

WOLKITE UNIVERSITY

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THE DETERMINANTS OF URBAN POVERTY IN ETHIOPIA; IN THE CASE OF GIRAWA TOWN

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Declaration

This is to certify BA paper entitled “The Determinants of Urban Poverty in Ethiopia; In the case of Grawa town’’. The paper submitted in partial fulfilment of degree of Bachelor of Art Degree in Economics, Wolkite University, through Department of Economics done by DECHAS JEMAL.

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Abbreviations

CBN	Cost of Basic Need
CSA	Central Statistics Authority
DAG	Development Assistance Group
EEA	Ethiopian Economic Association
FEI	Food Energy Intake
GNP	Gross National Product
HDI	Human Development Index
HPI	Human Poverty Index
MOFED	Ministry of Finance and Economic Development
NGO	Non-Governmental Organization
UNDP	United Nations Development Program
USD	United State Dollar
WB	World Bank.

Abstract

Poverty is multi-dimensional phenomenon that extends beyond the economic arena to encompass factor such as the in ability to participate in social and political life. This study aims identifying the determinants of urban poverty in Grawa town with specific objectives of measuring the extent of poverty in the study area and identifies variables that affect the probability of being poor statistically significantly. Four urban kebeles were selected based on multi stage sampling techniques. The data is collected from both primary and secondary sources. The primary data for this study is collected from 105 household heads through application of appropriate statistical procedures. To analyse the collected data, Stata software was used. Logistic regression model was also used to analyse factors that determine urban poverty 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 using Food Energy Intake (FEI) approach the surveyed households are identified as the poor and non-poor. Based on this, out of the 105 surveyed household heads, 65(53.85%) of them were found poor, the head count, poverty gap, and severity index of the survey obtained as 0.5385, 0.23 and 0.05 respectively.

The variables that are positively correlated with the probability of being poor are family size, and marital status. The variables that are negatively correlated with the probability of being poor are age, sex, education, income, water access, household's asset, and home ownership. Variables which affected significantly the incidence of poverty in the town are: age, family size, education level, monthly income of households, home ownership and households' asset. Variables which are statistically insignificant indicators of poverty are; marital status, sex, and water access.

Key words; Urban, Grawa, Poverty, Food Energy Intake, logistic regression model

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Poverty is one of the core issues in economies of development and the problem that most developing countries face. It is the situation in which an individual or group of peoples cannot be able to afford an adequate standard of living. It has two major definitions that are absolute and relative poverty. The former is a condition when someone cannot fulfil basic human needs including food, drinking water, sanitation facilitates and health, shelter and education and information. Relative poverty classified individuals or families as poor or not by comparing them to fixed cut off point, but by comparing them to others in the population under study. Generally, poverty is "pronounced deprivation and well-being" the conventional view links well-being primary to command commodities, so the poorer are those who do not have enough income or consumption to put them above some adequate minimum threshold (WB institute 2005).

Poverty greatly challenges many countries in the world, especially developing countries. Thus, the first international goal is to reduce by, at least half the proportion of people living on less than $1 a day, between 1990 and 2015. However, the world's supply of food tends to decline; shortage of food supply could result in frequent high price of food staples, which can push people who are on brink of deprivation in to poverty. Therefore, the developing countries, except could not achieve the millennium development goals (Chen and Ravillion, 2008).

According to the World Bank in 2012 just over 77.8 percent of the extremely poor lived in south Asia (309 million) and sub- Saharan Africa (388.7 million). In addition, 147 million lived in East Asia and pacific. Fewer than 44 million of the extremely poor lived in Latin America and the Caribbean and Eastern Europe and central Asia combined (World Bank, 2015).

The high poverty rate in Africa is puzzling and paradoxical for a number of reasons. First, the region is endowed with natural resources that are in great demand worldwide. Africa has 40 percent of the world's hydro-electric power supply; most of the world's diamond and chromium; half of the world's gold reserves; 12 percent of its natural gas; 3 percent of its iron ore; and several millions of acres of uncultivated land. Second, resource poor countries in East Asia have

done better than Africa in drastically reducing poverty rates, prompting the intriguing question of why they have been more successfully. Finally, Africa had received several billions of dollars in development aid from bilateral and multilateral sources during the past five decades (Moyo and Fergusen, 2009).

By any standard, Ethiopia is one of the poorest countries in the world. Poverty in Ethiopia is a long-standing problem. It affects a significant portion of its rural and urban population. Based on the estimate of international poverty line, the incidence of USD 1 per a day in the country is 26.3 percent (World Bank, 2005). The percentage increases to 80.7 percent if the poverty line is raised to USD 2 per a day per person in the year 2007 (World Bank, 2005). The percentage of population living under $1.9 per a day is 33.54 percent and the percentage of population living under USD 3.10 per a day is 71.27 percent (World Bank, 2010).

Most urban centres in developing countries including Ethiopia have undergone a rapid population growth. This is due to the fact that migrants migrate from rural area by drought, famine, civil conflicts, and the natural growth of population (EEA, 2003/2004). For instance, according to World Bank (2015) in sub-Saharan Africa extremely poverty fell down from 42.6% in 2012 to 35.2% in 2015. It shows some reduction but not satisfactory. The combined effect of these creates strain on the labour market and urban social services provision and ultimately led to pervasive poverty and deprivation (World Bank, 2015).

In Ethiopia, urban poverty is slightly more prominent in small and medium town than major towns. Poverty rate in small and medium towns is 50 percent against 40 percent in major town. In addition, the share of urban poor in small and medium town is above the share of urban population; 69 percent of the urban poor lived in small and medium towns, which accounts for 65 percent of urban population Elisa, 2008).

Therefore, this study would have been attempted to know what factors determine urban poverty in small and medium town (evidence from Grawa town) that makes the household being poor and non-poor.

1.2 Statement of the problem

Poverty reduction has become the overarching objective of development as reflected in the internationally agreed development goals, in including the millennium development goals, which

set the target of having global extreme poverty by 2015. Starting from 2005, developing countries will have had to maintain an annual reduction rate of 4.7% to achieve 2015 target (World Bank, 2010).

Poverty is not simply lack of adequate income. It is multi-dimensional phenomenon that extends beyond the economic arena to encompass factor such as the in ability to participate in social and political life. From the multidimensional perspective what matter is the focus on identification of variables that makes household being poor and non- poor.

A previous study on poverty suggests that most of related studies focused on the rural part of the country. This is because of majority of the people resides in the rural part of the country and various causes of poverty such as drought, production failure or rain are directly associated with the life of rural poor. Even though there are few studies on urban poverty they are largely focuses on country at an aggregates (Alemayehu,2001, Chidako,et al, 2005, Tesfaye, 2006, Elisa, 2008 Bisrat,2009). In addition to this most studies have been conducted in the primate town of Addis Ababa and secondary towns (Nazareth, Bahir Dar, Mekele and Awassa. As a result, poverty situation in the case study was not given attention.

However, in Ethiopia there is no such research study that focused on small towns. Besides, there is no such research that has been done on the determinant of urban poverty in Grawa town in general and those selected another small town under the Grawa in particularly.

Problem of identification of variables that matter for urban poverty is a principal cause of challenges or difficulties in fight against poverty. As a remedy identification of relevant variables as well as their crucial effect on poverty is the most important since these variables determine the livelihood of urban households.

Hence, this study will attempt to fill this gap by conducting an empirical research on identifying, analysing and understanding those covariates that are responsible for households to be poor and non-poor in the study area that needs to guide policy decision. So that this paper is tries to briefly show the path determinant of urban poverty in Ethiopia, in the case of specified area.

1.3 Research question

In line with the statement of the problem the research will seek to answer for the following basic research questions.

1. What is the extent of urban poverty in the study area?
2. What are the factors that affect urban poverty most statistically significantly?
3. What is the possible solution for poverty reduction in the study area?

1.4 Objectives of the study

1.4.1 General objective of the study

The main objective of study was emphasized on examine the determinants of urban poverty in the study area.

1.4.2 Specific objective

In line with the general objectives, this study was specifically devoted:

1. To measure the extent of poverty of households in the study area.
2. To identify the factors that affect urban poverty statistically significantly.
3. To suggest some possible solution for reduction of poverty in the study area.

1.5 Significance of the study

In light of the statement of the problem and profile of the study area, assessing the determinants of urban poverty in Grawa town would have some paramount importance. There are several poverties related to studies conducted in Ethiopia in recent time, mainly because of the accessibility of data from various household survey recently made available. Though there are research who attempts to study the dynamic nature of poverty in Ethiopia including determinants, they largely focus on rural part of the country. Little is known on the determinants of urban poverty in Ethiopia. This study will make a humble attempt to fill this gap by investigating the determinants of the urban poverty. Moreover, the study will serve as a spring board for the future study. In addition, the study would give an input for CBO's, NGO's or any other interested stake holders or actors who in or another way are engaged in the development of the town.

1.6 Scope of the Study

Urban poverty is the worldwide issue specially, in less developed country particularly in Ethiopia There are also different towns in our country, which face the problem of urban poverty. But this paper is focus on specified area. The study conducted will be assessed the situation of Urban

poverty in the Grawa town having the sample of six kebeles at a household level. This scope is preferred to be manageable & accuracy. Moreover, since poverty is multi-dimensional (asset, income and expenditure) and studying all dimensions require ample time, budget and intensive investigation of each aspect, the researcher studies on the expenditure dimension of poverty.

1.7 Organization of the Study

The paper is organized into five chapters. The first chapter contains introduction part which includes background of the study, statement of the problem, objective of the study, significance of the study, scope of the study, limitation of the study and organization of the paper. The second chapter contains review of related literature which includes theoretical and empirical part. The third chapter contains methodology of the study which includes, data type and source and methods of data analysis. The fourth chapter contains data presentation and analysis. The last chapter contains conclusion and recommendation

CHAPTER TWO

REVIEW LITERATURE

2.1. Theoretical literature review

2.1.1. Concepts and definition of poverty

Different definitions are forwarded with regard to poverty by different scholars and institutions. Since poverty is the outcome of complex interaction of social, economic, cultural and political factors, the theoretical consideration in studying poverty is adopt appropriate definition.

Poverty is a state or condition in which person or community lack, the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in the society (www.http//invetopodia.com. accessed on 28/21/2016). Poverty is the inability to attain a minimum standard of living; such as eating three times per a day, their daily income greater than 1USD (world bank, 2010).

There are three main school of thought concerning the definition and measurement to poverty. These are the welfare school, basic need school and the capability school (yared, 2005). These schools also perceive poverty differently there are areas in which they share same in common meaning: which is all of them judge a person to be poor whenever he or she is lacking with respect to reasonable minimum standard.

The welfare school relates definitions of poverty to the economic well-being of the society. It assumes 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 persons or society faces poverty. It sees income as a determining factor for the presence of poverty (yared, 2005).

The basic need school defines poverty as when one lacks basic needs (goods and services). It concentrates on the degree of fulfilment of basic human need in terms of nutrition/food, health, shelter, education, transportation and soon. Yared (2005, tries 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 sex, age, type of activity, etc of individuals that is under consideration. One of the basic problems he cited is how to determine the set of basic needs.

The capability school is neither the economic well-being nor the basic need deemed to satisfy the minimum standard by the society. It is human ability or capability to achieve a set of functioning. It tells as the extent to which people have a capability to be and to do things of extrinsic worth. The measure is said to include publicity provided but non marketed services; like sanitation, health care, education and life expectancy (Sallila and Hilamo, 2004).

Accordingly, the researcher favoured a capability school as the best school of thought regarding to the definition of poverty. This is because of as a result of multi-dimensional nature of poverty, its manifestation does not cease up to economic well-being of the society and basic human needs rather it would continue to non-marketed services which have extrinsic worth. Therefore, this definition is captured by the capability school of thought.

2.1.2. Poverty line definitions

The poverty line is the level of welfare that distinguishes poor households from non-poor households. This is a predetermined and well-defined standard of income or value of consumption or expenditure. Poverty line is often dawn either in relative or absolute term. In the former a proportion of mean expenditure is taken as a poverty line usually the one-third (which defines the core poverty line) and the two-third (which define the moderate poverty line) of mean expenditure have been commonly used. It perceives [poverty as a function of relative deprivation in terms of commodities, defining poor households as those that are unable to attain a given commodity that are normal for their society (Garza and esubalew,2006). The absolute poverty

line is predetermined one based on some minimum food and non-food expenditure below which a household is defined as poor if its consumption level is below this minimum.

The first step that needs to be clear in the analysis of poverty is to identify weather an individual is poor or not is to distinguish the poor from non-poor. For this purpose, poverty line plays a crucial role in quantifying the various indicators of well-being in to a single index. Although the choice of poverty line is always arbitrary (World Bank, 2000), the common arguments is that there is a minimum level of consumption of goods and services below which it is difficult to sustain our life.

In the construction of poverty line two methods can be employed. Those are cost of basic need (CBN) and food energy intake (FEI).

i. Costs of basic need approach

The cost of basic need method stipulates consumption bundle deemed to be adequate for basic consumption needs and then estimate its cost for each of the sub-groups being compared in the poverty profile. This is the approach of Rowtree (1901) in his seminal study of poverty in New York, England, in 1989.

Ravallion and Lockshin (2006) propose an approach to test the utility consistency of cost of basic need poverty lines across households with common preferences using Samuel sows (1938) theory of revealed preferences. However, this can be applied only within sub-groups deemed to have a common preference. In practise utility functions can vary, due to difference in climate.

ii. Food energy intake approach

Food energy intake approach finds the consumption expenditure or income level at which food energy intake is just sufficient to meet predetermined food energy requirement for good health and normal activity level (such calorie requirement is given in WHO, 1985 for example). 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). The steps are based on the following:

i. Step one: establish the minimum nutrition requirement
ii. Step two: examine the observed spending pattern to see at what average expenditure households just achieved a minimum nutrition requirement.

According to these explanations the researcher will choose or favour food energy intake approach than cost of basic need approach because of the following reasons:

First, fluctuation of the price of the commodities and hence, could not clearly show the reality in the consumption expenditure behaviour of residents (World Bank report, 2008/09).

Second, the cost of basic need approach needs listing and quantification of basics and non-basics goods of different items in monetary terms, while food energy intake approach never uses such monetary terms that is why food energy intake is preferred. In the case of cost of basic need approach require estimation of household's consumption expenditure in monetary value. The researcher argues however, that in Grawa town household consume both marketable and non-marketable goods. It is difficult to use equivalent scales revealed only from marketable goods. Therefore, instead of estimating the cost of consumption expenditure or using cost of basic need approach the study will use food energy intake approach.

2.1.3. Measures of poverty

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. 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 antipoverty policy interventions (Saith, 2005). There are three indices that can be utilized in the measurement of poverty.

2.1.4. Poverty Indices

Of course, there are various types of poverty indices, but the most commonly known ones are head count index (Po), poverty gap/depth index (P1), and the severity index (P2) (Esubalew, 2006).

i. Head Count Index (P0)

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

$$po = \frac{Q}{N}$$

Where, "Q" is the number of people earning income below the poverty line, and "N" is the total number of people in the population. While" P" 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.

ii. 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:

$$\text{P1} = \frac{1}{N}\sum_{i=1}^{q}\{Zi - Yi\}/Z$$

Where; Yi = 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.

iii. Severity Index (P2)

The severity index also called the Foster-Greer-Thorbecke Index that measures severity of poverty by squaring and averaging the gap between the income of the poor and poverty line. It is given by the formula as follows:

$$P2 = \frac{1}{n}\sum_{i=1}^{q}\frac{Z - Xi}{z}$$

Where; Xi 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, P0, P1, and P2 tell respectively the incidence, depth and P2 measures the mean of squared proportional poverty gaps. It gives more weight to the poverty of the poorest by squaring and averaging the gap.

2.2. Conceptual framework of the study

Todaro and Smith (2003), renewed development economists, draw the inequality approach to conceptualize poverty based on observable phenomena. They differentiate the economic gap between the rich and poor as to how poverty operates in a given society and how one can conceptualize it. Based on this, they attempted to look at the nature and the size of the differences between the bottom 20 or 10% and the rest of the society. To remedy the problem, distribution from the rich to the poor can make substantial development on poverty in most society.

According to Meron (2002), the conceptualizations poverty using the livelihood approach to urban poverty refers to the ensemble of activities that a household or an individual regularly undertakes and entitlements it makes claims in order to sustain a given standard of living. This captures not only the measurable income which most literatures suggest, but also about types of capital or assets up on which livelihoods are built and households and individuals strive to acquire in order to achieve requisite outcomes. The assets encompass physical capital, the basic infrastructure and producer goods needed to support livelihoods. This approach takes financial capital, the availability of cash or equivalent, human capital, the skills, knowledge, good health, natural resource stocks, social capital/ networks/connectedness, institutions and values as necessary ingredients in identifying the presence of urban poverty.

The biological approach, for instance, conceptualizes poverty as the lack of entities for survival. It postulates that poverty exists when the necessary minimum requirements for physical efficiency are not fulfilled. These as most literatures, agree includes lack of sufficient food, clothing and housing (Sen, 1981 cited in Tizita 2001). This approach gives more attention to the starvation issue and does not care so much about the additional requirements which an individual should get.

The normative approach, on the other hand, conceptualizes poverty based on value judgments about the minimum adequate level of welfare below which one is said to be poor. The problem which might arise at this juncture is what constitutes value judgments and how can one define the minimum adequate level of welfare. This is perhaps owing to subjectivity and individual differences among the different citizen's understandings. Value judgments can differ in many respects among which the norms and values are the two as stated by Sen (1987).

The sociological approach takes the concept of poverty as a reflection of social inequality. In a social context Trufat (1994) explained poverty as absence of access to enjoy fundamental human rights (cited in Tizita, 2001). This could include lack of access in social participations such as social class and social group and so forth.

Different scholars came up with different conceptualization of poverty. For instance, Grieson(1973) conceptualizes poverty and specifically urban poverty as a low quality in health care, housing, calorie intake, clothing, recreation, education, entertainment, furniture, transportation, political representation and justice.

If the concept of poverty, therefore, the multidimensional and no consensuses have been reached, then it goes without saying that its definition is complex, a matter that needs rigorous task to comprehend.

2.2.1. Poverty in urban setup

Poverty is largely a rural phenomenon and also it is more pronounced in rural than urban area. Studies in the past indicate 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. The 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).

2.3. Review of related literature: empirical literature review

2.3.1. Determinants of poverty

There are different studies that have been done with regards to the determinant of urban poverty. The study grouped based on the method they use such as study by coulomb and McKay in Muritania(1997), Mackinon and Appleton in Uganda (1996) and in case of Ethiopia Tadesse (1997) all those studies use the method of multi nominal logistic regression analysis. While the study by Glewwe for cote D,evior (1991), Esubalw (2006) for Ethiopia and house for Sudan (1991) were used the method of probity and logit model in their analysis of urban poverty.

Most of the studies econometric analysis examines the factors related to individual households. For instance, Glewwe(1991) identified determinants of households welfare by regressing total household expenditure (i.e. the measure of standard of living) on different explanatory variables. In his analysis household characteristics are identified as determinant of poverty and he restricted himself to that portion welfare due to consumption of goods and services. The study by Appleton and Mackinon in Uganda (1997), they modelled poverty as a discrete choice variable by using poverty measures developed by Foster, Greer and Thorbecke (1984). Their focus was only on what happens to the poor because they didn't consider and modelled variations in consumption above the poverty line. Their modelling exercise revealed that the results from the simple consumption function. Their finding shows that consumption level of the households is main factor that determine poverty significantly.

The study by Coulombe and Mckay cited in Mauritania (1996) on the determinants of poverty i.e. characteristics of household economic heads and households. They provide summaries of the pattern of poverty by residence and socio-economic group and also of the relationship between the standard of living and demographic and other characteristics of household and their economic heads before the econometric analysis. Their objective was on the use of multivariate analysis to highlight more precisely the socio-economic determinant of living standards. They

applied two stage least square methods to capture the choice of socio-economic group because the socio-economic group to which the household belongs is itself potentially a determinant of living standard. Their finding shows that "the demographic situation and the level of education among households can significantly determine the level of poverty".

Nowadays urban areas in Ethiopia are in a state of expansion without the necessary preconditions and this is paving the way for visible urban poverty. 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 horrific by any standard. Transportation facility, energy availability and access to job, labour market, skill upgrade, work, entitlements and finance are also at their lowest level (Dessalegn and Aklilu, 2002).

The mass departure of rural-urban migration either by pull or push, economic or social factors play the key or 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 admirable development of the urban centres. The urban population in Ethiopia is growing at a rate of around 8 percent per year (CSA 2005/6).

Empirical literatures regarding the various determinant of urban poverty which is conducted across different country in different time is discussed below.

i. Income related to poverty;

The income level of households could also determine the level and status of urban poverty. In Ethiopia, it is common to see that in most cases the family depends on a single breadwinner wage earner. This single employed person usually doesn't have the capacity to fulfil the need and interest of the whole family particularly those families composed of children, youngsters, and the old ones. This would have an impact for the family to expose vulnerable life. Lack of access to skill development and upgrading of workers have had an adverse effect on income of an individual. Since urban life is a function of monetized economy, absence/presence of income play a direct and great effect on urban poverty (Mekonnen, 2002).

ii. Remittances related to Poverty;

The flow of remittances remains more or less stable irrespective of the economic condition of the recipient country. Remittances are expected to reduce poverty as they may be directly received by the poor. The impact of remittances on reduction of poverty can be understood from both micro and macro perspectives. However, to capture this impact, there is no formal framework (Chimhowu et al 2005). But it is evident and it is reasonable to assume that the amount of transfer done by the migrants to the family members back home do have some overall impact in reducing the poverty. Uruci and Gedeshi (2003) using survey of long-term legal immigrants find that majority of the international migrants (69.7 %) send their money in order to meet "the essential needs of the family."

iii. Health related to poverty;

Health is a crucial in determining to what extent which urban poverty prevails 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 basically depends on their health status. 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 2002, cited in Somashaker (2003) explained that health plays immense contributions. According to him improved health contributes to economic growth in four ways: firstly, it reduces production losses caused by worker illness, secondly it permits the use of natural resources that had been totally or nearly inaccessible because of disease, thirdly it increases the enrolment of children in schools and makes them better able to learn, and finally, it frees for alternative uses resources that would otherwise have to be spent on treating illness.

iv. Water related to poverty;

Most of the urban areas of Ethiopia are still constrained by sufficient quantity, reliability and quality of water. It becomes common that water related diseases like Guardia 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 neighbours at a much higher cost than the recommended rate.

v. Household Size related to poverty;

Most empirical studies suggest that there is a negative correlation between household's size and poverty. For instance, Djavad Salehi-Isfahani cited 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.

vi. Age related to 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 Cote d'Ivore by using Probit model. He used the data from Cote d'Ivore living standards survey, which was conducted annually from 1985 to 1988 for analysis. He estimated the Probit 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.

vii. Unemployment related to Poverty:

The 1994 population census, though late the time estimated the rate of overall unemployment in urban Ethiopia to be 22 percent in the age brackets 15-39 for which concentration of labour 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 labour 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 labour 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 centres 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 is limited. The unemployment rate in urban Ethiopia includes a large section of well-educated persons. This 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.

viii. Education related to 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.

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.

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.

A study made on consumption and poverty 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.

In the case of Ethiopia Mekonen (1997) attempted to address simultaneously two aspects of poverty this are Poverty dynamics and urban poverty. In modelling determinant of poverty emphasis was placed on major socio-economic characteristics. The model is estimated by using OLS. His research finding shows that urban poverty in Ethiopia is quite high (46%). He also said that "factors that affect the dynamics of poverty are mainly education of head of the household and size of the household. As policy recommendation he puts that "policies that promote human capital and control of population growth reduce greatly the probability of failing in to poverty.

Esubalw has been undertook a study on the determinant of urban poverty in Debre Markos town of Amhara region. The study in case of Debre Markos town by Esubalew, 2006 found that household size is significant in explaining poverty which is to mean that there is significant relationship between household size and poverty; households head highest educational level has also a significant effect on the probability of being poor or non- poor at 99% confidence interval and he found 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. Generally, he identifies variables that are positively correlated with the

probability of being poor are: sex, household size, and disease incidence of the household. Variables negatively correlated with probability of being poor are: income, educational level, marital status, employment, age, housing tenure, and water source. Variables, which affected significantly the incidence of poverty in the town, are: average monthly income, family size, educational level, and disease incidence of the households. Religion, ethnic group, dependency, productive family members, main source of water and status of electric connection were found statistically insignificant indicators of poverty. The econometric analysis (logit model) more or less strengthens the above-mentioned conclusion.

The difference in the findings of different researches arise from the difference in economic activity of the study area, the working habit of the people and the availability as well as effectiveness of public goods and finally the government power in issuing poverty reduction program.

2.4. Empirical gap of the study

It is fact that urban areas are hobs of life for they are centre of wealth, income, commerce, trade and other sources of luxury. In the reverse, urban areas challenges to many problems. Among those the one and the most dominant is urban poverty. In the Ethiopian case, even if the challenge is daunting it is unfortunate that the subject of urban poverty has not been given the due attention it deserves. As a result of the major of the people resides in the rural part of the country the various causes of poverty like drought, production failure, and rain are directly associated with the life of the rural poor, number of studies have been conducted in the rural part of the country. There is hardly any concern and debate on urban poverty. Beside this the present government itself has intentionally launched policy or program biased toward the rural area and paid a little attention to urban areas. In addition, the most studies that are conducted in urban areas have made a great emphasis on covariates like demographic characteristics, socio-economic characteristics, and human capital characteristics. But this gives little or no attention to variables like household asset, home ownership and water. This paper intends to close methodological gap evident in previous studies by applying latest econometric techniques legit model and examining the causality between urban poverty for Ethiopia.

Thus, this paper has policy implications. Generally, the above-summarized review of the empirical literature on varies level of factors affecting determinant of urban poverty revealed that are

different factors that affect the urban poverty at operational levels. Therefore, this study will have made a hampered survey on the determinants of urban poverty by incorporating these variables in to the regression model.

CHAPTER THREE

RESEARCH METEDOLOGY AND DATA ANALYSIS

3.1. Description of the Study Area

This study is confined to Grawa town. Which is one of the towns in eastern Ethiopia located in hararghe zone of Oromia region. Grawa is bordered on the south by Gola Oda, Meyu Muluke, on

the west by Bedeno, on the north by Kurfa Chele, and on the east by Fadis. It is located at a distance of 595 KM from Addis Ababa and 67 KM from Harar. The Study focuses on Grawa town because of its problem of static growth of population life standard and economic transformation as well as unchanged income or return of their work proportionally. Grawa, as any town in Ethiopia have common population growth, but a bit more rapidly developing and have no other criteria that differs Grawa from other small towns. Based on figures from the CSA 2007 Grawa has an estimated total population of 240,173 of whom 121,751 are male and 118,422 are women. The majority of the inhabitants 98.38% of the population are Muslim, while 1.62% of the population are Orthodox Christians.

3.2 The research design and data collection

It is very necessary to systematically describe the problem under the research to find out various factors that determine urban poverty. Therefore, the appropriate research design used to undertake the research was collected and analysed through description process.

3.2.1 Data Gathering tools

The main data collection instrument was a semi-structured questionnaires' including both closed ended and open-ended question item on the research problem. In addition to the questionnaire, key information at interview and documents of Grawa town administrative bureau was used as the tools of gathering.

3.2.2 Sampling technique

The study was attempt to find out the factors that lead urban households to poverty i.e. potential variables which push urban households in to poverty, because of lack of money and time constraint, I was select sub-town in the described town. Using random sampling techniques, the formula $n= z^2 p(q)/e^2$. Households will be selected from the already described three kebeles using stratified sampling technique.

3.2.3 Sample Size Determinations

The sample size in this study was determined by using the minimum sample size formula of Fowler (2001) and then adjusted for the total population of the study area by Cochran's sample size formula (Cochran, 1977) as shown below: -

$N = z^2 (p)(q)/ e^2$ - - - - - - - - - - - - - - - - -- - - - - - - - - - - - - - - - - - -- - - - - - - - - - - - - - (3.1)

Where, N= number of surveyed populations = sample size

Za/2 = the two-tailed critical value at 90 percent confidence interval (1.96)

q = assumed incidence of urban poverty in Grawa town (0.5)

e^2 = Marginal error between the sample and population size (0.05)

The researcher has been decided to take that true margin of error may exceed the acceptable margin of 10% with confidence level 90% and estimated proportion of an attribute that was present in the population p=0.5.

$N=1.96^2(0.5)(0.5)/0.1^2=100$ -- - - - - - - - - - - - - - - - - - -(3.2)

3.3. Method of Data Analysis

To achieve the objectives of this study, different methods of data analysis were used descriptive method and econometric analysis with the help of econometric software i.e. STATA. The data collected was analysed using descriptive statics and econometrics models. The descriptive analysis was used to determine percentages, mean, median, mode, standard deviation, range and to support the soundness of econometric model.

The econometrics section discusses the theoretical background of model specification, theoretical expectations of variables and regression analysis of the dependent on independent variables. Thus, part interprets the effect of the independent variables on household poverty and whether the variables used in the model are significant or not in determining household poverty.

3.4. Model Specification

Econometric models are weapons that enable to clearly identify the empirical relationships between the explanatory and the explained variable. These models would able to assess the quantitative relationship between the dependent variable and the independent variable when the independent variable is both continuous and discrete. Logit model is appropriate if the dependent variable is dichotomous (binary choice). The econometrics model would be used to quantify the urban poverty function with respect to potential variables that are considered the measure determinants of urban poverty in Grawa town.

Econometric Model the logit model is designed to analyse qualitative data reflecting a choice between two alternatives, which in this case are the poor and non-poor. The choice of the logit model is premised on the fact that ordinary least squares assumes a continuous dependent variable while in the case of poverty the response is a binomial process taking the value 1 for poor and 0 for non-poor. The parameters of this model will be estimated by using the maximum likelihood estimation rather than the movement estimation in which OLS regression technique rely on (Gujarati & porter, 2009). Probability of being poor is specified as the value of the cumulative distribution function which is specified as function of the explanatory variables.

To undertake this survey the above logit model will be employed and the response variable zi will be defined by the regression relationship depicted as follows:

$$[pi = E(y = {}^{1}/_{xi})] = \frac{1}{1 + e - (\beta o + \beta 1X1 + \beta 2X2 + \cdots + \beta n}$$

Where βi =coefficient of each explanatory variable

Xi= explanatory variable

For simplicity it can be written as:

$$pi = \frac{1}{1+e^{zi}} = \frac{e^{zi}}{1+e^{zi}} \qquad \text{Where } zi = \beta o + \beta 1x1 + \beta 2x2 \ldots . \beta nxn$$

The above equation represents cumulative logistic distribution function

pi =the probability of households being poor, then $(1 - pi)$ is the probability of non-poor which is $1 - pi = \frac{1}{1+e^{zi}}$ therefore it can be re written as $\frac{pi}{1-pi} = 1 + \frac{e^{zi}}{1+e^{-zi}}$ from this $\frac{pi}{1-pi}$ is the odds ratio in favour of the household being poor or the ratio of the probability that the households are being poor to the probability that the households are being non-poor.

We take the natural logarithm of the above; we obtain what the interesting logit model

$\ln\left(\frac{pi}{1-pi}\right) = \frac{1+e^{zi}}{1+e^{-zi}}$ Where $zi = \beta o + \beta 1x1 + \beta 2x2 \ldots\ldots + \beta nxn$

Therefore, the general logit model that used for estimation purpose is that to undertake this survey the above logit model will be employed and the response variable zi will be defined by the regression relationship depicted as follows: $zi = \beta o + \beta 1x1 + \beta 2x2 \ldots \ldots + \beta nxn$

$zi = \beta o + \beta 1age + \beta 2fams + \beta 3educ + \beta 4income + \beta 5waccess + \beta 6sex + \beta 7mrst + \beta 8howner + \beta 9hasset + \cup i$

Where $i_$ stands for households run from 1 to 105

$zi_$ Is the status of household being poor and non-poor

$\beta o_$ Is the intercept term

$\beta 1, \beta 2, \beta 3, \beta 4, \beta 5, \beta 6, \beta 7, \beta 8, \beta 9 \; and \; \beta 10$ Are set of coefficients for each explanatory variable

$\cup i_ \;\; is \; the \; error \; term$

3.5. Definition of variables and hypothesis

In order to identify factors affecting urban poverty in Grawa town both continuous and discrete variables will be hypothesize based on economic theories and the findings of different empirical studies. The explanatory variables are broadly categorized as demographic, socio-economic and human capital variables. Thus, the researcher simply and briefly lists the variables and suggests expected signs under this section.

3.5.1 Definition of Dependent Variables

This study is about poverty status which is a dummy variable and it assumes a value of "1" if the households are poor and assume a value of "0" elsewhere.

The probability of being poor depends on a set of variable X's so that:

$$Prob(y=1) = F(B'X)$$

$$Prob(Y=0) = 1-F(B'X)$$

To distinguish poor households from non-poor households the study was used poverty line. The food energy intake (FEI) approach was used in the identification of poor from non-poor. This was done based on predetermined value expressed in terms of calorie intake equivalent. This approach was preferred than the other approach due to food energy intake approach never use monetary terms unlike the other approach.

According to food energy intake approach 2200calorie is predetermined minimum energy requirement.

3.5.2 Definition of Independent Variables

Based on the theoretical; exposition and previous empirical studies, the following are hypothesized covariates of urban poverty. Households being poor and non-poor are the dependent variable which is estimated in logistic regression model.

Sex of households (sex): Sex is a biological difference of households which is vital in the context of poverty analysis. Access to vital resources and decision-making capability is biased against female households in favour of male households. Accordingly, sex assumes a dummy variable which assumes a value of "1" if the household head is male and assumes a value of "0" otherwise. According to Esubalew (2006) the probability for the household to be poor is high if female heads it. The study will hypothesize female head household's higher probability of being poor households. Hence sex affects the probability of being poor negatively.

Age of household head (age): Age of household is a continuous variable. According to the theory of urban poverty Esubalew (2006) puts that the household heads in the age ranges of 31-60 are the productive one whereby the probability of getting income is higher and the probability of being fall in to poverty reduce. According to jonsen (2007) when the age of the household increases the probability of being poor will increases. Accordingly, the study will hypothesize

that households in the productive age (15-64) affect the probability of fallen to poverty negatively.

Household size (fams): Household size refers to the total number of household members who are living and eating together for at least six months in a year. According to Esubalew (2006) the households with a larger size (greater than or equal to five) have more probability of being fallen in to poverty than those with lesser family size. In addition, according to Lawsen (2003), an increase in household size will have a positive significant influence on the likelihood that the households will chronically fail in to poverty. Accordingly, the study will hypotheses that household with large family size are vulnerable to poverty. Hence this variable affects the probability of being poor positively.

Marital status of household head (mrst): Marital status is a demographic variable that shows weather a household is single, married, widowed or divorced. It is a dummy variable which assumes a value of "1" if the household head is married and assume a value of "0" otherwise. Married households are mostly accessible for poverty. As the household is being married, the probability of being poor tends to increase. Hence this variable affects the probability of being poor positively.

Education of household head (educ): Education of the household indicates that the maximum educational attainment of the household. It is a continuous variable which is expressed in a years of attaining formal education. According to Mekonen, Berket and Abebe (2002), the percentage of poor people will decline as the level of education of the household head increases. Higher years of attaining formal will helps to create a human capital. This will reduce the probability of being poor. Accordingly, the study will hypothesise that the probability of being poor decrease as the education level of the household increases. Therefore, this variable affects the probability of being poor negatively.

Access to water (waccess): Water is the most important and principal element of life supporting needs that is important for survival. It is a dummy variable which assumes the value of "1" if the principal sources of water is private tape water and assume the value "0" otherwise.

There is access to private tape water means that household can easily use water for whatever they want. This reduces the probability of being poor. Hence this variable affects the probability of being poor negatively.

Monthly income (income): Income takes a continuous variable. According to Mekonen(2002) since urban life is a function of monetised economy, presence of income will play a direct positive effect on urban poverty. Accordingly, the higher the income that he or she will receive from his or her job the probability of being poor will reduce. Therefore, this variable will affect the probability of being poor negatively.

Household asset (hasset): Households asset is a cash as well as non-cash wealth that the household will accumulated. It is a continuous variable that express all assets in monetary unit. More household asset is expected to positively influence the welfare of households to poverty as it serves as a copying mechanism in the time of risk. Accordingly, this variable affects the probability of being poor negatively.

Home ownership (howner): This variable shows whether the household owns a house or it is rent form. It assumes a dummy variable which assumes the value of "1" if household head owns a house and assumes a value of "0" otherwise. The higher the probability that the household owns the house, the lower will be the probability of being poor. Hence this variable affects the probability of being poor negatively.

Table 3.1: Summary of explanatory variable and their expected sign

No	Variable name	Code	Variable description	Expected sign	Source
1	Age	Age	Age of the household head	Negative	Previous study
2	Sex	Sex	Sex of the household head	Negative	Previous study
3	Household size	Fams	Family size of the household head	Positive	Previous study
4	Marital status	Mrts	Marital status of the household head	Positive	Previous study
5	Education	Educ	Education of the household	Negative	Previous study
6	Access to water	waccess	Access to water ownership	Negative	Previous study
7	Monthly income	Income	Monthly income of the household	Negative	Previous study
8	Household asset	Hasset	Household asset	Negative	Intuition
9	Home ownership	Howner	Home ownership of the household	Negative	Previous study

CHAPTER FOUR

DATA ANALYSES AND INTERPRETATION

4.1 Identifying the Poor or setting poverty line

The food energy intake (FEI) approaches 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 order to identify poor from the non-poor the food energy intake approach (FEI) were used and is preferred to the CBN based on the following conditions.

First, fluctuation of the prices of the commodities and hence could not clearly show the reality in the consumption expenditure behaviour of the residents (World Bank report 2008/09).

Second, a large number of residents, particularly, those who reside in the border of the town have their own lands (who are urban farmers) do not buy cereals and have little expenditure for commodities such as Teff, Beas, wheat, maize and potato. Hence, they consume from what they produce. This could disguise the result if the study used the CBN method which values all costs in monetary terms.

Third, the CBN approach needs listing and quantification of basics and non-basics goods of different items in monetary terms while, the FEI approach never uses monetary terms that is why FEI is preferred. To minimize all the above problems scholars including development specialists have been busy probing for a number of alternatives among which the adult equivalent scale, which establishes on 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. The researcher argues; however, that in Gondar town households consume both marketable and nonmarketable goods, it is difficult to use equivalent scales revealed only from marketable goods. Therefore, instead of estimating the costs of consumption expenditure, or using CBN approach the study used the FEI approach.

To identify the poor households in Grawa town the following seven 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+ vegetable, Oil, Milk, Meat, and Sugar.

Step two: Each bundle of food item is weighted with the appropriate unit of measure.

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 + Vegetable + Oil + salt + Sugar + coffee + barely + onion + bean and pea. Mathematically it can be represented as, C1+C2+...+Cn (up to the last food item).

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 Amount in Kilograms or Litters of food items an individual consumed in a month. $\frac{\sum_{i=1}^{130} ci}{\sum_{i=1}^{130} si} = \boldsymbol{L}$ Where Ci is total baskets of different food items in kilograms or litters a household consumed in a month and Yi 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 equal to L/30.

Step six; 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 4.0. Calorie contents of different food items

Consumption per 100 grams	energy in calorie	consumption in per 100 grams	energy in calorie

Teff	355	Sugar	400
Maize	378	Salt	0
Wheat	351	Barley	354
Coffee	110	Onion	71
Vegetable	75	Bean and pea	310
Oil	896		

Source: EHNRI (1998) food composition table used in Ethiopia

Step seven: This is the last step the research used to get the number of poor and non-poor households in the study area.

The researcher used these calorie equivalents to get the number of poor and non-poor households in the study area. If Ci, is total calorie intakes of a household in a day and Si, 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.

$$\cdot \frac{\sum_{i=1}^{130} ci}{\sum_{i=1}^{130} si} > \mathbf{2200Calorie} \quad \mathbf{= 40\ respondents}$$

$$\frac{\sum_{i=1}^{130} ci}{\sum_{i=1}^{130} si} \mathbf{<2200calorie} \quad \mathbf{= 65\ respondents}$$

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, 60 and 70 respectively. Households above and below poverty line respectively tell the number of households who did and did not secure a predetermined minimum energy requirement of 2200 calories per day per equivalent. In the research there exist three indices of poverty as follows:

4.1 Analysis of the poverty measures

Poverty measures are indices that show the magnitude of poverty in society. The depth of poverty in the town is shown as follows:

Table 4.1: magnitude of poverty in Grawa town:

Incidence(po)	Depth(p1)	Severity(p2)
0.39	0.2842	0.1045

Source: own survey result, 2016/17

As depicted in the above table about 39 percent of the household heads lives below the poverty.

1. Head Count: P0 = Q/N = 70/130 = 0.5385 OR 53.85%

2. Poverty Gap: $P1 = \frac{1}{N}\sum_{i=1}^{q}\{Zi - Yi\}/Z$ $P1 = \frac{1}{130}\sum_{i=1}^{70}\{Zi - Yi\}/Z$ = 0.23 or 23%%

3. Severity Gap $P2 = \frac{1}{n}\sum_{i=1}^{q}(\frac{Z-Xi}{z})\,2$ $P2 = \frac{1}{130}\sum_{i=1}^{70}(\frac{Z-Xi}{z})\,2$ = 0.05 or 5%

4.2. Descriptive analysis

In this section we discuss descriptive analysis of the data. This part analysis the data obtained from the surveyed kebele by making use of descriptive statistics such as, percentages, ratios, graph and pie charts.

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 (Abiola and Olaopa, 2008).

Different scholars support this assumption by providing various Justifications. This could be due to the presence of discrimination against women in the labour 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. Nevertheless, the gap between male and female headed households in the above poverty line is relatively significant in that most of the female headed households have not escaped from the status of being below poverty line, while the males are experiencing less poverty. The study found out that being in a household of male-headed one is less vulnerable to the prevalence of poverty in Grawa town than those of female headed ones.

Table 3.1 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 4.2: Sex group of sample respondents

Sex of households				
Poverty index	Female	Male	Frequency	percentage
Below poverty line	22	18	40	38.46
Above poverty line	11	54	65	61.54
Frequency	33	72	105	100%
Percentage	30.76	69.24	100%	

Source:(own survey result:2019)

The above table shows that among the total surveyed households i.e. 105 household heads 40 household are live below the poverty line and among them 22 are female and the rests are male. From the total non-poor households i.e. 65 household who live above the poverty line, 11 household heads are female and 54 household heads are male. Therefore, the study found that the probability of being poor is higher as females become heads of the family.

Age and poverty

Most of the time literatures and some scholars argue that the level and extent of poverty Increase at old age. This is due to productivity of the individual decreases and the individual has Few savings to compensate for the decrease of productivity and income as he/she becomes older and older. As we all know most developing countries have low saving status during their productive age therefore, 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.

Scholars on the other side argue that age is correlated with higher productivity and hence impacts positive welfare (Ojo, 2008), A third view that could be neither of the above two views based on the life theory of human beings. 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) and Esubalw(2006) . The result shows that when the age of households becomes increase then the probability of households being below the poverty line performance becomes increase. The researcher classified the age of the surveyed households based on the rationality of when age Increases to certain level then level and extent of poverty also varies. As result the researcher classify age of households into 20-30, 31-40 41-50 and above 51. According to the following table, the average age distribution of the sample respondent is 50.3 with a maximum and minimum age distribution of 81 and respectively and the results of the survey is indicated on the following table below.

Table 4.3: Age group of sample respondents

	Poverty level of households		
Age of households	Above poverty line	Below poverty line	Percentage
20-30	17	10	21.54
31-40	22	8	24.62

41-50	25	7	26.15
Above 51	11	5	12.31
Total	75	30	100%

Source: (own survey result, 2019)

Marital status and poverty

In poverty correlate 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 there would be more labour forces in the household. (Quisumbing, 2002). The following table elaborates the situation more.

Table 4.4: Marital status group of sample respondents

Poverty index	Marital status			
	Married	Unmarried	Frequency	percentage
Below poverty	25	15	40	38.46
Above poverty	45	20	65	61.54

Frequency	70	35	105	100%
Percentage	69.23	30.77	100%	

Source: (own computation, 2019)

Family size and poverty

According to (World Bank 2009) report when there is large number of households then it tends to associate with poverty. The effect of household size on household living standard basically depends up on the degree of enmity in consumption among household members. When the consumption pattern in the family is increase as a result marginal increase in consumption benefits all household members. As the household size increases, the level and extent of poverty increase in the same way as well. According to the table 4.1 the average family number that the households have is 5.569231 with a maximum and minimum value of 1 and 12. In the table below as family size 1-2 experience low poverty, it gives around 2.30%. The households with large family size as of 5 and above experiences higher level of poverty is around 28.46%. The number of households that lay below the poverty line increases when the family size becomes high.

Table 4.5: Family size group of sample respondents

	Family size			total
Poverty index	1-2	3-4	5 and above 5	
Below poverty	3	10	27	40
Percentage	2.30	7.69	28.46	38.46
Above poverty	30	24	11	65
Percentage	30.77	22.31	8.45	61.54

Source: (own survey result, 2019)

Level of education and poverty

Szekely (1999) and Cortes (1998) found that education is negatively correlated with poverty in Mexico. In facts 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 much of the household head educational status is that literate one. Theoretically we know that when the educational statuses of households increase then the probability of being non poor is somehow lower than the probability of household being poor, because there is a common understanding that education increases human capital which in turn increases labour productivity and wages. Since labour is by far the most important asset of the poor, increasing education of the poor will tend to reduce poverty. According to table4.1 the mean of the respondents attaining formal education is 9.061538 with a maximum and minimum value of 31 and 0 respectively.

Table 4.6: Education level group of sample respondents

	Level of education							
Poverty index	Illiterate	Primary	Secondary	diploma	First degree	Above first degree	frequency	percentag
Below poverty	20	7	5	4	3	1	40	38.46
Above poverty	13	4	6	7	15	20	65	61.54

Source: (own survey result, 2019)

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 sin Birr to see whether it has correlates with poverty or not.

Table 4.7: Income level group of sample respondents

Income categories				
Poverty level	Lower income (<700)	Middle income (701-2100	Upper income (>2101)	Total
Below poverty	18	13	9	40
Percentage	16.15%	13.85	8.46	38.46
Above poverty	2	18	45	65
Percentage	1.54%	15.38	44.62	61.54

Source: (own survey result, 2019)

Housing and poverty

Housing Ownership in the urban area is really an important indicator of poverty in most developing countries. This indicator is of paramount importance because it is household's wealth, which generates income flows. The following table shows the probability of being poor and non-poor in the context of housing tenure.

Table 4.8: Housing group of sample respondents

Poverty index	Does households own house?			
	Yes	No	Frequency	Percentage
Above poverty	45	15	60	46.15%
Below poverty	20	25	45	53.81%
Frequency	65	40	105	100%
percentage	53.85	46.15	100%	

Source: (own survey result, 2019)

It is clear from the table that house ownership increases the probability of being non-poor where as it decreases the probability of being non-poor as one lacks it keeping all other thing constant. As shown above among the total of 60 sampled households (60.78%) which have house, 45 surveyed households live above poverty line and the remaining 15 households live under poverty line indexes.

4.3 Econometric Statistics

4.3.1 Regression result

The estimation of model result can be interpreted as follows: -

P-value= P-test will provide a clear idea whether the variables are jointly significant or not.

Model p-value= 0.000

Since prob>Z=0.000 reject Ho (which says the model is insignificant) at 5%level of significance implying that running the model is significant (important).

Pseudo R^2=0.7534

It means75.34 % of total variation of consumer attitude is explained by the model (all explanatory variables).

Table 4.9: Logistic regression result

```
. logit pov age fams educ income waccess sex mrst howner hasset

Iteration 0:   log likelihood = -72.203205
Iteration 1:   log likelihood = -18.495715
Iteration 2:   log likelihood = -17.903173
Iteration 3:   log likelihood = -17.806092
Iteration 4:   log likelihood = -17.805966
Iteration 5:   log likelihood = -17.805966

Logistic regression                             Number of obs   =        105
                                                LR chi2(9)      =     108.79
                                                Prob > chi2     =     0.0000
Log likelihood = -17.805966                     Pseudo R2       =     0.7534
```

pov	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
age	-.0949407	.0465161	-2.04	0.041	-.1861105	-.0037709
fams	.8152531	.4063998	2.01	0.045	.0187242	1.611782
educ	-2.781511	1.113346	-2.50	0.012	-4.963629	-.5993937
income	-.0009542	.0004048	-2.36	0.018	-.0017475	-.0001609
waccess	-1.552167	1.091187	-1.42	0.155	-3.690855	.5865202
sex	-.4991141	1.243998	-0.40	0.688	-2.937305	1.939077
mrst	.0993188	1.516295	0.07	0.948	-2.872565	3.071202
howner	-2.488156	1.417724	-1.76	0.079	-5.266845	.2905326
hasset	-2.992903	1.340283	-2.23	0.026	-5.61981	-.3659957
_cons	10.87926	3.966341	2.74	0.006	3.105376	18.65315

Source: - Own Computation, (2019)

4.3.2 Interpretation of the model result

1. Interpretation of key figures

Age: Negative sign with significance at 4.1%. It's decrease the probability of poverty by 9.4%, other things remain constant.

Family size=Positive sign with significance at 4.5%. It's increase the probability of poverty by 81.5%, other things remain constant.

Education=Negative sign with significance at 1.2%. It's decrease the probability of poverty by 78.1%, other things remain constant.

Income=Negative sign with significance at 1.8%. It's decrease the probability of poverty by0.09 %, other things remain constant.

Home ownership=Negative sign with significance at 7.9%. It's decrease the probability of poverty by 48.8%, other things remain constant.

Household asset=Positive sign with significance at 2.6%. It's increase the probability of poverty by 99.2%, other things remain constant.

From this the researcher conclude that almost all variables are statistically significant except water access, sex and marital status. The positive sign of marital status and the negative sign of sex and water access are insignificant.

Table 4.10: Odds ratio result

```
. logistic pov age fams educ income waccess sex mrst howner hasset

Logistic regression                             Number of obs   =        105
                                                LR chi2(9)      =     108.79
                                                Prob > chi2     =     0.0000
Log likelihood = -17.805966                     Pseudo R2       =     0.7534
```

pov	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
age	.9094269	.042303	-2.04	0.041	.8301819	.9962362
fams	2.259747	.9183608	2.01	0.045	1.018901	5.011734
educ	.0619448	.068966	-2.50	0.012	.0069875	.5491445
income	.9990463	.0004044	-2.36	0.018	.998254	.9998391
waccess	.2117884	.2311008	-1.42	0.155	.0249507	1.797722
sex	.6070682	.7551915	-0.40	0.688	.0530084	6.952328
mrst	1.104418	1.674624	0.07	0.948	.0565537	21.56782
howner	.083063	.1177604	-1.76	0.079	.0051599	1.337139
hasset	.0501417	.067204	-2.23	0.026	.0036253	.6935058
_cons	53064.42	210471.6	2.74	0.006	22.3176	1.26e+08

Source: - Own Computation, (2019)

2. Odds ratio interpretation

Odds ratio is the ratio of probability of success to probability of failure (Gujarati, 2004). In this model, it is the probability of being poor divided to probability of non-poor.

Age= When age increase by one, the probability of being non-poor is 0.90 times higher than the probability of being poor. This means age have negative effect on the living standard of the people.

Family size=When family size is increase by one, the probability of being poor is 2.25 times higher than the probability of being non-poor. This means family size have positive effect on living standard of the people, keeping other things being equal.

Education=When education increase by one, the probability of being poor is 0.61 times higher than the probability of being non-poor. This means education have negative effect on living standard of the people, keeping other things being equal.

Income=When income increase by one, the probability of being poor is 0.99 times higher than the probability being non-poor. This means income have negative effect on living standard of the people, keeping other things being equal.

Home ownership=When home asset increases by one, the probability of being poor is 0.21 times higher than the probability of being non-poor. This means home ownership have negative effect on living standard of the people, keeping other things being equal.

Sex=When sex increase by one, the probability of being poor is 0.66 times higher than the probability of being non-poor. This means sex have negative effect on living standard of the people.

Marital status=When marital status increase by one, the probability of being poor is 8.26 times higher than the probability of being non-poor. This means social status have positive effect on living standard of the people.

Water access=When water access increase by one, the probability of being poor is 7.26 times higher than the probability of being non-poor. This means price have positive effect on living standard of the people.

Home asset= When home asset increase by one, the probability of being poor is 6.37 times higher than the probability of being non-poor. This means home asset have positive effect on living standard of the people, keeping other things being equal.

From this the researcher conclude that almost all variables are statistically significant. This shows that independent variables are significantly affect dependent variable.

1.Test for multicollinearity

To detect multicollinearity, the researcher uses variance inflation factor (VIF). In this test if we have a choice, we would have VIFs to be smaller (other things being equal). But have rarely choice, if the researcher think that a certain explanatory variable needs to be included in regression to infer causality of explanatory variable, then we are hesitant drop them whether we think VIFs is too high cannot really affect that decision. If our main interest in the casual effects of one explanatory variable on dependent variable, and then we should ignore entirely the VIF of other independent variables coefficients. Finally, setting the cut off value for VIF which have concluded multicollinearity is a problem is arbitrary and not especially helpful. Sometimes the value of 10 is choosing. (Guajarati, 2004). Let we see VIF from the estimation result.

Table 4.11: Vif table

```
. vif, uncentered
```

Variable	VIF	1/VIF
age	14.17	0.070594
fams	13.22	0.075659
income	9.79	0.102165
educ	3.64	0.274535
howner	3.26	0.306453
waccess	2.84	0.351849
hasset	2.38	0.420716
sex	2.14	0.466948
mrst	1.66	0.602857
Mean VIF	5.90	

Source: - Own Computation, (2019)

The above table means of VIF and 1/VIF shows that there is no multicollinearity problem among variables. If mean of VIF value greater than 10 and 1/VIF value greater than one, we can say there is multicollinearity. Therefore, based on the following information there is no multicollinearity problem.

2. Test of heteroskedasticity

A. Breusch- pagan test

Look straight to the p-value is (preferable) 0.05 or smaller, then the null hypothesis is accepted and here significant evidence there is heteroskedasticity, but if prob-chi2is 0.05 or greater than, or then null hypothesis is rejected here in significant evidence there is no heteroskedasticity problem (Gujarati, 2004). Look the following estimation result.

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of pov

         chi2(1)      =     0.31
         Prob > chi2  =   0.5755

.
```

Source: - Own Computation, (2019)

From the above estimation result, we can compare critical p-value or the value of prob>chi2 greater than 0.05. This means there is no problem of heteroskedasticity, because 0.2586>0.05. (Michael, 2002)

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1 CONCLUSSION

The objective of the study was to assess determinants of urban poverty in Grawa town. Mainly the primary data sources (well-structured questionnaire) were used to carry out the study. A total of 105 household heads were randomly selected and the study was undertaken by a two-stage sampling technique in four kebeles of the town.

So as to set poverty line for the purpose of identifying the poor from the non-poor the researcher used the food energy intake approach. Based on this approach the study found that out of the 105 surveyed households 60 of them are found below the poverty line. Around 54.85 percent of the sampled households live below the poverty line, the head count ratio, poverty gap, and severity of poverty are 0.54, 0.23 and 0.05 respectively. It suggests that evidence about incidence of core poverty in the town. Variables, which were hypothesized to account for the incidence of poverty in the town, were selected and analysed. These were; sex, marital status, age, household size, education, water access, income, and home ownership. All of these explanatory variables were analysed through descriptive statistics.

A Logit model was employed to quantify the relationship between some selected determinants of poverty. In the econometric part the study employed the Logit model by using STATA12 software. Based on the descriptive and econometric analysis (Logit model) the following results were obtained.

The Logistic regression obtained four variables: family size, monthly income, housing ownership and household asset found statistically significantly affecting the incidence of poverty in the town. However, education levels were statistically insignificant for the incidence of poverty. The results of the model Stata12 software analysis showed that there is a positive and strong relation between family size and poverty in the town. Specifically, households with larger family size are more likely to fall into poverty than those with smaller family size.

The analysis undertaken in this study affirms that female-headed households experience poverty more than male headed ones. The researcher found that by using both descriptive analysis and logistic regression model variables which are statistically significant are; age, family size, education, income, home ownership, and household asset. Variables which are statistically insignificant are; sex, marital status, and water access. The variables that are positively correlated with the probability of being poor are family size and marital status. The variables that are negatively correlated with the probability of being poor are; age, income, education, home ownership and household asset.

5.2 Recommendation

- The study founds households with large family size are associated with poverty and statistically significance. So as to secure this problem the appropriate policies should be designed by the government such as, contraceptive which can be affordable at low price in which the poor can access. The other methods are family planning programs should be designed in line with different possible alternatives that make easily accessible for poor. With belief of that, the practice of family planning by the poor reduces the pressure of supporting large family members as well as the incidence of poverty.
- The study found out that education of the household is negatively correlated with poverty and statistically significance. It indicates that as the level of education of the household head increases the percentage of poor people becomes decline. Higher years of attaining formal will helps to create a human capital. This will reduce the probability of being poor. The implication is therefore that promoting households(people) in education and productive activity that should be designed by the governments and NGOs which should be an important element of poverty reduction policies in the town.
- The study found that households with above age 51 years are associated with poverty. The implication is therefore that the government, society and NGO'S should established old age association and any other means.
- The study found that income of the household is negatively correlated with poverty and is statistically significance. So as to secure this problem every household should be participate in productive activity that in order to increase their income levels. The implication is therefore that promoting the households in the way of productive activity

by their own policies as well as government policies such as micro-small enterprises and their own enterprise.

- The study found that home ownership is negatively correlated with poverty and statistically significance. It indicates that as home ownership of the household head increases the percentage of poor people becomes decline. So as to secure the problems of homeless the households should have to work hard as well as participate in any kinds of entrepreneur and the government also should have to be designed the policies by giving awareness to the people and other means of methods that help them as they own their individual home (home ownership).
- The study found that household asset is negatively correlated with poverty and statistically significance. It indicates that as asset of the household head in terms of both cash assets and non-cash assets increases, the percentage of poor people becomes decline. The implication is that households should participate in the way of improving their asset and the governments should have been aware them in the appropriate method that they can improve their asset for their life.
- 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 of designed policies and strategies of the government. Poverty reduction policies that could augment those household characteristics such as increasing household education improve family planning; expand income sources of the poor and sufficient amount of household asset and so the government as well as the society should wear the society to work and create their own entrepreneur as they own their home ownership are key areas of interference for the poor to become out from poverty.

APPENDICES

Appendix 1: REGRESSION RESULTS

A. Logistic Regression result

```
. logit pov age fams educ income waccess sex mrst howner hasset

Iteration 0:   log likelihood = -72.203205
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Iteration 2:   log likelihood = -17.903173
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Logistic regression                             Number of obs   =        105
                                                LR chi2(9)      =     108.79
                                                Prob > chi2     =     0.0000
Log likelihood = -17.805966                     Pseudo R2       =     0.7534
```

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hasset	-2.992903	1.340283	-2.23	0.026	-5.61981	-.3659957
_cons	10.87926	3.966341	2.74	0.006	3.105376	18.65315

B. Odd ratio result

```
. logistic pov age fams educ income waccess sex mrst howner hasset

Logistic regression                                     Number of obs   =        105
                                                        LR chi2(9)      =     108.79
                                                        Prob > chi2     =     0.0000
Log likelihood = -17.805966                             Pseudo R2       =     0.7534
```

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sex	.6070682	.7551915	-0.40	0.688	.0530084	6.952328
mrst	1.104418	1.674624	0.07	0.948	.0565537	21.56782
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hasset	.0501417	.067204	-2.23	0.026	.0036253	.6935058
_cons	53064.42	210471.6	2.74	0.006	22.3176	1.26e+08

C. Vif result

```
. vif, uncentered
```

Variable	VIF	1/VIF
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educ	3.64	0.274535
howner	3.26	0.306453
waccess	2.84	0.351849
hasset	2.38	0.420716
sex	2.14	0.466948
mrst	1.66	0.602857
Mean VIF	5.90	