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# **MASTEROF ARTS**

## **(ECONOMICS)**

**Determinants of urban poverty the Case of Sebeta Hawas,  
Oromia National Regional Stat**



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## TOPIC OF THE PROJECT

### DETERMINANTS OF URBAN POVERTY IN THE CASE OF SEBETA HAWAS, OROMIA NATIONAL REGIONAL STATE

Project work submitted to the Indira Gandhi National Open University in partial fulfillment of the requirement for the award of the Degree – Master of Arts (Economics) . I hereby declare that this work has been done by me and has not been submitted elsewhere.

Signature of the candidate .....

Name of the candidate: MesfinMahtemeselase Alula

Address if any: Addis Ababa, Ethiopia

Year: 2014

# Certificate

Certified that the project work entitled (TOPIC OF THE PROJECT):**DETERMINANTS OF URBAN POVERTY IN THE CASE OF SEBETA HAWAS, OROMIA NATIONAL REGIONAL STATE** submitted by **MesfinMahtemeselase Alula** is his/her own work and has been done /redone in the light of evaluator's comments under my supervision .

It is recommended that this project be placed before examiner for evaluation.

(Signature of the supervisor)

Name: **DugasaMulugeta**

Designation: **PHD, Assistant Profesor** \_\_\_\_\_

Address: **Addis Ababa, Ethiopia**

Study center \_\_\_\_\_

Regional Center \_\_\_\_\_

Date \_\_\_\_\_

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## Acronyms

*CBO=Community Based Organizations*

*USD=United States Dollar*

*MoFED=Ministry of Finance and Economic Development*

*OBoFED= Oromia Bureau of Finance and Economic Development*

*UNDP=United Nations Development Program*

*PPP=Purchasing Power Parity*

*GNP=Gross Domestic Product*

*HDI=Human Development Index*

*NGO=Non-Governmental Organization*

*DAG=Development Assistance Group*

*DFID=Department for International Development*

*GTZ=German Technical Cooperation*

*CBN=Cost of Basic Needs*

*FEI=Food Energy Intake*

*Cal=Calorie*

*EEA=Ethiopian Economic Association*

*EEPRI=Ethiopian Economic Policy Research Institute*

*CSA=Central Statistics Authority*

*ETB=Ethiopian Birr*

*HICE=Household Income and Consumption Expenditure*

*TGA=Transitional Government of Ethiopia*

*DAG=Development Assistance Group*

*SPSS=Statistical Package for Social Scientists*

*HH= Household*

*WB=World Ban*

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## Abstract

*The heterogeneity of urban poverty in a country is attributed to the high monetization of economies. Unlike in rural areas, urban poverty is reflected at an individual rather than communal level. Accordingly, poverty in such context is usually described in terms of income, consumption level, and employment. In Ethiopia the challenge of urban poverty has become daunting. However, analytical works that scrutinize urban poverty profile in the country in general and in medium towns in particular are at best scanty.*

*In light of this the study assessed determinants of urban poverty in Sebeta Hawaas town. Data are collected by group members with some favorite colleges. A total of 130 household heads were selected by a systematic random sampling from two Kebele ssebeta and Alemgena of the town.*

*A Logistic regression model was employed and estimated based on the primary data with the probability of a household being poor as a dependent variable and a set of demographic and socioeconomic variables as the explanatory parameters. By making use of Cost of Basic Needs (CBN) approach the study identified respondents as poor and non-poor. Based on this, out of the 130 surveyed household heads, 87(67%) of them were found poor. The study obtained the head count, poverty gap, and severity indices as 0.66, 0.417, and 0.191 respectively.*

*The variables that are positively correlated with the probability of being poor are: age, sex, higher education for house hold head, income, food consumption, education, Electricity, House rent, and telephone status of the household. Variables negatively correlated with the probability of being poor are marital status, employment statues, family size, Health, potable water, Variables which affected significantly incidence of poverty at 99% confidence interval are: average monthly income, food consumption, and health status of the households whereas, age, sex, marital status, higher education level family size education ,water source, housing, telephone service, and electric connection were found statistically insignificant indicators of urban poverty.*

*That incidence of poverty is rampant among the surveyed households 0.66 the head count ratio, 0.417poverty gap, and 0.191 the severity index in the town respectively calls for urgent interventions aimed at curbing the fate of the poor.*

# Chapter One

## 1. Introduction

### 1.1. Background

Ethiopia is one of the poorest countries in the world. Poverty in Ethiopia is a longstanding problem. It affects a significant portion of its rural and urban population. Based on estimates of international poverty lines, the incidence of USD 1 per day in the country is 26.3 percent (World Bank, 2005). The percentage increases to 80.7 if the poverty line is raised to USD 2 per day per person in the year 2007 (World Bank, 2005). Based on the national poverty line of the year 1999, 44 percent of the population is absolutely poor (MoFED, 2002). World Bank (2000) and UNDP (2003) quoted in Yared (2005) reported that the country has the lowest GNP Per-capita in the world with its Purchasing Power Parity (PPP) adjusted GNP ranking 200<sup>th</sup> out of 206 countries. The Human Development Index (HDI) and Human Poverty Index (HPI) ranked Ethiopia the 6th out of 175, and 91st, out of 94 developing countries respectively (UNDP, 2003).

Poverty in Ethiopia manifests in a number of ways and this, in fact, is attributed to a multitude of interrelated factors. Getahun (2002), for example, has identified these factors as insufficient source of income, lack of asset/skill, poor health status, poor educational level and backward attitude of people towards work. These factors in one or another way have direct or indirect effect on the life standard of the people. For example, lack of income results.

Induction of expenditure pattern, poor health leads to being unproductive, absence from work, less energetic, lack of education results in lack of skill, helplessness and so on. Although these factors are believed to be universal, there are obviously some differences between the causes, processes, and consequences of poverty among the urban and rural societies. This could be while urban life is complex and is predominantly monetized economy that of rural is basically determined by assets on land, number of oxen, cows, sheep, goats, extra available to the farmer.

Poverty has remained to be a worldwide problem and consequently it has been studied many times at global level. Some countries, like in East Asia are about to escape from the category of least developed countries, partly for their continuous fight against poverty. Ethiopia, however, did not join this track because of the inability to reduce persistence poverty. All of us consciously or unconsciously know to some extent what Ethiopia's poverty look like. The fundamental question that comes in the fore front is not are we really poor, just because we are, but what makes we still poor and what factors determine we to be poor.

## **1.2. The Study Area- Sebeta Hawas**

Sebeta Hawas is one of the districts found in the oromia region. The district is located 25 km away from the capital of the country in south – west direction. The district has 41 rural & 8 urban totally 49 kebeles in the woreda. According to census of 2007 total population of the woreda is 132,294 which 68, 133 male and 64,161 female. Sebeta Hawas woreda is Astronomically located  $8^{\circ} 37' - 9^{\circ} 1' 30''$  latitude and  $38^{\circ} 24' 30'' - 38^{\circ} 45' 30''$  longitude and also surrounded by:- Welmera and Addis Abeba at the south Akaki woreda at the East Elu, Ejere and Tole-woreda at the west Kersa and Mallima woreda at the north. Area of the woreda is 87572 hectare.

High Land of the Woreda is 1800-3385m & averagely 2592.5m .The Annual rain fall is 866-1200 mm & averagely 1033mm.

## **1.3. Research Problem**

In Ethiopia poverty is the general feature for the nation and causing many sufferings and anguish to the largest proportion of the population. It is high agenda of the government, donor agencies, NGOs and other actors that have the inspiration to reduce the level and mitigate the effect and its associated impacts on the wellbeing of the people. The Ethiopian government has been formulating and implementing various policy interventions and programs that are in one-way or another related with poverty reduction. Yet most efforts are biased towards rural areas.

Most poverty literatures in Ethiopia dominate in rural areas. They concentrate on food entitlement failures of farmers (Webb et al, 1992; Webb and Ban Braun, 1994). Dercon and Krishnan (1996), for example, study the status of poverty in rural Ethiopia by taking the income portfolios and food entitlements of households. Bevon and Joiermen (1997) in Ayalneh (2004) adopt a sociological approach to analyze rural poverty. They explored the importance of social class and family relationships including the extended family in the fight against poverty. They concluded that in rural Ethiopia social capital are very important in the way out of poverty.

Though in absolute terms poverty is still a rural phenomenon, there is currently a diffusion and growth of urban poverty. The number of urban poor is increasing at unprecedented level that might be fueled by the highest rural-urban exodus and alarming internal population growth. In the meantime, the urban economy has limited capacity to accommodate the unprecedented population explosion. More specifically, being employed in the formal sector is really cumbersome.

Albeit the effects of urban poverty in Ethiopia are getting severe the factors that account for the results are not studied very well. Most studies have been conducted in rural areas and attempts on urban centers are still scanty. Even the studied ones are confined to the primate city-Addis Ababa or secondary towns like *Nazreth, Bahir Dar, Mekelle* and *Awassa*. (EEA, 2009). Studies of urban poverty in medium and new emerging towns in Ethiopia of which Sebeta Hawas is one are nearly by-passed agendas. The challenge in the fight against poverty of the medium towns in the country in general and in Sebeta Hawas in particular is immense. One of the challenges in the fight against poverty is clear identification of the prevailing impediments. Examination of some impeding variables which aggravate poverty is vital. Among the many impediments of poverty are the, social services, economic and demographic variables such as marital status, age, and sex. Identifying their potential effects to poverty is critical in the study of urban poverty since these variables take the visible repercussions on the commendable life of urban dwellers. Sebeta Hawas is one of the new emerging and medium towns of Ethiopia currently facing with daunting challenges of socioeconomic and demographic variables. In the town the problem of poverty is increasing tremendously because of the socioeconomic and demographic constraints the town is facing with.

The economic activity and social infrastructure of the town is low and the overall life standard of the inhabitants is not in good condition (Planning and Economic Development oromia, 2012). This is due to lack of diversified opportunities such as, absence of commercial crops in the nearby areas, homogenous culture, same language, religion, lack of commerce, and of entrepreneurship. Dwellers are engaged in occupations, which have limited returns. These include small trade and industry, government employee, and urban agriculture etc.

A small number of the residents are employed in the civil services, trading, small-scale industries (woodwork, metalwork and so forth), handicrafts (like weaving, and sewing) and a number of other petty businesses .A large number of households also earn their livelihood by working daily laborer in some foreign garment manufacturing and other small scale industries that found in Sebeta Hawas. (OBoFED, 2012)

Despite paucity of data problems of mal-adjustments are increasingly felt. There is lack of occupation, affordable education, health, and other psychosocial problems. There rate of unemployment is increasing and the number of job seekers is growing fast (OBoFED, 2012) this further will aggravate the existing social problems. The absence of affordable recreational centers in the town is another problem faced by the people.

Assaults, thefts, cases of law negligence, burglaries are some of the common features. Owing to inadequate business activities and/ or economic dynamisms there are limited numbers of financial institutions. These are three government banks, four private bank, three insurances, and three Micro Credit and Saving Institutions. Besides their limited number they serve the people poorly. The private and government banks serve customers for saving and loan to investment and business while the micro-finance and credit institutions play vital roles in the disbursement of loans among the poor sections of the society with the aim of creating self-employment, skill development, and overall increase in income level (Sebeta Hawas Socio Economic Reports , 2012 - unpublished).

The quality and distribution of education service in the town is still not remarkable (Sebeta Hawas Socio Economic Reports, 2012 - unpublished). Regarding the number, there are eighty first cycle

elementary schools, five second cycle elementary school, two high school, one preparatory school, eight kindergartens, two basic alternative schools, thirteen basic adult educations. As to the quality it is poor for the education accessories like students to class ratio, students to teacher ratio, books and availability of qualified professionals are in poor conditions.

Infrastructure has remained to be a crucial tool in flourishing investment, increasing productivity, ensuring efficiency and effectiveness of work and in the development endeavor of urban areas.

This variable when available at sufficient level in urban centers has a positive multiplier effect, for it, surely, brings comparative advantage, economies of scale, and in the overall requisite performance of institutions. In Sebeta Haws, the basic infrastructures, such as, water, electricity, telephone and transport are available but not to the commendable level.

In the town, the supply of water usually falls short of demand. The quality is also by no means atrocious. There are seven shallow wells eight deep wells, but most of them are not properly functional, except the one and the main source type line developed last year.

These wells together produce thirty-five liters per second, daily on average 3070 cubic meter or 35 liters per second. Surprisingly enough, 65 percent of the total produced water is wasted, only 30.25 liters consumed in a second, due to different reasons, and one of the most frequently cited is found to be leakage (Sebeta Hawas Town Water service, 2012). Only 11,600(68%) households are with own tap water and the rest 2100(32%) does not have their own pipe water. This shows that there is no adequate water consumption in the town. Households, government and public institutions, and NGOs together consume 65% percent of the produced water, 35% percent being the leakage (Sebeta Hawas Town Water Service, 2011).

The town gets a 24-hour electricity from the plant of Awash M/Qunxurree, Jawwee, Tefkii, Furi, Awaas Belo, Kemsidika, Daleti and Qorkee hydroelectric power with 132 kilo-volt line of producing capacity (Sebeta Hawas District Electric Power, 2004). During the study period, there were 4130 (47.5%) households, 70 government organizations, 125 private sectors, and 4 small

industries, in total 3097 electricity subscribed customers. The rest 133 of the households do not have their own electricity.

Telephone services play crucial roles in exchanging information among individuals, wholesalers, and retailers and inform traders with up-to-date information. According to Sebata Hawas Telecom Customer Service Office (2012), there are only 1,000 subscribers out of 4,130 households, but most customer are subscribes from out of Sebata Hawas Telecom office because of Addis Ababa is very near and many customer subscribes mobile Phone from Addis Ababa. The services rendered include, among others, fixed telephone, fax, and internet dial-ups. It also has supplementary services such as call waiting, call transfer, teleconference, malicious call and internet services.

With regard to transport, excluding the main road (Addis Ababa to Jimma) in the town, 12 kilometers (Addis Ababa to Butajira) in the town 5 Kilometers of the main road is asphalted, around 35 kilometers inner roads being graveled and Cobblestones 45 kilometers are dusty/mud roads inside the town. Presently, there the transport service used with the linkage of Addis Ababa with two numbers city bus and money private taxies (Minibuses and *Ladas*) serving the customers (oromia transport agency office, 2012) but the main Road between Addis Ababa and Sebata Hawas is only one so when the morning and evening during the entrance of job there is very traffic tight. When one contrast the number and increasing demand of the inhabitants to the existing poor road quality and quantity coupled with the small number of taxies makes one aware to see the problem further. Although the presence of adequate social services are fundamental to the economic growth and development of urban centers, the number and distribution of social institutions in the town aren't in commendable rates. Not only is the coverage minimal but also the quality of the distribution. The social services of the town generally fall under the following (Sebata Hawas City Service, 2011).

In sum, though 30 years passed since its foundation, the growth and development of the town has remained slow and sometimes started even declining and the incidence of poverty is increasing due to various reasons (Sebata Hawas City Service, 2012). Some of them include:



- Lack of adequate social services, infrastructures and investments
- Governments' little attention to urban areas
- Lack of good governance
- Lack of adequate financial sources
- Inefficient municipal administration,
- Lack of responsibility and accountability,
- Inefficient expertise/qualified human power.

All the above problems in one or another way have implications of urban poverty in the town. In general, one could feel the deterioration of the living conditions. The aim of this paper is, therefore, to assess determinants or correlates of urban poverty in the town.

#### **1.4. Research Questions.**

1. What is the Determinant of Urban Poverty?
2. To what extent urban poverty affects household's life?
3. What is the determinant of urban poverty to what extent urban affects the Society?

#### **1.5. Research Objective**

The objective of any research is to add value to the previous work or bring new ones. Based on the research problem the following research objective(s) are formulated.

##### **1.5.1 General Objective**

- To assess urban poverty in Sebeta Hawas.

##### **1.5.2 Specific Objectives**

- A. To identify households who live below the poverty line.
- B. To examine determinants of urban poverty in Sebeta Hawas
  - To analyze some determinants: demographic characteristics of the household head (age, sex, and marital status), family size, household head educational level, and employment.
  - To assess households social services (water, housing tenure, telephone, and electricity) in relation to poverty

- To assess the relationships (positive or negative) of these variables on urban poverty in the study area.
  - To identify determinants which dominantly affect urban poverty in the study area?
- C. To draw possible research and policy implications.

### **1.6. Research Relevance**

In light of the problem statement and profile of the study area, assessing determinants of urban poverty in Sebeta Hawas will have some paramount importance on account of the following reasons:

- No similar study has been conducted in this area before. This research, therefore, will serve as a springboard for future study.
- Very little was done on urban poverties in medium towns of Ethiopia. It is with the belief that this town is representative of other old medium towns of Ethiopia .The study will, therefore, serve as a starting point or exemplary for studying urban poverties in other medium towns of Ethiopia.
- It can give an input for CBOs, NGOs, or any interested stakeholders/actors who in one or another way are engaged in the development of the town.

### **1.7. Research Scope**

The study assessed the situation of poverty in Sebeta Hawas. In so doing *eight kebeles* were studied. Although many variables could play roles in the study of urban poverty, in this study few variables, which were believed to play dominant roles, were analyzed. These include: household demographic characteristics (such as sex, age, family size, and marital status), educational level, employment/occupations, and social services (like health, water, housing tenure, telephone, &electricity etc.). The study examined these variables at a household level.

### **1.8. Research Limitation**

No research, per se, is complete and free from limitations. This paper is, therefore, constrained by the following:

1. Some sensitive variables such as income and properties (assets) may not be correctly obtained and valued since few respondents were not willing to tell the exact amount. The responses therefore are not 100 percent perfect.
2. The base of the surveyed households is the Kebele registry-sampling frame which includes only those households that have house number, thus some information that could have been collected from households without house number is missing in this study area.
3. Urban poverty is a function of multitude factors. In this study, only some variables, which were assumed to affect the incidence dominantly, are included. The researcher is of the opinion that the study could have been much comprehensive had a number of parameters been included.
4. The budget provided to undertake the research is small. The study would be more comprehensive had it been adequate.

## 1.9. Research Methodology

### 1.9.1. Data Type and Source

Primary and secondary data from different sources were employed for this study.

- **Primary Source.** To obtain information on poverty in the town empirical data were collected through structured questionnaires. The structured questionnaires were posed to the heads of the households. They were interviewed about the demographic characteristics (age, sex, marital status, family size), employment, assets, income, expenditure, saving, water, health, telephone, house tenure, and electricity. Besides, author's experience whenever needed is incorporated. The writer was a resident of the study area for nearly two decades and this made the author to draw conclusion by supplementing the data with observations and life experience.
- **Secondary Source.** Pertinent documents to the study: books, previous working literatures, statistics, and checklists of facts and figures were utilized. Unpublished materials were also used.

### 1.9.2. Sample Size

Any research method chosen may have inherent problems. In order to minimize the problems, scholars support the use of multiple strategies so as to complement one method by another (Mehari, 2003).

In line with the above argument this study employed a cross-sectional survey to assess the determinants of urban poverty in Sebeta Hawas. The research covered eight *kebeles* of the town. A total of 130 respondents were surveyed. This, 130, sample is determined using the minimum sample size formulae of Fowler (2001) as shown below.

$$n = \frac{Z_{\alpha/2}^2 P(1 - P)}{D^2}$$

Where n= number of surveyed population = sample size

$Z_{\alpha/2}$  = the two-tailed critical value at 95 percent confidence interval (1.96)

P = assumed incidence of urban poverty in Sebeta Hawas (0.22) by taking the 1994 case study of Sebeta Hawas

D = Marginal error between the sample and population size (0.05)

The result gives:

$$n = \frac{(1.96)^2 0.22(1 - 0.22)}{(0.05)^2}$$

n = 130 households

Therefore, the sample size is 130.

### 1.9.3. Sampling Technique

The study comprised eight (8) kebeles of the town Alemgena (01, 06, 08) Welete (03), Furi (04) & Sebeta (01, 05, 07) the other 41 kebeles are rural. The total number of households in the surveyed kebeles will add up. Numbers of households selected in each kebele were determined proportion to 118,000 Kebele populations. In the absence of official documents tracing the resemblance and differentiation of the town's socioeconomic status selection

criteria of kebeles were made based on two premises: poverty categorization and spatial distribution. In lieu of this, Sebeta (01, 05, and 07) & Furi (04) Kebele will take as areas of the poor dwellers whereas Alemgena (01, 06, and 08) & Welete (03) Kebeles will be for those of the relatively well-off residents.

Households were randomly selected from each of the eight (8) kebele based on sampling frames prepared from the housing registry available at the kebele administrative offices. To be more precise systematic random sampling adopted every 25<sup>th</sup> of the household, in each of the surveyed kebeles simple random sampling made selection of the first household.

The total numbers of households in the surveyed kebeles add up 4,130. Although thorough efforts were made the research couldn't trace official or unpublished document(s) of the town which can tell us how the socioeconomic status of the selected kebeles differentiate and resemble each other. In light of this, selection criteria were made based on spatial distribution.

In the survey, the questions will posed to the head of the household and the responses, therefore, represent an individual's evaluation about the poverty of the entire household. Since most household heads were busy in weekdays the survey will conduct in weekends. A possible reservation against the response of the heads of the household is that other members of the household may have different evaluations. This is not likely to be a serious problem in the research since the head is usually the sole or the main breadwinner and his/her evaluation tends to be more authentic

**Table 1 Household Size of Surveyed Kebeles**

Surveyed Kebele	Alemgena			Welete	Furi	Sebeta		
	01	06	08	03	04	02	05	07
Total House hold	495	602	535	660	470	490	438	440
Sampled Households	15	20	17	22	14	15	13	14
Total Sampled HH	130							
Total Households	4,130							

*Source: Respective Kebele Roaster and own computation*

#### **1.9.4. Data Collection Instrument**

Structured questionnaire was employed as instrument to gather information at a household level.

The questionnaire were first prepared in English and then translated into Afan Oromo. The *Afan Oromo version* questionnaire was pre-tested on respondents in similar communities. This was done for clarity, acceptability, flow and reduction of repetition. Based on this, minor modifications were made and survey was undertaken.

I recruit two enumerators for four days, one volunteer my colleague and also I was one of also enumerate for five days. They were recruited based on two criteria-education and experience. All interviewers and /or enumerators were trained for one day on the administration of the questionnaire.

#### **1.9.5. Method of Data Analysis**

Basically the analysis and presentation of the study is quantitative. In the first part, the research used descriptive statistics (percentages, ratios, means, standard deviations, Chi-squares, significance intervals, and t-test). These are analyzed and described quantitatively by making use of IBM SPSS-20 version, and tables.

In the second part econometric issues, more specifically, *Logit* model is adopted. Variables, which play significant roles for the incidence of poverty in Sebeta Hawas, were analyzed through this model by making use of econometric issues.

In this IBM SPSS-20 software was employed to determine the coefficients of the determinants odds, odds ratio, and marginal effects and test the statistical significance relationships between the determinants and the dependent variable (urban poverty). A significance level of 0.05(confidence interval of 95 percent) was adopted to accept or reject the hypothesized assumption.

#### **1.9.6. Model Specification (Econometric Issue)**

Although no economic model is precise in assessing the relationship between the regressed and explanatory variables and predicts its significance, the policy implication of any study very much

depends upon how close accurate is the specified model. This brings us to the issue of econometric modeling.

In order to explore the correlates of urban poverty with the variables though to be important in explaining in urban poverty a Logistic regression model was employed, with the dependent variable being the dichotomous variable of whether the household is poor (1) or not poor (0). The explanatory variables considered in the analysis are demographic (sex, age, household head, family size) educational level, occupation, household health, water, and house tenure. To undertake this survey, Logit model was adopted and the response variable  $Y_i$  defined by the regression relationship is depicted as follows.

$$Y_i = a_i + b X_i + U_i$$

Where;

$i$  stands for households run from 1 to  $n$

$Y_i$  is the status of household  $i$

$a_i$  is the intercept term

$b$  is set of coefficients

$X_i$  is set of explanatory variables (determinants)

$U_i$  is cross-section error term

$Y_i$  is unobservable. What we observe is a dummy variable  $Y_i$  defined by  $Y_i = 1$  if  $Y_i > 0$ ,  $Y_i = 0$ , otherwise. So, the response of the variable is binary, taking two values, 1 if the household is poor, 0 if not. The probability of being poor depends on a set of variables  $X$  so that

$$\text{Prob. } (Y=1) = F(b'X)$$

$$\text{Prob. } (Y=0) = 1 - F(b'X)$$

### **1.9.7. Model Variables and Hypothesis**

In this study two main variables were explored: the dependent (regressed) and independent (explanatory). The regressed variable is urban poverty and that of the regressor /explanatory are the determinants of urban poverty-variables, which are thought to have significant role in determining urban poverty in Sebeta Hawas. It is to be noted that a number of explanatory variables could influence the incidence of urban poverty directly or indirectly, as a result, only few variables, which are believed to play dominant roles, were analyzed. One should also make

sure that the regressed or regressor variable(s) could be the cause and effect of the other. In this study, it is assumed that regressor's (determinants) come first and the regressed (urban poverty) comes next. The following section gives highlights to the selected determinants of urban poverty and casts some hypothesis.

1. **Household Head Education (HHED):** It stands for the highest education level attained by the head of the household. There will be two dummies in this category. If the highest attainment is primary education level, it takes the value of 1,0 otherwise. It is hypothesized that the probability of the household being poor decreases with increase in the educational attainment level of the household head. Generally, if the head's highest educational level is less than or equal to primary school complete it takes the value of 1,0 otherwise
2. **Household Head Income (HHI):** The amount of income at any one time in a household shows the extent of poverty and its amount in time shows what is happening to the poverty in time. Economic theory tells that a household with a relatively better income will lead a decent life and hence reduces incidence of poverty. In this study a household with monthly income of less than or equal to 800 Birr (closer to 1 USD per day per adult as an international poverty line) is assumed to be poor and takes 1, 0 otherwise. It is expected that household income affect urban poverty negatively.
3. **Household Head Occupation (HHOC):** This refers to the type of occupation that the household head is engaged in. In this category five dummies were identified. If the household head is own account it take the value of 0, 1 otherwise. If the head is wage employed it take the value of 1, 0 otherwise. If the head is casual worker it takes the value of 1, 0 otherwise. If the head is a pensioner it takes the value of 1, 0 otherwise. If the head is disabled it takes the value of 1, 0 otherwise.
4. **Household Head Marital Status (HHMS):** This refers to the marital status of the head of the household. If the head of the household is married, it takes the value of 1, 0 otherwise.



In this study it is hypothesized that households with their head married are less likely to escape poverty.

The assumption is that households headed by married individuals are supposed to be larger in family size. Large families in developed countries mean large labor force which in turn reduces the incidence of poverty. But in developing countries the reverse in most cases holds true in that larger households are associated with high incidence of poverty because many of the labor force are unemployed.

5. **Household Head Age (HHA)**. People of productive age groups are believed to earn more income than the unproductive ones. However, this may not be true in developing countries where there is rampant unemployment among the productive sections of the society. In this study it is hypothesized that household heads in the age ranges of 31-60 are the productive ones where by the probability of getting income is higher. The rest of the household heads, which are found in the age ranges of 18-30 and above 60, are assumed to experience poverty more than the other sections of the society. The hypothesis in this study is that household heads with age ranges of 18-31 and more than 60 take the value 1, 0 otherwise (31-60 age ranges).
6. **Household Family Size (HHFS)**: This one stands for the number of family members in the household. In this study it is hypothesized that households with larger size (greater than or equal to five) have more probability of being falling into the poor category than those with lesser family size.
7. **Household Head Sex (HHS)**: This refers to the sex of the head of the household and it takes binary value. If the head of the household is female, it takes the value of 1, 0 otherwise. In this study it is hypothesized that the probability for the household to be poor is high if female heads it.
8. **Household Health (HHH)**: Since health, without debate, is the decisive factor for life, one with poor health condition will have a poor living standard. When a breadwinner of

the household gets sick, it is a known experience that the family faces acute problems and one of which is obviously poverty. Lack of proper health will make people to become weak and unproductive. Health is, therefore, expected to play a negative role in urban poverty. Households with frequent patient members take value of 1, 0 otherwise.

9. **Household Water (HHW):** This refers to the type of water service the household has. There will be two dummies in this variable. Those who don't have private tap water in their compound takes the value of 1, 0 otherwise. It is hypothesized in this study that the probability for a household to be poor is low if they have private tap water in their compound.

10. **Household House Tenure:** Nowadays the issue of house ownership has become a critical parameter of urban dwellers and is assumed to play significant roles in the incidence of poverty.

In this study it is assumed that the probability of households to fall into poverty decreases as they have their own houses and increases if they don't have. It is hypothesized that households without their own house take the value 1, 0 otherwise.

### **1.9.8. Organization of the Paper**

The research has the following four chapters. Chapter one consists of the introduction, description of the study area, research problem, research objective, research relevance, research scope, research limitation and methodology. The methodology part introduces data type and source, sample size, sampling techniques, data collection instrument, method of data analysis, model specifications (econometric issues) and working hypotheses.

Chapter two deals with literature survey: This includes conceptual frameworks, definitions and empirical findings of poverty and/or urban poverty. The conceptual framework highlights some theoretical aspects as seen by different scholars, disciplines and countries. The definition of poverty casts some points as to how absolute/objective, relative and subjective poverty-line are interpreted. Construction of poverty line, measures of poverty and indices are also highlighted.

The empirical literature surveys the results of different studies conducted on poverty, nationally and across the world.

Chapter three, the main body of the study, assessed determinants of urban poverty in Sebeta Hawas. In this part, main variables: demographic characteristics (age, sex, marital status, and family size), educational level, employment/occupation, household health, house tenure, water source, energy utilization, and telephone consumption were dealt. The correlates and significance of the main independent variables on urban poverty were critically examined. It identifies the poor from the non-poor, analyzed the empirical results first with the help of descriptive statistics then by econometric analysis by a Logit model.

Chapter four brings summary, conclusion, and policy implications based on the empirical findings. It summarizes and concludes the main findings of the study and casts policy implications that could be of help to reduce urban poverty in the study area. Tables and maps that might be of relevant for reference are attached at the end of the thesis

## Chapter Two: Review of related Literature

### 2.1. Definitions of Poverty

Literatures on the definition of poverty provide many different interpretations. Based on different definitions, different implications on the incidence of poverty and policy analysis have been drawn.

The World Bank (1990) quoted in Garza (2001) defines poverty as "the inability to attain a minimum standard of living." Lipton and Ravallion (1995) in Garza define that "poverty exists when one or more persons fall short of a level of economic welfare deemed to constitute a reasonable minimum, either in absolute sense or by the standards of a specific society." This makes us aware that definition of poverty includes a given level of welfare. Then, it is important to study how to assess welfare as an indicator of poverty.

Townsend (1979) defines poverty when individuals, families or groups in a society lack adequate resources to satisfy their wants and needs, or else to participate in the activities and have the living conditions and amenities, which are common to the society.

Mekonnen (2002) defines poverty in absolute terms, which he explains as the inability to obtain basic needs consumption level irrespective of the general standard of living. In relative terms the definition of poverty, on the other hand, related poverty to the general welfare in a society and often identifies the poor as those falling below a certain fraction of average income or specific percentile of distributions. But, the questions that comes uppermost at this juncture is what constitutes basic needs and how can one derive a poverty line only with the help of monetary value.

In literature there are three main schools of thought concerning the definition and measurement of poverty. These are the welfares school; basic needs school and capability school (Yared 2005, Garza 2001). These schools although perceive poverty differently, there are areas in which they share some common meaning, which is all of them judge a person to be poor whenever s/he is lacking with respect to reasonable minimum standard. The Welfares School

The welfare school relates definition of poverty to the economic well-being of the society. It assumes that when; societies are not able to attain a level of economic well-being deemed to constitute a minimum by the standard of that society, and then person/society faces poverty. It sees income as a determining factor for the presence of poverty (Yared, 2005).

It bases composition of wellbeing solely on individual utilities, which are based on social preferences (Ravallion 1993 cited in Garza, 2001). Problems related to this school are the need to make inter-personal utility comparisons to obtain welfare functions, the degree of validity of full information and unbounded rationality on the part of consumers.

## **2.2 The Basic Needs School**

This school defines poverty when one lacks basic needs (goods and services). It concentrates on the degree of fulfilment of basic human needs in terms of nutrition/ food, health, shelter, education, transport and so on. Yared tried to explain the limitation of basic needs approach as a definition and measure of poverty. He argues that the set of basic goods and services is different for different individuals depending on age, sex, type of activity, etc. of individual that is under consideration. One of the basic problems he cited is how to determine the set of basic needs. There is even a high disagreement among professionals on the determination of basic needs.

## **2.3 The Capability School**

What is emphasized in this school is neither the economic well-being nor the basic needs deemed to satisfy the minimum standard by the society; it is nevertheless, human abilities or capabilities to achieve a set of functioning. This is an alternative criterion for the definition and measurement of well-being which tells the extent to which people have capabilities to be and to do things of intrinsic worth. Sen (1987) wrote that the "value of the living standard lies in the living, and not in the possessing of commodities". Such an approach to the definition and /or measurement of poverty suggests a broader set of criteria for assessing poverty than just income and/or consumption. The measure is said to include publicly provided but non-

marketed services; like, sanitation, health care, education & life expectancy (Sallila and Hilamo, 2004).

Sen (1983) introduced the notion of capabilities in poverty definition and assessments. He defined poverty not only as a matter of low level of well-being, but also as lack of ability to pursue well-being precisely because of lack of economic means. He favored the capability to function as criteria for assessing standard of living, and by implication poverty rather than the utility that might be derived from using that capability. However, the difficulties of this method lie in the application of the concept of capabilities in practical poverty assessments. This school assumes that if one is devoid of the right to participate and does not perform the functioning's, she/he is considered to be poor. It is said that it neither offered a practical criteria for evaluating the various capabilities to function nor sought any aggregation of social values of separate capabilities (Kingdon and Knight, 2004). Thus the availability of different definition of poverty, which is in turn a result of the multifaceted concept, had led to the availability of different poverty line definitions.

## **2.3 Poverty Line Definitions**

### **2.3.1 Objective Poverty Line**

Also known as absolute poverty, objective poverty lines should not be defined as stringent ("survival") poverty line. Rather, it should be the one which is fixed in terms of the living standards indicator being used and over the entire domain of the poverty comparison with two persons at the same real consumption. Thus, an absolute poverty comparison level to both be either "poor" and "non-poor" irrespective of the time or places being considered and with or without policy changes within the relevant domain (Ravallion, 1992).

One of the common weaknesses of an absolute poverty line is it does not change with the living standards of the society in question. Thus, people are labeled "poor" when some absolute needs are not sufficiently satisfied, that is, needs that are not related to the consumption pattern of other people in a given society. In other words, poverty is viewed as acute deprivation, hunger, premature death and suffering. Hence, the assumption implicit in

this notion of poverty is welfare depends on the extent to which some basic needs are met (Hagenaars, 1986). However, it may be difficult, in practice, to define the absolute minimum, in a constant way. Though, the dividing line between acceptable and unacceptable deprivation is said to be biological, it changes in line with age, sex, season, climate, physical built up, types of activities a person is engaged with and extra. The consensual understanding, however, is that absolute poverty is an intolerable situation that requires prompt corrective action.

### 2.3.2 Relative Poverty line

It defines how income and inequality is distributed in a society. It sees poverty as a function of relative deprivation in terms of commodities, defining poor households as those that are unable to attain given commodities that are normal for their society (Garza 2001). The word itself is self-intuitive in that this poverty is defined by the position of an individual compared to other members of a given society. Poverty is discussed here as the share of people whose equalized income falls below a poverty line. In practice, the most popular choice to set poverty line in this method is done by taking certain percentage of mean or median incomes of the population.

Many studies in the developed countries have used a poverty-line which is set at 50 percent of the national mean income. Other studies use 60 percent of the median incomes as a measure of the risk of poverty. However, the scientific justification for the use of certain percentages of the median or mean equivalent threshold is not well-grounded (Ravallion, 1992, Bradshaw, 2001 ascited in Sallila and Hiilamo, 2004).

The problem of defining relative poverty-line stems from the assumption which states the poverty line to be a constant proportion of the mean. The implication of this assumption is the elasticity of the poverty-line and the mean is unity. However there are cases where this might not hold true (Ravallion, 1992). Having this concept in mind, a poverty line in this procedure is set with a formula here-in-below.

$$Y = bX$$

Where,  $Y$  stands for the poverty line,  $b$  is some constant as 0.5 or 0.6 and  $X$  refers to the mean or median of the distribution on which poverty is measured. The measure of poverty which is solely dependent on the parameters of Lorenz curve is stated as  $P(K,L)$ . However, this measure is a good measure of relative poverty to the extent that one is trying to capture the amount of inequality in that distribution (Ravallion, 1992).

While a median income threshold lacks warranted objectivity, it conveys a meaning full-interpretation of deprivation according to the standards of necessities in a particular society. Also the threshold based on median is claimed to be more solid as it is not affected by an increase in high incomes (Sen, 1979, Jantti and Danziger, 2000 as cited in Sallila and Hiilamo, 2004).

In fact, using a median threshold is also subject to well-grounded criticism. Thus, a median threshold used, as a standard comes closer to the definitions of absolute poverty which does not take into account the changes in economic and social context of the upper half of the income distribution. It may also be well criticized for obscuring the difference between inequality and poverty measures (Yishaki, 2002 as cited in Sallila and Hiilamo, 2004).

In general, poverty in this sense is defined as a relative deprivation with respect to various commodities. Hence, households or individuals are deemed "poor" when they lack certain commodities that are common in the society they are living. However, the relative importance of studying poverty as comparative phenomena is justified as modern societies confront economic liberalization, ageing population, marital dissolution and increased labor force participation by women. Relative poverty is concern of developed countries where as measuring absolute poverty is the main aim of developing countries (Ravallion, 1991).

### **2.3.3 Subjective Poverty-Line**

The method of defining subjective poverty line depends on the subjects themselves. The procedure lets people to define poverty through their lived experience. Hence, the identification of the "poor" and the "non-poor" is left to self-perception of the individual concerned (Saith, 2005).



As poverty in this sense refers to subjective well-being of individuals, the perceptions of people towards their own situations is of vital importance in setting poverty threshold. Hence, the method sets poverty line based on the relationship between survey responses on questions of minimum income, considered by an individual to be adequate enough to get along with a representative family size, and the actual income. The resulting definition is called the Leyden poverty -line definition named after its place of origination. The point of interaction between the minimal income stated to be adequate and the actual income in the graph is taken as the poverty threshold. The basic assumption that people associate roughly the same welfare feeling to certain verbal qualifications like for instance "enough to get along" is what the subjective method of defining poverty line depends on the basis of this assumption, income levels, which provide a welfare level to households of different size and type, can be derived (Hagenaars, 1986).

Recognizing poverty lines as essentially subjective judgments people make on the basis of socially acceptable standards of living in their own society is the rationale behind the notion of subjective poverty-line. In most cases, it holds true for the response, on survey questions of the income level people consider absolutely minimal to make ends meet, to be an increasing function of the actual income. Hence, it might not be surprising if this method yields higher poverty lines than the basic needs approach (Ravallion, 1992). For detail about the subjective definitions and/or perception of poverty (refer "Voices of the Poor from Many Lands", 2002 edited by Deepe Naryan and Patti Petesch). All these definitions lead to the setting of poverty lines and measurement of poverty.

## 2.3 Poverty Lines

Given the complexities of poverty concept and its definition, the fundamental question that comes uppermost in the analysis of poverty is the derivation of poverty line. In the derivation of poverty line scholars use different methods. Poverty line in simple term is a line that delineates the poor from the non-poor. To do so construction of poverty line is an important issue.

## 2.4 Setting Poverty Lines

The first step that needs to be clear in the analysis of poverty is to identify whether an individual is poor or not to distinguish the poor from the non-poor. For this purpose, poverty line plays a crucial role in quantifying the various indicators of well-being into a single index. Although the choice of poverty line is always arbitrary (World Bank, 2000), the common argument is that there is a minimum level of consumption of goods and services below which it is difficult to sustain our life. Hence, in order to get the poverty line, it demands thorough work in that the level and type of goods and services must be accurately identified. Although the debate is on how to exactly arrive at different levels of goods and services due to the presence of regional price difference, various commodities and individuals preferences, it is tolerable that a carefully examined work can give good estimation.

In the construction of poverty lines two methods can be employed: the first is to directly use current consumption of goods and services as an indicator of well-being. This requires identification of the minimum bundles of goods and services, which an individual has to consume. In this case, the bundle serves as a border line between the poor and non-poor. The second method uses income as a parameter to identify an individual as poor or non-poor. This necessitates specifying minimum income that enables an individual to achieve consumption of minimum bundle of goods and services defined by the minimum socially acceptable level. Various methods have been employed in constructing poverty lines. The most popular methods, however, are the Cost of Basic Needs (CBN) and Food Energy Intake (FEI) as cited in Mekonnen (2002).

To implement this method Ravallion and Bidani (1994) employ two stages: first determining the food consumption bundle just adequate to meet the required food energy requirements and second adding to this cost an allowance for non-food needs. The food consumed is then valued at the prevailing price to obtain the food poverty line. The allowance for basic non-food consumption is again anchored on the consumption pattern of the poor. Two problems may arise.

One is variation in estimating food components (minimum required nutrition level) across regions and ethnic group. The second is estimating the non-food components of the poverty lines. There are no objective criteria on which to base the satisfaction. In any case, the basic needs approach is the most widely used approach to setting poverty line in developed countries.

#### **2.4.1 Food Energy Intake Approach (FEI)**

This approach locates the poverty line as the income or consumption expenditure level just adequate to meet a predetermined food energy intake to an individual. The level of FEI, very much, depends upon, preference, activity, age and sex of an individual. After taking these differences into account and the costs of attaining predetermined FEI, the poverty line can be constructed. This could be obtained by finding the consumption expenditure or income level at which the person attains the food energy level (Ravallion and Bidani, 1994). Most analysts argue that consumption will be a better indicator of well-being for the following reasons. First, consumption is a better indicator of well-being due to the question of access, and availability of goods and services apart from the issue of income needed to get those goods and services.

Second, consumption may be measured better than income. This is especially true in cases of poor agrarian economies, as there occurs frequent income fluctuation according to harvest cycle and the erratic flows of income as a result of large informal sectors in urban economies of the developing countries. Consumption or expenditure may also better reflect household's actual standard of living and ability to meet basic needs. Thus, consumption expenditures indicate not-only command of goods and services but also access to credit markets and savings in times of lower or even negative income level (Coulouel, et al, 2004). This does not, however, mean that this approach is free from flaws.

However, the relative merits of using one methods of the poverty-lines over the others and the vice versa is still debatable. Each has its own strengths and weaknesses. Some argue that the poverty of the third world cannot be studied through poverty lines like in subjective criteria.

Those who support this argument cite the very low level of income and the subsistence nature of economies in these countries as a major reason for the likely inaccurate results of such a measurement. On the other hand, others argue that poverty cannot be meaningfully quantified in excessively narrow and lean objective criteria (Mekonnen, 2002). The fact that the concept, definition and setting of poverty lines are controversial invites one to look deep into how one can measure poverty. After setting the poverty line the next step is the measurement of poverty

## **2.4. Measures of Poverty**

There is no single measure of poverty and all choices have their own pros and cons. The debate of measuring poverty still waxes and wanes. The presence of a lot of instruments, though, each with some drawbacks, nevertheless, helps us to see the type and extent of poverty in a given society.

Generally, the measurement of poverty is said to consist of three phases; in the first phase, choice of appropriate well-being indicator is made, in the second phase, the poor are identified from the population and the third phase is concerned with the derivation of poverty indices using the available information. The concepts of poverty thresholds and lines have a long history extending back into & beyond the poor Laws in England. Despite their long history of operationalization, the methodology is still deeply flawed for analysis and the design of anti-poverty policy interventions (Saith, 2005). Three indices can be utilized in the measurement of poverty.

## **2.5. Poverty Indices**

There are, of course, various types of poverty indices but the most commonly known ones are head count index (P<sub>0</sub>), poverty gap/depth index (P<sub>1</sub>) and the severity index (P<sub>2</sub>).

### **2.5.1 Head Count Index (P<sub>0</sub>)**

This index tells us the proportion of population, whose consumption expenditure falls below the predetermined poverty line. Put simply,

$$P_0 = q/N$$

Where q is the number of people earning income below the poverty line and N the total number of people in the population. While P0 has an advantage of simple calculation it suffers from two problems: a reduction in the incomes of the poor doesn't reveal how worse the poor will be poorer and it doesn't in any case depict distribution of income among the poor.

### 2.5.2 Poverty Gap/Depth Index (P1)

This measures how far an individual's income falls short from the poverty line. Since this index is based on the aggregate poverty deficit of the poor relative to the poverty line, it is by far better than P0. Mathematically, P1 can be depicted as follows,

$$P_1 = \frac{1}{N} \sum_{i=1}^q \frac{Z - Y_i}{Z}$$

Where;

$Y_i$  = Consumption expenditure or income of the poor

Z = Poverty line

Although this model measures the depth of poverty better than P0, it is insensitive to the number of individuals below the poverty line and to the transfer of income among the poor.

### 2.5.3 Severity Index (P2)

The severity index also called, the Foster-Greer-Thor-becke Index, measures severity of poverty by squaring and averaging the gap between the income of the poor and poverty line. It is given by the formulae,

$$P_2 = \frac{1}{N} \sum_{i=1}^q \frac{(Z - Y_i)^2}{Z^2}, \quad i = 1, 2, 3$$

Where;

$X_i$  is income or consumption expenditure of household,  $Z$  is the poverty line,  $n$  size of the population, and  $q$  is the number of the poor.  $P_0$ ,  $P_1$ , and  $P_2$  tell respectively the incidence, depth and severity of poverty among individuals.  $P_2$  changes in accordance with and  $P_2$  measures the mean of squared proportional poverty gaps. It gives more weight to the poverty of the poorest by squaring and averaging the gap.

## 2.6 Poverty in the Urban Setup

Researches in the past indicated variations in the forms and dimensions of poverty in categories such as rural-urban settings, while rural poverty is often marked by its connection with agriculture and land, urban poverty is said to be associated with heterogeneous economic and social factors. Nevertheless, the genesis of poverty is often found to be rural poverty (Yassin, 1997).

All too often, the poverty of the rural populace does have an impact on urban poverty. In most cases, rural poverty is one of the many other factors that stimulate massive exodus among the productive segments of the rural population to cities. In such cases, the poor economic performance of the rural areas is said to be a major contributing factor to the persistence of urban poverty (Tizeta, 2001).

The heterogeneity of poverty in urban settings could be attributed to the high monetization of economies in such localities. Unlike in rural areas, urban poverty is defined at an individual level rather than communal level. Thus, poverty in such context is usually described in terms of occupation, income, and consumption level and employment status. The above-mentioned aspects, therefore, can serve as bases of urban poverty analysis (Department for International Development, 1997).

As cited in Shewaye (2002), the World Bank sees urban poverty as a multi-dimensional phenomena characterized by cumulative deprivation where one form of deprivation leads to another. The various dimensions of urban poverty include: income, health, education, tenure in

security, personal insecurity and disempowerment among others. The multi-faceted nature of urban poverty is also noted in Tizita (2001). Accordingly, the various features of poverty that characterize most of the urban poor are: unemployment, lack of wage employment, failure to send children to school, lack of access to health facilities, sanitation, potable water, electric services and good housing. Above all, lack of employment is one of the greatest economic challenges that incapacitate poor people to meet their basic needs. A study by Christensen (2004) examined the evolution of urban poverty. On the causes of urban poverty, Christensen's findings point to such factors as high urban population growth, rural urban migration and also migration from small to big towns. Rural-urban migration is a coping mechanism devised by the rural poor, but migration adds to the existing burden of urban poverty.

Unlike findings elsewhere in sub-Saharan Africa, the results of this study indicate that the rate of urb has shown some growth in Ethiopia, this study did not show that the increased potential for employment has translated into a decline in urban poverty. By contrast, other research (Dessalegn and Aklilu, 2003) has shown a small increase in employment in the service sector between 1994 and 1999 (from 37.6 percent to 43.7 percent). Much of the increase came from the trade, hotel and restaurant Sub-sector (Kedir, 2005).

All in all, the crucial determinants of poverty among the majority of mega-cities, and big urban areas and nowadays even to medium towns of the third world can be summarized as: low levels of physical and human capital, unequal distribution of productive assets, inadequate access to social services, high fertility especially amongst the urban poor, and urban development strategies which are biased against labor absorption (Oberia, 1993).

## **2.7. Review of Related Literature: Empirical Evidence**

It is true that urban areas are hopes of life for they are centers of wealth, income, commerce, trade and above all sources of luxury. On the contrary, urban areas are also challenges to many. One of the many challenges it brought is urban poverty. In the Ethiopian case, though the challenge is daunting, it is unfortunate that the subject of urban poverty has not been given the due attention it deserves. While a number of studies have been conducted in rural areas there is hardly any co and various causes of poverty such as drought, production failure or rain are directly associated

with the life of the rural poor. The present government, itself, has intentionally launched policies/ programs biased towards the rural areas and have paid little attention to urban areas. This part discusses some practical studies of poverty in different times across different periods. Urbanization and Poverty: Nowadays, the rapidly growing urban population of developing nations poses unprecedented challenges for the national and municipal policymakers. Urban areas in Ethiopia are in a state of expansion without the necessary preconditions and this is paving the way for visible urban poverty. There is, indeed, ample evidence that urban areas are unable to cope with the increasing population, and delivery of services has deteriorated markedly over the years. Access to housing, health, and education services continues to be seriously limited. Basic sanitary conditions are atrocious by any standard. Transportation facility, energy availability and access to job, labor market, skill reproduction, work, entitlements and finance are also at their lowest level (Dessalegn and Aklilu, 2002).

The exodus rural-urban migration either by pull or push, economic or social factors play pivotal roles in the escalation of urban poverty in Ethiopia. This migration coupled with the natural increase in population within the urban area has started to impose a pervasive challenge to the commendable development of the urban centers. The urban population in Ethiopia is growing at a rate of around 6 percent per year (EEA/EEPRI, 2004/05). In 1994, for instance, the proportion of the urban population was 13.7 percent, which increased to 15.5 percent in 2003 and more than 16percent presently. This figure could go up to 17.5 and 29.7 percent in 2015 and 2030 respectively (CSA, 2003).

**Table 2** Urbanization Trends in Ethiopia

<b>Year</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2003</b>	<b>2005</b>
<b>Population in millions</b>	10.5	11.6	12.7	13.9	14.9	15.6	16.2

Source: EEA/EEPRI 2004/05



Increasing Urbanization poses a major issue of concern not only in the primate city- Addis Ababa but is leading to daunting challenges among the secondary cities such as Bahir Dar, Dire Dawa, Awassa, Mekelle, Jimma and presently even to the medium and small towns of the country. Given the high rural - urban migration and fertility rate and natural increase within the urban area, the structure of the population is largely dominated by higher proportions of the lower age group. Out of the total population, 44 percent were under 15 and 3 percent more than 64 years (CSA, 2003).

This implies that the burden of the dependency ratio for the 53 percent active labor force (aged 15-64) would be 88 percent. The young population, therefore, dominates the main feature of the Ethiopian urban population with the children (0-14 years) and youth (15-24 years) together accounting for almost 65 percent of the total by 2000 (CSA, 2003).

The visible poverty signs are everywhere- malnourished citizens with dirty and torn clothes, beggars, shanty homes, scattered garbage; small items exchange sites, idle persons and the like.

Those poverty symptoms are likely to aggravate with increased urbanization that the country is undergoing (EEA/EEPRI, 2004/05).

**Economic Dynamism and Poverty:** Most literature attests that major urban areas in developed countries have their origin in coal mining, mineral exploration, manufacturing activities and recreation and /or tourism sites. They serve as center of dynamic economic activity and are believed to play great roles in the socio-economic development process of the nation. On the contrary they are also sources of modern socioeconomic problems, which include unemployment, homelessness, crime, destitution and exclusion.

In Ethiopia, history tells that the origins of urban areas in most of the time are administrative, military and/ or political purposes. Presently, secondary cities or medium towns of the country are developed mainly as a result of being chosen as regional or zonal administration seat without taking care of their socio-economic dynamism. Whenever there is a change in

administrative setup, these urban centers either die quickly or replaced by new ones. The problem for the sporadic or continuous aggravation of urban poverty in Ethiopia, could therefore, be explained partly by lack of socio- economic dynamism. This is not, however, to disregard city functions .Each city or town in Ethiopia though with different degrees of functions have their own contributions and challenges to the residents.

Because of the lack of adequate economic dynamism within the urban areas, industrious entrepreneurship is not sufficiently developed in Ethiopia. In a typical urban center, those in the relatively high- income group are few in number and comprise successful businesspersons and /or those with substantial physical asset such as land and house (EEA/EEPRI, 2004/05).

Nowadays, in Ethiopia, urban poverty is manifested in a number of ways ranging from stark destitution observable at every corner of urban centers to somewhat hidden deprivations that are not easily discernable to causal and frontline observers.

**Chronic Poverty:** Abbi and Andrew (2003) analyzed the status of chronic poverty in urban Ethiopia. They conducted their study in three waves of panel data set on 1500 households collected through the Ethiopian Urban Household Surveys from 1994 to 1997. By making use of both descriptive and econometric evidence, their study showed the extent of chronic and transitory poverty in urban Ethiopia identified the characteristics of the poor and determinants that explain chronic and transitory poverty. They examined the robustness of the pattern and trends of poverty suggested by the quantitative evidence by linking the subjective evaluation of welfare changes by households between two time periods. They conducted the study in the primate city Addis Ababa and other secondary cities- Bahir Dar, Nazereth, Dire Dawa, Mekelle, Awassa, Jimma, and Dessie.

They analyzed poverty trends between 1994 and 1997 in the average welfare of 1045 (whereby 555 are the rejected cases) household in the panel as measured by real total expenditure per adult equivalent. They used total household consumption expenditure as a best proxy for analysis

because they found out that, in their survey, income has been reported by a much smaller number of households.

Using this, they found out that during 1994-1997, median consumption expenditure per adult declined for the total sample from 100.46 Ethiopian Birr (ETB) to 73.4 Birr. This decline, according to their study, is evident in all regions, is monotonic over the period, and is particularly apparent between 1994 and 1995. Overall, their result suggested that household welfare deteriorated in urban Ethiopia between the years considered.

In the second and third waves of their study (1995 & 1997) Abbi and Andrew asked household's questions related to changes in household income, expenditure, and living standards since 1994 interview. The three questions asked to households were

- a) How have the household's income changed since 1994 interview?
- b) How has household's expenditure on basic needs changed since 1994 interview? And
- c) To what extent did the living standard of the households change since 1994 interview? The responses to these questions, though individual perceptions, match to that of the quantitative evidence on poverty transitions between any two periods.

In general, their study confirm that 40 percent of the case indicated that there is a significant match between the change depicted by the quantitative evidence which shows that the percentage of their income change is close to the percentage on standard of living changes. The study further revealed that the correspondence between the subjective evaluations responses based on income and standard of living opposed to expenditure. Over all, the finding showed an increase in the incidence of urban poverty.

Bigsten et al (2003) reported poverty trends using consumption poverty lines on urban Ethiopia between 1994 and 1997 and found that the consumption level of decreases in the years considered. For all in the considered urban areas the study showed an increase in poverty from 1995 to 1997. Likewise, in the case of Tadesse (1998), the trends vary by city. Between 1994 and 1995, poverty declined in Addis Ababa, Awassa, Bahir Dar, and Jimma while it increased in Dessie, Dire Dawa, and Mekelle.

Consumption and Poverty: A study by the government of Ethiopia suggested that in the period 1995/96 to 1999/2000, poverty, based on consumption measure, increased in urban areas by above 11 percent. This study is consistent with the findings of another study (Abbi and Andrew, 2003), which has household survey information covering the period from 1994 to 1997 as stated above. Trends, which show poverty head count indices and food poverty count indices are shown below.

**Table 3a Trends in Poverty Head Count Indices (P0)**

Location	Years		Percentage change
	1995/96	1999/00	
Urban	33.3	37.1	11.1
Rural	47	45	-4.2
Total	45.5	42	-6.7

**Table 4 Trends in Food Poverty Head Count Indices (P0)**

Location	Years		Percentage change
	1995/96	1999/00	
Urban	32	47	43.7
Rural	47	41	-12.6
Total	45	42	-6.7

**Source:** MOFED (2002) Poverty Profile of Ethiopia in EEA/EEPRI 2004/05

Tesfaye (2004) also found that there was a 6 percent decline in mean consumption per adult equivalent between 1994 and 2000 for urban Ethiopia.

**Table 5 Mean Consumption per Adult Equivalent (in Birr)**

year	1994	2000	Change (%)
Urban Ethiopia	150.78	141.99	-0.058
Addis Ababa	162.30	187.77	0.157
Bahir dar	169.10	134.22	-0.206
Awasa	162.30	187.77	0.157
Bahir Dar	169.10	134.22	-0.206
Dessie	151.04	113.63	-0.248
Dirre dawa	191.00	141.69	-0.258
Jimma	131.09	106.27	-0.189
Mekele	109.31	154.19	0.411

**Source:** Tesfaye (2004)

Tesfaye's (2004) analysis, using panel data collected by the Economics Department of Addis Ababa University has generated different results from the analysis made by MoFED based on the 1999/2000 household income, consumption & expenditures data. While both analyses confirm that poverty has generally increased in urban areas the level of changes in poverty incidence across different towns made by the two studies is not consistent. The type of methodology adopted and the data analyzed could partly explain this divergence.

Using micro level panel data from villages in rural Ethiopia, Dercon (2001) analyzed the determinants of growth changes in poverty during the initial phases of economic reform (1989-1995) making use of a standard decomposition of income and poverty changes. The study revealed the rise and fall of consumption and poverty level respectively during the period under consideration. A study by Ministry of Finance and Economic Development (MoFED, 2002) based on 1999/2000 Household Income and Consumption Expenditure (HICE) and welfare monitoring survey indicated that incidence of poverty is higher in rural than urban areas with poverty head count ratio of 45.4 and 36.9 percent respectively. The point here is although rural poverty is higher than urban, urban poverty by itself is significant.

A good understanding of the correlates of urban poverty is useful since it helps us to design appropriate policies for urban poverty reduction. There are, of course, different correlates of urban poverty that fall within the domains of economic, social, political and nature spheres.

Access to Food and Poverty: Access to adequate food and nutrition is one of the basic correlates of urban poverty in any country. In Ethiopia, many households in urban areas suffer from perpetual food insecurity as shown by high prevalence of malnutrition, which is especially devastating for children and pregnant. The poverty profile of Ethiopia prepared by the government indicates how food poverty situation in urban areas is deteriorating. Table five clarifies the situation more.

**Table 6-Trends in Real Consumption Expenditure and Calorie Intake**

Year	1995/96			1999/00			Percentage change over 1995/96		
	Rural	urban	National	Rural	urban	National	Rural	urban	National
Real food Expenditure	577	790	607	609	631	612	5.55	-20	0.82
Real food expenditure per-adult	697	947	732	774	767	773	11.05	-19	5.60
Kcal per Day-per Adult	1938	2050	1954	2723	1861	2606	40.51	-9.22	33.37
Share of food in total expenditure	0.6	0.56	0.60	0.67	0.53	0.65	11.67	-5.36	8.33

**Source: MoFED (2008)**

Share of food in total expenditure Access to food has as shown above deteriorated in urban areas as measured by real food expenditure per capital and/or adult, which also resulted into decline in

calorie consumption per-day per adult. A closer examination of the above table reveals that the percentage change of food consumption in the urban areas is negative in all the cases whereas that of the rural areas is positive. This tells that the consumption expenditure of the urban dwellers are in bad scenario.

**Education and Poverty:** Most empirical studies undertaken on poverty concluded that education has a negative impact though the magnitude is different depending on the socioeconomic condition in which the study is undertaken. A remarkable correlation between poverty and level of education is for example, observed in urban Ethiopia (Mekonnen, Bereket & Abebe, 2002).

The study found out that the percentage of poor people significantly declines as the level of education of the household head increase. Their study illustrated the incidence of poverty among people who have never attended school which is 42 percent compared to people with college level and above education who have had one member to the poor population.

Existing educational services within urban areas are less equipped to meet the pressing demands for increased coverage and better quality. The impact of education on the development of an individual and of a country and the role it has with urban poverty is ascribed to the speed with which the student is able to absorb new ideas and to adopt himself to changing and often unforeseen conditions (TGE, 1994) cited in Kebede (2004). The Development Assistance Group (DAG) noted that whereas significant improvement has been achieved in terms of participation rates in some developing countries, the potential for human resource development in Ethiopia still remains questionable owing to the minimal progress associated with educational quality and retention. Although the coverage of education seems promising in urban Ethiopia today, the quality is still far from reality to make learners competitive for employment.

A study made by Clox (2003) finds out that in Ghana education of the head and spouses all had strong positive influences on the likelihood that a household was never poor. The spouses having been educated to primary level or the head to secondary level both had strong negative influences on the likelihood that the household was chronically poor. Djavad (2002) in Yared (2005) found

the effect of education for long-term poverty but for short-term poverty its effect was only significant with high school and above.

**Age and Poverty:** Mekonnen (2002) studied the determinates and dynamics of urban poverty in Ethiopia by using data on a panel of households drawn from the Ethiopian urban socio-economic survey conducted by the Economics Department of Addis Ababa University. The study used multivariate regression model to capture factors that determine changes in the standard of living and mobility of households in and out of poverty from the panel data. He employed total household expenditure per adult equivalent as the dependent variable in the model with the exogenously predetermined household characteristics as the explanatory variables. Grootaert (1997) in Garza (2001) studied determinants of poverty in Coted'Ivoire by using probit model.

He used the data from Cote-d'Ivoire living standards survey, which was conducted annually from 1985 to 1988 for analysis. He estimated the probity model for both urban and rural areas separately. Both researchers (Mekonnen and Grootaert) found out that the probability to be poor decreases as the age of the household head increases.

**Unemployment and Poverty:** The 1994 population census, though late the time, estimated the rate of the overall unemployment in urban Ethiopia to be 22 percent in the age brackets 15-39 for which concentration of labor force is believed to be the highest. This accounts for the highest share testifying to the serious problems of consequences among which juvenile delinquency, increasing crime and violence, and higher number of street children and homeless people have become common features in many intermediate and bigger urban areas of Ethiopia. A study made by Dessalegn and Aklilu (2002) in urban Ethiopia witnessed the problem of unemployment to increase in the near foreseeable future. It is sad to mention that their study revealed the depressing vision in that the prospects for economic growth and improvements in the labor market are very poor. Further, the issue of job insecurity is high in urban Ethiopia. The same study obtained that most workers were dissatisfied with their jobs, income, their benefits and their employers. The little presence or absence of wage laws, unions and fair employment laws, based on their study, confirms the aggravation of unemployment in urban Ethiopia as well.



Unemployment is a major reason for low-income situation of the majority of the population of Ethiopia. The March (CSA, 1999) national labor survey unemployment levels show 8.02 percent at the national level while it is 26.4 percent in urban and 5.14 percent in rural areas. Various factors can explain why unemployment level is generally high in urban areas. The primary reason is the fact that urban centers in Ethiopia have little economic dynamism and their economic base is largely services and trade. In the absence of industries EEA/EEPRI (2004/05) argued that the capacity of these areas are limited. The unemployment rate in urban Ethiopia includes a large section of well-educated persons. This is, perhaps, most young adults who complete 10 or 12 years of schooling but fail to pursue their studies further become automatically unemployed. In any given year, there is around 190,000 of them a figure rising over time (Abbi and Andrew, 2003).

With regard to the correlates of employment to urban poverty (Abbi and Andrew, 2003, Eyob and Mark, 2004, Mekonnen 2002) found that there is a negative and significant relationship between employment level of the household head and incidence of poverty.

**Household Size and Poverty:** Empirical literatures suggest that there is a negative correlation between household's size and poverty. For instance, Djavad Salehi-Isfahanicite in Yared 2005 for Iran concludes that households with larger number of members tend to be poor. Likewise, Grootart for Cote d'Ivor, IFPRI for Malawi, Herrer for Peru, Garza for Mexico, Eyob and Harris for Eritrea, Nigatu, Mekonnen and Ethiopian Economic Association for Ethiopia also reached at similar conclusions.

Lawson et al (2003) analyzed poverty transitions and persistence in Uganda. The study used the Uganda National Household Survey conducted in 1999/2000. In the study, household movements relative to the poverty line were considered by means of a multivariate nominal Logit model. The study obtained that increase in household size had significant positive influence on the likelihood that household was chronically poor or fell into poverty.

**Sex and Poverty:** Garza examined the determinants of poverty in Mexico. The data used in the study came from the 1996 national survey of income and expenditure of households. A Logistic regression was estimated based on the data with the probability of a household being extremely poor as the dependent variable and a set of economic and demographic variables as the explanatory variables. Looking at the results of the Logistic regression the study obtained that there is no evidence that female-headed households are more likely to be poor than male-headed households. Using a Logistic regression and the 1992 National Survey of Income and Expenditure, Cortes (1997) finds that the probability of being poor decreases by six percent if the household is headed by a woman. These studies are not in conformity with the Ethiopian case. A case in point will suffice to take the works of (Shewaye, 2002, Mekonnen, 2002) in which female-headed households are those who are the most affected and vulnerable groups in experiencing hard core urban poverty.

**Income and Poverty:** Urban poverty could also be determined by the income of individual. In Ethiopia, historical evidence tells that in most cases the family depends on a single breadwinner. This single breadwinner, usually, doesn't have the capacity to fulfill the need and interest of the whole family, particularly those families composed of children, youngsters, the old ones, and the extended families. This would have an impact for the family to face vulnerable life. Lack of access to skill development and upgrading of workers have had a yawning effect on income of an individual. Since urban life is a function of monetized economy, absence/presence of income plays a direct and great effect on urban poverty (Mekonnen, 2002).

**Health and Poverty:** Health, without doubt, is a fundamental element in assessing the extent to which urban poverty prevails, simply because in the absence of proper health, the working force whether professional, skilled or trained cannot have the capability and opportunity to do jobs effectively and efficiently. Efficiency of workers considerably depends on their health. Workers whose health is not good and who fall sick quite often cannot do their job efficiently and thus their efficiency is bound to remain low (Somashakar, 2003). World Development Report 1993 cited in Soma shaker (2003) explained that health plays immense contributions. According to him improved health contributes to economic growth in four ways: it reduces production losses

caused by worker illness, it permits the use of natural resources that had been totally or nearly inaccessible because of disease, it increases the enrollment of children in schools and makes them better able to learn, and it frees for alternative uses resources that would otherwise have to be spent on treating illness. The economic gains are relatively greater for poor people, who are typical most handicapped by ill death and who stand to gain the most from the development of underutilized natural resources. The above paragraph recalls the interpretation of two things: balanced nutrition and medical care. Improvements in the health of masses increase their productive capacity and leads to qualitative improvement in human capital. This, indeed, will have a visible effect on reducing poverty.

Therefore, expenditures on health are important in building and maintaining a productive labor force as well as improving the lives of the people, the quality of society and welfare of the economy. In principle, expenditure on health takes the form of investment in medical knowledge in disease prevention, treatment and rehabilitation. But, the Ethiopian health policy cited in (Michael, 2004) irrespective of urban or rural areas focuses on elements such as preventive healthcare system, mass education on prevailing health problems, prevention of locally endemic diseases, and provision of essential diseases. It presupposes substantial resource inflows to the sector as well as trained manpower.

Michael adopted average odds of participation to analyze how households in different socioeconomic levels shared the benefits from public sectors expenditures on health. The study assumed that access to health service would increase a household welfare thereby reducing poverty. His findings indicated that households in the bottom quintile have managed to utilize health services relatively more than those in the upper expenditure intervals, which is, contrary to the commonly held assumptions.

Excepting the metropolitan-Addis Ababa, urban areas in Ethiopia are highly constrained by health services. Some of which include: lack of better organized health facilities, laboratories, medical schools, general hospitals, nursing schools, highly trained specialists and nursing aids, improved finance of medical services, private hospitals and clinics, free medical aid to the poor and so forth. In the little presence/ absence of these variables and coupled with poor sanitation

in urban areas it is highly unlikely that productive forces residing in these areas lead healthy life and challenge the burden of urban poverty to a commendable manner.

**Water and Poverty:** Urban areas of Ethiopia are still constrained by sufficient quantity and quality of water, and adequate energy services. It becomes common that water related diseases like Giardia and Amoeba are affecting most people due in part to lack of pure water. The numbers of households who have tap water inside their home or compound are believed to be too small (AAWSA, 2000). In most cases, households either share pipes far from their homes or buy drinking water from their neighbors at a much higher cost than the recommended rate. Worse still, in times of winter, specifically, in the months of April and May it is common to happen that households 'enjoy' lives without water for two to three days a week simply because of the absence of adequate supply of water (Sebeta Hawas Water Service, 2002). Thus, although water is the second mandatory component for life next to air, households of urban Ethiopia face acute problems.

**Energy and Poverty:** With regard to energy provision, not the majority of urban dwellers obtain the required amount. Specially, the escalation of the present tariff made households a shift from using energy for cooking to buying of charcoal (Shewaye, 2002). This has, at least, brought two visible consequences. One is the price of wood gets high in which the poor could not afford to buy. Two, it leads to the indiscriminate cutting-off trees to sale for the purpose of fuel wood. This has again a bad consequence to the sustenance of nature and will have a direct/indirect effect to the well-being of the country as a whole.

The issue of housing tenure has become a crosscutting agenda of urban dwellers and is assumed to get as one of the indicators of urban poverty. The numbers of house owners are believed to be small. This is particularly true in the mega city of Addis Ababa and other secondary cities of the country. It is also getting attention in other medium towns of Ethiopia (Shewaye, 2002).

In general, urban poverty is increasing fast either in Ethiopia or other developing countries? This is simply because of the inability to identify the factors that account for the aggravation, design appropriate policy and fight against it squarely or is due in part to implementation failure.

Like most developing countries of the world, urban centers in Ethiopia, are generally, characterized, therefore, by a host of problems including high unemployment, inadequate housing stock, poor health services, insufficient education, inadequate water /sanitation facilities, poor solid waste collection & disposal, poor transportation, violence, crime, congestion, personal insecurity and overall insecure urban livelihood.

## Chapter Three

### Results and Discussion

#### 3.1. Identifying the Poor

The food energy intake (FEI) approach is used in the identification of the poor from the non-poor. This is done based on a predetermined value expressed in terms of calorie intake equivalents.

In the identification of the poor from the non-poor the research used the food energy intake approach (FEI) and is preferred to the CBN based on the following premises. First, during the survey period (March 2006) the prices of all commodities in the country and the study area as well have increased drastically. This is not consistent with the prices of the previous years and hence could not clearly show the reality in the consumption expenditure behavior of the residents.

For example, in the study area the price of a quintal of *teff* with first brand has been not more than 1400-1650 Birr for the last decade or so has become 1500-1700 Birr during which the survey was made. If only the surveyed time prices of all the commodities and other materials were taken and the poor were to be analyzed based on this, surely, the figure would be inflated and the result might be far-fetched from the prevailing reality. Second, a large number of residents, particularly, those who live in the peripheries of the town have their own lands (who are urban farmers) do not buy cereals and have little expenditure for cereals for they consume from what they grow. This could mask the result if the study used the CBN method which values all costs in monetary terms.

Third, the FEI is preferred to the CBN for the latter needs enumeration and quantification of basics and non-basics of different items in monetary terms. The problem arises particularly in estimating the costs of non-basics. No doubt, Sebeta Hawas is not an exception to this pitfall. It is not, however, to mean that all residents in the study area were not able to quantify their assets or commodities in monetary terms nor does they are always smart enough in telling commodities such as cereals in Kilograms.

Economists and development practitioners agree on the perplexities of getting error free method of setting poverty lines. For instance, the minimum calorie intake requirements for households (specifically for individuals) in a specified period, though popular, are still flawed with debates. This is because households are composed of family members with different age and sex leading to differences in needs, consumption habits, and preferences. It is also true that the same level of income cannot serve equally the needs of households that are different in composition.

To minimize such problems scholars including development specialists have been busy probing for a number of alternatives among which the adult equivalent scale, which establishes one equivalence in the consumption of an adult, a child, and extra, is found to be the popular one.

This requires estimation of household consumption expenditure in monetary value. I argue; however, that in Sebeta Hawas where households consume both marketable and non-market-able goods, it is difficult to use equivalent scales generated from preferences revealed only from marketable goods. Therefore, instead of estimating the costs of consumption expenditure, the study used the quantities of bundles of items households consumed. To identify the poor households in Sebeta hawas the following six steps are used.

**Step one:** This step is left for enumeration of food items consumed in the study area. The lists of food items included in the analysis are: *Teff*, Wheat, Maize, Barely, beans, peas, *Guaya*, Lentil, vegetable (Cabbage, Carrot), Dry Pepper, Edible Oil, Cow Milk, Onion, Butter (Cow and Vegetable), Meat, and Sugar.

**Step two:** Each bundle of food item is weighted with the appropriate unit of measure (in kilograms or liters).

**Step three:** To get the total amount of food bundle a household consumed in a month each of the weighted bundles of food items are summed up. *Teff*, +Wheat+ Maize+ Barely+ Potato+ Onion+ Beans+ Peas+ *Guaya* + Vegetable (Cabbage, Carrot) + Dry Pepper+ Edible Oil+ Milk+ Butter

(Cow and Vegetable) + Meat+ Sugar. Mathematically it can be represented as,  $K_1+K_2+...+K_n$  (up to the last food item) where K refers to the value in kilogram or Litter of each food basket.

**Step Four:** The aggregate value of baskets of food items consumed by a household in a month is divided to the corresponding sample size of the household to get the amount of kilograms each adult individual gets in a month.  $L = \frac{\sum X_i}{Y}$  = Amount in Kilograms or Litters of food items an individual consumed in a month Where  $X_i$  is total baskets of different food items in kilograms or litters a household consumed in a month and Y is the family size of the surveyed household.

**Step Five:** The amount of Kilograms each household consumes in a month is again divided for 30 days to get the amount of kilograms each adult individual consumed in a day. This is equivalent to  $L/30$ .

**Step Five:** The amount of kilograms an individual consumed in a day is again converted into calorie intake and is calibrated to the predetermined 2200 calorie per day per adult equivalent. The conversion factor for the mentioned food items is indicated in the table below.

**Table 7 Calorie contents of different food items**

Consumption Per 100 grams	Energy in Calorie	Consumption Per 100 grams	Energy in Calorie
Teff	355	Lentil	325
Wheat	340	Vegetable (cabbage, carrot)	75
Maize	344	Dry Pepper	73
Barley	370	Edible oil	900
Potato	75	Cow milk	79
Onion	38	Butter	700
Beans, Peas	310	Meat	626
		Sugar	375

**Source:** Food Consumption ECSA and Ethiopian Health and Nutrition Research Institute



**Step Six:** This is the last step the research used to get the number of poor and non-poor households in the study area. If X is total calorie intakes of a household in a day and Y is the family size of the surveyed household in the town, then calibrating the poverty line using the FEI international agreed figure -2200 calorie per day for an adult person as recommended by nutritionists, yields: -

1.  $\frac{\sum_{i=1}^{130} X_i}{\sum_{i=1}^{130} Y_i} > 2200 \text{ Calorie} = 43 \text{ Households (above the poverty line)}$
2.  $\frac{\sum_{i=1}^{130} X_i}{\sum_{i=1}^{130} Y_i} < 2200 \text{ Calorie} = 87 \text{ Households (Below the poverty line)}$

In the research there exist three indices of poverty as follows.

$$1. \text{Head count: } H_p = \frac{87}{130} = 0.66$$

$$2. \text{Poverty Gap } G_p = \frac{1}{130} (\sum_{i=1}^{87} (2200 - X_i)) = \frac{1}{130} (54.225) = 0.417$$

$$3. \text{Poverty Gap } G_p = \frac{1}{130} (\sum_{i=1}^{87} (2200 - X_i)) = \frac{1}{130} (24.94) = 0.191$$

The number of non-poor (in the above poverty line) and poor (below the poverty line) households, according to the above poverty line is, therefore, 43 and 87 respectively. The following figure shows distribution of households along the poverty line. Zero value of the figure represents the poverty line-2200 calorie per day per adult equivalent. Households above and below zero value respectively tell the number of households who did and did not secure a predetermined minimum energy requirement of 2200 calories per day per equivalent

### 3.2. Descriptive Analysis

In this section we discuss descriptive analysis of the data. Based on the above highlights this part analysis the data obtained from the surveyed kebeles by making use of descriptive statistics, such as percentages, ratios, mean, standard deviation, Chi-square tests, significance levels, t and F-tests.

A total of 130 household heads were surveyed in eight kebeles of the town Alemgena (01, 06, 08) Welete (03), Furi (04) and Sebeta (01, 05, 07)) of the town and the results of the study revealed the following.

**Table 8 Surveyed Kebeles**

		Kebele							Total	
		Alemgena 01	Alemgena 06	Alemgena 08	Furi 04	Sebeta 02	Sebeta 05	Sebeta 07		Welete 03
Urban Poverty Level	Count	11	12	11	9	11	8	9	16	87
	% within Urban Poverty	12.6%	13.8%	12.6%	10.3%	12.6%	9.2%	10.3%	18.4%	100.0%
Urban Poverty Level	Count	4	8	6	5	4	6	4	6	43
	% within Urban Poverty	9.3%	18.6%	14.0%	11.6%	9.3%	14.0%	9.3%	14.0%	100.0%
Total	Count	15	20	17	14	15	14	13	22	130
	% within Urban Poverty	11.5%	15.4%	13.1%	10.8%	11.5%	10.8%	10.0%	16.9%	100.0%

*Source: Own Survey and Computation*

Proportional to population size Alemgena (15, 20, and 14) Welete (22), Furi (14) & Sebeta (15, 13, and 14) households were drawn in order from kebele Alemgena (01, 06, and 08) Welete (03), Furi (04) and Sebeta (01, 05, and 07) of the town, which in total add up 130. Based the employed poverty line, the study found out that only 88 households of the total population are above the poverty line and the rest 87 (around 67%) are below the poverty line. Looking the incidence of poverty status in each respective kebele, there are Alemgena (11(12.6), 12(13.8)), and 11(12.6)) Welete (9(10.3)), Furi (11(12.6)) & Sebeta ((8(9.2), 9(10.3), 16(18.4)) of households in kebeles respectively who live below the poverty line. It is surprising to find equal footings of poverty in three kebeles: Alemgena (01, 06) and Furi (08), each with absolute value of 11(12.6), for which they are above the poverty lines.

However, a clear examination of the poverty status (in terms of below the poverty line) the figures in each of the respective kebeles are quite different. Even kebeles that have identical incidences of

poverty in the above poverty line category (Alemgena (01, 06) and Furi (08), have been observed giving different results, which is Alemgena 12(13.8%), Welete 9(10.3%) and Sebeta 8 (9.2%), 9(10.3%) and 16(18.4%). In aggregate terms a closer glance at the prevalence of poverty at each kebele attested that the number of households who live below the poverty line is nearly twice to that of those who live above. Cross tabulating the data and looking at Pearson Chi-square revealed that prevalence of poverty is statistically significant at 95% confidence interval in the surveyed kebeles. In general, from the surveyed households one can clearly see that the highest and lowest level of poverty is experienced in Sebeta 03 and 05 kebeles of the town, respectively. A number of things could be suggested for the prevalence of differences in the status of poverty among the chosen kebeles and below is description of some variables that might reinforce the discussion.

### **3.2.1. Household Characteristics and Poverty**

#### *Age and Poverty*

Some scholars argue that poverty increases at old age. This is because productivity of the individual decreases and the individual has few savings to compensate for the decrease of productivity and income. This is, of course, more likely to be the case in developing countries where savings are low because of low income and at the old age being mostly dependent.

Others contend that age is correlated with higher productivity and hence impacts welfare positively. A third view that could be worthy of note to see is that neither of the two approaches be correct. This is because the relationship between age and poverty might not be linear, as we would expect that incomes would be low at relatively young age, increases at middle age and then decreases again. Therefore, according to life theories we would expect to find that poverty is relatively high at young ages, decreases during middle age and then increases again at old age (Szekely, 1998) in Mekonnen(2002).

In Sebeta Hawas, age of household was not found to be significant in linear terms. There have been similar findings by other authors though using different techniques (Arndeberg and

Pederson, 2001 for Eritrea, Charlette Guenard, and Mesple for Cote Divior and Goiled and Ghazouni, 2001 for Tunisia).The research classified the age of the household into 18-30,31-40,41-60 ,above 60 and the results of the survey is indicated below.

**Table 9 Ages and Poverty**

			Household Age		Total
			31-59	18-30 and>60	
Urban Poverty	Below Poverty	Count	5	82	87
	Level	% within Urban Poverty	5.7%	94.3%	100.0%
	Above Poverty	Count	42	1	43
	Level	% within Urban Poverty	97.7%	2.3%	100.0%
Total		Count	47	83	130
		% within Urban Poverty	36.2%	63.8%	100.0%

*Source: Own Survey and Computation*

### *Sex and poverty*

Quite several studies have discussed the phenomena of feminizing poverty which assumed that the prevalence of poverty is higher to female-headed households than male-headed ones. Different scholars support this assumption by providing various justifications. This could be due to the presence of discrimination against women in the labor market, or it might be because women tend to have lower education than men do and therefore they are paid less salaries. Or else, they are in general deprived the opportunities of exercising when compared to men in many respects.

About 25.5% of female-headed households were included in the survey out of which 15 (17.2%) and 13 (30.2%) live above and below the poverty line respectively. The proportions of male-headed households who live above and below the poverty line are in order 30(69.8%) and 72(82.8%). A crude observation of the figure makes one aware that the number of male headed households who live below and above the poverty line is much higher in absolute terms than those of female-headed ones. This is not; however, a strong justification to say they face the hard core poverty or are leading decent life for the number of male –headed households covered in the survey are much higher than those of females by exactly 4.6 times. A better comparison would be

to see the ratio of poverty sharing between the two sexes. In the above poverty like category there are 2.4 male-headed households for each female-headed ones. On the other hand in the below poverty line group there is one female-headed household in every 3.6 male-headed ones. This shows that the gap between female and male-headed households is only a matter of 1, which means that the incidence of poverty is relatively comparable in the below poverty line category if not identical.

Nevertheless, the gap between male and female-headed households in the above poverty line is relatively significant in that most of the male-headed households have escaped from the status of being in the below poverty line while the females are experiencing more poverty. This result is inconformity with most literatures, which assume that the probability of falling into poverty is more as females head a household. The probability that a household will be poor when headed by females is significant at 95% confidences interval. The study found out that being in a household off male-headed one is more vulnerable to the prevalence of poverty in Sebeta Hawas than those of male headed ones.

Table 9 below shows the probability of being poor for male and female-headed households. We can see from the table that the probability for male and female headed households are different in that the figure for the latter is higher which attests that the probability of being poor is higher as females become heads of the family.

**Table 10 Household Sex and Poverty**

			Household Sex		Total
			Male	Female	
Urban Poverty	Below Poverty	Count	72	15	87
	Level	% within Urban Poverty	82.8%	17.2%	100.0%
	Above Poverty	Count	30	13	43
	Level	% within Urban Poverty	69.8%	30.2%	100.0%
Total		Count	102	28	130
		% within Urban Poverty	78.5%	21.5%	100.0%

*Source: Own Survey and Computation*

### *Marital Status and Poverty*

In poverty correlates analysis, marital status of the household head is an important constituent of the demographic variables. Economic theory and most empirical literatures support the notion that the chance of falling into poverty increases as one is married. This is due to when people get married household size will increase as new children are born and expenditures increase which in turn leads to searching for mechanisms of fulfilling additional needs and necessities for the family. On the other hand as one is married the probability of falling into poverty decreases, as there would be more labor forces in the household. Table ten elaborates the situation more.

**Table 11 Household Marital Statuses and Poverty**

		Household Marital statuses		Total	
		otherwise	Married		
Urban Poverty	Below Poverty Level	Count	9	78	87
		% within Urban Poverty	10.0%	90.0%	100.0%
	Above Poverty Level	Count	17	26	43
		% within Urban Poverty	39.5%	60.5%	100.0%
Total		Count	26	104	130
		% within Urban Poverty	20.0%	80.0%	100.0%

*Source: Own Survey and Computation*

The above table demonstrates that 26 (60.5%) who are in the married category are found in the above poverty line. The never married heads in the above poverty line constitute 17(39.5%). In the below poverty line status quite a big number of the poor, 78 (90.0%), constitutes the married group. Married households are many both in the above and below poverty line, which shows that there, are not much significant differences in the way out or in of poverty as one is married. Cross tabulating the data results in the marital status of the household head significant impact on poverty at 90 % confidence interval. Marital status is therefore an important determinant of poverty in Sebeta Hawas.

### *Household Size and Poverty*

Large households tend to associate with poverty (World Bank 1991 a, b), Lanjaw, and Ravallion (1994). the effect of household size on household well- being very much depends up on the degree of rivalry in consumption among household members. All consumption in the family is public so that every marginal increase in consumption benefits all household members. An example to this will suffice to introduce/ provide drinking water.

In the case of Sebeta Hawas the study found that household size is significant in explaining poverty which is to mean that there is significant relationship between household size and poverty. In household size of <5 and >5, were found. They account for 9.2% and 90.8% in order. It is worth mentioning that as when the household size increases the poverty level will increase and they found under below poverty level.

**Table 12 Household Size and Poverty**

			Household Family size		Total
			other wise	>5	
Urban Poverty	Below Poverty Level	Count	8	79	87
		% within Urban Poverty	9.2%	90.8%	100.0%
	Above Poverty Level	Count	38	5	43
		% within Urban Poverty	88.4%	11.6%	100.0%
Total	Count	46	84	130	
	% within Urban Poverty	35.4%	64.6%	100.0%	

*Source: own survey and computation*

### **3.2.2. Education and Poverty**

Education increases the stock of human capital which in turn increases labor productivity and wages. Since labor is by far the most important asset of the poor, increasing education of the poor will tend to reduce poverty. There is thus a generalized consensus that education is negatively and significantly correlated with poverty. We might think of low education as causes of poverty.

In fact there seems to be a vicious circle of poverty in that low education leads to poverty and poverty leads to low education .Our interest is not to discuss the vicious circle of poverty but to see the effect of education on poverty.

Szekely (1998) and Cortes (1997) found that education is negatively correlated with poverty in Mexico. In fact for Szekely education is found to be the single most important factor in explaining poverty in the country.

The cross tabulation of the survey result showed that households head highest educational level has a significant effect on the probability of being poor or non- poor at 99% confidence interval.

The highest educational level of the household head is divided into two groups:  $\geq$  grade 8 and  $\leq$  grade 8. From the  $\geq$  grade 8 category it included are diploma, first degree holders and above but the  $\leq$  grade 8 category it included primary school completes and adult school complete and illiterate those group are mostly 82(94.3%) are below poverty level but 42(97. % ) sample are found  $\geq$  grade 8 are above poverty level in Thus, the explaining power of highest educational level of the household head is highly significant (99%) in Sebeta Hawas .

Educational level of the household head often times determines income level of family. The study further inquired whether education has impact for life in the study area or not. The question forwarded to them was "does education have impact on your life standard?" Nearly ninety one percent replayed yes and around nine say no. From the yes group of respondents 40(94.3%) have been living in the above poverty whereas 116 (89%) are in the below poverty line group. This show although most respondents were found to be illiterate, primary schools completes or so they are aware of the importance of education on the life standard of the people. While we know that education has a negative and significant effect on the welfare of the society the findings of this result proved correct and found it to be significant at 99% confidence interval in the town.



**Table 13 Household Education and Poverty**

			Household Education		Total
			other wise	<= Grade 8	
Urban Poverty	Below Poverty Level	Count	5	82	87
		% within Urban Poverty	5.7%	94.3%	100.0%
	Above Poverty Level	Count	42	1	43
		% within Urban Poverty	97.7%	2.3%	100.0%
Total	Count	47	83	130	
	% within Urban Poverty	36.2%	63.8%	100.0%	

*Source: own survey and computation*

From economic history we are familiar with the impact of education, more specifically, of human capital as a multiplier effect on the life standard of households. Taking this into account six basic alternatives was provided for household heads on how they see the impact of education on living standards. The choices included were: getting secure jobs, obtain commendable salary, educate children properly, increase saving habits, and develop entrepreneurship and others.

Disaggregating the value produces 29 (33.4%) and 39(22.8%) and this is respondents' conviction that education does develop entrepreneurship in the above and below poverty line respectively. Likewise, 22(25.3%) in the above poverty line and 43(25%) in the below poverty line respectively believe that education has a positive impact for getting secure jobs. The overall impact of education based on the criteria chosen is found significant explanatory variable of poverty.

### **3.2.3. Employment and Poverty**

Employment has a high and negative correlation with poverty because employment which requires low amounts of capital, either human or physical can be related with low earnings and therefore with higher poverty rates. Out of the 130 surveyed households, it is good to get that 69.2 % ( 90) are self-employed, 38 (29.2) are laborer and 2(1.5%) are other employed. From those served 90(62.2%) self-employed around 57(65.5%) are under poverty his indicate that the self-employed or laborer are mostly they are below poverty because of low income level.

**Table 14 Household Occupation and Poverty**

			Household Occupation			Total
			self employed	other wise	laborer	
Urban Poverty	Below	Count	57	2	28	87
	Poverty Level	% within Urban Poverty	65.5%	2.3%	32.2%	100.0%
	Above Poverty	Count	33	0	10	43
	Level	% within Urban Poverty	76.7%	0.0%	23.3%	100.0%
Total		Count	90	2	38	130
		% within Urban Poverty	69.2%	1.5%	29.2%	100.0%

*Source: own survey and computation*

It is also paradoxical to see from the result that 23.3 %( 10) of daily laborer households fall above the poverty line (in the non-poor group). This could be due to the fact that a household may have previous accumulated assets, savings or could be remitted by anybody else so that fortunately the household is categorized as non-poor where in fact it may not. One of the weaknesses of the poverty line in the classification of households as poor and non-poor is it does not question where the source of income of the household is; it only based its assumption on consumption expenditure (both basic and non-basics) regardless of the source.

### 3.2.4. Income and Poverty

Holding other variables constant, there is no need to debate that income directly or indirectly dictates the well /bad being of an individual .It has, indeed, a multiplier effect on the living standard of people and as a result, many countries still use income as a single most important proxy of poverty.

Considering this, the study took average incomes of a household per month in Birr to see whether it has correlates with poverty or not. The monthly income of households was divided as follows: below 1000 birr and above. The number of the highest and lowest average monthly income of the households, according to the survey result, is respectively as 81(62.3%) and 49(37.7%) from those surveyed 81(93.1%) household they got less than 1000 Ethiopian birr and they found below

poverty level and 6(6.9% and 43(100%) below and above poverty level group are gate income 1000 Ethiopian birr per month so most sampled house hold income level around 81(62.3) are below poverty level.

If income of households is highly significant in explaining the status of poverty in Sebeta Hawas town, it goes without saying that categorization of their income is vital for further analysis. Based on a priori knowledge and many surveys conducted in Ethiopia, the monthly average incomes of households are divided in this research as upper income (more than 1500 birr), middle income(800-1500), lower income (400-799), and extremely lower income (below 399).

The monthly income categorization of households is tested whether it has an impact on the wellbeing of households, particularly, of poverty in Sebeta Hawas. The classification strongly supports that such type of income grouping really has an impact, significant at 99% confidence interval.

**Table 15 Household Income and Poverty**

		Household Income		Total	
		other wise	>1000 birr		
Urban Poverty	Below Poverty Level	Count	81	6	87
		% within Urban Poverty	93.1%	6.9%	100.0%
Above Poverty Level		Count	0	43	43
		% within Urban Poverty	0.0%	100.0%	100.0%
Total		Count	81	49	130
		% within Urban Poverty	62.3%	37.7%	100.0%

*Source: Own Survey and Computation*

In most developing countries, no exception for Ethiopia, household's monthly income does not go in harmony with their expenditure, instead, expenditures outweigh incomes. This usually happens to create gaps between revenues and expenditures.

### 3.2.5. Social Services and Poverty

#### Water and Poverty

The provision of purified and adequate water is becoming a critical issue for urban dwellers without which life will be difficult. In the previous sections the study hypothesized water to be an important correlates of urban poverty in Sebeta Hawas. Following is discussion of water supply and its relation with poverty

Almost all the surveyed households used piped water as the main source for domestic purposes. But from those Only 44 (34%) have their own tap but those 86 (66%) have not tape mostly they used from common tape form distance area from those lower income group or below poverty level group 89(96.6%) have not tap but from those above poverty level group 41(95.5) have tap on their own. Sources of piped water in the area consisted of private tap inside the compound, public taps and private vendors.

**Table 16 Household Water and Poverty**

			Household Water		Total
			otherwise	without tap water	
Urban Poverty	Below Poverty Level	Count	3	84	87
		% within Urban Poverty	3.4%	96.6%	100.0%
	Above Poverty Level	Count	41	2	43
		% within Urban Poverty	95.3%	4.7%	100.0%
Total		Count	44	86	130
		% within Urban Poverty	33.8%	66.2%	100.0%

*Source: Own Survey and Computation*

The issue of connectivity should go hand in hand with the quality (purity) and amount of water if dwellers satisfaction is taken into account. Some households do not have the capacity to have their own tap, they used other alternatives. Public tap is obviously, one of the alternatives. The study analyzed households who consume public tap water, whether they would like to continue or not with the service, their rates of satisfaction/dissatisfaction in its, charge, quantity, quality

(purity) and others if any. As to the kind of public water they consume it significantly affects the prevalence of poverty at 99% level.

### Health and Poverty

More than anything else health is the first and single factor for the well/ bad being of individuals. Without proper health life is difficult. The first question posed in this research was whether any member of households suffered from disease or not and the alternatives provided to them.

Disease is one of the determinants for the aggravation or improvement of poverty as many literatures proved and from theoretical underpinnings. The findings of the study in the town of Sebeta Hawas revealed that disease has significant impact on the prevalence of poverty.

The degree of illness was examined for those who respond yes that they suffered from diseases (as very critical, critical, moderate, simple). It also assessed the type of medical facility they utilize (government, non-government, private, traditional and others if any), their preference of medical facility- government (based on lower charge, good facility), private (based on better hospitality treatment, better medicine, efficient service, others) and traditional medicine (based on low charge, better curability, better follow up and others). Based on these it is found that most of them have a significant effect on the incidence of poverty in Sebeta Hawas. We can, therefore, wrap up from the study that health is a good indicator of poverty and is a determinant of poverty in Sebeta Hawas.

**Table 17 Household Health and Poverty**

			Household Health		Total
			otherwise	frequently sick	
Urban Poverty	Below Poverty	Count	3	84	87
	Level	% within Urban Poverty	3.4%	96.6%	100.0%
	Above Poverty	Count	39	4	43
	Level	% within Urban Poverty	90.7%	9.3%	100.0%
Total		Count	42	88	130
		% within Urban Poverty	32.3%	67.7%	100.0%

*Source: Own Survey and Computation*

Households evaluation of medical services from government, NGO, private, traditional and why they did not use modern medical facility (if they got disease) were found significant in explaining the incidence of poverty in the town.

As regards to the responsibility of who is going to provide adequate health services for the town households were interviewed about their evaluations. The extent of town health service intervention was found to be significant. Over all, respondents' evaluation as regards to who is accountable for providing adequate medical facility is also significant. From the sampled survey we try to conclude that around 84 (96.6%) poor group household are frequently going to different health center but the non-poor group 4(9.3%) households only going frequently to health center. In caveat, incidence of disease in the town is found to be significant variable while studying poverty and hence is a good proxy of urban poverty in the study area.

### Housing and Poverty

The Ownership of house in urban areas is really an important indicator of poverty in most developing countries. This indicator is of paramount importance because it is household wealth, which generates income flows. **Table 18** shows the probability of being poor and non-poor in the context of housing tenure.

**Table 18 Household Tenure and Poverty**

					Total
			otherwise	without private house	
Urban Poverty	Below Poverty	Count	2	85	87
	Level	% within Urban Poverty	2.3%	97.7%	100.0%
	Above Poverty	Count	42	1	43
	Level	% within Urban Poverty	97.7%	2.3%	100.0%
Total		Count	44	86	130
		% within Urban Poverty	33.8%	66.2%	100.0%

*Source: Own Survey and Computation*

It is clear from the table that house ownership increases probability of being non-poor where as it decreases the probability of being non-poor as one lacks it keeping all other things constant. From the above survey most poor group household 85(97.7%) they haven't private house they live in rent from private or from government house mostly they rented from private house the amount of rent is very higher greater than half of their monthly income so it affects the poverty level highly . The coefficient of toilet facility, which is employed as proxy for health condition of a household, is found to be significant. Access to toilet facility is very vital for the well-being of the household. It is also equally important that access to bathing facility is crucial for the wellbeing of a household. The result of the survey vindicates economic theories.

### 3.3 The Logit Model

As introduced earlier a Logit model was employed to analyze the data. This model is appropriate when we assume the random components of response variables follow binomial distribution & when most variables have categorical responses. Put differently, it is suited when the dependent variable is dichotomous and of the type that have a yes or no response. The form of the Logit model is shown as follows.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + \epsilon \dots \dots \dots (1)$$

$$Y = \text{Probability of a household being poor or non-poor}$$

Where,

$Y$  = Probability of a household being poor or non-poor

$\alpha$  = Intercept (constant) term

$\beta_j$  = Coefficients of the predictors estimated using the maximum likelihood method

$X_j$  = Predictors (independent variables)

$\epsilon$  = Random effect (error term)

Aggregating the value yields

$$Y = \alpha + \sum_{j=1}^n \beta_j X_j + \epsilon \dots \dots \dots (2)$$

In practice  $Y$  is unobserved, and  $\epsilon$  is symmetrically distributed with zero mean and has cumulative distribution function (CDF) defined as  $F(\epsilon)$ . What we observe is a dummy variable  $y$ , a realization of a binomial process defined by

$$P = \frac{e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k}}{1 + e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k}} \quad \dots \dots \dots 3$$

From equation (2) leaving the constant term and rewriting the model yields

$$\begin{aligned}
 \ln \left( \frac{P}{1-P} \right) &= \ln \left( \frac{e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k}}{1 + e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k}} \right) + \ln \left( \frac{1 + e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k}}{1} \right) \\
 &= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k > - \ln \left( 1 + e^{\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k} \right) \dots \dots \dots 4
 \end{aligned}$$

The Logit model usually takes two forms. It may be expressed in terms of Logit or in terms of event probability. When expressed in Logit form, the model is specified as

$$\ln \left( \frac{P}{1-P} \right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k \quad \dots \dots \dots 5$$

Using equation 4 and 5 can be transformed into a specification of the Logit model of event probability by replacing the general CDF, F, with a specific CDF, L representing the Logistic distribution

$$P = 1 - \frac{1}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k}} = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k}} \quad \dots \dots \dots 6$$

The above equation represents the probability of an event occurring. For a non-event, the probability is just 1 minus the event probability.

$$P = 0 = 1 - \frac{1}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k}} = \frac{1}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k}} \quad \dots \dots \dots 7$$



## **Multicollinearity**

In most economic variables it is likely that a set of independent variables within themselves correlated each other. In situations where there is significant collinearity among the independent variables there is a difficulty of differentiating which variable should be the interest of the study. Collinearity ranges from 1 where there is complete relationship within the independent variables to 0 where there is no relationship at all. In reality, however, there are rare or no such complete presences or absence of relationships among economic variables. If the interconnection between the explanatory variables is perfect (1) then:

- i) estimate of the coefficients are indeterminate
- ii) The standard errors of these estimate become infinitely large.

The seriousness of the effects of multicollinearity seems to depend on the degree of interconnection within the explanatory variables as well as on the overall correlation coefficient.

The solutions which may be adopted if multicollinearity exists in a function vary depending on the severity of multicollinearity, on availability of other sources of data (large samples, or cross section sample etc.), on the importance of the factors which are multicollinear, on the purpose for which the function is being estimated and other considerations.

The standard errors, the correlation coefficients and the total  $R^2$  may be used for testing multicollinearity. Yet none of these criteria by itself is a satisfactory indicator of multicollinearity (Koutsoyiannis, 1977) because:

- a) Large standard errors don't always appear with multicollinearity. They may arise for various reasons and not only because of the presence of linear relationships among the explanatory variables.
- b) The inter-correlations of the explanatory variables need not be high for the values of  $b$  (coefficient of  $X$ ) and their standard errors to be affected badly, that is  $r_{xixj}$  is not an adequate criteria by itself.

- c) The overall  $R^2$  may be high and yet the results may be highly imprecise and insignificant. In the checking up of multicollinearity existence the procedure is to regress the dependent variable on each of the independent variables separately.

Then we insert variables and examine their effects on the individual coefficients, on their standard errors and on the overall  $R^2$ . In view of this a variable is either determinant or not based on the following grounds.

1. If the variable improves  $R^2$  without rendering the individual coefficients unacceptable on a priori considerations, the variable is considered as detrimental and is taken as explanatory variable.
2. If the variable does not improve  $R^2$  and does not affect to any considerable extent the value of the individual coefficients it is considered as superfluous and rejected.
3. If the variable affects considerably the signs or the value of the coefficients (usually  $> 0.5$ ) it is considered as detrimental.
4. If the inter-correlation between two explanatory variables is greater than or equal to 0.5 we reject either of the variables and if it is less than or equal to 0.5 we take both of them as detrimental variables.

Therefore, before analyzing the effect of independent variables on the dependent variable, all variables, which were hypothesized to depict the incidence of poverty, were checked for multicollinearity using bivariate correlation matrix table. The result of the test confirmed that there is moderately high collinearity between education and employment (0.48) whereas the rest of the variables did not show significant collinearity between each other. Employment and education are taken as detrimental variables for their correlation is less than 0.5.

### **Model's Robustness (Predictive) Power**

The suitability of the chosen model for econometric analysis very much depends on how much it predicates from the actual observation or what percent of the actual observation is really predicted by the model. There are no fixed points as to judge the model as a best or bad predictor yet it is generally agreed that a model with its overall predictive power of fifty percent or more is good.

**Table 19 Cell Counts and Residuals**

Poverty Level	Observed		Expected	
	Count	%	Count	%
Below poverty level	87	66.92%	87	67%
above poverty	43	33.07%	43	33%

*Source: Own Survey and Computation*

Therefore, to assess whether or not the model fits the data, the study used a prediction table (classification table) as shown below. The on and off-diagonals respectively tell the correct and incorrect number of predictions of the data. Thus, using these diagonals we can see how many households are correctly classified and how many are misclassified.

From a total of 87 households who live below the poverty line 67 percent were correctly predicted and out of 43 households who live above the poverty line 33 percent were correctly classified. Generally, 76.5 percent of the 130 valid cases were correctly predicted. Therefore, the model is appropriate for the data.

### **Odds and Marginal Effects**

Odds of the model tell by what factor the dependent variable change does whenever a unit change occurs in an independent variable. Odds ratio is the Log value of odds and is always positive. In this particular study it is found out that the odds ratio, the ratio of the probability of being poor to the probability of non-poor, is 1.95, (87/43). Marginal effects refer to the additional value to the dependent variable given an increase or decrease on the explanatory variable.

The first, second, and third columns of the following table respectively represents the independent variables, odds (coefficient of predictors) and standard error. The third, fourth, and six columns of the table depict Wald which is obtained by dividing odds ( $\beta$ ) to standard error and squaring the value ( $SE\beta$ )<sup>2</sup>, significance level of each independent variable on urban poverty and exponent of b in order. In most econometric analysis the most important variables used are the odds, significance levels and odds ratio (exponent of b).

**Table 20 Logit Maximum Likelihood Estimates**

<b>Number of Observations =130</b>					
<b>Explanatory Variables</b>	<b>β</b>	<b>S. Error</b>	<b>Wald</b>	<b>Sig.</b>	<b>Exp (β)</b>
Household Age	-.090	.347	.067	.795	.914
Household Marital St	-.604	.428	1.989	.158	.547
Household Family Size	.403	.111	13.312	.000	1.668
Household Education	-.493	.375	1.728	.003	0.637
House hold occupation	-.512	.596	.736	.391	.600
Household Income	-2.242	.400	31.436	.000	.106
Household Water	-.841	.748	1.266	.261	.431
Household Health	1.616	.474	11.645	.001	1.199
Household Tenure	-.470	.394	1.420	.233	.600
Household Sex	.056	.442	.016	.899	1.058
Constant	3.031	.732	17.152	.062	20.725

**Source: Survey Result and Computation**

$$P = 0.000 - 0.000P_1 + 0.000P_2 - 0.000P_3 - 0.000P_4 - 0.000P_5 - 0.000P_6 + 0.000P_7 - 0.000P_8 + 0.000P_9$$

Examination of the above Logit maximum-Likelihood estimates demonstrates that the variables that are positively correlated with the probability of being poor are sex, family size and disease incidence. The variables that are negatively correlated with the probability of being poor are age, marital status, education, employment, income, water, and house tenure.

The fifth column of the table shows that out of a total of ten predictor variables, only four of them: household family size, Household educational level, household monthly income, and Household income significantly affect households falling into poverty at 99% confidence level. The positive value of b in household head sex indicates that as female heads the household the probability that a household falls into poverty increases though its contribution to poverty is found insignificant variable. In the same fashion as the size of the household increases the chance of falling into poverty increases. Hence female-headed households and high family size are

positively associated with poverty in Sebeta Hawas. Disease incidence has given the same result in that a household with frequent sick members experiences more chance of falling into poverty than those who are not.

On the other hand the negative value of the odds- ( $\beta$ ) to age (18-30 and greater than 60), income, marital status, educational level, employment, house tenure, and water source indicates that as the value of these variables increases or as one possess or lacks, the household is less likely to fall into or be away from poverty.

The table indicates that as the age of the household increases by one year (within the ranges of 18-30 and greater than 60), *ceteris paribus*, the odds ( $\beta$ ) and odds ratio ( $\exp \beta$ ) of falling a household into poverty decreases by a factor of 0.09 and 0.914 respectively. Likewise, as the educational level of a household head increase by one, holding other independent variables constant, the odds and odds ratio of being poor decreased by a factor of 0.493 and 0.637 in order whereas the value of household occupation decreases by 0.512 and 0.600. On the other hand as the number of the family size of the household increased by a unit, the odds and odds ratio of the data, keeping all other independent variables constant, increased by a factor of 0.403 and 1.668. This shows that as the number of household size increases the probability of being poor increases.

As regards to the categorical variables as a household head is married, have private tap water, house, telephone, and metered electricity the household experience less poverty. Yet each of their contribution to poverty in the study area is insignificant.

In short, by looking at the signs and significance levels attached to the predictors' coefficients- (odds) and odds ratio ( $\exp \beta$ ), we observe that households headed by females, diseases incidence and big size of the family experience more poverty in the study area. These variables correlate with poverty positively and those that are negatively correlated with poverty are age, marital status, educational level, employment/occupation, water source, and house tenure.

## Chapter Four

### Summary, Conclusion and Policy Implication

#### 4.1. Summary

The objective of the study was to assess determinants and their quantitative relationships up on urban poverty in Sebeta Hawas. Both primary and secondary sources were used to carry out the study. A total of 130 household heads were randomly selected and the study was undertaken by a systematic random sampling in six Kebeles: Alemgena (01, 06, and 08) Welete (03), Furi (04) and Sebeta (01, 05, and 07) of the town. The research used the food energy intake approach in the identification of the poor from the non-poor.

It first enumerated baskets of food items households frequently consume in the area. Then these bundles of food items are weighted in kilograms. Third, the aggregate kilograms of food bundles were divided into the number of family sizes. This gives the average amount of kilograms an adult person would consume in a day. This kilogram is again converted into the amount of calorie equivalents it yields and is calibrated to the predetermined minimum value of 2200-calorie per day per adult.

Based on this approach the study found out that out of the 130 surveyed households 87 of them are found below the poverty line. The fact that 67 percent of the sampled households live below the poverty line, the head count ratio, poverty gap, and severity of poverty are 0.66, 0.21 and 0.09 respectively suggest ample evidence for one to draw inferences about the incidence of hard core poverty in the town.

Variables, which were hypothesized to account for the incidence of poverty in the town, were selected and analyzed. These were income, assets, education, sex, age, family size, employment, marital status, and disease incidence. Social services like water source, house tenure, telephone subscription, and energy utilization were also analyzed.

These variables were analyzed through descriptive statistics. A Logit model was employed to quantify the relationship between some selected determinants and poverty. In the descriptive part analysis was made by making use of **IBM SPSS statistics 20** version. In this part categorical response were treated via percentages, ratios, Chi-squares and significance levels with the help of tables. Whereas continuous variables were analyzed by, means, standard deviations, F and t-tests. In the econometric part the study employed the Logit model. The odds which tell by what factor does the dependent variable change given a unit change of the predictor variable was also discussed. The odds ratio, which is Log of odds and marginal effects and significances of each predictor variable, were quantified. Based on the descriptive and econometric analysis (Logit model) the following results were obtained.

In aggregate terms most households' monthly income were found meager. The findings of the study showed that only 30 percent of the households earn greater than or equal to 1000 Birr a month. As a result more than 70 percent of the households couldn't cover their monthly expenditure. Most of them were found leading meager life with the existing income and some of them were remitted from abroad or supported by their relatives, particularly, of the old household heads.

The other determinant that played roles in the incidence of poverty in the town is employment. Overall, 88 percent of the surveyed population is employed and yet most of them couldn't escape from falling into the poor. This is because the return they get from being employed is not sufficient to have effect on their life standard. Although literature and empirical findings proved considerable associations between employment and poverty, the result as regards to Sebeta Hawas is not remarkable. However, the negative association of unemployment to poverty in the town vindicate that there is a need to have labor market administration in the town as a potential instrument for tackling poverty in the town.

A closer examination of the occupation of households showed that the lower income groups are found among females. As to the type of the specific job they engaged in, the petty-trade and foods

dominate most female household heads. The numbers of female-headed households who are in civil service are almost absent.

Marital status is the other correlate of the well-being of a household. In the study married households take the lion's share of which it is 59 percent of the sample. The findings of the study showed that the divorced sections of the society experience more poverty than those who are not. The probability of a household being non-poor increased, as the head of the household is married.

In the descriptive part income, sex, marital status, number of dependents in the household, education, employment, disease incidence and house tenure of the household were found statistically significant affecting the incidence of poverty. They are, therefore, good parameters of poverty in the town. Besides, Outside household dependents, income-expenditure gap, ways of filling income-expenditure gap, recreation, watching movies, saving, satisfaction rate of using private vendors, frequently consumed drinks, (purity, quantity, reliability) of private tap water, continuity and satisfaction or dissatisfaction of using public tap water consumption, dissatisfaction in (charge, quantity and purity) of using private vendors, telephone subscription, toilet and shower facility were found statistically significant indicators of poverty. However, religion, ethnic group, dependency, productive family members, main source of water and status of electric connection were found statistically insignificant indicators of poverty.

The Logistic regression obtained four variables: income, education, family size, and disease incidence of households found significantly affecting the incidence of poverty in the town. The results of the model using **IBM SPSS statistics 20** software showed that there is a positive and strong relation between household size and poverty in the town. Put differently, households with larger family size are more likely to fall into poverty than those with smaller family size. Telephone subscription and energy utilization were found insignificant variables.

A quantitative analysis undertaken in this study confirms the fact that female-headed households Experience poverty more than male headed ones. Similarly, disease incidence in the household increases prevalence of being poor than those who are not sick frequently.



As regards age the probability of being poor decreases as the household age is in the young and old ages or when it is found in the ranges from 18-30 and beyond sixty (retirement period) .On the contrary, it increases as the head is found in the age ranges of 31 to 60. Thus, it is imperative to note that there is no conclusive remark as to the relationship between age of the household head and poverty unless one is made to know a demarcation. The result calls further research to understand the effects of age on poverty.

Both the descriptive statistics and Logit model showed that increases in educational attainment of the household head have a significant impact on reducing the probability that a household is poor. Even though education is negatively correlated with poverty, basic education will not suffice. Education is not a sufficient condition to escape from poverty. This indicates that there are other factors which affect poverty of the household in conjunction with education.

#### **4.2. Conclusion and Policy Implications**

That incidence of poverty is rampant among the surveyed households 0.66 the head count ratio, 0.417 poverty gap, and 0.191 as the severity index in the town respectively calls for urgent interventions aimed at curbing the fate of the poor. One way of doing this is studying the determinants of urban poverty by informing concerned parties as the factors are important in fighting against poverty. Without the clear identification of the factors that account for the sporadic or continuous impoverishment of life in the town it is really ridiculous to come up with concrete solutions. As urban poverty, per se, is a multitude of interrelated factors-a cause being a consequence simultaneously, critical identification of the variables is important. However, because it is difficult to bring panaceas for the whole problems over night prioritization of the variables is of paramount importance.

The messages and policy implications of this research among other things include the following:

1. Construction of comprehensive poverty profiles at the town level is vital but the task could only be possible if there is commitment from the government, town administrators, NGOs,

researchers, the residents and any concerned body. This research is cross-sectional which only can tell a result of one time survey. The availability of panel data is, therefore, badly needed in order to be able to construct better models of the determinants of poverty in the town.

2. The study assessed the incidence of poverty in the selected Kebeles at a household level. It only can tell the incidence of poverty based on these households. It is of the writer's feeling the future studies should study the town's poverty other than the household level so as to get a wider view of poverty profiles and policy implications. This could be seen from the institutional, social, gender, and extra perspectives.
3. The study employed the FEI approach in the identification of the poor from the non-poor. The validity of this research could be testified if other approaches are applied. Therefore, methods other than the ones developed should be incorporated in other studies in the future.
4. That the educational attainment of the head of the household is found to be the most important fact or associated with urban poverty clearly suggests ways of focusing on the value of education. Adequate education is central in addressing incidence of poverty. Specifically, college education is found to be of paramount importance in reducing poverty in Sebeta Hawas. In this regard the recently introduced private colleges would play critical and/or vibrant roles and they therefore should be given emphasis. This is because students who were able to learn but incapable of joining higher government institutions have the opportunity to further pursue their academic pursuit.
5. The study found out that female-headed households are more likely to be poor than households of which the head is men. The implication is therefore that promoting female education should be an important element of poverty reduction policies. This is because female education and fertility are negatively correlated; such a policy could also have an impact on household size which is another important determinant of poverty in Sebeta Hawas.

6. Household size was positively and significantly correlated with poverty in Sebeta Hawas as the study depicted. This has a clear implication for the residents of the town in that households with large size will fall into the hardcore sections of poverty easily than those who have not. Thus, in order to minimize such effects, family are planning and/or education of couples be provided by the concerned bodies. In this regard the town's health service can play a vibrant role.
7. Income, as it was expected, correlated negatively and affected poverty significantly. Thus, ways of diversifying the means of increasing income should be introduced. At this juncture both the households and the government should have the joint effort and responsibility to find possible panaceas. One of the potential ways of doing this is through education. Technical and vocational trainings, which are available in the town, can play instrumental roles. Entrepreneurship development could also be the other option.
8. Disease incidences of the households were also found to affect the incidence of poverty significantly. Not a large number of households took medical treatments though they contracted diseases. They, therefore, should be diagnosed whenever they contract a disease and bad beliefs and suspicions about the curability of modern medical facilities be avoided. In this regard health professionals have the prime responsibility to teach households in how to combat the incidence of disease.
9. The respondents' evaluation on the overall health service provision of the government in the town is almost negative. The government, particularly, the town health service, should therefore upgrade the provision of health services including the laboratories, pharmacies, and qualified professionals. Better payments of professionals could be one way of reducing frequent turnovers. Crucial to the provision of commendable services could also be supplemented with the private health centers and the government should see them friendly.
10. Although employment was found insignificant indicator of poverty it at least is correlated negatively. In the town the issue of unemployment according to the survey results is not that

much serious. The paradox is, nevertheless, that even the employed ones are not able to lead commendable lives. This is because the return they get is not sufficient. This shows that the situation of unemployment should be revisited again.

11. The variables that are not significantly correlated with poverty (in the Logit model) are telephone and electricity. This doesn't, however, mean that they are unimportant parameters of poverty but are not as desperately needed at this time for poverty analysis as the other variables do. They need to be strengthened in the future.
  
12. In general, the problem of poverty in the town can be reduced to a significant level so long as there are joint efforts in the identification of the causes, consequences, and commitments in the implementation from the government, NGOs & CBOs (if any), researches by professionals, the poor themselves, and from any interested stakeholder(s).

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## ANEX I

**Indira Gandhi National Open University (IGNOU)**

**Social Science College**

### **Questionnaire for Master of Arts Degree Thesis in Economics**

**Objective:** The purpose of this questionnaire is to gather information about *Determinants of Urban Poverty in Sebeta Hawas* for the partial fulfillment of the Master of Arts Degree in Economics.

#### **General Directions:**

1. You are kindly requested to give genuine responses.
3. You don't need to write your identification.
4. Circle the corresponding number of your choices from the given alternatives.
5. Put the numbers you agree with those questions which are not multiple choices.
6. The study is entirely academic and all responses are confidential.
7. Feel free to respond.

**Thank You in Advance!**

**A. Household Characteristics**

1. Age of Household Head \_\_\_\_\_
2. Sex     a, Male.    b. female
3. Marital Status  
          a.Never Married     b. Divorced     C. Married
4. Household Size \_\_\_\_\_
5. Number of economically active (productive) family members \_\_\_\_\_
6. Number of dependents in the household \_\_\_\_\_
7. Number of dependents outside the household \_\_\_\_\_
8. Total number of household dependents \_\_\_\_\_
9. Household head highest educational level  
          a.Less Than Grade 8   b. Greater than Grade 8

**B. Employment /Occupation**

- 10 Status of employment  
      a. Employed   b. Unemployed  
If "employed" to Q.13
11. What is your **main** occupation?  
      a. Self-employed /Self-account   b. Private Employee   c. Government employee  
      d. NGO employee  
If "self- employed" to Q.14
12. Which type of own-account/self-employed are you engaged in?  
      a. Petty-trade/*Gulit*   b. Preparing and sale of f local drinks    c. *Trade*  
      d. Sale of Food   e. Metal /Wood Work   f. Handicraft (embroidery, pottery)   h.  
      Hotel Service
13. How many economically active (productive) individuals are there in your household unemployed? \_\_\_\_\_

**C. INCOME**

13. Which category of the following best describes the total average income that you and all other members of your household earn per month (in Birr)?  
      a. Below   b. 2000 and above

14. Does your household monthly income cover your expenditure?

- a. Yes
- b. No

If "no" to Q 20

15. How do you **fill** your household monthly income and expenditure gap?

- a. Sale of assets
- b. No option except leading meager life
- c. Support from relatives
- d. Others \_\_\_\_ (specify)

16. In your residence (Sebeta Hawas), does education have impact on your life standard?

- a. Yes
- b. No

If "yes" to Q. 22

16. on what aspects education impact on your life standard?

- a. Getting secure jobs
- b. Increase in saving habit
- c. Better salary
- d. Develop Entrepreneurship
- e. To educate children
- f. Others \_\_\_\_\_ (specify)

If "e" to Q. 23, inquire

17. Do the working habits have impact on your life?

- a. Yes
- b. No

If "a" to Q 24, inquire

18. in what way?

- a. To work efficiently/effectively
- b. Increases working ethos
- c. Other \_\_\_\_ (specify)

#### **D. Consumption Expenditure**

19. How much is your household monthly **expenditure** (in Birr)?

- a. Below 1000
- b. above 1000

20. How much does your family spend to **basic needs** (food, cloth and houses etc) per month? \_\_\_\_\_ Birr.

21. How much for the **non-basic needs** do you spend in a month? \_\_\_\_\_ Birr.

22. How much is your household monthly expenditure on education? \_\_\_\_\_ Birr

23. Concerning your children's schooling which of the following is true?

- a. It is less than adequate for my family's need

- b. It is adequate for my family's need
  - c. It is more than adequate for my family's need
24. How much does your family save per month \_\_\_\_\_ Birr?  
If your answer to Q.31 is nothing, inquire,
25. Why?
- a. Lack of sufficient income    b. Transfer to other duties
  - c. Other \_\_\_\_ (specify)
26. Of the following food items which one does your family *frequently* consume?
- a. *Injera* with *Shiro*                      b. Spaghetti/Macaroni
  - c. *Injera* with Meat products              d. Vegetables
  - e. Bread with *Shiro*                      f. Other \_\_\_\_ (specify)

**E. About Water**

27. What is the **main** source of water for your household?
- a. Piped water —————> goes to Q. 42
  - b. Other \_\_\_\_ (specify) —————> go to Q.58
28. How much, on average, are you charged per month, for using this source? \_\_\_\_\_ Birr
36. How do you rank the current status of water services from this source based on its quality, amount, and reliability? (Good & above =3, Satisfactory =2 and Poor =1)

Category	Rate		
	Good & above	Satisfactory	Poor
Quality			
Quantity			
Reliability			

**F. Health**

29. Have any of your household members frequently suffered from diseases?
- a. Yes    b. No
- If "Yes" to Q. 65, inquire
30. Degree of illness
- a. Very critical                      c. Moderate
  - b. Critical                              d. Simple

31. Have you visited any medical facility?

a. Yes → go to Q.68

b. No → go to Q. 75

If “Yes “to Q. 67, inquire

32. Which facility?

a. Government (Hospital, Health center, Clink, Pharmacy)

b. Private (Clink, Diagnostic laboratory, Pharmacy)

c. Traditional healer

d Other \_\_\_\_\_ (specify)

If 1 to Q 68, inquire,

33. Why do you prefer government facility?

a. Because it has lower charge      c. Because of qualified professionals

b. Because of its good facility      d. Other \_\_\_\_\_ (specify)

If 2 to Q. 68, inquire,

34. Why do you prefer Private medical facilities?

a. Better treatment/hospitality      c. efficient service

b. Better medicine      d. Other \_\_\_\_\_(specify)

If 3 to Q. 68, inquire,

35. Why do you prefer traditional medicine?

a. Low charge      b. Cures better than scientific medicines

c Better follow up      d. Other \_\_\_\_\_ (specify)

36. If your household member has visited more than one medical facility tick them in order of frequent visits. (Often=1 & sometimes=2)

Medical Facility	Visit Frequency	
	1	2
Government		
Private		
Nongovernmental		
Traditional		

37. How much is your household annual health expenditure?

- a. \_\_\_\_\_ Birr      b. No regular budget

38. How do you evaluate the quality of treatment received based on the availability of common drugs, Diagnostic laboratory tests, and performance of staffs?

Evaluation Rate	Government	Private	NGO	Traditional
Excellent (4)				
Very good (3)				
Good (2)				
Poor (1)				
No Evaluation				

- c. Easiness for manipulation and free of danger      d. Other \_\_\_\_ (specify)

### G. Housing

39. Who is the owner/ tenure of your housing unit?

- a. Own occupied      c. Rent from privates  
b. Rent from *Kebele*      d. Others \_\_\_\_\_ ?

If 1 to Q 94, inquire

40. How many rooms does this house have? \_\_\_\_\_ Rooms If “two” to Q. 94, ask

41. How much do you pay monthly? \_\_\_\_\_ Birr If “three” to Q.94, inquire

42. How much do you pay monthly? \_\_\_\_\_ Birr

43. What are the main construction materials of the house you live in?

- a. Wood with mud      c. Bricks  
b. *Blockets*      d. Other \_\_\_\_ (specify)

44. Concerning your family's housing which of the following is true?

- a. It is less than adequate for my family's need  
b. It is adequate for my family's need  
c. It is more than adequate for my family's need

**Thank you!**