DETERMINANTS OF URBAN POVERTY AMONG HOUSEHOLDS OF SEBETA TOWN, SHEGER CITY ADMINISTRATION, OROMIA REGION, ETHIOPIA

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DETERMINANTS OF URBAN POVERTY AMONG HOUSEHOLDS OF SEBETA TOWN, SHEGER CITY ADMINISTRATION, OROMIA REGION, ETHIOPIA

A thesis submitted to the department of economics in partial fulfillment of the requirements for Master of Science degree in Development Economics

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DECLARATION

I officially declare that the thesis work entitled "Determinants of urban poverty among households of Sebeta town" is my own original work and has not been presented in any other university. All resources that I have indicated in the thesis is properly acknowledged.

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CERTIFICATE

This is to certify that Garuma Fite Lamesa has carried out his research work on the title of "Determinants of urban poverty among households of Sebeta town" under my guidance. As Thesis advisor, I have evaluated this thesis work and I recommend it be submitted as partial fulfillment of requirements for Master of Science degree in development economics.

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APPROVAL SHEET

On behalf member of Board examiner, we have evaluated the thesis conducted by Garuma Fite entitled “Determinants of urban poverty among households of Sebeta town”. Therefore, we recommend this thesis be accepted in partial fulfillment of requirements for Master of Science degree in development economics.

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ACRONMY AND ABBREVATION

CBN	Cost of Basic Needs
CSA	Central Statistics Agency
ENPC	Ethiopia National Planning Commission
FEI	Food Energy Intake Approach
FGT	Foster – Greer – Thorbecke
GDP	Gross Domestic Product
HDI	Human Development Index
LPM	Linear Probability Model
IMF	International Monitory Fund
MDG	Millennium Development Goal
MoFED	Ministry of Finance and Economic Development
OPHDI	Oxford University Poverty and Human Development Index
PPP	Purchasing Power Parity
SDGs	Sustainable Development Goals
UN	United Nation
UNCHS	United Nations Commission Human Settlements
UNDP	United Nation Development Programme

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ABSTRACT

Ethiopia is known as a global where all people live in chronic condition of poverty. Especially, attention has not been given for urban poverty on findings and development studies of Ethiopia. The study was conducted with general objective determinants of urban poverty among households of Sebeta town. To gather data both primary and secondary data were used. The primary data source was collected from 361 household heads by distributing pre-prepared structured questionnaire while secondary data was collected from published and non-published materials. To determine general poverty line of the study town, a Cost of Basic Needs (CBN) approach of poverty measurement was employed and household heads in the town were identified as the poor and non-poor. Based on general poverty line in the town measurement of poverty indices head count poverty, poverty gap and severity of poverty were measured. The data was analyzed and estimated by employing descriptive statistics and Logistic regression model depend on the primary data with the probability of households being poor as a dependent variable, and demographic and socioeconomic characters as the explanatory variables. Econometric results of the binary logit regression model revealed that; sex, age, family size, health condition, education level, employment status, income, remittance, saving habit, social capital, asset ownership, access to credit, house tenure and migration were found statistically significant 1%, 5% and 10% significant level. The variables that were negatively correlated with the probability of being poor were sex, age, education, remittance, saving habit, social capital, access to credit, asset ownership, and house tenure. The variables those positively correlated with the probability of being poor were family size, employment status (unemployed), health condition and migration. Hence, the recommendations suggested in this study were cost of food and non-food items should be stabilized, promoting higher education, diversifying income of households, attention should be given to reduce family size, unnecessary rural to urban migration should be controlled, efforts should be done to enhance labor absorb market through job creation by the expansion of micro and small scale enterprises, advancing infrastructures like houses, water, electricity and health service.

***Keywords**: Urban Poverty, Household, Cost of Basic Needs, Logit model and Sebeta, Ethiopia*

CHAPTER ONE

1 INTRODUCTION

1.1 Background of the Study

Poverty is the most difficult economic, social issues and a global concern problem. It is a pervasive reality of the world and it has been considered as when people lack the means to satisfy their basic needs such as food, clothes and shelter. World Bank defined poverty as the inability to attain a minimum standard of living (World Bank, 2007). As well as viewed as encompassing both income and non-income deprivation, lack of empowerment, deprivation well-being and extreme poverty is when someone lives on less than predetermined poverty line (World Bank, 2018).

According to the World Bank (2023), about 9.2% of the world or 719 Million people live on less than $ 2.15 a day. Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) defined poverty as top priority issues because it affects both developing and developed countries (Melamed, 2014). Across all nations, the composition of poverty is revealed in multi-dimensions both rural and urban nations.

All common standard measures of poverty classified Ethiopia as one of the world's poorest nations, and the country's HDI score of 0.463 is lower than the region's average of 0.537 (UN, 2019). According to the World Bank Group (2014) more than 30% of Ethiopia's population was lived below the national poverty line in 2011 and 31% made less than US$1.25 PPP a day. Therefore, the proportion of the population those live below poverty line is quite high. Ethiopia had successfully reduced poverty rate from 56 % to 29.6 % between 2000 and 2017 (World Bank, 2017). However, it was not consistent with the country's fast economic growth and rapid urbanization. Ethiopia's MPI estimation shows 68.7% of the population in Ethiopia is multi-dimensionally poor in 2021 and the intensity of deprivations in Ethiopia, which is the average deprivation score among people living in multidimensional poverty, is 53.3% (UNDP, 2023). Poverty in Ethiopia is also determined with household characteristics when relatively compared to richer households, poor households in urban areas tend to have a larger number of dependents, old aged household heads, unemployed families and more female headed households (Debeli, 2019). This is evented due to lack of assets for urban households such as land and livestock, which are

available in rural areas. An estimate by MoFED (2012) reported that 27.8% of Ethiopian population was unable to meet their basic needs of which 25.7% was urban.

In Ethiopia the rate of urbanization has been accompanied by increase of urban poverty together with dwells crowding, inequality distribution of development benefit and the change in the ecology of urban environment (Mohammed, 2017). Over the last decades, Ethiopia had scored tremendous development gains in education, health, and economic growth. However, Ethiopia still remains one of the poorest countries in the world, with an estimated annual per capital income $ 790 (USAID, 2023). Recently Ethiopia has faced a confluence of shocks, some from emerging from within the country and from the global economy. The simulations show that rates of poverty (head count ratio) have increased in all regions compared to 2015/16. For example, in 2022 head count ratio for Addis Ababa and Dire Dawa might reach as high as 24% and 23% respectively compared to 17.8% and 15.4% in 2016 (UNDP, 2022).

Poverty reduction was especially rapid in urban areas where average consumption per capita grew by 6% per year, thrice higher than in rural areas, where the poorest 20% did not experience any growth. Although the Gini index shows remained relatively low, at 35 in 2016, inequality rose due to the diverging welfare trends between urban and rural areas in Ethiopia (World Bank, 2023). By the standard of rural areas, urban areas may be considered as the better living standards. However, poverty in most urban areas is rapidly rising and rapid population growth because of migrants from rural to urban areas suffered by drought, famine and displacement. This creates strain on labor market and urban social service provisions and rises cost living of the welfare of urban residents. The head count index shows that the poverty level in the Oromia area was decreasing over time. In 1999/00 it was 39.9%, in 2004/05 it was 37%, in 2010/11 it was 28.7% and in 2015/16 it was 23.9%, but in 2016 Oromia's region level of absolute poverty was 23.9% recorded higher poverty headcount index than the national level which was 23.5% (ENPC, 2017). Contrary to all these accomplishments, literary studies conducted by many researchers in selected area of nation showed that the number of urban poor is rising at unheard of rate (Gemachu, 2023).

Generally, based on the evidences in urban Ethiopia and regions poverty is not stabilized as well as urbanization increases so does urban poverty increase that exposes residents falling into poverty. To have a valuable intervention and reduce poverty it requires identifying the basic causes of poverty in the urban context and need to measure it. Therefore, identification of determinants of

poverty needs to prefer the intervention directions for tackling poverty from location specific context. The study has tried to identify the determinants of urban poverty and recommended policy options for poverty reduction in the Sebeta town.

1.2 Statement of the Problem

In Ethiopia all across the cities, many of people live in desperate poverty without access to adequate shelter, school, clean water, electricity, hospital, road and basic sanitation (World Bank, 2015). Indeed, some observers consider that poverty is now mainly an urban problem. In urban areas, all measures of inequality show a substantial increase in inequality in Ethiopia across socio-economic with an extreme economic growth rate (Kuznar, 2019). In Ethiopia as monitoring surveys shown household incomes was impacted through a reduction in aggregate demand and more than half of the households' incomes were reduced or had totally disappeared and disproportionally concentrated among low-income urban households due to COVID-19 pandemic (Word Bank, 2021). In urban centers where waged employment is higher, poverty rates are lower. However, as rates of waged employment increase so does the number of people searching for these jobs increase, resulting very high rates of unemployment in the largest urban centers in Ethiopia.

Ethiopia is one the least urbanized countries in Africa, population size is growing by 2.9 % per year. Over 12 million are now living in cities and many of these children will be born in poverty (United Nation, 2019). Therefore, urban poverty in Ethiopia is reflected in the forms of beggary, growing number of homeless, high rate of dependency ratio, illiteracy and street women and children and increasing trend in youth and adult unemployment (Ibid). Rapid pace of urbanization mainly fueled by rural urban migration is transferring poverty from rural to urban areas.

In Oromia region, Sebeta town has been facing Rural-urban migration, population growth, and lack of infrastructure. This town is geographically located near to Addis Ababa the capital city of Ethiopia that attracts large numbers of employees and job seekers. Many people are living surrounding Addis Ababa city like Sebeta in order to find job opportunities, access to service, and an overall better standard of living, residents change their residence. As recent evidences show, migration to the study area are highly increasing and these problems are leading population density, unemployment, homelessness, economic scarcity, beggary, and street children and women in the study town. Large numbers of residents are participating in occupations, which have limited returns like small-scale industries; they make their business of selling Coffee and Tea, different

items in the market and illegal materials. However, the income earned from these occupations is inadequate regarding to expenditure for consumption and services such like electricity, pipe water, tuition fee and healthcare.

The other problem in the study town is lack of urban infrastructure that can reshapes the town and improves life standards of the community. Urban infrastructures have the potential to run a diverse range of social, environmental, and economic impact (World Bank, 2023). In view of the many theoretical literature that investments in infrastructures such as road, electricity, water and et, are key to ensure high levels of standard of living and economic growth and overall it has negative effect on poverty and inequality (Ambaw, 2020). From these infrastructures, urban roads are the key to link the inner areas. It determines the smoothness of material and information between the inner areas of the town. Town size can affect the cost of household travel (more cars on the road), spatial distance, congestion, traffic jams, and pollution.

Generally, in this town there are not adequate the electric power, water supply, communication network, healthcare and road crowded. Especially, access to electric power, water supply, and road is a series problem in the town. The electric power and water are highly interrupted within short time of interval. As well as the main and network roads that pass between the town is very tight and crowded. The main road pass along this town is only one direction path that is not suitable freely driving car and it is causing for traffic accident. Therefore, lack of infrastructures would lead less productivity, less investment attractiveness, unsustainable economic development, economic deficit, poverty, unemployment, and difficulty for poor people access to market and services provisions.

Poverty reduction enhances ultimate goal of all development and by implication development policy focusing attention on the poor could be contributing to both growth and equity. Focusing on these problems Government Should implement remedial policies, spread standardized infrastructures, control Rural-Urban migration, and increase job opportunity.

1.3 Research Questions

- What are the main determinants of urban poverty in the study town?
- What is the gap and extent of poverty in the study town?
- What are the appropriate policies in alleviating urban poverty of the study town?

1.4 Objective of the Study

1.4.1 General objective of the study

The study was conducted to analysis the determinants of urban poverty among households of Sebeta Town, Shegar City Administration, Oromia Region, Ethiopia and alleviate urban poverty of this town.

1.4.2 Specific objective the study

- ✓ To identify the main determinants of urban poverty of the study town.
- ✓ To estimate the gap and extent of poverty status of households' in the study town.
- ✓ To suggest remedial policy based on the findings of urban poverty of the study town.

1.5 Significant of the Study

This study would reduce poverty by identifying the main determinants of urban poverty that sets socio-economic and demographic characteristics of households as well as it determined the poor households and non-poor households by the standard measurement of urban poverty in the study town. It also conducted in order to aware government, institutions and NGO as the planning development and implementation process targeted on poverty reduction.

Ultimately, the beneficiaries from the recommendations of the study directly and indirectly in the study town are 85,848 households and 336,975 populations respectively as well as the study will gives insight to determinants of poverty other urban of Oromia. Additionally, this study would give information for different researchers, government, institutions, NGO and other on determinants of urban poverty for the coming gap.

1.6 Delimitation (Scope) of the Study

Poverty is pervasive and a global issue. Especially it is a series agenda in less developed countries like Ethiopia in different towns. But this study was limited to Sebeta Town, Shegar City Administration, Oromia Region, Ethiopia and it covered four sample kebeles from the total of nine kebeles administrations. The study was focused on main determinants of poverty that contains socio-economic and demographic characteristics of households in the study town.

1.7 Limitation of the Study

In this study lack of respondents' knowledge, willingness and expectation were faced when the data was collected as well as getting updated data was difficult on some variables. Many

Respondents were not willing to tell their actual income by underestimating and overestimate their expenditure in the study town. The study was used cross-section data that analyzes data from a population at one point in time so it does not show a clear situation of poverty over the time. Urban poverty is a multitude function factors. But, in this study some variables were analyzed to assume determinants of urban poverty due to scarcity of financial, resource, and time. Therefore, this study has not covered other determinants of urban poverty in the study town.

1.8 Organization of the Study

This research paper was contained five chapters. The first chapter was dealt with background of the study, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study, limitations of the study and organization of the study. The second chapter discussed on review of concepts of the study, empirical literatures and conceptual framework relevant to objectives of the study. While, chapter three deliberately dealt with descriptive of study area and research methodology as well as chapter four also was focused on major results and discussions. Finally, chapter five presented the summary, conclusion and recommendations in the study.

CHAPTER TWO

2 LITERATURE REVIEW

2.1 Concepts of Poverty

The word poverty derived from the Latin word pauper meaning poor, which has its roots in the words pau- and pario that is giving birth to nothing referring to unproductive livestock and farmland (Westover, 2008). Based on this concept, poverty may have many different aspects and have many different definitions. Typically, it alludes to a lack of abilities or resources necessary for respectable existence. There are three main approaches to analyze poverty. These are the welfare approach, the basic needs approach, and the capability approach. But, whatever the definition, poverty can be defined either in absolute terms below a fixed threshold line of income or basic needs satisfaction, or as relative poverty depending to a specified proportion of median incomes of the population(Sen, 2001). Although each strategy and policy uses a different concepts of poverty and a different mechanism to identify the poor people, these are all dichotomous and consider individuals or households being poor if they don't have that specific poverty line, as explained in (Rowntree, 1901) and (Atkinson, 1975).

2.1.1 Absolute poverty

Absolute poverty is measured relative to a fixed living standard (income threshold) and constant across time. It always measures poverty used to compare poverty between countries and then they are not just kept constant over time, but also across countries. The International Poverty Line is the best well known for measuring absolute poverty as a world. Some countries also use absolute poverty measures as a national poverty line. These measures are very crucial so that comparisons referring to a minimum consumption or income level over time are possible (Max Roser and Esteban, 2017).

2.1.2 Relative poverty

Relative Poverty is measured relative to standards of living in a specific society, and not constant both across time and between societies. Measuring poverty in relative approach is that the degree of deprivation depends on the relevant reference group of society, based on this measurement, communities are considered as poor if they earn less income and opportunities than other communities living in the same society. In different reasons, relative poverty is measured with

respect to a poverty line that is defined relative to the median income in the corresponding country. This poverty line classifies people as poor if they have income below a common fraction of the income of the person in the middle of the income distribution. Due to this, relative poverty can be considered a measurement of inequality that measures the gap or distance between those in the middle and those at the bottom of the income distribution.

Relative poverty can be also measured by using the poverty headcount ratio and the poverty gap index. For example, these approach are common in Europe. However, it is important to bear in mind that these are not comparable to the estimates published by the World Bank the nature of the International Poverty Line is different (ibid).

Todaro and Smith (2003), revised development economists, driven the inequality approach to define poverty based on tangible phenomena. They classify the economic gap between the rich and poor as to how poverty operates in a particular society and how someone can conceptualize it. Based on this they tried to look at the nature and the size of the differences between the bottom 20 or 10% and the left of the society. In order to give remedy for the problem distribution between the rich to the poor can make substantial development all poverty in many societies. It is important to note that poverty and inequality are different concepts and neither subsumes the other though they share close definitions.

2.1.3 The capability criterion

This school is emphasized neither the economic wellbeing nor the basic needs needed 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 poverty which tells the extent to which people have capabilities to be and to do things of intrinsic worth. Sen (1987:109) defined poverty not only people being of low level of well-being, but also as lack of ability to meet well-being consistently because of scarce of economic means. He wrote also 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 wider set of criteria for evaluating poverty than just income or consumption perspective. This approach incorporates the problem of social exclusion in the idea of poverty and much broader than the basic needs approach. This approach is particularly relevant for gender differentials because even women belonging to

non-poor households by the income or basic needs criteria may be absolutely deprived in terms of the capability.

2.1.4 Food Energy Intake Approach (FEI)

This approach depends on the poverty line as the income or consumption expenditure level that to meet a threshold food energy intake to an individual. The level of FEI depends up on preference, age and sex of an individual. After taking these differences into account and the costs of attaining predetermined Food Energy Intake amount, the poverty line can be determined. This could be obtained by calculating the consumption expenditure or income level at which the person takes the food energy level (Ravallion and Bidani, 1995). Most researchers argue that consumption approach is a better measures of well-being for the following reasons. First, consumption is a better measures 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 rather than income. This is especially true in where poor agrarian economies, because income fluctuation is occurred according to harvest cycle and as a result of large informal sectors in urban economies of the developing countries. Consumption or expenditure perspective is better reflect household's actual standard of living and ability to meet basic needs. Thus, consumption expenditures refer not-only uses of goods and services but also access to credit markets and savings in times of lower or even negative income level (Couldouel *et al.*, 2004). This does not mean that, however, this approach is free from drawbacks.

2.1.5 Chronic Poverty

Research suggests that approximately one-third of all people who are income poor at any one time are chronically (always) poor. Andrew Mckay and Bob Baulch provide a well-regarded '' guess time'' that around 300 to 420 million people were chronically poor at the $ per day level in the late 1990s sited Economic development (Todaro and Smith, 2009). According to Kedir(2005) in Ethiopia there is the little evidence that reveals on urban chronic poverty in detail and the most of the studies were reviewed and presented a static view of urban poverty rather than focusing on the dynamics of poverty over time. But, this study suggests that future research should focus on a dynamics analysis of household welfare.

2.2 Context of urban poverty

Urban bias was become a mainstream view among development institutions in the 1970s and 1980s. In many developing countries, poverty reduction strategies were reoriented to improve living standard in rural areas. From the mid-1980s, structural adjustment policy has reinforced these efforts by removing subsidies given to urban consumers and raising prices to market levels to favor rural producers. However, the study in the 1980s and 1990s has revealed great diversity in the extent and depth of poverty within the urban sector in the third world. Some writers were arguing that the depth of poverty is worse in deprived urban than in rural communities (Wratten, 1995).

The main characteristics of urban settlemets, Satterthwaite (2001:146) argued that urban poverty expects to fulfill six major reflections are suggested as follow. These are **1.** adequate income which gives adequate consumption of basic necessities and services often escape problems of indebtedness.**2.** adequate asset base both material and non-material including education attainment for individuals and households. **3.** adequate house which is typically of non-poor quality, and secure.**4.** adequate provision of public infrastructure and basic services like piped water, sanitation, electricity, school, hospital, training center, public transport, communication, emergency services, drainage, roads, footpaths, and so on which increases healthcare and often decrease work burden. **5.** adequate protections of poorer groups' rights through the application of the rules and regulations regarding civil and political rights, health and safety, environmental health, protection from violence, discrimination, and exploitation.**6.** all society should engage in decision making and participation in political systems. But in many findings for poor groups no means of ensuring accountability from agencies, NGOs, public agencies and private utilities Global urban poverty as they engage in political system (Mabogunje, 2005).

Urban poverty in Ethiopia is particularly revealed by lack of the basic facilities in and around the house. Lack of adequate shelter, poor sanitation, inadequate hospitality, inadequate school, lack of access to clean drinking water, and absence of toilet facilities are characteristics of urban poverty (MoFED, 2004)

Measurement of poverty

Measuring poverty on specific bases began in Britain at the end of the 19th century. The approach was to determine the living standard for a sample of households by carried out poverty analysis

(Marwell, 1999). Poverty definition is crucial, but measuring it is often challenging. It mostly facilitating poverty comparisons that are necessary for assessing a country's efforts to combat poverty and/or its policies and programs (United Nation, 1996). There are enormous tools available to measure the kind and severity of poverty in a culture. The poverty line and the poverty index are these tools. Someone having a level of consumption below the poverty line are seen as being fall in poverty when compared to the consumption of an individual or household as a whole. As the cost of living increases, so does poverty lines increase. Since 1990, the international poverty line had risen from $1 a day to 1.25 daily, and in 2015 to $ 1.90. The figures rose from $ 1.90 to $ 2.15 in September 2022. This means that $ 2.15 is necessary to buy what $ 1 could buy in 1990 (World Bank, 2022). The head count poverty, poverty gap, and severity poverty or FGT indices are the three most known often poverty indices in several literatures.

Head Count Ratio

The headcount ratio is people whose incomes are below the absolute poverty level, Yp, is one way to quantify absolute poverty. It defined the headcount index, H/N (also known as the "headcount ratio") as the headcount divided by the total population, N, (Todaro and Smith, 2009).

It is an index that reveals the percentage of people who are insensitive to variations in poverty levels, meaning that once someone is classified as poor, the index does not accurately express the level of poverty they are experiencing. Second, it has no consideration for how the poor are distributed in terms of money. This is how it is provided:

$$\mathbf{P_0} = \frac{q}{N}$$

Where:

q = the number of people with consumption expenditure or income below the poverty line

N=total population

The Poverty gap/depth index (P1)

The Poverty Gap Index(P1) which explicit an indication of the aggregated gap between individuals that are classified as poor and the determined line that is needed to reach out of poverty. That is :-

$$P1 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{[Z - Yi]}{Z}\right)$$

Where:

Yi = consumption expenditure or income of the poor

Z = poverty line

The Foster - Greer – Thorbecke Index / The Severity index (P2)

The poverty index used in this particular study is the (Foster *et al*., 1984). It is often referred to as the FGT index. To calculate the severity of poverty, squaring and averaging the difference between the poor's consumption expenditures or income and the poverty line. Given a vector of appropriate well-being measures, Y, they are ordered in ascending order, Y1, Y2, Y3, ... Yn, where n is the number of households being taken into account for the FGT poverty index.

$$P2 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{[Z-Yi]\alpha}{Z}\right) \qquad \mathbf{0 \leq \alpha \leq 2 \text{ for } Y_i \leq Z}$$

Where, **Pα** is measurement of poverty **Z** is poverty line for the household

Y denotes household income **α** is the poverty aversion parameter (α≥0).

q is the number of the poor households

If α equal to 0, then Pα will be decreased to the headcount ratio, if α equals to 1, Pα gives the poverty gap, shows how far the poor on average, are below the poverty line (intensity of poverty). When α equal to 2 gives the severity of poverty. So, this poverty index gives greater weight to the poorest of the poor.

The World Bank's World Development Report uses two income cut-off points or poverty lines: those with an income per capita of below US$ 370 per year (at 1985 purchasing power parity) are deemed poor, while those with less than US $275 per year are extremely poor. In 1994, 1,390 million people were identified to fall into the "poor" category. Within countries, income and consumption data have been used by the Bank to classify different groups such as the "new poor"

(the direct victims of structural adjustment), the "borderline poor" (those on the brink of the poverty line, who are pushed under it by austerity measures) and the "chronic poor", who were extremely poor even before adjustment began. In addition to calculate the headcount index (the proportion of the population below the poverty line), the Bank assesses the severity of poverty by calculating the poverty gap index (the ratio of the gap between the poverty line and the mean income of the poor expressed as a ratio to the poverty line).

Income-defined poverty lines are problematic for a many of reasons. Income is a useful indicator if we want to identify which persons are likely to lack the resources to achieve a socially acceptable standard of living. However, it does not measure accurately their capacity to achieve access (which may be influenced by other factors such as education, information, legal rights, illness, threatened domestic violence or insecurity).

Incomes are commonly used to analyze at the household level. Yet, individual members of a household do not have equal utilization over resources, and those with low entitlement to consume resources (for example due to their age, gender or social status) may be hidden within relatively prosperous households. Moreover, adjustments have to be made in order to compare households of different size. Using the World Bank criterion of US$ 370 per capita, all seven members of the larger family would be classified as poor, whereas the single adult would not. Per capita incomes take no account of the economies of scale which benefit the larger household (such as savings on cooking fuel by preparing food in bulk) or the particular needs of people of different ages or different gender roles. Nor is it easy to value home production or earnings from self-employment, which are generally assumed to be important income sources for the urban poor (Amis, 1995).

Poverty is widespread in Ethiopia with a significant proportion of the population lacking the basic necessities of life such as lack of food, clothing, and shelter. In addition, lack of access to education and medical care, widespread unemployment and lack of income also exacerbate the magnitude and severity of poverty in the country (Abebe, 2002) sited in (Hulala, 2020).

2.3 Empirical Literature Review

Determinants and extent of poverty in urban Oromia, Ethiopia

Different findings have been done with regards to the determinant of poverty. The determinant of poverty can be classified as economic factor and household characteristics. Age, sex, family size,

level of education, health condition, and et. On the other hand, economic factors include income, and employment status in the economy (Melese, 2017). Most of the studies econometric analysis examines the factors related to individual households identified determinants of household's welfare by regressing total household expenditure (i.e. the measure of living standard) on different explanatory variables. Urban areas in Ethiopia are in state of expansion without the necessary preconditions and this is paving the way for visible urban poverty. Access to housing, health, and education services, education, basic sanitation, labor market, social institution, transportation facility, energy availability, technical skill and financial are the lowest level (Solomon, 2017).

Empirical studies indicate that the urban poor are more vulnerable to economic problems than the rural poor because of their greater reliance on market both for income generation and to procure basic goods and services. The 2008 economic crisis, for instance more seriously affected urban areas that rely on the market than the rural ones (World Bank, 2009). The implication here is that unless appropriate poverty alleviation policies and strategies are designed by the government and followed by effective implementation, urban poverty will be higher than rural poverty in the near future. This further explains the positive correlation between urbanization and urban poverty in Ethiopia (Bikila, 2011). The crucial determinants of poverty among the majority of mega cities and big urban areas; and nowadays the problem facing even medium towns of the third world is 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 (Dilala, 2020). According to the Ethiopian Ministry of Labour and Social Affairs, the poverty head count ratio in urban Ethiopia was 17.6% in 2019/2020, which means that about 17.6% of urban population lived below the poverty line.

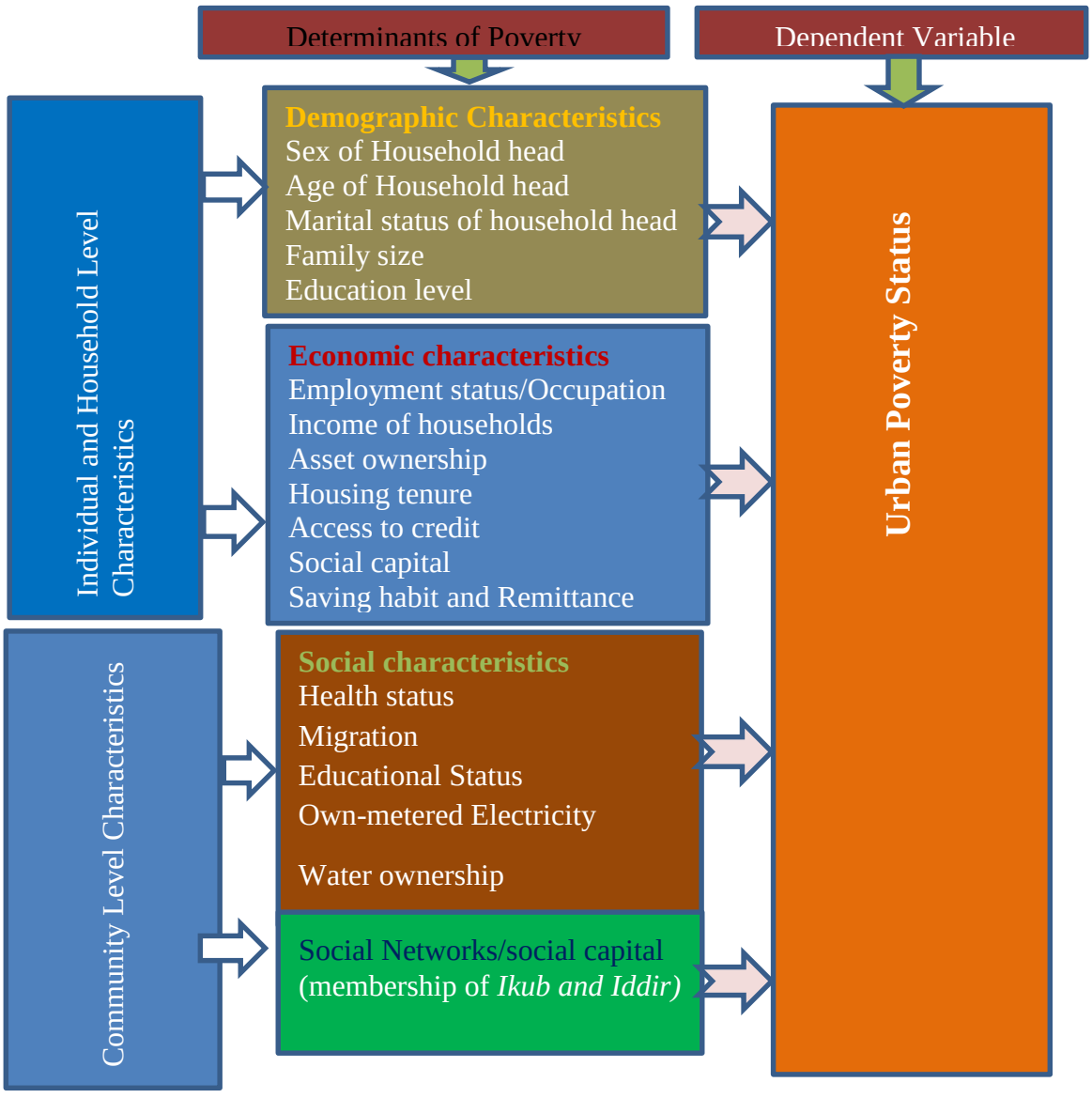
In recent year, Ethiopia has faced a confluence of shocks, some from emerging from within the country and some from the global economy. UNDP's simulation analysis indicates that poverty has risen in Ethiopia due to the shocks and the rising cost of living, especially for food. Rising poverty has impacted urban and war-affected areas the most, with significant variations among regions. The simulations show that rates of poverty (head count ratio) have increased in all regions compared to 2015/16. For example, in 2022 head count ratio for Addis Ababa and Dire Dawa might reach as high as 24% and 23% respectively compared to 17.8% and 15.4% in 2016 (UNDP,

2022). In Oromia region poverty levels are also high. A 2019 study by the International Labour Organization found that the poverty rate in Oromia was around 28.7%.

2.4 Conceptual Framework

The followings are the key determinants of poverty classification. These are classified as community-level characteristics, which include the availability of infrastructure such as roads, water, and electricity and services (health, education), proximity to markets, and social relationships/social capital (ikub, iddir, and etc). Household and individual demographic characteristics are the most important such as age structure, gender of household head, marital status of household head and household size. Economic characteristics are employment status of household, income of household, social, saving habits of household, asset ownership of household, household house tenure, access to credit service, remittance, and hours worked.

Figure 1: Conceptual framework



CHAPTER THREE

3 RESEARCH METHODOLOGY

3.1 Description of the Study Area

Sebeta town is one of the Oromia towns and is the capital town of Sebeta Awas district of Oromia special zone surrounding Finfine as shown in Figure 1, situated at about 24 km southwest of the Addis Ababa along Jimma road and located within an approximate geographical coordinate of $8^0$53N, $8^0$59'N latitude and $38^0$35'E, $38^0$39'E longitude (Tewodros, 2021) It was called Sebeta Awas before changed to Sheger City Administration. It shares common boundaries with Addis Ababa in the North, Northeast, and East, Burayu town in the North, and rural villages of Sebeta Awas district to the South and West. It has got municipal status in 1954. Total area that is covered with the current base /topographic map of the town is estimated about 99 sq. km. According to the Master plan of the town which was prepared in 1988 E.C. Sebeta has about 1762 hectares of a reserved total area from which about 433 hectares of land is actually urbanized. In addition to this, according to the reform of 1996, Sebeta town total area is estimated that 17.62 Sq.kms accounting for 0.18% of the zonal area (Tayiba, 2013).

There are many facets of shape of an area. The longest and shortest axes of Sebeta boundaries measured from topographic map are 16.97 km and 8.64 km respectively. Hence, the computed result is about 1.9 indicating that this town has a relatively oval shape. Weather condition of the town is classified under Woynadega zone that has the same general climatologically characteristics as that of Addis Ababa. The temperature of this town area lay in the temperate climatic zone with a temperature range of 12.7^0c to 24.4^0c.

The present Sebeta town consists of 9 Kebeles: Sebeta (01), Alemgana (02), Welete (03), Furi (04), Dima (05), Daleti (06), Sebeta 2 (07), Kerabu(08), and Garabollo(09). According to the data obtained from Sebeta town municipality, the current total population is 336,975, of 139,131 men and 197,844 women with a total 85,848 households and an average family size of 4.8 members. The peoples are composed of Oromo, Amhara, Gurage as a major ethnic groups and others also found. Afan Oromo and Amharic languages are widely used languages of communication in the town where as Afan Oromo is an official language of the town (Mutanda Hosea, 2021).

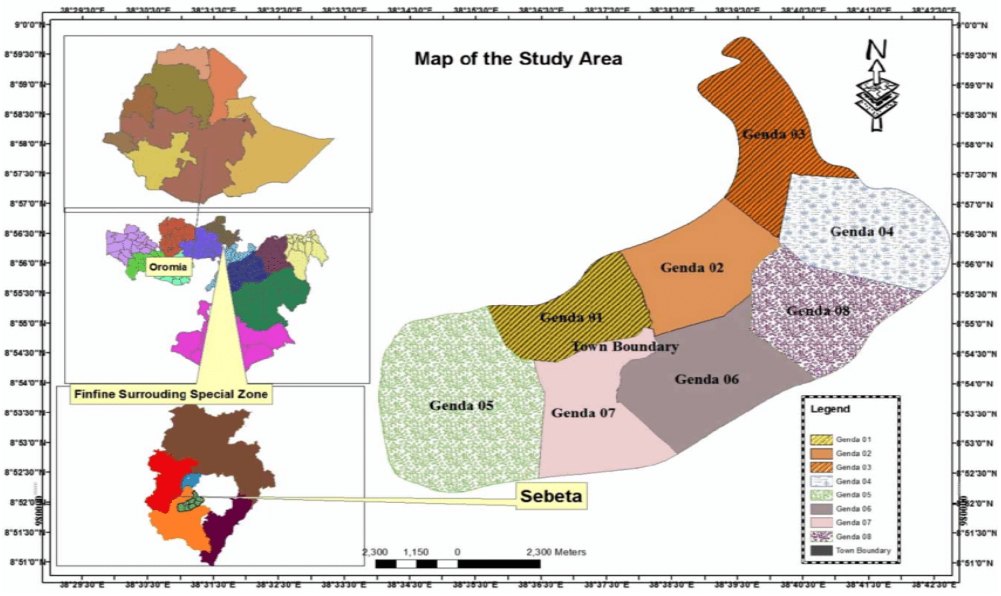


Figure 2: Geographical location of Sebeta town

3.2 Data types and Sources

This study was applied both quantitative and qualitative methods to clarify concepts and analyses poverty status the study town. Data was collected from primary and secondary data sources. Primary data was obtained directly from sample respondents on different variables such as sex, age, marital status, health status, and education levels etc, using quantitative and qualitative methods. The study used cross-sectional household survey data which is collected from the selected sample households. It was collected by using structured questionnaire and interview based on sample of households.

Secondary data was collected through review of relevant literatures on urban poverty and from various sources such as reports, Journals, Articles, research center, books, Central Statistical Agency (CSA), Woreda Administrative office, online and published and unpublished materials of developing countries and Ethiopia which are relevant to study**.** Then the data collected from both primary and secondary data was analyzed and interpreted using appropriate statistical method and econometrics presentations.

3.3 Sample Size Determination and Techniques

Sebeta town has 9 urban kebeles. These are Sebeta (01, 05, 07), Alemgena (02, 06, 08), GaaraBollo (09), Welete (03), and Furi (04).. In order to get the sample kebeles and households two stages sampling techniques were applied.

The first stage was used to select the sample study kebeles by applying simple random sampling techniques from nine of Sebeta town kebeles and the second stage is used to select sample households. After simple random sampling method applied, sample kebeles selected were 01, 02, 04, and 08kebeles. The sample size of households was calculated from the sample of each kebele which was calculated in proportion number of total household sample size. To determine total sample size of households the following Cochran's sample determination formula was applied.

$$\mathbf{n} = \frac{\boldsymbol{Z\text{^}2pqN}}{\boldsymbol{e^2(N-1) + Z\text{^}2pq}}$$

Where,

N= is the population size (total households)

n = is sample size

p = probability of sample households being poor in urban of Oromia is 62% (Tamiru, 2020).

q = probability of sample households being non-poor in urban of Oromia is 38% (Tamiru,2020).

z= number of standard deviation at a given confidence level for 95% (1.96),

e= acceptable error (precision) 0.05

$$\mathbf{n} = \frac{(\mathbf{1.96})\text{^}\mathbf{2}\ (\mathbf{0.62})(\mathbf{0.38})\mathbf{85,848}}{(\mathbf{0.05})^2(\mathbf{85,848}\ -\mathbf{1}) + (\mathbf{1.96})\text{^}\mathbf{2}(\mathbf{0.62})(\mathbf{0.38})}$$

$\mathbf{n} = \frac{\mathbf{77,699.393}}{\mathbf{215.523}}$ **= 361 total sample size households**

The sample size of households of each sample kebele was proportionally calculated based on the given total households of each sample kebele and the determined total sample size (361) of households.

Table 1 ; Total sampled household‘s proportion to the total population size from sampled kebeles.

No	Sample kebele	Total Hh	Sample Hh	Percentage share
1	01	10,253	89	24.61%
2	02	9873	85	23.56%
3	04	10,334	89	24.61%
4	08	11,327	98	27.23%
Total	4	41,787(100%)	361(100%)	100%

Source: own computation

Hence, 361 households were selected from each sample kebeles selected by using simple random sampling method.

3.4 Methods of Data Analysis

3.4.1 Descriptive analysis

To describe the situation of demographic and socioeconomic variables of the household descriptive analysis is made. In descriptive analysis, the specific method data analysis is involved such as tabulation and cross tabulation, frequency, percentage, and mean in the study town. The analysis is used to assess the overall livelihood of the population in the study town.

3.4.2 Model estimation

The researcher used empirical models to identify the poor from the non- poor and measure poverty status of the study town. The data was analyzed and discussed applying poverty index, descriptive statistics and Binary logit regression model analyses.

3.4.2.1 Approaches to measure poverty

The most common known procedures when choosing variable to measure poverty is an individual's income or expenditure. Both income and expenditure have their own advantage and disadvantage when using them as monetary variables for measuring poverty. Annual income seems to be the best method to determine the household's economic capacity, but it only reveals partial estimation. As well as, household have goods, assets, etc, which also influence the standard of living that households can support them. In addition, income of someone can vary from one year to the next year without there being changes to living conditions. On the other way, the expenditure variable is more stable, as household doesn't modify spending habits when occasional decreases to income and depends more on concepts of permanent income. However, selecting of expenditure as the monetary variables has its own disadvantage. It is obvious households' consumption depends on environment, customs acquired over time, there is not direct relationship with assets, and difficult to detect households' consumption during data collection. In any approach, it is important not to forget that the majority of measurement errors are inevitable. Notwithstanding, both variables income and expenditure are subject to measurement errors.

A poverty line is used to determine a household's poverty status those who fall below a certain predetermined level of income are considered poor while households those who earn above predetermined income levels are considered non-poor. There are two poverty thresholds the food poverty line and the general poverty line. The food poverty line is the amount of money needed to buy a basket of food items in the study town that can purchases the minimum calories intake while the general poverty line is a higher threshold that affords the purchase of both the basket of food items and a minimum number of non-food items. Both the food and general poverty lines are determined using the cost of basic necessities approach. For cost of basic needs (CBN) approach to determine the poverty line of the study town the following three premises were taken for the study area. (1) Putting a food basket that provides 2200 calories per day, (2) calculating out how much this basket of food items would cost, (3) figuring the general poverty line, that adds money for non-food items to the food poverty line. The average Ethiopian needs 2200 calories per day. However, the number of calories needed varies between age, gender, and physical activity, so averagely population groups come to be 2200 (PDC, 2018).

Therefore, the poverty line in the study was based on the cost of 2200 Kcal of food consumed per day by adult plus a small for necessary non-food items. A pricing questionnaire was prepared in order to identify a food price and its amount. The amount of each adult individual receives in a month is determined by dividing the weighted bundles of food items consumed by a household in a month by the corresponding adult equivalent unit of the household. All food per adult units consumed in a month are divided by 30 days to determine the daily food requirements for each adult equivalent unit in the household. Then, the total calories are compared to the predetermined minimum calories needed per day for an adult equivalent. Although everyone would concur that there are significant non-food requirements and it is difficult to determine the minimal standards for non-foods needs because unlike food needs.

Nonfood needs can be defined as the nonfood expenditures whose food expenditure is equal to the food poverty line. This assumption is based on that households balance their food and nonfood needs, so households that are just at the points of meeting their food needs are also assumed to be just at point of meeting their nonfoods needs. Hence, the general poverty line was determined for the study town.

After the number of poor households decided those who were lived below poverty line their head count poverty index, gap of poverty and severity poverty was measured as follow. By squaring and averaging the difference between the poor's consumption expenditures or income and the poverty line, it calculates the severity of poverty.

$$\boldsymbol{P\alpha = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{[Z-Yi]\alpha}{Z}\right)} \qquad \mathbf{0 \le \alpha \le 2 \text{ for } Y_i \le Z}$$

Where, $\mathbf{P\alpha}$ is measurement of poverty

$\mathbf{Z}$ is poverty line for the household

$\mathbf{Y}$ denotes household income

$\boldsymbol{\alpha}$ is the poverty aversion parameter ($\alpha \geq 0$).

$\mathbf{q}$ is the number of the poor households

If α equal to 0 then Pα will be decreased to the headcount ratio. If α equals to 1, Pα gives the poverty gap, shows how far the poor on average are below the poverty line (intensity of poverty).

When α equal to 2 gives the severity of poverty, so, this poverty index gives greater weight to the poorest of the poor.

3.4.2.2 Model speciation

Logistic regression is a suitable, simpler case of multinomial regression. The logit model is more preferable for this study due to the limitation of LPM and the normality assumption of probit model which makes it difficult to test (Westfall's blog, 2018). The log function is useful because it can take as an input any value from negative infinity to positive infinity, whereas the output is confined to values between 0 and 1. The dependent variable(outcome) in logit model expected to be a value of either one or zero depending on whether a household is poor or not. Binary logistic regression was used to analyze the relationship of households' poverty status and its determinants.

Because the linear probability model has the following limitations to estimate the assumption of OLS normal probability model.

1. **Non-normality: -** Because Yi can take on only the values of 0 and 1, the error **εi** is dichotomous as well as not normally distributed: If Yi= 1 which occurs with probability **πi**, then, εi= 1− E(Yi)

   = 1− (α + $\beta 1 Xi$),

   = 1−πi

If Yi= 0, which occurs with probability 1−πi, then

εi= 0−E(Yi)

= 0− (α + $\beta 1 Xi$)

= 0−πi

= −πi

Because of the central-limit theorem, however, the assumption of normality is not critical to least-squares estimation of the normal probability model.

2. **Non-constant error variance:-**If the assumption of linearity holds over the range of the data, then E(εi) = 0, Using the relations just noted, V(εi) = πi(1- πi)^2 +(1- πi)(-πi)^2

= πi(1- πi) so the heteroscedasticity of the errors bodes ill for ordinary least squares estimation of the linear probability model, but only if the probabilities **πi** get close to 0 or 1.

3. Non linearity: Most seriously, the assumption that E(**ε**i) = 0 that is the assumption of linearity is only tenable over a limited range of X values.

If the range of the X's is sufficiently broad, then the linear specification cannot confine **πi** to the unit interval **[0, 1].** It makes no sense to interpret a number outside of the unit interval as a probability.

The other is the Logit and Probit models are almost identical and the choice of the model is arbitrary. Although Logit has certain advantages to simplicity and ease of interpretation and the parameters of the two models are scaled differently. The parameter estimates in logistic regression tend to be 0.6 to 0.8 times higher than they are in a corresponding probit model.

Logit model is appropriate when we expect the random components of response variables follow binomial distribution and when most variables have categorical responses. The dependent variable in the model is dichotomous. The logit model expresses the dependent variable as a function of a set of explanatory variables k in the following form:

$\text{pi} = \frac{1}{1+e\text{^}-z\,i}$ equation (1), where zi=α+βx1, as zi (-∞, ∞), pi (0,1)

$(\frac{pi}{1-pi}) = e^{zi}$ equation (2), $\frac{pi}{1-pi}$ is odd ratio

In this study the explanatory variables were inserted in the mode as follow

$\ln(\frac{pi}{1-pi}) = zi = \alpha+\beta1x1+ \beta2x2\ldots+ \varepsilon i$ equation (3), we can estimate this model

$zi = \alpha + \beta1sex + \beta2age + \beta3mstat + \beta4fmsize + \beta5healthC + \beta6edu + \beta7emplS + \beta8inco + \beta9savh + \beta10socialc + \beta11remit + \beta12accredit + \beta13asset + \beta14houseT + \beta15watown + \beta16electrown + \beta17migration + \varepsilon i$

3.5 Hypothesis and definitions of variables

Many researchers have been engaged to analyze level of poverty by using the main types of data in both developed and developing country using variety variables. Then, this study reviews main

explanatory variables commonly used by researchers and they have a significant influence on poverty status of households in urban areas of Ethiopia. These were discussed as follow.

Household heads' sex

Being a male household headed or female household headed has impact on their living standard and poverty status (UNDP, 2022). According to Dilala (2020), Female household heads 59.2% are poor while 40.9 male household heads are poor in urban of Ethiopia. Being female head in household is positively affects the likelihood of remaining poor. Because female household heads are busy on different tasks at home like care for child or they may not engage in equal participation in the labor market, access to education and asset ownership. Consideration of urban poverty often neglects differentials between male and female in terms of generate and access to income, benefits, resources and services. Such differentials may occur between men and women households or between individuals (between single man and single woman) or between households with women-headed households.

Household heads' age

Some researchers show poverty increases at old age because the ability of individual productivity decreases that lead low income and saving. Others suggest that age is correlated with higher productivity and impacts welfare positively. The third argument that might be worthy is that neither of the two approaches be correct.

Therefore, the relationship between age and poverty could not be linear, because as we expect that incomes would be decrease at relatively young age, increases at middle age and then decreases again (at old again). According to life theories to assess that poverty is relatively high at young ages, decreases at middle age and then increases again at old age (Szekely, 1998).

Household heads' marital status

Marital status of a household head has its own impact on poverty status of household. As context Ethiopia married or with spouse households are more exposed to poverty and where there are early marriage and economically inactive condition are popular when compared to unmarried individuals (Teshome and Sharma, 2008).

Therefore, in this study the correlation between married households and urban poverty expected to be positive.

Family size

According to the different study showed that, households who have large family size with jobless, non-earning income, the probability of falling into poverty than those have small family size in Ethiopia (Mulugeta, 2019). Because of inconsistent between household size and resource ownership, the study depicted that in the existing literatures some show a positive, opposite, and both positive and negative correlation between household size and poverty. So, measurement of poverty should be given more attention especially for the adjustment of household size and composition for equivalence scale. Without making these adjustments carefully the relationship between household size and poverty would be distorted (Anonymous, 2019). So, the relationship between family size and urban poverty is hypothesized as the above arguments.

Household health condition

Poor health can limit individual ability to work, reduce economic opportunities, inhibit education access, and lead to medical debt and bankruptcy**.** This is tightly linked to income and strongly influenced by public policy must be viewed as healthy policy. McKinsey Global Institute reveals that chronic conditions, like back pain, and migraines can reduce the income of households by up to 5%. Giving health a priority Jagannath University (2019) and paying attention to areas with highest return can improve resilience, and promote individual's livelihood, social, and economic well-being. So, a poor health condition of households' is hypothesized as positive relationship with poverty.

Household educational level

Education plays a great role to reduce poverty and in increasing the welfare of the poor (World, 2016). It has a positive correlation with consumption, in urban and rural areas. Even completing informal education shows significant increases in consumption, showing that investment in adult education may also returns in Ethiopia (FDRE, 2018). Literacy is the most essential key of the quality of life and literate household heads are less likely to be poor than illiterate household heads. This indicates education might increase earning power, improves the occupational, geographic

mobility of labor, and technological usage. Literate household heads would be in a better position to escape from poverty. According to Metalign (2005); Sepahvand (2009) education has a significant correlation with poverty where schooling increases household welfare by 8.5%. So, the level education reduces the risk of poverty and it has negative relationship with poverty.

Households' employment/occupation status

In many findings on urban poverty economically an active has also played a vital role in deciding the likelihood of household poverty. Compared to households led by a wage earner household with the self-employed head are less susceptible to poverty (Melese, 2017). Employment status is a dummy variable which is categorized as employed and unemployed individuals or economically inactive. In this study it took 1 value if the household head employed and 2 otherwise.
Therefore, it is resulted that poverty is negatively affected by the employed household heads.

Households' income

Poverty is a state where a portion of the population in a country lives below the level of income, termed as the 'Poverty line' or the predefined level of income per day that is required for having a basic standard of living in that country. This research ensured a negative correlation between income and poverty. Urban poverty could also be determined by the income of individual. In Ethiopia, historical evidence reveals that in most cases, the family depends on a single breadwinner. This single breadwinner, usually, does not have the capacity to satisfy the need and interest of the whole family, particularly those families composed of under age (children), youngsters, the old aged, and the extended families. This would have a negative effect on families to expose vulnerable life. The study revealed that the income, good financial behavior of household heads has vital role in reducing their poverty status (Endalkachew, 2022).

Households' saving habit

Households those who save money have a better probability of escaping poverty and they expenditure after consumption for further investments or production (Meseret and Zelalem, 2019). It is a dummy variable that implies whether or not households who have a monthly savings in formal and informal financial institutions (1=have saving, 2 otherwise). Therefore, in this study the households those who saved money were showed negative correlation with poverty.

Remittance

Remittances plays a vital role in poverty reduction beyond the macroeconomic benefits especially for female-headed households and also used for consumption expenditure rather than investment, most likely at low levels of income (Berhe, 2014). One of the categorical responses of independent variables that used to measure poverty represents whether or not the household heads have remittance (1 is yes and 2 is no). Households who had remittance have a less risk of probability of being impoverished.

Households' social capital

Social households' can be considered of as social capital such family system, society interaction (like Ikub and Iddir), and networks of the institutions. This is social capital that households have participated to through social agreement (Meseret and Zelalem, 2019). If the household heads are participate in social capital (Ikub/Iddir), it takes value 1 and 2 otherwise. In the study town the household heads that belongs to social capital revealed a lower probability of being poor.

Access to credit service

Credit service is a dummy variable that takes value 1 when urban households access credit service and 2 if they not access. It is seen as an important source of income for the individual's commercialization. This way is the one that urban households would less likely to face extreme poverty via structured and organized financial services. Several findings show the role of financial services is great in escape out households from poverty. It is also used for raising productivity, and opportunity to access capital assets, and businesses that generate profits (Mosley *et al*., 2007).

In the event of a cash shortage in the home, credit can also be employed as a consumption smoothing mechanism (Meseret and Zelalem, 2019). Therefore, it was expected that households who access credit services would be less likely to be poor than those who do not access in the study town.

Households' asset ownership

The term "asset" indicates to a household's ownership such as house, land, machinery, buildings, cars, and durable things, as well as its financial returns, such as liquid assets, savings, and other financial assets. Land possessing is the most importance in poverty reduction that consequences economic growth, social development, and governance. In rural and urban area, own to land is the backbone of economic and social existence (Fiseha, 2009). So, Land and livestock ownership had

a significant influence on the likelihood that a household would not be poor (Dawit, 2011; Babu and Reda, 2015). It was expected that households' asset would contribute to alleviate poverty. As a result, households possess different assets were negatively correlated with probability of falling into poverty in the study town.

Households' house tenure

Lack of access to secure and safe housing is a basic feature of urban poverty. House tenure housing plays great role in productive asset and access to credit to secure a livelihood may depend on property ownership which can used as collateral. The price and availability of land for housing influence on housing tenure and lead to the development on non-official for those poor who have low capacity to pay, though quantity, accessibility and tenure of housing are all important (Masika, 1997).

Households' water ownership

Households who don't have private tap water in their compound is more likely to be poor than those who have and this variable have negatively correlated with poverty status. It is hypothesized that the probability for a household to be poor is low if they have private tap water in their compound (Mesfin, 2014).

Households' electrometer ownership

Access to electricity does not determine on the level of income. Rather it is mostly depended on an issue of overall availability. There is very much difference in the percentage of the population with access to electricity as a lighting source across the urban spectrum. Access to share electricity connections appear to be the norm in major towns and Addis Ababa, where virtually the entire population is covered by the grid. However, the escalation of the present tariff for electricity made households to shift from using the same energy for cooking to buying of charcoal.

This brings at least two visible consequences. Firstly, the price of charcoal gets high in which the poor could not afford to buy. Secondly, it leads to the unselected 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 direct/indirect effects to the well-being of the country as a whole.

Migration

Urban poverty is reflected in the growing number of urban destitute (Beggary, Street children, Homeless) and rural to urban migration is the first activity they are faced in their life journey (Tegegne, 2019). Therefore, migration to urban is hypothesized positive correlation with poverty

status. In this study migration is a dummy variable it takes value 1 if the households are migrated and 0 otherwise.

Explanatory variables

Variables	**Hypothesis effect**	**Variable nature**	**Description**
Dependent variable			
Poverty status	Positive	Dummy	1= if household is poor, 0= otherwise
Explanatory variables			
Household heads' sex	Negative	Dummy	1 = if household head is male, 2 = otherwise
Household Heads' age	Not linear	Continuous	Age of the household in number
Household heads' marital status	Negative		1= if household head with spouse (married), 2= otherwise
Households family size	Positive	Continuous	Number of person in the household
Households health condition	Positive	Dummy	1= if household with frequent patient number, 2 = otherwise
Households education level	Negative	Continuous	Education level of the head in years of schooling
Households employment status	Negative	Dummy	1= if household head employed 2 = otherwise
Households income	Negative	Continuous	Amount of birr earned per month
Households saving habit	Negative	Dummy	1 = if households have saving, 2 = otherwise
Households Remittance	Negative	Dummy	1= if households have remittance, 2 = otherwise
Households access to credit	Negative	Dummy	1= if households access credit, 2= otherwise
Households social capital	Negative	Dummy	1 = if households have social capital, 2 = otherwise
Households asset ownership	Negative	Dummy	1= if households possessing asset, 2 = otherwise
Households house tenure	Negative	Dummy	1= if households have house, 2 = otherwise
Households water ownership	Negative	Dummy	1 = if households have private pipe, 2 = otherwise
Households electrometer ow/ship	Negative	Dummy	1= if households have private electrometer, 2= otherwise
Households migration	Positive	Dummy	1 = if households migrated, 2 = otherwise

Table 2: Description of dependent and explanatory variables

CHAPTER FOUR

4 RESULTS AND ANALYSIS

4.1 Setting Poverty Line

Food poverty line and nonfood poverty approach or cost of basic needs (CBN) was used to identify the poor from the non-poor. This was based on a predetermined values expressed in terms of calories intake adult equivalent plus nonfood poverty line. To determine the food poverty line of the study town the following premises was taken to account.

Step one: The food items were enumerated and listed which consumed in the study area. The food items available in this area are teff, maize, wheat, barley, beans, peas, lentil, edible oil, vegetables and fruits (cabbage, pepper, carrot, onion, ginger, potato, tomato, beetroot, coffee, mango, orange, papaya, banana), milk, butter, meat, sugar and honey.

Step two: Each bundle of food item was weighted with unit of measure in kilogram or liter. To get amount of food bundle item consumed by household in a month each of the weighted bundles of food items are summed together. For instance, teff + maize + wheat + barely + beans + peas +lentil + edible oil + ginger + potato + tomato + vegetables +fruits + meat + milk +butter +sugar +honey. Mathematically, it is written as K1 + K2 +K3 …+Kn, where K refers the value of each food basket in kilogram or litter.

Step three: The total value of basket of food items consumed by a household in a month was divided to the sample size of the household to get the amount of kilograms each adult individual gets in a month.

Let, L is amount in kilograms or litters of food items in kilogram an individual consumed in a month, Xi is the total basket of different food items in kilograms or litters a household consumed in a month and Yi is the family size of the surveyed household.

Note: To make easy to understand amount of calories intake per day at household level deciding the individual is a representative of household level.

Step four: To get the amount of kilograms each adult individual consumed in a day the amount of kilograms each household consumed in a month was divided for 30 days. This was equivalent to

L/30. Step five: The amount of kilograms consumed by an individual in a day were again converted to calories intake and compared to the predetermined 2200 kcalories per day per adult equivalent. In order to get the price of kilograms which can provide the amount of 2200 kcalories the current average price market of all food items were calculated or determined. The average price of a kilogram food bundle in the study town was 215. The amount of kilograms needs to be 2200kcalories was calculated as follow. 1Kg = 7716.18 Kcal, this become 2200Kcal = 0.2851 Kg. Then, this amount was multiplied by the average price of food bundle and the price needed for the amount 2200 K calories was determined in the study town. Therefore, 0.2851 * 215 = 61.30 birr per day, again when this amount is converted to per month 61.3 birr *30*5 =1838.89 *average family size (4) = 7355.56 ETB. So food poverty line is 7355.56 ETB. The below table was used to compute the average poverty line for urban Oromia and Ethiopia and adopted from (PDC, 2018)

Table 3: Food basket items used to compute poverty line

Food items	Kcal needed to get 2200 kcal**	Average consumption /day/AE/g	Kcal/ day/AE	Price/ 100g/mlt	Re-evaluated daily calories/AE*
Cereals un-milled	302.80	278.24	959.93	2.01	963.19
Cereals milled	1,153.58	58.51	212.99	3.79	213.72
Pulses un-milled	80.32	15.84	54.33	2.65	54.52
Pulses milled/split	82.75	46.88	162.21	6.42	162.77
Oil seeds	6.98	0.00	0.00	0.00	0.00
Cereals preparations	0.73	6.42	23.37	2.37	23.45
Bread, Prepared foods	31.66	8.25	17.17	6.55	17.22
Meat	7.20	9.32	18.36	3.58	18.42
Fish	0.24	0.00	0.00	0.00	0.00
Milk, cheese and egg	15.50	148.37	176.56	6.77	177.16
Oils and fats	13.63	31.03	274.31	7.56	275.24
Vegetables	36.62	104.43	44.90	6.44	45.06
Potatoes, tubers	1.27	31.16	20.88	2.50	20.95
Fruits	23.38	61.12	34.84	3.95	34.95
Spices	392.07	20.13	52.15	10.45	52.32
Coffee/Tea	22.36	13.56	6.37	12.19	6.39
Salt, sugar	28.93	34.66	134.12	2.68	134.57
	2200		2192		2200

Column 6, Obtained by multiplying each item in column 4 by the ratio between the minimum caloric intake (2200) and the caloric intake from average consumption (2192).

Nonfood poverty line is the ratio of the food poverty line to the share of lowest 25 percent of expenditure distribution. The percentage share of the lowest 25% population = 0.1786. Accordingly, nonfood poverty line is 4110.45 ETB. Hence, the general poverty line of the study area per month is the sum of food poverty line and nonfood poverty line, which are 7355.56 ETB + 4110.45 ETB = 11,466.01 ETB per month.

Therefore, households those who earn income below 11,466.01ETB are considered as poor and above this line are considered as non-poor. As the gathered data in this study showed, from the total 361 households survey in Sebeta town 218(60.39%) households were below poverty line (poor) and 143(39.51%) of households were above the poverty line (non-poor).

Poverty indices: - In the research poverty indices are poverty index, gap and poverty severity.

1. Head count ratio: $P_0 = q/N$, where q is number of households which are below the poverty line, N is total sample of households (population).

   $P_0 = 218/361 = 0.61$

   This means 61% of the sample households were unable to meet the minimum requirement of poverty line of the study town.

2. Poverty gap: $P1 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{[Z-Yi]}{Z}\right)$^1 where, Z is poverty line, Y is income of poor households

   = 107.0158/361 = 0.296

   The result indicates the total resources or income transfer needed to close up the average gap or distance separating the poor from the poverty line or the town needs to mobilizes the resources equal to 29.6 percent of poverty line for every adult equivalent individuals and distributes these resources to the poor the amount required to move them to poverty line.

3. **Poverty severity or squared poverty gap (P2): is called Foster-Greer-Thorbeck.** This index revealed income inequality or variation among the poor households. It is weighted sum of poverty gaps and by squaring the poverty gap index, the measure implicitly puts more weight on households who fall well below the poverty line

$$P2 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{[Z - Yi]}{Z}\right)\text{^}2$$

P2= (0.296)^2 = 0.087, the FGT severity poverty index in the income revealed 8.7% fall below the threshold line.

This result shown in the study town the head count poverty, gap of poverty, and severity poverty are higher than the recent reported for urban Oromia that was approximately 28.6%, 14.1%, and 6.4% respectively (IMF and WB, 2022).

Based on the poverty line, the variables included in determinants of urban poverty among households of the study town were analyzed and interpreted as follow.

4.2 Descriptive Analysis, Demographic characteristics of the sampled households

Findings of the study shows that out of the 361 sampled households, 34.63% were female headed and 65.37% were male headed. The distribution of households' marital status reveals that 61.23% were with spouse (unmarried), 16.07% were unmarried, 16.62% were divorced and 6.09 % were widowed. The ethnic group of the sample households of 60.94% them are Oromo, 23.27% Amhara, 1.94% Tigrie and 13.85% belongs to other ethnic. The distribution of religion sample households shows 34.35% are Christian protestant, 28.81% are Christian Orthodox, 26.04% are Muslim, 3.88% are Christian Adventist, 2.22 are Christian Catholic and 4.71% are belongs to other religion.

Household heads' sex and urban poverty

In the study town there are 241 male household head and 120 female household head. Out of male household heads 120(49.79%) were poor while 121(50.21%) household heads were non-poor. For female household heads 98 (81.67%) were poor while 22(18.33%) were non-poor and statistically significant at 1% (see Table 4 and Appendix B1). This finding revealed the percentage prevalence of poverty was high for female household heads than male household heads and so female household heads were vulnerable for poverty than male household heads in the study town.

This study also agreed with Dilala's finding (2020) that was concluded as the female household heads were more exposed to poverty than male household heads.

Table 4: Household heads' sex and urban poverty

Sex	Poor households		Non-poor households		Total	
	Number	%	number	%	number	%
Male	120	49.79%	121	50,21%	241	100%
Female	98	81.67%	22	18.33%	120	100%
Total	218	60.39%	143	39.61	361	100
Pearson chi2 =34.0243						

Source: Own survey result, 2024 *** statistically significant at 1% significant level

Household heads' age and urban poverty

In the study town households' head age was categorized as 18-40, 40-60, and >60 and the result of study depicted the degree of poverty was increased as the age group increased from 18 to 40, 40 to 60 and >60, they were 55.32%, 60.87%, and 85.71% respectively see Table 5 and the coefficient is different from zero at 1% (see Appendix B2).

Szekely was concluded the correlation between age and poverty could not be linear which means poverty is relatively high at young ages, decreases at middle age and increases again at old age. However, the study result in Sebeta town revealed as age increases the degree of poverty so does increase.

Table 5: Household heads' age and urban poverty

Age category	Poor households		Non-poor households		Total	
	Number	%	number	%	number	%
18-40	104	55.32%	84	44.68 %	188	100
40-60	84	60.87 %	54	39.13 %	138	100%
> 60	30	85.71%	5	14.29 %	35	100%
Total	218	60.39%	143	39.61%	361	100%
Pearson chi2 = 11.4176						

Source: Own survey result, 2024, *** statistically significant at 1% significant level

Household heads' marital status and poverty

In the study town the marital status was categorized as married, unmarried, divorced, and widowed. Out of married household heads 107(48.42%) were poor while 114 (51.58%) were non-poor. This result shows the percentage of non-poor households are greater than poor households for married household heads but for unmarried, divorced and widower households the percentage of poor households are greater than non-poor households (see Table 6 and Appendix B3).

According to Sharma (2008) Ethiopian married household heads were vulnerable for poverty than unmarried household heads and economically inactive contrastingly the result of this study revealed the prevalence of poverty for married household heads were less than unmarried households.

Table 6: Household heads' marital status and urban poverty

Marital status	Poor households		Non-poor households		Total	
	Number	%	Number	%	Number	%
Married	107	48.42%	114	51.58%	221	100
Unmarried	41	70.69%	17	29.31%	58	100
Divorced	50	83.33%	10	16.67%	60	100
Widowed	20	90.91%	2	9.09 %	22	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 37.5873						

Source: Own computation result, 2024 *** the coefficient is different from zero at 1%

Household family size and poverty

The survey finding in Sebeta town revealed that as the size of family increases so does increase the degree of poverty because the sign of coefficient between them were showed positive and statistically significant at 1% (see Table 7 and Appendix 4). Therefore, this study shows urban poverty and family size have similar in the study town.

Table 7: Household heads family size and urban poverty

Group	Observation	Mean	Std. Dev	Std. Err
Poor household heads	218	3.825688	2.095616	0.1752443
Non-poor household heads	143	4.531469	1.853352	0.1255248
Total	361	4.105263	1.98046	0.1042347
t-values 3.3586				

Source: Own survey result, 2024 *** statistically significant at 1% significant level

Households health condition and poverty

As the result of the study in Sebeta town the households suffered by disease 107(84.48%) were poor and 19(14.52) were non-poor. But, majority of healthy households were not failed in poverty or the number of non-poor households were large compared to poor households and statistically

significant at 1% (see Table 8 and Appendix B5). This result also met the expected outcome correlation household poverty with household health condition.

Table 8: Household heads' health condition and urban poverty

Health condition	Poor households		Non-poor households		Total	
	number	%	number	%	number	%
Sick	107	84.48%	19	14.52%	126	100
Not sick	111	47.23%	124	52.77%	235	100
Total	218	60.39%	143	39.61%	361	100
Pearson Chi2= 48.6998						

Source: Own computation result, 2024 *** statistically significant at 1% significant level

Household education level and urban poverty

The study town result showed education and poverty had a negative correlation which means as the schooling age increases the vulnerability of households for poverty decreases. Household heads never attended school (illiteracy) were 13 and all 13(100%) were poor. 84 household heads attended elementary (1-8), 68(80.95%) were poor while 16(19.05) were non-poor. 63 household heads attended 9-12, 50(79.37%) were poor while 13(20.63) were non-poor. 55 household heads attended diploma, 41(74.55%) were poor while 14 (25.45%) were poor, and 146 household heads attended degree and above 46(31.88%) were poor and 100(68.49%) were non-poor and the coefficient was different from zero at 1% (see Table 9 and Appendix B6). This indicates that the percentage incidence of poverty was declined as the education level of household heads increased especially number of poor among those who completed degree and above were small. World bank (2016) was reported education plays a great role to reduce poverty and in increasing the welfare of the poor. In this study which conducted in Sebeta town also resulted as the schooling year increases the probability of households being poor decreases.

Table 9: Household heads' education level and urban poverty

Education level	Poor households		Non-poor households		Total	
	Number	%	Number	%	Number	%
Illiterate	13	100	0	0	13	100
1-8	68	80.95%	16	19.05 %	84	100
9-12	50	79.37%	13	20.63%	63	100
Diploma	41	74.55%	14	25.45%	55	100
Degree and above	46	31.51 %	100	68.49 %	146	100
Total	218	60.39%	143	39.61 %	361	100
Pearson Chi2 = 88.3808						

Source: Own survey result, 2024 *** statistically significant at 1% significant level

Households' employment status/ occupation and urban poverty

In this study the employment status respondents were classified as employment and unemployment. Among the sample of the study town 122 households head were unemployed. From these households 99 (81.15%) were poor and 23 (18.58%) were non-poor. The total employed households were 239, 119(49.79%) household heads were non-poor while 120(50.21%) were poor. This result shows large number of employed households were non-poor and negatively correlated and the coefficient is different from zero at 1% (see Table 10 and Appendix B7). Therefore, the household poverty status was determined employment status variable in the study town.

This finding result has similarity with Melese's finding (2017) that was quoted as employed households were less susceptible to poverty. Hence, employed household heads are less likely to be poor than unemployed household heads.

Table 10: Household heads' employment status and urban poverty

Employment status	Poor households		Non-poor households		Total	
	number	%	Number	%	Number	%
Employed	119	49.79%	120	50.21%	239	100
Unemployed	99	81.15%	23	18.85%	122	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 =33.1997						

Own survey result, 2024 *** statistically significant at 1% significant level

Households' income and urban poverty

In the study town, the households' income starts from 2000ETB minimum to 85,000ETB maximum per month. Based on this income 218(60.39%) households were earned below poverty line, which consider them as poor while 143(39.61%) were earned above line poverty or considered as non-poor. Out of this, mean income poor households were 5896.239 ETB and non-poor households was 16909.77 ETB per month. This implies there were high different between income of the poor households and non-poor households in the study town. The t-test-value was -18.3240 which shows income and poverty were negatively correlated and statistically significant at 1% level of significant (see Table 11 and Appendix B8). The survey of the study town found similar result with Endalkachew (2020) he was concluded that the income, good financial behavior of households has vital role in reducing their poverty status.

Table 11: Household heads' income and urban poverty

Group	Observation	Mean	Std. Dev	Std. Err
Poor households	218	5896.239	2364.454	160.141
Non- poor households	143	16909.77	8386.012	701.2735
Total	361	10258.94	7759.219	408.3799
t-values = -18.3240				

Source: Own survey result, 2024 *** statistically significant at 1% significant level

Remittance and urban poverty

The findings of the study town displayed households received remittance were 70, out of these 63(90.00%) were non-poor and 7(10.00%) were poor. Households not received remittance were 291 and 211 (72.51%) were poor while 80(27.49%) were non-poor (see Table 12 and Appendix B9). This implies the households who have remittance has less probability to be poor than households who haven't remittance.

Similarly, Berhe (2014) was found remittance have a significant role in poverty reduction beyond the macroeconomic benefits especially for women headed households and also used for consumption expenditure rather than investment.

Table 12: Households remittance and urban poverty

Remittance	Poor households		Non-poor households		Total	
	number	%	Number	%	number	%
Those had	7	10.00%	63	90.00%	70	100
Those had not	211	72.51%	80	27.49%	291	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 92.1691						

Source**:** Own survey result, 2024 *** statistically significant at 1% significant level

Households' saving habits and urban poverty

The study result in Sebeta town revealed 259 households had not saving habit, 204(80.31%) were poor and 50(19.69%) non-poor. But out of 108 households, those had saving habit were 93 (86.92%) considered as non-poor while 14(13.08%) were poor and the coefficient is different from zero at 1% (see Table 13 and Appendix B10). The number of poor households in those who had saving habit was small but they were large in those who had not save. This ensures having saving habit is negatively related to poverty and can escape households from poverty.

In 2019 Meseret and Zelalem were found similar result with the result of the study town and suggested households those who have save money have a better probability of escaping poverty.

Table 13: Household heads saving habit and urban poverty

Saving habit	Poor households		Non-poor households		Total	
	Number	%	Number	%	number	%
Those have	14	13.08%	93	86.92%	107	100
Those haven't	204	80.31%	50	19.69%	254	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 142.2556						

Source**:** Own computation, 2024 *** statistically significant at 1% significant level

Households' social capital (Ikub and Iddir) and urban poverty

The study area shows households those who participate in social capital were 156, out of these 113(72.44%) were non-poor while 43(27.56%) were poor and negatively correlated with social capital. Households who were not participated in social capital 205, 175(84.37%) were poor while 30(14.63%) were non-poor and statistically significant at 1% (see Table 13 and Appendix B11). The result that revealed in Zelalem (2019) was concluded as the household head that belongs to Ikub, Iddir and other is thought to have less probability of being indigent. The result of this study also suggested similar conclusion.

Table 14: Households social capital and urban poverty

Social capital	Poor households		Non-poor households		Total	
	Number	%	number	%	number	%
Those have	43	27.56%	113	72.44%	156	100
Those haven't	175	84.37%	30	14.63%	205	100
Total	218	60.39%	218	39.61%	361	100
Pearson chi2 = 123.7300						

Source**:** Own computation, 2024 *** statistically significant at 1% significant level

Access to credit service and urban poverty

In the study town among the sample of population 146 households access credit service, among these 87(59.59%) were non-poor while 59 (40.41%) were poor. But, households didn't access credit service were 215, out of these 159(73.95%) were poor while 56(26.05%) were non-poor and the coefficient was different from zero at 1% (see Table 15 and Appendix B12). This shows credit service plays a vital role in poverty reduction and negatively correlated with poverty in the study town.

The result of study was also agreed with Meseret (2019) which was estimated as in the event of a cash shortage in the home, credit can also be employed as a consumption mechanism.

Table 15: Households access to credit and urban poverty

Credit accessible	Poor households		Non-poor households		Total	
	number	%	number	%	number	%
Those had access	59	40.41 %	87	59.59%	146	100
Those had not access	159	73.95%	56	26.05%	215	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2= 40.8976						

Source**:** Own survey result, 2024 *** statistically significant at 1% significant level

Households' asset ownership and urban poverty

In the Sebeta town 104 households have their own asset which can generate income and among these households 74(71.15%) were non-poor while 30(28.85%) were poor but the prevalence of poverty was high among households who haven't their own asset and statistically significant at 1% (see Table 16 and Appendix B13).

Babu and Reda (2015) were suggested asset ownership had a significant favorable impact on the likelihood that a household will not be poor and has similar with the result revealed in Sebeta town. This study also recommend households asset ownership plays a vital role to lift up households from poverty.

Table 16: Households' asset and urban poverty

Asset ownership	Poor households		Non-poor households		Total	
	Number	%	Number	%	number	%
Those have	30	28.85%	74	71.15%	104	100
Those haven't	188	73.15%	69	26.85%	257	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 60.7573						

Source**:** Own computation, 2024 *** statistically significant at 1% significant level

Households' house tenure and urban poverty

The finding of study town shows 172 households have their own house while 189 households haven't their own house. Among households who have their own house 91 (52.91%) were non-poor while 81(47.09%) were poor and those haven't their own house 137 (72.49) were poor while 52 (27.51%) were non-poor (see Table 17 and Appendix C14) and the coefficient is different from zero at 1%. It indicates the percentage of households who have their own asset are less susceptible to poverty comparing to those who have not their own asset.

Table 17: Households' house tenure and urban poverty

Housing tenure	Poor households		Non-poor households		Total	
	Number	%	Number	%	number	%
Those have	81	47.09%	91	52.91%	172	100
Those haven't	137	72.49%	52	27.51%	189	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 24.2750						

Source**:** Own survey result, 2024 *** statistically significant at 1% significant level

Water ownership and urban poverty

In Sebeta town among the sample size, households those who have their own water pipe were 227, 126(55.51%) were non-poor while 101 were (44.49%) were poor. Those who haven't their own water pipe were 134, 117(87.31%) were poor while 17(12.69%) were non-poor and the coefficient is different from zero at 1% (see Table 18 and Appendix B15).

Mesfin (2014) was suggested households who don't have private tap water in their compound is more likely to be poor than those who have and this variable have negatively correlated with poverty status. Similarly, in the study town result revealed the poor number of households among households who haven't their own private pipe water were large compared to those who have their own private pipe water.

Table 18: Households' water ownership and urban poverty

Water ownership	Poor households		Non-poor households		Total	
	number	%	number	%	number	%
Those have	101	44.49%	126	55.51%	227	100
Those haven't	117	87.31%	17	12.69%	134	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 64.5862						

Source**:** Own survey result, 2024 *** statistically significant at 1% significant level

Electrometer Ownership and poverty

The finding of the study town revealed households those who have their own electrometer privately were 223, 123(55.16%) were non-poor while 100(44.84%) were poor. Households those haven't their own electrometer were 138, 118(85.51%) were poor while 20(14.49%) were non-poor and statistically significant at 1% (see Table 19 and Appendix B16). It implies the prevalence

of poverty is high for those who haven't their own electrometer privately than those who have their own electrometer.

Table 19: Households electrometer ownership and urban poverty

Electrometer ownership	Poor households		Non-poor households		Total	
	number	%	number	%	number	%
Those have	100	44.84%	123	55.16%	223	100
Those haven't	118	85.51%	20	14.49%	138	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 58.9282						

Source**:** Own survey result, 2024 *** statistically significant at 1% significant level

Migration and urban poverty

Based on the sample of households the survey of the study town shows households migrated from other location were 200, 136(68.00%) were poor and 64(32.00%) were non-poor but the number of poor households not migrated were small compared to migrated households and statistically significant 1% (see Table 20 and Appendix 17).

This study revealed similar conclusion with the find of Tegegne (2019) that was quoted as urban poverty is reflected in the growing number of urban destitute and hypothesized positive correlation with poverty status.

Table 20:households migration and urban poverty

Migration	Poor households		Non-poor households		Total	
	number	%	Number	%	number	%
Those migrated	136	68.00%	64	32.00%	200	100
Those not migrated	82	50.93%	79	49.07%	161	100
Total	218	60.39%	143	39.61%	361	100
Pearson chi2 = 10.8631						

Source**:** Own computation, 2024 *** statistically significant at 1% significant level

4.3 Econometric Analysis of the Results, Diagnostic tests

Before estimating the specified model, different tests on the basic assumptions of the model should be checked as they are met or not. As well as, the goodness of fit of the model should also be tested. Hence, these tests are as follows.

Test for multi-collinearity; Is in which the explanatory (independent) variables are highly correlated or revealed when there is little variation between them. The problem of multi-collinearity is a serious issue in cross sectional data. To estimate Binary logit it is first important to compute the hypothesized variables have any associations or correlation one on another using variance of inflation factor (VIF). If the VIF values for continuous variable equal to 10 or greater than10 these variables have problems of multicollinearity.

In this study the computed VIF values are less than one that confirms there is no serious problem for the multicollinearity among the continuous variables (see appendix C1). This more ensures that there is no variable that whose value is 10 and greater. Thus, the variables in this study can be entered for running of the Binary logistic regression.

When there is collinearity between variables, $R2$ approaches to one; while 1/VIF approaches to zero. When there is no multi-collinearity, $R2$ approaches to zero; while 1/VIF approaches to one. As a rule of thumb if a VIF of a variable greater than 10, the variables have highly collinear with explanatory variables. In this case, 1/VIF value was slightly far away from zero and it approaches one. As a result, mean value VIF becomes 2.18. This indicates that, there is less and acceptable collinearity in the model (see Appendix C1).

Specification link test for single equation model

A model specification error can reveal when one or more relevant variables are omitted from the model or one or more irrelevant variables are included in the model. There are two alternative mechanisms to detect the specification error namely link test and ramsey reset test. In this study ramsey reset test was applied to detect model specification model. The study resulted the model has not omitted variables and there is no problem of model specification error in the model (see Appendix C2).

Goodness of fit test

To test goodness of fit the model the two ways tests, likelihood ratio test and the Hosmer Lemeshow test was used. In this study the Hosmer Lemeshow test result shown (Chi2) value of the model was very high (334) with the p-value of 1.000 (see Appendix C3). As well as, the Pseudo R2 values of the model was 0.7117. This indicates that approximately 71.17% of the variation of households' poverty level among the observed households. This suggest that the

explanatory variables in the model are strong predictors of poverty and that the model fits the data well and the remaining 28.83 % is explained by other variables.

In the all above the basic econometric test, the model was qualified enough and then, the econometric part is analyzed.

4.4 Determinants of Urban Poverty in Sebeta Town: Model Estimation

The result depicted in the logit model was settled in series of tables. It included the variables, the estimated coefficients, the odds ratio and the marginal effects for explanatory variables in the model. The odds are the ratio of the probability of being poor to the probability of not being poor. The odds ratio implies the change in the odds of being poor as opposed to not being poor in response to one unit increases in independent variables. Marginal effect is the percentage change on the probability associated with a unit change in the explanatory variables.

Table 21: logistic regression result of variables

Explanatory variables	**Coef.**	**Std. Err**	**z**	**p>|z|**	**Odds ratio**
Hh sex	-1.334729	0.5532863	-2.41	0.016 **	0.2632295
Hh age	-0.9087127	0.4678991	-1.94	0.052 *	0.4030427
Hh marital status	-0.310393	0.3232986	-0.96	0.337	0.7331588
Hh family size	-0.2427538	0.1314971	1.85	0.065 *	1.274755
Hh education level	-4.2173223	0.7936647	-5.22	0.000 ***	0.2220589
Hh employment status	1.472009	0.7072401	2.08	0.037 **	4.357998
Hh access credit	-1.344976	0.5072336	-2.65	0.008 ***	0.2605461
Hh saving habit	-1.076065	0.5707765	-1.89	0.059 *	0.3409343
Hh social capital	-1.389082	0.5157146	-2.69	0.007 ***	0.2493042
Hh Remittance	-2.421112	0.8541986	-2.83	0.005 ***	0.0888228
Hh health condition	0.999074	0.588938	1.70	0.090 *	2.715766
Hh house tenure	1.279531	0.5907852	2.17	0.030 **	3.594954
Hh asset	-1.055549	0.618924	-1.71	0.088 *	0.3480012
Migration	0.9311676	0.4955473	1.88	0.060 *	2.53747
Cons.	12.22622	3.112262	3.93	0.000	204070.5
Number of obs = 361 LR chi^2 (16) = 328.53 Pseudo R^2 = 0.7117					

Source: Own survey result by using STATA version 14, 2024 significant at 1%, 5%, and 10%

4.4.1 Logistic regression reporting and interpreting odds ratio

The result of odd ratio is obtained by making antilog the estimated logit equation and it provides more meaningful interpretation. In the study town the logistic regression model was reported as in the above table 19 and appendix D2).

Urban poverty and household's education level: The 0.2220589 indicates that keeping other variables at rest, if a year of schooling of household heads increases by one year in the study town, the odds ratio of households' being poor decrease by a factor of 0.2220589 and significant at 1%, 5%, and 10%.

Urban poverty and having remittance: The coefficient 0.0888228 implies household heads who have not remittance in the study town are less than 0.0888228 times as likely to be poor than household heads who haven't remittance and the result also significant at 1%.

Urban poverty and households' social capital: Keeping other things constant at their mean value, if the households have social capital, the probability of households falling into poverty in the study town decreases by 0.2493042 and statistically significant at 1%.

Urban poverty and access to credit: The households those who accessed credit service in the study town were less than 0.2605461 times as likely to be poor than those who did not access credit service and statistically significant at 1%. This means, accessible credit service leads households to invest different opportunities and generate enough income for further consumption.

Urban poverty and household's age: This study show that the age of household increases by one year the probability of household being poor decreases by a factor of 0.4030427 holding other variables constant and statistically significant at 5% and 10%.

Urban poverty and household's sex: In the study town being male household headed were less than 0.2632295 times as likely to be poor than being female household headed and statistically significant at 5% in the study town holding other thing ceteris paribus. This shows male household heads have more opportunity to generate income than female household heads.

Urban poverty and household's housing tenure: Households who haven't their own house, the probability of being poor increases by 3.59 keeping other things at rest and statistically significant at 5% in the study town.

Urban poverty and unemployed households: Keeping other variables constant at their mean value, the households those were unemployed the probability of falling in poverty increases by 4.357 and statistically significant at 5% in the study town.

The remain variables like family size of household, saving habit of household, health condition of household, migration, and asset ownership have similar interpretation depends on their coefficient and statistically significant at 10% (see Table 19 and Appendix D2).

CHAPTER FIVE

5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The study was conducted in Sebeta town in addressing the specific objectives of identifying determinants of urban household poverty, assessing the effect of poverty on urban households, and to estimate the gap and extent of poverty status of households' in the study town. To analyze these objectives, the data was gathered directly from the sample of households and from secondary sources. The intended determinants of urban household poverty variables included in the data were basic household demographic (sex, age, ethnic group, marital status, family size, education, health condition), income, occupation, saving habit, social capital, asset holding, remittance, water ownership, electrometer ownership and migration.

To measure poverty in this study monetary expenditure for food and non-food or Cost of Basic Needs (CBN) approach was used in determining poverty line of the study town. The researcher calculated the income needs to buy the minimum food calories intake plus the minimum non-food approach in identification of the poor from the non-poor. Based on this approach the study found out, out of 361 total respondents 218 households were below poverty line accounts for 60.39% of sampled households. This result shows that the proportion of households below poverty line is very high. As well as poverty indices were used to measure the head count poverty, gap of poverty, and severe or FGT of poverty of poor household and resulted 61%, 29.6%, and 8.7% respectively.

To analysis the collected data descriptive statistics and econometrics binary logit model were employed. In the descriptive analysis, categorical response variables were analyzed via percentage, Chi-squares, and significant level while continuous variables were analyzed by standard deviation and t- tests by using STATA software version 14. In econometrics part of the logit model was employed and the coefficients tells by what factor the dependent variable change with a unit change of independent variables was also interpreted. Based on the descriptive and econometric analysis the significant variables with urban poverty in study town were sex, age, education, family size, health condition, employment status, asset, house tenure, saving, social capital, water ownership, electrometer ownership and migration were significant at 1%, 5% and 10% significant level.

5.2 Conclusions

Hence, the study concludes, these significant determinants of urban poverty play vital role and also difficult to measure in alleviating poverty depends on their correlation. Among the determinants of poverty educational level of household's head is the most crucial determinant variable in reducing poverty in the study town. The likelihood of escaping poverty increases with a household's level of literacy since literate people know how to treat themselves and live standardized life. As well as, income of households is a basic to escape households from poverty in multidimensions. This income should be enough to cover the expenditure that needs the minimum basic requirements. In the study town the cost food and non-food of the study town is very expensive and living cost is greater. Currently, poverty line of Sebeta town is higher than the national and regional poverty lines that was approximately 231 ETB per month and 254 ETB per month respectively (IMF and World Bank, 2022). Due to this, urban residents cannot afford food. Majority of the households in this town their consumption expenditure is dominated by food expenditure. To raise the income of household credit, social capital, and saving habit are the major determinants in the study town.

The other problem in the study is rural to urban migration and it has a great impact in increasing living cost of households in urban areas. It also consequences population density, economic scarce, unemployment and etc. Especially, employment status of households is the main issue and the prevalence of poverty is higher for households are unemployed than employed households in the study town. Majority of among those employed are hired in small industries and they get small return payment. However, the incidence of poverty is lowest in households where the head of the households is self-employed. For unemployed poverty is also more common. The study also shown households those who recently migrated to this town are more failed in poverty than those who were lived long time in the town. Again due to higher employment wage in urban compared to the employment wage at rural area as well as to access standard of living many people migrated to this town.

Similarly, in this study family size of households was the main determinants of poverty which indicates that households with large family size are unable to escape poverty because they are unable to meet the minimal daily calories requirement. Additionally, Sebeta town has lack of infrastructures such as water pipe, higher education institutions, electricity, road and health center.

Infrastructures have a great impact in reducing poverty, facilitating business mobility and expanding job opportunities in urban area.

Poverty incorporates not only tangible material deprivation that measured by income or consumption, but such as unemployment, sick health, illiteracy, vulnerability, powerlessness, social exclusion and so on. Generally, it is a great retardation of an individual, a household, and a country in different dimensions. Hence, we cannot alleviate poverty by its symptoms but only by identifying and attacking the determinants of poverty. It is also multi-dimensional phenomena and root causes may not only variables mentioned in this research.

5.3 RECOMMENDATIONS

Based on significant level of explanatory variables that are listed under summary the researcher argued in this study that emphasizing is an essential instrument to achieve a better effect of poverty alleviation measures. Identifying the poor within community is necessary in view of the fact that the poorest of the poor need to be identified and supported.

Depend on the findings of the study town, to uplift the livelihoods of the poorest of the poor that can contribute significantly to reduce poverty overall, the researcher summarized the following recommendations.

- Therefore, the strategy is needed that stables cost of food and non-food items and enables the community to obtain basic needs at fair costs. As a result, stabling cost of food may have a significant effect on the welfare of poor
- To reduce poverty, diversify and raise the households' income. In order to do this, enhancing saving habit, facilitating accessibility of credit and creating business opportunities for the community. Therefore, financial institutions and government should follow up and focus on the number of savers, the amount of saving, expanding their businesses, income inequality and accessibility of credit. Then, the consistent strategies for diversifying source of income would be developed in the study town.
- In order to solve the issue of poverty in different approach in the long run, higher education must be promoted. In this plan, strong emphasis ought to give attention on female education and adult education program. Therefore, the cost of access to

education direct and indirect should be considered by government, community and NGOs sector.

- In the town's strategy to reduce poverty, strong focus should be there on employment status of households. To increase and diversify job opportunities, small-scale industry development should be supported and encouraged in this town. Therefore, opportunity for employment and income generation for society with lower paying jobs should be given priority in new development strategies.
- Households' rural to urban migration should be controlled and expanding job opportunities with enough payment for communities those who live rural area.
- The correlation between family size and poverty in the study town was positive and significant. So, Government should improve economic situations to support households' member who are economically inactive and unemployed in order to mitigate such impacts. Additionally, giving attention more on family planning as well as inspiring and providing job opportunity for economically an active member may the enhance standard of living for the poor. As well as, the town's health sector and office for job opportunity creation can play crucial role in this regard.
- In this town urban infrastructures are not installed demand of residents. Particularly, there are not enough accessibility of water pipe, electricity, road, higher education institutions and health center. Therefore, government, community and NGO should work together in order to expand enough infrastructures based on its requirement.

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7 APPENDIX

Appendix A

Questionnaire

Dear Respondent,

You are kindly invited to engage in a survey conducted by Garuma Fite Lamesa at Addis Ababa University, towards master program in development economics. The survey has been organized to analysis entitled determinants of urban poverty of Sebeta Town, Shegar City Admistration, Oromia Region, Ethiopia.

This questionnaire is designed for a study to identify and analyze the determinants of urban poverty in Sebeta town. The result of the study is beyond doubt important for the poverty reduction endeavor of the town. Therefore, you are kindly requested to give genuine responses. I would like to assure you that the information you are going to provide will be exclusively used for academic purpose and will remain confidential.

Thank you for your understanding and collaboration to fill the questionnaire honestly and sincerely with the sacrifice of your precious leisure and work time.

General Instructions

I. You don‘t need to write your identification.

II. Circle to the corresponding number of your choices from the given alternatives.

III. Put the numbers you agree with to those questions which are not multiple choices.

IV. Ask the question which is not clear for you and feel free to respond

A. Respondents Profile

1. Age of Household Head: <18 ☐ 18-40 ☐ 40-60 ☐ > 60 ☐

2. Marital Status 1.Unmarried ☐ 2.Married ☐ 3.Divorced ☐ 4.Widowed ☐

3. Religion Denomination:- Orthodox ☐ Islamic ☐ Catholic ☐

Protestant ☐ Adventist ☐ others (specify _____

4. Ethnic Group:- Oromo ☐ Amhara ☐ Tigrie ☐ Other (specify)_____

5. Household size_____

6. Number of economically active (productive) family members _____

7. Number of household/s age above 60 _____

8. Number of household/s age below 18_____

9. Total number of dependent household/s _____

10. Total number of household/s unemployed_____

11. Educational level of the household head: A. illiterate ☐ B.1-8 ☐ 9-12 ☐

D. Diploma ☐ E. Degree and above ☐

B. Employment /Occupation

12. Status of employment: Employed ☐ Unemployed ☐ Pensioner ☐

13. If employed to question 13, what is your main occupation?

Self-employed ☐ Government ☐ private sector ☐ NGO employee ☐

Daily Laborer ☐

14. If self-employed to question 14, which type of own-account/self-employed you are engaged in? Shop ☐ Petty-trade/Gulit ☐ Trade Metal /Wood Work) ☐

Hotel and restaurant ☐ Preparing local drinks (Tella,Tej, Araqe) ☐ Others specify___

C. Income

15. How much birr is your average income that you earn per month (in Birr)?

<2,000 ☐ 2000-4000 ☐ 4,000-5,000 ☐ 5,000-10,000 ☐ >10,000 ☐

16. Does your household monthly income cover your expenditure? Yes ☐ No ☐

17. If you say "No" for question 18, how do you fill your household monthly income and expenditure gap? _____

18. Please rank the following difficulties your household expenses?

Food ☐ Housing ☐ Clothing ☐ Education fee ☐ Medication ☐

Transportation ☐ If any other (specify and rank) _____

19. Have you taken any loan for your household? Yes ☐ No ☐

20. If you say "Yes" for question 20, why you need loan? Startup business ☐ Housing rent ☐

Food ☐ Medical purpose ☐ Education fee ☐ Ceremony ☐

Others specify_____

21. Where did you get credit? Micro Credit and Saving Institution ☐ Bank institute ☐
Relatives and Friends ☐ If any other specify_____

22. Do you get any remittance from abroad? Yes ☐ No ☐

23. If you say "Yes" for question 22, how often do you get per year?

24. How many birr do you get?

<5,000 ☐ 5,000-7,000 ☐ 7,000-10,000 ☐ >10,000 ☐

25. How much Birr is your household total average income per month including all other members of the households?

<3,000 ☐ 3,000-6,000 ☐ 6,000-10,000 ☐ >10,000 ☐

26. How much does your family saving per month in birr?

No saving ☐ <1000 ☐ 1000-2000 ☐ 2000-5000 ☐ >5000 ☐

27. Do you participate in social capita like Ikkub, Iddir, and etc? Yes ☐ No ☐

28. If you say 'Yes' for question 45, how many birr do you contribute per month?

<500 ☐ 500-1000 ☐ 1000-2000 ☐ 2000 and above ☐

29. From the following types of food, which one is your frequently consumed?

Injera with shirowot ☐ Injera with meat ☐ Injera with kikwot ☐

Others (Specify) _____

D. Consumption Expenditure

30. Quantify the following items with the appropriate units of measure. For items 1 to 4 Expenditures will be expressed monthly while items from 5 to 8 are expressed yearly.

Item no.	Food/Drink and nonfood items (on monthly and yearly bases)	Amount in kg or Liters	price per kg or liter in birr
1	Food		
2	Drinking		
3	House rent		
4	Transport		
5	Clothes and shoes (in birr per year)		
6	Education(in birr per year)		

7	Health (in birr per year)		
8	Entertainment, Ceremony (weeding, birthday, holiday etc. per year)		
9	Others specify		

E. Health condition

31. Have any of among your household members frequently suffered from diseases?

Yes ☐ No ☐

32. If you say "Yes" for question 27, how many family members are sick?

One ☐ Two ☐ Three ☐ More than three ☐

33. Do you think that, does the disease have any influence on his/her activity?

Yes ☐ No ☐

34. If you say “Yes” for question 29, how do you explain the degree of influence?

Very high ☐ High ☐ Low ☐

F. Housing

33. Who are the owner/ tenure of your housing unit?

Own occupied ☐ Rent from Kebele ☐

Rent from privates ☐ others (specify) _____

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

Wood with mud ☐ Blocket ☐ Bricks ☐ Other (specify)_____

36. How many rooms does your house have? _____ Rooms

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

It is less than adequate for my family's need ☐

It is adequate for my family's need ☐

It is more than adequate for my family's need ☐

38. Where do you cook your meal? Kitchen ☐ Using living room ☐

Using open space ☐ No cooking ☐

39. Do you have toilet facility? Yes ☐ No ☐

40. If you say “Yes” for question 36, which does it belongs to?

Flush Pit ☐ Shared pit ☐ Open space ☐

41. Bathing/Shower facility

Private shower ☐ Shared shower ☐ None ☐

Other specify_____

42. Do you have another asset which earns income? Yes ☐ No ☐

43. If you say "Yes" for question 42, what kind of asset do you have?

Land ☐ Machinery ☐ Equipment ☐ Factory ☐ Other, write _____

G. Infrastructures

44. Which one is the main source of water for your household?

Pip/water meter private ☐ Water vender ☐ Pip/ water at bono ☐

Others (Specify) _____

45. Do you have your own electro meter? Yes ☐ No ☐

46. If you say "Yes" for question 40 for what purpose do you use?

Lighting only ☐ Lighting and cooking ☐

Lighting and ironing ☐

47. Which type of fuel(s) does your household frequently use for cooking purpose?

Electric ☐ Charcoal ☐ Wood ☐ Buta Gas ☐

Other, write_____

48. What looks like the quality and adequate of the interlinked and main road in your town?

Excellent ☐ Very good ☐ Good ☐ Satisfactory ☐ Not satisfactory ☐

H. Migration

49. Have you been migrated from other area to this town? Yes ☐ No ☐

50. If you say "Yes" for question 47, where did you come?

Rural ☐ Urban ☐ Abroad ☐ Other write _____

50. What was the cause of your location change?

Job ☐ Investment ☐ Drought and Famine ☐ Conflict ☐ other _____

Checklist questions for group discussion

1. Do you think majority of households are living in poverty in your town? If yes, share your idea
2. Could you suggest the major determinants of poverty in your town?
3. Can you identify the main bottlenecks that difficult for households to escape from poverty?
4. What are the crisis individuals or households are facing due to living in poverty in your town? List it
5. What looks like communities' participation in economic activity that leads poverty reduction in your town?
6. Are there enough infrastructures facilities which are suitable for investment attractions in your town and how can make impact on poverty reduction?
7. In your opinion, do communities have an opportunity from government, non-government sectors, environment, culture and social interaction in reducing poverty in your town? If so, list some examples

Appendix B: Descriptive statistics analysis result

Appendix B1: Households' sex and urban poverty

Sex of household head	Poverty status of households: poor	nonpoor	Total
male	120	121	241
	49.79	50.21	100.00
female	98	22	120
	81.67	18.33	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  34.0243   Pr = 0.000
 likelihood-ratio chi2(1) =  36.3252   Pr = 0.000
               Cramér's V =  -0.3070
                    gamma =  -0.6358  ASE = 0.080
          Kendall's tau-b =  -0.3070  ASE = 0.046
```

Appendix B2: Households' age and urban poverty

Age of household head	Poverty status of households: nonpoor	poor	Total
18-40	84	104	188
	44.68	55.32	100.00
40-60	54	84	138
	39.13	60.87	100.00
>60	5	30	35
	14.29	85.71	100.00
Total	143	218	361
	39.61	60.39	100.00

```
          Pearson chi2(2) =  11.4176   Pr = 0.003
 likelihood-ratio chi2(2) =  12.8222   Pr = 0.002
               Cramér's V =   0.1778
                    gamma =   0.2614  ASE = 0.092
          Kendall's tau-b =   0.1360  ASE = 0.048
```

Appendix B3: Households' marital status and urban poverty

Marital Status of household head	Poverty status of households: poor	nonpoor	Total
married	107	114	221
	48.42	51.58	100.00
unmarried	41	17	58
	70.69	29.31	100.00
divorced	50	10	60
	83.33	16.67	100.00
widower	20	2	22
	90.91	9.09	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(3) =  37.5873   Pr = 0.000
 likelihood-ratio chi2(3) =  40.9666   Pr = 0.000
               Cramér's V =   0.3227
                    gamma =  -0.5834  ASE = 0.074
          Kendall's tau-b =  -0.3047  ASE = 0.042
```

Appendix B4: Households family size and urban poverty

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
nonpoor	143	4.531469	.1752443	2.095616	4.185044	4.877893
poor	218	3.825688	.1255248	1.853352	3.578284	4.073092
combined	361	4.105263	.1042347	1.98046	3.900278	4.310249
diff		.7057805	.2101403		.2925198	1.119041

```
    diff = mean(nonpoor) - mean(poor)                             t =   3.3586
Ho: diff = 0                                     degrees of freedom =      359

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.9996         Pr(|T| > |t|) = 0.0009          Pr(T > t) = 0.0004
```

Appendix B5: Households' health condition and urban poverty

Health condition of households	Poverty status of households: poor	nonpoor	Total
yes	107	19	126
	84.92	15.08	100.00
no	111	124	235
	47.23	52.77	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  48.6998   Pr = 0.000
 likelihood-ratio chi2(1) =  52.8278   Pr = 0.000
               Cramér's V =   0.3673
                    gamma =   0.7257  ASE = 0.067
          Kendall's tau-b =   0.3673  ASE = 0.044
```

Appendix B6: Households' educational level and urban poverty

Education level of hosehold	Poverty status of households: nonpoor	poor	Total
illiterate	0	13	13
	0.00	100.00	100.00
1-8	16	68	84
	19.05	80.95	100.00
9-12	13	50	63
	20.63	79.37	100.00
diploma	14	41	55
	25.45	74.55	100.00
degree and above	100	46	146
	68.49	31.51	100.00
Total	143	218	361
	39.61	60.39	100.00

```
          Pearson chi2(4) =  88.3808   Pr = 0.000
 likelihood-ratio chi2(4) =  94.4669   Pr = 0.000
               Cramér's V =   0.4948
                    gamma =  -0.6730  ASE = 0.054
          Kendall's tau-b =  -0.4248  ASE = 0.040
```

Appendix B7: Households' employment status and urban poverty

Employment status of household head	Poverty status of households: poor	nonpoor	Total
yes	119	120	239
	49.79	50.21	100.00
no	99	23	122
	81.15	18.85	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  33.1997   Pr = 0.000
 likelihood-ratio chi2(1) =  35.3216   Pr = 0.000
               Cramér's V =  -0.3033
                    gamma =  -0.6255  ASE = 0.081
          Kendall's tau-b =  -0.3033  ASE = 0.046
```

Appendix B8: Households' income and urban poverty

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
poor	218	5896.239	160.141	2364.454	5580.608	6211.869
nonpoor	143	16909.77	701.2735	8386.012	15523.48	18296.05
combined	361	10258.94	408.3799	7759.219	9455.829	11062.05
diff		-11013.53	601.0443		-12195.54	-9831.521

```
    diff = mean(poor) - mean(nonpoor)                             t = -18.3240
Ho: diff = 0                                     degrees of freedom =      359

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.0000         Pr(|T| > |t|) = 0.0000          Pr(T > t) = 1.0000
```

Appendix B9: Households remittance and urban poverty

Remittance availablity	Poverty status of households: poor	nonpoor	Total
yes	7	63	70
	10.00	90.00	100.00
no	211	80	291
	72.51	27.49	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  92.1691   Pr = 0.000
 likelihood-ratio chi2(1) =  96.9791   Pr = 0.000
               Cramér's V =  -0.5053
                    gamma =  -0.9192  ASE = 0.033
          Kendall's tau-b =  -0.5053  ASE = 0.042
```

Appendix B10: Households' saving habit and urban poverty

Saving habit of household	Poverty status of households: poor	nonpoor	Total
yes	14	93	107
	13.08	86.92	100.00
no	204	50	254
	80.31	19.69	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) = 142.2556   Pr = 0.000
 likelihood-ratio chi2(1) = 149.7577   Pr = 0.000
               Cramér's V =  -0.6277
                    gamma =  -0.9288  ASE = 0.022
          Kendall's tau-b =  -0.6277  ASE = 0.041
```

Appendix B11: Households' social capital and urban poverty

Social capital of household	Poverty status of households: poor	nonpoor	Total
yes	43	113	156
	27.56	72.44	100.00
no	175	30	205
	85.37	14.63	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) = 123.7300   Pr = 0.000
 likelihood-ratio chi2(1) = 130.3671   Pr = 0.000
               Cramér's V =  -0.5854
                    gamma =  -0.8775  ASE = 0.031
          Kendall's tau-b =  -0.5854  ASE = 0.043
```

Appendix B12: Households access to credit and urban poverty

Access to credit	Poverty status of households: poor	nonpoor	Total
yes	59	87	146
	40.41	59.59	100.00
no	159	56	215
	73.95	26.05	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  40.8976   Pr = 0.000
 likelihood-ratio chi2(1) =  41.1373   Pr = 0.000
               Cramér's V =  -0.3366
                    gamma =  -0.6144  ASE = 0.071
          Kendall's tau-b =  -0.3366  ASE = 0.050
```

Appendix B13: Households' asset ownership and urban poverty

asset availability	Poverty status of households: poor	nonpoor	Total
yes	30	74	104
	28.85	71.15	100.00
no	188	69	257
	73.15	26.85	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  60.7573   Pr = 0.000
 likelihood-ratio chi2(1) =  60.7804   Pr = 0.000
               Cramér's V =  -0.4102
                    gamma =  -0.7410  ASE = 0.058
          Kendall's tau-b =  -0.4102  ASE = 0.049
```

Appendix B14: Households' house tenure and urban poverty

Housing tenure	Poverty status of households: poor	nonpoor	Total
yes	81	91	172
	47.09	52.91	100.00
no	137	52	189
	72.49	27.51	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  24.2750   Pr = 0.000
 likelihood-ratio chi2(1) =  24.5193   Pr = 0.000
               Cramér's V =  -0.2593
                    gamma =  -0.4949  ASE = 0.084
          Kendall's tau-b =  -0.2593  ASE = 0.051
```

Appendix B15: Households' water ownership and urban poverty

Water ownership	Poverty status of households: poor	nonpoor	Total
yes	101	126	227
	44.49	55.51	100.00
no	117	17	134
	87.31	12.69	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  64.5862   Pr = 0.000
 likelihood-ratio chi2(1) =  70.8834   Pr = 0.000
               Cramér's V =  -0.4230
                    gamma =  -0.7914  ASE = 0.055
          Kendall's tau-b =  -0.4230  ASE = 0.043
```

Appendix B16: Households' electrometer ownership and urban poverty

Electrometer ownership	Poverty status of households: poor	nonpoor	Total
yes	100	123	223
	44.84	55.16	100.00
no	118	20	138
	85.51	14.49	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  58.9282   Pr = 0.000
 likelihood-ratio chi2(1) =  63.7781   Pr = 0.000
               Cramér's V =  -0.4040
                    gamma =  -0.7578  ASE = 0.059
          Kendall's tau-b =  -0.4040  ASE = 0.044
```

Appendix B17: Migration and urban poverty

Migration	Poverty status of households: poor	nonpoor	Total
yes	136	64	200
	68.00	32.00	100.00
no	82	79	161
	50.93	49.07	100.00
Total	218	143	361
	60.39	39.61	100.00

```
          Pearson chi2(1) =  10.8631   Pr = 0.001
 likelihood-ratio chi2(1) =  10.8712   Pr = 0.001
               Cramér's V =   0.1735
                    gamma =   0.3437  ASE = 0.096
          Kendall's tau-b =   0.1735  ASE = 0.052
```

Appendix C: Tests for the basic econometrics data assumptions

Appendix C1: Test for multicollinearity

```
. vif
```

Variable	VIF	1/VIF
sex	1.29	0.773754
age	1.36	0.735008
MarS	1.43	0.697536
fmlS	1.25	0.802210
edu		
2	4.09	0.244540
3	3.64	0.274659
4	2.96	0.337470
5	6.39	0.156585
2.emplS	1.51	0.664094
accessC	1.18	0.847905
savingh	2.13	0.469782
socialC	1.89	0.530432
remit	1.57	0.638678
healthC	1.32	0.760158
housingT	1.90	0.527079
asset	1.54	0.648404
migr	1.58	0.632733
Mean VIF	2.18	

Appendix C2: Specification link test for single equation model

```
. ovtest

Ramsey RESET test using powers of the fitted values of pvtystatus
       Ho:  model has no omitted variables
                 F(3, 343) =     25.51
                  Prob > F =      0.0000
```

Appendix C3: Test for goodness of fit

```
. estat gof

Logistic model for pvtystatus, goodness-of-fit test

       number of observations =       361
 number of covariate patterns =       349
            Pearson chi2(334) =       194.20
                  Prob > chi2 =         1.0000
```

Appendix D: Results of logistic regression used by STATA version 14

Appendix D1: logistic regression Reported coefficients

```
Logistic regression                                     Number of obs   =        339
                                                        LR chi2(16)     =     328.53
                                                        Prob > chi2     =     0.0000
Log likelihood = -66.551848                             Pseudo R2       =     0.7117
```

pvtystatus	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sex	-1.334729	.5532863	-2.41	0.016	-2.41915	-.2503078
age	-.9087127	.4678991	-1.94	0.052	-1.825778	.0083527
MarS	-.310393	.3232986	-0.96	0.337	-.9440466	.3232606
fmlS	.2427538	.1314971	1.85	0.065	-.0149757	.5004834
edu						
1	0	(empty)				
2	-4.766793	.8470231	-5.63	0.000	-6.426928	-3.106658
3	-5.154721	.8819381	-5.84	0.000	-6.883288	-3.426154
4	-2.730453	.6520331	-4.19	0.000	-4.008415	-1.452492
5	0	(omitted)				
2.emplS	1.472009	.7072401	2.08	0.037	.0858436	2.858174
accessC	-1.344976	.5072336	-2.65	0.008	-2.339135	-.3508159
savingh	-1.076065	.5707765	-1.89	0.059	-2.194767	.042636
socialC	-1.389082	.5157146	-2.69	0.007	-2.399864	-.3782997
remit	-2.421112	.8541986	-2.83	0.005	-4.095311	-.7469133
healthC	.999074	.588938	1.70	0.090	-.1552233	2.153371
housingT	1.279531	.5907852	2.17	0.030	.1216133	2.437449
asset	-1.055549	.618924	-1.71	0.088	-2.268618	.1575192
migr	.9311676	.4955473	1.88	0.060	-.0400871	1.902422
_cons	12.22622	3.112262	3.93	0.000	6.126299	18.32614

Appendix D2: Logistic regression reported odds ratio

Logistic regression — Number of obs = 339
LR chi2(16) = 328.53
Prob > chi2 = 0.0000
Log likelihood = -66.551848 — Pseudo R2 = 0.7117

pvtystatus	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sex	.2632295	.1456413	-2.41	0.016	.0889972	.7785611
age	.4030427	.1885833	-1.94	0.052	.1610922	1.008388
MarS	.7331588	.2370292	-0.96	0.337	.3890503	1.381625
fmlS	1.274755	.1676266	1.85	0.065	.9851358	1.649519
edu						
1	1	(empty)				
2	.0085076	.0072062	-5.63	0.000	.0016174	.0447503
3	.0057721	.0050906	-5.84	0.000	.0010248	.0325117
4	.0651897	.0425059	-4.19	0.000	.0181622	.2339865
5	1	(omitted)				
2.emplS	4.35798	3.082138	2.08	0.037	1.089636	17.42967
accessC	.2605461	.1321577	-2.65	0.008	.096411	.7041134
savingh	.3409343	.1945973	-1.89	0.059	.1113845	1.043558
socialC	.2493042	.1285698	-2.69	0.007	.0907303	.6850252
remit	.0888228	.0758723	-2.83	0.005	.0166506	.4738268
healthC	2.715766	1.599418	1.70	0.090	.856224	8.61385
housingT	3.594954	2.123846	2.17	0.030	1.129317	11.44381
asset	.3480012	.2153863	-1.71	0.088	.103455	1.170603
migr	2.53747	1.257436	1.88	0.060	.9607057	6.70211
_cons	204070.5	635120.8	3.93	0.000	457.7391	9.10e+07