs). Sample EAs from each domain were selected using systematic probability proportional to size; size being number of households obtained from the 1994 Population and Housing Census. In this category, a total of 325 urban EAs were selected. Within each sample EA, fresh list of households was prepared at the beginning of the survey's fieldwork and the survey questionnaire was administered to 25 systematically selected households within each of the sampled EAs.

b) <u>Category II:</u> Three-stage stratified sample design was adopted to select the sample from domains in category II.   The PSUs were urban centers selected using Systematic Probability Proportional to Size; size being number of households obtained the 1994 Population and Housing Census. The secondary sampling units (SSUs) were EAs that were selected using Systematic Probability Proportional to Size; size being number of household obtained from the 1994 Population and Housing Census. In this category, a total of 122 urban EAs were selected. Number of SSUs selected from each of the sampled urban centers was determined by census. Ultimately, 25 households within each of the sample EAs were selected systematically from a fresh list of households prepared at the beginning of the survey's fieldwork for the administration of the survey questionnaire.

c) <u>Category III:</u> A stratified two-stage sample design was used to select the sample in which the PSUs were EAs. Sample from each domain was selected using systematic probability proportional to size; size being number of households obtained from the 1994 Population and Housing Census. A total of 1380 rural EAs were selected from category III. Within each sample EA a fresh list of households was prepared at the beginning of the survey's fieldwork and the survey questionnaire was administered to 25 systematically selected households per sample EA.

Distribution of sample units by domain (reporting levels) and category is given in Summary Tables 2A and 2B below.

Summmary Table 2A

**Distribution of Sampled and Covered EAs and Households
for RURAL Areas - 1998**

Domains	RURAL	
	Eas	**Households**

	Sampled	Covered	Sampled	Covered
1 Tigray	**100**	**99**	**2500**	**2471**
W.Tigray	25	24	625	598
C.Tigray	25	25	625	624
E.Tigray	25	25	625	624
S.Tigray	25	25	625	625
2 Afar	**60**	**53**	**1500**	**1324**
Zone 1	20	16	500	399
Zone 3	20	17	500	425
Zone 5	20	20	500	500
3 Amhara	**285**	**283**	**7125**	**7067**
N.Gondar	30	30	750	750
S.Gondar	30	30	750	750
E.Gojam	30	30	750	748
W.Gojam	30	30	750	749
Awi	25	25	625	622
N.Wolo	30	30	750	750
S.Wolo	30	30	750	749
Wag Hamra	25	25	625	625
Oromiya	25	24	625	600
N.Shoa	30	29	750	724
4 Oromiya	**358**	**358**	**8950**	**8947**
N.Shoa	30	30	750	750
W.Shoa	30	30	750	750
E.Shoa	30	30	750	749
Arsi	30	30	750	749
Bale	30	30	750	750
Borena	28	28	700	700

(continue)

Domains	RURAL			
	Eas		Households	
	Sampled	Covered	Sampled	Covered
E.Wellega	30	30	750	750

	Sampled	Covered	Sampled	Covered
W.Wellega	30	30	750	749
Jima	30	30	750	750
Illubabor	30	30	750	749
E.Hararge	30	30	750	750
W.Hararge	30	30	750	750
5 Somali	**62**	**60**	**1550**	**1496**
Liben	22	22	550	549
Shinile	20	18	500	447
Jijiga	20	20	500	500
6 Ben-Gumuz	**75**	**75**	**1875**	**1868**
Metekel	25	25	625	622
Asosa	25	25	625	621
Kemashi	25	25	625	625
7 S.N.N.P.	**340**	**334**	**8500**	**8342**
N.Omo	30	30	750	750
S.Omo	30	24	750	599
Bench-Maji	25	25	625	625
Kef-Shekich	30	30	750	749
Gedeo	30	30	750	750
Kembata	30	30	750	750
Hadiya	30	30	750	749
Burji	15	15	375	375
Yem	15	15	375	375
Konso	15	15	375	375
Derashe	15	15	375	373
Gurage	30	30	750	747
Sidama	30	30	750	750
Amaro	15	15	375	375

(continue)

	RURAL			
Domains	**Eas**		**Households**	
	Sampled	**Covered**	**Sampled**	**Covered**
8 Gambela	**25**	**24**	**625**	**594**

9 Harari	25	25	625	625
10 A.Ababa	25	25	625	625
11 D.Dawa	25	25	625	622
Total Rural	**1 380**	**1 361**	**34 500**	**33 981**

Summmary Table 2B

**Distribution of Sampled and Covered EAs and Households
 for URBAN Areas - 1998**

Domain	URBAN			
	Eas		Households	
	Sampled	Covered	Sampled	Covered
Mekele	19	19	475	475
Asayita	12	12	300	299
Gondar	17	17	425	425
Dessie	20	20	500	500
Bahr Dar	20	20	500	492
Jima	20	20	500	500
Debre Zeit	20	20	500	499
Nazreth	20	20	500	496
Jijiga	14	14	350	350
Assosa	15	15	375	375
Awasa	19	19	475	475
Gambela	14	14	350	349
Harar	20	20	500	500
Addis Ababa	75	75	1875	1862
Dire Dawa	20	20	500	500
Amhara - Other Urban	31	31	775	773
Oromiya - Other Urban	50	50	1250	1249
SNNP - Other Urban	20	20	500	500
Country- Other Urban	21	21	525	523
Total Urban	**447**	**447**	**11 175**	**11 142**

Coverage rate of sampled EAs was 99.0 percent and response rate of sampled households
was 98.8 percent.

2.5   Field Organization and Supervision

All the 22 branch statistical offices of the CSA participated in the survey undertaking, especially in organizing the second stage training, in deploying the field staff to their respective sites of assignment, and retrieving completed questionnaires and submitting them to the head office for data processing. They were also responsible in administering the financial and logistic aspect of the survey within the areas of their assignment.

To accomplish the data collection operation, all enumerators were supplied with the necessary equipment (infant weighting scales and height measurement boards for anthropometric measurement) at the completion of the training. It is to be mentioned, that the WMS was conducted in conjunction with the 1998 Health and Nutrition Survey. Thus the data obtained from anthropometric measurement were used and analyzed in both surveys.

In the data collection of the survey, a total of 2012 enumerators and 436 field supervisors were involved with an average supervisor-enumerator ratio of 1-to-5. The data collection in the field lasted for seven days.

To assist the data collection activities in deployment, supervision and retrieval of completed questionnaires, a total of 123 four-wheel vehicles were used. Table 2C shows distribution of the field staff and vehicles by branch statistical offices.

During the survey fieldwork, close and regular supervision was undertaken at various levels. At the beginning of field work, the management staff from the head office visited all Statistical branch offices and discussed the objectives, importance of the survey, the expected quality of the data and some other related issues with supervisors and enumerators. Immediately after the commencement of fieldwork, close supervision was made by supervisors who made spot checking, re-interviewing and a thorough scrutiny of filled questionnaires to ensure that the data collection activities are taking place according to the instructions given. In addition to this, supervision was made by the trainers and branch statistical office heads.

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Summmary Table 2C

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Distribution of Field Staff and Vehicles by Branch Statistical Office - 1998

Branch Office	Numbers of		
	Enumerators	**Supervisors**	**Vehicles**
Mekele	135	29	7
Asayita	82	18	5
Gondar	103	22	6
Debre Markos	124	26	8
Dessie	102	21	7
Debre Birhan	68	15	5
Nazreth	102	22	4
Ambo	74	17	5
Nekemte	75	17	6
Jima	97	22	7
Goba	57	14	4
Asebe Teferi	58	13	4
Jijiga	86	19	4
Asosa	103	23	6
Awasa	138	27	8
Mizan Teferi	71	16	6
Arba Minch	127	23	8
Hosana	123	28	7
Gambela	51	11	5
Harar	71	15	4
Addis Ababa	108	24	4
Dire dawa	57	14	3
Total	**2012**	**436**	**123**

2.6   Training of Field Staff

For this survey the training program of enumerators, supervisors and other field and office staff was conducted at two stages. The first stage was conducted at the head office of CSA, in Addis Ababa. The participants were selected from professionals and sub-professionals with long time experiences, branch office heads and their assistants who were to train enumerators and supervisors during the second stage of training conducted at the branch statistical offices.

The training at the head office, which lasted for five days, consisted of theoretical discussions on how to complete the questionnaire as well as practical interview of

households and/or household members. The objectives of practical interviewing of households were two-fold. Firstly, it enabled to assess how well the theoretical class discussions were understood by all participants so that they could convey the same massage to enumerators and supervisors. The second objective was to examine the difficulty which would likely be encountered during actual fieldwork.

Thorough discussions were made after field practice. The discussions were intended to help exchange experiences among participants and pinpoint the areas of the survey questions which need more care and attention. This practical fieldwork was conducted both at the head office and at branch offices in selected urban and rural areas.

The second stage training was undertaken at the branch statistical offices. The trainers were those professional and sub-professional staff who were trained at the head office. The second stage training lasted for at least seven days and also consisted of both theoretical class discussions and practical field practice.

2.7   Data Processing

After the completion of the fieldwork the filled-in questionnaires were retrieved from the branch statistical offices for data processing. The first stage data processing activity was manual editing, coding and verification. About 55 editors-coders and 8 verifiers accomplished the coding and verification exercise, and the work lasted for 15 days. Then 28 encoders accomplished data entry to the computer and the work took 15 days. After the data entry was completed, machine editing, data weighting and tabulation activities were carried out by programmers of the Data Processing Department. The Integrated Microcomputer Processing System (IMPS) software was used for data entry, consistency checking and finally for the tabulation of the survey results.

Most of the variables are presented at country level, rural area, urban area and by expenditure quintile. Other reporting levels are selected urban centers and region/zone (rural).